



UNIT FOUR

A resource for building climate resilience in Alberta

4

Open workshop and explore local weather and impacts

What this unit will help you do

You have been directed to this unit because:

- ➔ You are looking to develop a complete Action Plan for your community through the full-day workshop; or
- ➔ You want to conduct a group exercise to explore local weather and associated impacts on the community.

This unit contains two sections to help you:

Section 1: Deliver the opening activities of the action planning workshop, including opening remarks, introductions, defining the scope and process for developing a climate resilience action plan for your community, and reviewing the workshop agenda.

Section 2: Lead a plenary discussion of how your community is currently affected by weather events, considering impacts on the local economy, property and infrastructure, the natural environment, and local health and lifestyles.

At the workshop

The guidance and resources provided in this unit are used to support Session 1 at the workshop. An agenda with timings for Session 1 is presented in Table 1. In total, it is recommended that 50 minutes is allocated to this session.

Time	Workshop activity
30 mins	Arrival, refreshments—tea, coffee, breakfast
Session 1 Set context and explore local weather and impacts	
10 mins	Opening remarks. Community champion to welcome participants to the workshop and outline briefly why the community is developing a climate resilience action plan.
10 mins	Introductions. Facilitator, either the community champion or external consultant(s), to invite participants to introduce themselves—name and title / role in the community).
10 mins	Presentation to outline the scope, process and expected outputs of the workshop, and the climate resilience action planning effort generally, as well as the workshop agenda. Use Slide 4-1 through Slide 4-8 .
20 mins	Plenary exercise: Collectively explore how the community has been affected by weather events in recent memory, considering impacts on the local economy, the health and lifestyles of residents, the natural environment, and infrastructure, services and property. Use Slide 4-9 to introduce the exercise. Instructions are provided along with the slide.

Table 1: Agenda with timings for Session 1 at the workshop



To increase the likelihood that the workshop starts on time, open it to participants 30 minutes prior to the official start and provide refreshments—tea, coffee, breakfast.

If time permits during the introductions, it is a good idea to ask participants to also describe, in a couple of words, what they love about the community. Not only is this a good “ice breaker”, but when exploring how weather and climate affect the community later in the workshop, the discussion often comes back to what participants have said.

Section 1: Opening activities at the workshop

The guidance and resources provided in this section focus on helping you present the scope, process and expected outputs of the workshop, and the climate resilience action planning effort in general.

Following the “introductions” at the workshop, we suggest you deliver a 10 minute presentation that covers the following topics (use **Slide 4-1** through **Slide 4-8**, which are provided below):

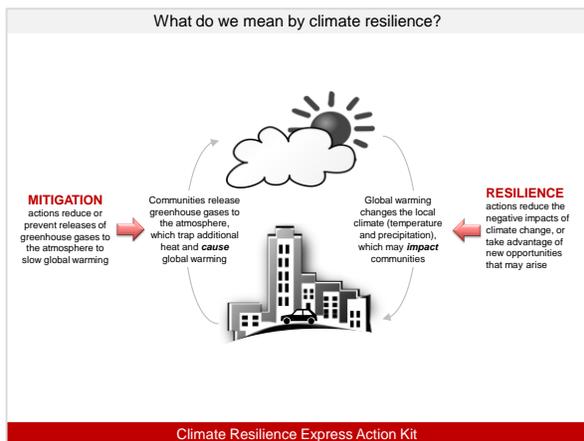
- 1: The difference between climate change mitigation and climate resilience;
- 2: The overarching goal of the climate resilience planning project;
- 3: The process for achieving this goal;
- 4: The role of the workshop;
- 5: The scope of the climate resilience planning project; and
- 6: The agenda for the remainder of the workshop.

➔ Slide: Distinguish between climate mitigation and climate resilience

Each unit in the Action Kit contains screenshots of the slides to be used at the workshop along with supporting narrative—similar to that shown below. The agenda in Table 1 tells you where in the workshop program the slides are to be used. The full set of workshop slides is found in Appendix B.

Slide 4-1

Narrative



Slide 4-1 is used to explain what we mean by climate resilience, and make sure participants are clear as to the focus of the workshop.

There are two complementary responses to climate change:

The first response targets the *causes* of climate change and seeks to reduce the amount of greenhouse gases (GHGs) we release to the atmosphere; for example, by reducing energy consumption in our building or vehicles, or reducing the GHG-intensity of the energy we use. This is commonly referred to as climate “mitigation”.

The second response targets the *impacts* of climate change and seeks to build our resilience to changing climate conditions, enabling us to cope with and manage risks and opportunities presented by climate change.

This workshop is about building our resilience to climate change.

When speaking to **Slide 4-1**, you could provide a few examples of climate resilience actions. For instance, to address the risk of water shortages or drought, a community could:



- Invest more in leakage detection and repair;
- Introduce a program to support the installation of water efficiency technologies across the community;
- Increase the storage capacity of the local reservoir, etc.

In Unit 7 you will find a list of the climate resilience actions identified by the four pilot communities.

You may also want to make the additional point that: climate resilience and climate adaptation are often used interchangeably; they refer to the same thing.



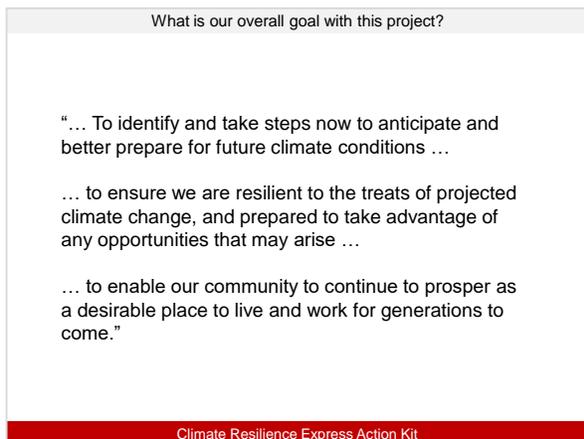
Climate resilience: Our capacities to prevent, absorb, respond to, and bounce back from shocks and stresses imposed by a changing climate. Building or increasing resilience simply means enhancing these capacities.

Climate mitigation: Actions to prevent or reduce the amount of GHGs we release to the atmosphere, or that protect or enhance natural carbon “sinks”.

➔ Slide: The overarching goal of climate resilience planning

Slide 4-2

Narrative



Slide 4-2 provides a generic overarching goal for a climate resilience planning process

The main points you will want to make:

- We are looking to take steps *now* to *proactively* prepare for climate change;
- We want to better prepare for both *risks* and *opportunities*—we are not focused solely on threats; and
- We see this as vital to the *long-term economic, social and environmental sustainability* of our community.

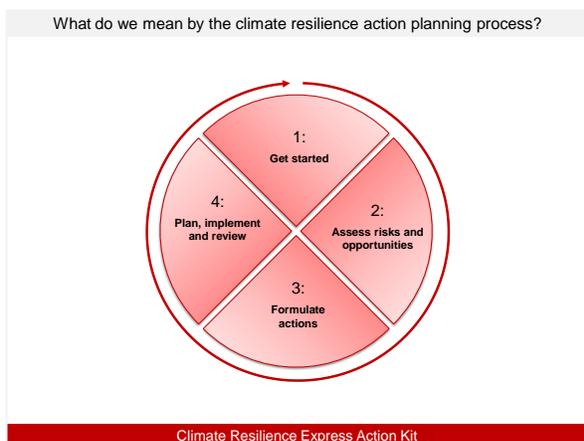


The overarching goal in **Slide 4-2** may be adapted to reflect the needs and preferences of your community. The goal should explain the reasons why you are undertaking a climate resilience action planning process.

➔ Slides: Explaining the climate resilience express planning process

Slide 4-3

Narrative



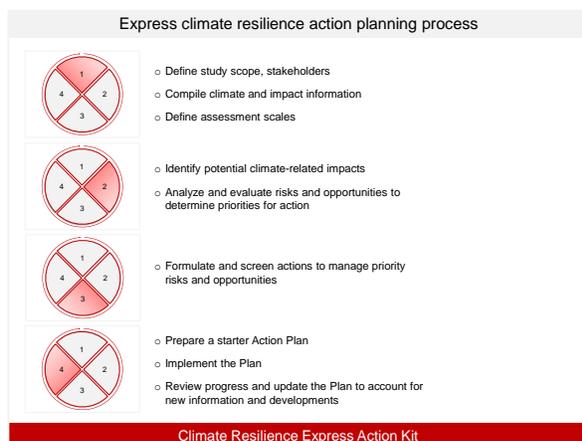
Slide 4-3 and **Slide 4-4** present the main steps in the climate resilience planning process.

The process adopted by the Climate Resilience Express, which we follow, is not complicated, lengthy, nor resource-intensive.

It comprises four simple, sequential steps.



When speaking to **Slide 4-3**, try not to list the steps (e.g., Step 1: get started, Step 2: assess risks and opportunities, etc.) as you will get a chance to explain them in **Slide 4-4**.

Slide 4-4**Narrative**

The process begins by setting the scope for the exercise (discussed in **Slide 4-6** and **Slide 4-7** below), identifying who needs to be involved, compiling information on climate trends, projections and associated impacts for the area, and defining scales to help us assess the importance of climate-related impacts on the community.

Step 2 involves identifying future climate-related risks and opportunities, analyzing their importance, and establishing priorities for action.

Step 3 involves identifying actions to manage priority risks and opportunities, and identifying the most promising actions to focus on for now.

Step 4 involves preparing a community Action Plan and taking steps to implement priority actions, to review progress on implementation, and update the Action Plan as needed.



Action Plan: A climate resilience action plan (“Action Plan”) documents the actions a community plans to implement in order to manage priority risks and opportunities posed by climate change. It also describes the process of arriving at the recommended actions, provides all materials used to support the decision-making process, and outlines how, when and by whom actions will be implemented.

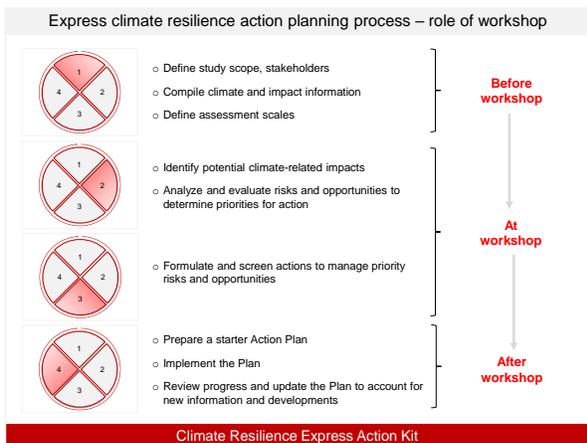
If you want to learn more about community-based climate resilience planning processes, look at:

- ✓ Bowron, B. and Davidson, G., 2011, *Climate Change Adaptation Planning: A Handbook for Small Canadian Communities*, Canadian Institute of Planners, Ottawa, Canada.
- ✓ Black, R., et al, 2010, *Adapting to Climate Change: A Risk-based Guide for Local Governments*, Volume 1.
- ✓ CBT, 2011, *Columbia Basin Case Studies Final Report, Communities Adapting to Climate Change Initiative (CACCI)*, Columbia Basin Trust.
- ✓ Fisher, G., 2011, *Municipal Climate Change Action Plan Guidebook*, Service Nova Scotia and Municipal Relations, Halifax, NS. [Part Two.]
- ✓ HRM, 2007, *Climate SMART: Climate Change Developer’s Risk Management Guide*, Halifax Regional Municipality (HRM), Halifax, NS. [Module 3.]
- ✓ ICLEI, *Changing Climate, Changing Communities: Guide and Workbook for Municipal Climate Adaptation* ICLEI Canada, Toronto, ON.

➔ Slides: Explaining how the workshop fits with the overall climate resilience express planning process

Slide 4-5

Narrative



Slide 4-5 shows how the workshop fits within the overall climate resilience planning process.

Steps 2 and 3 of the process will be completed at the workshop.

The workshop allows a range of municipal staff (and other local stakeholders, if invited) to contribute both to the assessment of risks and opportunities for your community, and to the development of actions to manage those judged to be most important.

You could also make the following additional points when speaking to **Slide 4-5**:

The first three steps—and in particular Step 2 and Step 3 at the workshop—produce the information that underpins your climate resilience action plan, that will be prepared after the workshop.

There are multiple benefits to engaging stakeholders in the climate resilience planning process using this workshop-based approach:

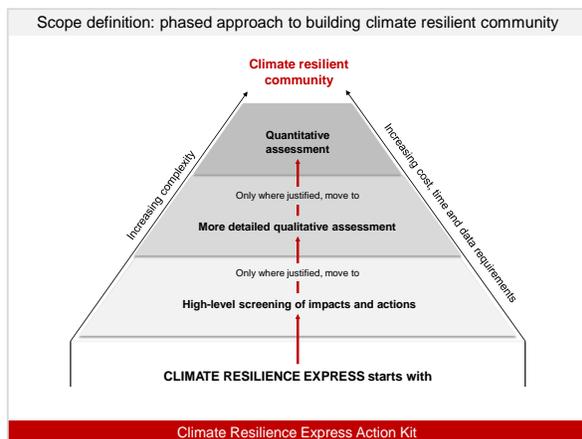


- An effective Action Plan requires coordination and cooperation between different departments to ensure that embedded actions make use of local knowledge, avoid conflicts, and have broad support;
- It cultivates agreement amongst staff, elected officials and other interested parties on risks, responses and priorities; and
- It encourages cross-pollination of ideas among different departments, and builds capacity among stakeholders.

➔ Slides: Scope definition - explaining the phased-approach to climate resilience action planning

Slide 4-6

Narrative



Slide 4-6 illustrates the phased approach that underpins the climate resilience express action planning process.

The phased approach starts with a high-level screening of climate impacts and management actions, and only proceeds to more detailed qualitative and quantitative assessments for the most important impacts and most promising actions, and even then, only when judged necessary to improve understanding or to get the formal approvals to act, like where cost-benefit analysis is required.

The scope of the climate resilience express is confined to a high-level screening of climate-related impacts and management actions.

The resulting starter Action Plan may include actions that then recommend a more specific detailed qualitative and quantitative assessment for specific priority risks or opportunities.

When speaking to **Slide 4-6**, you may find it useful to use the following example:

Your community may start with a high-level screening of climate-related impacts to corporate infrastructure and services. The screening may identify storm-water flooding as a high priority risk. The Action Plan may recommend that, to better understand the risk and its causes, the community should, as a next step, undertake a more detailed qualitative assessment using, for example, the PIEVC Protocol of Engineers Canada (<http://pievc.ca/>) to identify priority sources of storm-water flooding risk. The same analysis may also show that mitigating the main sources of risk will require a significant capital expenditure. But before committing to the investment, a full cost-benefit analysis, itself a costly exercise, may be needed to satisfy Council of its value. In this example, the logic for starting with a high-level assessment is obvious: **It would be wasteful to start with detailed qualitative assessments and cost-benefit studies of all potential climate impacts.**

You will also hear the terms “iterative risk management” or “tiered-risk assessment” used to describe the phased approach presented in **Slide 4-6**.



If you want to learn more about the use of phased assessment approaches in the context of climate resilience planning processes, look at:



- ✓ Ranger, N., et al, 2010, Adaptation in the UK: A decision-making process, Policy Brief, September 2010, The Grantham Research Institute on Climate Change, London School of Economics and Political Science, London, UK. [Pages 20-24.]
- ✓ Willows, R. and Connell, R. (Editors), 2003, Climate Adaptation: Risk, uncertainty and decision-making, UKCIP Technical Report, UK Climate Impacts Program, Oxford, UK. [Section II.E.]

➔ Slides: Scope definition – timeframe, geographic boundaries, affected sectors

Slide 4-7

Narrative

Other scope definition issues

- ✓ Timeframe – 2050s
- ✓ Geographic – where is the boundary
- ✓ Affected sectors – corporate vs community:

- Critical infrastructure, equipment
- Private property and assets
- Civic buildings, green spaces
- Economic activities
- Municipal services
- Health, lifestyles, environment

Climate Resilience Express Action Kit

In Unit 3 you will have established the scope of the project with respect to:

- The timeframe of analysis;
- The geographic boundary; and
- The affected sectors to be covered.

Use **Slide 4-6** to explain to participants the definitions adopted.

➔ Workshop slide: review agenda for rest of today at the workshop

Slide 4-8

Narrative

Agenda for rest of today	
Time	Activity
[insert]	Session 2: Introduction to climate science and impacts Learn about climate science and key concepts, past climate trends for the region, future projections of climate change, and potential environmental changes and impacts.
[insert]	Health break
[insert]	Session 3: Assess climate risks and opportunities Group exercise to identify how projected future climate for the region could impact key economic sectors, property and infrastructure, the natural environment and health and well-being in your community.
[insert]	Individual exercise to assess the severity and likelihood of the climate impacts facing your community.
[insert]	Lunch
[insert]	Plenary discussion to review the outcomes of the individual exercise and to identify priority risks and opportunities that will be the focus for action planning.
[insert]	Session 4: Action Planning Group exercise to generate a list of actions to build resilience to the priority risks and to take advantage of opportunities.
[insert]	Health break
[insert]	Group exercise followed by plenary discussion to identify and characterize the most promising actions to build resilience in your community.
[insert]	Summary and closing

Climate Resilience Express Action Kit

Slide 4-8 is used to outline the agenda for the rest of the day at the workshop. Run through the agenda:

Next, we will learn about how our climate has changed over the last 50-100 years and how it is projected to change in the future.

Then, we will examine how these projected changes are anticipated to affect our community, and define priority risks and opportunities.

Finally, we will identify and examine actions to manage these priority risks and opportunities.



Slide 4-8 and the accompanying narrative assume you are running the full-day workshop. If you are running a variation of the full-day workshop—as discussed in Unit 3—you will need to adjust the slide and text accordingly.

Section 2: Explore local weather and impacts

The first exercise at the workshop involves a plenary discussion of how the community has been affected by weather events in recent memory, considering impacts: • on the local economy; • the health and lifestyles of residents; • the natural environment; and • infrastructure, services and property.

In addition to creating a list of community-specific impacts that can be referred to throughout the workshop, the goal is also to get participants in the right frame of mind for subsequent sessions, by having them reflect on the relationship between weather and climate, and aspects of the community.

The plenary exercise is introduced using **Slide 4-9**.

➔ **Workshop slide: Exploring local weather and impacts**

Slide 4-9

Narrative

Plenary exercise: exploring local weather and impacts

In your experience how have weather events and climate affected the [enter community] area?

Consider:

- ➔ The local economy
- ➔ Health & lifestyle of residents
- ➔ Natural environment
- ➔ Infrastructure, services, and property



Climate Resilience Express Action Kit

Slide 4-9 introduces the plenary exercise.

The objective of the exercise is twofold:

- 1...To get participants in the right frame of mind for the remainder of the workshop, by thinking about the relationship between weather and climate, and four aspects of the community.
- 2...To create a list of recent and current impacts that we can built upon in subsequent sessions at the workshop.

Detailed instructions for the exercise are provided below.

Refer to the question on slide.

Ask participants to think about the question in terms of their experience living or working in the community. And to think about the question in terms of impacts on four ‘aspects’ of the community:

- The local economy;
- The health and lifestyle of residents;
- The natural environment; and
- Infrastructure, services and property.



Give participants one minute to individually think about the question. Remind participants that brainstorming is not limited to negative impacts; encourage the identification of positive impacts.

Invite participants to tell you their observations of how weather events and climate have impacted the community based on their experience and knowledge.

Summarize and capture the discussion on a flip chart. As you complete sheets, hang them around the room for reference during later sessions of the workshop.



Total time for this exercise is 20 minutes; 5 minutes to introduce the exercise and 15 minutes for discussion and recording on flip charts.



Flip chart (for facilitator to record impacts and consequences identified by participants)

Marker

Tape or sticky tack to hang flip chart paper on walls



More information about the anticipated impacts of climate change on the Canadian prairies is provided in Unit 5.

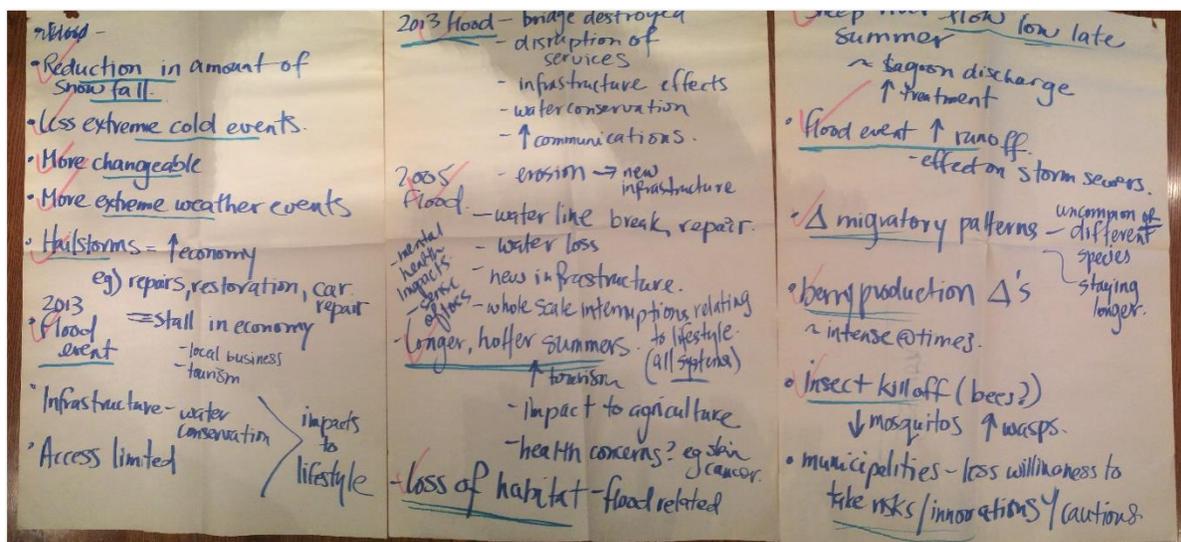


Figure 1: Example of flip chart sheets from Session 1 plenary exercise (Black Diamond & Turner Valley)

You have now reviewed the scope of the workshop with participants, got them in the right frame of mind for drawing links between climate and impacts on the community, and generated a list of past weather-related impacts on the local economy, resident health and lifestyles, the natural environment, and infrastructure and property.

You are now ready to progress to Session 2 of the workshop and learn about important climate science concepts, local climate trends, and projected climate and environmental changes for your community. Go to Unit 5.

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