

Activity 5: Funding Frenzy

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.⁶

One of the most commonly cited barriers to adaptation is deficiencies in information for decision making. Decision makers are looking for the right type of information, at an appropriate scale and level of detail that is accessible and understandable.⁷

Summary

In this role-play activity, students will act as stakeholders in a working group session. They will try to build consensus on how best to use federal funding to address their climate change adaptation needs.

Duration: Two 60-75 minute sessions

Learning outcomes

After participating in the activity, students will be able to:

- Describe socio-economic impacts of climate change from a variety of stakeholder perspectives
- Recognize and analyze differing priorities for climate change research
- Demonstrate an understanding and appreciation of the consensus process

Competency outcomes

During this activity, students will develop or improve these abilities:

- Communication
- Critical thinking
- Collaboration
- Creativity and innovation

Set-up and materials

- ☐ **Stakeholder Profiles** (each student should get his/her own copy)
- ☐ **Stakeholder Note-Taking Sheet** (one per student)
- ☐ **Alliance-Building Sheet** (one per student)
- ☐ Laptop or iPad (one per group) with access to one common Google Slides document

⁶ Excerpted from Canada in a Changing Climate: Sector Perspectives on Impacts and Adaptation, F.J. Warren and D.S. Lemmen, editors (2014); Government of Canada, Ottawa, ON, p. 20.

⁷ Ibid., p. 276.

Tip: One Google Slides document saves document loading time; and allows groups to access each other's slides. As another time-saver, consider creating slides for each stakeholder group ahead of time with the following headings: socio-economic importance; impacts of climate change; research needs (social and/or scientific).

What to do

Day 1

1. Introduce the activity with the following scenario:

The federal government has just announced the creation of the Climate Adaptation Research Fund to be administered by the National Research Council (NRC) of Canada. The National Research Council is the Government of Canada's premier organization for research and development. Working with clients and partners, the NRC provides innovation support, strategic research, and scientific and technical services to develop and deploy solutions to meet Canada's current and future industrial and societal needs. This \$1 million fund is to be used for research-based projects that will enable Canada to adapt to climate change impacts across a variety of sectors like forestry, agriculture, mining, etc. This research can be used for scientific study (science and technology focus), for social science research (focus on people and societal issues), or a mixture of both. Your interest group has been asked to make a pitch to the federal government on how best to use these funds for your sector.

Your group will have two to three minutes to present your case, highlighting your socio-economic importance and the relevance of your research needs.

2. Divide class into teams of two to three students. Each team receives copies of a specific stakeholder profile.

Tip: For classroom management purposes, ensure that each member of the group receives his or her own copy of the profile. Use page protectors so that the profiles can be used again next year.

3. Tell students that they will be preparing three to four slides in Google Slides for their "pitch." The pitch should include the socio-economic importance of their sector and the impacts on it of climate change, as well as their research needs (social and/or scientific).

Tip: Consider assigning each student a sub-topic so that everyone is accountable and each student has a part to present.

4. Ask students to silently read their profile, highlighting words or expressions they don't understand. Give them time to discuss their understanding of the profile with their team to ensure they are on the same page.
5. Explain that there is not much time to prepare for this presentation: they will have another 10 minutes to re-read the profile, plus 15 to 20 minutes to figure out what to put on the slides and decide who says what. Emphasize that they should focus on content first and only work on making their slides attractive if they have time.
6. Place the desks in a U-shape facing the projection screen.

7. **Just before the first group presents**, tell the class that you have *just* received news from the people at the NRC.

The NRC has decided that they will only be funding four studies to deepen the significance of each study. This means that after the initial pitches are made, the groups are going to have to build alliances with each other in order to find common ground for a study. The NRC has prepared note-taking sheets to facilitate the job of trying to find issues and research needs in common. You should ask questions to find out more about the other groups' positions. It is very important to listen to each presentation and jot down your initial thoughts.

8. Hand out the **Stakeholder Note-Taking Sheet** to each student. Ask them to take notes during the presentations.
9. For homework, ask students to fill out their **Alliance-Building Sheet** to prepare for their group meeting next class. The sheet indicates who you would like to merge with around a specific issue, and your reasons to support this decision.

Day 2

10. Ask the students to get into their **original** stakeholder groups to discuss their notes. As a team, they should decide on which strategic alliances could be formed with the other sectors.
11. Give students 10 minutes to approach potential allies to discuss their common interests based on their Alliance-Building Sheets.

Tip: More than two teams may want to build alliances together. If this is the case, split them into sub-groups for intensive brainstorming; they can then come back together to merge their discussions.

12. Ask students, as an alliance, to come up with a joint pitch for the funding, using a similar format to their original presentation (common socio-economic importance/impacts; common research needs). They should also highlight the win-win aspect of this alliance.

Tip: Consider assigning each student (or pairs) a sub-topic so that everyone is accountable and each student has a part to present.

13. Ask each alliance to prepare three to four slides in Google Slides for their presentation.
14. As a class, decide who gets funding and how much (optional).
15. Generate a whole-class discussion of the consensus-building activity. *How did it feel to shift from competitor to collaborator? What skills did you have to use in these different roles? Which did you prefer and why? What were the advantages or disadvantages?*

Activity 5—Teacher backgrounder

THE ADAPTATION PLATFORM

The Adaptation Platform, a unique mechanism in Canada, brings together representatives from industry, professional and not-for-profit organizations, federal, provincial and territorial governments, and researchers to tackle shared climate change adaptation priorities (See Figure 1). Collaboration between the public and private sectors, and across jurisdictions and disciplines, is essential to address the complex and cross-cutting issue of climate change adaptation.

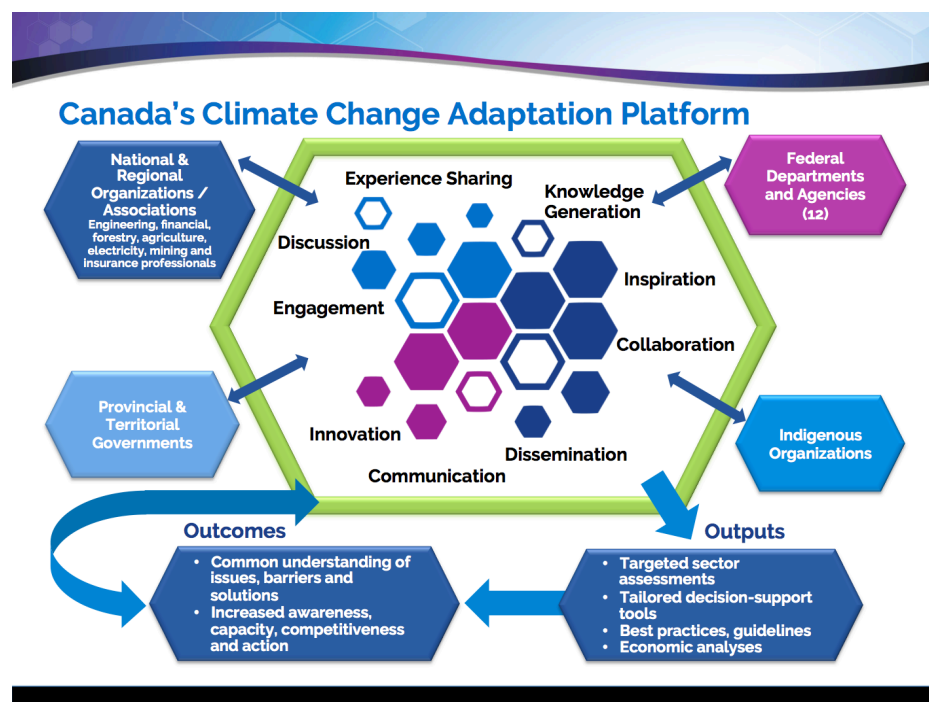


Figure 1. Canada's Climate Change Adaptation Platform. Source: Natural Resources Canada, <http://www.nrcan.gc.ca/environment/impacts-adaptation/adaptation-platform/10027>.

Platform participants are both the 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 Canada's public and private sectors. By providing the structure to pool financial resources, knowledge, and people, the Adaptation Platform works to create new information and tools for adaptation and get these products to the appropriate users.

Canada's Adaptation Platform is structured around several components: a plenary body, a series of subject-matter specific working groups, a secretariat and a broad network of individuals engaged in delivering adaptation actions. Additionally, Regional Adaptation Collaboratives (including the Pan-Territorial Adaptation Partnership) are active across the country performing outreach and enhancing regional dissemination of Platform results.

Natural Resources Canada, chair of the Adaptation Platform, has committed ongoing resources to support the overall Platform, selected Working Group activities, and to provide the secretariat function.

Subject-matter specific Working Groups focus efforts on shared adaptation priorities within their particular subject matter area. Plenary members, comprised of senior-level representatives of governments and national organizations, identify critical and emerging adaptation priorities in Canada and to support collaborative efforts in focused areas of work. Plenary members also generate support for adaptation action and disseminate adaptation knowledge within their organizations and extended networks.⁸

These consensus-building activities are an integral part of the adaptation planning process (see Figure 2).

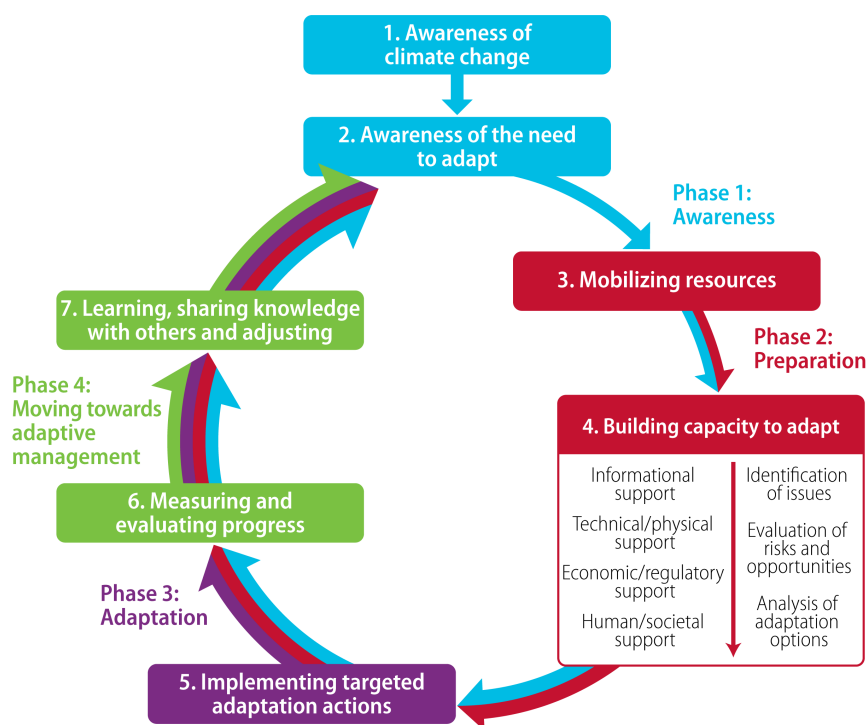


Figure 2. Steps in the adaptation planning process (Eyzaguirre and Warren, 2014). Source: Canada's Marine Coasts in a Changing Climate, p. 83.

⁸ Excerpt from The Adaptation Platform: Equipping Canadians for a Changing Climate (4th Annual Report) (2016); Natural Resources Canada. http://www.nrcan.gc.ca/sites/www.nrcan.gc.ca/files/earthsciences/pdf/adaptation/AP-Annual-Report-2015-16_EN.pdf

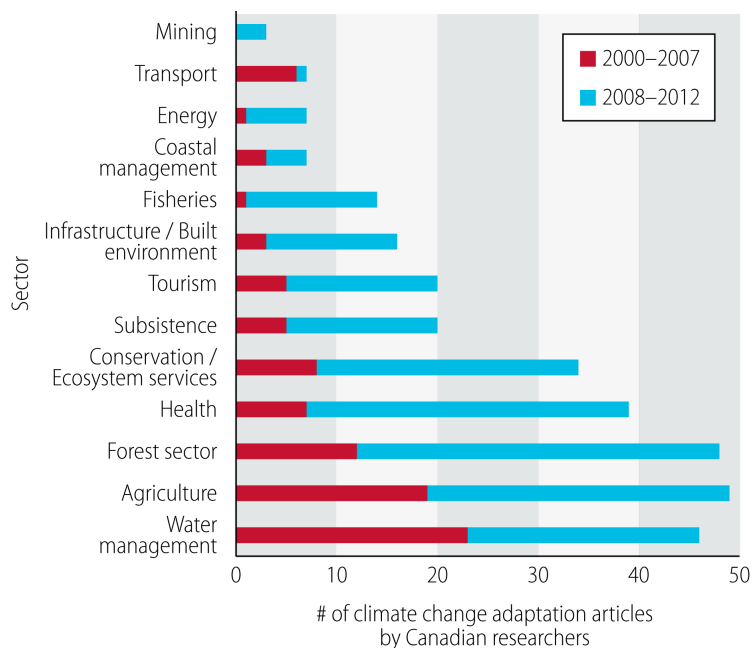


Figure 3: Number of climate change adaptation articles by Canadian researchers by sector (2000–2013). Source: Canada in a Changing Climate: Sector Perspectives on Impacts and Adaptation, p. 12.

More information

For more information on climate change impacts and adaption, see Natural Resources Canada's website: www.nrcan.gc.ca/environment/impacts-adaptation.

For a list of additional resources, including regional initiatives, please consult **Canada's Marine Coasts in a Changing Climate**, p. 273.

Activity 5—Student BLM: Stakeholder Glossary

Building code: code used by the construction industry to ensure that safety conditions are met

Commodity: trade goods, articles of commerce

Consumption: the use of goods to satisfy needs (e.g. water or energy consumption)

Cost-benefit analysis: evaluate the potential costs and benefits of a decision

Crop: a cultivated plant that is grown commercially on a large scale

Drainage basin: an area where water collects from rivers and streams

Ecosystem services: The variety of resources and processes that are supplied by ecosystems and benefit human societies. These include products like clean drinking water and processes such as the decomposition of wastes

Erosion: condition in which the earth's surface is worn away by the action of water and wind

GDP: the measure of a country's economy. It is the total market values of goods and services produced by a country.

Hydroelectricity: electricity produced by water power

Hydrological: refers to water

Infrastructure: the combination of facilities and equipment needed for the functioning of a country or area (e.g. water infrastructure or transportation infrastructure)

Resilience: ability to "bounce back" after an event

Retrofit: to substitute or add parts to an existing structure to adapt it to new conditions

Smelting: extract metals by heating

Stakeholder: a person or organization that has an interest (or stakes) in a specific issue

Supply chain: the network of companies involved in producing, handling and/or distributing a specific product (e.g. seed producer > farmer > processing plant > distributor > grocery store)

Threshold: a state or level marking a boundary (tipping point)

Vulnerability: the state of being vulnerable or exposed to a threat, such as hazards associated with changing weather and climate patterns, the sensitivity of specific populations, and the ability of individuals and communities to take protective measures.

Name: _____

Date: _____

Activity 5—Student BLM: Stakeholder Note-Taking Sheet

[illegible]

Activity 5—Student BLM: Alliance-Building Sheet

Stakeholder: _____

Team member names: _____

	Socio-economic similarities	Socio-economic differences	Research needs similarities	Research needs differences
Stakeholder 1				
Potential win-win solutions				
Stakeholder 2				
Potential win-win solutions				

Rubric

The Alliance-Building Sheet includes an analysis of at least **two** stakeholder groups. Each analysis:

	Exemplary	Proficient	Satisfactory	Unsatisfactory
Clearly compares similarities and differences in socio-economic impacts between their profile and the other stakeholder's.				
Clearly compares similarities and differences in research needs between their profile and the other stakeholder's.				
Provides creative potential win-win solutions, i.e., solutions that would benefit both parties.				

Activity 5–Teacher BLM: Presentation Rubric

	Exemplary	Proficient	Satisfactory	Unsatisfactory
Understanding of content Socio-economic profile of the stakeholder	The slides communicate the socio-economic profile of the stakeholder with a high degree of effectiveness.	The slides communicate the socio-economic profile of the stakeholder with considerable effectiveness.	The slides communicate the socio-economic profile of the stakeholder with some effectiveness.	The slides communicate the socio-economic profile of the stakeholder with limited effectiveness.
Understanding of content Research needs of the stakeholder and their importance.	The slides communicate the research needs of the stakeholder and their importance with a high degree of effectiveness.	The slides communicate the research needs of the stakeholder and their importance with considerable effectiveness.	The slides communicate the research needs of the stakeholder and their importance with some effectiveness.	The slides communicate the research needs of the stakeholder and their importance with limited effectiveness.
Viewpoint Questions are answered from the viewpoint of the stakeholder	Consistently answers questions from the viewpoint of the stakeholder.	Frequently answers questions from the viewpoint of the stakeholder.	Sometimes answers questions from the viewpoint of the stakeholder.	Rarely answers questions from the viewpoint of the stakeholder.
Oral communication Information is given with appropriate use of notes, eye contact, clarity, and volume	Consistently gives information with appropriate use of notes, eye contact, clarity and volume.	Frequently gives information with appropriate use of notes, eye contact, clarity and volume.	Sometimes gives information with appropriate use of notes, eye contact, clarity and volume.	Rarely gives information with appropriate use of notes, eye contact, clarity and volume.
Active listening Active listening skills are demonstrated by providing thoughtful responses to other students' statements and asking questions of presenters	Consistently demonstrates active listening skills.	Frequently demonstrates active listening skills.	Sometimes demonstrates active listening skills.	Rarely demonstrates active listening skills.

Activity 5–Teacher BLM: Group Collaboration Rubric

	Exemplary	Proficient	Satisfactory	Unsatisfactory
Contribution to group Contributes knowledge, opinions and skills.	Consistently contributes knowledge, opinions and skills.	Frequently contributes knowledge, opinions and skills.	Adequately contributes knowledge, opinions and skills.	Rarely contributes knowledge, opinions or skills.
Problem-solving Looks for and suggests solutions; and/or refines solutions suggested by others.	Consistently looks for and suggests solutions; and/or refines solutions suggested by others.	Frequently looks for and suggests solutions; and/or refines solutions suggested by others.	Adequately looks for and suggests solutions; and/or refines solutions suggested by others.	Rarely looks for and suggests solutions or refines solutions suggested by others.
Consensus-building skills Values the knowledge, opinion and skills of all group members and encourages their contributions.	Consistently values the knowledge, opinion and skills of all group members and encourages their contributions.	Frequently values the knowledge, opinion and skills of all group members and encourages their contributions.	Adequately values the knowledge, opinion and skills of all group members and encourages their contributions.	Rarely values the knowledge, opinion and skills of all group members or encourages their contributions.
Time Management Stays focused on the task	Consistently stays focused on task.	Frequently stays focused on task.	Adequately stays focused on task.	Rarely stays focused on task.
Collaboration skills Works towards group goals. Encourages people to work well together.	Consistently works towards group goals and encourages people to work well together.	Frequently works towards group goals and encourages people to work well together.	Adequately works towards group goals and encourages people to work well together.	Rarely works towards group goals.