

CHAPTER 9

How should governments in Canada respond to political and economic issues?

biodiversity: the number and variety of plant and animal species on Earth, including genetic variation within individual species

climate change: a rise in the average temperature of the Earth, primarily caused by emissions from burning fossil fuels, such as coal, oil and natural gas

This photo shows Fish Creek Provincial Park, a natural area in Calgary. Environmental issues can involve local matters, such as natural areas in your region. They can also involve provincial and national matters, such as clean-air laws, and global matters, such as climate change. **Think critically:** What environmental issues concern you?

This year in social studies, you have investigated how governance and economics connect to issues that concern Canadians, and to citizenship and identity. This chapter focuses on one group of issues that concern Canadians — environmental issues — so that you can apply what you have learned.

Thumb through today's newspaper for articles related to environmental issues. Think about how much they affect your quality of life, and how much you think they require government regulation and monitoring.

This chapter explores how decisions about environmental issues affect the development of resources, jobs and quality of life. You will investigate how governments and citizens respond to specific environmental issues that affect you and others.

You can use the issues discussed in this chapter — **climate change** and **biodiversity** — as models of how to approach other environmental issues, and political and economic issues in general.

As you read the chapter, consider the different views and perspectives on the issues and to what extent you think governments and citizens should get involved. Think about your role in taking action on environmental issues.

FOCUS QUESTIONS

- How do environmental issues involve political and economic decision making?
- What political and economic decisions should Canadians make to respond to climate change?
- What political and economic decisions should Canadians make to protect biodiversity?



What issues could these photographs communicate?



The person who operates this feller buncher relies on Alberta's natural resources for employment. **Think critically: How do decisions about the environment affect resource development and jobs?**



This person has made a choice to ride a bike rather than drive. Many factors could have influenced this choice, including fitness and environmental concerns. **Think critically: What role could consumer behaviour play in responding to environmental issues?**



Jimmy MacDougall of Newfoundland and Labrador drives a Caterpillar 797 dump truck — the world's largest — to pick up a load of oil sand at Syncrude Canada's Aurora mine near Fort McMurray. **Think critically: How could decisions about Alberta's oil sands affect the environment? How could they affect the quality of life of individuals and groups?**



Make a presentation about responding to environmental issues.

Your Task

Prairie University's Faculty of Social Sciences is looking for interested youth to make a presentation at a conference that raises awareness about political and economic decision making. Each presenter will research and present an informed response to the question:

How does political and economic decision making affect environmental issues and quality of life?

Your Role

Your presentation should highlight:

- In-depth research of how one environmental issue affects quality of life today.
- A description of the views, perspectives and government decisions on the issue.
- An explanation of how citizens and government have responded to the issue.
- An informed response that includes options and proposed solutions for how citizens can take action in responding to the issue to improve quality of life for all Canadians.

The university hopes that the conference will attract many members of the public, so your research and presentation should be interactive and engaging. You have an opportunity to model leadership skills in responding to issues that affect you and others. Good luck with your research!

Canada geese rise from a field of stubble. **Think critically: How important are wildlife issues where you live? What other issues are important?**



Let's get started!

What are some environmental issues that affect quality of life for all Canadians today? As you work through this chapter, you will explore several environmental issues, and the political and economic decisions that government and citizens make in response to these issues.

As you read the chapter, take notes on the environmental issues that you encounter. Consider the decisions that affect each one and how governments, individuals and groups have responded. What political and economic decisions have had an impact on these issues?

For your chapter task, you need to choose a different environmental issue to research and analyze. The notes you make on the environmental issues in the chapter can help you with your task.

Inquire	Example	Example	Example
What is the issue?			
Who does this issue affect most? Why?			
What political or economic decisions have been made about the issue?			
How does the government respond to the issue?			
How do citizens respond to the issue?			
In what ways can you take action on the issue?			
<p><i>For the chapter task, I will develop an informed response on the issue of...</i></p> <p><i>This issue is important because...</i></p>			

How do environmental issues involve political and economic decision making?

WHAT'S IN THIS SECTION

This section presents:

- An introduction to environmental issues, including a mind map about perspectives on environmental issues.
- A diagram connecting governance and economics to environmental issues.
- Interviews with three Grade 9 students about environmental issues important to them.

What are you looking for?

As you work through this section, look for:

- Why environmental issues are considered issues.
- How environmental issues connect to governance, economics, citizenship and identity.
- How the views and perspectives expressed in the interviews fit the bigger picture of responding to environmental issues in Canada.

A federal law passed in 2007 makes energy-efficient light bulbs, like this fluorescent bulb, mandatory by 2012. The law responds to an environmental issue: how to reduce the impact of electrical lighting on the environment. **Think critically:** In what way is the law a political decision, involving governance in Canada? In what way is it an economic decision, involving producers and consumers?



What's an environmental issue?

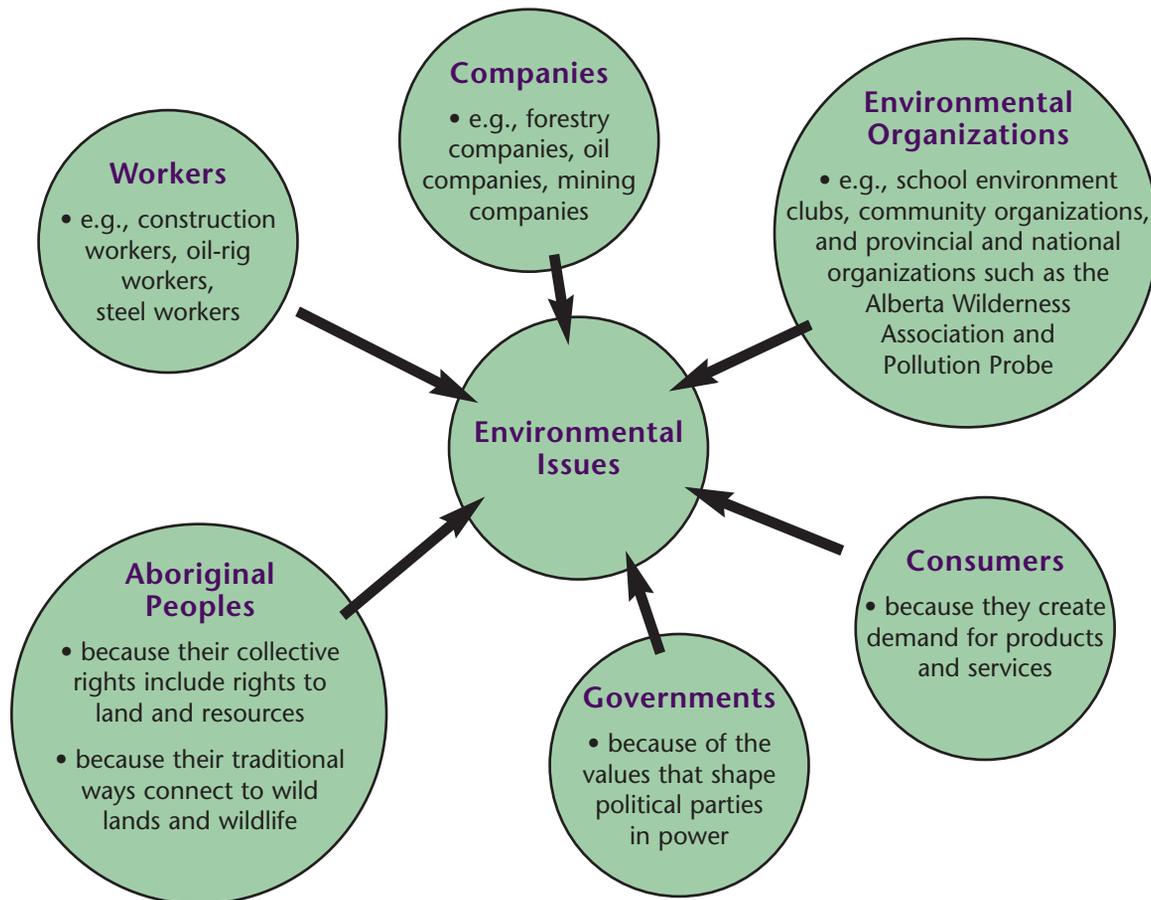
Environmental issues arise because of human activities that change the natural world. For example, changes happen when factories release toxins and other pollutants into the air or water, or when housing developments occupy land that once supported wild plants and animals.

Like all issues, environmental issues involve different views and perspectives. The mind map below describes one way to break down the views and perspectives. A breakdown like this links to Step 4 of **Spot and Respond to the Issue** on page 13.



Citizenship is about building a society that includes everyone — individuals and groups. Based on the mind map on this page, why are citizenship and environmental issues connected?

How do views and perspectives on environmental issues break down?



How do environmental issues connect to quality of life? Find three examples based on the mind map.

How are governance, economics and environmental issues connected?

The mind map on this page explores how governance and economics connect to environmental issues. Think about how an environmental issue that concerns you might engage different parts of this diagram. **Examine the diagram carefully. Which two parts relate to governance? Which two relate to economics?**

GOVERNANCE, ECONOMICS AND ENVIRONMENTAL ISSUES

Laws affect the quality of our environment, including laws about water quality. This biologist is analyzing a water sample to test for pollution. Canada’s federal political system creates and enforces the laws that govern Canada.

Economic decisions involve using resources in the natural world, such as forests, to produce goods and services, such as lumber. Economic decisions reflect values related to different economic systems, such as mixed economies or market economies.



This diagram reviews ideas you have studied this year. What examples of opportunities and challenges can you identify for each part of the diagram?

What are your biggest environmental concerns?

My biggest concern is pollution from big industries. I think companies take the easy way out when they put wastes into rivers and the air. They should dispose of wastes properly — including carbon emissions.

I'm glad to see car companies taking action to put limits on carbon emissions — like putting hybrid cars on the market. Some companies are looking into hydrogen fuel cells, too.

It's important to solve environmental problems because they affect our lives — how we live and how well we live.

I think Canada's government needs to set higher standards to control air and water pollution. But Canada has a small population. The governments of countries with large populations — like the U.S., China and India — need to step it up, too.



Graham Musat is a Grade 9 student in Edmonton.



To what extent do you agree that government has a role in solving environmental problems?



How do environmental issues affect these students' quality of life? How do they affect your quality of life?

I worry about global warming and what will happen to the animals — wildlife — because of it. Litter is also a problem. I see plastic bags and cans strewn around. Some people just don't respect what we have.

I think government should help with environmental problems, because it's going to take more than just the people who care about the environment to save it. It's going to take everybody. It's everybody's world, and we all need to show respect for the place we're in. Government can help make people take care of the world.

I heard an Elder in my community talking one time. He said he loves where he is, and he hates to see how people are destroying where he is. He said it breaks his heart. This is his home and he wants to protect it. I feel the same way.



Michelle Swampy is a Grade 9 student and lives in Gift Lake Métis Settlement.



Cassandra Sahlen is a Grade 9 student in Calgary.

I'm concerned about how much we throw out and the way landfills are filling up. Some people throw away useful stuff that shouldn't go to the landfill. We should be recycling it and giving it away.

I'm part of the Environmental Action Club at my school. We do a bulletin board about environmental issues, and I do the paper recycling and container recycling for my entire school. I think every school should recycle, but I know that many don't.

We only have one planet, and we're kind of destroying it.

It would be good if government would put a limit on what people can throw away, or on how much they can throw away — like no more than two bags a week. And we need to do something about plastic. Everything is wrapped in plastic! Like sour Nerds — they come in a box and they're wrapped in cellophane. They don't need to be. I think the government might have a role there — putting limits on over-packaging.

connect to the big ideas

1. Choose one of the interviews on pages 305 and 306.
 - Refer to the mind map on page 303. Identify where the interview fits on the mind map, and consider what other views and perspectives there might be.
 - Refer to the diagram on page 304. Consider how the students' comments and ideas connect to different parts of the diagram.
2. For your chapter task, you need to choose an environmental issue that affects quality of life for all Canadians, and to demonstrate an informed position on how political and economic decision making affects it. Use the questions below to help you. These questions relate to steps 4 through 6 of **Spot and Respond to the Issue** on page 13.
 - What views and perspectives do you think your environmental issue could involve? Consult the mind map on page 303. Describe how you could investigate different perspectives on your issue.
 - What environmental organizations might connect to your issue? Research some possible organizations. Describe how the work of one organization could affect your issue.
 - How does your issue connect to governance and economics? Consult the diagram on page 304. Describe ways that action on your issue could involve political and economic decision making.

What political and economic decisions should Canadians make to respond to climate change?

WHAT'S IN THIS SECTION

This section explores how political and economic decisions connect to climate change and to citizenship, identity and quality of life. It includes:

- Maps that present data related to climate change from Canada and the U.S.
- Information about individual action and climate change, including a comic and a profile of one student-action group.
- A case study of political and economic decision-making about climate change and Alberta's oil sands.
- Information about the Kyoto Protocol, an international agreement on climate change.

What are you looking for?

As you read this section, look for:

- Different perspectives on climate change in different regions of North America.
- Examples of ways to take action on environmental issues.
- Examples of how responding to an environmental issue can involve individual consumers, groups in society, and government.

Also look for ways to answer these questions:

- How can you develop a more informed response to the issue?
- What is your informed position on the issue?
- What action do you need to take on this issue?

These questions come from Steps 4 through 6 of **Spot and Respond to the Issue** on page 13.

Climate change will affect the whole Earth, but regions will not experience the same impacts. In addition, some regions make more climate-changing emissions than others. **Think critically: Why might these regional differences affect political and economic decisions about climate change?**



WHAT'S A GREENHOUSE GAS (GHG)?

GHGs capture heat generated by the Sun's rays. Have you ever been inside a greenhouse? It's warmer inside a greenhouse than it is outside. That's because the glass roof of the greenhouse captures heat generated by sunlight. It lets in light, but doesn't let out heat. GHGs make Earth's atmosphere behave like a greenhouse. They cause Earth to warm, which in turn affects living things on Earth, including plants, animals and people.

What's climate change?

- Climate change refers to a rise in the average temperature of Earth due to a build-up of greenhouse gases (GHGs) in the atmosphere. An international panel of scientists — the United Nations' Intergovernmental Panel on Climate Change — predicts that climate change will have extensive and mostly negative impacts around the globe. These impacts include rising sea levels, more severe weather, and disruption of ecosystems and freshwater supplies.
- GHGs primarily come from burning fossil fuels, such as natural gas, gasoline, coal and oil. Most economies in the world rely on fossil fuels to produce resources, such as metals and foods, and to manufacture and transport goods and services. Individual consumers also use fossil fuels — for example, to heat their homes and drive their cars.
- GHGs in the atmosphere affect the whole world. A region or country that emits more GHGs will not experience “worse” global warming. Different regions, however, will experience different impacts. For example, low-lying land — such as New Orleans, and the country of Bangladesh — face severe impacts from rising sea levels.

Why might North Americans have different ideas about how to respond to climate change?

The next pages explore:

- **Regions and impacts:** how regional differences in the impacts of climate change connect to political and economic decision making.
- **Regions and emissions:** how regional differences in the sources of GHGs connect to political and economic decision making.

DID YOU KNOW?

Regions of North America are already experiencing impacts from climate change. For example, hurricanes on the east coast of North America have become more frequent and severe. In 2005, the city of New Orleans experienced extensive flooding because of Hurricane Katrina. Coastal cities such as New Orleans also face flooding from rising sea levels.

HOW TO ANALYZE THEMATIC MAPS

The maps on pages 310 to 314 are thematic maps. Thematic maps show information related to a specific topic, or theme. For example, a population density map shows the number of people living in a defined area. Physical maps illustrate the shape of the land and the location of lakes and rivers.

You can use thematic maps to inquire into issues that affect quality of life, citizenship and identity. Follow the steps below to analyze the maps about Canada on pages 310 to 312 and answer this question:

How does climate change connect to citizenship in Canada?

Inquire	Map 1	Map 2	Map 3
Identify the type of map it is (e.g., physical, political, climate).			
Interpret the basic information on the map (e.g., legend, directional symbols).			
Analyze how the map relates to the issue question. Take notes on useful information.	<i>The map shows one way climate change may affect regions, which is...</i>		
Compare the map with other maps. Note where data overlaps, and where it doesn't overlap.	<i>The climate-change map overlaps with the population map in this way...</i>		
Draw your own conclusions about the information you have gathered. Think about how your conclusions connect to the issue question.	<i>Climate change affects regions and populations in this way..., which affects citizenship because...</i>		
State your position on the issue question, supported by examples and evidence.			

Go to the Skills Centre to see examples of different types of thematic maps.



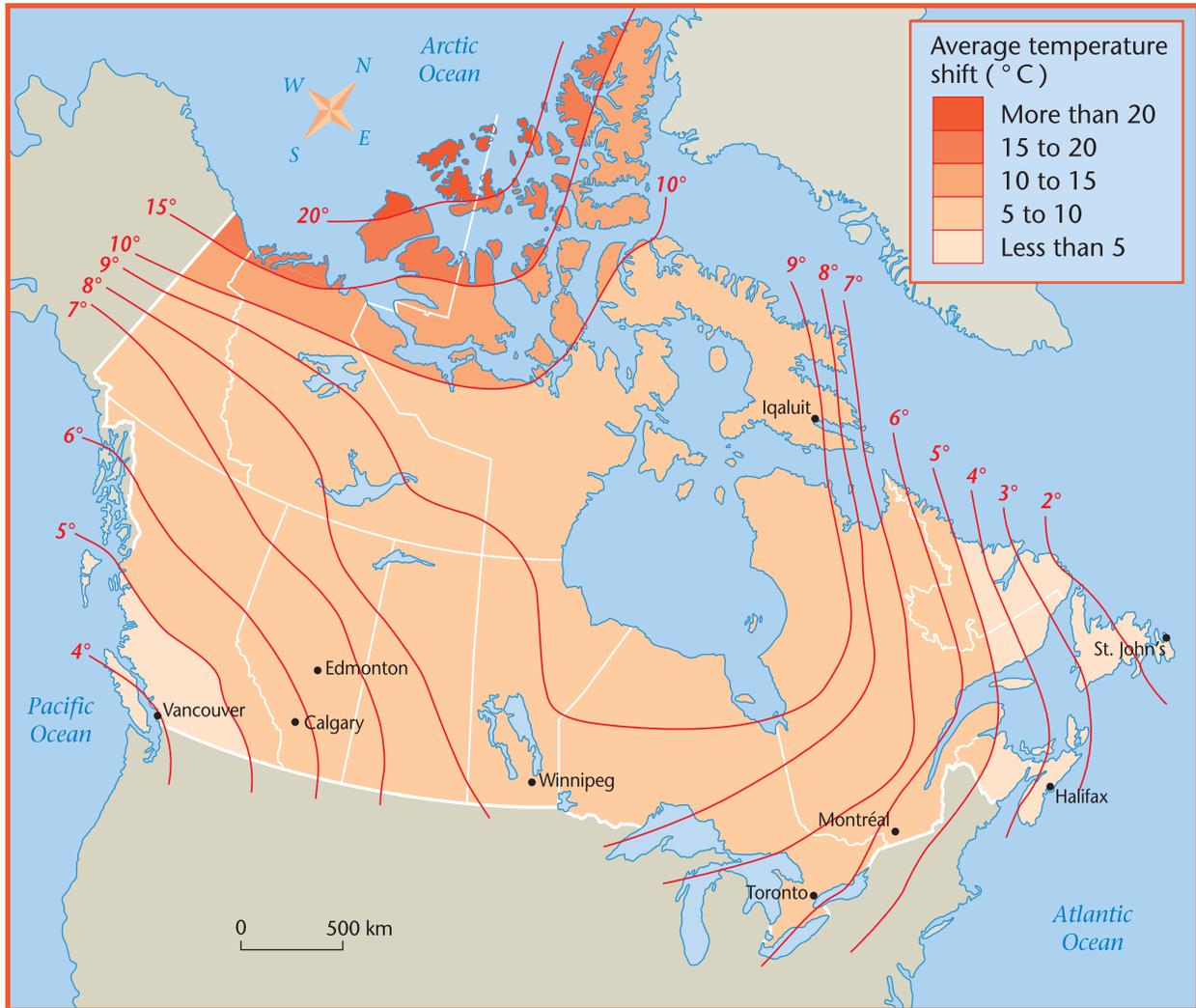
The maps on pages 310 to 312 are related to the issue of climate change. When you have investigated them, think about the issue you have chosen for your chapter task. Use GIS or another online mapping program to create thematic maps connected to your issue.

For example, if your issue concerns air quality, you could present maps comparing air quality in different cities with other data about cities, such as population, areas and number of vehicles. **Go to the Skills Centre on pages 345 to 371 for ideas on mapping.**



Climate Change, Regions and Impacts

Predicted Temperature Increases by 2099



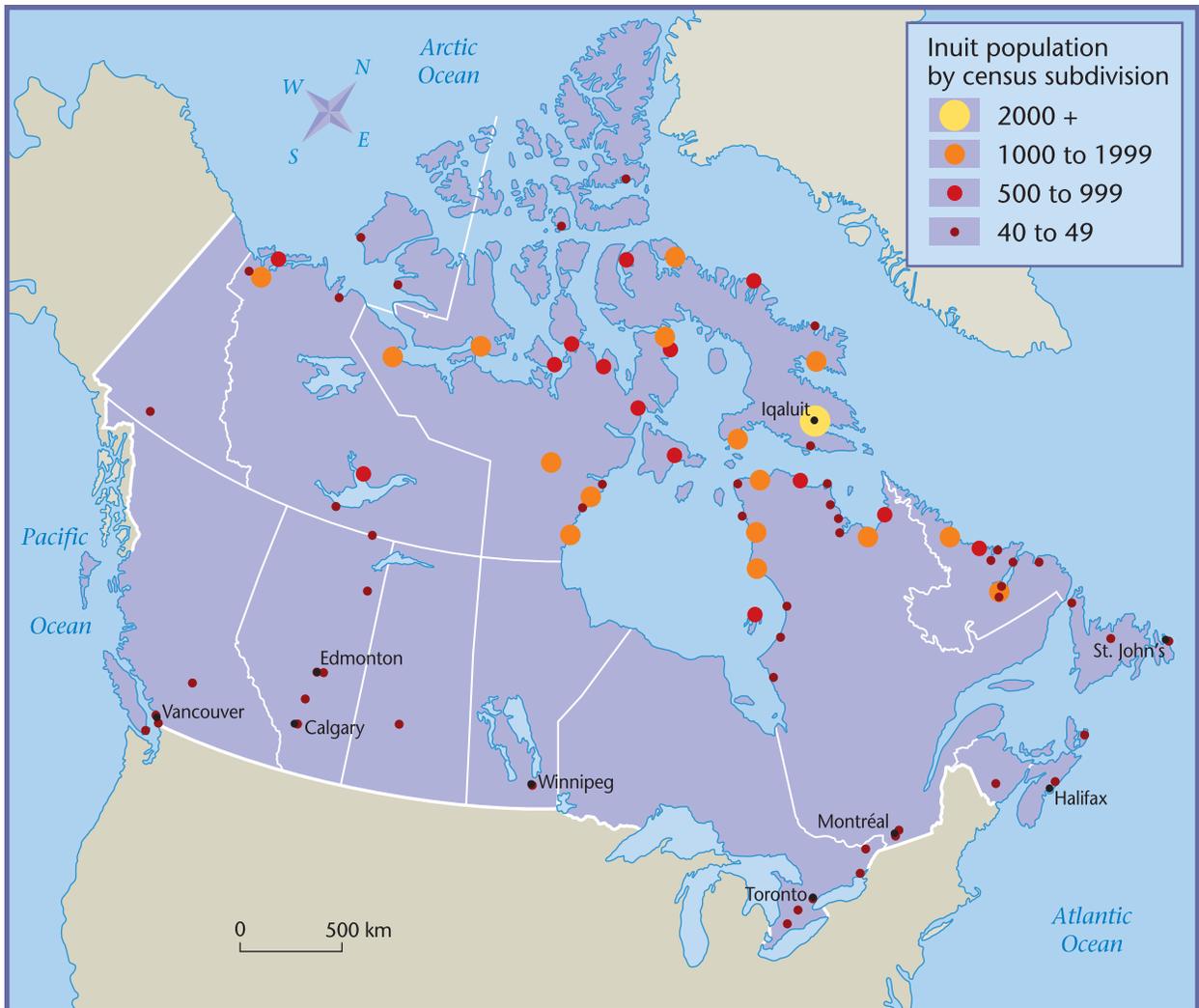
What region of Canada will experience the most warming?

DID YOU KNOW?

The Intergovernmental Panel on Climate Change predicts impacts such as the following for North America from warmer temperatures:

- Decline in abundance of fresh water (lakes and rivers).
- Loss of wildlife species overall. Some species will adapt to warmer temperatures.
- More extreme weather events, such as storms and droughts.
- Longer growing seasons, possibly resulting in higher crop yields and increased forest growth in some regions.
- Flooding along coastlines.

Distribution of Inuit Population in Canada, 2001



Where do most Inuit live in Canada?



CRITICAL THINKING CHALLENGE

What role might governance and rights play in providing the Inuit, and other Canadians, with a voice? What role might Canada's economic system play?

An Inuit man makes his way between Baffin and Bylot Islands in Nunavut. The Inuit have lived in Canada's north for thousands of years. Their way of life has roots in the land, and in rights established in Canada's constitution and in treaties. **Think critically:** How do political and economic decisions connected to climate change affect quality of life for the Inuit?



Compare this map to the map on page 310. Why might the Inuit seek a strong voice in political and economic decision making connected to climate change?

Climate Change, Regions and Emissions: Canada

Pages 310 and 311 explored regional differences in the impacts of climate change, and how this might affect views and perspectives about needed action. This page and the next explore regional differences in the sources of GHGs, and how this could also affect views and perspectives.

CO₂ Emissions by Province and Territory, 2005



Carbon dioxide (CO₂) makes up the majority of greenhouse gas emissions. What regions of Canada emit the most CO₂?

Canada's Total CO₂ Emissions, 2005

Province or Territory	Thousands of Tonnes CO ₂	Percentage Total Emissions
B.C.	65 900	8.9
Alberta	233 000	31.5
Saskatchewan	70 900	9.5
Manitoba	20 300	2.7
Ontario	201 000	27.2
Québec	89 400	12.1
New Brunswick	21 300	3.0
Nova Scotia	22 700	3.1
P.E.I.	2 280	0.3
Newfoundland and Labrador	10 500	1.4
Yukon	418	0.1
NWT and Nunavut	1 580	0.2

- Alberta has a large GHG output because of its oil industry and its coal-fired plants for generating electricity.
- Ontario has a large GHG output because of its manufacturing sector, including steel mills and plants for processing metal ores.
- Political and economic decision making helps shape the industries and plants that Alberta and Ontario have. For example:
 - Laws and policies set standards for pollution control, including GHG emissions.
 - Demand for energy and for products influences the number of industrial plants in operation.
- Reducing GHG emissions from industry is one way to respond to climate change — a way many governments and people around the world recommend.



Consider the information

on this page and page 312 carefully. Why might Alberta and Ontario face pressure to reduce their GHG emissions? How would reducing GHG emissions involve political and economic decision making?



CRITICAL THINKING CHALLENGE

How do decisions about GHG emissions connect to quality of life? Think about these links:

GHG emissions → **industry** → **jobs**

Climate Change, Regions and Emissions: North America

GDP per capita: a measure of how well-off the people of a country are — see page 261

Pages 312 to 313 explored how GHG emissions differ regionally in Canada. This page and the next explore how GHG emissions differ regionally in North America. They look at how the values underlying the U.S. economic system may play a role in decisions about climate change.



Compare the map on this page with the data in the table. To what extent do GDP and population correlate with GHG emissions? Support your answer with evidence.

CO₂ Emissions by Country, 2004



Which country has the highest GHG emissions?

Country Comparisons, 2007

Country	GDP per Capita	Estimated Population	Percentage Global CO ₂ Emissions
Canada	\$33 000	33 million	2
Mexico	\$12 500	109 million	1.5
U.S.	\$46 000	300 million	20

- The U.S. has faced pressure from countries around the world to reduce its GHG emissions. How does the information from the map on page 314 explain this, in your opinion? In 2007, the U.S. had not agreed to join international negotiations or agreements concerning climate change, such as the Kyoto Protocol. You can read more about the Kyoto Protocol on page 316.
- International negotiations on climate change focus on reducing the GHG emissions of developed countries, such as the U.S. and Canada. Developing countries, such as Mexico, do not face the same GHG restrictions. This is because GHG restrictions can slow the economy of a country, which goes against the needs and interests of developing countries. It is also because developed countries have a higher GHG output than developing countries — so they contribute more to climate change.
- The U.S. took a stand against international negotiations on climate change partly because President George W. Bush did not believe human actions were causing climate change. President Bush also believed that international agreements on climate change should not exempt developing countries from taking action.
- In 2008, in the State of the Union address, President George Bush said the U.S. would take action on its own to reduce its GHG emissions, without entering into international agreements. He also said actions on climate change had to respect the American belief in “the power of individuals” and in the “ability of free peoples to make wise decisions.”



How do President Bush's

remarks on climate change in the last bullet reflect values and attitudes that underlie the U.S. economic system?



CRITICAL THINKING CHALLENGE Based on what you know about

supply and demand, how might the decisions of individual consumers and producers push GHG emissions up or down? Describe an example.



CRITICAL THINKING CHALLENGE

What values do you think should shape economic decisions connected to climate change? Why?

What's the Kyoto Protocol?

Climate change involves the whole world — so it involves countries of the world in negotiations about how to take action. Canada and the U.S. are part of these negotiations.

The Kyoto Protocol was the first climate-change plan the countries of the world negotiated. The U.S. did not agree to the plan. Canada at first agreed, but its position has changed depending on the political party in power.

- Canada's Liberal government ratified the Kyoto Protocol in 2002. It, however, did not make decisions that reduced Canada's overall GHG emissions.
- In 2006, Canadians elected a Conservative government, which announced that Canada would not meet its targets under the Kyoto Protocol. The government said the targets would damage Canada's economy, and noted that Canada's GHG emissions were rising, not falling.
- In December 2007, an international meeting in Bali, Indonesia, launched new international negotiations on an agreement to fight climate change after 2012, when the Kyoto Protocol expires. Canada and the U.S. agreed to take part in these negotiations.

Individuals and members of environmental organizations from around the world demonstrate during climate-change negotiations in Bali, Indonesia, in 2007.



Why might the positions of Canada and the U.S. on the Kyoto Protocol concern environmental organizations?



What government decisions aimed to reduce GHG emissions in 2007?

This page presents some of the federal laws and policies in place in 2007 to reduce GHG emissions. Go online and research federal laws and policies today. Think about why laws and policies today have changed or stayed the same compared to 2007.

CRITICAL THINKING CHALLENGE Canada had a Conservative government in 2007. How do the values that shape Conservative policies compare with the decisions shown here?

Public transit, such as Calgary's LRT, can reduce GHG emissions by reducing the number of people who drive to work and school. The federal government encouraged consumers to use public transit by reducing taxes for those who bought transit passes.



The federal government provided funds to develop renewable energy technologies, such as wind turbines and solar panels. This is the McBride Lake Wind Farm near Fort Macleod, Alberta — one of the largest wind farms in Canada.



This machine is harvesting corn, which can be turned into biofuel. Biofuel emits fewer GHGs. In 2007, the federal government began to fund the production of biofuel.

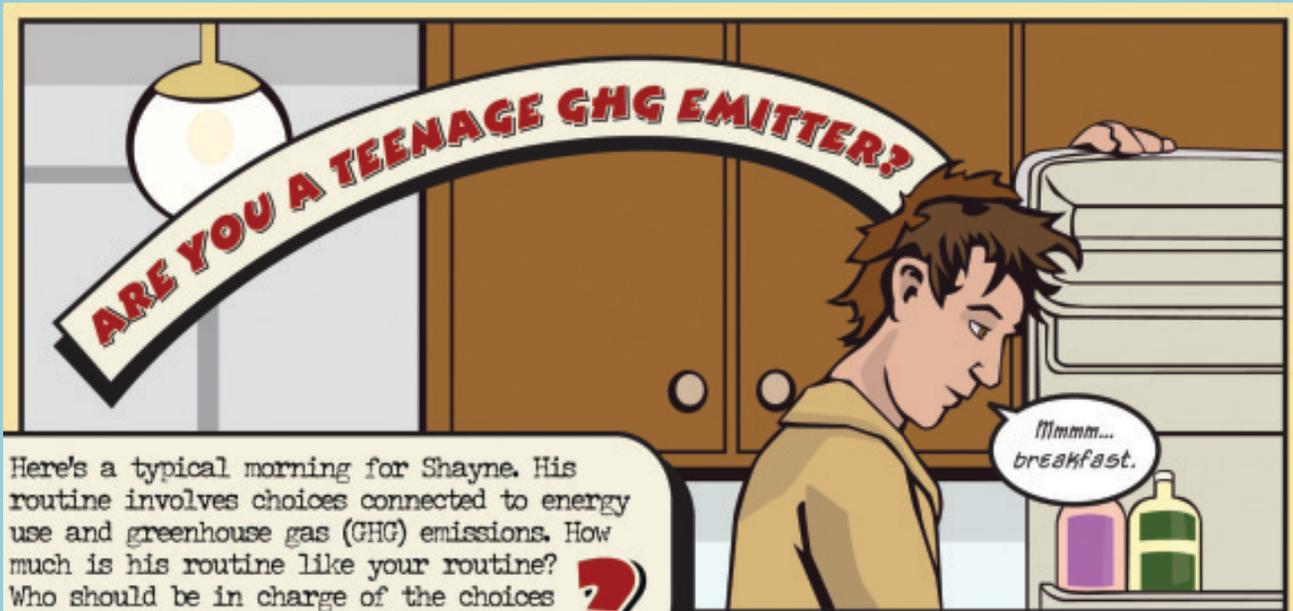


This power plant outside Edmonton uses coal to produce electricity. The Conservative government passed the Clean Air Act in 2006, which set new GHG emission standards for most plants and industries in Canada.

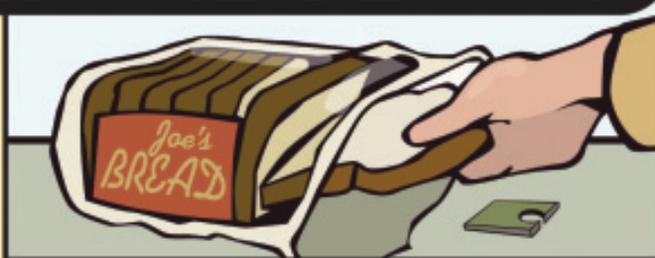
DID YOU KNOW?

In 2007, the U.S. government had taken steps similar to Canada, including tax breaks on energy-efficient products and services, and funding for new energy technologies. It also passed new energy-efficiency standards for vehicles, aimed at making vehicles emit a lower quantity of GHGs.

In 2008, to fight climate change, B.C.'s government created a "carbon tax" on fossil fuels, including diesel, natural gas, coal and propane. Fossil fuels emit carbon in the form of CO₂. The tax made these fuels more expensive for consumers, and aimed to discourage consumers from buying them. The tax functioned as a reminder to consumers: the government did not use the tax to fund any initiatives, but rather returned the money to consumers with tax breaks in other areas.

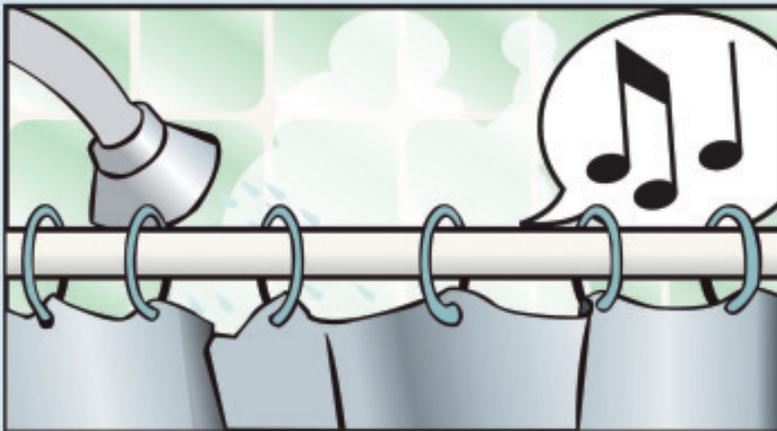


Here's a typical morning for Shayne. His routine involves choices connected to energy use and greenhouse gas (GHG) emissions. How much is his routine like your routine? Who should be in charge of the choices that affect GHG emissions?

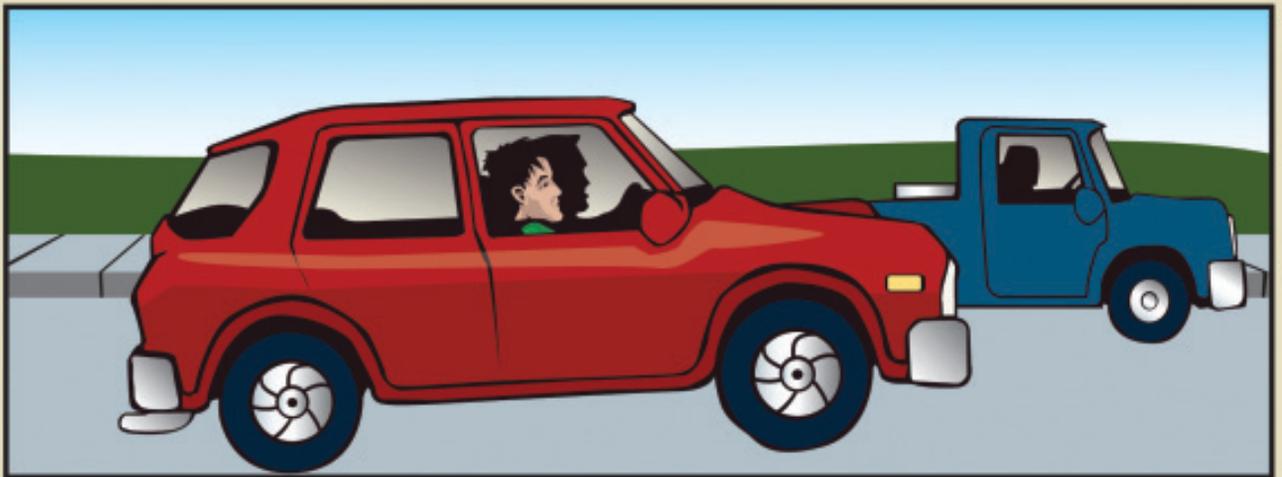


What foods do you like? What if the government began promoting biofuels made from grain, vegetable oil and sugar as a green alternative to fossil fuels? How might this affect the food supply? How might this affect you?





How much hot water do you use? Home furnaces and water heaters account for about six percent of Canada's GHG emissions. What if the government passed regulations about appliances and showerheads that restricted the amount of hot water available to you?



Don't forget your guitar lesson after school. I'll pick you up at 3:30!

How much do you drive in a week? Private vehicles emit about twelve percent of Canada's GHG emissions. What if the government put a tax on gasoline, to discourage driving by making it more expensive?



What if the government decided to do nothing, and left decisions about GHG emissions up to you? What impact might this strategy have on climate change?





Students for Environmental and Social Advocacy



Rob Grant is a Grade 12 student at Camrose Composite High School. He helped start a group at his school called Students for Environmental and Social Advocacy.

Renewable energy is one of the most important things for the future. We wanted to demonstrate that renewable energy is viable and has a place in our society.

It's about taking action on climate change. It's such a broad issue, and so scary. We want people to know they have a choice in the energy they use. We want them to realize their choice is a choice, every time they use their microwave or turn on the TV.

Our group is extremely worried about the oil sands. We want to show that Alberta's economy would benefit from a greener path. We don't have to compromise our economy and standard of living to use renewable energy.

I think it's huge for the government to be involved in environmental issues. Environmental issues are important to people, but they're really big. Lots of people don't know where to start. Government needs to take the lead. It represents us, and it needs to act in our interests.

Plugging In to Solar

Rob Grant put solar panels on his school.

"The project started with me and one other student, Elizabeth Solverson. We felt it was important to make people aware of renewable energy. We wanted to get as many people involved as possible. So, we announced a meeting. Anyone interested could attend. Twenty-five people are part of the group now and we meet every week."

The solar panels create electricity and supply about 3 percent of what the school needs to run its lights, computers, microwaves and so on. The panels went up in December 2007 and cost about \$25 000.

"We're in a perfect position — in a school — to educate people and to demonstrate environmental stewardship. People read about renewable energy — we wanted them to see it in action. We wanted to get renewable energy out of textbooks and into real life."



What are the main environmental concerns of the Students for Environmental and Social Advocacy? How do they view the role of government and individuals in responding to environmental issues?

The group did a number of things to raise awareness about renewable energy.

- Concerts, where all the money and donations went to the project. These events featured a speaker from the group, who talked about the project and the reasons for it.
- Weekly updates about the project in the school newsletter, with contact information for the group.
- Updates every Thursday, on morning announcements. This featured an “environment fact of the week.”
- Information booths during parent-teacher interviews and a basketball tournament. Group members gave out pamphlets, and talked to people about what they were doing and why. They put out a donation jar.

“We raised about a thousand dollars with these events, but their real value was in making people aware.” The group raised the rest of the funds from local businesses, with phone calls, meetings and emails.

“Be prepared to talk — even if it makes you nervous!” says Rob, a little nervously. “The issue is more important than how nervous you are.”



CRITICAL THINKING CHALLENGE Refer to the mind map on page 303. How do the Students for Environmental and Social Advocacy fit into the breakdown of views and perspectives on environmental issues? What other views and perspectives are important to consider? Why?



Rob Grant, and some Grade 9 members of Students for Environmental and Social Advocacy, stand in front of the solar panels they helped install on their school. You can see the panels behind the student on the right. These students raised awareness on an issue that concerned them by taking action.

connect to the big ideas

1. Pages 302 to 321 have explored the role of governments, industry, groups and individuals in political and economic decision making about climate change. Describe an example of different views and perspectives on climate change, based on what you learned. Describe reasons for the different views and perspectives in your example. To what extent do you expect similar or different reasons to generate a variety of views and perspectives on the issue for your chapter task?
2. Over a two-hour period, make a list of all the times you use electricity, battery-powered devices such as rechargeable phones, or fossil fuels such as gasoline and natural gas. Indicate what you used them for and why. Which things would you cross off your list and do without? What could you do instead to help reduce GHGs? In your opinion, how important are individual actions to reduce GHGs? Why?
3. In 2007, the federal government offered rebates for fuel-efficient cars, such as hybrids. Based on the views, perspectives and events you have read in this section, why might the government choose to make this political decision? What impact on producers and consumers could it have? Create a diagram or a cartoon to illustrate your answer.



This hybrid car is fuelling up at a gas station.

CASE STUDY

WHAT IMPACTS DO ECONOMIC AND POLITICAL DECISIONS ABOUT THE OIL SANDS HAVE ON CLIMATE CHANGE AND QUALITY OF LIFE?

Oil sands development in Alberta emits large quantities of GHGs. So, economic and political decisions about climate change often affect the oil sands, and decisions about the oil sands affect climate change.

These decisions involve many views and perspectives, including those of producers, consumers and governments. They involve legislation and the rights of Aboriginal peoples and of individuals. They affect quality of life in many ways, because of jobs, the impacts of climate change and other factors.

Pages 323 to 326 present articles and cartoons that explore some of the views and perspectives connected to decisions about oil sands development. As you read these pages, think about views and perspectives linked to the environmental issue you have chosen for your chapter task.

Federal Government Lets Alberta Oil Sands Off the Hook

May 8, 2007

OTTAWA — The federal government today issued clean-air regulations that exempt Alberta's oil sands from new pollution limits. Under the regulations, oil sands plants will not need to cut back on smog-forming emissions such as volatile organic compounds and nitrous oxide. In addition, oil sands plants will not have to cut greenhouse-gas emissions for three years — a move the government hopes will result in a rapid expansion of oil sands development.

— Based on research into events, views and perspectives.



Examine the article. How does the federal law it describes affect development of the oil sands?



CRITICAL THINKING CHALLENGE

Why might Canadians have different views and perspectives about this federal law? To what extent does governance in Canada create opportunities for Canadians to voice their views and perspectives?

This is the Scotford Upgrader in Fort Saskatchewan, Alberta. The upgrader turns bitumen — the sticky substance extracted from the oil sands — into synthetic crude oil used for fuel and chemical products. It employs 200 people. It is part of an industry that ranks as one of the top GHG emitters in Canada. **Think critically:** How could the decisions of consumers to use more or less energy affect the jobs at this upgrader? How could it affect climate change? Whose quality of life would decisions affecting this upgrader involve?

Premier Rejects Calls to Slow Oil Sands

June 19, 2007

CALGARY — In a speech to the Canadian Association of Petroleum Producers, Alberta’s premier Ed Stelmach said continued growth of the oil industry was key to Alberta’s economic future. He noted that, in 2006, one in every four new jobs in Canada was created in Alberta and that unemployment was the lowest in any Canadian province in the last 30 years. The premier acknowledged that the rapid growth of the oil sands had put pressures on Alberta’s infrastructure and public services. But he rejected the idea of slowing oil sands development. He said that some people have suggested his government “touch the brakes” on oil sands development. He stated that his government rejects that idea, because it believes producers and consumers, acting freely, make the best economic decisions. He said government should not be involved in manipulating the economy.

— Based on research into events, views and perspectives.

DID YOU KNOW?

Two levels of government are involved in the development of the oil sands. Under Canada’s constitution, provincial governments control natural resources. So, Alberta’s government sets the pace and extent of oil sands development. The idea of provincial control reflects a value at the centre of Canada: that people in different regions of Canada should have a voice in laws and policies that affect their quality of life.

Both the provincial and federal governments set pollution limits, including limits on greenhouse gases. This reflects another idea at the centre of Canada: that the federal government should maintain the “peace, order and good government” of Canada as a whole.



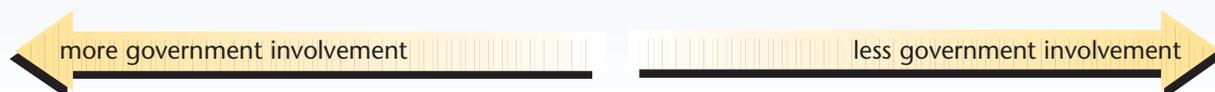
Examine the views of Premier Stelmach. What values shape his position on the government’s role in oil sands development? Where would you locate his position on the economic continuum? Why?

THE ECONOMIC CONTINUUM

Planned Economy

Mixed Economy

Market Economy



Coalition urges slowdown on oil sands

A coalition of groups in Alberta called on the provincial government today to stop approving any more oil sands projects. The groups represent a wide variety of interests: First Nations communities, environmental organizations, scientists, health care sector employees, labour, faith communities and social justice groups. All of them feel the rapid pace of oil sands development has put too much strain on the quality of air, land, health and the economy in Alberta's communities. They are running ads in newspapers in Vegreville, Medicine Hat and Grande Prairie. "It's time to stop and think!" read the ads, which then go on to list nine reasons to halt development.

— Adapted from an article by Hanneke Brooymans in the *Edmonton Journal*, February 1, 2008.



It's time to STOP and THINK!

Here are just a few reasons why:

- Out-of-control tar sands development has made Alberta the pollution capital of Canada; greenhouse gas emissions from this industry now represent the fastest growing source of Canada's global warming pollution.
- People living in communities downstream from tar sands mines and tailings ponds are being diagnosed with rare forms of cancer and auto-immune disorders.
- First Nations and Aboriginal Peoples in AB, SK and NWT have not been appropriately consulted about oil sands developments.
- Millions of acres of pristine boreal forest and wetlands are being lost and damaged to development.
- By 2012, daily natural gas use by the tar sands will equal the amount needed to heat every home in Canada each day.
- Up to 5 barrels of water are needed to produce 1 barrel of oil from the tar sands.
- An overheated economy means high inflation and a shortage of health care professionals, affordable housing and workers for critical infrastructure projects.
- Raw bitumen is being exported along with jobs and benefits.
- Alberta's system for approving oil sands projects is broken and is not serving Albertans' best interests.

Regardless of the reason, there is one thing we all agree on - the first step is to stop adding to the problem.

No New Oil Sands Approvals!



Examine the ad on this page.

What evidence can you find that oil sands development involves collective rights? What evidence describes some of the effects of oil sands development on quality of life?



Refer to the mind map on page 303.

Where would you locate the perspectives on this page on the mind map?

This ad appeared in several newspapers in Alberta, sponsored by a coalition of organizations concerned with the impacts of oil sands development. Think critically: The term *tar sands* in this ad refers to oil sands. How might the use of this term convey a perspective?

How might consumer behaviour affect government decisions about oil sands development?

Consumers create demand for products such as oil and gas, which connect to political and economic decisions about oil sands development. This year, you explored the role that government and consumerism should play in Canada's economy. Apply what you learned to help you interpret the cartoons below.



This cartoon appeared in February 2007, following news that American car manufacturers were losing money and planned to lay off workers. What do the sizes of the cars convey about its message?

To what extent has the driver of the car made an informed decision about what to drive?



Which cartoon supports the idea that government needs to play a role in the economy to reduce GHG emissions?

connect to the big ideas

1. Choose one view or perspective from the articles or cartoons in this section. How does the view or perspective connect to governance or economics? To answer this question, refer to the diagram on page 304. Describe a way that the view or perspective fits part of the diagram. Share your conclusions with a partner.
2. Write a letter or email to the federal or provincial environment minister to find out more about government positions on climate change. Compare the position of one of these governments with the position of other political parties. To what extent do different political parties have different positions? How do their different economic philosophies affect their positions?
3. Take a step towards completing your chapter task. Develop an inquiry plan for investigating views and perspectives on your environmental issue. *Go to page 356 to 359 in the Skills Centre for tips on developing an inquiry plan.*



Steps to Social Involvement

In this chapter, you have read about individuals who have taken action to improve quality of life for themselves, their schools, and communities. They have organized action and information to bring awareness to issues that concern them.

For your chapter task, you will also take action — by researching and presenting an informed response that raises awareness about political and economic decision making. **How do you know when to take action on an issue? When you decide to take action on an issue, what steps can you take to become better informed, work with others and communicate your response?**



HOW DO YOU KNOW WHEN TO GET INVOLVED?



First, I research an issue that has impacts on others and that I am concerned about — for example, having a voice in government or consumerism. The research inspires me to do something about the issue to help others.

When you get involved and do something, you're being a leader. I used to think leadership was about being in charge, but now I see that it's about doing something to help others. It's part of responsible citizenship.



Try this!

In this chapter, you have encountered environmental issues affecting citizenship, identity and quality of life of Canadians. Where could you go for more information about other environmental issues affecting Canadians today? What issue will you take action on?

How could you take action to influence decision making on an environmental issue?

As part of your chapter task, you need to describe ways citizens can take action to respond to an environmental issue. Include the ideas you develop here in your presentation.

<p>Choose an issue.</p>	<ul style="list-style-type: none"> • Choose an issue you would like to influence or speak out on. Think about issues you have read about, or seen on television or the Internet. • Be as specific as possible.
<p>Research the issue.</p>	<ul style="list-style-type: none"> • Gather information from legitimate groups and organizations concerned about the issue. • Research various sources (e.g., news media, library, Internet, films/DVDs, government) to find out the causes and consequences of the issue, and proposed solutions.
<p>Choose a way to influence political and economic decision making on your issue.</p>	<ul style="list-style-type: none"> • Consider the best way to influence political and economic decision making on your issue. Some examples: fundraising campaign, information display, panel discussion, public service announcement, petition, press release, letter-writing campaign. • Describe your choice for taking action and the reasons for it.
<p>Create an action plan.</p>	<ul style="list-style-type: none"> • Make a step-by-step strategy for your choice. Include specific steps for involving others in your choice. Consider who needs to be involved, materials needed and timelines for getting things done.
<p>Propose your action plan.</p>	<ul style="list-style-type: none"> • Present your action plan, backed up with specific details and reasons, to a small group of classmates. Listen to their action plans. • Describe one way you could improve your action plan based on what you learned from the ideas of your classmates.

What political and economic decisions should Canadians make to protect biodiversity?

WHAT'S IN THIS SECTION

This section presents:

- The observations of an environmentalist taking action to protect biodiversity.

What are you looking for?

As you read this section, look for:

- Ways that decisions about biodiversity affect the environment, the economy and quality of life.
- Steps to involve others in issues that concern you.

Also look for ways to answer these questions:

- How can you develop a more informed response to the issue?
- What is your informed position on the issue?
- What action do you need to take on this issue?

These questions come from Steps 4 through 6 of **Spot and Respond to the Issue** on page 13.

This is the Rumsey Natural Area near Stettler, Alberta. It is the largest undisturbed tract of aspen parkland remaining in Canada. The ponds within its hummocky terrain provide some of North America's most important waterfowl habitat. Energy companies have challenged the protected status of the area, seeking rights to drill for natural gas. **Think critically: How could you find out the current status of the Rumsey Natural Area and other protected areas in Alberta?**

WHAT'S BIODIVERSITY?

Biodiversity refers to the variety and number of living things on Earth, and to the ecosystems living things both shape and depend on. Ecosystems provide us with many "ecological services," such as clean water, clean air and climate control — so they connect to the quality of life of everyone in fundamental ways. Ecosystems can also have cultural and spiritual importance to people. In addition, ecosystems can be an important source of wild food for some Canadians, especially for some First Nations, Métis and Inuit.



SPOT AND RESPOND TO THE ISSUE

Should development be allowed in protected areas?



DIARY OF AN ECOWARRIOR

Look into what one environmentalist has learned about taking action. As you read, think about how his ideas could help you build a plan of action for the environmental issue in your chapter task.



Me, Cliff Wallis

- professional biologist
- member of the Alberta Wilderness Association
- advocate for wilderness

The Issue: Woodland Caribou



Woodland caribou do not tolerate human activity well, partly because they eat lichens. Lichens thrive in old-growth forests — forests established and undisturbed for at least eighty years. Woodland caribou used to range over all of Alberta's boreal forest. But logging operations, and oil and gas development, have disturbed large areas of their habitat. Disturbed forest doesn't grow lichens, and it attracts deer and moose — and wolves. Wolves find caribou an easy meal. The woodland caribou is now listed as a threatened species under the federal Species at Risk Act.

We know what the science is telling us: woodland caribou are in trouble. The boreal forest ecosystem is in trouble. So, how do we get people to act? It's not enough to give them information.

*To Take Action
First, you build a network.
Then, you look for levers.*

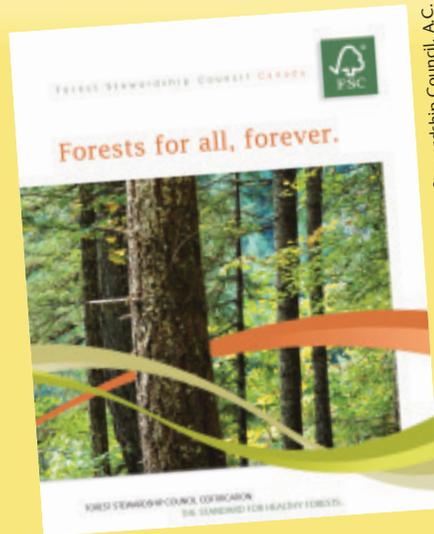


Refer to the mind map on page 303. Where does Cliff Wallis fit into the bigger picture of views and perspectives on environmental issues?

Building a Network

You think of everybody who has a stake in the issue, and you look for individual people who are concerned about the future, like you are. There are some of these people everywhere — in government, in industry, in your community. You build bridges to them, and you expand your network to include a greater and greater diversity of people.

The Forest Stewardship Council (FSC) is an international association that sets standards for using forests. Its list of member organizations is pages and pages long, and demonstrates the diversity of people and businesses connected to forests — from Wigger's Custom Furniture in Port Perry, Ontario, to Little Red River Cree Nation in northern Alberta, to the multinational pulp and paper company Alberta Pacific, to the Communications, Energy and Paperworkers Union. The FSC certifies companies that use forests sustainably — including the boreal forest where woodland caribou live.



© 1996 Forest Stewardship Council, A.C.

The network we built was the Forest Stewardship Council.



Citizenship is about building a society where everyone belongs — individuals and groups. How does Cliff Wallis's strategy of "building a network" connect to citizenship?

Notes: Who has a stake in the woodland caribou?

ABORIGINAL PEOPLES, because they have constitutional rights to land and to traditional ways of using the land, such as hunting, fishing and trapping.

BUSINESSES, because they use the forest to make products for the market. Forestry is different from oil and gas this way. Forestry companies need forests that are healthy for the long term, but oil and gas companies need what's under forests. Oil and gas companies don't need to think about what's good for forests.

ENVIRONMENT GROUPS, because they represent the big-picture public interest of protecting ecosystems.

GOVERNMENTS, because they have responsibility for wildlife and for the development of natural resources, such as forests, and oil and gas.

UNIONS, because many jobs come from using forests.



What views and perspectives are you investigating for your chapter task? How does your investigation compare with this list? Consider whether this list offers insights that could help you with your research.

Looking for Levers

lever: in the context of society, a means of accomplishing something; a way to apply pressure

In physics, *levers* are devices that can amplify the work you do. A lever lets you apply a little pressure on one end, and make big things happen on the other. In my volunteer work, I look for "levers" — ways to apply pressure that will get people to act. This is all about getting people to act.

Lever 1

Markets

Limited Brands is a clothing company that uses catalogues to market its products. In 2006, it agreed to convert its catalogues to paper certified by the FSC — a move that helps protect woodland caribou habitat. Other companies that use FSC certified products include IKEA and Home Depot.

Catalogues
+
Woodland
Caribou

International trade is connected to caribou habitat. The companies that buy resources from Alberta drive some of the logging and drilling that goes on here. Money talks. We are making the market work for the caribou. We are changing the way people think about the economy. It's not about taking away people's jobs. It's about making jobs last, by making the forests they depend on last.

About the Species at Risk Act

The Species at Risk Act (SARA) was created to protect wildlife species from becoming extinct in two ways:

- By providing for the recovery of species at risk due to human activity; and
- By ensuring through sound management that species of special concern don't become endangered or threatened.

The Act became law in June 2003. It includes prohibitions against killing, harming, harassing, capturing or taking species at risk, and against destroying their critical habitats.

Here are some species from western Canada listed under the act.

Western Blue Flag



Woodland Caribou



Northern Leopard Frog



Grizzly Bear

Level 2

Laws

One of the challenges is how to get oil and gas companies on board. Laws are an important lever for them. So far, governments haven't done much to protect caribou habitat, but the federal government has an obligation to protect the woodland caribou under the Species at Risk Act. So, we've launched a case to trigger action from the federal government. We hope this will have an impact on oil and gas development.

Lever 3 *International Agreements*

International Convention on Biological Diversity

The nations that have signed this agreement:

- ... Conscious of the importance of biological diversity for evolution and for maintaining life sustaining systems of the biosphere,
- ... Affirming that the conservation of biological diversity is a common concern of humankind,
- ... Aware that conservation and sustainable use of biological diversity is of critical importance for meeting the food, health and other needs of the growing world population,

Have agreed to take steps to protect biological diversity.

Some people aren't aware of Canada's international obligations to protect biodiversity. Canada signed the Convention on Biological Diversity in 1992, and it helped create an agreement on forests under the U.N. Forum on Forests in 2007. It's important for people to know that our wilderness isn't just "ours." It belongs to the world. It affects the world. The world is watching.

connect to the big ideas

1. Create a chart or diagram that shows how the steps described in "Diary of an Ecowarrior" fit the steps in **Spot and Respond to an Issue** on page 13.
2. Imagine you are a reporter who has interviewed Cliff Wallis. Write a short news story summarizing how he takes action on environmental issues. **Go to the Skills Centre on page 371 for tips on writing a news article.**
3. Consider the advice of Cliff Wallis to "build a network." Based on the mind map on page 303 about views and perspectives, who would you include in a network for the environmental issue for your chapter task? Jot down the reasons for your decisions and share them with a partner.
4. Cliff Wallis describes three "levers": the market, laws and international agreements. Which of these levers could play a role in the environmental issue for your chapter task? Research possible levers, and design a way to show others how you could "put a lever to work" on your issue.





Wrap Up Your Task

For your chapter task, you need to present an informed response to the following question:

How does political and economic decision making affect environmental issues and quality of life?

Summarize Your Ideas

Review your notes about the effects of political and economic decision making on the environmental issues you encountered in this chapter. Consider what you learned from your research into your own environmental issue and from “Steps to Social Involvement” on pages 327 and 328. Use what you know about how to spot and respond to an issue to help you summarize your ideas.

Communicate Your Response

Prepare your presentation. Remember to include:

- Your research on how your environmental issue affects quality of life today.
- Views and perspectives on your environmental issue.
- An explanation of how government and citizens have responded to the issue.
- Options and solutions for how citizens can take action to influence economic and political decision making on the issue.

As part of your conclusions about how citizens can take action, prepare some sample materials to support an action plan you recommend. For example, if you recommend a letter-writing campaign, present an announcement for radio or newspapers that would encourage people to join such a campaign.

For your support materials, choose from the formats below, or think of a format of your own.

- Radio or TV announcement.
- Information display for your school or a mall.
- Digital announcement for attaching to email.

TIPS FOR YOUR SUPPORT MATERIALS

- ✓ Choose the format that would reach the most people interested in your issue.
- ✓ Consider cost and the reasons for choosing more expensive or less expensive options.
- ✓ Apply what you have learned about persuasive communication this year.
- ✓ Create a clear message that aims to involve others in a course of action.

You've used the steps for **Spot and Respond to the Issue** many times this year. That's because they're useful for any issue, including issues you haven't encountered yet. Before you complete your task for this chapter, compare your work against the steps on pages 12 and 13.



Chapter 9 Review

WHAT DID CHAPTER 9 EXPLORE?

- How do environmental issues involve political and economic decision making?
- What political and economic decisions should Canadians make to respond to climate change?
- What political and economic decisions should Canadians make to protect biodiversity?

Revisiting the Chapter Issue

Use what you have learned in this chapter to develop your own informed position on the chapter issue:

How should governments in Canada respond to political and economic issues?

Work through the directions for “Demonstrating Your Learning” on page 55 to present your position.

Share What You Know

Plan and create a presentation that illustrates different views and perspectives on one of the environmental issues in this chapter. Think of a format that would best communicate your ideas. You could include a skit or tableau, music or sound effects, a poster or other visual.

Take Action

With the help of your teacher, invite a provincial or federal minister of the environment to your school to raise awareness about current environmental issues and government decisions affecting quality of life today.

Reflect Before You Forget

Reflect on what you learned in this chapter. Complete these thoughts:

- In this chapter, I learned... about taking action on issues.
- Thinking about environmental issues that affect me and others matters because...
- The most important thing I learned about governments responding to environmental issues is...

Link with Technology

Using a digital camera or a video camera, interview different individuals for their views and perspectives on how one of the environmental issues in this chapter affects citizenship, identity and quality of life. Present your clips to others.

Go to the Skills Centre on page 374 to get ideas.



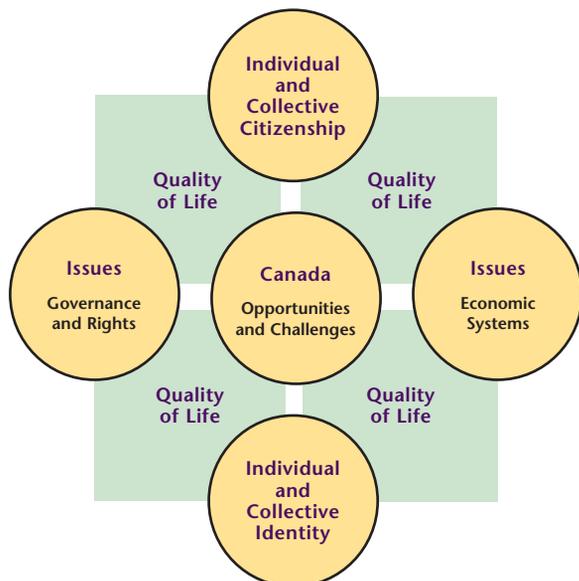
Big Ideas Review

This year in Grade 9 social studies, you explored how governance, rights and economic decision making affects quality of life for all Canadians. You analyzed challenges and opportunities that these create as Canadians respond to issues. You considered points of view and perspectives.

Revisiting the Issues in this Book

Refer to the table of contents at the front of the book to review the main issues you covered this year. Use the chart below to summarize what you learned. For each issue:

- Describe how the issue involves political decision making (governance and rights) or economic decision making (economic systems and consumer behaviour), or both.
- Describe how the issue affects identity, citizenship and quality of life. Use examples of views and perspectives to do this.
- Describe an example of an opportunity and a challenge the issue creates for Canadians.



Going Beyond the Book

Choose an issue making news today that affects quality of life for all Canadians. Check today’s newspaper or check an online news source.

Respond to the Issue

By now, you have had lots of practice researching and developing an informed response, so your response should be thorough and detailed. Remember to work through the steps for **Spot and Respond to the Issue** on pages 12 and 13.

Link with Technology

Describe how you could use technology to communicate and take action on your issue.

Share What You Know

Choose a format that would best communicate your position on the issue. For example, you could create a multi-media presentation, a role-play or a poster. Explain the reasons for your choice and describe steps for accomplishing it.

Take Action

Think back to ways that individuals and collectives in this book have taken action on issues that are important to them. Explain what action you believe is appropriate on the issue you have chosen. Describe how your action connects to responsible citizenship and present steps for accomplishing the action you identify.