

KYOTO: THE BATTLE LINES ARE DRAWN

Introduction

Focus

This *News in Review* story deals with the debate over whether Canada should ratify the Kyoto Protocol on climate change, and how this has emerged as a potentially divisive issue in Canadian politics and society.



Sections marked with this symbol indicate content suitable for younger viewers.

The question of whether or not Canada should ratify the Kyoto Protocol on climate change became a heated and potentially divisive political issue in the autumn of 2002. Prime Minister Jean Chrétien stated unequivocally that Canada would endorse this 1997 international treaty designed to protect the earth's environment from further global warming by the end of 2002. Under the terms of the Kyoto agreement, Canada would be required to reduce its level of greenhouse gas emissions by the year 2008 to six per cent below the 1990 rate. In order to meet this target, both corporations and individual citizens would need to become more environmentally conscious and limit activities that resulted in the burning of fossil fuels—such as coal, oil, and natural gas—that produce “greenhouse gases” like carbon dioxide. This meant that large oil and gas companies would be required to install expensive pollution-control devices in their facilities, while Canadian families would be expected to limit their use of automobiles, make their homes more energy efficient, and reduce their reliance on electric appliances. Most Canadians indicated in public opinion surveys that they supported the goals of the Kyoto accord. However, there was considerable uncertainty regarding exactly how the federal government intended to reach the targets to which it had committed itself. In addition, some business figures and opposition political leaders expressed their concerns about the potentially negative economic consequences of Kyoto, in terms of lost jobs, investment, and productivity.

Perhaps nowhere was this uneasiness

about Kyoto more prevalent than in the province of Alberta, whose economy is primarily driven by the exploitation of its vast petroleum reserves. Premier Ralph Klein flatly denounced the Kyoto accord as economic suicide for his province, and instead endorsed what he termed a “made-in-Canada” environmental policy that would be far less demanding on the oil and gas companies that are the main producers of greenhouse gases. Klein and other members of his provincial government even called into question the scientific evidence clearly endorsed by the vast majority of informed scientific opinion: the burning of fossil fuels and the resulting global warming are really the major cause of climate change. A small but vocal minority of scientists, many of them funded by powerful Alberta petroleum companies, openly concurs with Klein's opinion. For most Canadians who lack the specialized scientific knowledge and background required to understand the intricacies of the issue, the debate over Kyoto was becoming less a matter of science and more a question of economics and politics. Both sides in the argument were actively using the mass media in order to persuade Canadians of the validity of their claims.

Bowing to a growing anti-Kyoto lobby led by Klein and the “oil patch” but also backed by other provincial governments, especially British Columbia and Ontario, Chrétien announced in November 2002 that he would offer some financial incentives to companies in return for their co-operation in meeting the Kyoto targets. He would also engage in closer consultation with the

For more information on the stand Canada's political parties have taken on the Kyoto Protocol visit their official Web sites at:

Bloc Québécois,
www.bloc
quebecois.org

Canadian Alliance,
www.canadian
alliance.ca

Liberal Party of
Canada,
www.liberal.ca

New Democratic
Party of Canada,
www.ndp.ca

Progressive Con-
servative Party of
Canada,
www.pcparty.ca

provinces whose economies were most likely to be negatively impacted by the deal. But at the same time, he reiterated his government's intention to move ahead with ratification in a parliamentary vote expected in late 2002. The opposition New Democrats and Bloc Québécois both backed the governing Liberals' pro-Kyoto stance, while the Canadian Alliance and the Conservatives were opposed to the deal. Some anti-Kyoto opposition figures looked to Paul Martin, the leading candidate to replace Chrétien, as someone who might move more cautiously on implementing the terms of the deal once he became prime minister.

By late November 2002 there was little doubt that Parliament would ratify the Kyoto Protocol. But Alberta and other provincial governments were actively preparing the ground for a possible challenge to that decision under the terms of the Canadian constitution, which grants the provinces control over natural resources in their territory. While most opinion polls continued to indicate a strong majority of Canadians backed Kyoto and believed that immediate action was required to reverse the trend toward global warming, the debate over the accord and what it will mean for Canada's economy and society appeared to be far from over.

To Consider

1. What is the Kyoto Protocol?

2. What is the position of the federal government on the Kyoto Protocol?

3. According to most opinion polls, what do Canadians think about the Kyoto Protocol?

4. Why is the government of Alberta so strongly opposed to the Kyoto Protocol?

5. Why is the Kyoto Protocol becoming such a controversial political issue in Canada?

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Video Review

As you watch this video, carefully answer the questions on this page. Remember the Kyoto Protocol is about the future—your future.

1. What appears to be the major result of greenhouse gases?

2. Carbon dioxide emissions have increased by what percentage since the industrial revolution? _____%

3. What happened in December 1997?

4. What were the major concerns of Preston Manning and Ralph Klein in terms of Kyoto?

5. What is U.S. President George W. Bush's response to the Kyoto Protocol?

6. Note two reasons why many Albertans appear to oppose the Kyoto agreement.

i) _____

ii) _____

7. What promise did Prime Minister Chrétien make concerning Kyoto?

8. How many tonnes of carbon dioxide do Canadians produce in a year by running their homes and cars?

9. At this time, do you support or reject the Kyoto Protocol? Explain.

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Background to Kyoto

Did you know . . .

Kyoto is a major cultural and heritage site in Japan? It actually served as the capital for 100 years. It was unharmed during the Second World War and has been designated as Japan's first city for International Conventions.

What is the Kyoto Protocol?

In 1997, delegates representing over 160 nations met in Kyoto, Japan, to discuss and sign an international agreement on global warming, a serious environmental problem with potentially devastating consequences for the earth and its people. The countries at the Kyoto meeting recognized that immediate action was required in order to reverse the process of global warming. The agreement they reached, called the Kyoto Protocol on Climate Change, committed them to a step-by-step reduction in the emissions of greenhouse gases that are believed to be the main cause of global warming. It established target dates for meeting these reductions, and offered some options that countries could access in order to reach them.

For Canada, the target was a reduction of greenhouse gases to six per cent below 1990 levels, during the period from 2008 to 2012. This target was similar to the one Canada's main trading partners in Western Europe accepted. For the Kyoto Protocol to become legally binding, it needed to be formally approved, or ratified, by at least 55 countries responsible for producing 55 per cent of global emissions of greenhouse gases.

What are greenhouse gases?

Global warming is a process of climate change that a majority of scientists are convinced is occurring at an increasingly rapid rate, as average temperatures around the world rise steadily. It is a very serious problem for the earth's environment, with potentially disastrous consequences for millions of people,

especially those living in poor countries close to the world's oceans. Scientists have discovered that the main causes of global warming are greenhouse gases. These gases can form as a result of natural biological processes, but their production is rapidly increased by human activities, such as deforestation and the burning of non-renewable forms of energy.

How are greenhouse gases produced? What is their impact on global climate change?

Human activities, such as driving cars, heating and cooling houses and buildings, powering factories and other industrial plants, and using electric appliances, consume huge quantities of energy. When the sun's radiation enters the earth's atmosphere, the greenhouse gases that humans produce act like the glass of a greenhouse. They block the heat that the earth's mass generates from being released into space. This is what scientists call the "greenhouse effect." A large majority of scientists are now convinced that there is a direct link between rising levels of greenhouse gases like carbon dioxide in the earth's atmosphere, global warming, and the increase in extreme weather conditions—like droughts, floods, and hurricanes—that can be observed around the world. As global warming continues, Canadians can look forward to their climate becoming warmer and drier. This will have a dramatic impact on industries like farming, fishing, and forestry. For many other countries, however, the results could be catastrophic. Some low-lying areas of the world could disappear as sea levels

Definition

According to the *Canadian Oxford Paperback Dictionary*, a protocol is "the original draft of a diplomatic document, especially of the terms of a treaty agreed to in conference and signed by the parties." The Kyoto document is also termed an accord, agreement, pact, and deal. However, Kyoto Protocol is the official title for this historic document.

rise—a result of rapidly melting ice caps at the North and South Pole.

How can greenhouse gases be reduced?

Scientific and environmental groups who believe that global warming is a serious concern argue that it is the responsibility of governments, corporations, and individual citizens to reduce the emissions of greenhouse gases for which they are responsible. This means that most, if not all, of the nations of the world must ratify Kyoto quickly if it is to become legally binding on its signatories. Major industrial countries, which produce most of the earth's greenhouse gases, will be especially required to get behind the Kyoto deal and implement its main terms. One of the main criticisms of Kyoto has been that the penalties to be imposed on the states that sign it and then fail to meet their targets within the time frame required are too weak and easy to avoid.

Businesses will be required to reduce the level of their industrial production or install costly equipment that can filter out greenhouse gases and other pollutants from their waste emissions. This will have the greatest impact on firms involved in the energy sector of the economy, such as Canada's important petroleum industry, which is based mainly in Alberta. Individual citizens will be asked to cut back on their level of energy consumption, and explore alternative, renewable forms of energy for providing heat and electricity for their homes, such as wind or solar power. They will also be encouraged to use their cars less, to switch from energy-guzzling sport utility vehicles (SUVs) to smaller models, and to consider purchasing new kinds of automobiles that do not run on gasoline.

What is Canada's record on greenhouse gas emissions compared with other countries?

Canada produces more fossil fuel emissions than any other country on a per capita basis. The transportation sector, industry, oil and gas production, and electricity generation are all major contributors to greenhouse gases. The federal government has committed Canada to reaching its target level of greenhouse gas reductions by 2008-2012, under the terms of the Kyoto Protocol. This will help reverse the trend toward global warming, and also result in considerable environmental benefits for Canada, such as cleaner air and less industrial pollution. It will also serve to promote investment, research, and development in new advanced technologies and alternative energy sources.

As of late 2002, Canada was one of the few industrial nations that had not yet ratified the Kyoto Protocol. While most Western European countries had endorsed the deal, the United States announced it was not signing it, even though President Bill Clinton had been a strong supporter of the agreement when it was first negotiated in 1997. For the incoming government of George W. Bush, the protection of jobs, especially in the American petroleum industry, took precedence over the reduction of greenhouse gas emissions.

In compensation for meeting its target figure of six per cent emission reductions from 1990 levels, Canada was asking for credits for its exports of clean energy to the United States. Canada also promoted the idea of "carbon sinks," or areas where forests or agricultural soils can remove and store carbon dioxide from the atmosphere. While Kyoto recognizes this

option, in Canada's view there should be a broader inclusion of carbon sinks into the agreement. Canadian agricultural and forest communities can be

involved in efforts to reduce global warming, and promote better forest management and soil conservation projects.

Activities

1. After reading the passage above, write a brief response to the following question: "Why is the Kyoto Protocol such an important issue facing Canada today?"

2. Form groups with your classmates to brainstorm and discuss the information presented in this passage. Prepare and present a set of **three** proposals that you would recommend to the federal and/or provincial governments of Canada on how they should proceed with the ratification and implementation of the Kyoto Protocol.

Brainstorm Notes

Our Proposals

1.

2.

3.

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The Economic Impact of the Kyoto Protocol

Did you know . . .
The Canadian Manufacturers and Exporters Association has claimed that Kyoto could cost \$40-billion and the loss of 450 000 jobs?

The potential economic impact of the Kyoto Protocol on Canada has become a central focus in the ongoing debate over whether or not it should be ratified. Critics of the deal include Alberta Premier Ralph Klein, leading Canadian business figures, especially from the petroleum industry, and Canadian Alliance leader Stephen Harper. They warn that if Canada approves the Kyoto Protocol, the impact on the economy could be devastating. They believe that there will be significant job losses in various areas of industry—not only in the petroleum industry—because production will have to be cut in order to meet the accord's greenhouse gas emissions targets. The oil and gas industry will suffer the most, with serious spin-off effects having a significant impact on related economic activities, especially in Alberta. Canadians will have to pay far higher prices for various forms of non-renewable energy like gasoline, coal, and electricity. They will also have to reduce their dependency on these kinds of energy to operate their cars, heat their homes, and power their electric appliances.

Opponents of the Kyoto Protocol charge that the federal government has so far failed to provide Canadians with a detailed plan as to how the accord is to be implemented, with clear data on its costs for and impact on the national economy. In addition, they accuse Prime Minister Chrétien and Environment Minister David Anderson of moving too quickly to ratify the agreement before a detailed analysis of its anticipated consequences has been revealed to the Canadian public for its consideration.

"Canadians want Canada to show leadership. They do not want Canada to continue with indecision, with endless delays and with half-measures." — Federal Environment Minister David Anderson, November 22, 2002

On the other hand, supporters of the Kyoto Protocol, including a number of environmental activist groups like the Sierra Club, Greenpeace, Pollution Probe, and the David Suzuki Foundation, argue that the potentially negative consequences of not approving the deal far outweigh the economic costs involved. They strongly believe that any job losses resulting from implementation will be temporary, and will be more than counterbalanced by job growth and new opportunities in a number of alternative energy sources stimulated by the agreement. Environmentalists also argue that a reduction in the consumption by Canadians of non-renewable energy sources like oil and gas would be of great benefit to the environment.

The federal government now counts on natural gas exports amounting to approximately \$26-billion annually to balance its trade account. Canada exports more oil to the United States than Saudi Arabia does. If Kyoto were to be implemented, then hydroelectric utility companies would have to use cleaner fuels, and the transportation sector would have to adopt more efficient alternative-fuel vehicles. These reductions could cost the economy some \$40-billion over the next decade, and could mean that economic growth might be slower. But supporters of Kyoto respond that even if ratification were to result in a somewhat slower rate of economic growth, the environmental and social benefits resulting from it would far outweigh any temporary disruptions.

Activities

1. Read the passage on the previous page and prepare two lists summarizing the arguments of the pro- and anti-Kyoto positions concerning its possible impact on the Canadian economy. State which side you think has presented more persuasive arguments, and why you think so.

Pro-Kyoto Arguments	Anti-Kyoto Arguments
My View	My Reasons

2. As a class, debate the issue of whether the implementation of the Kyoto Protocol is likely to have a negative impact on the Canadian economy.
3. As a class, discuss the following question: "Are there some economic sacrifices that would be worthwhile for Canadians to make in order to improve the quality of the environment?" Suggest some examples.

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The Scientific Debate Over Kyoto

Did you know . . .
Canada is responsible for 3.3 per cent of greenhouse gas emissions by industrialized countries and 2 per cent of all greenhouse gases emissions globally?

The vast majority of scientists who study the earth's environment endorse the claim that human activities involving the burning of fossil fuels that produce greenhouse gases are the main cause of global warming. However, a small but vocal minority advances the position that climate change is a natural phenomenon, and that human beings play only a very small part in the process. This scientific debate has shaped the controversy over whether or not Canada should ratify the Kyoto Protocol, with both pro- and anti-Kyoto forces enlisting the opinions of prominent scientists to their cause. Here is a summary of the main arguments that each side has presented.

Climate change is a natural phenomenon

The earth's climate is always changing. Over millions of years, the planet has been subjected to a series of ice ages, with much of North America covered by glacial ice for extended periods.

Greenhouse gases, along with clouds and aerosols produced naturally in the atmosphere, prevent some of the sun's heat from being reflected from the surface of the earth back into space, causing the greenhouse effect. But these gases comprise less than 0.1 per cent of the air. The major greenhouse gases are carbon dioxide, methane, nitrous oxide, and water vapour. Water vapour constitutes 99 per cent of the greenhouse gases in the atmosphere, followed by water in clouds.

Over the past three centuries, the amount of carbon dioxide in the earth's atmosphere has risen by about 30 per cent, primarily as a result of fossil fuel

burning and deforestation. But this in itself is not a significant cause of global warming. The proportion of carbon dioxide in the atmosphere has varied greatly over millions of years, and was actually over 1000 per cent higher than it is today during the Ordovician ice age of 440 million years ago. During the past 150 000 years, levels of carbon dioxide have risen and fallen long before temperatures did, indicating that climate change causes changes in the levels of this gas, not the reverse. Carbon dioxide, then, is a very minor factor in influencing climate change.

A recent United Nations forecast of future global warming based on anticipated growth in the use of fossil fuels indicated a one-degree Celsius increase between now and 2050. If the Kyoto Protocol were to be implemented around the world, that figure would be reduced by only 0.06 degrees. From a close analysis of the data, it is clear that increased amounts of carbon dioxide in the atmosphere are not a serious cause of global warming. There does appear to be strong evidence that alterations in the sun's output of energy is a much more important cause of temperature increases on the earth's surface. Climate change has always occurred on this planet, and always will. It is an overwhelmingly natural phenomenon, and human beings and their activities do not influence it to any significant degree.

Climate change is caused by human activities

No scientist would dispute the fact that the earth's climate has always changed over time, and will no doubt continue to

"Our plan, really, is to wake up enough Canadians to the problems here that they will say, 'Hold off, let's have this debate.'" — Tom d'Aquino, Canadian Council of Chief Executives, *The Toronto Star*, September 27, 2002

do so into the future. But it is now clear that average temperatures on the surface of the planet are rising dramatically. Despite the claim that carbon dioxide is only a minor contributor to the phenomenon of global warming, it appears that such "trace gases" do not have to be present in very large amounts in order to critically influence energy flows from the earth into space. Although their level of concentration may be very small, they are important because they combine with radiation from the planet. Other gases like nitrogen that may exist in larger amounts do not do so.

Do natural changes in the amount of radiation from the sun explain rising global temperatures better than human production of greenhouse gases? Most scientists do not think so. The issue hinges on how the pattern of global warming is interpreted. Climate records indicate that the earth warmed up until 1940, began cooling a little to 1970, and then proceeded to heat up again. Scientists who believe that human beings have little to do with global warming point to the fact that the first period of temperature increase could not have been caused by the burning of fossil fuels, since human emissions of carbon dioxide were low during this period. Instead, rising levels of solar radiation were the most likely reason for the warming trend that took place at that time. They then apply this line of reasoning to account for the dramatic temperature increases that have occurred since 1970. However, their argument is seriously flawed.

The two periods of global warming that occurred during the 20th century are not similar. There are many other factors that must be taken into consideration along with average temperatures

on the earth. Among these are the contrast between winter and summer temperatures, the range of temperature between night and day, and how global warming has affected both land and water temperatures around the world. When scientists take all of these factors into account, it is clear that human emissions of greenhouse gases, especially carbon dioxide, are the main cause of global warming.

Changes in the sun's radiation are not the main factor behind global temperature changes over the past century. Satellite evidence indicates that the amount of variation in solar heat was too small to explain the temperature changes that have taken place during this period. While there does appear to be a strong correlation between solar radiation and temperature variation over the past 1000 years, this cannot account for the current global warming trend, which is occurring far more rapidly and during a much shorter time span than any previous one.

Opponents of the Kyoto Protocol have tried to enlist a small group of scientists who dispute the consensus view of global warming to their side in an effort to block ratification and implementation of this agreement. But their views are challenged by the latest conclusions of the International Panel on Climate Change. It stated that "most of the observed warming over the past 50 years is likely to have been due to the increase in greenhouse gas concentrations." It is vitally important for the global environment and the lives of billions of people on this planet that this trend be reversed. Many people believe the Kyoto Protocol on Climate Change represents our best hope of achieving this goal.

What's missing from the debate over the Kyoto Protocol is a clear analysis of its benefits—and its costs." — Jack Mintz, *Canadian Business*, October 14, 2002

Activities

1. Read the passages on the previous pages and prepare a summary of the main arguments that scientists present on the factors responsible for global warming. Which side do you think makes the stronger case for its explanation of climate change? Why?

Summary

Climate change is a natural phenomenon:

Climate change is caused by human activities:

My View and Reasoning

2. Explain how the views of each group of scientists could be used to support both pro- and anti-Kyoto positions in the current debate over this issue in Canada.

Support Pro-Kyoto

Support Anti-Kyoto

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What Can You Do?

The Alberta Position

"Alberta will not implement the Kyoto Protocol if it's going to damage our economy. Period." — Alberta Environment Minister Lorne Taylor

For more detail on the position of the Alberta government's position, visit www3.gov.ab.ca/env/climate/actionplan

Did you know . . .

Canada's Kyoto Proposal urges individual Canadians to help the environment by individually reducing emissions by 20 per cent and buying more energy efficient cars and appliances?

The debate over the Kyoto Protocol has focused the attention of many Canadians on the need to take action in order to protect the global environment. Here are some Web sites that offer suggestions to individuals and families regarding what they can do to become more environmentally aware and help to reduce the production of greenhouse gases and the global warming that results from it:

The federal government's climate change Web site:
www.climatechange.gc.ca/overview

The federal government's greenhouse gas emissions Web site:
www.ec.gc.ca/pdb/ghg

Activity

With your classmates, form groups to research and brainstorm some of the suggestions these Web sites and other sources of information offer to people interested in reducing their use of greenhouse-gas producing energy to help protect the environment.

Among the ideas that could be explored are the following:

1. Alternatives to the use of automobiles
2. Making your home more energy efficient
3. Development of alternative forms of energy
4. Reducing consumption and production of waste
5. Starting an environmental action group at your school
6. Planting trees and plants to help absorb carbon dioxide
7. Making people more aware of environmental issues

The official Web site of the Sierra Club, a major environmental group:
www.sierraclub.ca/national/climate

A helpful handbook on saving energy in the home:
<http://cleanairconsumerguide.org>

A site that offers a program called SMART (Saving Money and the Air by Reducing Trips):
www.pollutionprobe.org/Publication?air.htm

This site, led by perhaps Canada's most famous scientist, offers 10 practical changes that Canadians can make to reduce their impact on the environment:
www.davidsuzuki.org

