Solutions to Climate Change



High School Backgrounder 16

Climate Change Agreements... and Disagreements

Governments have been talking a lot about climate change. They've been talking a lot about how everyone can reduce the amount of greenhouse gases (GHGs) we are all putting into the atmosphere.

Some of this talk has been very important. Governments of countries from around the world have been putting their heads together to come up with ways to reduce global emissions. It hasn't been easy and they have certainly banged heads a few times!

This backgrounder provides an overview of these talks and gives you a sense what governments have agreed they will do. It also outlines why some people are saying we shouldn't do much about climate change.



Big Time Talks

Climate change is a global issue and governments around the world have been talking about it for years and years. Here is a summary of some of the most important international discussions that have happened.

World Conference on the Changing Atmosphere

In 1988, Canada hosted an international conference in Toronto that rang some loud alarm bells about climate change. The scientists and policy makers who attended the conference said we needed to start doing some climate change right away. They recommended that carbon dioxide emissions be cut back until they were 20% lower than the emission levels in 1988. They thought we should make this reduction by 2005.



Second World Climate Conference

Two years later, in 1990, scientists attended another conference on climate change. They urged governments to put together an international agreement to reduce the amount of greenhouse gases (GHGs) that were going into the atmosphere.

United Nations Framework Convention on Climate Change (UNFCCC)

Another two years later, in 1992, the United Nations Framework Convention on Climate Change (UNFCCC) was released. It established a framework for how governments could stop the increase of GHGs that were being pumped into the atmosphere.

This UNFCCC treaty was an important first step for international governments. There are now over 186 governments that have signed onto the UNFCCC. These countries have agreed to:

- do an inventory of how many GHGs they produce and report to everyone on the numbers;
- come up with plans on how they are going to reduce their emissions;
- share information with each other on a variety of things related to climate change;
 and
- help each other develop technologies that would reduce GHG emissions.

The UNFCCC also made it clear that industrialized countries in the world produced most of the GHGs so industrialized countries should also take a lead in reducing GHG emissions.

The industrialized countries that signed the UNFCCC agreed to try to reduce and limit their GHG emissions so that their GHG levels would be no higher than what they were pumping out in 1990. These countries, including Canada, said they would strive to do this by the year 2000. The industrialized countries also agreed to help developing countries reduce their emissions too.

However, the framework didn't really have a lot of detail on how to reduce GHG emissions. So the countries that signed the UNFCCC also agreed to keep getting together every year to see how things were going and to see if they needed to change some of the commitments.

These annual meetings are called "Conferences of the Parties" (COP for short). At the very first COP meeting in 1995, the countries agreed that, if they were going to make a difference to climate change, they needed to take more steps than those outlined in the UNFCCC. So they started negotiating a new deal.



Kyoto Protocol

In 1997, the third COP meeting was held in Kyoto, Japan. At this meeting, the folks who had signed on to the UNFCCC finished negotiating the new deal. They called it the "Kyoto Protocol" because Kyoto is where it was signed.

There are two key things that make the Kyoto agreement different from the earlier UNFCCC:

- 1. UNFCCC asked countries to *stabilize* their GHG emissions to whatever level they were in 1990. The Kyoto Protocol asks that industrialized countries do better than they were doing in 1990. The Kyoto Protocol wants these countries to *reduce* their emissions below 1990 emission levels.
- 2. The Kyoto Protocol is legally binding, not optional. Countries who sign and ratify the Kyoto Protocol must demonstrate that they are making progress. If they don't then they might face international sanctions (penalties). UNFCCC was not legally binding.

Canada's commitment

In the Kyoto Protocol, Canada agreed to reduce its GHG emissions to six percent below what its emission levels were in 1990. It has to do this between 2008 and 2012.

However, Canada has actually been increasing its emissions most years! At the rate we're going, by 2010 it looks like we will have increased our emissions to 27% *more* than what we were emitting in 1990! It's time to take some serious action if we are going to live up to our international agreement.



The Kyoto Protocol contains ten sections (called "articles") that define what participating countries have agreed to do to reduce their GHGs. For example, each industrialized country has agreed to develop its own climate change plan. This plan will outline the actions the country will take to reduce its GHG emissions. Countries can also increase ways that the environment can absorb GHGs (e.g. by protecting and planting forests because they absorb carbon dioxide, a GHG, from the atmosphere).

Each industrialized country also specified what their emission levels would be by the year 2012 and they agreed to make significant progress on their target by 2005.

Each country was also given a right to produce a certain amount of GHGs. If a country ends up not producing as many GHGs as they are allowed to produce, it can sell its surplus emission rights – their emission credits – to other countries! This is called "emissions trading."

A country can also work with another country to cooperatively reduce emissions. If one country helps another reduce its emissions, either of the countries can claim credit for it under the Kyoto Protocol.

The Kyoto Protocol has a number of conditions that some people aren't happy about. Some opponents to the protocol don't like the idea that a country can keep pumping out a lot of GHGs because they have bought "emission credits" from other countries that have cleaned up their act. Some believe that the GHG reductions outlined in the Kvoto Protocol won't do enough to help reduce GHGs in the world.

Others think the Kyoto Protocol goes too far or shouldn't exist at all. They believe governments shouldn't require businesses to reduce their GHGs. They are concerned that it costs a lot of money to reduce emissions and believe that the economies of countries that have signed onto won't be able to compete with the economies in countries that are ignoring the Kyoto Protocol (read "The debate over climate change" below).

So the Kyoto Protocol has opponents on both sides. And it has supporters. The Kyoto Protocol may not be everything we need to stop climate change but it is the agreement that many governments in the world are currently using to guide their future actions on climate change.



Not quite law

The Kyoto Protocol isn't actually law yet. Countries that first signed the UNFCCC and then signed off on the Kyoto Protocol also have to "ratify" the protocol. This means the governments of these countries need to formally accept or approve of the Kyoto Protocol. It's kind of like you agreeing to join a sports team, but not being allowed to until your parents or guardians sign a form. They "ratify" your agreement to be on the team. The federal government of Canada ratified the Kyoto Protocol in December 2000.



Before the Kyoto Protocol can become law, at least 55 countries have to ratify it. In other words, there need to be enough players on the team before it officially can become a team!

But the Kyoto Protocol isn't quite that easy! The Kyoto team won't simply become a team when any 55 countries ratify. The countries that produce the most emissions must agree to be part of the team. This is kind of like making sure there are enough big kids on the team. You can't just make up a team of the smallest of the kids. You need some big players if the team is going to have a chance of succeeding. The Kyoto Protocol needs the big GHG emitters to sign on.

There are still a few other conditions about who must ratify the protocol but the main thing to remember is that there have to be enough countries, with enough emissions, before the Kyoto Protocol will become law. The key right now is that either the U.S. or the Russian Federation has to sign before the protocol can come into force.

However, even if the Kyoto Protocol isn't law, each country can start working towards the commitments they have made in the agreement. They should get out there and start practicing until the rest of the team is ready to roll!



The Debate Over Climate Change

Most scientists in the world believe that some climate change is happening. The Intergovernmental Panel on Climate Change (IPCC) believes humans are causing climate change by adding greenhouse gases (GHGs) to the atmosphere (see Backgrounder #5 for more on the IPCC).



Others might agree that the climate is changing, but they don't believe that the climate changes are caused by humans. There are also people who accept that climate change is happening and that humans are the cause of it. But they don't support international agreements like the Kyoto Protocol.

"As we enter a new century, we live in a global village. That is why the issue of climate change and global warming is so important. If we really care about the next century, we, as a planet, must take action.... We need a solution that will help reduce global warming. A solution that Canadians can be proud of."

Prime Minister Jean Chretien, Climate Change Information Tool Kit, Government of Canada, 2000

Here are some of the debates that are going on about climate change:

- 1. The science and computer models are wrong or not good enough. Climate change science is very complex. In the past, some climate models (which are used to provide scientific predictions of our future climate) have been proven to have large errors over time. Critics of climate change science point to these errors and even say that climate change isn't happening or that it isn't as serious as the IPCC says it is. But it's not easy figuring out how all the parts of the climate system will work together. It's not surprising that some errors have been made when predicting the future.
- 2. The temperature increase is caused by natural changes, not humans: The climate has changed many times in the history of the earth. Some say the current change is just another natural change. They say changes in the solar radiation from the sun or other natural changes, like volcanic eruptions, have caused the recent changes in the climate. But other scientists have looked at solar radiation and volcanoes and they say that the changes in the sun and volcanoes can't explain the recent changes in the climate. The timing doesn't work out in their opinion.



We shouldn't do anything until we have more evidence: Some say we shouldn't bother trying to reduce how many GHGs we put into the atmosphere until we are sure that this is what is causing the climate to change. They say it might be a waste of time and money. Others say there is enough evidence – even if it's not perfect – to get a move on now and start changing our ways before it is too late. After all, what do we have to lose? By reducing our use of fossil fuels, we will do things like reducing air pollution. We will also create new business opportunities, and save money!



4. Kyoto Protocol and other mandatory measures to reduce emissions will hurt the economy: Not surprisingly, industries and businesses that are involved in producing many GHGs are concerned about how the requirements of the Kyoto Protocol will affect them. In particular oil, gas and coal companies (the sources of many GHGs) know that if people buy fewer fossil fuels it will harm their businesses. So these companies often strongly oppose Kyoto and other climate change initiatives.

Some industries that emit a lot of GHGs when they make their products are interested in reducing their use of energy as it saves them money. But these industries are also worried that the restrictions will be too hard to live up to. Or they worry that their competitors in other countries that haven't signed the Kyoto Protocol will be able to produce the same products for less money because they won't have to install new GHG-friendly equipment. Car manufacturers are concerned about a decrease in demand for cars and about the costs of developing more fuel-efficient cars and trucks.

There are also some industries and businesses that support reducing GHG emissions. Companies involved in developing and selling renewable energy see great economic opportunities. Agricultural businesses and forest companies are concerned about how climate change is impacting crops and forests (see Backgrounder 13 on renewable energy).

5. The Kyoto Protocol will do nothing for climate change: Even if all of the commitments made by industrialized countries under the Kyoto Protocol are fully met, many believe it will only delay climate change. That is because most of the greenhouse gas emissions will come from developing countries within the next few decades. But the developing countries are not committed to reductions under the Kyoto Protocol. However, others argue that industrialized countries that have made



commitments under the Protocol should take the first important step to do something about reducing emissions because most of the past and current emissions come from them. They need to lead by example if they expect less developed countries to start reducing their emissions.

These are a few of the main arguments surrounding climate change and the need to reduce our emissions. Which side do you stand on? Can you think of other arguments for or against doing anything about climate change?

When you see stories about climate change on TV or in the papers, think about which side of the debate the person speaking is coming from. What are their interests? Are they in the oil business? Do they have an economic interest in getting people to use more – not less – oil and gas? Do they sell wind turbines so their business will grow as we reduce our GHG emissions? If they are a scientist, who may have paid for their research? Do you think that might influence a scientist's conclusions?

It's always good to ask critical questions when reading or hearing media stories as the media doesn't always show all sides of the story.

From Talk to Action

This backgrounder has been a lot about the "talk" about climate change. If you want to read how some governments and businesses are "walking the talk" (putting their words into action), check out Backgrounder 17.





Key Points

- ★ Many important international meetings and agreements since 1988 have tried to address the problem of climate change.
- ★ The most recent agreement is the "Kyoto Protocol." It outlines specific emission reduction targets for each industrialized country that has signed the agreement and requires countries develop action plans. It also allows for "emissions trading."
- ★ Some people don't think that the Kyoto Protocol does enough to reduce climate change. Others think that it goes too far.
- ★ Some people don't believe that current changes in climate are being caused by humans. Others accept that humans are causing climate change to happen, but they don't support international agreements like the Kyoto Protocol.





Want to Know More?

Here are some websites to help you learn more about Kyoto, and about what our governments are doing:

- David Suzuki Foundation (Kyoto Page):
 <u>http://www.davidsuzuki.org/Climate_Change/Kyoto/</u> Good explanation from a Canadian perspective. Be sure to click on the links.
- Government of Canada: <u>www.climatechange.gc.ca/plan for canada/plan/index.html</u> – A plan for Canada.
- Government of Northwest Territories: www.gov.nt.ca/RWED/index.html –
 NWT energy strategy.
- Northern Climate Exchange (Kyoto Infocentre):
 http://www.taiga.net/nce/kyoto.html Up-to-date information about the Kyoto Accord.
- United Nations: http://unfccc.int/resource/convkp.html Complete text of the Kyoto Protocol, and more.
- Yukon Department of Environment:
 www.environmentyukon.gov.yk.ca/epa/content/initiatives.pdf –
 An inventory of Yukon climate change initiatives.