

Kyoto Protocol

Overview

The Kyoto Protocol is a legally binding, international agreement that sets targets for industrialized countries to limit or reduce their emissions of greenhouse gases (GHG) by the year 2012. Each of the 38 industrialized countries has its own target. Canada's target is a 6% reduction from 1990 emission levels by the year 2012. Overall, achieving these targets should reduce GHG emissions in the industrialized world by 5.2%. (Examples of other targets: Japan 5%, EU (overall) 8%, UK 12.5%, Denmark 21%, USA 7%).

The Kyoto Protocol was agreed upon in Kyoto, Japan in 1997, based on principles set out in the United Nations Framework Convention on Climate Change (UNFCCC) signed in 1992. It became legally binding on February 16, 2005, once it was ratified by at least 55 countries that collectively accounted for at least 55% of emissions from the 38 industrialized countries. To date, 175 countries have ratified the Kyoto Protocol.

Canada ratified the Kyoto Protocol in December 2002 and is now legally bound to meet its target. Neither the USA (the world's single biggest emitter of GHG, accounting for about one-quarter of all emissions) nor Australia has ratified the Kyoto Protocol, so they are not legally bound to meet their Kyoto targets.

How were the targets set?

The targets were set for each country based on their 1990 emissions of GHG. Some countries with low levels of emissions were allowed to increase their emissions (e.g. Iceland). A target was set for the EU as a whole, with member countries agreeing to allocate the reductions amongst themselves.

Why are developing countries exempt from the emissions targets?

Developing countries have contributed least to the sharp rise in GHG concentrations, yet they are among the most vulnerable to its effects. Past GHG emissions were largely a result of industrialization in Europe, North America, and other industrialized nations, and in general, per capita emissions in industrialized countries continue to be higher than emissions in developing countries. For example, Canada emits about 24 tonnes per capita whereas China emits about 4 tonnes per capita. Developing countries are amongst those that will be hardest hit by climate change, and they have less capacity to respond and adapt to it (e.g. they have fewer resources to deal with floods, droughts, crop failures, disease outbreaks, etc.).

How important is the Kyoto Protocol?

According to the UNFCCC, the Kyoto Protocol:

“...provides an important first step to slow down the increase in GHG concentrations and make progress to the ultimate objective of the Convention.”
(UNFCCC, Art. 2)”¹

The targets set in the Protocol will reduce emissions by only 5% from 1990 emission levels, *if* all the countries meet their targets. But in order to avoid the worst effects of climate change, scientists think we need to reduce global emissions by at least 50% by 2050. In addition, the Kyoto Protocol does not set emissions targets for some of the world's fastest growing economies and biggest emitters of GHG, including China and India.

The Kyoto Protocol does, however, provide direction and impetus that wouldn't otherwise exist. Most countries are working to reduce their GHG emissions, some have achieved their targets and set new ones, and markets for trading carbon emission credits have been established. The protocol also provides the framework for continued discussions and negotiations about further cuts after 2012. The Kyoto Protocol marks a historical achievement in that the leaders of 175 countries united on a common goal for the good of humankind.

Athletes know the importance of having a 'dream goal' that is supported by smaller, specific goals along the way. They also know the importance of committing to that goal and working hard to achieve it. Similarly, the Kyoto Protocol is an interim goal on the route to achieving the 'dream goal' of stabilizing GHG emissions at a level that would slow climate change and allow us to adapt to it.

Implementing the Kyoto Protocol

Countries must implement policies and measures at home that will reduce their GHG emissions. These could include policies and measures that:

- enhance energy efficiency
- promote renewable energy
- favour sustainable agriculture
- recover methane emissions through waste management
- encourage reforms in relevant sectors to reduce emissions
- remove subsidies and other market distortions
- protect and enhance greenhouse sinks (e.g. forests)
- reduce transport sector emissions

In addition, the Kyoto Protocol defines three mechanisms that eligible industrialized countries may use to lower the cost of meeting their targets. These mechanisms are based on the understanding that it doesn't matter *where* emissions are reduced – the effect on the global atmosphere is the same - but the cost can be considerably different. The mechanisms allow countries to invest in the cost-effective ways of reducing emissions.

1. **Clean Development Mechanism** allows industrialized countries to invest in projects that reduce emissions in developing countries.
2. **Joint Implementation** allows an industrialized country to invest in projects that reduce emissions in other industrialized countries.
3. **Emissions Trading** allows industrialized countries to trade emissions 'credits' with one another. For example, if one country reduces its emissions by more than its target amount, it can sell this 'extra' reduction to another country.

There are detailed rules about each of these mechanisms and who is eligible to use them to ensure that they are not abused and that the projects achieve real, lasting reductions.

In addition to the mechanisms under the Kyoto Protocol, 'carbon markets', such as the European Union Emissions Trading Scheme and the Chicago Climate Exchange, have been operating for a number of years. For more information on carbon markets, go to <http://www.chicagoclimatex.com/> and <http://ec.europa.eu/environment/climat/emission.htm>.

Beyond Kyoto

Since 2005, a working group of countries has been meeting to work out the 'next steps' – what will happen after the Kyoto Protocol expires in 2012. The goal is to have a new treaty in place by 2009 or 2010 so that countries have a chance to ratify it before the Kyoto Protocol expires. The treaty would likely include new targets as well as mitigation measures. Key negotiations on this new international framework are expected to take place at the UN Climate Change Conference in Bali, Indonesia in December 2007. Representatives from over 180 countries will meet to discuss measures to mitigate and adapt to climate change, as well as new emissions reduction targets.

To build momentum for the Bali conference, UN Secretary-General Ban Ki-moon has invited heads of state to a climate change conference in late September 2007. Highlighting the gravity of climate change, he is urging the world's political leaders to provide 'visionary leadership' and strong support for the Bali negotiations, pointing out that a 'business as usual' approach is not enough.

How are Parties to the Protocol doing?

Not very well. Although total emissions by industrialized nations declined by about 5.6% between 1990 and 2000, this was largely due to the collapsing economies of Eastern European countries. Emissions from other industrialized countries increased by 8% during that same period. And since 2000, GHG emissions from many of the Eastern European countries have risen as their economies have stabilized and grown. On the other hand, some countries have made good progress. The UK, Sweden, and Iceland have met their targets and Germany has made substantial progress. These countries demonstrate what can be accomplished with a coherent plan.

We need to do more. Scientists agree that an increase in the global average temperature of 2°C above the pre-industrial levels is 'dangerous'. To stay below this limit and avoid the worst effects of climate change we need to stabilize GHG levels at 400 parts per million (ppm). To do this, global GHG emissions must fall to at least 30-50% below the 1990 levels by 2050 and industrialized countries must reduce their emissions by 25-30% between 1990 and 2020, and by 85-90% between 1990 and 2050. Some governments have committed to drastic cuts:

- European Union's governments have jointly called for developed countries' emissions to be reduced to 15-30% below the 1990 level by 2020.
- California has committed to reduce its emissions to 80% below the 1990 level by 2050.
- France has committed to reduce its emissions to 75-80% below the current level by 2050.
- United Kingdom has committed to reduce its emissions to 60% below the 1990 level by 2050.

How is Canada doing?

We have a long way to go. In 2004, Canada's GHG emissions were 26.6% higher than in 1990. In order to meet our Kyoto target we will have to reduce our current GHG emissions by about 33%. The current government (led by Prime Minister Stephen Harper) does not support the mandatory targets Canada committed to in the Kyoto Protocol and has not developed a plan for meeting the Kyoto target.

The Clean Air Act proposed by the government in fall 2006 focused more on reducing air pollution than GHG emissions and was strongly criticized for its 'intensity-based' approach to reducing emissions (rather than reducing total emissions, industries would be required only to reduce their emissions per unit of production - this means that if production goes up, total GHG emissions could also go up). The Clean Air Act was revised by an all-party committee but was not supported by the Conservative government.

In response to increasing public concern about climate change, particularly after the release of the Fourth IPCC report, the government released a new plan called 'Turning the Corner'. It lays out the government's strategy for reducing GHG emissions by 20% (from 2006 levels) by 2020. Under this plan, emissions still would be 6% **above** 1990 levels even 8 years after the end of Kyoto.

What happens if Canada does not meet its Kyoto target?

Canada will have to make up the difference, plus a penalty of 30% in the second commitment period (i.e. after 2012) and develop a compliance action plan. We will also lose our eligibility to trade emission credits.

Did you know?

- Canadians use more energy than all of the 760 million inhabitants of Africa.
- Canadians consume more energy per capita than the US, Germany, and the UK.

Success stories

- Germany has reduced GHG emissions by 18% since 1990, and is very close to achieving its target reduction of 21%. Reductions were a result of economic restructuring resulting from the reunification of the country, reduced use of lignite, greater use of wind energy, and reductions in methane emissions from coal production, agriculture and waste management.
- United Kingdom has reduced GHG emissions by 15% since 1990, surpassing its Kyoto target of 12.5%. These reductions were achieved despite an economy that grew by 30% between 1990 and 2002.
- A number of municipal, provincial and state governments have set targets and developed action plans for achieving them, independent of their national government. For example, even though the USA has not ratified the Kyoto Protocol, California, Massachusetts and Connecticut have set their own targets.

Sources and Useful Links

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