The Kyoto Protocol

What Is the Kyoto Protocol?

The Kyoto Protocol is an international agreement that aimed to reduce [carbon dioxide](https://www.investopedia.com/articles/investing/092915/5-countries-produce-most-carbon-dioxide-co2.asp) (CO2) emissions and the presence of greenhouse gases (GHG) in the atmosphere. The essential tenet of the Kyoto Protocol was that industrialized nations needed to lessen the amount of their CO2 emissions.

The Protocol was adopted in Kyoto, Japan in 1997, when greenhouse gases were rapidly threatening our climate, life on the earth, and the planet, itself. Today, the Kyoto Protocol lives on in other forms and its issues are still being discussed.

KEY TAKEAWAYS

* The Kyoto Protocol is an international agreement that called for industrialized nations to reduce their greenhouse gas emissions significantly.
* Other accords, like the Doha Amendment and the Paris Climate Agreement, have also tried to curb the global-warming crisis.
* Today, talks begun by the Kyoto Protocol continue and are extremely complicated, involving politics, money, and lack of consensus.

The Kyoto Protocol Explained

Background

The Kyoto Protocol mandated that industrialized nations cut their greenhouse gas emissions at a time when the threat of global warming was growing rapidly. The Protocol was linked to the United Nations Framework Convention on Climate Change (UNFCCC). It was adopted in Kyoto, Japan on December 11, 1997, and became international law on February 16, 2005.

Countries that ratified the Kyoto Protocol were assigned maximum carbon emission levels for specific periods and participated in [carbon credit trading](https://www.investopedia.com/terms/c/carbontrade.asp). If a country emitted more than its assigned limit, then it would be penalized by receiving a lower emissions limit in thefollowing period.

Major Tenets

Developed, industrialized countries made a promise under the Kyoto Protocol to reduce their annual [hydrocarbon](https://www.investopedia.com/terms/h/hydrocarbon.asp) emissions by an average of 5.2% by the year 2012. This number would represent about 29% of the world's total greenhouse gas emissions. Targets, though, depended on the individual country. This meant each nation had a different target to meet by that year. Members of the [European Union (EU)](https://www.investopedia.com/terms/e/european-community.asp) pledged to cut emissions by 8% while the U.S. and Canada promised to reduce their emissions by 7% and 6% respectively by 2012.

Responsibilities of Developed versus Developing Nations

The Kyoto Protocol recognized that developed countries are principally responsible for the current high levels of [GHG emissions](https://www.investopedia.com/articles/markets/030816/top-4-oil-companies-protect-environment-xom-sun.asp) in the atmosphere as a result of more than 150 years of industrial activity. As such, the Protocol placed a heavier burden on developed nations than less-developed nations. The Kyoto Protocol mandated that 37 industrialized nations plus the EU cut their GHG emissions. Developing nations were asked to comply voluntarily, and more than 100 developing countries, including China and India, were exempted from the Kyoto agreement altogether.

A Particular Function for Developing Countries

The Protocol separated countries into two groups: Annex I contained developed nations, and Non-Annex I referred to developing countries. The Protocol placed emission limitations on Annex I countries only. Non-Annex I nations participated by investing in projects designed to lower emissions in their countries. For these projects, developing countries earned [carbon credits](https://www.investopedia.com/terms/c/carbon_credit.asp), which they could trade or sell to developed countries, allowing the developed nations a higher level of maximum carbon emissions for that period. In effect, this function helped the developed countries to continue emitting GHG vigorously.

The United States' Involvement

The United States, which had ratified the original Kyoto agreement, dropped out of the Protocol in 2001. The U.S. believed that the agreement was unfair because it called for industrialized nations only to limit emissions reductions, and it felt that doing so would hurt the U.S. economy.

The Kyoto Protocol Ended in 2012, Effectively Half-Baked

Global emissions were still on the rise by 2005, the year the Kyoto Protocol became international law—even though it was adopted in 1997. Things seemed to go well for many countries, including those in the EU. They planned to meet or exceed their targets under the agreement by 2011. But others continued to fall short. Take the United States and China—two of the world's biggest emitters. They produced enough greenhouse gases to mitigate any of the progress made by nations who met their targets. In fact, there was an increase of about 40% in emissions globally between 1990 and 2009.

The Doha Amendment Extended Kyoto Protocol to 2020

In December 2012, after the first commitment period of the Protocol ended, parties to the Kyoto Protocol met in Doha, Qatar, to adopt an amendment to the original Kyoto agreement. This so-called Doha Amendment added new emission-reduction targets for the second commitment period, 2012–2020, for participating countries. The Doha Amendment had a short life. In 2015, at the sustainable development summit held in Paris, all UNFCCC participants signed yet another pact, the Paris Climate Agreement, which effectively replaced the Kyoto Protocol.

The Paris Climate Agreement

The Paris Climate Agreement is a landmark environmental pact that was adopted by nearly every nation in 2015 to address climate change and its negative effects. The agreement includes commitments from all major GHG-emitting countries to cut their climate-altering pollution and to strengthen those commitments over time.

A major directive of the deal calls for reducing global GHG emissions so as to limit the earth's temperature increase in this century to 2 degrees Celsius above preindustrial levels while taking steps to limit the increase to 1.5 degrees. The Paris Agreement also provides a way for developed nations to assist developing nations in their efforts to adapt climate control and it creates a framework for monitoring and reporting countries’ climate goals [transparently](https://www.investopedia.com/terms/t/transparency.asp).

The Kyoto Protocol Today?

In 2016, when the Paris Climate Agreement went into force, the United States was one of the principal drivers of the agreement, and President Obama hailed it as “a tribute to American leadership.” As a candidate for president at that time, Donald Trump criticized the agreement as a bad deal for the American people and pledged to withdraw the United States if elected.

A Complicated Stalemate

In 2019, the dialogue is still alive but has turned into a complex quagmire involving politics, money, lack of leadership, lack of consensus, and bureaucracy. Today, despite myriad plans and some actions, solutions to the problems of GHG emissions and global warming have not been implemented.

Almost all scientists who study the atmosphere now believe that global warming is primarily the result of human action. Logically then, what humans have caused by their behavior should be able to be remedied by humans changing their behavior. It is frustrating to many that cohesive action to deal with the human-made global climate crisis has yet to happen.

Montreal Protocol

## BACKGROUND

The Montreal Protocol, finalized in 1987, is a global agreement to protect the stratospheric ozone layer by phasing out the production and consumption of ozone-depleting substances (ODS). The stratospheric ozone layer filters out harmful ultraviolet radiation, which is associated with an increased prevalence of skin cancer and cataracts, reduced agricultural productivity, and disruption of marine ecosystems. The United States ratified the Montreal Protocol in 1988 and has joined four subsequent amendments. The United States has been a leader within the Protocol throughout its existence, and has taken strong domestic action to phase out the production and consumption of ODS such as chlorofluorocarbons (CFCs) and halons.

The Montreal Protocol has proven to be innovative and successful, and is the first treaty to achieve universal ratification by all countries in the world. Leveraging worldwide participation, the Montreal Protocol has sent clear signals to the global market and placed the ozone layer, which was in peril, on a path to repair. Full implementation of the Montreal Protocol is expected to result in avoidance of more than 280 million cases of skin cancer, approximately 1.6 million skin cancer deaths, and more than 45 million cases of cataracts in the United States alone by the end of the century, with even greater benefits worldwide. The Montreal Protocol’s Scientific Assessment Panel estimates that with implementation of the Montreal Protocol we can expect near complete recovery of the ozone layer by the middle of the 21st century. Further information on the science of the Stratospheric Ozone Layer can be found on the [**NASA**](https://www.nasa.gov/ozone) and [**NOAA**](http://www.ozonelayer.noaa.gov/) websites, and information on the U.S. domestic implementation of the Montreal Protocol can be found on the [**EPA**](https://www.epa.gov/ozone-layer-protection) website.

The full text of the Protocol, information on its institutions and past actions, and related publications are available through the [**UNEP Ozone Secretariat**](http://ozone.unep.org/).

## *KIGALI AMENDMENT TO THE MONTREAL PROTOCOL*

On October 15, 2016, Parties to the Montreal Protocol adopted the [**Kigali amendment**](http://ozone.unep.org/en/handbook-montreal-protocol-substances-deplete-ozone-layer/41472) to phase down production and consumption of hydrofluorocarbons (HFCs) worldwide. HFCs are widely used alternatives to ozone depleting substances such as hydrochlorofluorocarbons (HCFCs) and chlorofluorocarbons (CFCs), already controlled under the Protocol.

This amendment creates market certainty and opens international markets to new technology that is better for the environment, without compromising performance. It calls on all countries to gradually phase down their production and consumption of HFCs in the coming decades using the flexible, innovative, and effective approaches the Montreal Protocol has used for three decades. Global stakeholders endorsed adoption of the Kigali amendment, including most of the major U.S. companies working in related sectors.