



Revisiting the Kyoto Protocol: Reducing CO₂ to Prevent Climate Change Disasters

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There are many issues facing the international community that struggle to gain enough support to really create strong change because of contentious divides in ideologies. However, there is only one that is contentious that has many dire worldwide implications. This issue is climate change. Even with annual meetings on the subject, the United Nations has failed to agree upon anything substantial and long lasting since the Kyoto Protocol. Natural disasters are becoming more frequent as anthropogenic greenhouse gases rise, causing deaths yearly. It is your job to work together and change this.

History of the Kyoto Protocol and Other Climate Efforts

Global awareness of human-induced climate change began in the mid-1900s, when the focus was on a weakening ozone layer, nuclear waste, and intense pollution. By the late 1980s, scientists began fearing that the rise in anthropogenic (man-made) carbon dioxide was harming the environment. In 1988, the *Intergovernmental Panel on Climate Change (IPCC)* was created in response to these concerns as previously explored by the United Nations and World Meteorological Organization. The IPCC has become the world's most prominent spokesman on the state of climate change.¹ Its research is read carefully, and often picked at marvelously. Living in the ultimate research spotlight, it has become very careful and well regarded. A couple years later, the IPCC declared that the greenhouse effect was real, and that human activity and pollution was making it stronger. The IPCC's *Fifth Report*, released in September 2013, leaves no doubt that human activity is contributing to climate change.² Whether and how this process can be halted or reversed is the focus of global debate.

**Figure 1. The United Nations IPCC,
the world's most prominent research center on climate change**



¹ IPCC, Intergovernmental Panel on Climate Change, <http://www.ipcc.ch/>

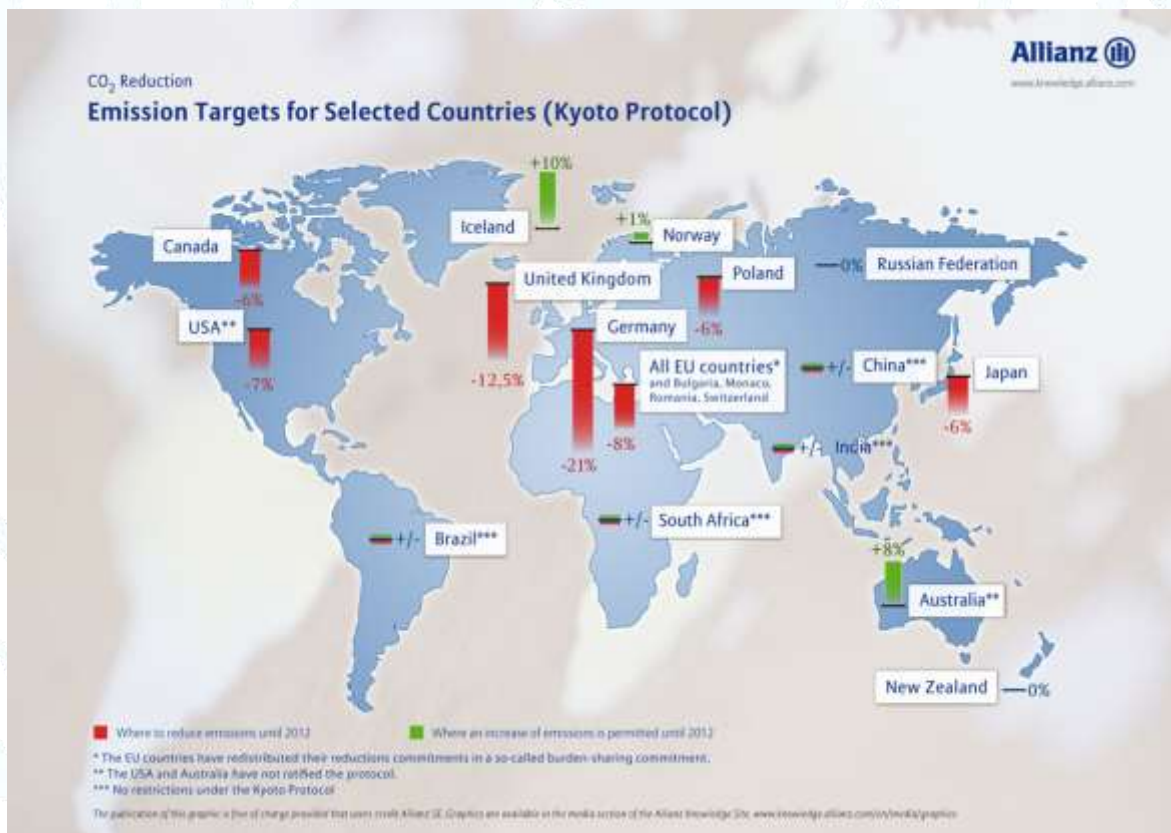
² IPCC, *Fifth Assessment Report (AR5)*, September 2013, http://www.climatechange2013.org/images/uploads/WGIAR5-SPM_Approved27Sep2013.pdf

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During the next ten years the United Nations and IPCC continued to try to find ways to approach this imminent threat to the world. *The Framework Convention on Climate Change* (UNFCCC), which has annual meetings in various countries around the globe, was created in Rio de Janeiro in 1992. It was negotiated at the United Nations Conference on Environment and Development (UNCED), informally known as the *Rio Earth Summit*, held in Rio de Janeiro (Brazil) 3-14 June 1992. The Earth Summit agreed on the importance of the problem and created a framework for international action, although it left actual policy recommendations mostly for the future.

In 1997, the largest international climate agreement, the UNFCCC met again in Kyoto (Japan). The resulting *Kyoto Protocol* to the UNFCCC, was signed.³ Although it has been widely criticized as a weak and indecisive agreement, the Kyoto Protocol is the strongest international guidance countries have been able to agree on. At Kyoto most countries agreed on emissions targets. Some countries did not cooperate, and implementation has been difficult for most. Most countries are not close to meeting the targets they set for themselves at Kyoto (Figure 2)

Figure 2. Country compliance with Kyoto carbon emissions targets



The main points of the Kyoto Protocol were internationally agreed “that developed countries are principle responsible for the current high levels of GHG emissions in the

³ The Kyoto Protocol to the United Nations Framework Convention on Climate Change, http://unfccc.int/kyoto_protocol/items/2830.php

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atmosphere... and place heavier burdens on developed nations under the principle of ‘common but differentiated responsibilities.’” 1990 was set as the base year for carbon dioxide emissions, and this was the target goal for most countries that signed/ratified the treaty. The ultimate purpose of the Protocol was to ensure that all parties reduced their carbon dioxide use in order to cease a dangerous rise in temperature. The first commitment period for cutting emissions began in 2008 and ended in 2012. Annex I countries plus the United States actually saw a drop in emissions of 6 percent, partially due to the economic slowdown after 2007, partially due to declining use of cars and less burning of coal, the most polluting of all fuels.

What and how to measure emissions is itself very political. It’s important to note that the international community could not agree to have emission measurements include international air travel and shipping, two industries which are large emitters of fossil fuels. 60 percent of CO₂ emission from aviation is from international flights, meaning that it emits more than most countries in the world. Shipping is another huge carbon dioxide emitter (transportation accounts for 15 percent of GHG emissions) that is ignored by the Kyoto Protocol.

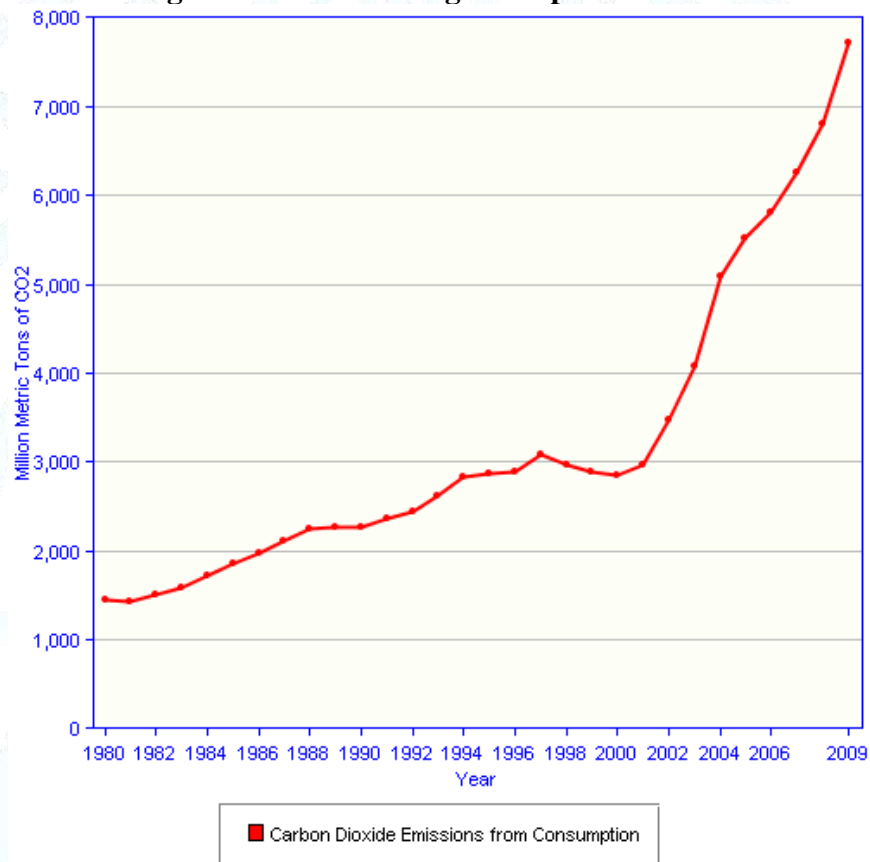
The second commitment period for the Kyoto Protocol began in 2013. The European Union, Australia, and Turkey are essentially the only countries who have committed to these targets. Canada renounced the Protocol, Russia and New Zealand removed themselves from setting targets, and nearly every other country is considered developing and therefore have no targets set.

Current Situation

As seen in the graph, the Kyoto Protocol has clearly and unequivocally failed to reduce the emission of carbon dioxide worldwide (although there was a drop between 1997, when the Protocol was ratified, and 2000). It is clear that new measures need to be taken in order to prevent things from getting even worse.

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Figure 3. Accumulating atmospheric carbon



Article 2 of the United Nations Framework Convention on Climate Change is one of the more contentious parts of the international climate debate to this day, as it defines the need to reduce greenhouse gases in the atmosphere to “a level that would prevent dangerous anthropogenic interference with the climate system.” The obvious problem with this is that there is no single answer for what qualifies as “dangerous” or what exactly that “level” should be. For island countries, a small sea level rise would be dangerous interference, while for landlocked countries, the ramifications of climate change will be seen in different ways. Furthermore, there is no agreed upon level for what greenhouse gases should be at because science hasn’t been able to fully predict climate successfully. The world’s carbon dioxide gas (CO₂, a crucial part of global warming) increase is rising 2 ppm (parts per mission) per year. How many years do we have before it’s too much? Global warming is a longer term phenomenon, an averaged trends interrupted by highs and lows. Since there is no direct correlation between *short term* CO₂ and temperature, and our reliable climate records only go back to around the year 1850, some governments balk at the need to change because they don’t feel like the earth is even in immediate danger, or their country might not be.

Two other very large issues include weighing funding and fixing, which lead to the net benefit. How much money does it cost a nation to cut their greenhouse gases? Will switching to

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alternative energies affect the world's economy? While we don't know the exact answer, it's very clear from all of the international climate discussions that it is not cheap for countries to stop the use of greenhouse gases, and it's even tougher when a nation is larger or more reliant on greenhouse gases in the first place. It will also be expensive for third world countries with no energy industries in place to start using alternatives; every country that is powerful today relied on coal to industrialize. At the moment, there is no alternative energy that has the same cost effectiveness or power as coal, and even the countries with the most alternative energy use still utilize fossil fuels. For example, France gets 75 percent of its electricity from nuclear energy, but still is in the top 20 countries by CO₂ usage, due largely to widespread use of personal cars and trucks.

Role of the United Nations Today

The only way to slow climate change and mitigate disaster is to stop the emission of greenhouse gases. It's clear that the changing atmosphere, melting glaciers, and intensifying storms need to be stopped. The United Nations needs to act in order to make sure that the effects of climate change are eliminated or at least minimized, while ensuring that the smartest tactics are used so all countries can continue to progress. The UN can't simply tell countries to transform their electrical grids or restrict use of cars. Sovereign states in the UN rather, must cooperate on solutions acceptable to themselves.

There are three main objectives that the United Nations must successfully complete in order to ensure a new climate agreement is agreed upon and successful. The first is making goals that are achievable, explainable, and cost effective.

The second objective is to ensure that all nations are able to develop under the guidelines. The first Kyoto Protocol simply excused developing nations from setting goals or caps, which has been one of the biggest failures.

The third objective is to plan ways to mitigate the effects of climate change on people that is already happening and will most likely continue to endanger people worldwide.

Landmark UN Resolutions

The Human Rights Council released their *Report of the Office of the UNHCHR on the relationship between climate change and human rights*. Using the IPCC Assessments for scientific backing, this report attempts to lay out exactly how climate change will affect human rights. The main issues they found were the threats climate change posed to the most vulnerable of populations. Displacement due to sea level rise and extreme weather is one of the biggest dangers. It is therefore the obligation of the more developed and less vulnerable nations to cease their use of greenhouse gases, as they are directly causing human rights crises worldwide.

In 2009, the General Assembly passed resolution A/RES/63/281, titled *Climate change and its possible security implications*.⁴ This year was also the year of the Copenhagen

⁴ "General Assembly, expressing deep concern, invites major United Nations organs to intensify efforts in addressing security implications of climate change", *UN General Assembly*, 3 June 2009.

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Conference, where countries came together in an attempt to unite countries. However, it led to the opposite. States from different parts of the globe began to bicker with each other, and it ended with separate factions fighting for their own personal needs as opposed to the group needing to halt climate change. The conference ended with nothing substantial, but a lot of division between developing island/African nations, China/India, and developed countries in the West.

The Rio + 20 Conference in 2011 was the latest United Nations event to bring up substantially new ideas in terms of stopping climate change. The most important idea brought to the table was Sustainable Development Goals. These goals bring a focus on ensuring that climate policy and greenhouse gas reduction doesn't mean ceasing development or preventing underdeveloped countries from progressing. While these ideas are definitely welcomed, they were not enough for anything binding to be produced during the conference.

In October of 2013, the International Panel for Climate Change released their Fifth Assessment, and the results were extremely grim. They say with 95 percent certainty that man-made climate change is occurring, and the need to make changes is becoming more and more dire.

Country Positions

The conflict between economic goals and immediate need for results has made it difficult for countries to come to a strong agreement. Popular opinion in countries also differs greatly, which can cause certain countries to disagree with provisions that are too weak or too strong to fight global warming.

The United States and Canada have experienced political divide within their country on the issue of climate change. Both countries' carbon emissions have remained fairly constant/slightly dropped in the past 5 years. This suggests that they (and others like them) might feel as though UN resolutions are unnecessary for them, but important to put pressure on others. Canada withdrew from the Kyoto Protocol in 2012 after declaring the treaty was a failure.

The trials and tribulations experienced by the *European Union* showcases how difficult even regional agreement on climate change can be. The UN estimates that the 27 countries of the European Union account for 13.98 percent of the world's carbon emissions, behind only China and the United States. France, Germany, Italy, Poland, Spain, Ukraine, United Kingdom each produce between 1-2 percent of the world's carbon dioxide emissions. The European Union initiated a trading scheme in order to help curb their CO₂ use. However, it was not nearly strict enough, which caused the market to crash while allowing most companies to avoid the costs altogether. Individual nations have taken matters into their own hands with mixed results as well.

Russia accounts for 5.72 percent of the world's carbon output, but has no interest in following the Kyoto Protocol as it stands now. They are dealing with the matter of climate change internally, but have similar reluctance to signing international agreements as the United States. They also have very little to be concerned about when it comes to global warming, and actually would be one of the few countries where global warming could become a net benefit if

<http://www.un.org/News/Press/docs/2009/ga10830.doc.htm> The resolution can be found at
<http://www.un.org/en/ga/63/resolutions.shtml>

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some colder regions warmed up. The countries that border Russia similarly have much less at stake from global warming than the rest of the globe because of their current climate. Nevertheless, they must take responsibility for the perils the rest of the world faces and make changes.

Asia is one of the most troubled regions when handling the climate issue. *China* and *India* the world's largest countries, both are rapidly industrializing. Both have lifted hundreds of millions of people out of desperate poverty, and still need to reach hundreds of millions more. A side effect is severe pollution. China produces 23.5 percent and Indian 5.83 percent of global carbon output respectively, and their populations are growing at a rate that suggests their use of carbon will only go up. China's emissions rose 200 percent in the two decades between 1990 and 2009. India experienced a similar rise. Even though they are such major greenhouse gas emitters, the Kyoto Protocol does not require them to cap their emissions because they are still considered developing countries. In recent years, China has spoken out about curbing their pollution and carbon dioxide emissions, but have little to show for it. Japan followed suit with Russia and Canada in deciding that they will cease to pursue the target goals set up by the Kyoto Protocol. South Korea, according to 2011 estimates, has one of the highest emissions per capita. However, they have recently announced an initiative to put one of the most stringent carbon trading policies in place in 2015 and curb greenhouse gases significantly by 2020.

Nearly every country in *Africa* is considered developing, except South Africa, and therefore have no requirements from the Kyoto Protocol. South Africa emits around 1.5 percent of the world's carbon, and no other country in Africa emits more than 1 percent. They are nevertheless one of the most difficult pieces in the climate change puzzle. Because of this, the main focus for these countries should be on how the LDC's are able to develop while ensuring they don't cause great impacts on greenhouse gas emissions. The Kyoto Protocol was obviously too lax on these nations, as India is a prime example of, but many African nations will struggle in poverty for decades without new technology and the burning of fossil fuels.

Many *Middle Eastern* countries are extremely dependent on fossil fuels for their economy, and therefore could experience serious negative effects from a dramatic reduction in the burning of fossil fuels. Iran, Saudi Arabia, Turkey, and UAE all have great impacts on carbon emissions. These countries will not negotiate with terms that cause immediate reductions in use of fossil fuels since it will destroy their economies.

Pacific island countries are in the unique position of having the most concern over the ramifications of climate change, while having the smallest effect on the global greenhouse gas output. Indonesia, Japan, and Australia are the only three island states that have a significant part on the overall industrial carbon dioxide use. All of the Pacific island nations are united in their desire for immediate and strong cuts in carbon dioxide to prevent sea level rise and ocean acidification. Australia has recently seen a switch in majority parties, leading to the ending of many of the stricter climate policies. They will most likely be far closer to the United States' policy of avoiding international agreement than ever before.

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