Efforts to Address Climate Change

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☰	WHAT'S COVERED

In this lesson, we will cover the topic of efforts to address climate change. We will discuss two main strategies to address climate change: mitigation and adaptation. We will cover government regulations, international bodies, and the attempts of other organizations to address climate change. We will also discuss the challenges associated with it. Specifically, this lesson will cover the following:

1. Mitigation and Adaptation

Efforts to address climate change come in two main forms: mitigation and adaptation.

Mitigation strategies introduce and/or eliminate the effects of climate change. There are numerous government efforts directed at mitigation.

> ↗ EXAMPLE Carbon sequestration occurs when atmospheric carbon is stored underground to negate its greenhouse effect.

Adaptation means adjusting to impending changes in the climate by preparing for its pros and cons. Adaptation measures can include acknowledging that certain areas will become too cold to grow food, while other areas will be able to grow more food than previously possible because of climatic limitations. To adapt, we will need to transfer where our prime growing regions are located. Ecosystems will also have to go through adaptation as climates change, but their ability to transition is unpredictable. Scientists are uncertain what the effects will be.

2. Government Regulations

Various government efforts, including efforts in countries like the United States, have involved the following:

- Enforce regulations and standards for greenhouse gas reduction

- Enforce taxes and fees on producers of greenhouse gas emissions

- Facilitate tradable carbon permits for businesses and industry

- Fund financial incentives for greenhouse gas reduction

- Provide education and information on the climate change sources, their impacts, and strategies to address it

3. Other Organizations

Many institutions of higher education, as well as private businesses, are diverting funds to research ways to reduce greenhouse gases and the potential negative effects of climate change. Some private businesses have been voluntarily signing agreements to reduce their production of greenhouse gases. Along with them, many nonprofit organizations demonstrate, educate, and lobby for solutions to climate change issues.
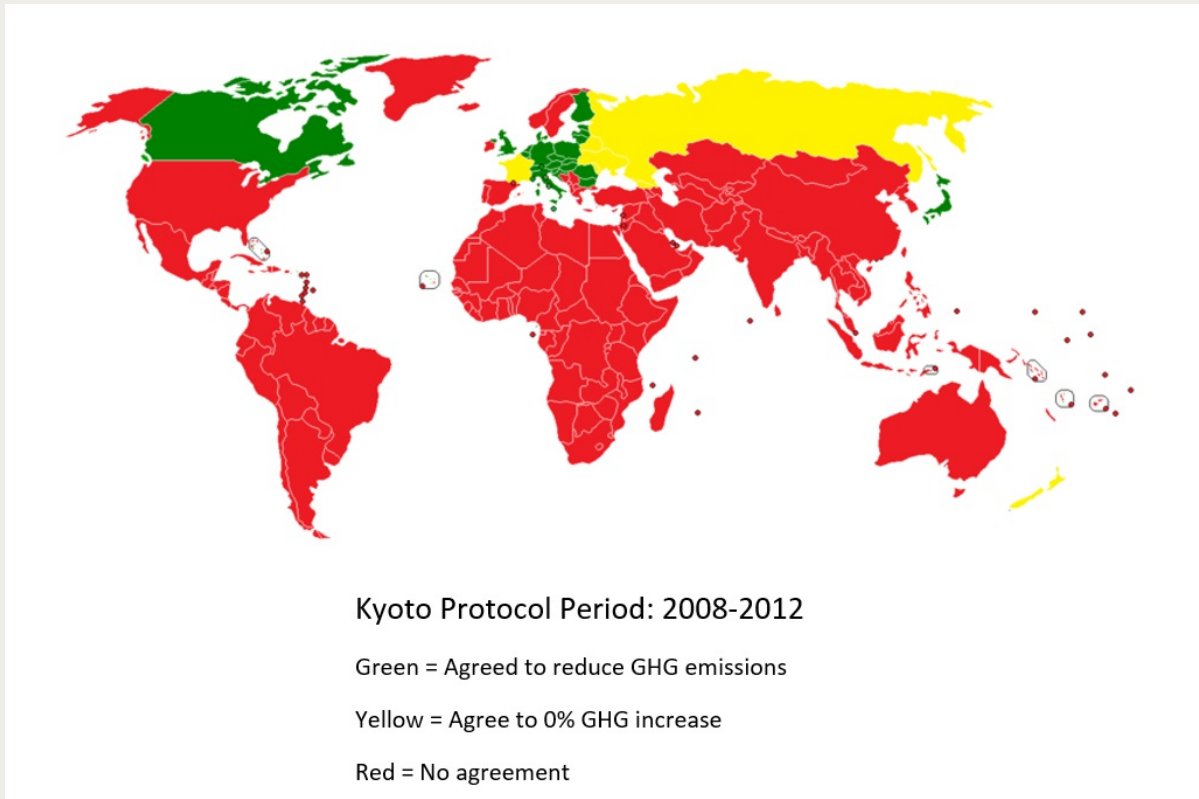

4. International Efforts

One of the most significant international efforts to address climate change was the international meeting in 1992, established by the United Nations, to prepare a framework for the anticipated Kyoto Protocol five years later. This 1992 convention suggested the following:

- More developed nations needed to cut their emissions.
- Internationally, we needed to approach climate change with the precautionary principle, meaning we should err on the side of caution rather than wait for scientific certainty.
- Policies to reduce emissions should be cost-effective.
- Free trade internationally should be encouraged in a more open global economic system.

IN CONTEXT

By 1997, the Kyoto Protocol, essentially an international treatise on climate change actions, had many UN countries on board to reduce their greenhouse gas emissions. While different countries had different targets, in general, the goal was to reduce greenhouse gas levels to 5.2% below 1990 levels by the year 2012. Emphasis was placed on tracking and monitoring emissions data to understand what mitigation efforts were effective.

Kyoto Protocol Period: 2008-2012

Green = Agreed to reduce GHG emissions

Yellow = Agree to 0% GHG increase

Red = No agreement

The Kyoto Protocol was seen as a first step in international cooperation on climate change issues. If all countries were to follow its framework, it would only slightly reduce the impacts of climate change. However, some countries still did not agree to the Protocol's terms. The United States was one that did not, which is why Kyoto Protocol standards have not been enforced there.

In 1998, a year after the Kyoto Protocol, the International Panel on Climate Change (IPCC) was formed to assess the potential risks and impacts of climate change. Even though the United States did not ratify the Kyoto Protocol in Congress, in 2011, the U.S. EPA began to issue greenhouse gas permits to industries, factories, and power plants.

5. Challenges to Addressing Climate Change

Addressing climate change is a challenging endeavor because it is hard to get people to focus on long-term benefits and impacts, as humans tend to be more concerned with short-term consequences and dividends.

The current global, political, physical, and economic infrastructure is built around fossil fuels, which makes transitioning away from them difficult, particularly in developing countries where economies thrive on cheap, abundant fuel sources. Sadly, those same developing countries are commonly most at risk of the negative impacts of climate change. Luckily, some private businesses have realized that climate change can have deep impacts on global economic prosperity and are finding new technologies to adapt to, or mitigate, climate change impacts.

📋 **SUMMARY**

In this lesson, we learned about two categories of addressing climate change: **mitigation and adaptation**. We learned about **government regulations** in attempting to address climate change, as well as efforts made by private businesses, institutions of higher learning, and nonprofit **organizations**. We learned about **international efforts** to address climate change, such as the Kyoto Protocol, an international treatise on climate change actions. Finally, we explored the **challenges to addressing climate change**.

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