

Global warming, a global problem assignment



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In order to alleviate the effects of global warming, scientists have developed lots of new technology to slow down global warming without lowering our quality of life. Meanwhile, I had some misconceptions about global warming before took this class. First, ICC reduction is the mainly source for global warming. Second, my high school teacher used greenhouse to explain greenhouse effect. Greenhouse is a house which is made of glass. It has glass walls and a glass roof, which keep greenhouse warm inside. As sunlight shines in, it warms the plants and air inside.

But the heat is trapped by the glass and can't escape. Therefore the greenhouse gases act as the glass walls and glass roof to trap the heat from the sun. During the day, the sun shines through the atmosphere. Earth's surface warms up in the sunlight. At night, earth's surface cools, releasing the heat back into the air. But some of the heat is trapped by the greenhouse gases in the atmosphere. That's how the greenhouse gases cause global warming. Before I took this class, I did not realize that there are natural greenhouse effect which produced by atmospheric gases that maintains a certain temperature on Earth.

Those gases in the atmosphere trap infrared radiation, or heat that would otherwise escape from the earth's atmosphere into space, so the earth's average surface temperature is around 590 F and it would be about 30 F without the greenhouse effect, which is important to the survival of every species on earth. Greenhouse effect already existed before humans exist on the planet. In fact, human activity is actually enhancing the greenhouse effect not creating it. Furthermore, the main concern is that concentrations of greenhouse gases are too high.

In lecture 2, the Powering showed that the sunlight from sun is short-wavelength, 23% absorbed by atmosphere, 30% reflected and only 47% absorbed by the earth's surface. Then the earth emits long-wavelength radiation back into space; these longer waves are 96% radiated down to Earth by the atmosphere which cause greenhouse effect. Before I took I did not view earth as a radiating object. My concept was the greenhouse gases absorb the sunlight once they enter the atmosphere. Look at the glass walls in the greenhouse house, it prevent convection between inside air with the outside air unlike our atmospheric process.

So the correct concept is that long-wavelength radiation which emit from the earth are easily absorbed by the greenhouse gases, the greenhouse gases are not absorbed the short-wavelength radiation very well compare to the long-wavelength radiation. That why it is important to the different between short-wavelength radiation and long-wavelength radiation My previous textbook did not mention much about ethane (CHI), and nitrous oxide (NON). Methane is an important greenhouse gas with a global warming potential of 25 compared to ICC over 100 years, but methane had a shorter life time compare to ICC.

The Earth's atmospheric methane concentration has increased by about 150% since 1750. Nitrous oxide has 310 times the ability per molecule of gas to trap heat in the atmosphere compare to ICC. Moreover, the process of making artificial nitrogen fertilizer has to consume a lot of fossil energy. Although the food production has increased over these decades, there are still lots of people dying because of lack of food. The reason is that the

human change their eating habit to consuming more meat and less vegetables.

After studying this course, there is still not strong evidence to prove that human is changing the climatic system. All I know is science is able to lead us to explore the mystery of the world and explains how things work in nature system. Some people criticize how the scientists exaggerate the effects of human activity on the climatic change; all they want is more funding to do research. Disagree about that because scientists put lots of effort to make the human life better, and they hope to find ways to stop climate change which causes disasters.

On the other hand, as people become more aware of the effects of global warming, people start thinking about recycling to reduce the waste in order to lower the ICC emission, such as turning off the electric devices when they are not in use, campaigning for longer battery life and more fuel-effective cars. Moreover, since global warming is a global problem, and we live in a global village, what we have done in the past and will do in the future are going to impact our neighbor. To conclude, we all have the same goal to protect the environment and let our children continue to live on a beautiful earth.