Environmental relevance and issues with global warming term paper example

Environment, Pollution

\n[toc title="Table of Contents"]\n

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1. Environmental Studies \n \t
2. Personal Relevance \n \t
3. Conclusion \n \t
4. References \n

\n[/toc]\n \n

Environmental Studies

Global Significance

The one environmental issue that has the most important significance in the world today is global warming. That is because the rising temperatures at the surface of the earth are responsible for causing negative impacts around the world. The two general causes for global warming are (a) natural and (b) manmade. Green house gases are causing the warming because the amount of manmade greenhouse gases added to those that are formed naturally have created the problem of too much trapped heat in the atmosphere. The sun’s energy plus reflected energy from the surface of the earth becomes absorbed or trapped by carbon dioxide (CO2). The concentrations of green house gas, especially Carbon dioxide (CO2), are too high. The results include extreme weather events and climate change. Climate is different from weather because it lasts longer and certain climates have been typical for different regions. For example in the United States growing seasons have shifted. Because the change has lasted for more than twenty years it can be categorized as a climate change.

Scientists know that the concentration of CO2 has increased since the beginning of the Industrial Revolution. Measurements are taken from the (a) atmosphere and from (b) ice cores. Measurements of CO2 taken from the top of Mount Loa, Hawaii were about 316 parts per million by volume (ppmv) in 1958. (Maslin, 2007, p. 8) The concentration of CO2 taken from the same place has increased every single year since 1958; in 2005 the concentration measured approximately 379 ppmv. (Maslin, 2007, p. 8) The measurements showing increased concentrations in the atmosphere since the Industrial Revolution have also been measured in ice cores from the Antarctic. The EPA reports (2012) that " the current CO2level is higher than it has been in at least 800, 000 years." The evidence from Mother Earth demonstrates the impact humans have had on the amount of CO2 in the atmosphere.

Here are a few of the results of global warming. The Arctic ice is melting at a rate faster than anyone had predicted. Than (2012) reported that the month of August 2012 demonstrated the fastest melting rate in Arctic ice that has ever been observed. The sea ice surrounding the North Pole only measured approximately 1. 58 million square miles. Compare this amount to1970 when the Arctic ice measured more than 2. 7 square miles. That is a decrease of 60 percent. Droughts, heat waves, and floods have become worse around the world due to global warming. People on the continents of Africa and Asia have died because of floods and droughts. (Maslin, 2007, p. 27) The droughts have caused an increase in wildfires which have burned hundreds of homes down in the American Southwest. Not only does the destruction from wildfires cause problems, but after these huge wildfires, water quality problems exist. Eichenseher (2012) reported on how wildfires cause water

quality problems using Colorado as an example, “ Wildfires scorch soils and create ash and debris that can clog rivers and reservoirs, increasing the cost of water treatment for years to come.” After the 2002 Hayman fire, the Denver public water agency spent over $26 million to restore, maintain and dredge in the forested areas. (Eichenseher 2012) The focus of improving water quality is to divert the ash and eroded soils from the water supply. Global warming also negatively impacts industries such as tourism. Winter tourism is in decline which over time means billions of lost money flowing through the economy; POW reports that “ snow-based recreation in the US was estimated to contribute $67 billion annually to the US economy and support over 600, 000 jobs. (POW, 2012)

The countries of the world have met in order to set up climate agreements, but the problem is that the richest countries are slow to make significant positive changes. The easiest way to lessen the problem immediately would be for all the countries to stop using fossil fuels for energy. Under the Kyoto Protocol created in 1997, cutting greenhouse emissions was agreed upon as global strategy. A worldwide goal was set to decrease the emissions by 5. 2 percent using1990 amounts as the base. The duration of the time frame for reaching the goal was from 2008 to 2012. Unfortunately some countries are producing more, not less, greenhouse gasses. Maslin (2007) reports that the “ US now produces 30 percent more CO2 pollution than in 1990” (p. 65). In 2001 one hundred and eight countries of the world signed the Kyoto Protocol in Germany. Unfortunately, the US President at the time, George W. Bush, withdrew from the Kyoto because it would call for businesses to actively use pollution control methods and look for alternative energy sources (instead of

fossil fuels). George W. Bush and his supporters felt that Kyoto agreement was anti-business and that the economy would be ruined if these change were made. Finally in 2005 Russia was the 55th country to ratify the treaty so the Kyoto agreement had enough signatures to go into effect.

Global warming is the worst problem that the world is facing because it impacts the entire world in so many ways. All the ecosystems humans need to stay healthy are negatively impacted. Those include agricultural areas, forests, cities and the water and air. If the whole world could find a way to work together to make the rate of global warming slow, that would be fantastic.

Personal Relevance

I strongly feel that reducing automobile pollution is the most important strategy for slowing down global warming. The reason reducing automobile emissions is so important is because of the large amount of CO2 emissions caused compared to other sources. Carbon dioxide is emitted from car engines when the fuel is burned. Environmental Defense reported that the amount of CO2 emitted from personal vehicles used for transportation account for " 10 percent of global CO2 emissions from fossil fuels, which are the main form of greenhouse gas pollution" (DeCicco& Fung, 2006, p. vi). Vehicles from the US have the largest negative impact on the atmosphere because " the US has 5 percent of the world's population and 30 percent of the world's automobiles, but it contributes 45 percent of the world's automotive CO2 emissions" (DeCicco& Fung, 2006, p. vi). That means that only one country is producing almost half of the CO2 pollution entering

earth’s atmosphere. All this pollution has disrupted the natural equilibrium of gases in earth’s atmosphere. It also means that Americans have the power to make a big difference in atmospheric CO2 pollution by changing their transportation habits.

Environmental Defense (2006) reported that the amount of carbon from the tailpipe of cars is more than the amount of carbon emission from producers of electricity. Data from 2004 demonstrates that car manufactured by GM, Ford and Daimler Chrysler are all responsible for more carbon pollution than any of the electricity producers. The vehicles produced at GM emitted approximately 99 million metric tons in carbon-equivalent (MMTc). (DeCicco& Fung, 2006, p. 11) The amount from Ford products was about 80 MMTc and the amount from Daimler Chrysler was about 51 MMTc. (DeCicco& Fung, 2006, p. 11) The American Electric Power Company was responsible for the highest concentration of carbon emission in 2000, adding approximately 41 MMTc to the atmosphere. (DeCicco& Fung, 2006, p. 11) Therefore the products of the three largest vehicle manufacturers all emit more carbon than the highest producer of energy. Solving this problem is very important.

The impact of automobile pollution is called the “ rolling carbon” problem in the Environmental Defense (ED) report (DeCicco& Fung, 2006, p. vi). Each type of private transportation vehicle on America’s roads “ from the latest luxury SUV cruising through an upscale suburb to the oldest pickup truck bumping along a rural lane” were evaluated in the study (DeCicco& Fung, 2006, p. vi). The impact in 2004 of all the US light trucks and cars was found to be equal to 314 MMTc CO2. (DeCicco& Fung, 2006, p. 21) The authors of

the ED report point out that “ the amount of CO2 emitted a year from the US vehicle stock is equivalent to the amount of carbon in a coal train 50, 000 miles long” (DeCicco& Fung, 2006, p. 21).

There are many solutions that could be used to solve this problem. A few of those include high quality mass transportation like fast trains, alternative energy sources and low carbon fuels, and designing walk ways for pedestrians and bike friendly streets in cities. I have been changing some of my habits in order to make my carbon footprint lower. For instance I have started walking and riding my bike or car pooling with friends and I can still travel to where I want to go I talk about the problem with my friends and I keep myself educated about recent developments. The National Geographic, National Resources Defense Council (NRDC) and Conservation International (CI) are all good websites for keeping up-to-date. The type of problems I face in meeting my personal goals are that sometimes a car is the only choice available because there is no bus or it is too dangerous to use my bicycle.

Conclusion

I have been especially interested in studying the impact automobiles have on global warming because Americans are responsible for so much of the world’s CO2. That is due to what some people call our ‘ love affair’ with our cars. The negative impact from using fossil fuel burning engines for transportation every day is larger from the US than from any other country in the world. It is an area that I feel I can positively impact by changing my own habits. The leaders of the industrialized countries base their decisions on economics, or as they say ‘ what is good for big business.’ Ironically, the

negative impacts caused by global warming are also negative impacts on the economy. The winter tourism business is only one example. The good news is we can control the manmade causes of global warming by creating less pollution. The difficulty is gaining the cooperation of everyone in all of the US sectors including government, businesses, neighbors and friends. The obstacle seems to be the difficulty they have in facing the challenge to accept a big change.

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