

# Human activity and climate change

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I strongly agree with the statement: “ Human activity especially the burning of fossil fuels is a major contributor to climate change.” According to IPCC (2007) the concentrations of the greenhouse gases - carbon dioxide, methane and nitrous oxide in the earth’s atmosphere, has increased significantly as a result of human activities. The increase in carbon dioxide has been attributed to the use of fossil fuel as well as changes in the way in which land is used while methane and nitrous oxide are linked primarily to agriculture including animal husbandry (IPCC 2007). Carbon dioxide has been described as one of the most anthropogenic greenhouse gas. That is it is caused from human activity and the influence that they have on the environment. The concentration of carbon dioxide in the atmosphere has increased from 280 parts per million (ppm) before the industrial revolution to 379 ppm<sup>3</sup> in 2005 (IPCC 2007). Additionally, the concentration of carbon dioxide in the atmosphere in 2005 was much greater than the natural range of 180 to 300ppm over the last 650, 000 years. This information has been determined from ice cores spanning thousands of years (IPCC 2007). Continuous measurements show that during the ten years spanning 1995 to 2005 the annual growth rate of the concentration of carbon dioxide was 1.9ppm and this is more than that for the period 1960 to 2005 when the concentration was 1.4ppm (IPCC 2007).

The use of fossil fuel has been found to be the main source of the increased concentration of carbon dioxide ever since the pre-industrial period which dates from 1900 to 1926 with annual emission increasing from an average of 6.4 GtC per annum in the 1990’s to 7.2 per year during the period 2000 to 2005 (IPCC 2007). Greenhouse gas emissions that has been attributed to the

change in the way land is used has been found to be significantly less when compared to greenhouse gas emissions from carbon dioxide at a rates of 1.6 GtC per year throughout the 1990's. However, these estimates

According to California Energy Commission (2012) there are three major forms of fossil fuel – coal, oil and natural gas. They were formed millions of years ago during the carboniferous period which is part of the Paleozoic Era. Carboniferous comes from the word carbon and carbon is the basic element that makes up coal, oil and natural gas.

Coal is used to fuel power plants and other factories. Natural gas is made up mainly of methane. It contains one atom of carbon and four atoms of hydrogen thus its scientific name is CH<sub>4</sub>. It is highly flammable and is found near petroleum underground. It is used in heating buildings and water. It is also used to generate electricity. It is also used in households for cooking. Oil in the form of petroleum or crude oil has to be changed into other products before it can be used for energy (California Energy Commission 2012). It is through the process of combustion of fossil fuel that carbon dioxide is released into the earth's atmosphere.

Fossil fuel is used as energy in the daily activities of human. It is used in factories to run machines. It is also used as energy to transport goods, to generate electricity and for many other purposes. Therefore, the use of fossil fuel is pervasive. We are dependent on it to carry out our daily activities and the more we become dependent on it the more we are contributing to climate change.

#### References

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