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Carbon Dioxide: Good or Bad?

Anthropogenic carbon dioxide, or CO₂ is a major contributor to total amount of CO₂ in the atmosphere. Many scientists believe that the actions of humans have caused global warming. The earth has warmed about one degree in the past hundred years (“Chapter Three: The Human Contribution”). Global warming has increased significantly throughout the years. Human beings are to be blamed for affecting the surface of the land and the composition of the atmosphere. While we are changing the land and atmosphere, we are also changing the climate (“Chapter Three: The Human Contribution”).

Humans are warming the earth by several processes. The biggest and most important process is burning fossil fuel, which releases carbon dioxide, or CO₂. Oil and natural gas are used for electricity to heat homes and factories. Also, the fuel is used for transportation. About seven billion tons of carbon is released through the burning of fossil fuels (“Chapter Three: The Human Contribution”). When oxygen “joins” with the carbon, it makes carbon dioxide. Another big contributor to the total amount of CO₂ in the atmosphere is coal. Coal is used to manufacture products, such as steel and cement, but its main use is creating electricity. Power plants use coal to heat water until it turns into steam, which then rotates large turbines to create electricity: “In the United States, more than 50 percent of all electrical plants use coal, which also provides power for about 40 percent of the total electricity generated throughout the world” (“Chapter Three: The

Human Contribution”). Oil and natural gas are also used to produce electricity, but not as often as coal: “All fossil fuels release carbon whenever they are burned, but coal has a much higher carbon content than either oil or gas. Coal is a main contributor toward global warming because so much electricity is produced from coal-burning power plants” (“Chapter Three: The Human Contribution”). Humans and animals create carbon dioxide by just breathing. “The bodies of humans and animals contain eighteen percent carbon” (“Chapter Three: The Human Contribution”). When things die and decompose, they also release carbon dioxide. The carbon combines with the oxygen in the soil and releases carbon dioxide (“Chapter Three: The Human Contribution”).

Deforestation is another human activity that releases carbon dioxide. Trees take in carbon and put out oxygen, so when they are cut down, they release great amounts of carbon dioxide. The effects double when the trees are burned (“Chapter Three: The Human Contribution”).

Methane is also discharged during the burning of fossil fuels. It escapes from the ground during oil drilling and coal mining, and through cracked or leaking pipelines. “Methane is also formed during the decay of garbage. In the United States alone, about 10 million tons of food waste is disposed of each year by commercial restaurants and households” (“Chapter Three: The Human Contribution”). A major contributor to methane gas is livestock. Animals like cattle, sheep, goats, horses, pigs, and camels eat grass and hay. When these animals burp, methane is released into the air.

“In countries where there is a high amount of agriculture, farm animals are often the largest source of methane. In Scotland, for instance, farm animals produce more than 45 percent of the country's total methane, while in New Zealand the

number is much higher: nearly 90 percent. Currently, the worldwide cattle population is increasing faster than the human population, and as more cattle are raised, more methane gas is created” (“Chapter Three: The Human Contribution”).

On the other hand, anthropogenic CO₂ is not a major contributor to the total amount of CO₂ in the atmosphere. Only 3.25% of carbon dioxide is man-made and 96.75% is natural. Humans contribute only a very small part. Anthropogenic CO₂ contributions cause only about 0.117% of the earth’s greenhouse effect (“Water Vapor Rules the Greenhouse System”). “About forty percent of the extra CO₂ entering the atmosphere due to human activity is being absorbed by natural carbon sinks, mostly by the oceans” (“Brahic”). Carbon dioxide is used by plants during photosynthesis. Natural processes in the world also emit CO₂. Some of these processes are volcanoes and other geothermal processes, like hot springs and geysers. “It is estimated that volcanoes release about 145-255 million tons of carbon dioxide into the atmosphere each year” (“Carbon Dioxide”). Humans can not help or stop these natural processes from happening.

I personally believe that we need to use the fuels and petroleum for certain things, like transportation. Humans need to stop our excessive use of the fossil fuels, though, because we are running out of them, and we are hurting our earth. Carbon dioxide, the by-product of burning fossil fuels, is used excessively by numerous industries. Also, plants require carbon dioxide to conduct photosynthesis. Additional CO₂ sustains plant life and growth, so a drop in carbon dioxide would kill green plants or completely stop their growth. If all the plants were killed off, humans would not be able to survive. “It has been proposed that carbon dioxide from power generation be bubbled into ponds to grow

algae that could then be converted into biodiesel fuel. Carbon dioxide is already increasingly used in greenhouses as the main carbon source for Spirulina algae. In medicine, up to 5% carbon dioxide is added to pure oxygen for stimulation of breathing after apnea and to stabilize the O₂/CO₂ balance in blood” (“Carbon Dioxide”). The use of fossil fuels creates both negative and positive consequences, but I believe the positive outweigh the negative.

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