
Environmental Issues that Caused Climate Change

Today, it seems impossible to listen to a news broadcast or other media outlet without the topic of climate change being present. The general consensus of most scientists is that today's atmospheric conditions are changing, and unfortunately not for the best. Many current governing bodies and political figures have made political attempts for dialogue promoting awareness and change to help combat the many challenges that today's society plays on the Earth's atmosphere, most notably the amount of carbon emissions. Increases in CO₂ emissions can create a disruption in the Earth's ability to absorb heat and carbon from the atmosphere, a dangerous trend as reflected in a recent ScienceNews article. Associate editor Emily DeMarco explains in the article that in the oceans surrounding the ice shelves of the Antarctica Peninsula of the Southern Ocean, researchers are making headway in mapping and understanding just how much of an impact the amounts of carbon have had on the growingly warmer and saltier waters.

"Understanding this upwelling matters because the deep water carries a lot of heat and carbon. As the climate changes, Southern Ocean upwelling may increase, which could accelerate ice shelf melting, release more carbon into the atmosphere and limit the ocean's ability to absorb heat and carbon dioxide from the atmosphere" (DeMarco). The Earth's atmosphere is a giant chemistry factory of processes that helps us sustain life. Through multiple processes, such as the carbon cycle, photosynthesis, respiration, weathering, etc. our climate is able to create energy, rid byproducts, and help produce the elements necessary to sustain life in our environment. The Earth's atmosphere has always been a luxury for mankind, providing the basic essentials to support life.

However, with the rapid changes in social, cultural, and economical lifestyles, less and less care for the safety of our environment is jeopardizing the safety of the one delicate Earth we share. This is not just a concern, but a responsibility to every person who chooses to live on this planet. I've always considered myself as a person who tries to make better choices for the environment, which is why I am always on the lookout for more news and more information as it becomes available, such as articles like this one. However, this article did call for a deeper grasp of appreciation surrounding the recent taboo that surrounds the melting of the polar ice shelves. I had heard so much about it on the news recently, but the article offered a glimpse of how our actions play a role on the earth, as shown in the melting in the Southern Ocean waters. This led me to want to know further, so after a quick internet search, I found a great article from Columbia University's website titled "The Carbon Cycle and Earth's Climate" that explained at greater length the exact formulas the Earth needed to run.

For example, we all know carbon emissions are bad. Carbon emissions are very easy, unfortunately, for us to create as well. In this article, however, we see that all of the excess CO₂ emissions create a surplus that is too great for the Earth to dissolve in equilibrium with the atmosphere. So this surplus gets dissolved into the ocean waters, warming the waters higher than normal, creating warmer, saltier conditions than are typical for the area, and this causes the ice shelves to melt (Columbia). With this new knowledge gained, it begs the question, why doesn't everyone want to be more eco-friendly? I know that I am going to try harder to be less negligent toward the numerous applications in my life that I know rely on carbon-emitting

sources, like cars, trains, airplanes, and the fossil fuels that run my home.

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