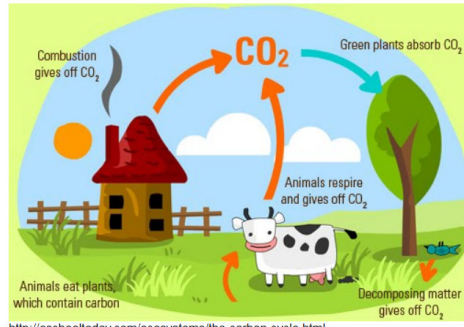


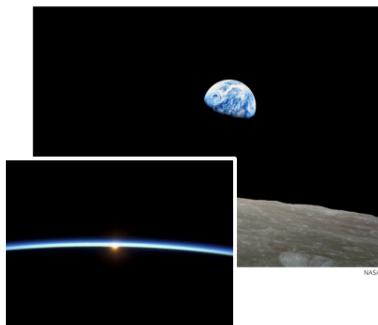
Cena y Ciencias 2019-2020  
Ciencia para Salvar El Mundo  
“Climate Change”

Every human activity has an impact on the environment. When we breathe, we transform oxygen around us and the food we eat, into energy and byproducts, such as carbon dioxide, or CO<sub>2</sub>. However, plants help us recycle this CO<sub>2</sub> to regenerate oxygen. For millions of years, earth has established these cycles that allow to establish a relative harmony between what we consume and the waste we produce. However, cycles can be easily altered by excess, and it is often difficult to figure out when this has happened.



The carbon cycle

**A great deal of human activity produces large quantities of CO<sub>2</sub>.** When we ride a gasoline car, when we fire up the great furnaces that produce the cement to build our building, when we turn on the lights with the electricity produced by burning fossil fuels. However, the CO<sub>2</sub> that these activities produce is virtually imperceptible: it is tasteless, invisible, and is already part of the air we breathe. Thus, this gas has been accumulating on earth's atmosphere. When earth's first astronauts went to space, they noted things that changed our perspective



Earth's thin atmosphere

about earth: it is essentially a container, where we all live and where what we all do impacts us all; it also has a very thin atmosphere; thus, the impact of our activities on it is deep. Great quantities of CO<sub>2</sub> on the atmosphere will have the effect of trapping more heat from the sun. This has an impact on climate, creating stronger storms and longer draughts. More CO<sub>2</sub> in the atmosphere also means more CO<sub>2</sub> in the ocean, which causes issues such as acidification, which threatens the existence of coral reefs.

Thus, to begin solving this problem of CO<sub>2</sub> accumulation, scientists first had to figure out a way to see what is not evident. Today in Cena y Ciencias, we will learn more about how scientists help us see the effects of CO<sub>2</sub> and to understand the problem of accumulation. First, we will learn about the properties of CO<sub>2</sub>. Then you will learn about how scientists detect changes in the properties of water when there is CO<sub>2</sub>. Then we will learn about scientific instruments to see CO<sub>2</sub> and its effects. Finally, you will learn about the problem of accumulation, and what are the common sources of CO<sub>2</sub>.



Bleached corals



Healthy corals

Bleached coral reef