

# Climate Changes

## and the Greenhouse effect

Even if the term “greenhouse effect” is somewhat of a misnomer, it still might be useful so people can understand an otherwise tangled natural process. Most people can relate to how hot and stuffy a greenhouse can get. Now that the Earth has started to heat up, we realize that our own global greenhouse has no window that we can open to catch some fresh air.

As it appears, climate changes aren't as big of a concern to some, as it is for the life on Earth in general. Some take notes of what is said on TV about temperatures being the highest **in the past 50 years or so**, so they don't make that big a deal of it, thinking it will come and pass by without any consequences, but others don't agree. People should be afraid of what might come in time, and take action before is too late. If speaking of the consequences, negative or positive, it is unavoidable to say that there are almost none positive aftereffects at all. Agriculture, traffic, industrialization, deforestation, all those things lead to negative effects that question our future life on Earth. The melting of the glaciers and Earth's icecap in general, the increase of storms and other natural disasters, the process of desertification that is becoming a greater threat, all these and more endanger our life on Earth.

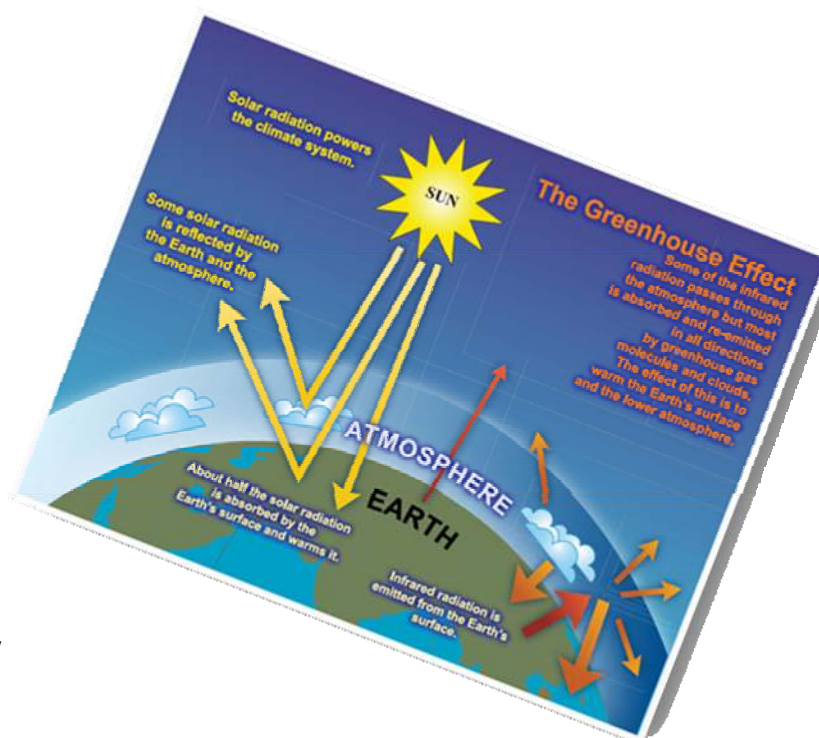
Carbon dioxide is the number-one reason for man-made climate change.

CO<sub>2</sub> is a colorless and odorless gas so it is hard to detect. CO<sub>2</sub> is the second-most important greenhouse gas behind water vapor. Methane and ozone are more efficient, but their concentration in the atmosphere is smaller so they have less effect on climate change. Since the beginning of the industrial revolution, the average amount of CO<sub>2</sub> in the atmosphere has increased by nearly 40 percent in total. This leads to a natural disorder: plants can no longer transform the CO<sub>2</sub> into oxygen, and oceans are steadily reaching saturation level. CO<sub>2</sub> has always been with us. Scientists say Earth's earliest atmosphere was made up mostly of steam, CO<sub>2</sub>, and NH<sub>4</sub> from volcanic eruptions. Today, CO<sub>2</sub> is mostly produced by the combustion of organic matter like coal, oil, and wood, the fermentation,

and the respiration processes of living organisms.

### What is the Greenhouse effect?

The Sun is the Earth's primary energy source, a burning star so hot that we can feel its heat from over 150 million kilometers away. Its rays enter our atmosphere and shower upon our planet. About one third of this solar energy is reflected back into the universe by shimmering glaciers, water and other bright



surfaces. Two thirds, however, are absorbed by the Earth, warming land, oceans, and

atmosphere. Much of this heat

radiates back out into space, but some of it is stored in the atmosphere. This process is called the greenhouse effect. Without it, the Earth's average temperature would be a chilling -18 degrees Celsius, even despite the sun's constant energy supply. In a world like this, life on

Earth would probably have never emerged from the sea. Thanks to the greenhouse effect, however, heat emitted from the Earth is trapped in the atmosphere, providing us with a comfortable average temperature of 14 degrees.

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