

# Global warming and climate change

[Environment](#), [Global Warming](#)



NASA shows evidence of what causes Global warming and how our ecosystem and our ocean is taking it. Satellite images are evidence as to how the world is affected, cumulative details backing into the 1800s to our present time. The main cause to the globe warming are greenhouse gases. The greenhouse effect is what as described, like a greenhouse that takes heat from sunlight and traps the heat for the plants. Except in this scenario greenhouse gases traps heat of carbon dioxide and other gases into the planet. The increased level of greenhouse gases has cause earth to warm in response.

The ocean takes in the increased heat. According to NASA the ocean takes in the carbon dioxide from the air and if it weren't for the ocean, we'd be in more trouble than we are now. But, there's so much the ocean can take. There are plants and animals in the ocean that must either adapt or die in response to in-taking the warmth. On the bottom of the food chains are algae and plankton in which all creature depends on. Corals give the algae a place to live and process photosynthesis, but too much warmth can cause the algae to not process anymore photosynthesis so the algae either gets spit out by the corals or die. Just like the plants and animals on land, the plant and animals in the ocean breathe oxygen and give off carbon dioxide. For the ocean, taking in carbon dioxide from the air can not only in toxifies plants and animals but also make the ocean acidic, affecting all alkalinity of the ocean.

The ocean gives us our cold and warmth in the atmosphere. The warmth it takes in also gives off into ice sheets, the arctic ice anything ice on the globe causing the ice to melt. The floating extensions of glaciers empty into the <https://assignbuster.com/global-warming-and-climate-change/>

sea. Based on NASA's satellite, they state that Antarctic ice shelves have 55% mass loss from 2003 to 2008. The ice shelves hold 60% of the planet's freshwater. But yet, they're melting into the ocean making them non-consumable for us because it's merged with the saltwater, expanding the seawater as it warms. Also, as a result has caused the sea level to rise 8 inches in the last century, but in this last 2 decades has nearly doubled that since. The ice age warming is occurring three times faster than the average.

In the last 650,000 years, the Carbon Dioxide in the atmosphere has increased more than 40% since the industrial revolution. Right now, the carbon dioxide level has exceeded the mark and is now over 400 ppm mark it is not 408 ppm exactly according to NASA. The carbon dioxide is coming in faster than expected and the earth will lose its natural ability to take in carbon dioxide each year. Even if we were to stop emitting carbon dioxide into the atmosphere for a day, it will still linger in the air for decades.

The primary reason as to why the planet is warming is due to human activities and our causes that create greenhouse emissions. Carbon dioxide is put into the air and trapped. Solar radiation is not to blame. NASA fights this notion and states that they've been measuring the Sun with satellite instruments, the measurements show that the sun gives off a slight drop of solar radiation. There are also a long-term investigation on whether the sun does contribute to global warming, using "sunspot records". The most recent analyses of test indicate that solar irradiance changes are not a factor that is plausible for more than 10% of the 20th century's warming.

Global warming would affect me personally, but also the world globally. If temperature rises, glaciers that hold 60% of our freshwater will melt into the ocean to become water we cannot consume making our water supplies decline. The sea level would also rise 1-4 feet by 2100. The temperature will change our agriculture and the lengths of season and frost-free season will change. The worse it would do is create bad heat waves that will increase summer temperatures, create droughts and even now is projected to continue rising reducing soil moisture. There will also be an increase of wildfire that will affect our air quality. I don't know if me or anyone would survive in this type of environment except those who have the money to buy homes or technology/creations that can protect one from all this disaster.

The scientific consensus, the accumulative general agreement of all scientists about the reality of global warming that humans are the primary cause of global warming. 97% of scientists understand that global warming is caused by humans. The emissions of greenhouse gases are the highest in history and human activities are the reason why. This is concluded based on evidence and peer-reviewed science. Leading science organizations worldwide: The American Scientific Societies, Science Academies, U. S. Government Agencies, and so on. This is just the partial list.

On the FAQ section, I've had a question I've seen that I wondered myself. I've always wondered what the real difference is between climate change and global warming, never really thoroughly thought about it, but now it seems obvious by the titles. According to NASA, "global warming" refers to the long-term warming of the planet and "climate change" encompasses global

warming, but towards the broader spectrum of changes that are happening on the planet. I also always thought that NASA was about space and research on other planets and life forms beyond Earth. According to NASA, they take a global perspective on Earth also, Earth is a planet! They play a big role in Earth science, from observing our climate, our weather, etc. from space viewpoint. NASA spends over a billion dollars a year for Earth science, more than a dozen of their satellites orbit around the planet, overseeing the ocean, lands, ice, atmosphere and biosphere.

Exploring a little more on the NASA website, on the “ News” section of the “ Articles” section, “ June 2018 ties for third warmest June in the record.” I found intriguing. According to NASA this June 2018 is still one of the warmest June since the past 40 years, surpassing the 1951-1980 mean by 0. 77 Celsius. This year tying up with June of 1988 as the third warmest June in 138 years. The GISS team does monthly analysis from publicly available data in which they acquire from 6, 300 meteorological stations (weather stations).

On the NOAA website, the “ All NCEI News” section, “ On This Day: Earth’s Hottest Temperature”, I found this article interesting. It speaks about Death Valley and how it got its name along with the world record of the hottest temperature ever recorded. Death Valley is a historical and National Park today. Pioneers has cross this path to mine gold at Sutter’s Mill in CA but could not make it through Death Valley. Many died and fought to survive, along with cattle and horses.

Death Valley has the highest record of air temperature, 134 degrees Fahrenheit observed in July 10th, 1915, which according to NOAA is above

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Death Valley's average summer temperature frequently reach or exceed over 100 degrees Fahrenheit from middle of May to October. The temperature has reached 125 degrees Fahrenheit or more every day. There was a 10-day long period where temperatures were way above for 10 consecutive days. The hottest days to this date has been July 9th -13th where the temperature reached about 129 degrees Fahrenheit each day, on the 10th between those days it was 134 degrees Fahrenheit. Death Valley is extremely hot due to the shape of its " valley": long and narrow basin that is 282 feet below sea level, it influences summer temperature. The heat gets trapped in the valley's depths. Nights there are between 85 to 95 degrees Fahrenheit.

Another article I found interesting is " Tracking the Gulf Dead Zone". NOAA's Gulf of Mexico Hypoxia Watch program has monitored the Gulf's hypoxic zone. The bottom of the water in the area contains less to no little oxygen, also known as the " dead zone". Their aim is to find a way for sustainability within the matter with advancements in technology that meet the program requirements. Billions has been invested to understand the conditions and ways to improve the economy. Hypoxia is caused by human activities; nutrient pollution is the primary cause of it. They form when too much nutrients, more towards nitrogen and phosphorus enter the waters from fertilizers, wastewater and fossil fuels. The algae that provides oxygen decomposes and so oxygen depletes and marine life in that area either leave or die. The largest dead zone is on the entire bottom of the Baltic Sea, the size of California.

The U. S. has dead zones that occur in Chesapeake Bay and Oregon. But, the Gulf has the largest dead zone in the U. S. and second largest in the world, forming each summer off the coast of Texas and Louisiana. This dead zone threatens the ecosystem of the Gulf fisheries. The Mississippi river is the core, it is the drainage basin for 41% of the U. S. toxicity. The Mississippi river carries all the nutrient pollution from agriculture, industries, and cities. The NOAA Hypoxia Watch helps by gathering data from the environment annually, critically scanning the information and conditions accumulated finding ways to sustain the problem. They also team up with other projects of NCEI and The National Fisheries Service, and the Coast Watch: Caribbean/ Gulf of Mexico. As a team and partnering up with one another together they are finding a way to understand and predict ways to reduce hypoxic from affecting the ecosystem.

The United Nations Conference on Climate Change Conference held in Paris in 2015. The agreement didn't specifically detail exactly on what countries should do. But, the conference aims at global climate change to put the world on track to avoid the dangers of climate change, by keeping global warming below 2 degrees Celsius. The agreement that the countries had was to reduce emissions, aiming to limit it, recognize that this will take longer for the developing countries, to take action with the best available science to undertake reduction, coming together as a nation every 5 years to make more goals to aim for, report to each other, track progress, and also to adapt: strengthen the societies to deal with the impacts of what's to come with climate change and continue to provide and support internationally for adaptation to developing countries.