

# Global warming essay sample

[Environment](#), [Climate](#)



The term global warming was first used in its modern sense in a science paper dated 8th August 1975 in the journal science called "Are we on the brink of a pronounced global warming?" The words used by Broker were new and they represented a convincing recognition that there was an amount of warming in the climate. Scientists previously used the phrase "inadvertent climate modification" because even though it was realized that humans could bring about a change in the environment, no-one was particularly sure as to which direction it was going. The word Global Warming was first used by National Academy of Sciences in 1979 in a paper called The Charney Report, which wrote: "If there is a continuous increase in the amount of carbon dioxide in the atmosphere, there'll be no reason to doubt that climate changes will come up and no reason to believe that these changes will be close to insignificant."

The report made a contrast between referring to changes in surface temperature as Global Warming while referring to various other changes caused by increased CO<sub>2</sub> as climate change. Global warming became more commonly popular basically after 1988 when a NASA climate scientist James Hansen used the term in a demonstration to congress. He said, "Global warming has reached to such a stage that we can describe it with a great degree of confidence as a cause and effect relationship between the greenhouse effect and the noticed warming." His statement was widely reported and the word 'Global Warming' was ordinarily used in public disclose and by the press. Reference: [http://www. projectearth. net/Project/Details/1508](http://www.projectearth.net/Project/Details/1508)

Global warming has been one of the biggest environmental and humanitarian crises since the late 19th century. Decades have been spent by the scientists to figure out what actually is causing global warming. Natural cycles and events that are known to influence climate have been looked upon. But the pattern and amount of warming that has been measured cannot be explained only by these factors. The only explainable way is to take into consideration the effect of greenhouse gases (GHGs) in the atmosphere due to human activities. A group of scientists called the 'Intergovernmental Panel on Climate Change' or IPCC was formed by the United Nations to bring all this information together. Latest scientific findings are reviewed every few years by the IPCC meetings and reports are written summarizing all that is known about global warming. Every report puts forward an agreement, or a consensus among hundreds of major leading scientists. The first thing that scientists found out is that warming is caused by several greenhouse gases, which are emitted by humans in a number of ways. Most of them come from burning of fossil fuels in factories, cars and electricity production.

Carbon Dioxide or CO<sub>2</sub> is the gas responsible for most of the warming. Methane discharged from landfills and agriculture, mainly from digestive systems of grazing animals, nitrous oxide released from fertilizers, gases which are used for industrial processes and refrigeration, and cutting down of forests that would otherwise store CO<sub>2</sub> are some other contributors of global warming. The effect of green house gases such as carbon dioxide, deforestation, emissions from burning fossil fuels, trapping of unnecessary heat that should otherwise escape from the earth, causing a rise in its

average surface temperature is known as global warming. It is also called the greenhouse effect. Heat trapping carbon dioxide overloads the earth's atmosphere and causes large scale disruptions and other disastrous consequences. Warming of the climatic system is absolute, scientists being decisive that it is primarily due to increasing concentrations of green house gases contributed by various human activities of polluting the environment. Different heat-trapping abilities are found in different greenhouse gases. Some of them capable of trapping more heat than CO<sub>2</sub>.

A single molecule of methane emits more than 20 times the warming of a single molecule of CO<sub>2</sub>. Nitrous oxide being 300 times more powerful than carbon dioxide. Gases such as chlorofluorocarbons have been banned in many parts of the world because of their ability to degrade the ozone layer. Such gases trap the heat thousand times more than CO<sub>2</sub> does. But because they have low concentration than CO<sub>2</sub>, none of them add that much warmth to the atmosphere as much as CO<sub>2</sub> does. To understand the impacts of all gases together, scientists usually talk about all greenhouse gases in terms of the commensurate amount of CO<sub>2</sub>. Yearly emissions of ' carbon dioxide equivalent' have gone up by 6 billion metric tons worldwide since 1990, more than 20% increase.

Reference: <http://environment.nationalgeographic.co.in/environment/global-warming/gw-causes>

Rising temperatures worsen smog pollution and increase the number of " bad air days" wherein it becomes hard to breathe. Irritated eyes, nose, and lungs are some of its symptoms, and is mainly dangerous for people who

<https://assignbuster.com/global-warming-essay-sample-essay-samples/>

suffer from respiratory diseases like asthma. Unhealthy air pollution will keep getting worse as the climate changes. Across the globe, climate change is the reason for making hot summer days hotter and stretching their numbers to never ending heat waves. As the temperature rises, so are the number of illness, emergencies and deaths. In a way, the heat is causing more than just discomfort. Record highs in the summer of 2010 were seen in more than 37 states of the U. S., and in much of the regions, the temperature did not seem to cool off at night. Nationwide, more than 28. 5 million people resided in countries where 2010's standard temperature set records, and more than 36 million people lived in countries where they experienced hottest summer nights that were ever recorded. As a result of temperature rise, longer summers and changing rainfall patterns, insects like mosquitoes capable of carrying and transmitting various diseases like dengue fever can remain active for longer periods and seasons in wide areas, highly increasing the risk for people who live there. Tropical and subtropical insects tend to move from regions where infectious diseases advance into new places due to increase in precipitation, heat and humidity. Reference: <http://www.nrdc.org/globalwarming/>

National science academies of all chief industrialized nations have recognized such findings of change in the global temperature. Indications are such that the global surface temperature during the 21st century is mostly to rise a further 1. 1 to 2. 9 degree Celsius for the minimum emissions case and 2. 4 to 6. 4 degree Celsius for the maximum. A rise in the sea levels, change in the pattern and amount of precipitation, probable expansion of subtropical deserts are some of the effects of increase in the global temperature of

<https://assignbuster.com/global-warming-essay-sample-essay-samples/>

earth. The continuing retreat of glaciers, permafrost and sea ice are associated with fact that strongest warming is predicted in the Arctic region. Other anticipated effects of the greenhouse warming include a more continual occurrence of extreme weather events comprising of heavy rainfall, heat waves, droughts, ocean acidification and extinction of various species due to shifting temperature system. Change in climate has accorded to a rise in extreme weather events, which includes high intensity hurricanes in the North Atlantic and much heavier rainfalls across the globe.

Scientists believe that climate change will raise the frequency of heavy rainstorms, which will put many communities at risk for havoc from floods. Injury and death, hazardous material spills, contaminated drinking water, moldy houses, rise in the population of disease carrying rodents and insects and community disruptions are some of health impacts and risks caused by flooding. Streams , lakes and rivers can overflow as rains keep getting heavier increasing the risk of water-borne diseases flowing into drinking water sources. Reference: [https://www. boundless.](https://www.boundless.com/chemistry/thermochemistry/energy-use-and-environment/environmental-problems-associated-with-fossil-fuel-use/)

[com/chemistry/thermochemistry/energy-use-and-environment/environmental-problems-associated-with-fossil-fuel-use/](https://www.boundless.com/chemistry/thermochemistry/energy-use-and-environment/environmental-problems-associated-with-fossil-fuel-use/) When the dots are connected between extreme weather and climate change and health, the lines are clear. The earth is showing something with record heat, storms and droughts. Scientists are showing us this is what global warming looks like. One of the most serious public health threats facing the earth is climate change, though very less people are aware of how it can affect the population. The most vulnerable are the elderly, the children and communities living in poverty.

<https://assignbuster.com/global-warming-essay-sample-essay-samples/>

The main reason why our planet is getting hotter is Carbon pollution, which increases the chances of drought, flood and weather disasters, thereby hurting our health. Water is life, and this precious resource is being threatened by climate change. Climate change is going to have convincing impacts on the sustainability of supplies of water in the coming decades. As parts of the globe get drier, the quality and quantity of water available is likely to decrease - creating an impact on people's health and food supplies. A new breakdown, executed by consulting firm Tetra Tech for the NRDC, looked into the effects of global warming on water supply. The study found out that one third of all countries in lower 48, i. e. more than 1100 countries will be facing higher risks of water shortages as a result of global warming by the mid-century. Extremely high risks of water shortages will be faced by more than 400 of these countries.

Reference: <http://www.nrdc.org/health/climate/disease.asp>

Global warming has been observed in various natural systems. Rise of the sea level and across the board decreases in snow and ice extent are some of the observed temperature changes. Most of the rise in global average temperature since the mid 20th century, with high anticipation, is because of the human-induced changes in the concentration of greenhouse gases.

Global emissions are still expected to grow over time even though there are policies to reduce emissions. Sea level rise for the 21st century is estimated to range from 0.18 to 0.59 meters. The melting of ice sheets will induce even higher rise in the sea level. Changes in regional climate include more warming over land, most of it being at high northern latitudes, and least

warming over parts of the Northern Atlantic Ocean and the Southern ocean. In addition, Arctic is expected to be largely ice free by September 2037. Calculation shows with high statistical confidence, that particular weather events like the heat waves in Texas and the 2003 European heat wave would not have occurred if there was no global warming. These temperatures are expected to intensify the hydro-logical cycle, with more extreme droughts and floods.

Though, consequences on hurricane activity are less certain. In terrestrial ecosystems, the earlier timing of spring events and shifts in plant and animal ranges have been associated with much of surety to recent warming. Future change in the climate is bound to notably affect certain ecosystems, along with tundra, mangroves and coral reefs. Expectations are such that most ecosystems will be altered by higher atmospheric CO<sub>2</sub> levels, amalgamated with higher global temperatures. Overall, it is estimated that climate change will bring about the extinction of many species and will reduce the diversity of ecosystem. Ocean acidity rises due to dissolved CO<sub>2</sub> in the water. This evil twin of global climate change is ocean acidification. Increase in the ocean acidity leads to reduction in the amount of carbonate ions, which organisms such as foraminifera at the base of marine food chain use to make structures needed to survive.

The current rate of ocean acidification has increased at a high rate in the past 300 million years due to which four mass extinctions took place one of it being the Permian mass extinction, which killed 95% of marine species.

Vulnerability of human societies to change in the climate lies largely on the



effects of extreme-weather events rather than the gradual change in the climate. Some of the impacts of climate change so far include unfavorable effects on small islands, adverse effects on aboriginal populations in high latitude areas, and other small apparent effects on human health.