**GLOBAL WARMING**

Global warming occurs when carbon dioxide (CO2) and other air pollutants and greenhouse gases collect in the atmosphere and absorb sunlight and solar radiation that have bounced off the earth’s surface. Normally, this radiation would escape into space—but these pollutants, which can last for years to centuries in the atmosphere, trap the heat and cause the planet to get hotter. That's what's known as the greenhouse effect.

**What causes global warming?**

Global warming is a serious issue and is not a single issue but a number of environmental issues. Global warming is a rise in the surface temperature of the earth that has changed various life forms on the earth. The issues that cause global warming are divided into two categories include **“natural”** and **“human influences”** of global warming.

**A) Natural Causes of Global Warming**

The climate has continuously changing for centuries. The global warming happens because the natural rotation of the sun that changes the intensity of sunlight and moving closer to the earth.

Another cause of global warming is greenhouse gases. Greenhouse gases are carbon monoxide and sulphur dioxide it trap the solar heats rays and prevent it from escaping from the surface of the earth. This has cause the temperature of the earth increase.

Volcanic eruptions are another issue that causes global warming. For instance, a single volcanic eruption will release amount of carbon dioxide and ash to the atmosphere. Once carbon dioxide increase, the temperature of earth increase and greenhouse trap the solar radiations in the earth.

Finally, methane is another issue that causes global warming. Methane is also a greenhouse gas. Methane is more effective in trapping heat in the atmosphere that carbon dioxide by 20 times. Usually methane gas can release from many areas. For instance, it can be from cattle, landfill, natural gas, petroleum systems, coal mining, mobile explosion, or industrial waste process.

Hence, with global warming being caused by carbon dioxide’s emission into the atmosphere, all living beings may be blamed for its occurrence – even animals and plants, since they also breathe and contribute to CO2 concentration. Another side of the issue is that the planet, as a self-sufficient ecosystem, used to manage the volumes of CO2 emitted by the living beings, while the amount of emissions produced by industrial activities is definitely beyond the scope of what the Earth can manage.

**B) Human Influences on Global Warming**

One should note that global warming is indeed caused by human industrial activities. With the emergence of industrial production and mass industrialization of most worlds’ territories, the amount of carbon emissions in the atmosphere increased as a disproportionate rate, causing a jump in the global warming.

First issue is industrial revolution. Industrial have been using fossil fuels for power machines. Everything that we use is involved in fossil fuel. For example, when we buy a mobile phone, the process of making mobile phone have involve machines and machines uses fossil fuels, during the process carbon dioxide is releasing to the atmosphere. Besides industrial, transportation such as cars is also releasing carbon dioxide from exhaust.

Another issue is mining. During the process of mining, the methane will trap below the earth. Besides, rearing cattle will also cause methane because cattle released the form of manure. However, cattle is important because it make the latter equally responsible for the occurrence of global warming

Next is the most common issue that is deforestation. Deforestation is a human influence because human have been cutting down trees to produce papers, wood, build houses or more. If human continuing deforestation, carbon dioxide will concentrate in the atmosphere because trees can absorb carbon dioxide from atmosphere. Besides, human also release carbon dioxide when breathe. Therefore the amounts of millions of people breath have release carbon dioxide to the atmosphere. If human continue deforestation, human breathing that release carbon dioxide will stay at the atmosphere.

Another cause of global warming is the irresponsible human attitude to finite resources granted by the planet. With the planet’s impressive ability to self-cure and self-purification, the humankind might have avoided the [problems associated with global warming](https://scoobydomyessay.com/blog/why-climate-change-is-real/). However, as it was underlined above, the tempos of pollution are so high that the Earth cannot manage all waste and emissions, and they accumulate to cause the irreversible environmental changes.

In recent years, China has taken the lead in global-warming pollution, producing about 28 percent of all CO2 emissions. The United States comes in second.

Curbing dangerous [climate change](https://www.nrdc.org/issues/climate-change) requires very deep cuts in emissions, as well as the use of alternatives to fossil fuels worldwide.

**What are the other effects of global warming?**

Each year, scientists learn more about the [consequences of global warming](https://www.nrdc.org/stories/are-effects-global-warming-really-bad), and many agree that environmental, economic, and health consequences are likely to occur if current trends continue. Here’s just a brief description about key effects of global warming:

* *Melting of Glaciers and Sea Ice*: The global warming—associated with climate change—has led to a great decline in the volume of water stored as sea ice, especially because of melting of glaciers and the Arctic sea ice that raises sea level. In other words, with more atmospheric concentration of greenhouse gases (mainly of carbon dioxide), glaciers and Arctic ice absorb more radiation, thereby melting rapidly. The coolest place on the earth is now increasingly warming up, especially over the past several decades.
* *Rise in Sea Level:* The continuous increase in temperature has also contributed to rise in sea level due to melting of glaciers, and the Greenland and Antarctic ice sheets. The US Global Change Research Program in its report concluded that “sea level has risen by about 8 inches since reliable record keeping began in 1880” (USGCRP 2016: 115). It is projected that a rise of half a meter in sea level would not only pose a serious threat to the marine ecosystem and organisms, but also adversely impacts the habitats and livelihood of those large numbers of people living in the coastal regions. Climate sensitive livelihoods like agriculture and fisheries are the major source of income for a greater proportion of the coastal population that are being threaten due to change in climate. In other words, the raising sea level could directly devastate the lives of the majority of the coastal population—particularly in the developing where a large number of people lives in coastal regions—by displacing them from their homelands and abolishing their source of incomes.
* *Change in Biological Diversity*: Biological diversity or biodiversity is generally defined as the number of species such as plants, animals, fungi and micro-organisms or conditions like terrestrial, mountain, forest and marine among others on earth (Botkin and Keller 2012: 128). Climate change has led to some significant changes in overall biodiversity. Every animal and plant species occurs within a particular range of temperature. The increase in temperature has shifted the temperature range and thus affected the altitudinal and latitudinal patterns of organisms. Therefore, as the planet has gotten warmer, many of the “plants and animals, on land and in the oceans, have begun moving toward the poles… some terrestrial species are moving up mountainsides, and marine species are moving to deeper depths and higher latitudes” (AAAS 2014: 4). These changes have been observed on every continent and in every ocean. Such changes in biological diversity can fundamentally transform the whole ecosystems. And, numbers of extinctions are likely to increase in the coming decades as climate change combines with other human-related ecological pressures.
* *Effects on Human Health:* The influences of climate change and weather on human health and wellbeing are significant in many ways. It affects the human health largely in two main ways: first, by altering the “severity or frequency of health problems that are already affected by climate or weather factors; and second, by creating unprecedented or unanticipated health problems or health threats in places where they have not previously occurred” (USGCRP 2016: 4). Some of the effects of climate change are already being reported. For example: climate change has increased the human exposure to extreme temperatures or heat waves, worsened air quality, infections transmitted through food, water, and disease vectors (like fleas, ticks and mosquitoes), and stresses to our mental health and well-being. Moreover, the long-term exposure to extreme temperatures also adversely impacts the chronic conditions by increasing the respiratory illnesses, cardiovascular disease, cerebrovascular disease, and diabetes-related disorders. In that sense, as the climate continues to change, the risks to human health are expected to intensify in coming years.
* *Challenge to National Security:* Global warming also poses a serious challenge to national security, particularly in coastal region. The ecological problems (resulting from the changes in climate) like rising sea levels, storm, floods, the availability of freshwater, and agriculture productivity adversely affect the coastal population. In addition, climate change has contributed to the geopolitical problems. For example: the scarcity of natural resources like water and food, and the spread of vector-borne and water-borne diseases due to climate change would be accepted to spur migration on massive level that could increase resource competition as well as pressures on society, economy and government institutions. And, several reports suggest that these pressures can trigger violence among the communities and individual groups. In this way, international community today considers climate change a major threat to individual, national, or global security.

**Reference:**

* Jindal, Nirmal and Kumar, K. (2018). *Global Politics: Issues and Perspectives*, New Delhi: SAGE.