

1.14 GLOBAL WARMING (भूमंडलीय तापन अथवा वैश्विक उष्मा)

Global warming is the current increase in temperature of the Earth's surface (both land and water) as well as its atmosphere. Average temperatures around the world have risen by 0.75°C (1.4°F) over the last 100 years about two thirds of this increase has occurred since 1975. In the past, when the Earth experienced increases in temperature it was the result of natural causes but today it is being caused by the accumulation of greenhouse gases in the atmosphere produced by human activities, such as carbon dioxide emissions from burning fossil fuels or from deforestation, methane, nitrous oxide and fluorinated gases, etc. which trap heat that would otherwise escape from Earth.

Climate change is changing our economy, health and communities in diverse ways. Climate change will have a significant impact on the sustainability of water supplies in the coming decades.

The natural greenhouse effect maintains the Earth's temperature at a safe level making it possible for humans and many other life forms to exist. However, since the Industrial Revolution human activities have significantly enhanced the greenhouse effect causing the Earth's average temperature to rise by almost 1°C . This is creating the global warming we see today. To put this increase in perspective it is important to understand that during the last ice age, a period of massive climate change, the average temperature change around the globe was only about 5°C .

A long series of scientific research and international studies has shown, with more than 90% certainty, that this increase in overall temperatures is due to the greenhouse gases produced by humans. Activities such as deforestation and the burning of fossil fuels are the main sources of these emissions.

Global warming is affecting many places around the world. It is accelerating the melting of ice sheets, glaciers which is causing average sea levels to rise. It is also changing precipitation and weather patterns in many different places, making some places dryer, with more intense periods of drought and at the same time making other places wetter, with stronger storms and increased flooding. These changes have affected both nature as well as human society and will continue to have increasingly worse effects if greenhouse gas emissions continue to grow at the same pace as today.

Effects of Global Warming

Global warming is damaging the Earth's climate as well as the physical environment. One of the most visible effects of global warming can be seen in the Arctic as glaciers, permafrost and sea ice are melting rapidly. Global warming is harming the environment in several ways including

1. Melting of snow and ice in glaciers in bulk
2. Floods in rivers

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3. Desertification
4. Droughts after emptying of glaciers
5. Rise in sea level
6. Submerging of cities located in coastal areas
7. Stronger hurricanes and cyclones
8. Spreading of epidemics and diseases owing to floods
9. Effects on species
10. Poor production