

Understanding Climate Change



What is Climate Change?



* In 1850 the modern industrial revolution started and fossil fuels like coal, oil and petroleum became stable fuels.

* The burning of the fossil fuels produced **Carbon Dioxide**. We have burnt so much oil and coal that the level of Carbon Dioxide in air has gone up by 35%. (From 280 ppm to 400 ppm)

* Carbon Dioxide is a greenhouse gas. Greenhouse gases are those which keep our earth temperature stable by trapping sun's heat. Greenhouse Gases like Carbon Dioxide and Methane are present in very small quantities in air.



* If in winters you need one blanket, but you are told to use two blankets, then what will happen?

* Similarly the excess greenhouse gases in the air are working like extra blanket and trapping more heat, leading to **RISE IN EARTH TEMPERATURE CAUSING CLIMATE CHANGE!**



What are Greenhouse Gases?

* 1 % of the atmosphere is made up of trace gases & greenhouse gases. Greenhouse gases are the gases, which trap heat and warm the earth's surface.

* **Carbon dioxide** is responsible for over half the effect of global warming. Carbon dioxide is naturally occurring in the Earth's atmosphere and in oceans and forests.

* The percentage of CO₂ in the atmosphere has increased exponentially ever since human beings have been emitting carbon dioxide into the atmosphere in their pursuit for industrialization, economic growth, and better lifestyles.

* More Greenhouse Gases released also commonly called as **Emissions** will lead to warmer and more dangerous world.

Impacts of Climate Change

* Climate change is leading to extreme weather events which means, very heavy rains falling in few hours causing massive floods, or extreme droughts extending to years together.

* **Extreme weather** conditions caused by climate change will have a direct effect on the **agricultural sector** of the country. Our country has an agrarian based economy therefore such changes are bound to hurt the economic growth of the country as well.

* One of the most dramatic impacts of climate change can be seen on the glaciers. **Himalayan Glaciers** have in the recent past receded at an alarming rate. If we loose our glaciers it will effect the rivers like Ganga, Indus and Yamuna which will lead to 200 million people being affected.



* **Biodiversity**, which is plants and animals is also affected adversely due to floods, draughts and extreme weather conditions, for e.g. the endangered Royal Bengal tiger will lose a large portion of their worldwide habitat as the Sundarbans succumb to sea level rise, thereby threatening their existence.

* **Sea Level Rise** is expected to increase in the future. Coastal towns like Kolkata, Mumbai, Dhaka are under threat and so are millions of people living near the coast.

* Climate change will also have **health impacts**, as warmer temperatures will prove to be conducive for breeding of disease spreading mosquitoes of Dengue and Malaria.

* **Heat waves** will further intensify and will lead to more deaths and sick people during summers.

Solutions to Climate Change

* We have to give up our dependence on fossil fuels like coal and oil and make a transition to cleaner sources of energy. **Renewable energy** such as **solar & wind** energy comes from resources that are naturally available, non polluting and free of cost!

* We also need to look at **Energy Efficiency**, which aims to reduce the amount of energy required to power our goods and services.

* Change the old bulb with LED or CFL.

* Buy appliances which are 5 star rated by BEE. Today fridge, TV, Microwave, washing machines and most consumer goods are star rated. Higher the better.

* Use public transport when available.





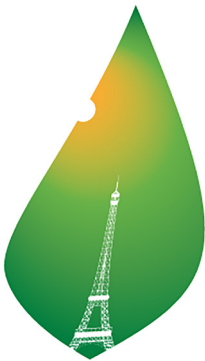
* Energy efficiency aims to reduce the amount of energy required to provide products and services. For example reduces the amount of energy required to attain the same level of illumination compared with using traditional incandescent bulbs. Reducing energy use is also seen as a solution to the problem of reducing carbon dioxide emissions.

* We can make better **lifestyle choices** by saying no to plastic, conserving energy, water, buying local food products, using public transport etc.

Paris Agreement- COP 21

In December 2015 at COP 21 in Paris, 193 Nations have come together to make landmark deal to tackle global warming and agreed to hold global temperature rise this century below 2 degree celsius above pre-industrial levels.

As of November 2017, 195 UNFCCC members have signed the agreement, and 174 have become party to it and will work towards solving climate crisis based on their commitments. (INDC's).



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