

Global Warming due to climate change in India an Emerging Issue

Dr. Vandana

Assistant Professor of Geography at Dronacharya Govt. College Gurugram

Abstract

Climate change is one of the complex problems facing mankind today in India. But Now Global warming not only is felt many decades from now it is already happening and its impacts are clearly visible.

“Global warming is for real. Every scientist knows that now, and we are on our way to the destruction of every species on earth, if we don't pay attention and reverse our course.” **Theodore C. Sorensen**

Global warming and climate change refer to an increase in average global temperatures. Natural events and human activities are believed to be contributing to an increase in average global temperatures. This is caused primarily by increases in greenhouse gases such as Carbon Dioxide (CO₂) etc. But Before embarking on a detailed analysis of Global warming and its impacts on Indian climate, we should first know what climate, green house effect and global warming actually mean.

CLIMATE: The climate is defined as 'the general or average weather conditions of a certain region, including temperature, rainfall, and wind'. The earth's climate is most affected by latitude, the tilt of the Earth's axis, the movements of the Earth's wind belts, and the difference in temperatures of land and sea, and topography.

GREEN HOUSE EFFECT: Green House effect is the phenomenon whereby the earth's atmosphere traps solar radiation, and is mediated by the presence in the atmosphere of gases such as carbon dioxide, water vapor, and methane that allow incoming sunlight to pass through, but absorb the heat radiated back from the earth's surface.

GLOBAL WARMING: 'Global warming is defined as an increase in the average temperature of the Earth's atmosphere, especially a sustained increase great enough to cause changes in the global climate'.

Keywords: Climate, Global warming, destruction, destruction, embarking

Introduction

Global warming is no longer just a prediction it is actually happening. It is undisputed that the average temperature at the surface of the earth has increase over the past century by about 0.6 degree Celsius with both the air and ocean warming. Certainly observed that dramatic increase in the atmospheric concentrations of green house gases since pre-industrial times has been caused by human activities, mostly the burning of coal, oil, natural gases and to lesser extend deforestation. We know the ability of green house gases such as carbon dioxide, methane and nitrous oxide, to trap heat at the earth's surface. While it has not yet been precisely determined how much of the warming was caused by human activities, the consensus among researchers is that most of the warming over the past 50 years was probably caused by human produced green house gases.

Many among the public may have the misconception that global warming is distant threat, with consequences that will only be felt many decades from now, and this fact is many widely accepted. But reviewed scientific studies have found that, glaciers all around the world and Arctic sea ice have been shrinking and disappearing, sea level has been rising, flooding rain storms, droughts, forest fires, coral are bleaching due to increase the temperature.

What are the most likely cause of the Global Warming?

There are top five causes of global warming:-

1. **Emission of carbon dioxide from fossil fuel burning in power plants:** - our ever increasing addiction to electricity from coal burning power plants release enormous amount of carbon dioxide into the atmosphere. 40% of emission comes from electricity production, and burning coal accounts for 93% of emission from the electricity utility industry.
2. **Carbon dioxide emission from burning gasoline for transportation:** - our modern car culture responsible for about 33% of emission of carbon dioxide. With our population growing at an alarming rate, the demands for more cars and customers goods, means that we are increasing the use of fossil fuels for transportation and manufacturing.
3. **Methane emission from Animal, Agriculture such as rice paddies and arctic seabed:** - methane another extremely potent green house gas. Ranking right behind CO₂. When organic matter is broken down by bacteria under oxygen- starved condition in rice paddies, methane is produce. As methane escape from Arctic seabed, the rate of global warming will increase significantly.
4. **Deforestation, especially tropical forest for wood, pulp and farmland:** - the use of forest for wood and charcoal is one cause of deforestation. Forest removes and stocks carbon dioxide from the atmosphere, and this deforestation release large amount of carbon dioxide, as well as producing the amount of carbon culture on the planet.
5. **Increase in usage of chemical fertilizers on croplands:** - in the last half of 20th century, the use chemical fertilizer has risen dramatically. The high rate of application of nitrogen – rich fertilizer has effect on the heat storage of cropland and the run off of excess fertilizer create dead zones in our oceans, become nitrogen oxide have 300 times more heat trapping capacity per unit of volume than carbon dioxide.

Some extreme events of global warming

1. **Killer heat waves:** - In July-August 2003 the Europe scorched by heat waves due to global warming. Evidence indicates that the summer was the hottest in Europe in last 500 years. All time high temperature record were broken in many countries. At least 27,000 people died as a result of the relentless heat, breaking all records worldwide for heat – induced human fatalities. In France alone, over 14000 people died. India was also hit in 2003 by severe heat waves. Temperature reached as high as 50 Degree Celsius in May across the worst hit areas and over 1200 people died.
2. **Torrential rains and flooding:** - according to the available data, a significant increase in the intensity of precipitation events occurred over the second half of the 20th century. This increase is consistent with the predicated effects of global warming, since high temperature speedup evaporation and increase the amount of water vapor in the air, leading to the heavier down pours. Heavier rainfall in turn the risk of flooding. Extreme flooding events that may have been exacerbated

by global warming occurred in Dec 1999, when Venezuela experienced its highest monthly rainfall in 100 years, with massive landslide and flooding that killed approximately 30,000 people.

3. **Drought:** - Higher temperature causes to increase the rate of evaporation, if precipitation does not soon replenish the lost moisture, soil grows drier. In drier soils less solar energy is used up in evaporating water, meaning more energy is available to raise the temperature of the soil and the overlying air, leading to even more desiccating conditions, this kind of self-amplifying cycle can lead to lengthy and severe drought.
4. **Forest and wildfires:** - Desiccating heat and lack of precipitation create ideal conditions for major wild fires. In addition longer warmer seasons often translate into longer fire seasons. Warmer temperatures also promote outbreaks of insects that feed on trees, killing many of the hosts and creating large amounts of dry fuel for forest fire. The summer of 2004 was particularly fierce, Alaska's warmest and third driest summer on record made for its worst fire year. A total of 703 fires consumed 651,720 acres of forest.

Effects of Global warming

Some dangerous effects of global warming on atmosphere and on human life are as follows:-

1. **Rise in sea level worldwide:** - Scientists predict an increase in sea level worldwide due to the melting of massive ice sheets in Antarctica and Greenland, especially on the east coast of the U.S. However, many nations around the world will experience the effects of rising sea levels, which could displace millions of people.
2. **More killer storms:** - Recently scientists proved that global warming will significantly increase the intensity of the most extreme storms worldwide. The maximum wind speeds of the strongest tropical cyclones have increased significantly since 1981.
3. **Massive crop failure:** - Climate change is expected to have the most severe impact on water supplies. Shortages in the future are likely to threaten food production, reduce sanitation and damage ecosystems. It causes more violent swings between food and droughts.
4. **Wide spread extinctions of species:** - According to research, rising temperatures could lead to the extinction of more than a million species. And because we cannot exist without a diverse population of species on earth, this is scary news for humans.
5. **Disappearance of coral reefs:** - A report on coral reefs says that coral populations will collapse due to increased temperature and ocean acidification and its effects. The bleaching of coral from small but prolonged rises in sea temperature is a severe danger for ocean ecosystems and many other species in the ocean rely on coral reefs for their survival.
6. **Say goodbye to tropical island vacations:** - Indonesia's environment minister announced that scientific studies estimate about 2000 of the country's lush tropical islands could disappear by 2030 due to rising sea levels.
7. **Dying polar bears:** - A recent study completed by the U.S. Geological Survey shows that cannibalism while brutal may be the least of the bear's problems. They are also starving, unable to swim in the increased spaces between melting ice. Two-thirds of them may be gone by 2050.
8. **Death march of penguins:** - Scientists blame global warming for the decline in penguin populations as warmer water and smaller ice flows force the birds to travel further to find food. Emperor penguins have dropped from breeding pairs to just nine in the western Antarctic peninsula.

9. **Greenland melting:** - Greenland is melting @ of 52 cubic miles per year, much faster than once predicated. If Greenland entire 2.5 million cubic kilometers of ice were to melt, it would lead to a global sea level rise of 7.2 meters, or more than 23 feet.
10. **People are dying:** - 150,000 number the people the world Health organization estimates are killed by climate change- related issues every year.

How can we contribute to stop global warming?

1. **Replace regular incandescent light bulb:** - Replace regularly incandescent light bulb with compact fluorescent light (CFL). They consume 70% less energy than ordinary bulb and have longer lifetime.
2. **Drive less of carpools:** - By driving less you are not only saving fuel but also helping in reducing global warming. The biggest pollution emitted fumes are caused by oil and gasoline cutting down consumption is a huge step to reducing energy waste.
3. **Reduce, Reuse, Recycle:-** Reduce your needs to buy new products or less, resulting in a smaller amount of waste. Even if you need to buy, consider buying eco friendly products. Reuse bottles, plastic containers and other items bought at the grocery. Reusing water bottles, cups, bread ties and other items is being conscious about what is already out there. Recycling unwanted papers, bottles etc. is a great earth saving tip. By recycling you can help in reducing landfills.
4. **Reduce waste:** - Landfills are the major contributor of methane and other green house gases. When the waste is burnt, it releases toxic gases in the atmosphere which result in global warming.
5. **Use less hot water:** - By energy saving geyser and dishwasher for your home. Avoid washing clothes in hot water. Just wash them in cold or warm water. Avoid taking frequent showers and use less water. It will help in saving energy requires to produce that energy.
6. **Plant trees:** - planting trees can help much in reducing global warming than any other method. They not only give oxygen but also take in carbon dioxide, during the process of photosynthesis, which is the main source of global warming.
7. **Become Part of the Global Warming Community:** - Connecting with other will help you become more conscious of the impact we all home. The climate change national forum and Global Humanitarian forum are great avenues to know the latest facts, statistics and effort in making difference.
8. **Spread the Awareness:** - Always try your best to educate people about global warming and its cause and after effects. Tell them how they can contribute their part by saving energy that will be good for the environment. Gather opportunities and programs that will help you to share information with friends' relatives and neighbors.

Conclusion

Earth's temperature is rising day by day and there is no single solution to solve global warming which has already created havoc in today's world. Threats of global warming rising sea levels lost endangered species, climate change and deadly storm events. We have already seen the causes of the global warming. Recently India in 7-14 October 2014 faced the Hudhud cyclone in which according to disaster management department of Andhra Pradesh, total of 248004 peoples are affected by Hudhud and also 70 houses and left 34 animals. So if we wants to stop climate change, melting of glaciers, disease and save the earth, we must stop the emission of carbon oxide, emission of methane, deforestation and use of chemical fertilizers.

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