



Effects and Impacts of Global Warming

Mrs. M.Angelin Rosy

Assistant Professor

Master of Computer Applications

Er Perumal Manimekalai College of Engineering

angel_rosym@yahoo.co.in

9944579754

S Bhargavi

II MCA

Master of Computer Applications

Er Perumal Manimekalai College of Engineering

bhargavisridhar2000@gmail.com

6380560771

ABSTRACT : Global warming is the result of the amplification of a natural process occurring in the atmosphere called the Greenhouse Effect. This amplification is caused by the addition of a range of gases to the atmosphere as a result of domestic and industrial activity. The main culprits are carbon dioxide and methane. The concentration of carbon dioxide has been increasing since the middle of the 18th century, and this is associated with two factors, changes in land use and the burning of fossil fuels. The global warming that is affecting the world today can be traced back to this period too. In 2015 around 90% of the carbon dioxide released into the atmosphere came from fossil fuels.

Keywords: Global Warming, Greenhouse, Temperature, Water Vaper, Atmosphere

I. INTRODUCTION:

Global warming is the increase in the average measured temperature of the Earth's near-surface air and oceans since the mid-20th century, and its projected continuation. In media, it is synanons with the term "climate change. Global surface temperature increased 0.74 ± 0.18 °C during the 100 years ending in 2005. The Intergovernmental Panel on Climate Change (IPCC) concludes "most of the observed increase in globally averaged temperatures since the mid-twentieth century is very likely due to the observed increase in greenhouse gas concentrations" via an enhanced greenhouse effect.

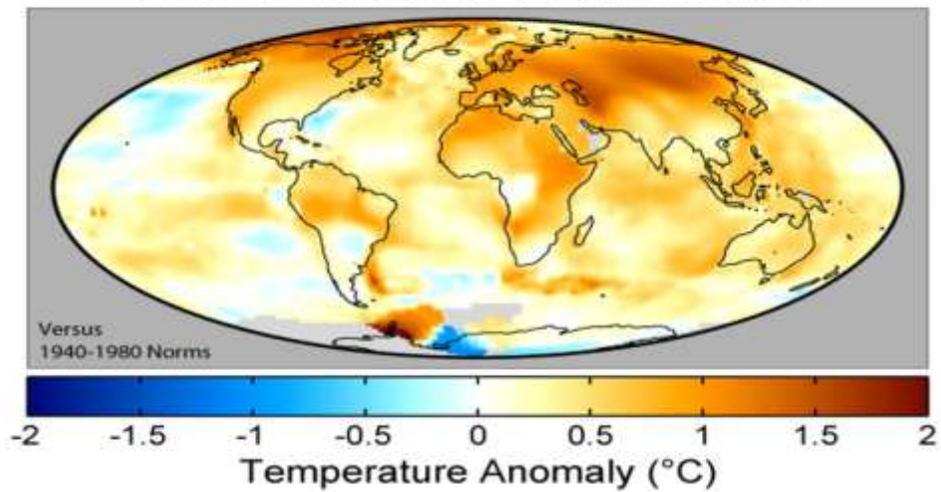
II. GREENHOUSE EFFECT

It is the process by which absorption and emission of infrared radiation by atmospheric gases warm a planet's lower atmosphere and surface. Naturally occurring greenhouse gases have a mean warming effect of about 33 °C (59 °F), without which Earth would be uninhabitable. On Earth, the major greenhouse gases are water vapor, which causes about 36–70 percent of the greenhouse effect (not including clouds); carbon dioxide (CO₂), which causes 9–26 percent; methane (CH₄), which causes 4–9 percent; and ozone, which causes 3–7 percent. The issue is how the strength of the greenhouse effect changes when human activity increases the atmospheric concentrations of some greenhouse gases. The image shows the present carbon cycle. The disruption of which leads to increased emission of carbon dioxide which ultimately leads to rise in global temperatures.



The image shows the concentration of CO2 in the atmosphere over a period of time if emissions continue unaltered.

1995-2004 Mean Temperatures



The image shows the temperature anomalies around the world attributed to global warming.



SMALL GLACIERS AND ICE CAPS ARE MELTING

V. MITIGATION OF GLOBAL WARMING

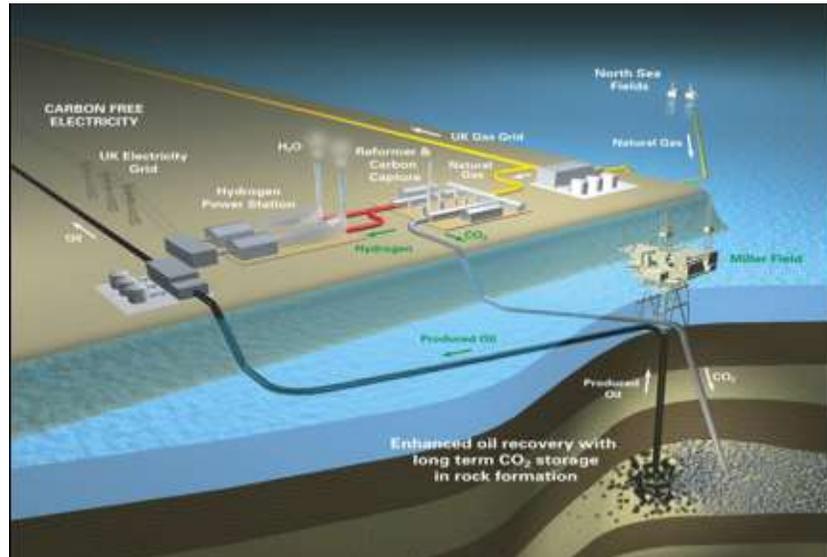
Mitigation of global warming involves taking actions to reduce greenhouse gas emissions and to enhance sinks aimed at reducing the extent of global warming. This is in distinction to adaptation to global warming which involves taking action to minimize the effects of global warming.

VI. ENERGY EFFICIENCY AND CONSERVATION

- Urban Planning
- Building Design
 - Use of passive solar building design, low-energy building, or zero-energy building techniques, using renewable heat sources
- Transport
 - plug-in hybrid electric vehicles
 - A shift from air transport and truck transport to electric rail transport
 - Increased use of biofuels

VII. CARBON CAPTURE AND STORAGE (CCS)

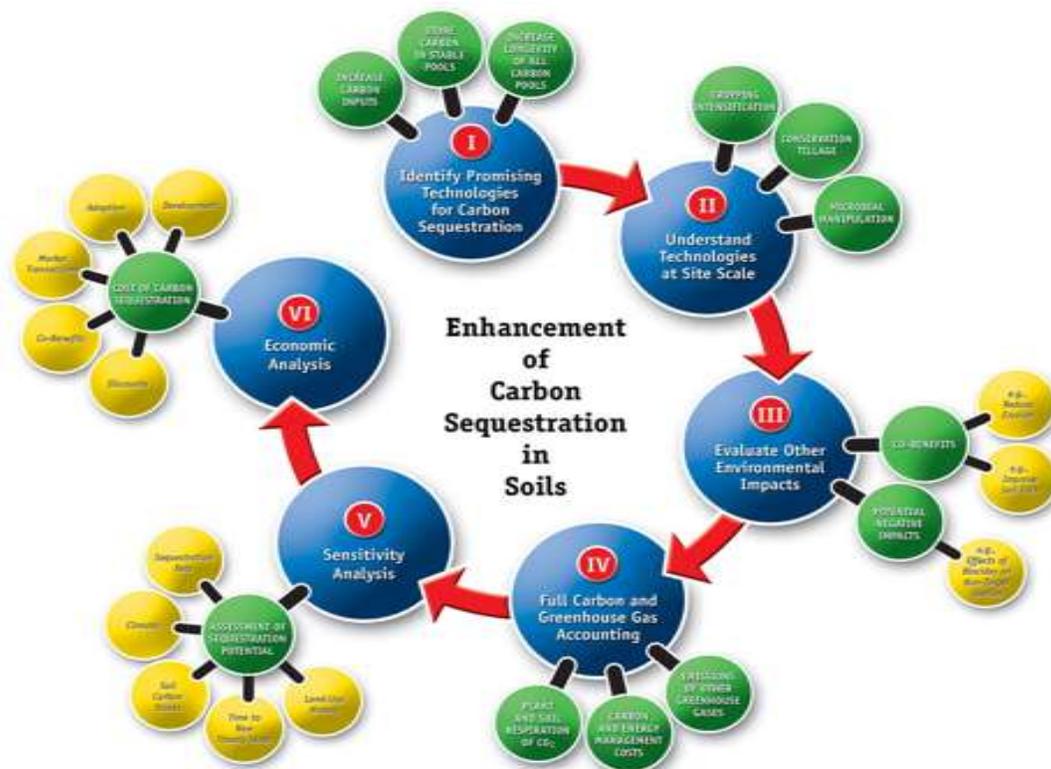
Carbon capture and storage (CCS) is a plan to mitigate climate change by capturing carbon dioxide (CO₂) from large point sources such as power plants and subsequently storing it away safely instead of releasing it into the atmosphere.



VIII. CARBON SEQUESTRATION

Carbon sequestration is a term that describes processes that remove carbon from the atmosphere.

- Seeding oceans with iron
- Solar shades
- Geoengineering



IX. POPULATION CONTROL

The population explosion is a fundamental factor that has led to global warming. Because of this, various organizations promote population control as a means for mitigating global warming. Proposed measures include improving access to family planning and reproductive health care and information, public education about the consequences of continued population growth.

X. CONCLUSION

As the world's expanding population burns large quantities of fossil fuels and simultaneously cuts down large expanses of forests worldwide, the concentrations of CO₂ and other greenhouse gases are building up in the atmosphere. There is mounting evidence that this shift in Earth's atmosphere will lead to global changes and potentially major climatic disruptions. Human and ecological systems are already vulnerable to a range of environmental pressures, including climate extremes and variability. Global warming is likely to amplify the effects of other pressures and to disrupt our lives in numerous ways. Significant impacts on our health, the vitality of forests and other natural areas, the distribution of freshwater supplies, and the productivity of agriculture are among the probable consequences of climate change.

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