

GLOBAL WARMING: WORLDWIDE ENVIRONMENTAL ISSUE

Dr. Chandrakant Borase,
Associate Professor in Education,
College of Education Nashik,
Maharashtra, India.

Abstract

This paper mainly highlights on Global Warming as a worldwide environmental issue. In this paper meaning of global warming, what are the greenhouse gases, the various reasons behind it discusses in brief. The different sectors and percentage of greenhouse gas emissions, global warming effects and solutions for global warming are also discussed in this paper.

Introduction

Global warming is the vital and worldwide environmental issue we are facing today as a greatest challenge which we need to get it solved permanently. In fact, global warming is the continuous and steady process of increasing in the temperature of earth surface. It needs to be discussed widely by all countries worldwide to stop the effects of it. It has impacted the nature's balance, biodiversity and climatic conditions of the earth over decades. The increasing global warming calls the unexpected disasters on the earth like flood, cyclones, tsunami, drought, landslides, ice melting, lack of food, epidemic diseases, death etc. thus causing imbalance to the nature's phenomenon and indicating end of life existence on this planet.

Increasing global warming lead to the more water evaporation from earth into the atmosphere, which in turn become a greenhouse gas and again causes rise in the global warming. Other processes like burning of fossil fuels, use of fertilizers, rise in other gases like CFCs, tropospheric ozone and nitrous oxide are also the reasons of global warming.

Global Warming

Global Warming is the increase of Earth's average surface temperature due to effect of greenhouse gases, such as carbon dioxide emissions from burning fossil fuels or from deforestation, which trap heat that would otherwise escape from Earth. This is a type of greenhouse effect.

What are the Greenhouse Gases?

The most significant greenhouse gas is actually water vapour, not something produced directly by humankind in significant amounts. However, even slight increases in atmospheric levels of carbon dioxide (CO₂) can cause a substantial increase in temperature.

The reasons behind is that firstly, although the concentrations of these gases are not nearly as large as that of oxygen and nitrogen, neither oxygen nor nitrogen are greenhouse gases. This is because neither has more than two atoms per molecule, and so they lack the internal vibrational modes that molecules with more than two atoms have. Both water and CO₂, for example, have these "internal vibrational modes", and these vibrational modes can absorb and reradiate infrared radiation, which causes the greenhouse effect.

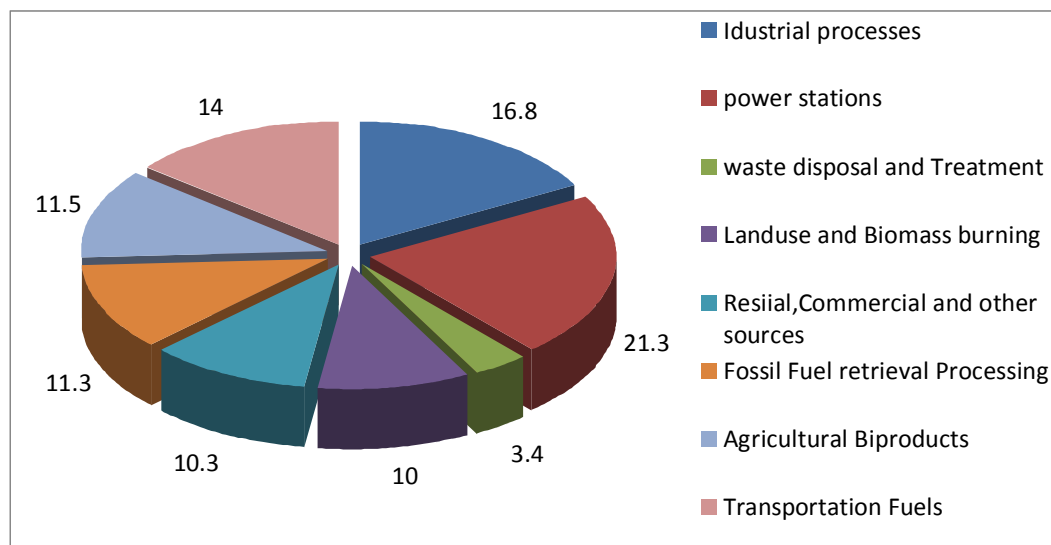
Secondly, carbon dioxide tends to remain in the atmosphere for a very long time (time scales in the hundreds of years). Water vapour, on the other hand, can easily condense or evaporate, depending on local conditions. Water vapour levels therefore tend to adjust quickly to the prevailing conditions, such that the energy flows from the Sun and re-radiation from the Earth achieve a balance. CO₂ tends to remain fairly constant and therefore behave as a controlling factor, rather than a reacting factor. More CO₂ means that the balance occurs at higher temperatures and water vapour levels.

Global warming can be best defined as the increase in the overall warming of our planet, which if not checked will burn all of us alive in the near future. According to a recent study Green house gages are the major cause for the increase of the average temperature of earth. There is a danger of coastal regions drowning due to increase in sea level with the shrinking of glaciers. Thus there is a grave danger of an entire civilization becoming extinct in a watery grave. Animals and plants are also finding it difficult to cope up with these temperature changes. Species after species of both flora and fauna might disappear from the face of earth. Not only this, even human life is getting affected by Global Warming. Epidemics are spreading frequently. There is heat stress responsible for killing people. Disease like dengue fever, yellow fever and encephalitis are indirect results of Global Warming. As the saying goes "It's never too late", the government should now try to educate the people about various kinds of pollution and create public awareness. People should be involved in helping to reduce and control pollution. Moreover, punishment should be strictly given in case of violation of any environmental law so that such people learn a lesson. Until we all get serious and resolve to make our planet a better place to live in, humanity stands amidst grave danger of perishing and being destroyed due to the severe and increase problem of pollution. The need of the day calls

each and every citizen of planet earth to plant trees everywhere...

Annual Greenhouse Gas Emissions by Different Sectors

The different sectors and percentage of greenhouse gas emissions shown by graph as...



Global Warming Impacts

1. Rising Seas

Inundation of fresh water marshlands (the everglades), low-lying cities, and islands with seawater.

2. Changes in rainfall patterns

Droughts and fires in some areas, flooding in other areas.

3. Increased likelihood of extreme events

Flooding, hurricanes, etc.

4. Melting of the ice caps

Loss of habitat near the poles. Polar bears are now thought to be greatly endangered by the shortening of their feeding season due to dwindling ice packs.

5. Melting glaciers

Significant melting of old glaciers is already observed.

6. Widespread vanishing of animal populations

Widespread habitat loss.

7. Spread of disease

Migration of diseases such as malaria to new, now warmer, regions.

8. **Bleaching of Coral Reefs due to warming seas and acidification due to carbonic acid formation**

One third of coral reefs now appear to have been severely damaged by warming seas.

9. **Loss of Plankton due to warming seas**

Sea lions, sea otters, sea urchins, kelp beds, and fish populations, appears to have collapsed due to loss of plankton, leading to loss of sea lions, leading orcas to eat too many sea otters, leading to urchin explosions, leading to loss of kelp beds and their associated fish populations.

Effects of global warming

There are two major effects of global warming:

* Increase of temperature on the earth by about 3° to 5° C (5.4° to 9° Fahrenheit) by the year 2100.

* Rise of sea levels by at least 25 meters (82 feet) by the year 2100.

Increasing global temperatures are causing a broad range of changes. Sea levels are rising due to thermal expansion of the ocean, in addition to melting of land ice. Amounts and patterns of precipitation are changing. The total annual power of hurricanes has already increased markedly since 1975 because their average intensity and average duration have increased (in addition, there has been a high correlation of hurricane power with tropical sea-surface temperature).

Changes in temperature and precipitation patterns increase the frequency, duration, and intensity of other extreme weather events, such as floods, droughts, heat waves, and tornadoes. Other effects of global warming include higher or lower agricultural yields, further glacial retreat, reduced summer stream flows, species extinctions. As a further effect of global warming, diseases like malaria are returning into areas where they have been extinguished earlier.

Although global warming is affecting the number and magnitude of these events, it is difficult to connect specific events to global warming. Although most studies focus on the period up to 2100, warming is expected to continue past then because carbon dioxide (chemical symbol CO₂) has an estimated atmospheric lifetime of 50 to 200 years. For a summary of the predictions for the future increase in temperature up to 2100.

Solutions of Global Warming

Many awareness programmes and programmes to reduce global warming have been run and implemented by the government agencies, business leaders, private sectors, NGOs, etc. Some of the

damages through global warming cannot be returned by the solution (like melting of ice caps). However, we should not get back and try everyone's best to reduce the effects of global warming by reducing the human causes of global warming. We should try to reduce the emissions of greenhouse gases to the atmosphere and adopt some climate changes which are already happening for years. Instead of using electrical energy we should try using clean energy or energy produced by solar system, wind and geothermal. Reducing the level of coal and oil burning, use of transportation means, use of electrical devices, etc may reduce the global warming to a great level.

References

1. Bharatikumar.(2012). A textbook of Environmental Education. New Delhi: Wisdom Press
2. Devi Uma and Reddy,P.A.(2009).Environmental Education. New Delhi:Sonali Publications
3. Prabhakar, V.K.(2001).Environmental Education. New Delhi: Anmol Publications Pvt.Ltd
4. Singh,M. S.(2007).Environmental Education. New Delhi : Adhyayan Publishers and Distributors.
5. Trivedi, P.R.(2004).Environmental Education.New Delhi:APH publishing Corporation.

