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GLOBAL WARMING: IMPACT ON HUMAN HEALTH

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ABSTRACT

Global warming today has become a major problem. The continuous rise in temperature of the planet is really upsetting. The root cause for this is global warming. To understand global warming, it is first necessary to become familiar with the greenhouse effect. The trade of incoming and outgoing radiation that heats up the Earth is often referred to as the greenhouse effect. The greenhouse effect, combined with increasing levels of greenhouse gases and the resulting global warming. The major cause of global warming is the greenhouse gases. They include carbon dioxide, methane, nitrous oxides and in some cases chlorine and bromine containing compounds. Global warming can severely affect the health of living beings.

Keywords: - Global Warming, Human Health, radiation, greenhouse gases

INTRODUCTION

The continuous rise in temperature of the planet is really upsetting. The root cause for this is global warming. Global warming begins when sunlight reaches the Earth. The clouds, atmospheric particles, reflective ground surfaces and surface of oceans then sends back about 30% of sunlight back into the space, whilst the remaining is absorbed by oceans, air and land. This consequently heats up the surface of the planet and atmosphere, making life feasible. As the Earth warms up, this solar energy is radiated by thermal radiation and infrared rays, propagating directly out to space thereby cooling the Earth. However, some of the outgoing radiation is re-absorbed by carbon dioxide, water vapors, ozone, methane and other gases in the atmosphere and is radiated back to the surface of Earth. These gases are commonly known as greenhouse gases due to their heat-trapping capacity. It must be noted that this re-absorption process is actually good as the Earth average surface temperature would be very cold if there was no existence of greenhouse gases.

The dilemma began when the concentration of greenhouse gases in the atmosphere was artificially increased by humankind at an alarming rate since the past two centuries. As of 2004, over 8 billion tons of carbon dioxide was pumped thermal radiation is further hindered by increased levels of greenhouse gases resulting in a phenomenon known as human enhanced global warming effect.

Greenhouse Effect:

While other planets in the solar system of the Earth are either roasting hot or bitterly cold, Earth's surface has relatively mild, steady temperatures. Earth enjoys these temperatures because of its atmosphere, which is the thin layer of gases that cover and protect the planet. However, 97% of climate scientists and researchers agree that humans have changed the Earth's atmosphere in dramatic ways over the past two centuries, resulting in global warming. To understand global warming, it is first necessary to become familiar with the greenhouse effect. The natural greenhouse effect normally traps some portion of heat in such a way that our planet is safe from reaching freezing temperature while human enhanced greenhouse effect leads to global warming. This is due to burning of fossil fuels which increase the amount of greenhouse gases present in the atmosphere [1].

The trade of incoming and outgoing radiation that heats up the Earth is often referred to as the greenhouse effect because a greenhouse works in a similar way. Incoming ultraviolet radiation easily passes through the glass wall of a greenhouse and is absorbed by the plants and hard surfaces inside. Weaker infrared radiation, however, has difficulty passing through the glass walls and is trapped inside, therefore, warming the greenhouse. This effect lets tropical plants prosper inside a greenhouse, even during a cold season [1].

A similar phenomenon takes in a car which is parked outside on a cold sunny day. Incoming solar radiation warms the interior of the car but outgoing thermal radiation is trapped inside the closed windows of the cars. This entrapment basically warms up the car. This trapping occurs in such a way that the hot air does not rise and does not lose energy through convection [1].

In the words of Michael Daley, an Associate Professor of Environmental Science at Lasell College: "Gas molecules that absorb thermal infrared radiation, and are in significant enough quantity, can force the climate system. These types of gas molecule are called greenhouse gases". Carbon dioxide and other greenhouse gases act like a mantle, absorbing infrared radiation and preventing it from escaping into the outer space. The net effect is the regular heating of the Earth's atmosphere and surface.

The greenhouse effect, combined with increasing levels of greenhouse gases and the resulting global warming, is expected to have philosophical implications. If global warming continues unrestrained and nothing effective is done to limit this evil, it will cause significant climate change, a rise in sea levels, extreme weather events and other ruthless natural, environmental and social impacts [1].

Causes of Global warming:

The major cause of global warming is the greenhouse gases. They include carbon dioxide, methane, nitrous oxides and in some cases chlorine and bromine containing compounds. The build-up of these gases in the atmosphere changes the radioactive equilibrium in the atmosphere. Their overall effect is to warm the Earth's surface and the lower atmosphere because greenhouse gases absorb some of the outgoing radiation of Earth and re-radiate it back towards the surface. In 1985 Joe Farman, of the British Antarctic Survey, published an article showing the decrease in ozone levels over Antarctica during the early 1980s. The

response was striking: large scale international scientific programs were mounted to prove that CFCs were the cause of the problem. Even more important was abrupt international action to curb the emissions of CFCs. The second major cause of global warming is the depletion of ozone layer. This happens mainly due to the presence of chlorine containing source gases. When ultraviolet light is present these gases dissociate releasing chlorine atoms which then catalyze ozone destruction [2].

Laws and legislation:

Various laws and legislations have been developed in order to protect the environment.

International Environmental Law:

Many countries have adopted comprehensive environmental laws. Many nations ascribe to and follow, to varying degrees, international agreements regarding environmental issues.

Pollution does not respect political boundaries, making international law an important aspect of environmental law. Numerous legally binding international agreements now encompass a wide variety of issue-areas, from terrestrial, marine and atmospheric pollution through to wildlife and biodiversity protection.

While the bodies that proposed, argued, agreed upon and ultimately adopted existing international agreements vary according to each agreement. Certain conferences, including 1972s United Nations Conference on the Human Environment, 1983s World Commission on Environment and Development, 1992s UN Conference on Environment and Development and 2002s World Summit on sustainable development have been particularly important.

Problem Statement:

Global warming today has become a major problem. Scientists predict an increase in sea levels worldwide due to the melting of two 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 level which could displace millions of people. One nation, the Maldives, is already looking for a new home, thanks to rising sea level.

In the same way, according to recent research, there is a 90% change that 3 billion people worldwide will have to choose between moving their families to milder climes and going

hungry due to climate change within 100 year due to massive crops destruction. Climate change is expected to have the most severe impact on water supplies. “Shortages in future are likely to threaten food production, sanitation, hamper economic development and damage ecosystems. It causes more violent swings between floods and droughts. Global warming causes 300,000 deaths a year.

Likewise, according to research published in Nature, by 2050, rising temperatures could lead to the extinction of more than a million species. And because we can't exist without a diverse population of species on Earth, this is scary news for human.

Similarly, a report on coral reefs from WWF says that in a worst case scenario, coral populations will collapse by 2100 due to increased temperatures and ocean acidification. The ‘bleaching’ of corals from small but prolonged rises in sea temperature is a severe danger for ocean ecosystems, and many other species in the oceans rely on coral reefs for their survival. Therefore, global warming has become a great threat to human life. Thus, it needs a proper solution.

Impact on Human Health:

- Global warming can severely affect the health of human beings.
- Excess heat can cause stress which may lead to blood pressure and heart diseases.
- Global warming may also transfer various diseases to other regions as people will shift from regions of higher temperature to region of comparatively lower temperatures.
- Moreover, it is an established fact that warmer temperature leads to dehydration which is a major cause of kidney stones.
- Researchers have already noticed a rise in mosquito-borne disease like dengue fever and malaria due to warmer and longer summers.
- Lyme disease is another dangerous disease which is transmitted mainly through bites from certain tick species.

CONCLUSION

The ultimate benefit of the research described in this paper will be a better understanding of the possible climate of the near future. One fact is abundantly clear: the next quarter of a century will be a fascination period in the study of climate change. We should put serious effort to overcome the problems due to global warming. We must try our best to solve the problem and strive as much as possible to reinstate our earth for sake of future generation. To reduce global warming, you should use electric motor vehicles. At the same time nuclear power stations should be used to generate energy.

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