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IMPACT OF GLOBAL WARMING AND ITS CHANGES IN ENVIRONMENT

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Abstract:

The term "global warming" refers to an increase in the average temperature of the world's atmosphere and oceans that has been observed and is continuing to grow. Around the course of the last 140 years, the average temperature all over the planet has risen by 0.6 degrees Celsius. Fine residue or spray particles that are carried to high altitudes by the wind have the potential to alter the temperature balance of the earth. They do this by deflecting the heat that is caused by the sun as it is approaching the surface of the planet, which causes it to become cooler. In contrast, they can also reflect the heat that is leaving the planet, which causes it to become hotter. The relative magnitude of these two effects is determined by the concept of the residue, which varies depending on the time of year and the season. For instance, the presence of a residue layer can frequently have the effect of making the later part of spring colder and the winter months warmer. Ozone and water fume both emit UV radiation, which has a significant impact on the surrounding atmosphere. The main contributors to climate change include things like compounds that are bad for the ozone layer, power plants, population growth, destruction of forest and wetland areas, and transportation corridors. The implications and outcomes of global warming vary greatly depending on the context. The effects of global warming should be observable in the climate of the environment, changes in the environment immediately surrounding it, the retreat of ice sheets, the disappearance of seas, the ascent of ocean levels, fermentation, forest fires, the consumption of ozone, agricultural practises, and water scarcity, as well as the health of people.

Keywords: Global Warming, Environment, Heat, Depletion, Population, Ozone Layer, Pollution, Resources, Deforestation, Plants, Animals, Globe, Climate Change etc.

Introduction:

The mix of gases that have been allowed to escape from the earth's interior has led to the development of the current climate. In recent times, environmental concerns have reached a level that is global in scope. The abnormalities, such as the depletion of the ozone layer, the accumulation of carbon dioxide, the shift in meteorological conditions, the corrosive rain, and the contamination of the ocean, are seen as problems associated with the world cycle.

Then, fine residue or spray particles that are floating high in the air might disrupt the hotness

balance of the planet by reflecting the heat that is escaping down toward the surface, so making it hotter. This can have an effect on climate change (Mackenzie, 1997). The relative importance of these two effects is determined by the concept of the residue, the season, and the time of year. Ozone damaging chemicals keep our world warm. They are a natural part of the atmosphere and contribute to its warmth by absorbing some of the energy that has already been provided by the sun.

These substances are the result of eating petroleum products (like coal, oil and gas). Emissions from internal combustion engines and the destruction of trees both contribute to the production of chemicals that are harmful to the ozone layer. It is possible that the temperature of the earth's surface will be three degrees Celsius higher by the end of the 21st century if global warming continues at the rate that is now projected. This sudden shift in temperature would have a significant impact, not just on civilization but also on the ecosystem. The amount of precipitation that falls, the level of the ocean, and the frequency and severity of extreme weather events like hurricanes and floods will all be impacted by global warming.

The well-being of humans, agriculture, and the availability of water would all be adversely affected. The cycles of environmental change and farming are intricately intertwined, and both processes take place on a global scale. It is anticipated that the factors that influence farming would all be affected collectively by global warming. These conditions include temperature, carbon dioxide levels, cold spill over, precipitation, and the communication between these components. These conditions determine the carrying capacity of the biosphere in order to generate an adequate supply of food for the human population and other domesticated animals. The equilibrium of these affects will determine the overall effect that changes in the environment will have on the agricultural industry. An analysis of the effects that changes in the global environment have had on horticulture may help to forecast and modify agricultural practises in order to adequately grow agricultural production.

Aim of the Research:

To find out the causes of Global Warming and Environment Changes and Analysing the same.

Objective of the Research:

- 1) To study the impact of global warming on the biotic factors of the environment.
- 2) To understand the concept of Global Warming & Environment.
- 3) Studying the causes behind the change in climate and environment.
- 4) To inculcate measures to control the changing climatic concerns.

Hypothesis:

- 1) Rising concerns of global warming are the causes of climate change.
- 2) Environment needs to be handled with care in-order to sustain the human existence on the Earth.

Methodology Used:

The research paper is been prepared with the help Secondary data, using various published articles, journals, thesis, research papers were analysed. A descriptive form of research technique is used to analyse the data collected. The surveys carried out on the global warming impacts; environment changes were been taken for the study. Policies & Schemes for the environment protection also were taken into consideration for the process of analyses of this research paper.

Results and Discussion:

Causes of Global Warming:

The main contributor to climate change is a class of chemicals known as ozone-depleting compounds. At this time, there is a potential threat posed by ozone-depleting compounds such as carbon dioxide, methane, and nitrous oxide. These ozone-depleting compounds act as a heat trap in the environment of the globe, which in turn contributes to an increase in the temperature of the world. The excessive emission of these gases is the primary contributor to the current state of climate change.

a. Power Plants:

The major contributors of carbon dioxide to the atmosphere are the power plants. The generation of electricity ultimately results in a significant release of carbon dioxide that is emitted by power plants. This release is caused by the use of oil-based goods. The burning of coal is an essential component in the operation of these power plants. When coal is combusted, approximately 1.7 times as much carbon dioxide is produced per unit of energy as is produced by petrol gas, and 1.25 times as much as is produced by oil.

b. Pollution:

Inside of the Ganges bowl, frequent concentrations of thick murkiness and smoke are produced as a result of the burning of biomass in the north western part of India as well as air pollution from large contemporary metropolitan centres in the northern part of India. The residue and the dark carbon that are blown towards higher altitudes by the twists at the southern essences of the Himalayas have the ability to hold shortwave radiation and warmth in the air over the Tibetan level. The net warming of the air that occurs as a result of spray absorption causes the air to warm and move upwards, increasing the convergence of moisture in the mid-lower troposphere and providing positive feedback that animates additional warming of sprayers (Lau, 2006).

c. Population:

There is a fresh focus on the relationship between "overpopulation" and environmental change and global warming, and countries like China and India need to step up their efforts to help bring global warming under control. However, developed countries have a lot of work to do on their own. The emissions from developed countries have been building up in the atmosphere for such a

long period, which is what triggered environmental change.

d. Deforestation:

The cutting down and removal of trees from around 34 million hectares of land per year is the primary source of deforestation, which is responsible for 25 percent of all carbon dioxide emissions that enter the atmosphere. Cutting down trees leads to a greater concentration of carbon dioxide in the atmosphere, which has a negative impact on climate. Greater urbanisation, the requirement of land for plants and constructions, and the demand of wood are all causes that are leading to deforestation, which is consequently leading to global warming.

Impact of Global Warming:

The levels of carbon dioxide, methane, and nitrogen dioxide in the atmosphere have exceeded consideration with ice centres over the past eight lakh years. According to extremely increased confidence, the infer paces of intensification during air consideration in abundant of the times in the previous century are unequalled while going before 22,000 years. It has been observed that each of the last thirty years has continuously been warmer lying on the surface of the globe than some previous ten years starting around 1850, that variations into a lot of gigantic environments alongside environment events have been even minded from that point onward around 1950, and that the frequency of heat waves has likely increased in enormous sorts of the Europe, Asia, and Australia. There are also probably more geographical areas in which the total quantity of substantial precipitation procedures has increased than those in which it has decreased, and the rate of, or the overall likelihood of, the intensity of severe precipitation has probably increased in both North America and Europe. That indicates a probability ranging from 66 to 100 percent. On the cry circle (cold locations), the report noted here that yearly mean Arctic Ocean ice decreased from the period 1979 up to 2012 at a rate surpassing in all likelihood inside assortment 3.5 to 4.1 percent each ten years and into assortment 9.4 to 13.6 percent each decade the late spring ocean ice least.

Since the 1980s, there has been a far over the ground pledge that the temperatures of the permafrost areas in the nearby all places have increased. The average temperature was actually 3 degrees Celsius higher in some parts of Northern Alaska, and it was up to 2 degrees Celsius higher in some parts of the Russian European North, where there has been an impressive decrease in the amount of permafrost thickness and areal level between the years 1975 and 2005. Although the rise in sea level since the middle of the nineteenth century is larger than the average pace seen in the two centuries before to that, the ocean's mean level has increased by 0.19 metres from 1901 to 2010, making the overall increase 0.19 metres. The term "global" indicates that there will be an increase in the amount of care taken in the twenty-first century, which may even result in an increase in the level of the ocean and a rise in the temperature of the sea, leading to a loss of mass from glacial masses.

1. Impact on Weather:

Changes in climate may be directly attributed to global warming, and this is a fact that is observable everywhere on the planet. There is a high probability that the global average surface temperature will increase by more than 2 degrees Celsius by the end of the 21st century. This is based on projections from the Intergovernmental Panel on Climate Change (IPCC), which suggest that the temperature will rise by at least 1.5 degrees Celsius by the end of the century. The warming trend will continue well beyond the year 2100 from every perspective save from one, will continue to display between annual to decadal variability, and will not be generally normalised. The aftereffect of environmental change has been carefully examined and thought about via the recording of changes that have taken place as a direct result of environmental change. Word "climate" used to refer to the states of the temperature, moistness, and so on on the particular ward in a restricted ability to focus, but the word "environment" used to refer to the comprehension of the relative restriction across a long and extensive age of time. As a result of this, it can be deduced that the decade of the nineties was a legitimate ten-year period from the perspective of the Earth up to that time, and the year 1998 was considered to be the most intense year of the given ten years by the third Assessment Report that was issued in (IPCC). Such an increase in the temperature of the planet continues with just a minor change in it. It is depicted that such a shape inside the atmospheric circumstances is modified and contained for the modification of globe from a piece of ice as that was inside the small up to that new inhabitable state. This modification of world occurred as a result of the alteration of atmospheric conditions.

Even more dire predictions have been made regarding the future of the Tibetan Plateau. The key point is indicated that of regular universe of incline sharpen into hotness during distinct regions of the globe, temperatures is growing of globe are on top of the increase and will delay to do so a holding up environmental change is with the forbidden of global warming. The initialization of the earth's temperature has influence on the actual framework working of the planet, including the retreat of frozen masses, the dissolution of snow on mountains, the adjustment of precipitation design hoist sea levels, and the circumstances of the weather. A change of this magnitude will have repercussions not just for the creatures that are currently alive but also for their continued existence in the world. Alterations to the environment have led to the retreat of glacial masses and the formation of cold lakes all over the world. The glacial masses that are located in the Himalayas have been moving at a rapid pace. The glacier masses of Siachen, Pindari, and Gangotri are retreating at an especially rapid rate, despite the fact that their origins lie in the post-glacial periods of the recent past. This is despite the fact that these glacial regions are currently experiencing a period of warming.

2. Impact on Human Environment:

The problem of global warming is something that humans have caused, and it threatens to harm the entire planet. An important one degree Celsius increase in temperature brought about changes while the environment ongoing, precipitation levels, ocean levels, accessibility of water assets, destruction of animals and vegetation, and soon a great deal more. These changes have consistently manifested themselves as a boomerang for us, the people, who are currently suffering as a direct result of the change that we ourselves have self-caused for ourselves. The investigation into the effects that global warming has had on a particular environment demands that a review be attempted that joins two points of view as a primary concern. These two points of view are, first, the impact that global warming has had upon the actual supportability of people, and second, the impact that global warming has had upon the monetary supportability of people.

This investigation compelled in the evaluating monetary impact of global warming upon such specific areas and consequently on the monetary arrangement of a country. Given that global warming has very directly associated with the travel industry and the protection business, this investigation compelled in the evaluating monetary impact of global warming upon such specific areas. As a direct result of the rise in average global temperatures brought about by human activity, the new conditions of the surrounding are been forced to adapt by the humans' and essential components of biological systems.

Over the course of the previous fifty years, warm days, warm obscurity, and warmth waves have had to have repeating frequencies. It is impossible to count the number of times that environmental disasters will occur. It is true that the occurrence of all of these occurrences cannot be merely certify ready to global warming and environmental change, but it is also true that the consistent influence of global warming remains accountable for a significant amount of time that has passed in the recent past. The disasters that occur without our knowledge will ultimately lead to better conditions for us. The year 2003 was witness to a deadly late spring heat wave that spread over Europe and was responsible for the deaths of about 22,000 people. All of these incidents make it very evident that rising temperatures have contributed to global warming and will have an effect on the passing of summer. It has been indicated that it is reasonable to mention in this that the temperature of winter will be a lot lower, and that the number of passages that are most likely to deliver in winter should go down. Other evident and not set in stone conditions in summer, such as heat stroke, excessive hacking, and cold, will continue to torture humans. When temperatures in urban areas rise to dangerously high levels, this phenomenon is known as the "heat island effect."

Conclusion:

The developed nations as well as the rapidly developing non-industrial nations have a responsibility to devise methods to control emissions of greenhouse gases. Countries that are well on their way to achieving success in terms of economic growth should also investigate the possibility of

embracing new inventions that save energy. It is essential to carry out massive amounts of reforestation. In addition to this, there is an emphasis placed on increasing the usage of renewable energy sources that are better for the environment, such as wind and solar power. Reduced usage of manure is something that should be considered. The influence of global warming on the environment is used to analyse its character. The immediate aftereffects of global warming and environmental change include an increase in the temperature of the oceans as well as an increase in their levels. The climate is shifting from one end of the world to the other as a result of global warming. Considering the impact of changes to the environment typically involves looking at the effects of changes that have already taken place as a kind of aftereffect of environmental change.

Suggestions:

- 1. Methods of Recycling, Reusing, Reducing, should be brought into the practical way of living.
- 2. Concerns for environmental balance should be shown from an early stage of learning.
- 3. Use of energy efficient appliances is a must.
- 4. For the betterment of the environment a price on carbon can be done.
- 5. Reforestation and its maintenance should be brought under the prime light of the society and its understanding.
- 6. Increase in consumption of solar and wind energies can be done, in order to conserve the non-renewable energies.
- 7. Conservation of the bio-diversity hotspots.
- 8. Concepts of rain water harvesting, terrace farming, use of biofuels, using of LED appliances, less emission of CFC gases. Etc should be made aware in the society, in order to maintain the man – environment relationship.

Reference:

- 1. Ahmad, A., Koudstall, R. and Werners, S, 2006. 'Key Risks". Considering Adaptation to climate change towards a sustainable development.
- Smith, J., Hitz, S., Akhter, R. 2002. Climate change and Human Health-Risk and Responses. 2. WHO Greeneua.
- 3. Thukral, A.K. and Virk, G.S. 2001. Environment Protection. Indian Journal of Environmental Prot. 13: 358-367.
- 4. Vladimir and Romanovsky, 2007. Climate changes and retreat of glaciers. Nature 377: 687-688.
- 5. Global Warming: Impacts on Forests. United States Environmental Protection Agency, 2007. In: [www.globalwarming.org.in]
- 6. Lawrence, D.M., Slater, A.G. and Tomas, R.A. 2008. Accelerated artic land warming and

- permafrost degradation during rapid sca ice loss. Geophysical Research Letter 35: 1506.
- Mackenzie, D. 1997. Impact of Pollutants on Environment. Forest Fab. 156: 15.
- Mishra, S., Ramesh, R., Amit, R., Lazar, B., Rajaguru, S.N. and Sandler, A. 2007. Highresolution holocane environmental changes, Northwestern India. Science 284(5411): 125.
- Ponce, V. Migue 2009. The thirty three facts about global warming. Nature 510: 140-148.
- 10. Rao, A. and Sinha, A.K. 1994. Climate changes and agriculture. Nature 437: 102-109.
- 11. Saseendran, R.M., Smith, I.M. and Matson, P.A. 2000. Ecological and evolutionary responses to climate change. Science 284: 1943-1947.
- 12. Shyam Divan And Armin Rosencranz (2001) "Environmental Law & Policy In India" 18th edition 2015, Oxford University Press New Delhi, ISBN 019566173-7, Pg.49
- 13. Alexander Gillespie (2006) "Climate Change, Ozone Depletion and Air Pollution-Legal Commentaries with Policy and Science" Martinus Nijhoff Publication Leiden / Boston, ISBN 90 0414520 6 Pg.3-

