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A Study on the effect of Global Warming on the Environment

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ORIGINAL ARTICLE

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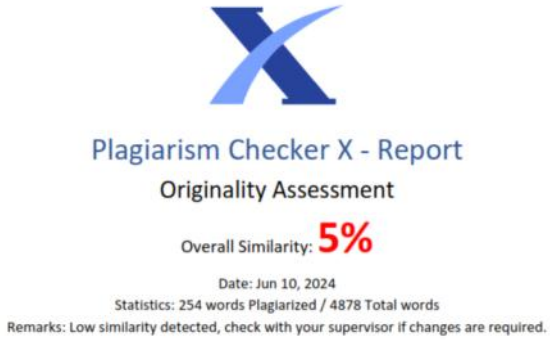

ABSTRACT

The National Oceanic and Atmospheric Administration (NOAA) and other research organizations have produced independent analyses that closely align with NASA's analysis.According to worldwide data the Earth's temperature in 2023 increased by around 2.45 degrees Fahrenheit (1.36 degrees Celsius) compared to the pre-industrial average temperatures measured between 1850 and 1900. It is worth noting that atmospheric aerosol particles particularly fine dust held at high altitudes play an important role in regulating the planet's thermal equilibrium by collecting solar radiation and re-emitting heat that would otherwise escape into space. This occurrence has important consequences for our knowledge of how the Earth's climate works. These two impacts can counterbalance one another depending on the kind of dust the season and the time of day. For example a coating of dust may tend to warm the winter and cool the summer. Ozone and water vapour both emit UV light that significantly affects the atmosphere. Power plants greenhouse gas emissions population increase deforestation the transportation sector and the degradation of wet land are the main causes of global warming. Global warming has implications and consequences on many facets of existence. The weather seas acidification forest fires ozone depletion local climate change glacier retreat and disappearance agriculture water shortages and human health are all affected by global warming.A projected 2°C rise in global temperatures has been found to potentially lead to a decline in rice production ranging from 0 to 75 tons per hectare. Similarly a 0.5°C increase in winter temperatures could result in a decrease in wheat output between 0 and 45 tons per hectare. Research has indicated

that these outcomes are likely consequences of global warming. This paper examines the underlying causes of global warming its far-reaching impacts and the strategic measures being employed at the international level to mitigate its effects.

KEY WORDS

Green house, Global Warming, Oxygen, Climate Change, Pollution, Agriculture.

INTRODUCTION

The phenomenon of a steady rise in temperature in the vicinity of the earth's surface is known as global warming. Over the previous century or two observations of this occurrence have been made. The earth's climate pattern has been disrupted by this upheaval. Though the idea of global warming is highly debatable scientists have produced pertinent evidence to support the idea that the earth's temperature is steadily rising.

Since the Industrial Revolution the yearly average global temperature has increased by just over 1 degree Celsius or around 2 degrees Fahrenheit. Between 1880 when accurate data first began to be kept and 1980 there was an average ten-year rise of 0.07% Celsius (0.131°F).Over the past four decades the global mean temperature has increased by approximately 0.18 degrees Celsius or 0.32 degrees Fahrenheit annually. This upward trend has accelerated significantly since 1981 resulting in an unprecedented level of planetary warmth. Notably nine out of the ten warmest years on record since 1880 have occurred within the last two decades with the five highest temperatures ever recorded taking place in 2015.According to the National Oceanic and Atmospheric Administration's (NOAA) National Thecenters for Atmospheric Information's 2023 Global Climatic Report each month of last year was among the top seven warmest on record globally. Notably the latter half of the year (June to December) saw the highest recorded temperatures. Furthermore, according to NOAA's historical records global temperatures have risen by more than 1.0°C (1.8°F) in three consecutive months - JulyAugust and September. Despite several studies demonstrating otherwise, doubters of climate change argue that there has not been a "pause" or "slowdown" in the rise in global temperatures the repercussions of global warming are already causing harm to people all around the world. Climate experts tell us that we have to keep global warming to 1.5 degrees Celsius by 2040 if we are to avoid a future in which devastating droughts wildfires floods, tropical storms and other calamities that are together referred to as climate change define ordinary life globally. These impacts touch everyone in some manner but they are mainly felt by the economically disenfranchised and underprivileged. The issue of the environment has gotten worse recently on a worldwide scale. Global cycle issues are covered such as rising carbon dioxide levels atmospheric changes, maritime pollution and ozone layer depletion. Alternatively the earth's thermal balance can be altered by minute dust or aerosol particles floating high in the atmosphere which warm the surface by reflecting escaping heat back towards it (Mackenzie, 1997). How these two impacts balance out depends on the season the volume and the timing of the dust. For example a coating of dust may tend to warm the winter and cool the summer. The Earth's warmth is sustained by greenhouse gasses. They are an element of the atmosphere that exists naturally and warms it by absorbing solar light. This phenomenon is known as the "natural greenhouse effect." Without greenhouse gasses, the earth's surface would be around -18C cooler than the moon's. The average temperature of the earth's surface is really about 15C. In the last 150 years, the atmosphere has warmed by more than 0.5 degrees Celsius (c).In addition to the continuous release of carbon dioxide and sulfur dioxide from the combustion of energy crops such as petrol crude oil and fossil fuels additional events, such as car emissions and wildfires contribute to their atmospheric presence. If current global warming estimates are right the Earth's surface temperature is expected to rise significantly maybe by 3 degrees Celsius until the final decade of the twenty-first century. A significant change in climate conditions would undoubtedly have far-reaching effects for both people and the natural environment. Global warming is predicted to have a wide-ranging influence, including changes in precipitation patterns, sea levels, and the frequency and intensity of extreme weather events like storms and flooding.Agriculture public health and access to clean water supplies are all expected to be seriously impacted.

A link exists between agricultural practices and climate change two major worldwide problems. Global warming is expected to have a significant influence on a number of climatic elements including precipitation levels temperatures carbon dioxide concentrations glacier runoff rates and precipitation pattern changes. These interconnected elements are critical in determining the biosphere's ability to sustainably provide enough food for humans and domesticated animal populations across the planet. Furthermore the balance of animal populations will eventually influence the overall impact of climate change on agricultural output.The balance between climate change's positive and negative effects on agriculture will eventually determine its total influence. To maximize agricultural output, it is critical to understand the broad implications of global climate change for this sector and apply appropriate adjustments. Notably research has demonstrated that agriculture itself has a considerable impact on climate change. The primary causes of this phenomenon are greenhouse gas emissions such as carbon dioxide methane, and nitrous oxide as well as changes in the Earth's surface coverage which can either enhance or impede the planet's ability to absorb or reflect solar radiation thereby amplifying radiative forcing. Methane and nitrous oxide emissions have risen mostly as a result of agricultural activities whereas land-use alterations such as desertification and deforestation as well as fossil fuel consumption are the principal human sources of carbon dioxide.

Current Major Causes of Global Warming

The terrestrial temperature is rising at an alarming rate impeding the dispersion of solar energy into space. As a result greenhouse gases are responsible for absorbing this energy causing a cascade of negative repercussions on our planet. This phenomena manifests itself through the melting of glacier deposits the rise in sea water levels and the intensification of severe climatic events. Furthermore natural systems change and agricultural output decreases affecting both the environment and society. Notably, the key factors to this climate crisis include

- **Green House Gases:** One of the world's most serious problems now is global warming, which is directly related to the greenhouse effect. The latter is the process by which specific gases in the atmosphere absorb and re-emit solar energy, causing the Earth's temperature to rise. These gases sometimes known as greenhouse gases retain heat from the Earth and redirect part of it back towards the planet.

The atmosphere and clouds reflect around 26% of the sun's energy back into space while the atmosphere absorbs about 19%. The remaining heat reaches the Earth's surface, causing it to warm. As a result the planet emits infrared radiation that heats the atmosphere.

This energy is subsequently transported throughout the atmosphere by convection. It is critical to understand that the existence of greenhouse gases maintains the equilibrium required for life on Earth to thrive. However their greater concentration has caused an increase in the Earth's ambient temperature it.

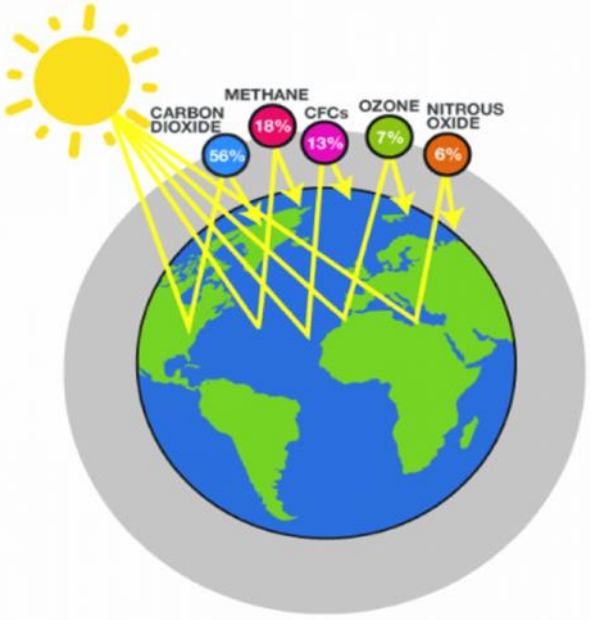

Figure: 1

➢ **Overfishing:** The type of pollution that originates from industry is known as industry-related pollution. The industrial revolution brought about two things: increasing industrialization and technical improvement. Regrettably this caused significant contamination of the world's air land and water. Industrial pollution is the worst type of pollution. This is due to the fact that smoking outside depletes the environment of ozone. It affects not just global warming but also the health of humans and animals. When fish stocks are depleted, the carbon footprint of fisheries increases. The extra carbon discharged into the atmosphere in order to catch fewer fish exacerbates climate change, as seen by temperature increases, ocean acidification, and deoxygenation.

Figure: 2

➢ **Industrial Pollution:** Industrial pollution is a term used to describe pollution caused by industries. The Industrial Revolution facilitated industrialization and technological development. However the atmosphere land and water on Earth have all been extensively poisoned as a result. The worst type of pollution is industrial since the smoke discharged into the atmosphere thins the ozone layer. Climate change has an influence on both human and animal health.

Figure: 3

➢ **Agriculture:** Approximately 11% of the emission of greenhouse gases are related to agriculture. Livestock like cows farms and rice cultivation are the sources of these greenhouse gases that are released from agriculture. In order to accommodate agriculture, which needs a lot of green area, local ecosystems may be destroyed. These species not only release a lot of greenhouse gasses including methane but also a lot of garbage. Because factory farming can produce more animals and produces more pollutants, it exacerbates climate change.

Figure: 4

➢ **Transport and Vehicles:** Automobile emissions and other forms of vehicle emissions are a major source of atmospheric carbon dioxide. Gasoline combustion in automobile engines accounts for 20% of the carbon dioxide emitted into the environment. It is usually best to drive an automobile designed for city driving when on city roads.

Figure: 5

➢ **Deforestation:** An estimated 36 million acres of forest cover are destroyed each year by logging and burning resulting in extensive deforestation. This phenomena accounts for about 25% of all carbon dioxide emissions discharged into the atmosphere. As a result the reduction of tree cover contributes greatly to the observed rise in atmospheric carbon dioxide levels. Other causes aggravating deforestation and hence magnifying global warming include rising demand for wood products increased urbanization and the need for land for industrial facilities and infrastructural development.

Figure: 6

➢ **Generating Power:** The process of combustion of petroleum and gas to generate energy and heat accounts for a large portion of world emissions. The primary energy sources used to generate electricity are natural gas petroleum products and coal. When these compounds burn they emit large amounts of powerful greenhouse gases such as carbon dioxide and nitrous oxide. Global warming is primarily caused by the buildup of these gases in the atmosphere which traps solar energy. Furthermore the use of fossil fuels endangers both species and ecosystems potentially leaving them uninhabitable owing to harmful effects. In severe situations this might result in the destruction of all vegetation leaving places devoid of life.

Figure: 7

➢ **Population:** We are expected to have over 8 .1 billion people on Earth by 2024. Given that 1 billion more people are predicted to join the human race by 2040 and another 1 billion by 2060 a thorough grasp of demographic trends and factors is essential to solving the global climate catastrophe. Climate-altering greenhouse gas emissions typically increase in proportion to population growth and consumption. Rapid population growth strains available resources aggravating climate change's consequences. It also makes more people vulnerable to the consequences of climate change.

Figure: 8

➢ **Producing Food:** Methane and carbon dioxide are two of the many greenhouse gases emitted throughout the food production process. Numerous variables affect how the food we purchase and eat affects the environment. These include as was previously said agricultural techniques food production sites fertilizer and pesticide applications and animal feed. Climate change is consequently largely caused by the production of food. Additionally food distribution and packaging increase greenhouse gas emissions.

Figure: 9

➢ **Waste:** Human waste production is at an all-time high. The short product life cycle and extensive packaging usage are to blame for this.The vast majority of items garbage and packaging that cannot be recycled end up in landfills. As lignor waste decomposes in landfills poisonous gasses are released into the atmosphere. Part of the cause of global warming is these gasses.

Figure: 10

➢ **Consuming too Much:** Home decisions have an impact on the environment. This covers our daily activities energy sources and eating habits. Our purchases of plastics gadgets clothes and other items add to greenhouse gas emissions. It was discovered that the impacts changed with income level. The carbon emissions of low-income and high-income families differ by at least ten times. Customers should be aware of the connection between their decisions and how they affect the environment.

Figure: 11

➢ **Manufacturing Goods:** The main source of emissions in manufacturing and industry is the burning of fossil fuels. Products like steel cement electronics plastics clothes and other items are made using this energy. Customers may now buy any goods at any moment thanks to technological and industrial innovations. This indicates that we are overproducing and creating more goods annually. The vast majority of the things we purchase are not really sustainable. Due to the shorter lifespans of apparel and electronics, there is more garbage than ever before.

Figure: 12

Effect of Global Warming

Climate scientists confront tremendous hurdles in projecting the effects of global warming because of the intricate interaction of elements controlling weather patterns such as rainfall snowfall hailstorms and sea-level rise.Furthermore the uncertainties surrounding future political actions and technology breakthroughs make projections about greenhouse gas emissions extremely questionable. Despite these difficulties certain negative consequences of global warming have been found. Specifically increasing atmospheric humidity causes floods in many parts of the world while accelerated evaporation processes on land and sea aggravate conditions in locations where precipitation fails to counteract evaporation rates resulting in droughts. Temperature anomalies are expected to continue increasing in the next years having risen dramatically since the beginning of the twenty-first century. This tendency is mostly due to the development of industrial operations and the construction of new power plants both of which release significant amounts of greenhouse gases into the environment. These conclusions are based on substantial study undertaken by many environmental and climatological groups.

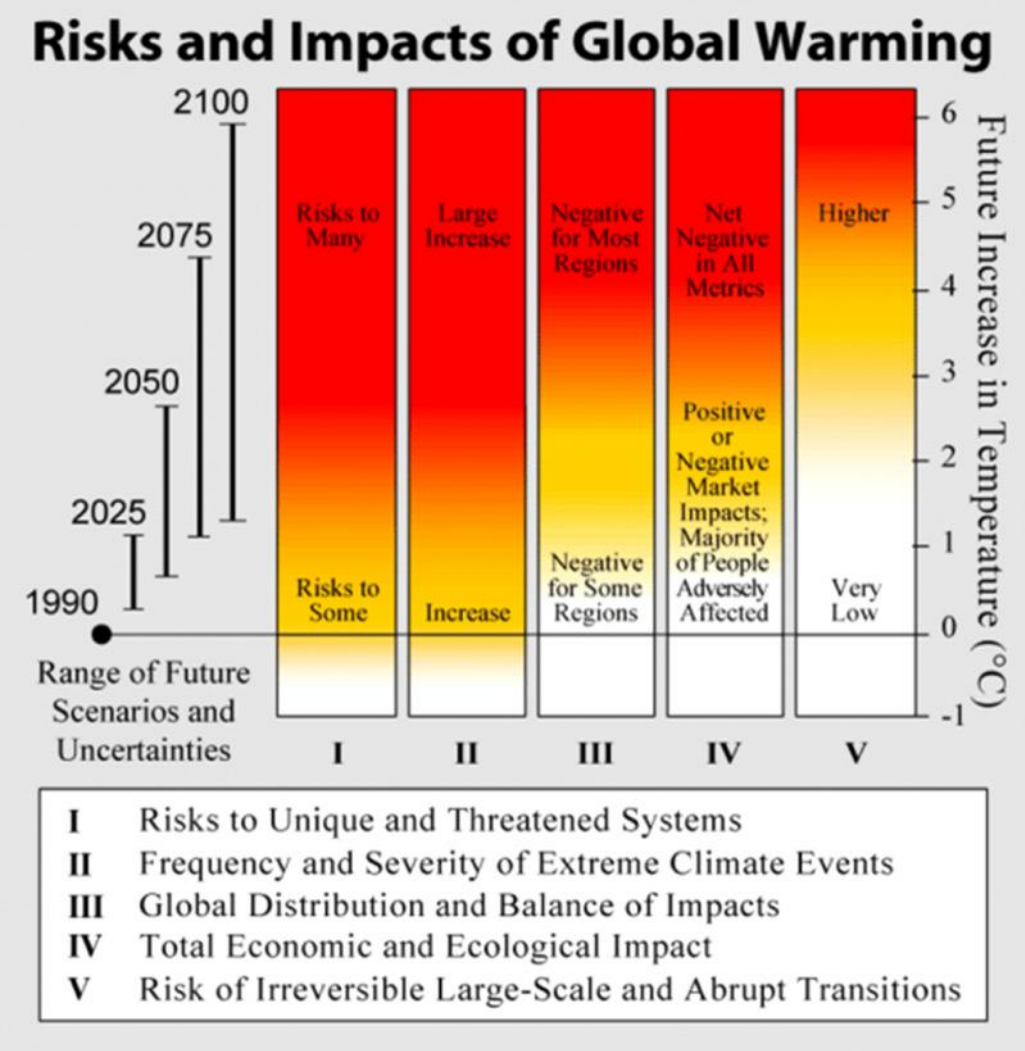

Figure: 13

Fig no:13 explains in detail the dangers and effects of global warming in the next years. The graphic suggests that we are now undergoing severe extreme climatic occurrences such as earthquakes floods and thunderstorms. If nothing is done to put an end to this threat the level of damage will increase dramatically. The mean worldwide temperature in recent years is shown courtesy of the National Aeronautics and Space Administration (NASA). We are obviously faced with a significant question by this tendency. In light of the increasing temperature how will humans manage to exist on Earth?

Effects on the Environment

Pollution levels increased by the middle of the 18th century following World War II brought forth an industrial revolution.Lowers air pollution by up to thirty-three percent. Flood shore Drought erosion seepage of salt water into the soil very high values there are hurricanes tropical cyclones and a lot of rain. The following consequences have been noted globally The rise in global temperatures over the last few years is to blame. In several regions of the country, flooding is being brought on by rising sea levels. The last century has seen a 100% increase in sea levels. Because of the planets warming, nearly one meter

Unusual Weather

Certain historical tendencies, such as odd weather, might be attributed to global warming natural disasters. That is what will happen when the frequency of severe tropical cyclones increases. That will happen. Increasing examples of extremely high sea levels.

Localized Climate Change

The first hurricane to be documented in the South Atlantic was Catalina. Brazil is struck in March 2004. Over the previous 50 years, temperatures in the southern portion of the Arctic area in the northern hemisphere have risen by 1 to 3 °C. Canada, Russia and Alaska see the first permafrost melting. This can devastate the ecology and cause it to grow. These zones are created by bacterial activity in the soil. Sources of carbon as opposed to sinks of carbon (Vladimir and Heaven Romanoff, 2007)

Retreat and Disappearance of Glaciers

The world's entire area of glaciers is found in Antarctica. This is a 50% reduction from the end of the 19th century. Glacier retreat rate and mass balance loss were currently noted elevated in the Himalayas, Alps, Pyrenees, Andes, and stony mountains. North Cascades and Mountains. It goes beyond the vanishing of glaciers. These are the direct causes of glacial lake flooding, flash floods, and landslides. But there are also yearly variations in river water levels.

Oceans

Huge volumes of carbon dioxide are absorbed by the ocean, which serves as a carbon sink. If not, it will continue to exist in the atmosphere but grow. Sea level rise is contributing to ocean acidification as that capability diminishes with increasing water temperatures absorbs more CO2. Sea levels are predicted to rise as a result of thermal waves brought on by global warming, among other effects. Glaciers and ice sheets expanding and melting.

Ocean-wide Acidification Phenomenon

According to a new scientific study, the process of ocean acidification is presently occurring at a tenfold faster pace than it did during a catastrophic extinction event around 55 million years ago. This phenomena has the potential to cause a dramatic drop in marine life, similar to the conditions causing the loss of a large number of armored deep-sea species from the fossil record. According to scholarly consensus, the steep drop in ocean pH levels that caused this earlier extinction event also resulted in shell corrosion in species having calcium carbonate inside their biological systems**.**

Increase in Sea Level

The amount of water in the earth's ocean is growing as the planet's average temperature rises, and more water is entering the ocean. In the past, land-based glaciers encircled it. Antarctic and Greenland ice sheets. in the majority of glaciers By 2050, global sales are likely to drop by an average of 60%, as I predicted. Over the whole Greenland, the annual ice melt rate is 2.39 ± 23 cubic kilometers. sea level rises to 6.5 meters in the Indian Ocean, the United States, and certain areas of Canada .

Temperature increase in Oceans

Between 1961 and 2003, global ocean temperatures rose by approximately 0.10°C (10%) at depths ranging from the surface to 700 meters. Notably, the Southern Ocean experienced a more pronounced increase of 0.17°C (0.31°C) during this period. Furthermore, the world's oceans underwent significant changes from the 1950s to the 1980s.

Forest Fires and their Implications under Climate Change

The InterGovernmental Panel on Climate Change's Fourth Assessment Report predicts that significant population growth will occur in mid-latitude regions. Consequently, rainfall patterns may deteriorate, leading to increased likelihood of droughts in areas such as Mediterranean Europe. The resulting increase in forest fires could release substantial amounts of stored atmospheric carbon into the environment. However, it is possible to mitigate and reverse this process through natural means by revitalizing the carbon cycle. Notably, the world's total forest area has the potential to create a self-reinforcing feedback loop. This phenomenon can

be further augmented by the establishment of new forests and the migration of existing ones towards higher latitudes, where today's climatic conditions provide optimal conditions for preservation.

Ozone Layer Destruction

The stratosphere's ozone layer depletion happens through two distinct mechanisms that affect both the whole ozone molecule and its conventional composition. The major cause of this drop is technological innovation, which has resulted in higher atmospheric disturbances from activities such as rocket flights, supersonic transportation, refrigeration systems, and agricultural practices that employ nitrogen-based fertilizers, among others.. Close to the ground, ozone is prevalent. Human health, agricultural crops, decorative plants, woods, materials, etc. are negatively impacted by the surface. It has been found that nitrogen emissions are decreased. When ozone concentrations are high, using oxides could be essential elevated.

Release of Methane from Hydrate

Methane hydrate, commonly known as methane clathrate, is a kind of water ice distinguished by its dense concentration of methane molecules inside a crystalline structure. Natural gas emitted by anomalous methane clathrate deposits can abruptly discharge enormous amounts of methane into the environment. Previous study revealed that these emissions might be attributed to the greenhouse effect. However, future climatic shifts are anticipated to release extra methane from these reserves, perhaps contributing significantly to global warming.

Effects on Farming

The effect of temperature on agricultural output is substantial. In places with high yields, a temperature of 0°C has been shown to reduce rice output by around 0.75 tons per hectare. In contrast, a 0.5°C temperature increase during the winter season may result in higher yields. Similarly, wheat yields have been observed to decline by about 0.45 tons per acre when exposed to 0°C. Notably, research shows that without the benefits of carbon dioxide fertilization, wheat productivity might fall by 28–68%. Furthermore, research show that every one-degree increase in temperature reduces rice output by around 6%.

Countermeasures / Control against Global Warming

Seek out the vehicle with the best fuel efficiency for your class of automobile purchases, you are liable for each gallon of gasoline you use. That's twenty-five pounds of atmospheric gas that traps heat. Reduced greenhouse gas emissions and thousands of dollars in savings over the course of your pump car are two benefits of better gasoline use:

- **Select energy that is Clean:** The chosen geographic region generates over fifty per cent of the electrical power utilized in the whole of America. Regardless of their relevance, facilities that rely on coal combustion have negative environmental consequences. The major purpose of these facilities is to provide thermal energy using gas-powered heating systems. It is critical to recognize that such infrastructure is necessary for human survival. Furthermore, while electricity is an essential component of contemporary civilization, a few countries have successfully shifted to using 50-100% renewable energy sources, reducing their carbon footprint and encouraging sustainable growth.
- **Look for the Energy Star:** It is essential to take into account the energy requirements associated with replacing household appliances. Notably, newly installed air conditioning units, water heaters, freezers, ovens, and refrigerators are typically the largest energy consumers within residential settings. Implementing energy-conservation measures at home can yield substantial benefits. Specifically, if all American households were to replace their existing appliances with the most energy-efficient models available, this could result in estimated annual savings of $15 billion in energy expenditures and 175 million gallons of gasoline, thereby reducing greenhouse gas emissions equivalent to those from millions of tons of carbon dioxide.

- **Take the Freezer's Plug Out:** One of the most expeditious strategies for mitigating global warming is to refrain from disassembling refrigeration units, such as freezers and refrigerators, which results in a significant reduction of carbon emissions within residential settings. Consequently, this approach yields a substantial decline of approximately 10%, thereby contributing to a notable decrease in overall emissions.
- **Plant a Tree:** Get your neighbourhood together and speak with an urban forester or arborist about planting trees on private property both private and public lands. Trees grown in and around homes and urban areas can lower energy costs and the consumption of fossil fuels in addition to storing carbon.
- **Let Policy Makers know you are Concerned about Global Warming:** Concerned individuals need to voice their concerns to our elected representatives and corporate leaders. To guarantee that decision-makers receive the timely and correct information they require to make well-informed choices about solutions to climate change, join the Union of Concerned Scientists Action Network.
- **Other Solutions:** As was previously established, the primary driver of global warming is emissions of harmful gases. Reducing the number of automobiles that emit hazardous pollutants is one way to lower such emissions. This hasn't been particularly effective, though, as many people are unwilling to restrict their use of automobiles. It is true that a tiny percentage of individuals prefer to walk, while some have started utilizing bicycles or public transportation. Always keep in mind that while picking a motor vehicle, the most essential aspects to think about are the vehicle's fuel efficiency and emissions. Automotive hybrids supply cleaner emissions and are more energy-efficient.To cut down on dangerous emissions, air filters should be changed on a regular basis and tire pressure should be maintained. To cut down on the number of cars on the road, carpool with a friend or co-worker.Social networking sites and newspaper circulation may both help reduce the issue. The advertising concepts of automobiles should be utilized to motivate drivers to minimize pollution and conserve energy. Commencing awareness campaigns may be accomplished with posters, logos, and posters.

The presented information accurately illustrates the detrimental consequences of global warming on the environmental sphere. Furthermore, it highlights the potential for mitigating these adverse impacts through the implementation of recycling practices, thereby contributing to a reduction in global warming. Rechargeable batteries are preferable to disposable batteries for most people. Purchasing long-lasting, high-quality items is essential. Local markets are the only places to shop, which minimizes transportation. Global warming may be mitigated by taking even tiny individual steps, like turning down your thermostat in the winter or switching to compact fluorescent lightbulbs from incandescent ones. You must begin a tree planting campaign in order to cultivate additional trees. State Governments need to take action to stop deforestation and forest degradation. Since nuclear energy lowers emissions, it may also be seen as a solution. This approach should be utilized carefully though, since it may result in catastrophic mishaps. Therefore, the largest obstacles to implementation of this technology would be overcoming the safety, proliferation, disposal of waste, and high cost of nuclear energy.

International Strategies to Control Global Warming

In charge of organizing relevant environmental concerns is the World Meteorological Organization (WMO). Climate, includes the state of the world's air. 7.4, 8.7, and 9.8% of the total CO2, SO2, and NO2 build up is found nearby. Avoided emissions from 1997 to 1997 Production can continue until 2075 if equipment is used efficiently (Shrestha et al. 1998). Bags can be used to treat exhaust gas to lower dioxin emissions. Processing fly ash by filtering and sintering (melting and solidifying); thermal aldehydes, chlorinated, and other photolytic and chemical methods (Ahuja, 2008).

Copenhagen Conference

The goal of the parties' (police) conference in Copenhagen was to conclude discussions on a new international accord. By 2012 law addressing climate change had to be implemented. Three individuals The

Party conference (police) was able to unanimously approve the Copenhagen Accord. Point 1The parties admit and indicate that they are " cognizant" of the consensus among scientists that temperatures globally should not rise by more than 2 degrees Celsius. Point 2: It is vital that global emissions be drastically decreased. According to scientific findings and the IPCC's Fourth Assessment Report limiting global temperature rise to no more than 2 degrees Celsius requirements prompt action. This goal should be pursued using equitable and scientifically informed techniques. Notably the United States China India, Brazil and South Africa have all taken initiatives to achieve this aim. The European Union along with the other maintaining parties has been invited to join these efforts but may decline if they so wish.

CONCLUSION AND FUTURE STRATEGIES

The scientific agreement on the phenomenon of global warming and humanity's role in it is straightforward. The current study serves as a preliminary investigation into a complicated field of inquiry. Global warming poses concerns that must be addressed immediately and aggressively in order to avoid catastrophic results. irrespective of its influence on human cultures, global warming endangers ecosystems and biodiversity, precipitating catastrophic catastrophes such as floods triggered by melting polar ice caps and sea-level rise which threatens to wipe out entire areas' agricultural and fishery economies.

To effectively deal with these serious challenges immediate and comprehensive action must be taken. These might include switching to alternative power sources of information halting deforestation and devising novel methods for combating this grave danger. Emerging economies are developing methods to minimize greenhouse gas emissions but fast rising economies must emphasize the development of technologies that save energy. Furthermore large-scale reforestation activities and a greater dependence on renewable energy sources obtained from natural resources like wind and sunshine are critical. Also proper fertilizing procedures need to be implemented to minimize environmental damage.

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