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GLOBAL WARMING: EXPLORING GLOBAL WARNING

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ABSTRACT

Global warming has taken the centre juncture of academic research and is at the rampant debate. According to the Intergovernmental Panel on Climate Change "Warming of the climate system is unequivocal as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice since the mid 20th century". Wide-scale use of non-renewable energy resources has exponentially amplified the levels of pollution. This has upended environmental solidity and global temperature is at rise. Over the last 15 years, G30 summits have been on the matter. Most countries have adopted potent Renewable Energy Targets and are planning to go partially or wholly off the grid. The establishment of renewable energy sources like sun, wind and water and processing of greenhouse gases are worthy solutions. Climate change creates new challenges for biodiversity conservation. Species ranges and ecological dynamics are already responding to recent climate shifts. Identify major gaps, including the need for a practical adaptation planning process to integrate the existing policies and programs beyond human-occupied landscapes. At this rate, while global warming may not cause much harm to the existent populace, it will surely be a menace for the coming generations. Our respective Governments are doing for the nation; yet every individual will have to proactive steps towards rendering stability to the environment through energy-conscious systematization at home.

Keywords : Global Warming, Pollution, Renewable energy, ecological dynamics and human landscapes.

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INTRODUCTION

The term 'Global Warming' was first used in its modern sense on 8 August 1975 by Wally Broacher. Global warming is debatably the most grave and controversial subject-matter facing the world in the twenty-first century. It is a major real discernible human influence on the global ecological climate which causes incessant unequivocal amount in the surface temperature of the Earth. Human finger prints have been identified for present sensitive climacteric transformation including ocean heat content, precipitation, atmospheric moistures as well flora and fauna kingdom. Since 1971, 90% of the global warming has occurred in the oceans. Between the years 1860-1900 average temperatures have increased by 0.75 degree Celsius. Over the past 100 years the global temperatures have risen by 1.3 degrees. Evidence of global warming is very apparent in the recent melting of ice sheets. Western Antarctica and Greenland are the exceedingly visible melting points and are diminishing at shocking rates. 10 out of the past 14 years are the warmest on record. 2 years ago, the entire Larsen B ice shelf broke into pieces in less than a month. Scientist believed that it would be at least a decade for this ice shelf to melt.

OBJECTIVES OF THE STUDY

1. To study on the empirical research studies of Global Warming.
2. To analyze the reasons for Global Warming.
3. To understand the consequences of Global Warming
4. To study about overcoming facts of Global Warming.

METHODOLOGY

The study is based on Secondary Data. The data collection includes from:

1. NASA : Global Climatic Change
2. Global Warming Information Centre
3. National Climatic Data Center
4. Climate Change Research Centre (CCRC)
5. Environmental Change Institute
6. Ministry of Earth Sciences
7. National Center for Atmospheric Research

LIMITATIONS OF THE STUDY

1. The present study does not cover the entire gamut of Global Warming due to the paucity of time and other restrictions.
2. Secondary data are used.

REVIEW OF LITERATURE

The two most recent IPCC reports, in 2001 and 2007 draw conclusions on the effects of climate change from a city-scale perspective. The 2001 chapter on Human Settlements, Energy and Industry,

(Scott et. al. 2001), concluded that: "Climate change is more likely to have important impacts on the development of settlements in resource-dependent regions or coastal or riverside locations. Most of the concerns were of possible negative impacts on development (e.g., on the comparative advantage of a settlement for economic growth compared with other locations), although impacts on some areas were considered likely to be positive."

Huber and Knutti (2011) implemented a very interesting approach in their study, utilizing the principle of conservation of energy for the global energy budget to quantify the various contributions to the observed global warming from 1850 and 1950 to the 2000s. Huber and Knutti took the estimated global heat content increase since 1850, calculated how much of the increase is due to various estimated radioactive forcing, and partition the increase between increasing ocean heat content and outgoing long wave radiation. More than 85% of the global heat uptake has gone into the oceans, so by including this data, their study is particularly robust.
Gillett et al.(2012) applied a statistical multiple linear regression approach to a climate model - the second generation Canadian Earth System Model (CanESM2). They used data for human greenhouse gas and aerosol emissions, land use changes, solar activity, ozone, and volcanic aerosol emissions. In their attribution they grouped some of the effects together into 'natural', 'greenhouse gas', and 'other'. The authors estimated the effects of each over three timeframes: 1851-2010, 1951-2000, and 1961-2010. Gillett et al. estimated that over both timeframes, humans are responsible for greater than 100% of the observed warming.

RESEARCH ANALYSIS ON GLOBAL WARMING

1.According to the U.S. Geological Survey, it has been recorded that there were 150 glaciers located in the Montana's Glacier National Park however because of increasing effect of global warming, only 25 glaciers are left. Huge level climate changes are making hurricanes more dangerous and powerful. Natural storms are getting so strong by taking energy from temperature difference (of cold upper atmosphere and warm Tropical Ocean). Year 2012 has been recorded as hottest year since 1895 and year 2013 together with 2003 as the warmest year since 1880.

2. The National Snow and Ice Data Center (NSIDC), is a United States information and referral center in support of polar and cryospheric research. Researchers at NSIDC investigate the dynamics of Antarctic ice shelves, new techniques for the remote sensing of snow and freeze in hydrologic modeling, thaw cycle of soils, linkages between changes in sea ice extent and weather patterns, large-scale shifts in polar climate, river and lake ice, and the distribution and characteristics of seasonally and permanently frozen ground.

3. A NASA study finds that almost $1/5^{th}$ of the global warming has occurred in the past 150 years has been missed by historical records due to quirks in global temperatures. A major report released on Sept. 27, 2013, by the Intergovernmental Panel on Climate Change (IPCC) more than 197 international scientific organizations agree that global warming is real and has been caused by human action. According to the Environmental Protection Agency, there is increase in the earth's surface average temperature by around 1.4 degree Fahrenheit (means 0.8 degrees Celsius). It has also been estimated that global temperature may increase by another 2 to 11.5 degrees F in the next century. According to the Statistics of The World Data Center (WDC) for Glaciology, it has been noted that by 2020 global warming may boom its bad effects if it is not taken under control, as increasing level of CO2 causes greenhouse effect on the earth in which all the greenhouse gases (water vapour, CO2, methane, ozone) absorbs thermal radiation, which in turn re-radiated to all directions and come back to earth surface causing increase in the temperature of earth surface and lead to global warming.

CLIMATE CHANGE SHEET – FACTS

★ The 21st century has seen the most temperature records broken in recorded history, outstripping 2014 and setting 2015 as the highest temperature recorded.

★ 97% of researchers believe global warming is happening, and 82% agree that it is strongly linked to human behaviour.

★ Glaciers have also been in retreat almost everywhere including major mountain ranges like the Alps, Himalayas and Rockies.

★ The current rate of sea level change is 3.24mm a year.

★ The UNHCR has warned that climate change could cause the displacement of 250m people across the world by 2050. In 2012 alone over 32m were displaced.

★ The world's third mass coral bleaching is underway and has affected 38 percent of reefs in 2015. Researchers monitoring the phenomenon -- a result of global warming and the current El Niño -- predict it will kill off 2 percent of the Earth's reefs.

★ According to a study from the World Resources Institute the number of people exposed to flooding each year is 21 million.

MILE STONE NEWS CORNER ON GLOBAL WARMING

AN OVERVIEW OF LEWIS GLACIER

REASONS FOR GLOBAL WARMING

1. The release of Carbon dioxide (CO2) and Sulphur dioxide (SO2) gas has been amplified in the recent years by 10-fold. The discharge of carbon dioxide gas varies according to the natural and industrial processes including photosynthesis and oxidation cycles.

2. Methane is another Green House gas release by the anaerobic decomposition (Putrefaction) of organic materials. Other greenhouse gases are nitrous oxide, halocarbons, chlorofluorocarbons (CFCs), chlorine and bromine compounds. They get collected in the atmosphere and disturb the radioactive balance as they have capacity to absorb heat radiations and cause warming of the earth facade.

3. Ozone layer protects inhibiting harmful sun rays coming to the earth plane are gradually declining.

4. Rise in the use and burning of fossil fuels like coal, oil, wood, deforestation, carbon dioxide released by human beings as a by-product of respiration, burning of gasoline for transportation, unnecessary use of electricity, fertilizers, different pollutants produced by the industrial processes get converted to the aerosols through many chemical reactions, cause lot of climate variation. For instance, rising sea level, occurrence of flooding, storms, cyclone, changes in air circulation patterns, jet stream, rain without season, melting ice caps, drought, ozone layer damage, changing weather patterns, fear of epidemic diseases, lack of food, death, decreasing winter season and much more.

EFFECTS OF GLOBAL WARMING – AN UNIVERSAL SCENERIO

The most undesirable effects of global warming are:

- A report by the World Meteorological Organization released July 3, 2014, states that deaths from heat increased by more than 2,000 percent over the previous decade.
- Cutback of natural resources has war roots in the Darfur region situated in Sudan or Somalia.
- Ocean Acidification and diminished presence of Coral Reefs affects entire ecosystems.
- Disappearance snowcap in Mount Kilimanjaro.
- Glaciers are receding in the Alps, Himalayas, Andes, Rockies, Alaska and Africa.
- Sunspots blocks hot solar plasma. Surrounding sunspots known as faculae causing short-term warming cycles.
- The price of staple crops could sky rocket causes major inflation and more economic woes.
- Hibernation takes longer and enormous collapse of animal life is evident.
- Droughts situation further worsens and will cause malnutrition in Africa & Uganda.
- Polar ice caps melting created numerous menaces by constantly rising sea level as the glaciers would melt at about 230 feet (70 meters) reducing the Earth's albedo. Melting ice caps release fresh water and traps CH4. Desalination will change ocean currents and damage several rare habitation of sea life. An outbreak of treacherous ailments affecting other nations around the world.

DETERRENCE OF GLOBAL WARMING

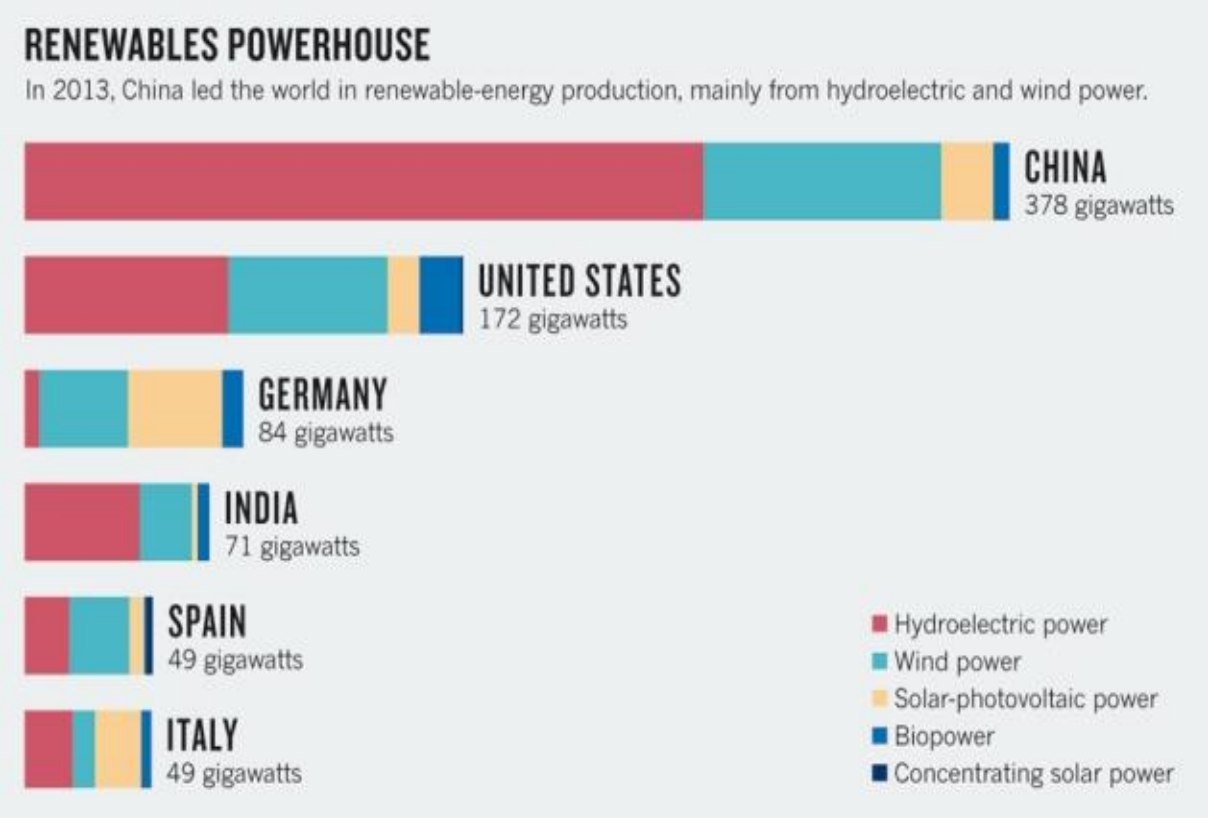
There are assorted ways in which an individual contribution can help in reducing global warming to a larger extent. To name a few:

- ❖ Turn off unnecessary lights it reduces the releases of CO2 in power stations.
- ❖ Put a stop to plastic bags for groceries and shopping.
- ❖ Transport to the local market, use hybrid efficient vehicle, grow own or herbal gardening
- ❖ Make organic fertilizers by using composting of organic waste.
- ❖ 3 Rs Principle: Reduce, Reuse and Recycle.
- ❖ One tree can absorb the amount of CO2 released by an average car driven for 400 miles.
- ❖ 20% of the world's electricity comes from water.

- ❖ Reduce carbon footprint associated with different dietary choices.
- ❖ Using a screen saver on the computer (LCD Monitor) emits 1.1 kg of carbon dioxide.

CONCLUSION

"Man Proposes God Disposes". The warnings about Global Warming are extremely apparent for a very long time. It is deepening and is predicted to enter a platform for many unconstructive effects. The Framework Convention on Climate Change (1992) and the Kyoto Protocol (1997) represent first steps taken by the international community to protect the Earth's climate from dangerous man-made interference. Currently, nations have agreed to reduce greenhouse gas emissions by an average of about 5% from 1990 levels by the period 2008 to 2012.



The UK, through its Climate Change Programme, has committed to 12.5% cut in greenhouse gas emissions. Paramount care on effectual awareness by government, business, NGOs: exhibition models, control over pollution, using clean energy produced by solar system, wind and geothermal. Every human being must strive stiff to reinstate our earth and a deeper landscape for future generations.

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