

A Brief Review on Global Warming

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ABSTRACT: *Most scientists, engineers and activists are extremely worried about the rapid climate changes. Continuously fossil fuels are used in energy production. Once these fuels are combusted, they are used to produce methane, carbon dioxide & nitrous oxides that result in the global warming. The deforestation leads to the cooler temperature as well. The risk of the global warming regularly does major harm to climate of the planet. Many people still don't hear about global warming and don't believe this is a major issue in coming years. Many people do not know that global warming is taking place at the moment, so the people have some withering consequences already. Ecosystems and ecological equilibrium are and will be significantly affected. Many strategy needs to establish due to dangerous consequences of the global warming. This paper discussed global warming and describes the causes and dangers & proposes solutions to the issues. In particular, it is important to take concrete steps to explored renewable sources of energy (wind, solar, hydro, biomass, geothermal). The one of the way to tackle global warming effectively is identifying & use clean resources. Other than global warming is climate change. Average temperature rises are only one indication of widespread changes, which often contribute to severe temperatures, droughts, floods, tempests, increasing marine rates, food production and infectious diseases. While the scientific community has known for many years about the correlation between greenhouse gases (GHGs) and climate change, global leaders have been slow to respond and take risk mitigation action.*

KEYWORDS: *Climate, Deforestation, Extreme precipitation, Fossil fuels, Population*

INTRODUCTION

Global warming or climate change is now known as one of the world's most common disasters. The average temperature increase near the surface of the world can be described. The global warming crisis is worsening every day. The EPA (2012) estimates that the global surface temperature has been up 1.4 ° F over the last 100 years and that a further 2 ° F is expected to rise in the next century. This rise is the result of other gasses, known as greenhouse gasses, which occur near the surface of the earth. The persistent increase of temperature of planet is intensely harsh. Global warming is root of this. Once sunlight hits the Planet, global warming begins. Clouds, particulate matter of the atmosphere, reflective surface and ocean surface are returned to space by some 36% of the sunlight though the remainder gets absorbed in the air, oceans & soil. The heat up planet's surface & atmosphere that makes life viable [1]. When earth warm up, solar radiations & infrasound rays radiates the sun's energy, and then expands directly in the space, cooling earth. However, outgoing radiations are reabsorbed into atmosphere & is radiate back to Earth's surface from CO₂, ozone, water vapors, methane & other some gases.

Their heat-trapping properties are widely known as greenhouse gas. This must be noted that cycle for absorption being nice, because average temperature of Planet is very cold if no greenhouse gas existed. By the year 2003, the thermal radiations pumped around 8 billion ton of the carbon dioxide was also hampered from a rise in the greenhouse gas that results in a humanly enhanced global warming effect. Recent findings on global warming established the hypothesis that earth is primarily heat up by human's greenhouse effects. Over last 100 year, surface temperature have raised world's highest [2]. The average temperature of surface of the earth rise between 0.6-0.9 degree Celsius among the year 1907 & 2007, but was omitted annually. Specific fertilizer, that includes urea & diammonium phosphate & other applications of soil treatment, releases nitrous oxide in the atmosphere. The greenhouse gases are emitted and remains in atmosphere for decades and even more. Carbon dioxide & methane rates risen by 34% & 144% since industrial revolution 1751, according to the Intergovernment Panel on Climatic Change (IPCC). Despite a substantial reduction in current greenhouse gas (GHG) emissions, global averages will increase by at least 2 C by 2050 in line with the IPCC. The consequence will among others be the development of hundreds of millions of refugees from environmentally friendly countries primarily in the developed world, acute water scarcity of a large proportion (primarily in developing countries), a food crisis as agricultural production is decreasing across the world, an rise of at least one meter to sea level 11 and the disappearance of a third of the world's population [3]. The

predicted 1oC increase by 2020 and the 1.3oC increase by 2024 would have devastating consequences for the lives and livelihoods of people, particularly the poor and especially in developing countries even before that. Develops consumed more than their fair share of global atmospheric space compared to the share of the world's population and continues to consume them. This is disadvantaging developing countries, both economically and atmospherically, with their populations increasing and, consequently, their need to strengthen and increase socioeconomic competitiveness is also rising, while developed countries remain relatively stable [4].

RECOGNITION OF RISKS

Because of the nature of the subject, global climate scientists are driving international discussions on climate change. Many representatives of the CIA would understand the issues well. There will be many. Nevertheless, most actuaries will not have this expertise. Currently, the research undertaken by the climate science community must also be directed by actuaries. There are no doubt that, even within the community of scientists on climate change, there are different opinions on the extent and severity of the risks. However, given that a vast majority of the population agrees that there are significant risks associated with climate change and that they could have devastating effects if there is no immediate response, actuaries have to take these possibilities into account [5]. There is no legitimate excuse for the profession to do nothing to address the fact that climate science is still changing or there are opposing views. If the climate scientists understand, there will be a large range of consequences on climate change—extreme climatic conditions, increased losses from floods and tempests, higher sea levels, food scarcity, cleaner water, increasing mortality and disease, devaluations of properties, energy use restrictions, etc. [6]. The actuarial profession must obtain a strong understanding of these problems. It would hurt the credibility of the profession to simply sit there without doing anything. Many occupations have accepted the issue of climate change. The actuarial group will benefit from finding out how climate change affects their jobs in the various professions. A prime example of the acting profession's constructive behavior is how the epidemic of AIDS was handled in the early 1980s. When the world became aware of the danger of AIDS, many actuarial organizations developed a variety of infection scenarios which permitted an adequate reserve of the life insurance industry for the additional death. The challenges raised by climate change can be tackled using a similar constructive strategy. There would be different strategies and approaches, but risk identification and quantification for various situations will be the first step [4].

GREENHOUSE EFFECT

The greenhouse effect is the product of the role played in global warming by greenhouse gasses. Carbon Dioxide (CO₂), methane (CH₄) (20 times more strong than carbon dioxide), and nitrous (N₂O) oxide plus 3 industrial fluorinated gases: hydro fluorocarbon (HFC's), per fluorocarbons (PFCs), and hexafluoride (SF₆) Sulphur and water vapor are the most important greenhouse gases. A lot of heat, electricity, is collected or absorbed by these gasses as sunlight enters the earth and it is prevented from escaping. It actually warms the regions near to the surface of the planet and is main cause of the global warming. When Earth's solar system is roasting warmly or freezing cold, the atmosphere of the planet is fairly hot, steady.[7] The Earth's air that reflects thin layers of gases covering & shielding earth, enjoys these temperas [4]. Nonetheless, over the last two decades, 96 percent of climate scientists and academics believe that people's environment has changed significantly and that leads to global warming. The greenhouse effect must first be understood to understand global warming. (Fig.1) greenhouse effect that occurs naturally typically absorbs heat so that the world is protected from freezing, while the intensified impact of artificial greenhouse effects induces global warming [5].

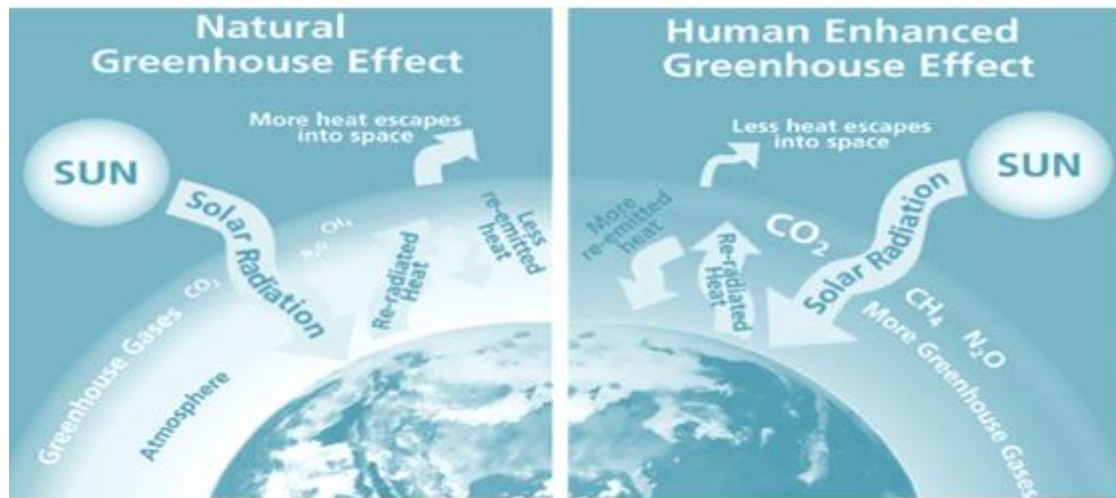


Fig.1: Types of greenhouse effects

It is because of fossil fuels burning that increases greenhouse gases amount in the air (CBO, methane and nitrogen oxides). This is referred to greenhouse effects as the environment functions in the same manner (Fig.2), with incoming and emerging emission of radiation heating up Earth. Ultraviolet radiation is readily absorbed through a greenhouse's glass wall and through its plant & rugged surface. Nevertheless, weak infrarouge radiations has difficulties penetrating glass wall & therefore warms greenhouse. Also during colder season, similar image occurs in car that parked out cool sunny day in a greenhouse. Sunlight warms the interior of the vehicle while the outbound cold radiation contained inside car's closed window [8].



Fig.2: Plants Incorporated Into a Greenhouse

Basically this trapping warms the car up. The warm air doesn't rise & lose energy, although tradition. The phenomenon is shown (Fig.3). This is a trapping mechanism. The gas molecule is called greenhouse gas. This greenhouse effects are anticipated to have metaphysical ramifications coupled with rising greenhouse gas levels and subsequent global warming. If global warming persists and this malady will not succeed, important climatic change, rise in sea level, severe weather event & vicious environmental, economic & social consequences will occur [9].

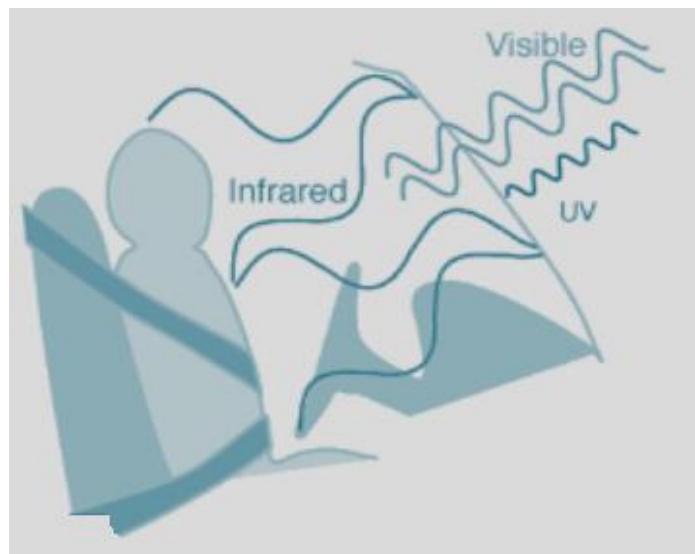


Fig.3: Greenhouse Effect Example

AFFECTS OF GLOBAL WARMING

Greenhouse emission is the primary source of the global warming. It includes nitrogen, carbon dioxide, nitrous oxide & compounds of bromine and chlorine. This deposition of chemical gases shifts the radioactive equilibrium in atmosphere. This has a general effect because greenhouse gases absorb outgoing earth's radiations & re-radiate this back the planet. A planet of the earth and the atmosphere. Net warming was equal to about 2.5 W / m^2 , from 1850 to the turn of the 20th century, with the residual carbon dioxide contributory estimates of about 60%, methane about 25%. In 1985, a British Antarctic article by Joe Farman published that shows the ozone level decrease in the early 1980s compared with the Antarctic [10]. The response was striking: wide-ranging international research projects were established to prove that the problem was triggered by CFCs (used in industrial cleaning fluids and refrigeration devices as aerosol propellants). Abrupt international steps to curb CFC emissions were even more significant. Global warming has the second biggest impact is ozone depletion. This is mainly because of presence of source gases comprising chlorine. Such gas dissociates chlorine atoms that then catalyze ozone degradation when ultraviolet light is present. The airborne aerosols often result in global warming through altering atmosphere in 2 ways [8].

Firstly, they dispersed & absorb radiation from the infrared and solar & secondly, can influence and probably alter the micro-chemical and physical properties of clouds. The scattering of solar radiation cools the atmosphere and the aerosol absorption warms the air directly instead of allowing the Earth's surface to absorb sunlight. There are various human contributors to the aerosol concentration in the atmosphere. Dust, for example, is an agricultural by-product [9].

A mix between organic droplets and soot particles is produced by biomass burning. A large range of aerosols are produced by many industrial processes depends on what have consumed or developed in the process. In addition, emissions exhausted from diverse transports type contains a mixture of pollutant from very beginning as aerosols or are converted into aerosol from chemical reaction in atmosphere.

GREENHOUSE GASSES: A HAZARD

Many greenhouse gasses are produced mainly from human activities. Carbon dioxide is the biggest responsible gas. The major factors that generates the gas is an excessive combustion of the fossil fuel such as oil and coal. Furthermore, destruction of the trees to acquisition of land, generates substantial quantity of carbon dioxide in the atmosphere. The processing of cement contribute in atmospheric carbondioxide when the calcium-carbonate absorbs calcium and carbon dioxide heated [11].

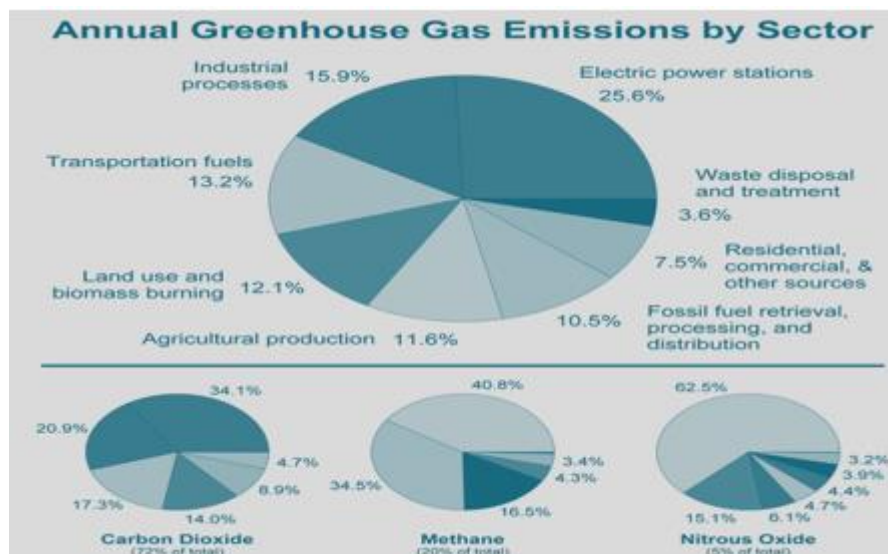


Fig.4: Production of Greenhouse Gases

Methane is generally called as natural gas and the second responsible gas. It is developed through farming activities like paddy rice cultivation, cattle digestion, and manure processing. Methane is processed because of inadequate waste management. Mainly fertilizers contain nitrous oxides. In addition, fluorinated gases, including chlorofluorocarbons and cooling products (CFCs), result largely from diverse industrial processes. Fig.4 the production of greenhouse gases appears pictorially. Such gasses play a detrimental role in raising the global warming catastrophe. They trigger the earth's temperature to continually rise [12].

CONCLUSION

Globally protected human rights are being threatened by climate change, especially in developing countries. Strong and rapid reduction of the emissions from the developed countries is required—particularly between now and 2050—to limit committed warming to the bottom rather than the top end which would mitigate some of the IPCC predicted future harm to human rights. Despite the harsh actuality of the global warming & human impact engagement, science and environmental community is on the same side.

The present paper dent surface of complicated line of a scientific engineering & research. Global warming, huge danger & effective action needs to be taken in order to fix this serious issue. Not only human being but animal & plant also suffer from this problem. Melting polar ice caps can cause rivers everywhere to collapse. Rising sea level will have devastated agriculture & fishing operations. To order to resolve the issues, all remedies action needs to be taken immediately, including but not in limited to exploitation and deforestation of the renewable source of energy. To end this danger once and for all, creative approaches must be implemented.

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