

# Socioeconomic Consequences of Climate Change

Ratish C Gupta<sup>1</sup>, Shruti Maheshwari<sup>2</sup>

<sup>1&2</sup>Faculty Member, Daly College Business school, Affiliated to De Montfort University UK

## Abstract

This report explains the term 'global warming'. It details its causes and effects, emphasizing the economic impact of such climate changes in India and the world. Global warming is a relatively well-known term for most of the human population. It is commonly used by the educated and is heard of and observed by all of the worlds. From the layman's perspective, it is evident that the world is much hotter than ever. Also, it is expected to have far-reaching, long-lasting, and, in many cases, devastating consequences for planet Earth. But, the harsh reality is that global warming is a seriously misunderstood concept. It is an area that is getting much-needed attention but not that of the commoner. Its origin, causes, timeline are barely given the importance it deserves, and, consequently, global warming is not getting attention at the grassroots level. The situation seems to be worsening with the fact that human population who well know the facts and consequences of global warming still continue to follow their comfortable lifestyle and ignore the repercussions of anti-environmental work practices. Thus global warming forms the basis for the report to provide the readers with insight, factual information, and clarity on the concept of global warming.

**Key Words:** Climate change, Global Warming, Human, Economic impact

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## Introduction

*So, What exactly is Global Warming?*

Global warming has been a relevant and most debated topic in the scientific community. Global warming indicates a gradual heating of the surface, oceans and atmosphere. The researches and scientists believes that global warming is the outcome of changing lifestyle of humans. The increasing utilization of fossil fuels to facilitates humans with luxury, infrastructure, technology and many such need based use has led to supply of carbon dioxide (CO<sub>2</sub>), methane, and similar greenhouse gases into the atmosphere. Climate of the earth is affected by first 6 miles of the atmosphere. It consists of major substances making atmosphere entirely due to Global Warming. It commences with heat transmitted by rays of sun on earth. This heat is absorbed by certain greenhouse gases and the rest is sent back to space. Higher the level of greenhouse gases in the atmosphere, higher is the heat trapped. This is the primary reason due to which earth's average temperature has risen. Also the winds and oceans changed dramatically. It moves around the globe creating unexpected changes in the climate. Everyone

**Corresponding Author:** Ratish C Gupta, Faculty Member, Daly College Business school, Affiliated to De Montfort University UK, ,  
Email: ratishgupta@dcbsindia.org

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falsely assumes that these climate changes are natural. These fluctuations in temperature and concentrations of all greenhouse gases are prevalent since thousands of years. As a consequence the position of earth corresponding to the sun has been changing and many ice ages have come and gone. Also, since the industrial revolution, humans have emitted a lot of carbon dioxide into the atmosphere making the glaciers melt and eventually causing Global Warming.

The way everyone experiences environmental issues has a vast weightage on what they accept and how they behave. The issue is not considered vital because the people don't or can't encounter the problems and their results straightforwardly. So, global warming is an issue that is hard to face on a few levels. Primarily, greenhouse

gasses aren't visible; the pollutants that specifically lead to global warming are undetectable to the eye. If one doesn't see, one seldom believes.

Furthermore, the impact of environmental change on untamed life, water frameworks, horticulture, human settlements, habitats, and climate trends are going on subtly in many areas, so many individuals do not see the progressions. "With the most extreme impacts anticipated in later years, it's difficult to inspire individuals to think about the subject when they have more current concerns. Such parts of global warming have made it troublesome for researchers, campaigners, and writers to impart it to the overall population adequately and have, hence, added to the famous point. Knowledge alone does not necessarily lead to action. Experience, values, and people's specific situations also significantly affect their choices.

There are two unique approaches to answer the question of how environmental deviation will influence the economy. The first step is to make people aware about the extent to which global warming can negatively impact the economy. Various advantages of global warming are as follows: rise in temperature worldwide has affected the agriculture season, it makes the earth moderate and more bearable. "Numerous specialists have concentrated on and reported the bright side of a warming world atmosphere pattern. Thomas Gale Moore, an economist at Stanford University, has written the book *Climate of Fear: Why We Shouldn't Worry about Global Warming*, which depicts the numerous ways that a hotter climate helps people in every aspect of life. A warmer Earth would specifically affect agricultural efficiency, as per Moore, as it would mean a more drawn-out developing season, more precipitation, and along these lines, more prominent yield". (Moore, 2008).

Global warming impacts and will force considerable extra stress on biological and socioeconomic frameworks, yet right now, these frameworks are loaded with pollution, resource shortcomings, and other unsustainable practices. Now, technologically propelled nations are good enough to respond to environmental change, especially by creating and setting up suitable strategy, institutional and social fitting for dealing with the results". Countries that are

under developed or developing are most effected by climate change because they do not possess advanced technology or experimental improvement to manage this effect. Therefore, the impact of global warming on the Indian economy is of utmost importance.

In developing countries like India, climate change is an additional burden because ecological and socioeconomic systems are already facing pressures from rapid population, industrialization, and economic development. "India's climate could become warmer under conditions of increased atmospheric carbon dioxide. The average temperature change is predicted at 2.33° C to 4.78° C with the doubling in CO<sub>2</sub> concentrations, according to IPCC in 1998. (Mitra, 2008).

The impacts of worldwide environmental change that could be conceivably genuine throughout the following century incorporate territorial increments in floods and droughts, immersion of beaches, high-temperature occasions, fires, episodes of vermin and ailments, noteworthy harm to the ecosystem, and danger to agriculture. Environmental change will likewise represent a great danger to human well-being and security, particularly among more inferior densely populated groups in zones like river basins and low-lying beach front fields. (Jepma & Munasinghe, 1998).

However, the world's leading experts working under the aegis of the IPCC have recently concluded that increases in global mean surface temperature during the past century are unlikely to have been caused entirely by natural effects." Changes in both average temperature and the geographic, seasonal, and vertical patterns of temperature indicate the influence of human actions on global climate.

Whether Global warming will affect the economy in a positive way or negative is undecided. What is known is taking care of the planet is a basis for healthy, safe, less costly life on Earth. Life on this planet will be fatally affected unless new practices, ethics, and principles to conduct our lives on a warming planet are embraced.

### **ORIGIN: How did this even happen?**

Svante Arrhenius, a Swedish scientist who claimed in

1896 that fossil fuel combustion would have enhanced Global Warming. He found that the average temperature on the surface of the Earth was 15 Degrees because of all the infrared rays which were absorbing the capacity of water vapor and carbon dioxide. This phenomenon is called the natural Greenhouse Gases Effect. A doubling of the Co2 concentration would have led to an increase in temperature. He also calculated that how all humans warmed the Earth by adding carbon to the atmosphere. This result was a by-product of research of whether Co2 would explain the causes of the Great Ice Ages. The Earth's climate has changed throughout history. Just in the last 650,000 years, there have been seven cycles of glacial advance and retreat, with the abrupt end of the last ice age about 7,000 years ago marking the beginning of the modern climate era — and human civilization. Most of these climate changes are attributed to minimal variations in Earth's orbit that change the amount of solar energy our planet receives. (Markham L 2018)

In the 1990s, scientists began to ask about the greenhouse effect theory because of significant uncertainties in the data sets and model outcomes. There were protests against data of Global Temperature. People believed that the measurements were not correct, and all the data from oceans was not present. The data did not discover the cooling, and all the satellites showed different records of temperatures. Because of this, the IPCC had to review all the data that they had collected initially on Global Warming. The forms of Climate of the IPCC are to date contested by many other scientists, causing many new research and responses by the IPCC. This discussion is still now continuing, and that data is being checked and renewed. Many Models are also updated and adjusted to discoveries and new theories. From 2000 onwards, the terminology on the greenhouse effect started to change because of the media. The Greenhouse Effect as a term was used very little, and then people began to refer to the theory as Global Warming. "The good news is we know what to do. We have everything we need how to respond to the challenge of global warming. We have the technologies we need, more are being developed. As they become available and become more affordable when produced in scale, they will make it easier to respond" (Al Gore speech at National Sierra Club, Sept.9, 2005).

"We have many advantages in the fight against global warming, but time is not one of them. Instead of idly debating the precise extent of global warming or the precise timeline of global warming, we need to deal with the central facts of rising temperatures and all the endless troubles that it will bring" (JOHN MCCAIN, speech, May 12, 2008).

Globally, the average surface temperature has increased more than one degree Fahrenheit since the late 1800s. Most of that increase has occurred over just the past three decades. We are overloading our atmosphere with carbon dioxide, which traps heat and steadily drives up the planet's temperature. Where does all this carbon come from? The fossil fuels we burn for energy—coal, natural gas, and oil—plus the loss of forests due to deforestation, especially in the tropics. Within the scientific community, there is no debate. An overwhelming majority of climate scientists agree that global warming is happening and that human activity is the primary cause. (Markham L 2018)

*"All across the world, in every kind of environment and region known to man, increasingly dangerous weather patterns and devastating storms are abruptly putting an end to the long-running debate over whether or not climate change is real. Not only is it real, but it's also here, and its effects are giving rise to a frighteningly new global phenomenon: the manufactured natural disaster"* (BARACK OBAMA, speech, Apr. 3, 2006)

### The Effects of Global Warming

Like any natural or artificial occurring, global warming has caught its fair share of attention from what is happening in the world. Numerous ways of comparison, statistics, facts, abnormality in patterns, unexpected changes, and most importantly, past predictions have come to be true. These factors have slowly but surely made it clear to the world that global warming is real, affecting us right this second, and may prove to be the Earth's doom. The effects are further divided into Observed, Expected & Social.

#### Observed: What is obvious!

For a while, global climate change had considerable effects on Earth that everyone can observe. These effects

that were mere predictions just a few years ago are currently taking place in the environment. To state a few of the many unfortunate products: Shrinking of icecaps, the disappearance of lakes, dramatic rise of sea levels, intensified heatwaves, etc. If these weren't terrifying enough, there is a shift in animal ranges, and flowering has speeded. One of the most relevant observed effects is that in India, the season cycle is dramatically disturbed. To exemplify, 2013 saw monsoon reaching Delhi 20 to 25 days earlier than usual, while 2014 saw Delhi's monsoon delayed. These observations are reordered, considered, and researched upon every day. According to Intergovernmental Panel on Climate Change, "Taken as a whole, the range of published evidence indicates that the net damage costs of climate change are likely to be significant and to increase over time." (IPCC, 2007, p.17).

It is known that certain gases trap heat and act as a blanket to warm the planet. One of the most important is carbon dioxide (CO<sub>2</sub>), which is released into the atmosphere when fossil fuels, namely oil, coal, and natural gas, are burned to generate electricity, power our vehicles, and heat our homes. As the atmosphere is burdened with carbon dioxide, heat that would otherwise pass freely into space gets absorbed, and Earth's pace of warming accelerates. How does one know? The scientific evidence is overwhelming:

*The planet's thermometer is climbing.*

Trends in temperature readings from around the world show that global warming is taking place.

Over the past 130 years, the global average temperature has increased 1.5 degrees Fahrenheit, with more than half of that increase occurring over only the past 35 years. (UCSUSA, n.d.). The pattern is unmistakable: There are 12 warmest years on record since 1998, and every one of the past 37 years has been warmer than the 20th-century average. The climate has changed significantly in the geologic past out of natural causes, including volcanos, intensified sun, fluctuations in Earth's orbit, and more. But none of such factors can replace the present rise in global temperatures.

*Carbon dioxide levels are alarming.*

Satellite measurements of atmospheric carbon dioxide

(CO<sub>2</sub>) levels have been taken consistently for almost 50 years. The reports read that CO<sub>2</sub> levels have undoubtedly increased every year, 25 percent higher than in 1957. To top that, scientists have detailed measurements of previous CO<sub>2</sub> levels from ice core studies, which show that CO<sub>2</sub> stories are currently more dramatic than any time since American ancestors began migrating out of Africa 800,000 years ago. The report on carbon emission published in the world economic forum in 2014 depicts how temperature has increased versus carbon emissions since 1870. The colors of the lines show the emission scenario of how much carbon got emitted over 100 years (World economic forum, 2020)

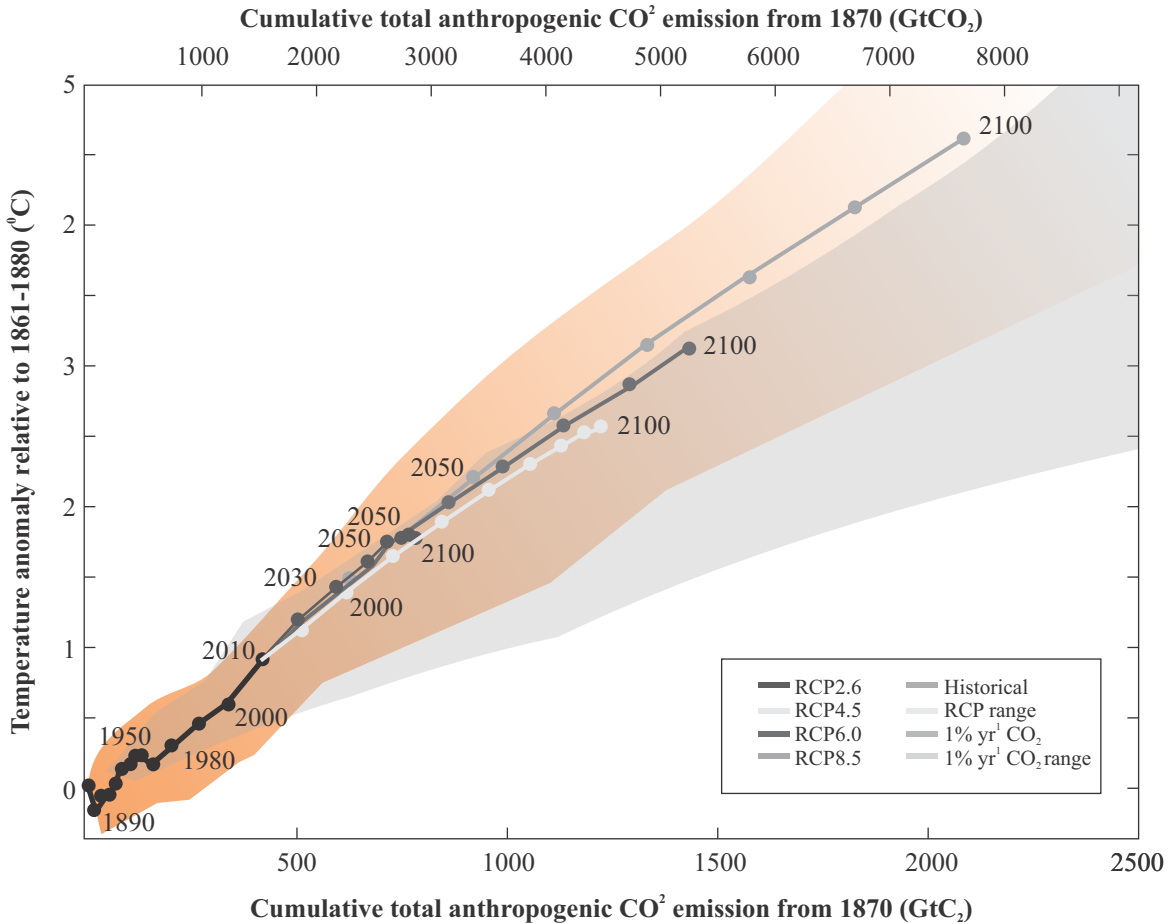
### **Humans are culprits, completely**

It is concluded that human activity is identifiable for the apparent increase in CO<sub>2</sub>. How? The carbon dioxide emitted by burning coal, natural gas, and oil has a unique chemical "fingerprint," The additional CO<sub>2</sub> in the atmosphere bears that signature.

Researchers have high certainty that temperatures will keep on ascending for a considerable length of time to come, to a great extent because of greenhouse gasses created by human exercises. The Intergovernmental Panel on Climate Change (IPCC), which incorporates more than One thousand three hundred scientists from the United States and different nations gauge a temperature ascent of 2.5 to 10 degrees Fahrenheit throughout the following century. As per the IPCC, the degree of environmental change consequences for other areas will fluctuate after some time and with the capacity of diverse societies and environments to alleviate or adjust to change. The IPCC predicts that increments in worldwide mean temperature of under 1.8 to 5.4 degrees Fahrenheit, i.e., 1 to 3 degrees Celsius above 1990 levels, will benefit a few areas and destructive in others. Net annual expenses will rise over time as global temperatures increase. (IPCC, 2007) So, the science is precise. Global warming is real and is happening. And humans are the reason why.

### **Expected: What Lies Ahead!**

The future effects of global climate change include more frequent wildfires, more extended periods of drought in some regions, and an increase in the number, duration,



**Fig.1: Anthropogenic Carbon Emissions**

Source: World Economic Forum 2020

and intensity of tropical storms. Past mid-century, lower levels of warmth-catching gasses in situations with decreased emissions will prompt less future warming observably. Higher levels will bring about more warming and consequently more extreme effects on humans and their world. (Franck T 2019)

Few of the long-term effects of global climate change, according to the Third National Climate Assessment Report (USGCRP, 2014), are as under:

*The transition will proceed through time and beyond*

Climate is anticipated to keep on changing over eternity. The greatness of environmental change past the following couple of decades depends basically on the measure of greenhouse gasses radiated all over and how sensitive the Earth's atmosphere is to those emanations.

*Temperatures will keep on rising.*

Since human-incited warming is superimposed on a fluctuating atmosphere, the temperature rise hasn't been, and won't be, uniform or smooth the nation over or after some time.

*Frost-free season stretched*

The length of this season (and the related growing season) has been expanding broadly since the 1980s, influencing biological communities and farming. The developing season is anticipated to keep on extending. In a future in which warmth-catching gas discharges keep developing, the most significant increments in the snow-free season (over eight weeks) are anticipated for the western U.S., especially in high-rise and seaside zones. The increments will be impressively lesser if hot gas emissions are diminished.



### *Different Rain Patterns*

Some regions of the world will experience little to no rainfall, followed by a drought-like environment. While tropical countries, such as parts of northern India, could share an increased precipitation rate but unfortunately with a highly uncertain pattern, which is unquestionably more damaging than helping.

### *Droughts*

Precipitation is hydration for Earth, and lack of this provides dryness and a very uncomfortable, dry, and hot environment to live in.

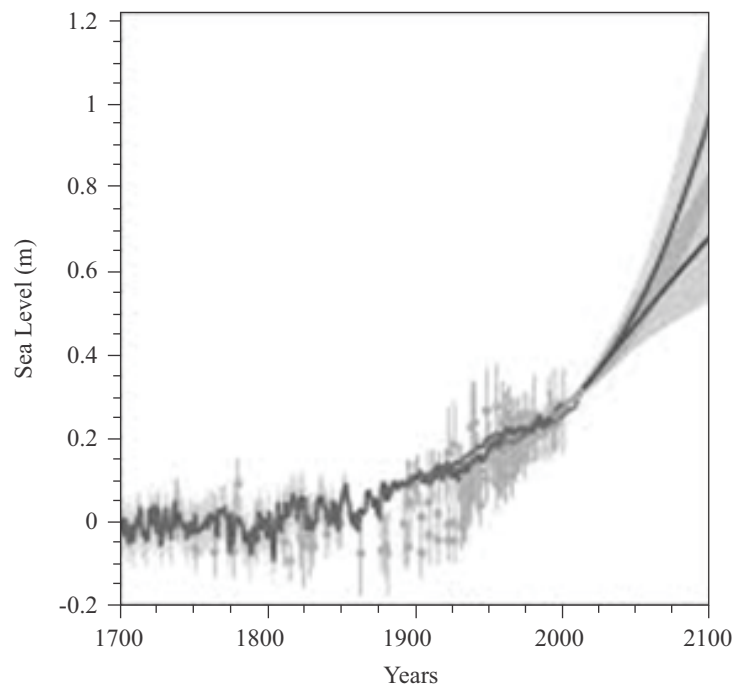
### *Stronger Hurricanes*

The force, recurrence, and length of North Atlantic typhoons, and in addition the frequency of the most

brutal storms, have all expanded following the mid-1980s. The relative commitments of human and natural reasons to these increases are still indeterminate. Hurricane-like storm power and precipitation rates are anticipated to rise as the atmosphere keeps on warming.

### *Dramatic Rise in Sea levels*

Global sea level has ascended by around 8 inches after record-keeping started in 1880. It is anticipated to rise another 1 to 4 feet by 2100. This rise is the consequence of additional water from melting area ice and the extension of seawater as it warms. In the following years, tempest surges and high tides could join with sea level ascent and land subsidence to further build flooding in vast numbers of these regions. Ocean waters will, along these lines, keep on warming, and sea levels will keep on increasing for a long time at rates equivalent to or higher than that of the present century. (Markham L (2018)



**Fig.2:Global Mean Sea Level Rise**

*Source: Intergovernmental Panel on Climate Change*

### **The ice-free Arctic**

The Arctic Ocean is relied upon to end up essentially ice-free in summer before mid-century.

### *Acidifying Oceans*

The ocean has consumed an extensive part of carbon dioxide. Fossil fuel smoldering has pumped into the climate, decreasing the rate of global warming.

However, this additional carbon dioxide is affecting the ocean, as well. The pH of surface seawater has diminished by 0.1 units since 1750 and is anticipated to drop another 0.5 units by 2100 if no move is made to control fossil fuel discharges. These progressions would take thousands of years to undo what's done.

### **Social: Do The Damage, Face The Doom!**

Not just posturing significant dangers for Earth's natural frameworks, the impacts of global warming on human systems have just started accepting the extended consideration they require. From hazardous effects bringing about the potential loss of life, injury, or other adverse well-being effects, the possible introduction of social, financial, and foundation advantages for unfavorable effects place vulnerable human lives in danger.

Environmental change influences food production over the globe, which is a vital centerpiece of every society, and it is severely undermined because of expanding levels of carbon dioxide on Earth. Moreover, agriculturists likewise need to manage the expanded occurrence of compelling climatic conditions and higher temperatures. The general well-being of individuals, particularly those living in underdeveloped nations like India, is greatly influenced. There has been a rise in malnutrition or death, injury, and illnesses because of storms, floods, or droughts, causing the migration of both people and animals. On a few occasions, it may bring about social clashes and war as groups battle for nourishment or clean water. (Daniel, 2013)

Also, President of the United States, Barack Obama, emphasized climate change when throwing light on instability in Africa and the Middle East when he addressed the Coast Guard Academy in May 2015.

"I understand climate change did not cause the conflicts we see around the world. Yet what we also know is that severe drought helped create the instability in Nigeria that the terrorist group Boko Haram exploited. It's now believed that drought and crop failures and high food prices helped fuel the early unrest in Syria, which descended into civil war in the heart of the Middle East." (Obama, 2015)

Bjorn Lomborg, the infamous author, and environmentalist finds the attention on global warming unnecessary. In Wall Street Journal, he took exception with the UN's continued pushing for a "solution" for "climate change," formerly known as "global warming." Lomborg thinks that it ignores the actual problems in the world, and this focus on global warming is only marginal and immoral.

"In a world in which malnourishment continues to claim at least 1.4 million children's lives each year, 1.2 billion people live in extreme poverty, and 2.6 billion lack clean drinking water and sanitation, this growing emphasis on climate aid is immoral." (Lomborg, 2014). He also pointed out that, according to a recent study, if the UN spent .57% (\$570 million) of the \$100 billion climate-finance goals on mosquito nets to prevent malaria, it could reduce malaria deaths by 50% by 2025

and save approximately 300,000 lives. So global warming is placed importance but often drops on the list when top leaders and peacemaking organizations prioritize problems existing in the world. (Franck T 2019)

The overall global warming effects are harmful to countries and people without enough resources to reduce those effects. It dissuades social and economic development, making the practice of reaching regional aims more challenging. Hence, climate change should be kept in mind when creating developmental policies to prevent the effects, as mentioned earlier. Governments should introduce incentives to draw private companies into protecting the environment, thus slowing down climate change.

### **Economic Impact of Global Warming**

*Indian Economy: Heavy Population, Heavier Consequences!*

Earlier, we have seen that global warming is the average rise in the Earth's temperature. Well, global warming is due to an increase in carbon dioxide and other greenhouse gases. Due to global warming, there are some effects on nature and the economy of a particular country. As there is an increase in global warming, governments have to bear the costs of protecting their

citizens and surroundings. If we talk about a country, say India, India is facing a big issue with global warming and facing extra costs on infrastructure and other things. (union of concerned scientists,2011)

1. Loss to infrastructure and property: as the sea levels are rising, there is an increase in floods, as we are polluting the rivers, we don't have sufficient water to supply to the fields and also there is the change in the weather so rains come at a different and this creates a problem for the farmers as their crop will die of not getting sufficient water so the farmer's suicide due to their crop not growing and then they will not get the money to feed their families so, in turn, they kill themselves. Due to global warming, roads, homes, bridges, railroad tracks, airport runways, power lines, dams, etc. The destruction of streets, houses, etc., is due to wildfires, extreme storms, and rebuilding. These things cost a lot of money to the country, and many lives are lost due to weather changes. (Union of Concerned Scientists,2011).

2. Lost productivity: Due to the weather changes, people's daily life have been destroyed. As people commute to different countries for business, this will get impacted as the weather might change suddenly. There might be a lot of rainfall or snowfall so the result will be delayed commutation and transport facilities for long hours. (Union of Concerned Scientists,2011).

3. Mass migration and security threats: as there is an increase in global warming day by day, there is also an increase in people migrating to different states and different countries because of floods or because of droughts, so many people go to the cities to find jobs and a place to stay, this also increases the pressure on cities as there is an increase in rural-urban migration. (Union of Concerned Scientists,2011).

*Apart from these, some global severe warming effects involve India in a big way:*

*Floods:* After Bangladesh, India is the second country prone to floods. India accounts for 1/5 of deaths globally, and 30 million people get replaced by floods every year. A lot of land in India is vulnerable to floods.

There is a sudden occurrence of floods that happen in India every year. The most impacted states in India are Uttar Pradesh, Bihar, Assam, West Bengal, Gujarat, Orissa, Andra Pradesh, Punjab, Madhya Pradesh, Maharashtra, and Jammu and Kashmir. (Saud,2013).

*The Bihar floods 1987:* The flood in Bihar was so destructive that it killed 1400 people and 5000 animals. The state had to pay for all the infrastructure, shelter, etc. came to 6 lacs INR.

*2008 Bihar floods:* After 21 years, Bihar was struck with another massive flood that impacted more than 2 million people. Some of the areas affected are Supaul, Araria, Madhepura, Saharsa, Champaran, and Pune. (Saud,2013).

#### **Other significant floods include:**

*Maharashtra floods of 2005:* In 2005, Mumbai was hit with a massive flood that killed around 5000 people. After the massive floods, this day was called the black day. (Saud,2013).

*Gujarat flood of 2005:* The same year, another massive flood happened in Gujarat, which was the worst flood in Indian history since the Maharashtra floods. The floods were so destructive that it cost the state at least 800 million to repair the state because the floods had destroyed the trains, roads, communications, etc. The floods happened three days in a row, killing almost 123k people, and 250k people were evacuated. (Saud,2013).

#### **Global Economy:**

*For The Earth Is Shared By Everyone!*

Global warming has also impacted the economies on a worldwide scale. Global economic output will have negatively affected because of climate changes. Researchers estimate that increasing the average global temperature by 0.04 degrees Celsius per year will reduce the world's real GDP by 7.22% by 2100. The chart displayed below depicts the long-run impact on GDP across different regions:



**Table 1: Long-Run Impact on GDP Globally**

	Year 2030 ( $h=16$ )			Year 2050 ( $h=36$ )			Year 2100 ( $h=86$ )		
	$m = 20$	$m = 30$	$m = 40$	$m = 20$	$m = 30$	$m = 40$	$m = 20$	$m = 30$	$m = 40$
<b>World</b>									
RCP 2.6	-0.01	-0.01	-0.02	0.06	0.11	0.16	0.58	1.07	1.57
RCP 8.5	0.40	0.80	1.25	1.39	2.51	3.67	4.44	7.22	9.96
<b>China</b>									
RCP 2.6	-0.22	-0.45	-0.71	-0.38	-0.80	-1.31	0.24	0.45	0.67
RCP 8.5	0.31	0.58	0.87	0.90	1.62	2.30	2.67	4.35	5.93
<b>European Union</b>									
RCP 2.6	-0.04	-0.08	-0.13	-0.06	-0.13	-0.22	0.05	0.09	0.13
RCP 8.5	0.24	0.50	0.80	0.79	1.53	2.35	2.67	4.66	6.69
<b>India</b>									
RCP 2.6	0.12	0.26	0.42	0.41	0.81	1.27	1.44	2.57	3.69
RCP 8.5	0.60	1.16	1.78	2.13	3.62	5.08	6.37	9.90	13.39
<b>Russia</b>									
RCP 2.6	-0.07	-0.14	-0.23	-0.16	-0.34	-0.56	-0.33	-0.71	-1.19
RCP 8.5	0.51	1.03	1.63	1.62	3.08	4.61	5.28	8.93	12.46
<b>United States</b>									
RCP 2.6	0.10	0.20	0.33	0.29	0.60	0.96	0.98	1.88	2.84
RCP 8.5	0.60	1.20	1.86	2.13	3.77	5.39	6.66	10.52	14.32
<b>Rich Countries</b>									
RCP 2.6	0.02	0.05	0.09	0.12	0.23	0.37	0.58	1.09	1.62
RCP 8.5	0.42	0.84	1.33	1.46	2.67	3.93	4.74	7.76	10.75
<b>Poor Countries</b>									
RCP 2.6	-0.08	-0.16	-0.25	-0.08	-0.18	-0.32	0.55	0.99	1.43
RCP 8.5	0.37	0.72	1.09	1.24	2.18	3.11	3.78	6.05	8.25
<b>Hot Countries</b>									
RCP 2.6	0.00	0.00	0.01	0.08	0.15	0.23	0.62	1.11	1.60
RCP 8.5	0.39	0.76	1.17	1.35	2.37	3.39	4.17	6.65	9.10
<b>Cold Countries</b>									
RCP 2.6	-0.01	-0.02	-0.03	0.05	0.09	0.14	0.56	1.05	1.57
RCP 8.5	0.41	0.81	1.28	1.40	2.56	3.76	4.53	7.40	10.24

Source: "Long-term Macroeconomic Effects of Climate Change" (2019), Kahn, et al

The global sea levels have been rising and risen about 8 percent since 1880; the sea levels on the coast of U.S east coast and Gulf of Mexico have been rising faster due to global warming. This rise affects both economies in a significant way. The floods can cause massive damage to both countries as they will destroy people's houses, death roll will rise, animals will get killed, national monuments will get hurt, roads will be damaged, and communication lines will get damaged. The flood causes massive destruction, and it costs

dearly to the country where a considerable sum of money is spent to repair all this. (Union of Concerned Scientists,2014).

As the temperatures increase, there will be huge effects on trees. Suppose a tree catches fire due to the increased temperature. In that case, it will affect the surrounding trees as well, and the fire will last for a more extended period because this natural habitat for the animals will get destroyed. The ashes will increase global warming.

This type of situation is seen in the western part of the U.S. and also in other parts globally. (Union of concerned scientists,2014).

Due to climatic change, humans also get impacted. As the population of humans is increasing, so is the demand for cars. The need for cars is growing faster day by day. The pollution caused by the vehicle is damaging both the environment and the humans. Due to an increase in gases given out by the car, we have some life-threatening effects, for example, asthma- this is due to the pollution caused by the vehicles, leading to cancer. Many of the people living in metropolitan cities have this problem, and the government has to spend a lot of money to avoid this disease and control the emission of gases. (Union of Concerned Scientists,2014).

Recently the Earth is experiencing extreme weather conditions like rising heat waves, coastal flooding, extreme hot or cold, extreme precipitation events, and severe droughts. As the climate is changing drastically, it is affecting everybody, which is why countries suffer so much damage. (Union of Concerned Scientists, 2014).

### **Conclusion: Need Earth Say More?**

In a nutshell, the report has made it clear that Global Warming has, indeed, become a humongous matter of concern for every living being on Earth. As it's evident that temperatures are rising, the atmosphere is already heavily affected in few places. It's high time now that humans own up and be responsible enough to take care of their planet and prevent it from collapse entirely. Any and every aspect that can be affected is being affected, from the change of seasons cycles to natural calamities such as floods, earthquakes, tsunamis, etc. Even the two poles of the Earth are suffering due to the artificial world's malicious damage slowly but surely. They are melting and turning into water bodies that are further conducive to natural disasters and leave everything shattered. The ozone layer has been tearing, leaving many Australians with skin cancer, unexpected floods in Chennai happened recently, and causing dramatic damage to life and property. Many more examples are a clear indication that it is high time. The citizens must own up, act responsible and get to some damage control and undo what's done to save the world that they live in.

### **Recommendations: What Can Be Done?**

Based on the observations and analysis in the study, the recommendations are as follows:

- Start driving smart cars: Pick a Green-e-Certified vehicle that will generate half of its power using wind and solar energy.
- Weatherize every house: Warming and cooling expend around 40 percent of vitality in the home. Fixing drafts and ensuring that one's home has sufficient protection are two simple approaches to wind up more energy practical. Figure out how to exploit government duty credits for vitality productive home upgrades.
- Drive Less: Pick distinct options for driving, for example, open travel, biking, strolling, and carpooling, and package your errands to make fewer treks. Living in a walkable "keen development" group close to a transportation center point will mean less time driving, less cash spent on gas, and less contamination noticeable all around. Take in more about shrewd development groups.
- One must try not to let warmth escape from their home over a long stretch at the point when airing home, open the windows for just a couple of minutes if they leave a tiny opening all day long.
- Countries must make policies regarding sustainable development and ensure that they are all strictly enforced and executed, for the planet's situation is alarming enough not to be taken lightly.
- The more developed countries must put national interest aside in global warming and guide the developing or third world countries to make better decisions and set examples for them to bring their greenhouse gas emissions low by doing so themselves.
- International Well-Behind Unions such as The United Nations must vehemently keep "Global Warming" as one of the priorities for dealing with global problems.

Finally, the author makes a fundamental suggestion: to

be conscious enough to check one's carbon footprint daily. Like the ones mentioned above, it's the minor changes, which will make an applaudable difference and will delay (and hopefully eradicate) the concept of global warming.

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