

INTERNATIONAL JOURNAL OF LAW MANAGEMENT & HUMANITIES

[ISSN 2581-5369]

Volume 6 | Issue 3

2023

© 2023 *International Journal of Law Management & Humanities*

Follow this and additional works at: <https://www.ijlmh.com/>

Under the aegis of VidhiAagaz – Inking Your Brain (<https://www.vidhiaagaz.com/>)

This article is brought to you for “free” and “open access” by the International Journal of Law Management & Humanities at VidhiAagaz. It has been accepted for inclusion in the International Journal of Law Management & Humanities after due review.

In case of **any suggestions or complaints**, kindly contact Gyan@vidhiaagaz.com.

To submit your Manuscript for Publication in the **International Journal of Law Management & Humanities**, kindly email your Manuscript to submission@ijlmh.com.

Impact of Climate Change on Business Sustainability

KODALI NEEHARIKA CHOWDARY¹ AND SHRAVANI GUPTA²

ABSTRACT

People are becoming more aware of how climate change and limited resources affect each other. This study gives an overview of how climate change affects business management based on how the world is organized. These two major concerns pose a threat to effective corporate management. Financial aid to deal with the repercussions of risk in business management is one way that regulatory and environmental organisations can help. For a nation, business is essential. Drought, storm surge, rising sea levels, and crop failures are all possible results of an increase in the average temperature. Initiating the practise of segregation in one's routine at work can help eliminate the negative impact. The theme of climate change and its potentially catastrophic effects is a topic that is frequently discussed by governments, scientists, environmentalists, and other groups.

It has been claimed that industrial processes have a detrimental impact on the environment. Businesses should be monitored and encouraged to operate in a socially responsible way if we're going to reduce climate change's harmful impacts. The role of corporations and the actions they can take in response to climate change are the primary topics of this article. The article begins by focusing on two major themes: CSR and environmental responsibility in corporations. Thereafter, the article presents climate change as an issue of global environmental significance. Climate change extends beyond the effects of rising temperatures. The average temperature increase is just one indicator of bigger changes that will have knock-on effects on things like drought, flooding, storms, sea level rise, the ability to grow crops, and the spread of disease. While scientists have known about the correlation between GHGs and climate change for quite some time, political leaders have been sluggish to act and put in place measures to lessen the impact of this threat.

Keywords: *Effect of Climate change, Service Sector, Business Operation.*

I. INTRODUCTION

The focus of this research is to help the general public come up with a strategy for recognizing some of the current and future effects of business management. A risk's potential monetary and non-monetary consequences. In business risk management, we are making efforts to reduce the

¹ Author is a student at University of Petroleum and Energy Studies, Dehradun, India.

² Author is a student at University of Petroleum and Energy Studies, Dehradun, India.

associated risks. Input and output production times are being closely monitored by both the public and commercial sectors of the economy as a result of the impact of climate change. In recent years, there has been a noticeable emergence of climate change. As a major factor influencing policy choices in the commercial and public sectors alike. Factors influencing climate change include international agreements, shareholder pressure, customer preferences, and the results of a SWOT analysis. This study provides a framework for future research on the impact of climate change on business management by methodically categorising existing data and offering suggestions for additional investigation.

A company, large or little, is a community in and of itself. People often talk about the mutual benefits that might come from combining business and society. On the one hand, companies contribute to society by providing jobs and enhancing the quality of life for its members through the development of new and improved goods and services. Conversely, businesses rely on society for a variety of inputs (including raw materials, labour, and many more) that are essential to their growth and survival. Businesses, being a component of society, must interact with its members and make use of the resources made available to it. Companies rely on the support of the public to succeed, therefore it seems to reason that they should live up to the standards set by that public. In order to thrive, businesses must ensure that their operations have no negative social impacts, and they must also adapt to the ever-evolving wants and demands of their customers³. Unlike other societal institutions, businesses have greater "public visibility" than ever before. This is because modern businesses operate in what is referred to as a "glass house"⁴. Businesses are feeling increasing pressure to take on social responsibility as both public curiosity and support for "social welfare" push them in this direction⁵. As to this theory, a company's sole social obligation is to maximize its profits by any legal methods necessary (i.e., through honest and open competition). When a businessperson participates in responsible conduct such as reducing the price of the firm's products to prevent inflation, making expenditures to decrease pollution, or hiring hard-core unemployed individuals, they are utilising shareholder funds for the benefit of the larger social welfare. For example, when a businessperson reduces the price of the firm's products to prevent inflation, they spend money to reduce pollution⁶. Although this approach nevertheless predominated in the business literature, alternative perspectives gained ground over time.

³P Bansal (1997), *Business strategy and the environment*, in Bansal, P and Howard, E. (eds.), *Business and the Natural Environment*, Butterworth-Heinemann, Oxford, pp. 173-194.

⁴ C.Deegan and J. Unerman (2006), *Financial Accounting Theory*, European Edition, McGraw-Hill, London.

⁵ Ibid.

⁶ Supra note 1 at Page 182.

(A) Significance of this study

The study's significance lies in its potential to provide a clear and precise visualisation of the expected impacts of climate change on sustainable development in impoverished nations. The study's results offer valuable insights to those responsible for designing and executing development initiatives, encompassing various dimensions and components pertinent to this matter. Additionally, it may serve as a reference manual and guide for modifying or creating developmental programmes in developing countries. The results of this study can potentially furnish the aforementioned information.

This field of inquiry could potentially gain from a more comprehensive comprehension of the extent to which the results of this investigation, as well as the results of other studies, exhibit similarities or disparities. The present investigation aims to facilitate further scholarly inquiry that can aid in the formulation of a comprehensive development strategy for nations that are currently undergoing growth and development.

(B) Limitation of this study

The study aimed to evaluate the impact of climate change on sustainable development, Although the researcher faced certain limitations, attempts were made to consider the majority of the crucial variables that required examination to ensure the justification of all the study's objectives. The present study was conducted under certain limitations, as it is challenging to establish with certainty that a specific alteration is occurring and exerting an instant impact on sustainable development. These constraints encompassed the following:

- 1) The body of scientific knowledge pertaining to the impacts of climate change and the practical experience in fulfilling the demands of adaptation is continuously expanding. Nonetheless, the utilisation of this knowledge has been insufficient, resulting in significant challenges in the collection of reviews.
- 2) The paucity of research and reliable empirical data on the impacts of climate change posed a significant impediment in India, rendering it arduous to ascertain the veracity of the results.

(C) Statement of problem

Scientists believe that the greatest effects of climate change would be on the economies, livelihoods, and agriculture of the people in developing nations, including India, where a significant portion of the population depends on climate-sensitive

The ability to adapt depends on having access to wealth, information, skills, infrastructure,

institutions, and equity. As a result, it differs throughout locations and socioeconomic classes. As a result, the problem of sustainable development as well as other environmental challenges are inextricably tied to climate change.

With a remarkable diversity of climatic areas, from tropical in the south to temperate and alpine in the Himalayan north, where elevated places receive consistent winter snowfall, India is thought to be particularly vulnerable to the effects of climate change. The country's northern regions have a continental climate with harsh summers that contrast with chilly winters with below-freezing temperatures. Ecological and socioeconomic systems in India are already under a great deal of stress from the country's increasing urbanisation, industrialization, and economic growth. Climate change is adding to this strain. Thus, using data this study examines the general relationships between climate change and sustainable development, the study seeks to address a few crucial questions in this regard:

1. What socioeconomic traits of the determine their capacity to accurately assess climate change?
2. Which policies and initiatives need to be backed in order to address the problems brought on by climate change?

(D) Objectives

The objective of this study is to analyse the trend of different climate parameters and Business Sustainability.

- 1) The objective is to examine the correlation between the attributes of the business and their comprehension of climate change, as well as their ability to adjust to it.
- 2) The objective of this study is to examine the perceived impact of climate change on sustainable development aspects within the designated study area.
- 3) In order to propose viable approaches for addressing climate change in the context of sustainable development.

(E) Literature review

- 1) **The Most Comprehensive Plan Ever Proposed To Reverse Global Warming by Paul Hawken:** In order to halt the progression of climate change and get to the point of drawdown, which is the point at which the concentration of greenhouse gases in the atmosphere reaches its highest point and then begins to fall, the book advocates for collective action during the next 30 years.
- 2) **Global Sustainability, Climate Change And Finance Policy by Penelope Hawkins:**

This paper suggests that how risk narratives need to be adopted to straddle the disconnect between the climate change and Finance Policy.

- 3) **Coping With Climate Change: India-Eu Cooperation On Renewable Energy And Clean Technology by Dinoj Kumar Upadhaya:** Promotion of Renewable Energy and application of clean technology are helpful in facilitating environmental compatible development. This paper discusses the cooperation between India and EU regarding Sustainable development along with Climate change.
- 4) **Role Of Corporate Social Responsibility In Mitigating Climate Change by Taniya Nagar:** This paper discussed CSR as one of the aspects of business in sustainable development in the 21st century. It tells that how much the profits is made by the corporate industry can play a very important and pivotal role in sustaining a future to come. From strong heat waves to burning of amazon forest and submerging of Islands is discussed.
- 5) **Greenwashing: The Fallacy Of Corporate Environmental Responsibility In India by Muskan Tyagi:** This paper discusses the misleading and false practises of businesses creating false and inflated environmental claims in order to appeal customers who are environmentally conscious.

(F) Hypothesis

A hypothesis is a precise and testable proposition that pertains to a particular subject matter, and whose resolution is contingent upon the findings obtained from research.

The following are the hypothesis for this particular research study:

- 1) The actions of company affect the environment to be a key factor in building a positive reputation with consumers.
- 2) Companies face difficulty to be under persistent pressure from different interest groups to improve their social and environmental performance.

(G) Concept

The idea behind the study of climate change's impact on corporate management is to inspire the development of cutting-edge tools and insights. As a result, it is necessary to determine which aspects of climate change require further study. All around the industry, in order to stimulate productive business. For all industries to reduce their exposure to climate change's potentially disastrous effects.

II. ROLE OF TECHNOLOGY

A major consequence of climate change is the impact it has on the way businesses are run. There are three main aspects to technology: the components themselves, the production process, and the management of the organisation. With the help of the service sector, the use of information and communication technology in different areas, such as education, health care, transportation, storage, production, and retail, could help de-carbonize many processes."Information and communication technology (ICT) for freight transportation has the potential to improve utilization rates and save energy use⁷. However, the author argues that this requires investment in ICT infrastructure because of the detrimental effects of climate change on energy use. In addition, the ICT sector provides the technological means necessary to promote energy savings and CO2 mitigation. With the aid of a smart logistic system, a wide variety of industries, including transportation, construction, electricity, and energy, may operate more efficiently and effectively.

(A) Research methodology

The present study employs primarily doctrinal research methods as its methodology. Nevertheless, to some extent, analytical and empirical research methods have also been employed to accomplish the research task. The doctrinal research involves analysis of the statutes, case law, existing secondary information accessed from various sources e.g., books, articles, journals, websites, magazine, newspaper etc. The study is descriptive in nature and mostly based on secondary data published in books, Acts, different reports of government, non-government agencies and decided cases by courts. Also, one particular chapter consists of data taken by undergraduate and post graduate students their opinions is represented in pictorial and graphical representation.

III. CLIMATE CHANGE – IT'S MEANING

Changing weather patterns spanning decades or longer are the focus of climate change research. Climate shifts occur because of both natural and human-made factors. Since the beginning of the Industrial Revolution in 1750, the emission of greenhouse gases and aerosols, as well as changes in land use, have been significant contributors to climate change. The phenomenon involving the melting of ice formations, sea ice, and glaciers, as well as the rise of sea levels and the frequency of storms, floods, and droughts, are all possible results of a rise in global

⁷ K. Davis (1975), *Business and Society: Environment and Responsibility*, 3rd edition, McGraw-Hill Book Company, NY.

temperatures.

(A) Process of global warming

The sun's rays supply the Earth with power. Gaseous greenhouse gases (GHGs) are crucial because they trap heat, keeping the planet at a habitable temperature. The phenomenon of the greenhouse effect is a crucial and inherent component in sustaining life on the planet Earth. The absence of the greenhouse effect would result in a decrease of approximately 33 degrees Celsius in the Earth's temperature. Anthropogenic activities, such as combustion of fossil fuels and deforestation, have significantly amplified the concentration of greenhouse gases in the atmosphere during the last few centuries. The increase in greenhouse gases during the past century has been the primary driver of temperature increases around the globe. Since 1850⁸, the average temperature of the Earth's surface has been measured using data from three primary datasets. From 1900 to now, these data show a warming of 0.80 degrees to 1.0%⁹. Because land temperatures are typically more sensitive to global warming than ocean temperatures, land-only measurements since 1950 show warming trends of between +1.1°C and +1.3°C. Global warming is often evaluated on 30-year or longer time frames, although identifying trends on shorter time spans can be difficult because of the impact of natural variability. The term "natural variability" is used to describe climatic shifts that arise from the interplay between the Earth's atmosphere, ocean, land, and glaciers are integral components of the planet's natural system. Fluctuations in the aforementioned type are widely acknowledged and are frequently denoted as "noise" or deviations from a standard value, which can manifest irrespective of alterations in the climate. The equatorial Pacific region serves as a mechanism for thermal exchange between the ocean and the surface, rendering the El Nio Southern Oscillation (ENSO) cycle as the primary contributor to inherent natural variability. Internal and natural variability means that global warming does not always grow linearly with rising GHG concentrations; instead, there may be periods of accelerated warming followed by cooling.

(B) Origin for global warming

There are several influences on Earth's climate. Several factors contribute to the Earth's climate, including the sun's energy output, volcanic events, greenhouse gas concentrations in the atmosphere, and aerosols. These factors can have either a warming or cooling effect on the planet. Carbon dioxide (CO₂) has been identified as the primary greenhouse gas responsible for exacerbating global warming since the onset of the Industrial Revolution circa 1750. Methane,

⁸Available at <http://www.metoffice.gov.uk/hadobs/hadcrut4/>, accessed on 26th March 2023.

⁹ Available at <http://www.skepticalscience.com/trend.php>, accessed on 25th March 2023.

with the chemical formula CH₄, ranks as the second most prevalent compound. The concentration of carbon dioxide experienced an increase from 278 parts per million (ppm) in 1960 to 401 ppm in 2015. The observed change represents a 44% increase. Water vapor's indirect effect on temperature rises due to rising GHG concentrations is substantial. Water vapour contributes to the greenhouse effect in the same way that greenhouse gases do, therefore an increase in global temperature caused by GHGs acts as a positive feedback. When the average temperature of the Earth rises by one degree Celsius, the Earth's temperature results in a 7% augmentation in the quantity of water vapour present in the atmosphere¹⁰. Thus, while carbon dioxide (CO₂) is the primary anthropogenic climate control knob, water vapour is a rapid and potent feedback that typically multiplies any initial forcing by a factor of two to three. Although water vapour contributes only a small amount to early forcing, it is a significant contributor to global warming. Not all industrial emissions are inherently responsible for a warming bias. By reflecting or absorbing sunlight, aerosols from industrial pollutants have aided in reducing global warming by approximately 26%. However, the precise impact of aerosols on the climate is largely unknown, primarily due to the interactions between aerosols and clouds. The atmospheric lifetime of ten greenhouse gases (especially CO₂) is longer than that of aerosols. Consequently, the short-term cooling impact of industrial pollution can be followed by its long-term warming effect. Due to the short residence time of aerosols, it is conceivable that future warming will accelerate even in the absence of an increase in GHG concentrations. In most future scenarios, aerosols are predicted to neutralise only a small fraction of greenhouse warming. As the sun's beams strike the Earth's surface, a portion of the energy is absorbed while the remainder is re-emitted to the atmosphere as infrared thermal radiation, causing the greenhouse effect. This radiation's wave frequency is lower than that of solar energy. The GHG molecules absorb the low-frequency heat radiation, causing the molecules to vibrate. The energy contained in these greenhouse molecules is released as infrared photons, the majority of which are reflected back to the surface of the planet. Unlike greenhouse gases, non-GHGs such as oxygen and nitrogen do not absorb heat. In terms of watts per square metre (W/m²), Radiative Forcing (RF) is a metric used to quantify the greenhouse effect based on power density. During the Industrial Revolution, it is believed that the cumulative effect of rising GHG and aerosol concentrations in the atmosphere increased the total RF by approximately 2.3 W/m² (1.1 W/m² - 3.3 W/m²; 90% confidence interval). Climate sensitivity refers to how the climate alters in response to a change in the energy of the planet.

This is equal to an increase in RF power of +3.7 W/m² (from +3.0 W/m² to +4.4 W/m²).

¹⁰Available at <http://www.esrl.noaa.gov/gmd/ccgg/trends/>, accessed on 23rd March 2023.

Transient Climate Response (TCR) estimates, on the other hand, range from 1.0°C to 2.5°C and are used to evaluate shorter-term repercussions (i.e., over 20 years) to a doubling of CO₂ concentrations in the atmosphere. Since warming the waters takes a while, short-term projections are less optimistic¹¹.

IV. ENVIRONMENTAL AND SOCIAL IMPACTS OF CLIMATE CHANGES

In academic circles, people have different ideas about and talk about how climate change affects the natural world, human society, and economic processes. Most of these effects are expected to be bad, and only a few, like an increase in crop output, may be good. As the average world temperature goes up, the bad things that happen will get worse. Even if global warming is limited to 2 degrees Celsius above pre-industrial levels, the world must still take steps to adapt to the changing weather. It has been decided that if world efforts fail, a temperature rise of more than 2 degrees Celsius would have serious, wide-reaching, and possibly irreversible effects. Between 1950 and 2010, the average temperature across Canada went up by 1.5 degrees Celsius. Climate change in Canada is likely to make unusual weather events like heat waves, heavy rains, floods, storms, droughts, and forest fires happen more often or with more force. Here, we explain in more detail the parts of the world that will be most affected by bad effects.

Floods and Droughts

More than half of Earth's surface is projected to experience increased flooding. This may cause a decline in some areas. Mid-latitudes are forecast to receive less snowfall over the winter, which should lead to less snowmelt flooding in the spring¹². There will be an increase in precipitation across Canada, according to forecasts. However, in particular places and seasons, such as British Columbia and the Prairies, longer or more frequent meteorological droughts (less rainfall) and agricultural droughts (drier soil) are anticipated to occur as a result of reduced rainfall and greater evaporation, especially under the RCP 8.5. More severe droughts may strain water delivery systems in arid regions, but in wetter regions, the situation may be manageable if adaptation strategies are put in place.

V. ECONOMIC IMPACTS OF CLIMATE CHANGE

There will very certainly be monetary repercussions for many sectors of the economy from the aforementioned environmental and social impacts of climate change. The Stern Review on the

¹¹ Available at http://www.ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5_SPM_FINAL.pdf, accessed on 28th March 2023.

¹² Available at http://www.ipcc.ch/pdf/assessment-report/ar5/wg2/WGIIAR5-Chap3_FINAL.pdf, accessed on 29th March 2023.

Economics of Climate Change estimates that failing to take action on climate change will result in a permanent loss of five percent or more of global GDP. The estimated costs could reach 20% of GDP or more if a larger spectrum of effects and contingencies are included in the research. When compared, it is projected that stabilizing atmospheric GHG levels between 500 and 550 ppm of CO₂ equivalent would cost one percent of world GDP per year in mitigation measures. This cost-benefit analysis is, therefore, a strong financial argument in favour of taking decisive action as soon as possible¹³. Significant local and global ramifications for all economic sectors would result from a worldwide transition away from fossil fuels and towards renewable energy, as envisioned under RCP 2.6. This transition presents both opportunities and risks.

It is projected that the increasing frequency and intensity of extreme weather events will have an effect on property and casualty insurance, life insurance, and health insurance, which will result in increased damage and increased loss volatility. As a direct result of this, it may be more challenging for insurance systems to offer coverage that is both cost-effective and comprehensive, as well as to expand their risk-based capital. The vulnerability of companies' asset and loan portfolios will determine the extent to which the effects of climate change are felt in the financial services sector, as a result of the impacts on human health¹⁴.

Industries that rely heavily on favorable weather conditions, such as farming, logging, fishing, tourism, hydropower generation, transportation, and mining, would suffer as a result of climate change. The possibility of a slowing economy and a loss of productivity. The need for heating in homes and businesses may decrease, while the need for cooling may increase, as a result of extreme climatic and weather events that could disrupt the reliable operation of pipelines, energy grids, and transportation infrastructure. Economic cost estimates and projections are notoriously difficult to make due to the complexity involved and the reliance on a wide range of assumptions. To fully comprehend the effects of climate change on vital economic systems and sectors, it is necessary to conduct additional research, collect and access more extensive economic data, and develop sophisticated analytic methods and tools.

VI. IMPLICATION OF CLIMATE CHANGE IN BUSINESS OPERATION

A new arena of contention might arise between business partners or with third-party logistic providers as a result of extreme weather's impact on operational efficiency. The primary contributor is the service provider. As a result of climate change, catastrophic weather events

¹³ Available at http://mudancasclimaticas.cptec.inpe.br/~rmclima/pdfs/destaques/sternreview_report_complete.pdf accessed on 30th March 2023.

¹⁴ Available at http://mudancasclimaticas.cptec.inpe.br/~rmclima/pdfs/destaques/sternreview_report_complete.pdf accessed on 30th march 2023.

have monetary repercussions such as increased premiums for insurance and a global rise in the costs of raw materials, intermediate products, and finished commodities. Managing operational aspects, such as planning, controlling materials, and scheduling products, will be significantly impacted by climate change¹⁵.

(A) The effect of strategic business management

It is possible to mitigate the entire impact of climate change with strategic planning and management. As a result, businesses need to account for the risks posed by climate change as they go about their day-to-day operations, including decisions about where to set up shop, what goods and services to offer, how to transport those goods, and how much they should produce. Businesses, particularly those that have globalized and are operating on several continents, face increased uncertainty due to climate change. According to the authors, the continuity of product is at risk due to disruption in the supply chain network, which can be caused by factors such as flow among multiple agents, delays in inventory carriers, transportation congestion, and cost volatility. The author's information suggests that deficient strategic management exerts a notable impact on the temporal aspects of business operations.

VII. UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE

The United Nations Framework Convention on Climate Change was ratified by 196 parties or nations in 1992. The convention's stated end goal is to stabilize atmospheric GHG concentrations "at a level that would avoid harmful anthropogenic influence on the climate system." The Conference of the Parties is an annual meeting at which countries discuss and negotiate global solutions to climate change¹⁶. By the end of 2004, the Kyoto Protocol was enacted. In 2012, it was officially over. In 2007, Canada became the first signatory to withdraw from the agreement. At COP15 in 2009, participants publicly concurred for the first time that global warming should not exceed 2 degrees Celsius¹⁷.

(A) IPCC climate change report 2022 and its implications for India ¹⁸

The summer of 2018 in India has attracted some attention to The effects of climate change that are being seen in the country right now. The weather in the country's capital, Washington, D.C., reached 49 degrees Celsius during a heat wave, which set a new record. Heatwaves are

¹⁵ Available at http://www.ipcc.ch/pdf/assessment-report/ar5/wg2/WGIIAR5-Chap19_FINAL.pdf, accessed on 29th March 2023.

¹⁶ Available at <http://unfccc.int/resource/docs/convkp/conveng.pdf>, accessed on 1st March 2023.

¹⁷ Available at <http://unfccc.int/resource/docs/2009/cop15/eng/107.pdf>

¹⁸ Available at Climate Change 2022: Impacts, Adaptation and Vulnerability | Climate Change 2022: Impacts, Adaptation and Vulnerability (ipcc.ch)

happening more often, which is making life hard for a large number of people in India. Working Group II of the Intergovernmental Panel on Climate Change's Sixth Assessment Report says that if we don't act quickly to stop or adjust to climate change, it could have terrible effects, especially in India. The study warns about the possibility of terrible things happening. In 1988, the World Meteorological Organisation (WMO) and the United Nations Environment Programme (UNEP) worked together to make the International Group on Climate Change (IPCC), which is made up of experts from many different countries. In order to make it easier to come up with a strong policy response to climate change, scholars from all over the world do a thorough analysis of the academic literature on the topic. During COP21 in December 2015, 200 countries unanimously agreed to the Paris Agreement, which was based on the prior assessment report from 2014. Different forecasts of climate consequences under different emission scenarios were given out in the three working group reports of the fifth assessment cycle. By 2100, the average global temperature was predicted to have risen by more than 1.5 degrees Celsius in all scenarios (compared to pre-industrial levels). This resulted in many countries, including India, making commitments to reduce their carbon footprint and achieve carbon neutrality by the year 2030. The interconnectedness of climate, ecosystems, biodiversity, and human societies forms the basis for the report's research and conclusions. Working Group I: The Physical Science Basis released their first report on August 9, 2021, which examined the "foundational consensus of the climate science behind the causes and effects of human greenhouse gas emissions." The report used projections of future changes up to the year 2100 from different Shared Socioeconomic Pathways to determine that emissions would need to be reduced by at least 45% by 2100 in order to keep global warming below 1.5 degrees Celsius.

Reductions in food and water security, effects on social and economic human systems, and reduced operation of important infrastructure owing to heatwaves, air pollution, etc. are just some of the consequences listed in the sixth assessment report. In addition, it foresees humanitarian catastrophes, such as climate-induced migration, as well as negative consequences for climate-sensitive industries like forestry, fisheries, agriculture, energy, and tourism. The research states that the vulnerability of ecosystems and people to the effects of climate change varies greatly across geographic regions. The human system is affected differently by climate change depending on factors such as patterns of socioeconomic development, inequality, marginalisation, historical patterns of colonialism, and the style of government. Some places are more at risk than others because of things like pollution, overexploitation of natural resources, and the decline of ecosystems there. West, Central, and East Africa; South Africa; Central and South America; Small Island Developing States; and the Arctic are some of

the most vulnerable places on Earth.

Using a variety of scientific forecasting models, the paper lays out the chances that the global average temperature would rise by more than 1.5 degrees Celsius in the near future, the mid-term, and the long-term. Importantly, climate action in the near future that restricts global warming to close to 1.5 degrees Celsius would greatly minimize the loss and damage due to the effects of climate change, but would not remove them entirely. The report found that governance is more likely to affect socioeconomic trends than climate change. In terms of geographical and socioeconomic vulnerabilities, India is one of the worldwide hotspots indicated in both the IPCC report and local reports on the Climate Vulnerability Index (CVI). India's primary climate action plan is the National Action Plan on Climate Change (NAPCC), which includes eight subsidiary programs. There is no overarching legal framework or governing body that is responsible for addressing the problem of climate change; instead, each mission falls under a distinct ministry. Similar to most countries, India will fall short of the IPCC guidelines despite its actions to combat climate change unless the government abandons all development goals and focuses entirely on climate change. Regional studies conducted in India, as well as the IPCC report, show, however, that the country is already in a precarious position. Assam, Andhra Pradesh, Maharashtra, Karnataka, and Bihar are among the states most at risk from climatic risks like floods, droughts, and cyclones, the study found. The paper also outlines adaptation methods, such as having a political commitment, an institutional framework, and policies with clear aims and objectives against climate change. It stresses the importance of planning ahead for potential long-term vulnerabilities and climate hazards in order to prevent "maladaptation," or acts that have unexpected yet negative effects due to climate change. Last but not least, there needs to be sufficient funding for sustainable adaptation plans to be put into action and adaptation gaps to be closed. A budget and action plan for adaptation must involve all relevant parties, both public and private. The importance of this cannot be overstated, especially for disadvantaged communities, populations, regions, and industries.

When it comes to combating climate change, India can take some advice and make it work. As a result of climate change, India is one of the world's most at-risk countries. As a result, it is imperative that India create a district-level map of all the vulnerable areas, industries, and populations. Given the country's size and population, India's landscape and geography are diverse enough to require tailored policies and strategies in various parts of the country. An effective climate action strategy requires more than simply careful planning and execution. To sustain these efforts, a periodic monitoring mechanism to review progress must be established, as well as a research and knowledge committee to provide regular updates on new scientific

resources and parameters.

(B) Disagreements with the IPCC report conclusions¹⁹

Some climate scientists have criticized the IPCC's findings. Not all climate scientists or economic actors have been convinced by the IPCC's findings. The IPCC consensus, according to some dissenting scientists, exaggerates the impact of CO₂ on the climate while underestimating the role of natural variability. However, there are experts who think the IPCC is being too cautious about the effects of climate change²⁰. Contrary opinions are more commonly encountered in popular media such as newspapers than in academic journals.

VIII. CORPORATE ENVIRONMENTAL RESPONSIBILITY (CER)

In recent years, alongside other issues, there has been a significant focus on the topic of environmental responsibility. The cost implications and environmental impact of preservation efforts are becoming a growing concern for numerous governmental bodies and entities. Corporate environmental reporting has garnered considerable attention from researchers, academics, professionals, and activists as a facet of Corporate Social Responsibility. CER has undergone significant changes in the past two decades and is continuously evolving to keep up with the new markets in the global economy.

Consumer activism, pressure from shareholders and investors, and the desire to gain a competitive edge are all contributing to CER's development²¹. Eliminating pollution and preserving a healthy ecosystem are urgent concerns at the present time. A number of countries' governments, legislators, and environmental activists are making strides to improve the planet's environmental conditions. These days, people are mainly concerned with finding answers to the challenges produced by global warming, which include preventing pollution of the land, water, and air as well as conserving energy, protecting plant and animal resources, and addressing the resulting threats to biodiversity.

Since the beginning of this movement, companies that hurt the environment have been criticised.

Businesses often release toxic gases into the air during the manufacturing process or dump effluents into the ground or water, leading to environmental degradation. While individuals and other social institutions are equally responsible for environmental degradation, corporations

¹⁹ Available at <http://www.commdiginews.com/health-science/climate-change-where-theorists-and-skeptics-agree-and-disagree-18567/>, accessed on 22nd March 2023.

²⁰ Available at <http://www.washingtonpost.com/blogs/wonkblog/wp/2014/10/30/climate-scientists-arent-too-alarmist-theyre-too-conservative/>, accessed on 26th March 2023.

²¹ (Jamison et al., 2005)

were primarily targeted by environmental activist groups because of the greater public prominence they enjoy²². Therefore, there was a steadily growing need for environmentally responsible production methods, audits, management accounting, and reporting. Companies made efforts to incorporate all of these concerns into their operations in order to satisfy public expectations. However, the activities themselves posed a problem everywhere. Manufacturing procedures that are less harmful to the environment and environmental audits add significantly to the cost of production, driving up product costs. Most managers have long believed that investing in better environmental performance has little payoff beyond ensuring the company complies with all applicable rules and regulations and so avoids any necessary preventative measures or fines.

However, various studies and case reports have provided an alternative image over the years that differs slightly from this common belief. Adopting environmental protection measures has been shown by several companies to result in significant cost savings, and an increasing number of businesses have shown the ability to decrease both costs and environmental impacts at the same time. As a result, modern multinational corporations devote more coherent and proactive resources to environmental protection than in the past.

There are three reasons why businesses take action in the face of environmental threats: to advance their own interests, to protect their competitors' interests, and to do the right thing²³. Cost savings, recycling materials at a lower cost than using new materials, and reduced clean up expenses have all been cited as ways in which pollution avoidance can pay off and provide a strategic advantage. It has also been observed recently that there is a growing demand for eco-friendly goods in this region.

IX. CLIMATE CHANGE REQUIRES A NEW APPROACH

Despite the recognition of the gravity of the climate crisis, organisations have primarily employed traditional sustainability tactics, such as focusing on mitigating the ecological footprint of particular products or procedures, in their attempts to address the issue.

The exploration of strategies aimed at mitigating environmental pollution is a pertinent area of study. The Intergovernmental Panel on Climate Change has emphasised the significance of restricting global warming to 1.5 degrees Celsius to prevent the most catastrophic outcomes of climate change. On the contrary, corporations have exhibited reluctance towards pledging to completely eradicate their emissions by the middle of the century. It is projected that by the year

²² Available at <http://www.fao.org/docrep/v8180t/v8180t07.htm>, accessed on 29th March 2023.

²³ Eden, 1996; Bansal, 1997; Perry and Singh, 2001).

2030, an estimated 20% of the leading corporations will have declared their intention to achieve carbon neutrality objectives by the year 2050. According to recent research, corporations tend to utilise inadequate strategies to effectively reduce greenhouse gas emissions, despite their efforts to establish net-zero emission goals.

Their reliance on carbon offsets, which allow firms to pay for anticipated carbon reductions elsewhere without altering their own value chain, is a major cause of concern.²⁴

(A) Business responsibilities and responses to climate change

In recent years, businesses have begun to pay a lot more attention to climate change as an international environmental issue. Because of the strategic challenges posed by climate change, businesses in a wide variety of sectors, including those involved in the production of fossil fuels, those that rely on them directly or indirectly, and those looking to capitalise on New market possibilities have opened up because of the rise of emission trading systems and risk coverage, are struggling to adapt. After the media began paying more attention to the issue of climate change, and after various studies concluded that human activities within corporations were a major contributor to global warming and environmental degradation, companies around the world began to feel under attack in terms of their credibility²⁵. The governments of many nations are likewise treating this matter with great urgency. The business community began to take the matter more seriously as a result. Quite a few companies have deliberately implemented programmes to cut down on their carbon footprint. Some businesses think about how climate change might affect their running costs now and in the future. They do this by thinking about things like possible state and federal laws, how shareholders feel, and changes in the consumer and supplier markets. But fewer companies are planning their strategies around the risks and opportunities offered by the physical effects of climate change. As people became more interested in the issue of climate change, two new, very important business issues arose: the issue of cleaner production (CP) and the issue of environmental reporting.

(B) How to transform business sustainability

Many businesses have tried to give their initiatives a more high-brow veneer by switching from phrases like "corporate social responsibility" to ones like "environmental, social, and governance", "purposeful corporations," and "carbon-neutral products."

However, firms are increasingly running into pushback from activists, investors, and

²⁴ Available at theconversation.com/how-the-climate-crisis-is-transforming-the-meaning-of-sustainability-in-business-166539, accessed on 28th March 2023.

²⁵ Available at <http://www.fao.org/docrep/010/a0701e/a0701e00.htm>, accessed on 2nd April 2023.

government and regulatory authorities when their words don't match their actions. Companies that portray themselves as environmental pioneers but fund candidates who are against climate policy are coming under increasing scrutiny. A study came out in which people who work in public relations and advertising said bad things about their own fields. The study showed that 90 companies worked together with fossil fuel companies.

Andy Grove, who used to be the CEO of Intel, said that there is a time in a company's life when its core values are about to change. The current state of the economy marks a strategic inflection point²⁶. There are a variety of possible paths this transition could take, but I argue in my book that in order to effectively combat climate change, a shift in perspective is necessary in which sustainability is prioritized before profit maximization.

X. CONCLUSION

Based on everything we've covered here, it's clear that commercial activities have a major impact on the environment and contribute negatively to global warming. Companies, as members of society, have an obligation to address climate change challenges in a responsible manner. Therefore, corporations should conduct operations in a way that does not compromise ecological balance. In addition, they are obligated to make amends to the community for any environmental damage caused by their operations. Businesses today face a unique sort of difficulty due to the persistent pressure from diverse interest groups to improve their social and environmental performance. Planning more meticulously, executing more challenging tasks, and spending significantly more money are all necessary to accomplish activities in an environmentally sustainable manner. This may have an adverse effect on the companies' bottom lines. In order to function, businesses must operate in a socially and ecologically responsible manner, as they are expected to do so. As a result, businesses all over the world are striving to be responsible, despite the fact that there is little effective regulation to control and guide their actions in order to limit the harmful effects on climate and the environment. It was also observed that companies often consider how their actions affect the environment to be a key factor in building a positive reputation with consumers. As time goes on, the globe faces increasingly complex environmental challenges, and the need for environmentally conscious business practices grows in response to public pressure. The topic of global warming and climate change is currently receiving great attention from several groups. In another round of pointing fingers, businesses were singled out for their role in accelerating global warming and worsening

²⁶Available at <http://www.slideshare.net/Ecofys/state-and-trends-of-carbon-pricing-2014-37901397>, accessed on 29th March 2023.

environmental degradation. The corporate world was tasked with new duties.

XI. REFERENCES

1. Bansal, P. (1997), Business strategy and the environment, in Bansal, P and Howard, E. (eds.), *Business and the Natural Environment*, Butterworth-Heinemann, Oxford, pp. 173-194.
2. Deegan, C. and Unerman, J. (2006), *Financial Accounting Theory*, European Edition, McGraw-Hill, London.
3. Frost, P. (2001), *Corporate Social Responsibility*, presented in 2001 Virtual Alumni Summit and published on the Alumni @ Melbourne website <http://www.unimelb.edu.au/alumni/>.
4. Goulder, L.H. and Nadeau, B.M. (2002). *International Approaches to Reducing Greenhouse Gas Emissions*, in Schneider, S.H., Rosencranz, A. and Niles, J.O., *Climate Change Policy A Survey*, Island Press, Washington.
5. GRI & KPMG (2007), *Reporting the Business Implications of Climate Change in Sustainability Reports*, Global Reporting Initiative and KPMG's Global Sustainability Services, The Netherlands.
6. Holme, R. and Watts, P. (2000), *Corporate Social Responsibility: Making Good Business Sense*, World Business Council for Sustainable Development.
7. Davis, K. (1975), *Business and Society: Environment and Responsibility*, 3rd edition, McGraw-Hill Book Company, NY.
8. Carroll, A.B. (1977), *Corporate Social Responsibility: Its Managerial Impacts and Implications*, in Carroll, A.B. (ed.), *Managing Corporate Social Responsibility* Jamison
9. Krishnan, R. (1977), *Business Philosophy and Executive Responsibility*, in Carroll, A.B. (ed.), *Managing Corporate Social Responsibility*, Little, Brown and Company, Boston.
10. , A., Reynolds, M., Holroyd, P., Veldman, E. and Tremblett, K. (2005), *Defining Corporate Environmental Responsibility Canadian ENGO Perspectives*, The Pembina Institute and Pollution Probe, Canadity, Little, Brown and Company, Boston.
