

An Analysis of Climate Change and Its Effects on India

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Abstract

"All nations across every continent is currently experiencing the effects of climate change. It is interfering with national Economics are having a negative impact on life, causing individuals, communities, and nations to suffer financially now and in the future. Climate change is having a profound influence on people. which include increasingly frequent and intense weather occurrences, rising sea levels, and altering weather patterns. The most vulnerable and poorest individuals are most impacted". - UN Sustainable Development Goal No. 13. The paper will examine the following in this context: What is climate change; How is it affecting India in the twenty-first century; Who is most impacted; How can "Development" and environmental protection coexist? What laws, both local and international, address environmental protection? Are they strong enough to address the ever-growing issues related to climate change? - Specific examples of how current instances of climate change have negatively affected people's lives - Strategies for addressing climate change.

Keywords: Domestic Laws, Poverty, India, United Nations, and Climate Change.

Introduction:

Combating the negative consequences of climate change on our environment is a crucial aspect of current world policymaking. Due in large part to the fact that humans has been blamed for it, the phenomena of climate change has attracted the attention of the whole globe. The climate of Earth is dynamic. The earth's climate has, nevertheless, undergone a significant alteration during the last century. The world is now warmer than it was before, and this has a variety of direct repercussions on coastal regions, tiny islands, food security, health, etc.

The whole issue of climate change is, in some way or another, more related to how people have been living, particularly throughout the urbanisation and industrialization eras. Although the fairly recent focus on this issue by the international community, the discussion on climate change has fortunately started and is expected to get more and more difficult as solutions are sought. But the words "responsibility for harm to the environment" must be included in any discussion of climate change. Countries have argued who should be held accountable for environmental damage already done and whether or not climate change can be incorporated into existing legal frameworks to prevent more harm. Note that both emerging and developed nations must first examine their own laws and

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regulations before taking any action to stop additional environmental harm. Particularly, emerging nations may have to bear a little more of the load since they must simultaneously manage challenges connected to development and the environment.

In light of the above, this study examines the effects of climate change on India from a legal standpoint. The introduction of the work briefly discusses climate change. The effect of climate change on India is highlighted in the part that follows with the aid of current climate-related incidents. The legislative framework that is now in place in India to handle the problem of climate change is discussed in the next section. A summary is provided after a focus is given to detailing the global reaction to climate change.

The study's major objective is to investigate just how the consequences of climate change will affect India legally. The following topics won't be covered in this essay: a thorough examination of India's various environmental laws; the socio-political and economic aspects of climate change in India; the effects of climate change on other countries besides India and their responses; or a comparison of India's situation with any other developing nation.

This essay takes a theological perspective since the subject calls for an examination of current climate change legislation. This essay employs a prescriptive and explanatory style of argumentation.

An overview:

Climate change is defined as "a change of climate that is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods" by the United Nations Framework Convention on Climate Change (hereinafter UNFCCC), which gives the parties a framework to address the causes of climate change. Simply explained, climate change, often known as global warming, is a rise in the world's average temperature that will mostly have a detrimental impact on ecosystems everywhere. The negative consequences of climate change on people's lives have already been sparked by the overuse of natural resources and rising environmental pollution. The existing state of human health and safety is projected to go worse with an increase in global average temperatures.

Additionally, it is anticipated that over the next several decades, billions of people, mostly those residing in poor nations, would have to deal with severe water and food shortages as well as increased threats to their health and lives due to the negative consequences of climate change. The physical and biological processes in aquatic, terrestrial, and marine habitats may be significantly impacted by climate change in a variety of ways. Crop yields affected by disease, glaciers disappearing, severe weather events including floods, droughts, and storms, increasing coastal flooding, and species extinction are only a few of the predicted risks of the phenomena of climate change. By 2020, it is predicted that 250 million people in Africa alone might face a heightened danger of water scarcity; in addition, melting glaciers will raise the risk of coastal flooding worldwide, with some tiny island nations likely suffering entire inundation. Furthermore, since poor nations lack the means to successfully adapt, it is anticipated that climate change would have a significant impact on those living there.

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It is obvious that the topic of climate change involves complex scientific and economic issues that have generated a lot of discussion over the years. The legal aspect of the issue of climate change, which is equally important, has long been disregarded. In light of the above, this essay aims to examine the legal implications of climate change and its effects on India.

Climate Change and India:

South Asia, notably India, is one of the key regions that will be severely affected by climate change in the near future due to its varied topography. Since this nation is quickly depleting its natural resources and ruining its ecosystem owing to "urbanisation, industrialization, and economic expansion," climate change is predicted to have a significant influence here. India is working to conserve its rapidly dwindling natural resources, but it is facing a grave socioeconomic and environmental crisis. As a result of a growth in numerous contaminants in the environment, the quality of the water and air is becoming worse every day. In addition, the nation's coastal ecosystems, biodiversity, and agricultural output will be the areas most vulnerable to the effects of climate change.

Additionally, the area is already vulnerable to natural disasters like the 2013 floods and landslides in Uttarakhand, the 2015 Chennai flood, and the 2016 drought. Additionally, there is evidence that many severe weather occurrences, such as heat waves, prolonged dry spells, and strong rains, are becoming more frequent and/or powerful. Such calamities have a variety of negative effects, including loss of livelihoods and income, susceptibility to illness, and starvation. The World Bank predicts that a 2°C rise in global average temperature over the next several decades would only enhance the erratic nature of India's monsoon season. Many locations are expected to go under water as a result of the change in rain patterns throughout India, while others won't have enough water to drink. "More than 60% of the cropland in India is rain-fed, making it very susceptible to variations in precipitation patterns brought on by the climate. The amount of water available for agricultural production in the Indus, Ganges, and Brahmaputra river basins is predicted to decrease further by the 2050s, with a temperature increase of 2°C to 2.5°C compared to pre-industrial levels. This could have an impact on the sufficiency of food for about 63 million people.

The pace of poverty alleviation is also anticipated to slow down as the temperature warms. Even while everyone in the area will be impacted by climate change, the poor will suffer the most since they were once heavily relied on rain-based agriculture and have little to no means to support their livelihood. By the 2040s, a 2°C rise would also affect agricultural production in South Asia, where output will fall by 12%, increasing the need for imports to fulfil domestic demand. Additionally, a lack of food would lead to serious health issues, particularly for women and children. Reliable water supplies in India are being threatened by glacier melting and snowmelt. Because they rely so heavily on snow and glacier melt water, major rivers like the Ganges, Indus, and Brahmaputra are especially vulnerable to the negative effects of climate change. This might make low-lying regions even more susceptible to floods, endangering agriculture. After briefly discussing the effects of climate change, the next part will concentrate on some recent weather occurrences in India that were mostly due to climate change.

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Uttarakhand Disaster 2013:

One of the greatest catastrophes in recent memory struck the state of Uttarakhand on June 16, 2013, causing significant harm and loss to both lives and property. Flash floods and very heavy rains struck the state. The state's whole district system was impacted. The state's Bageshwar, Chamoli, Pithoragarh, Rudraprayag, and Uttarkashi districts were the five hardest affected. Due to the accident occurring during the busiest travel and pilgrimage season, there were more fatalities and rescue and relief efforts took longer to complete. The Rudraprayag district's Mandakini valley, where the tragedy was most severe, was the area most affected. Flooding at the Kedarnath Shrine and the surrounding surroundings was caused by torrential rain. Other pilgrimage sites in the state that draw a large number of visitors throughout the summer, such as Gangotri, Yamunotri, and Badrinath, were also impacted. For days, many were left trapped and forced to seek refuge in the mountains. Due to ruined roads, landslides, and debris from flash floods, more than one lakh people were stranded in many areas. According to the State Government's official statistics from May 9, 2014, 169 persons perished overall and 4021 other people were either reported missing or assumed dead. Be aware that the 2013 Uttarakhand floods were mostly brought on by "human-induced" climate change, according to a research released by the American Meteorological Society. Even while the study did not state explicitly that climate change is to blame for the floods, it did make a strong case for it. The research claims that the excessive rainfall that was recorded in June 2013 was a century-scale event and that climate change is to blame for the increasing frequency of such severe occurrences based on statistical analysis.

Chennai Floods 2015:

"The coastal districts of Chennai, Kancheepuram, and Tiruvallur were swamped during a number of severe downpour storms in November and December 2015, affecting more than Four million people and causing economic losses estimated to be worth over US\$3 billion." The Chennai floods, according to the deputy director general of the Delhi-based Centre for Science and Environment, were a direct result of the rising global temperature shattering a record that had stood for 100 years with one day's worth of rainfall equaling a month's normal.

Drought of 2016:

In 2016, India went through one of its driest two-year periods, which had an impact on practically the whole nation. May saw temperatures in the state of Rajasthan rise over 51 degrees Celsius. According to the national drought assessment, the nation's moisture levels were at least 50% lower than in years past. Additionally, according to the Central Water Commission, the water level in India's 91 reservoirs was at its lowest point in nearly a decade and barely represented 17% of their entire storage capacity in May. Marathwada, in Maharashtra, was the area of the nation that was most severely impacted by the severe drought. This area has seen an ongoing water shortage, increased debt, and a rise in farmer suicides during the previous five years. The area's predominantly rain-fed agriculture has been impacted by erratic climate trends. The lack of or limited supply of water in dams, the lack of cattle feed, the lack of cash to launch related enterprises, and unemployment are

some of the major issues the people in this area confront. Maharashtra's agriculture has recently been impacted by harsh weather conditions including hailstorms, heat waves, frost, and irregular rainfall. In addition, the 2013 heat wave in India reduced wheat output by roughly four million tonnes. The farmers in Marathwada suffered a tremendous loss as a result of a rise in temperature of only one degree during the blossoming stage the same year.

The Most Affected:

The poor, weak, and underprivileged will always bear the brunt of any disaster, whether it be a natural or man-made one, like the recent drought that resulted in an increase in fatalities, or floods brought on by illegal constructions in Uttarakhand, the Chennai rains where there were inadequate arrangements made for the rain water to flow out of cities, or any number of other situations. The aforementioned incidents from the recent past all showed the same thing. The disadvantaged have often been the victims of calamities that were caused by the wealthy and powerful segments of society. They seldom have any methods of contacting the legal system and requesting justice. There would be anarchy and people will commit suicide out of desperation, like the farmers in Maharashtra who perished from the drought, in such situations when the state fails and the court remains mute on urgent matters of fundamental significance like climate change. Large business houses that contribute significantly to air and water pollution get away with simple "corporate social responsibility" agreements. The laws are not strict enough to hold the offenders accountable. The government won't be held accountable for failing to do its duty. Cases that do succeed in making it to the Apex Court via Public Interest Litigations only manage to make a little difference in preventing future crises. India has faced several problems as a consequence of climate change year after year, but we have not learned from our previous errors.

Existing Legal Framework on Climate Change in India:

To fight the consequences of climate change, India has no explicit law in place. As a result, in the absence of specific legislation, the Air (Prevention and Control of Pollution) Act 198135 (hereinafter Air Act), passed by the Parliament in accordance with Article 253 of the Indian Constitution, is the most important piece of legislation that comes close to addressing the issue of climate change. The Air Act is significant because it calls for the prevention, control, and mitigation of air pollution, which harms people, other living things, and plants when it exists in the atmosphere. The Air Act therefore tackles a crucial issue connected to climate change by emphasising the direct connection between air pollution and its impact on the whole ecosystem. But take note that the word "Climate Change" is not used in the Air Act. The main goal of the Air Act is to protect air quality by limiting greenhouse gas emissions that increase air temperature and contribute to global warming. The creation of Central and State Control Boards is made possible by the Air Act, and its duties include overseeing monitoring efforts, enforcing laws via monetary penalties and legal action, and improving air quality.

Additionally, state governments have the authority to designate some regions as "air pollution control zones," in which case any industrial operator is obliged to get prior approval from the state board before constructing or running any industrial facility there. Standards for the emission of air

pollutants from plants and vehicles may also be established by the State boards in cooperation with the Central boards. In addition, the Air Act gives a Metropolitan Magistrate or Judicial Magistrate of First Class the authority to stop an industry from emitting emissions after the Board has filed an application, and it also gives the Board the authority to shut down an industry or stop providing it with water or power if its directives are not followed. Prior to the Air Act, the Parliament also enacted the Water (Prevention and Control of Pollution) Act of 1974 (hereafter Water Act). Water contamination may be prevented and controlled thanks to the Water Act. Be aware that the Water and Air Acts provide comparable mechanisms for attaining their stated goals.

The Environment (Protection) Act, 1986 (hereafter EPA) was passed by the parliament to close any holes left in India's primary environmental legislation following the Water and Air Act. The EPA was established with the intention of protecting and enhancing the environment. The Schedules annexed to the Environment (Protection) Rules of 1986 include emission criteria that the government may additionally establish (hereinafter EPR). Additionally, in addition to general emission requirements, the regulations created under the EPA also establish emission criteria for particular sectors. National Ambient Air Quality Limits are covered in Schedule VII of the EPR. This section outlines "different standards and concentrations for industrial, residential, rural, and sensitive locations and are meant to safeguard human health, vegetation, and with a reasonable margin of safety." In addition, the Central Government passed the Ozone Depleting Substances (Regulation and Control) Rules, 2000, using the authority granted to it by EPA Sections 6, 8, and 25. According to the regulations, no one may produce, use, import, or export ozone depleting chemicals to or from any nation without first obtaining a licence from the relevant government. As was already said, India still lacks a fundamental legislative framework that addresses climate change. However, in the lack of comprehensive legislation, the judiciary has taken an active role in defending the environment as and when matters connected to climate change have come before the courts. However, there are extremely few climate-related lawsuits that make it to the courts.

Climate Change Litigation in India:

The issues brought on by climate change have been attempted to be addressed by the Supreme Court of India by interpreting Article 21 of the Constitution liberally. It has been decided that the right to clean air and water for a full enjoyment of life is included in Article 21 of the Indian Constitution. In the *Kedia Leather & Liquor Ltd.* case, the Supreme Court ruled that environmental, ecological, air, and water pollution violated the constitutional guarantee of the right to life in Article 21. A healthy lifestyle includes having a clean surroundings. It should be noted that "the Supreme Court, via its different decisions, has given effect to the rights afforded to the citizens and people alike, under Article 21, in order to safeguard 'life', in order to protect 'environment', and in order to protect 'air, water, and soil' from pollution. The Court, in the exercise of its authority under Article 32, has awarded damages against those who have been accountable for upsetting the ecological balance by operating industries or engaging in any other activity that has the effect of causing environmental pollution in the matter of upholding fundamental rights under Article 21 under the public law domain. The "Polluter Pays Principle," which is generally recognised as a way to pay for the expense

of pollution and regulation, is enforced by the court while also awarding damages.

International Community and Climate Change:

UNFCCC

A global agreement known as the United Nations Framework Convention on Climate Change (UNFCCC) was ratified by 197 nations in 1992. The agreement was made to study global warming and to be ready for its effects (e.g. temperature change and other climatic events). The UNFCCC outlines an agreement that encourages cooperation among nations to address climate change's concerns in the interest of people's safety. Parties to the Convention acknowledge that the climate is a common resource whose stability is of paramount significance and that it may be impacted by emissions of carbon dioxide and other greenhouse gases. Establishing a reporting structure that provides data on greenhouse gas emissions and removals using uniform categories and definitions is one of the UNFCCC's accomplishments. This framework supports submission of data from most of the nations who are parties to the Convention. This information offers crucial information to:

1. " Climate scientists (looking at the relationship of greenhouse gas emissions, temperature change and other environmental factors) in predicting whether climate change and the speed of climate change pose a significant risk to humans or the environment.
2. Follow the development of past trends in emissions and removal.
3. Prioritize efforts for emission reduction."

Kyoto Protocol

It was the first international agreement with a requirement for governments to cut greenhouse gas emissions. The Kyoto Protocol was originally endorsed by nations in 1997, and on February 16, 2005, it came into effect. The UNFCCC's primary goal, "stabilisation of greenhouse gas concentrations in the atmosphere at a level that would preclude hazardous human interference with the climate system," is extended by the Kyoto Protocol. Additionally, the Protocol requires industrialised nations to cut down on emissions since historically, they are to blame for the atmosphere's present concentration of greenhouse gases. Almost all nations have ratified the pact, with the exception of the United States of America. Given that emerging nations like China, India, Brazil, and South Africa only made up a tiny portion of the world's existing greenhouse gas emissions, it is significant that under the terms of the pact, these nations were not required to cut their emissions. Copenhagen Agreement A political agreement was reached by world leaders at the 2009 U.N. Climate Change Conference in Copenhagen, which included explicit emission commitments from all major economies, including China and other significant developing nations. However, one of its main criticisms was that it did not clearly outline a path toward a treaty with binding commitments. At the Copenhagen meeting, the 193 nations chose to only "recognise" the agreement rather than endorse it amid contentious talks.

Paris Agreement 2015-

The Paris Agreement, sometimes referred to as the Conference of Parties Protocol on Combating

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Climate Change, is the first comprehensive framework in the world to address the phenomena under the UNFCCC. The deal was agreed in Paris by 197 nations; it won't go into effect until at least 55 percent of the world's emitting nations have ratified it. The Paris Accord becomes effective on November 4, 2016. The main objective of the Paris Agreement is to strengthen the international response to the threat posed by climate change by limiting the increase in global temperature this century to well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to further reduce the temperature increase to 1.5 degrees Celsius. The accord also intends to improve nations' capacity to cope with the effects of climate change. A new technological framework, improved capacity development framework, and appropriate financial flows will all be implemented in order to achieve these lofty goals, supporting the action of developing nations and the most vulnerable nations in accordance with their respective national aspirations. Through a stronger transparency framework, the Agreement also calls for more action to encourage transparency. Regarding India, the Paris Agreement is crucial in that it requires the country to cut its carbon footprint by 33–55% from 2005 levels by 2030. India accounts for nearly 4% of global emissions.

Conclusion:

The study covered the mounting climate change worries India is experiencing. Enacting specific laws that combat climate change is urgently needed. Since India's current legal system has significant implementation gaps, individual State governments must pass suitable laws to reduce greenhouse gas emissions and combat climate change. Setting long-term goals to lower emissions of these hazardous gases may also be beneficial. Additionally, there is a rising need to provide funds for increasing domestic research capability. This will make it easier to assess how climate change would affect various industries. There hasn't been any clear study done yet on how climate change will affect India. Other measures can include expanding the use of LED lighting, using compressed natural gas as fuel, establishing stricter standards for automobile emissions, and using renewable energy sources. A robust national environmental strategy is required, one that includes unambiguous guidelines for waste management and environmental contamination while granting permits to industrial facilities. Since cars play a large role in air pollution, a workable solution must be found to address this problem. The State must take the lead in promoting community involvement in pollution monitoring. India has ratified a number of international climate change treaties, as the report demonstrates. However, the Indian State cannot directly execute any of the clauses in such international accords. To execute such principles in word and spirit, India must draught new laws that include them. In addition, people who violate the laws intended to protect the environment and combat climate change must face severe penalties. The Apex Court may suo moto take up crucial matters like climate change, environmental protection, and its effects on the poor and vulnerable in cases where public interest litigations are not filed. Where the State fails, the Apex Court may enact laws that are obligatory on everyone in its function as a court. The only way to effectively combat climate change and reduce its negative effects on people, particularly the underprivileged, is for the government, the judiciary, and civil society to work together.

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