



# India's Climate Odyssey: Analysing Current Challenges and Legislative Frameworks in Climate Change

Chitralli Bapuli

*Student, Amity Law School, Amity University, Kolkata.*

Date of Submission: 08-07-2024

Date of Acceptance: 23-07-2024

## Abstract

The urgency to address climate change has reached critical levels globally with the year 2024 experiencing various heightened climatic concerns ranging from global warming to water scarcity and drought. International organizations such as Intergovernmental Panel on Climate Change (IPCC), the United Nations Developmental Programme (UNDP), United Nations Framework Convention on Climate Change (UNFCCC) and the World Health Organization (WHO) are actively engaged in finding solutions to climate change. However, the problems persist especially in India, a nation recognized for its ongoing struggle with climate change and global warming. This paper aims to discuss the effect of climate change and global warming in India. It is important to understand the effects of climate change in temperature levels, monsoon patterns and economy of the nation to find an optimal solution. Furthermore, this paper analyses the constitutional remedies and legal framework enacted in order to enhance environmental protection and punishing the perpetrators of environmental degradation. By addressing this pressing issue, this paper proposes certain recommendations to effectively mitigate these challenges such as investment in renewable energy infrastructure and harnessing technological innovations to minimize carbon footprints. In addition to the national organisations and NGOs, it is incumbent upon the citizens to actively contribute in dealing with environmental challenges. This paper not only serves as an academic exploration of these challenging issues but also stands as a testament to collective action required from all Indian citizens to safeguard the environment for the future generations.

**Keywords:** Environment, global warming, degradation, temperature, sustainability.

## I. Introduction

Ban Ki-Moon, the former Secretary-General of UN stated "Climate change is the single greatest threat to a sustainable future, but, at the

same time, addressing the climate challenge presents a golden opportunity to promote prosperity, security and a brighter future for all." According to the United Nations Framework Convention on Climate Change (UNFCCC), climate change has been defined as long-term shifts in temperatures and weather patterns. While the shifts can be natural, due to changes in solar radiations or volcanic eruptions, since the 19<sup>th</sup> Century, human activities have shaped the dynamics of climate change, for instance, combustion of fossil fuels such as coal, oil and emission of greenhouse gases.

The world is facing unprecedented challenges due to the excessive damage to the ecosystem. This damage stems from a myriad of natural phenomena and man-made activities and it includes pollution, deforestation, droughts, soil erosion, oil spillage, forest fires, depletion of ozone layer and global warming. The severity of the climatic disruption has reached a point that the scientists urge to refer to this issue as a 'climate crisis' rather than climate change. According to the Global Climate Report for April 2024, the month of April was the hottest April on record in NOAA's 175-year record. There has been a broad change in the pattern of temperature all across the globe which has remained much higher than usual. The condition in India has worsened. There have been warnings issued by the Meteorological department for states such as Punjab, Haryana, Delhi, Rajasthan and Uttar Pradesh, highlighting the likelihood of heat stroke related illnesses and fatalities. Global warming has also resulted in accelerating the melting of glaciers worldwide. It has been reported that the glaciers in Jammu and Kashmir are melting fast, by more than half a meter every year.

The Declaration of the United Nations Conference on Human Environment has been a major attempt internationally to prevent environmental degradation. In India, the Environment (Protection) Act, 1986, the Air (Prevention and Control of Pollution) Act, 1981, the Water (Prevention and Control of Pollution) Act, 1974, The National Action Plan on Climate Change



(NAPCC), 2008 and the Forest (Conservation) Act, 1980 are some of the major acts that reflect the commitment to take appropriate measures for the protection of the ecosystem. Addressing the challenges posed by climate change and global warming necessitates collaborative efforts from the Indian Government to work with international organizations and increase financial investments in research and innovation to create a sustainable future.

### Effect of Climate Change and Global Warming in India

Climate change is commonly perceived to only include the long-term effects due to alterations in temperature levels. However, these shifts also have an impact on the precipitation patterns, droughts, health problems and rising sea levels. There are several major consequences of climate change in India:

1. Global warming significantly impacts the temperature which ultimately results in the melting of glaciers and changes in river flow patterns. This poses major challenge to agriculture and availability of freshwater resources. Due to the excess water in the rivers, communities settled nearby have to abandon their settlements due to the risks of floods. The abandoned houses in the eastern state of Odisha serve as an example of the devastating effect of land erosion and changes in the sea level caused by climate change.
2. Approximately 500 million people depend upon water from the rivers to support their economic endeavours. The possibility of diminishing river flows in the future resulting in insufficient energy being derived from hydropower may lead to profound implications.
3. The climate change and global warming exert a considerable influence on the overall monsoon patterns in the country. Due to sporadic floods and droughts throughout the year, there exists variability in agricultural yield.
4. Climate change amplifies concerns regarding the spread of communicable and non-communicable diseases. In India, the scope of this problem is substantial as climate change often intensifies the spread of malaria, dengue, yellow fever, cholera, and as well as chronic diseases, particularly among the population who have to survive in pollution, contaminated water and malnutrition.
5. Lastly, the overall economic growth of the country is stunted due to climate change. India

is an agriculture dependent economy. Challenges in irrigation often arise. The devastating North Indian Floods in 2013 that caused massive destruction to roads, bridges and infrastructures is a stark example of an environmental catastrophe caused by the combination of various factors like heavy rainfall and melting of glaciers. According to RBI's Department of Economic and Policy Research (DEPR) in its latest report on Currency & Finance 2022-23, stated that climate change due to rising temperature and altered patterns of monsoon rainfall in India could diminish 2.8 percent of India's GDP and lower the living standards of half of its population by 2050.

### Legal Frameworks: Current Landscape and Challenges

The Stockholm Conference of 1972 is a pivotal moment in the history of environmental protection. Principle 1 of the Stockholm Declaration states that "man has the fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being, and he bears a solemn responsibility to protect and improve the environment for present and future generations." This principle therefore, imposes a responsibility on all human beings to protect the natural resources for the present and future generations. In 1997, the Kyoto Protocol, a historical agreement was signed to mandatorily limit greenhouse gas emissions caused due to global warming. However, massive carbon emitting countries like India and China have faced significant trouble in reaching this goal. The Central Government of India exercises power to regulate such emissions under the Environment (Protection) Act, 1986. Additionally, Article 32 and 226 of the Indian Constitution provide the citizens the option to approach the Supreme Court or the High Court respectively to file a Public Interest Litigation (PIL) in relation to environmental affairs. The right to live in a healthy environment integral to Article 21 of the Constitution was first recognized in the case of Rural Litigation and Entitlement Kendra vs. State of Uttar Pradesh (1988). Furthermore, right to clean drinking water has been interpreted as a fundamental right under Article 21 in Narmada Bachao Andolan v. Union of India (2000). In Subhash Kumar v. State of Bihar (1991), the Supreme Court had observed that right to enjoyment of pollution free water and air is included under Article 21 of the Indian Constitution. The Indian Judiciary has consistently accorded high



priority to environmental protection and passed significant judgments in its favour. The right to equality under Article 14 of the Indian Constitution also ensures that there is no partiality and arbitrariness in the availability of an equitable living environment for all citizens. Furthermore, Article 48A of the Directive Principles of State Policy (DPSP) came to be inserted in the Constitution of India casting a duty on the State to secure public health and protect and improve the environment.

Among the legislative frameworks enacted to address environmental concerns, the Environment (Protection) Act, 1986 holds greater significance in relation to climate change concerns that India faces today. Section 3, 4, 5, 6, 10, 11, 20, 23 and 25 of the Act provides the Central Government several powers for protecting and enhancing the environment. Section 15, 16 and 17 of the Environment (Protection) Act of 1986 stipulates penal provisions for general offences, offences by companies and by governmental departments respectively. Moreover, the Air Prevention and Control of Pollution Act, 1981 has been enacted to inspect and regulate harmful effluents released from industries. The Forest Conservation Act, 1980 focuses on protecting the forests existing in India and combating deforestation which is a significant contributor to climate change. The National Green Tribunal Act, 2010 has been enacted for the speedy disposal of cases involving environmental disputes.

Despite landmark judgments being passed, India continues to face a number of challenges regarding environmental degradation. An increase of greenhouse gases like Chlorofluorocarbons (CFCs), Methane (CH<sub>4</sub>), Nitrous oxide (N<sub>2</sub>O), Carbon dioxide (CO<sub>2</sub>), and Ozone (O<sub>3</sub>) in the atmosphere is a huge factor contributing towards it. Concurrently, factors such as transportation, burning of fossil fuels, deforestation, rapid urbanisation and overpopulation contribute towards deteriorating the condition of various regions of the nation. Many parts of India are already experiencing water scarcity and non-availability of safe drinking water. Even without the risks brought by climate change, satisfying future demand for water will be a major challenge to overcome. The challenges posed by urbanization, population growth, economic development, and water scarcity are anticipated to aggravate the current environmental situation.

The National Action Plan on Climate Change (NAPCC) was issued on 30th June 2008. This plan consists of 8 sub-missions to help develop ecological sustainability in India, such as the

National Solar Mission (NSM), National Mission for Enhanced Energy Efficiency (NMEEE), National Mission on Sustainable Habitat (NMSH) and National Water Mission (NWM). However, attaining these objectives is a complex endeavor and requires cooperative efforts. The fundamental duties enshrined in Article 51A of the Indian Constitution mandates every citizen to protect and improve the natural environment. Climate change poses risks of increased illnesses and mortality rates, causing substantial damage to property, infrastructure, and economic stability. Article 51-A (g) of the Indian Constitution states the duty of every citizen of India to protect and enhance the natural environment including forests, lakes, rivers and wild life. Therefore, urgent action is imperative to mitigate environmental risks and promote a sustainable environment for the present and future generations of the nation.

## II. Suggestions

1. The effects of climate change and particularly global warming is being felt all across the country. It is crucial to take proper care of the vulnerable communities and ensure their voices reach the policymakers who can formulate policies benefitting the larger community.
2. There is a pressing need to raise awareness about the grave challenges India faces today. Many people, especially in rural areas, lack awareness of the gravity of the situation and continue to rely on traditional practices that contributes further to the environmental degradation.
3. Given industrial plants contribute significantly to India's economic growth and in creating new jobs, it is imperative to adopt alternative measure to mitigate the harmful effluents being released from these plants without compromising the industrial operations. Installing technologies such as carbon absorbers, wet scrubbers, gravitational settlement chambers and biofilters can help in addressing this situation.
4. India has an ambitious target of reaching 500 GW of renewable energy installed capacity by 2030. Renewable sources of energy such as solar, wind, hydropower and biomass should be emphasized and utilized over conventional fossil fuels such as coal, natural gas and crude oil. As of May 2024, India has achieved a combined installed capacity of 195.01 GW from the renewable sources of energy.



5. Transportation vehicles are major contributors of toxic effluents into the atmosphere. Transitioning to Electric Vehicles (EVs) is a highly effective strategy, as they utilize cleaner energy sources, thus safeguarding the environment.
6. During the United Nations Sustainable Development Summit in 2015, Prime Minister Narendra Modi emphasized that “Sustainable development of one-sixth of humanity will be of great consequence to the world and our beautiful planet. It will be a world of fewer challenges and greater hope; and, more confident of its success”. In accordance, NITI Aayog in India has been entrusted with the task of coordinating the Sustainable Development Goals (SDGs), mapping schemes and identifying lead and supporting ministries for each goal. Progress towards achieving SDGs not only benefits India but also contributes to global efforts in improving climatic conditions and building a healthier and sustainable environment.

### III. Conclusion

Amina J. Mohammed once stated, “We are the last people on the planet. We have no excuse for failure.” The challenge of climate change and global warming has emerged as one of the foremost concerns of the 21<sup>st</sup> Century. Climate change poses an existential threat not only to India but to the entire planet. As a nation, India has always been proactive in assisting countries in need. Today, it is necessary for India to adapt this approach and address its own challenges and contribute towards finding global remedy.

India has made robust environmental legislation and policy frameworks such as the Environment (Protection) Act, 1986 and initiatives like the National Action Plan on Climate Change (NAPCC). However, effective implementation of these initiatives remains a critical challenge. There is need for stringent enforcement of environmental laws and accompanied by punitive measures against violators. Simultaneously, innovative approaches in renewable energy adoption, sustainable lifestyle and international collaboration are paramount. By effective implementation of necessary policy, India can serve as an example of a country dedicated to preservation and protection of the environment for its citizens.

### References

- [1]. Yadav, M., & Kumar, R. (2019). Impact of Climate Change and Global Warming in India (With a Special Reference to Its Stand on Climate Change in International Forums). SSRN Electronic Journal.
- [2]. Sachs, J. D., & Warner, A. M. (2001). The curse of natural resources. *European Economic Review*, 45(4–6), 827–838. [https://doi.org/10.1016/s0014-2921\(01\)00125-8](https://doi.org/10.1016/s0014-2921(01)00125-8)
- [3]. United Nations. (n.d.). What is climate change? United Nations. <https://www.un.org/en/climatechange/what-is-climate-change>
- [4]. Sultana, N. (2023, August 23). How climate change can impact GDP and jobs. *Forbes India*. <https://www.forbesindia.com/article/take-one-big-story-of-the-day/how-climate-change-can-impact-gdp-and-jobs>
- [5]. World Bank Group. (2023, March 31). India: Climate change impacts. World Bank. <https://www.worldbank.org/en/news/feature/2013/06/19/india-climate-change-impacts>
- [6]. Sharma, S., & Sharma, S. (2024, May 21). India’s climate change policy: challenges and recommendation. *Indian School of Public Policy* -. <https://www.ispp.org.in/indias-climate-change-policy-challenges-and-recommendations/>
- [7]. Renewable energy in India - Indian Power Industry investment. (n.d.). Invest India. <https://www.investindia.gov.in/sector/renewable-energy>
- [8]. Sustainable Development Goals | The United Nations in India. (n.d.). Sustainable Development Goals | the United Nations in India. <https://india.un.org/en/sdgs>
- [9]. Dutta, T. (2023, December 12). India’s ghost village, where sinking houses tell a story of climate change. *The National*. <https://www.thenationalnews.com/weekend/2023/12/08/india-climate-change-cop-28-cyclone-storms/>