



Problem of Climate Change and Judicial Interpretation of Environment Protection Principles

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I. Introduction

One of the biggest problems in India is climate change. Given that many Indians live in poverty and might be impacted by climate change, it is a serious problem. Additionally, India is at risk from the adverse effects of climate change. Farming and other climate-sensitive jobs employ around half of India's workforce. India loses an enormous amount of money and the well-being of individuals every year due to climate change-related disasters like droughts and floods. India is the third greatest emitter of greenhouse gases in the world, behind the United States and China. This suggests that India creates a lot of environmental pollution. Globally, local, state, and federal governments are now primarily concerned with climate change and energy. Even though India has previously stated that it is not accountable for previous greenhouse gas emissions due to its status as a developing nation with historically low emissions per capita, it has now become a key participant in global negotiations and has begun enacting laws and policies pertaining to climate change at the federal and state levels in an effort to increase energy efficiency and create clean energy sources. The Indian government has taken steps to cut greenhouse gas emissions and meet international obligations, even though it is not currently in charge of doing so. In India, environmental regulations are essential for controlling climate change, cutting greenhouse gas emissions, and setting up rooftop solar panels. The problem of climate change is being monitored and regulated by Ministry of Environment, Forest and Climate Change (MoEFCC). Also, National Action Plan on Climate Change was also launched in 2008 by the Prime Minister Council for Climate Change (PMCCC). It was a revolution in concern to the climate change.

Keywords: *Environment, Climate Change, Pollution, Environmental Law, Sustainable Development*

II. Understanding Climate and Climate Change

Despite their inherent similarities, the phrases ‘*climate*’ and ‘*climate change*’ are sometimes used interchangeably, which causes misunderstanding. Gaining an understanding of the difference is essential to appreciating the complexity and seriousness of the global environmental crisis.

Climate: A region’s or the planet’s overall a long-term normal weather trends are referred to as its climate. This comprises variables that are averaged across time periods ranging from decades to millennia, such as temperature, precipitation, humidity, wind, and air pressure. Climate is a statistical representation of the atmospheric conditions over a long period of time, giving a baseline understanding of usual circumstances. It is not only the weather on a particular day. The temperatures of the various locations vary greatly, ranging from the sweltering Sahara Desert to the freezing Arctic.

Climate Change: Significant and long-lasting modifications to these long-term weather patterns are referred to as climate change. Although changes in climate occur naturally throughout time, the current pace and scope of these changes are unprecedented. Human activity is the main cause of these changes, especially the release of greenhouse gases (GHGs) from industrial operations, deforestation, and the burning of fossil fuels, such as carbon dioxide, methane, and nitrous oxide. The greenhouse effect, which is caused by these GHGs trapping heat in the atmosphere, causes the world to warm.

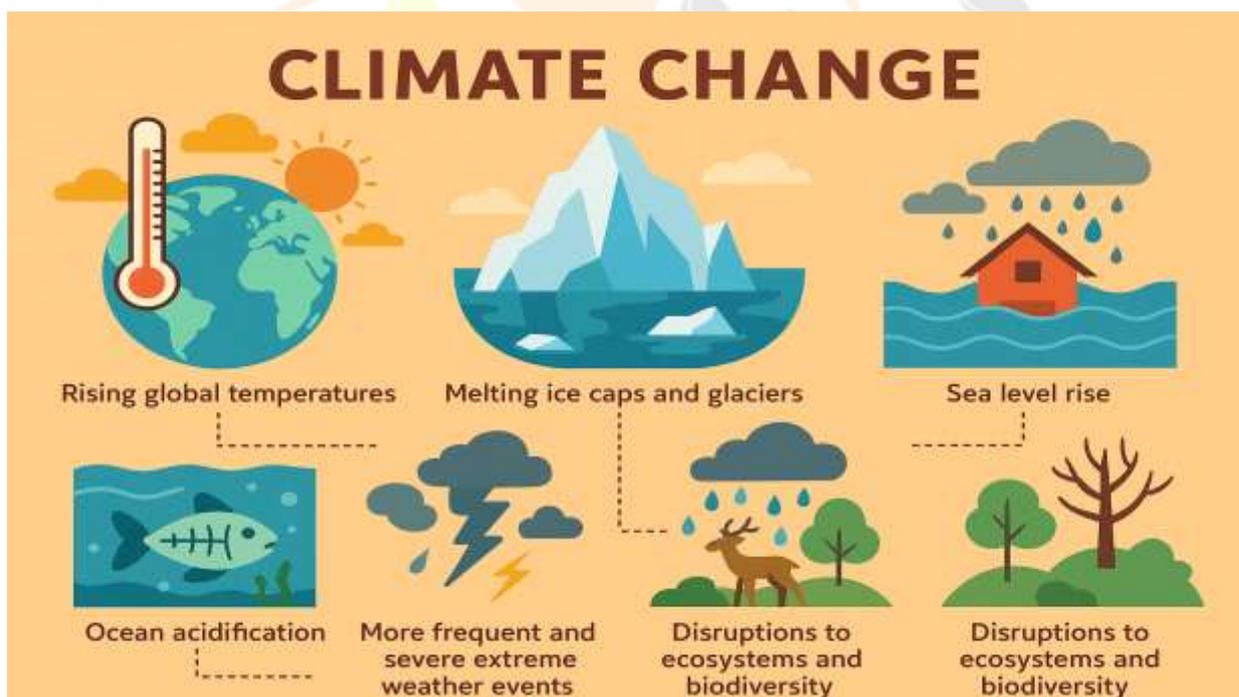


Fig 1: Effects of Global Change

III. Causes of Climate Change

The long-term change in the global temperature and weather patterns, known as climate change, is no longer a hypothetical threat; rather, it is a current reality that affects people all over the world. Addressing this intricate problem requires an understanding of its causes. Although there have always been natural changes in the climate, human activity is mostly responsible for the present fast warming trend. The main causes of anthropogenic (induced by humans) climate change are examined in this article.

- **Emission of Greenhouse Gases (GHGs):** This is among the major causes of climate change. Enormous greenhouse gases are emitted into the sky when these fossil fuels are consumed for transport, and industries as well as power generation. The principal ones that mostly cause the greenhouse effect leading to heat retention are Carbon Dioxide (CO₂), Methane, and Nitrous Oxide. Though this impact is natural and necessary for life on Earth, the higher concentration of greenhouse gases has been increased to cause global warming by human activity.
- **Combustion of Fossil Fuels:** Carbon dioxide (CO₂) and other greenhouse gases are released into the atmosphere in abundant quantity when fossil fuels like coal, oil, and natural gas are burned. Global warming results from these pollutants' enhancement of the greenhouse effect, which traps heat. Rising temperatures, ice cap melting, harsh weather, and ecological disturbances are all consequences of the ensuing climate change. Acid rain and air pollution are also caused by the combustion of fossil fuels, which releases pollutants including sulphur dioxide and nitrogen oxides. Reducing reliance on fossil fuels and switching to renewable energy sources are essential measures in minimizing environmental harm and guaranteeing a sustainable future, as fossil fuels are the main cause of anthropogenic climate change.
- **Deforestation:** Large volumes of carbon dioxide (CO₂) are absorbed from the atmosphere by forests, which serve as essential carbon sinks. Deforestation is one of the biggest problems when there is an era of industrialisation and urbanisation. Trees are cut down for fuel and timber, as well as to make room for mining, infrastructure, and farming. This activity disturbs the natural cycle and the natural carbon cycle in addition to causing biodiversity loss. Trees store carbon in their trunks, branches, and leaves after absorbing it during photosynthesis. This stored carbon is released into the atmosphere when trees are felled or burned, raising the concentration of greenhouse gasses and causing global warming. Because they absorb more CO₂ than they release, forests serve as natural carbon sinks.
- **Land Utilization:** Because human-induced processes like agriculture, deforestation, and urbanization have a major influence on the Earth's climate, land use and environmental degradation are closely related. Land utilization means that humans are using land so roughly that they are not paying a basic attention for the land conservation. Land is used for industrialization, making infrastructures or even agricultural land is being used by humans with lots of fertilizers resulting in releasing of methane, ammonia etc.
- **Black Carbon:** A significant contributor to soot, black carbon is a powerful pollutant that warms the climate and is created when fossil fuels, biofuels, and biomass are not completely burned. Although black carbon has a short atmospheric lifespan compared to greenhouse gasses, which remain in the upper atmosphere for decades, it has a significant warming impact because it absorbs sunlight and heats the air around it. By

darkening surfaces and decreasing their capacity to reflect sunlight, it also speeds up the melting of snow and glaciers (*albedo effect*). Black carbon also has a role in environmental deterioration and respiratory illnesses. A key goal in international efforts to slow down climate change is lowering black carbon emissions via cleaner energy technologies, better cookstoves, and stronger industrial controls. This might enhance public health and have direct climate benefits.

IV. Distinction Between Climate Change and Pollution

Both terms ‘Climate change’ and ‘pollution’ are deeply connected to each other. Sometimes it may feel that climate change and pollution are similar or equivalent to each other, but it is not true. Both the terms are definitely concerned with the environment but the pollution seems to be tiny in front of climate change. Here is a short table to understand the difference between these two.

<i>S. No.</i>	<i>Aspects</i>	<i>Climate Change</i>	<i>Pollution</i>
1	Defining	Long-term variations in typical weather patterns which have come to characterize local, regional, and global climates on Earth are referred to as climate change.	The introduction of hazardous substances or pollutants into the environment is referred to as pollution.
2	Time Span	It has long-term of span ending upto decades and centuries	Mostly Short-term, but may vary from time to time.
3	Geographical Impact	Global impact with regional variations (e.g. temperature rise, melting iceberg)	May vary from region to region (marine pollution, water pollution)
4	Major Affecting	Highly affecting biodiversity, mountains, temperature rise etc.	Effects health by contamination of water, air etc.
5	Key Causes	Greenhouse Gases, carbon Emission, Fossil Fuel Combustion	Domestic Waste, Industries, Vehicles, Agriculture,

V. Climate Change and Judicial Interpretations to Major Environmental Principles

- Polluter Pays Principle and Climate Change:*** One key idea in the battle against climate change is the polluter pays approach (Polluter Pays Principle). It suggests that companies that harm the environment should pay for actions done to save the environment and public health. This encourages companies to invest in renewable energy and reduce emissions. The establishment of the ‘*Green Tax Fund*’ to protect the environment is one of the many initiatives in India that have benefited from the PPP. This mitigates the consequences of climate change and promotes sustainable growth. The PPP is important for discussing loss and damage as well as the CBDR idea, even though it is not included within global climate treaties. The PPP, a potent tool for addressing climate change, aims to hold polluters accountable and promote a cleaner, sustainable future.

Given that many trades emit greenhouse gases that are harmful to the environment and public health, the Supreme Court's held and applied the PPP in the case of *Indian Council for Enviro-Legal Action v. Union of India*¹ is significant in light of climate change. By holding polluters responsible for their activities, the PPP idea incentivizes companies to reduce emission levels and make investments in sustainable energy alternatives. The Indian Supreme Court's ruling provides an important precedent for tackling the repercussions of pollution and climate change by insuring individuals that are responsible for the degradation of the environment be held responsible for the harm they cause. The importance of the PPP concept in Indian environmental law was brought to light by the case of *Vellore Citizens' Forum v. Union of India and Ors.*². This concept is crucial for holding polluters accountable for the harm they cause to the environment and human health. By seeing the PPP as a component of sustainable development, the Court emphasized the need of fostering an atmosphere that is healthier and safer for everybody. Regarding climate change, this is crucial as greenhouse gas emissions are putting the planet and its inhabitants in jeopardy. The PPP may mitigate these consequences and advance a sustainable future by incentivizing companies to invest in cleaner technologies and reduce their emissions. Every decision made by the court established under India's the NGT Act (National Green Tribunal Act 2010) to deal with climate change and environmental challenges, preserve sustainable growth, and lessen the effects of climate change is based on the Polluter Pays Principle. Climate change mitigation is addressed by the NGT Act, which also requires polluters to repair any harm they have caused and provides relief, compensation, and restitution to victims of pollution and damages to the environment.³

In this context NGT said in the case of *Dr. Karan Singh v. State of Himachal Pradesh*⁴ that: *According to the 'Polluter Pays' principle, the municipality of Shimla and Solan may think about collecting suitable financial contributions for the disposal of Municipal Solid Waste (MSW) and levying fees on households within their boundaries based on the size and type of the homes.*

The NGT allowed the Corporation and Delhi Jal Board to ask the public for PPP funds in order to compensate for the contamination of the Yamuna River in the case of *Manoj Misra v. Union of India*⁵. The NGT suggested using a proportion of each resident's individual property or house taxes as the foundation for calculating the amount of environmental compensation that Delhi residents must pay. The case demonstrates how crucial PPP is to preserving sustainable development in the context of climate change and holding individuals and companies responsible for environmental damage.

Also, in the case of the *Court on its Own Motion v. State of Himachal Pradesh*⁶ the NGT established a dedicated fund called the '*Green Tax Fund*'. By allowing visitors to enter the Rohtang Pass glacier for a fee of Rs. 100 for

¹ (1996) 3 SCC 212

² (1996) 5 SCC 647

³ NGT Act 2010, Section 20

⁴ M.A. No. 51/2020 (Original Application 168/2013)

⁵ 2015 SCC Online NGT

⁶ 2014 SCC Online NGT

heavy cars, Rs. 50 for small vehicles, and Rs. 20 for CNG or electric buses, the environment would be protected and climate change would be mitigated.

- **Precautionary Principle and Climate Change:** One of the major principles of environmental law, Precautionary Principle, it offers a legal basis for implementing preventative measures in policymaking to lessen potential risks associated with climate change to the environment or public health. Several international environmental aligns, such as Principle 15 of the 1992 Rio Declaration, make reference to this idea. States parties are required under Article 3 of the United Nations Framework Convention on Climate Change (UNFCCC) to adopt preventative, preventive, or mitigation actions to foresee, avoid, or lessen the causes of climate change and lessen its negative effects. The language emphasizes that even in cases where there is no scientific agreement about the cause and effect, precautionary measures must be taken when human activity endangers the environment or public health.

In India, the precautionary principle plays a crucial role in environmental governance, climate change mitigation, and sustainable development by protecting both the environment and the health of the public. The Supreme Court in India has approved its implementation, which was founded on constitutional clauses such Articles 21, 48A, and 51A. The Supreme Court in the case of *Vellore Citizen Welfare Forum v. Union of India*⁷, ruled that state governments and regulatory bodies have an obligation to identify, stop, and address the causes of environmental degradation that might contribute to climate change. Applying the precautionary principle, the Supreme Court of India stopped industrial operations that might be contributing to climate change and ruled that environmental clearance could only be given following the completion of all required Environmental Impact Assessment (EIA) procedures, including public consultation, screening, scoping, and assessment.

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In the popular case of *M.C. Mehta v. Union of India*⁸, the court prohibited businesses surrounding the site of the Taj Mahal from burning coal in their operations by using the precautionary principle in the context of mitigating climate change. The Taj Mahal is thought to have been impacted by coal burning. The precautionary principle served as the foundation for the court's ruling.

- **Public Trust Doctrine and Climate Change:** The public trust doctrine however originated 1500 years ago in Roman Empire. But today also it has the similar significant as it has been in that era. Public Trust Doctrine is all about the conservation of natural resources by the State as 'Trustee' in the benefit of public and natural resources are considered as 'trust'. In this context a famous case *M.C. Mehta v. Kamal Nath*⁹ was dealt by

⁷ (1996) 5 SCC 647

⁸ AIR 1997 SCC 734

⁹ (1997) 1 SCC 388

the Supreme Court. In this instance, a hotel built on the river Beas threatened the ecology. The S.C. (Supreme Court) used the Public Trust Doctrine, which to hold that the government must safeguard natural resources and public property. The hotel chain was told to fix the damage and prevent other injuries. The court stated that preserving the environment is crucial to sustaining life on Earth and emphasized the significance for sustainable development strategies to mitigate the consequences of climate change.

In the case of *Radhey Shyam Sahu v. M.I. Builders Pvt. Ltd*¹⁰ the court cited the public trust doctrine underlying the 'right to life', the court ruled that the garden for the public use was an asset of the public and stopped the construction of a shopping centre. According to the court, authorizing the structure would be against the Art. 21 of the Indian Constitution, which safeguards everyone's right to a decent standard of living. According to the court, the Public Trust Doctrine mandates that the government protect the public park for the betterment of locals and lessen the consequences of climate change. In another popular case¹¹ Climate change and extensive environmental harm cannot be sacrificed for economic growth. Maintaining the ecology and ecological equilibrium while making economic and other advancements is crucial.

In the case of *Shailesh R. Shah v. State of Gujrat*¹² the court held that all resources, including wetlands, lakes, ponds, and natural gas, are under the State's trusteeship. For the interest of the affected people, the state is in charge of protecting and conserving these resources. According to the court, it is the state's duty to prevent environmental degradation and extinction, protect natural resources, and slow down climate change. Through the application of the 'public trust doctrine', 'polluter pays', and 'precautionary' principles, the court has expanded the scope of 'basic rights' to encompass climate change.

Climate change is the major concern in past few years and various laws; policies and judicial interpretation has been trying to sort out such major problem. We are familiar to these above-mentioned principles of environmental law. These principles are not only adopted to Indian legal system but they have a great significance globally. Although, these principles are not adopted by social aspects strongly but the Indian Judiciary has reminded these in several case laws from time to time.

VI. Conclusion and Suggestions

Climate change is the concern for the whole world. Human activities have made several changes in the climate. Climate has not only affected the seasons or temperature but it also put the increment to humans, wildlife, vegetations, marine creatures etc. Numerous actions have been taken by the Indian government to alleviate the grave climate change scenario. The responsible body for climate change in India is considered as Ministry of Environment, Forest and Climate Change (MoEFCC). It has taken a number of climate-friendly actions, especially in the field of renewable energy. India implemented a number of legislative efforts and actions to raise awareness of climate change and support the development of adaption measures' capabilities. In order to

¹⁰ AIR 1999 SC 2468

¹¹ Indian Council for Enviro-Legal Action v Union of India, AIR 1996 SC 1446

¹² 2002 (43) 2 GLR 2295

make the forest area more fertile and greener, it started a program called 'Green India' that involves planting different kinds of trees. Many initiatives in context to the climate change like National Solar Mission, National Water Mission, National Mission for Enhanced Energy Efficiency etc. has been launched by the Government of India. To effectively tackle the issues of climate change, we must adhere to the principles of sustainable development. Since fossil fuels are the primary source of global warming, we must reduce our usage of them. To accomplish a gradual shift to sustainable energy, we must embrace alternative energy sources like hydropower, solar, and wind.

In context to the climate change there has been several initiatives taken to combat this particular problem. Climate change is the result of the activities made by human beings. Although, there is no perfect solution to the same but in reference to this article, there may be various suggestions:

- There are many legislations in India regarding environmental protection like- Water Act, Air Act, Environmental Protection Act, etc. but it seems that there is a lacuna of provision related to climate change. It is suggested that there must be either some provision or a separate legislation regarding climate change. It may be named as the Protection of Climate Act or may be some other name, but the primary objective is to combat against climate change.
- Another step or measure which can be taken for climate change is to provide some constitutional values. Once in 1976 the 42nd amendment has provided a special provision for environmental protection as Article 48-A, similarly there is a need of such Article to be added which focus over climate change. Some other provisions of the Indian Constitution are also there which focusses over the environmental protection. Fundamental Rights, DPSP and Fundamental Duties has several provisions. These provision imposes the liability to protect the environment towards citizens as well towards State.
- Some special agency or body must be constituted to observe the activities regarding climate change. However, MoEFCC plays a vital role for the same but it is necessary to constitute a separate institution for climate change like Greenpeace, HEAL (Europe), SDCEA (South Africa).
- NGO must motivate the society about climate protection. In India there are more than 1500 NGOs working for the climate change but still there are not so many which can help out people and aware them about the climate change.
- 'State' being the "Trustee" for Public (as per Public Trust Doctrine) must take strict actions against the private use of natural resources. Like in the case of *Kamal Nath*¹³ where the Public Trust Doctrine was applied and court restricted the use of natural resources privately. Similarly, State must follow-up with some policies by which natural resources may be protected for maintain sustainability.
- People must be aware towards the sustainable policies. Use of renewable resources, solar energy, use of EVs etc. can also help from global warming and climate change.

¹³ M.C. Mehta v. Kamal Nath, (1997) 1 SCC 388