Climate Change and The Growing Disease Burden in Youth: A Legal Framework For Intergenerational Justice In India

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I. Introduction

In the 21st century climate change is a colossal crisis. The extensive ramifications of this have a profound impact, endangering not just our current state but also the overall welfare of future generations. The current environmental disruption presents a substantial threat to human well-being, particularly affecting the younger generation who have made the smallest contributions to the problem. India has a young demographic profile, As per the 2021 Census report released by the Ministry of Home Affairs, around 41% of the total population, which amounts to 1.4 billion individuals, can be classified as young people (under the age of 35). This offers a distinctive chance for economic expansion and societal progress. Nevertheless, climate change poses a significant risk to hinder this potential. The increasing prevalence of diseases among young individuals will not only have an adverse effect on their personal well-being, but also put pressure on healthcare systems and hinder economic output. According to The World Bank, climate change could potentially result in a loss of 5.3% of India's GDP by 2050.

This legal research paper explores the complex connection between climate change, the increasing burden of disease in young individuals, and the urgent need for intergenerational justice in India. Intergenerational justice says that people living now have a moral and legal duty to look out for the well-being of people who will live in the future. In the context of climate change, we need to lessen the damage we're doing to the environment and make sure that future generations will be

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able to live on this world. Although the consequences of climate change are worldwide, developing nations such as India, due to their substantial youth populations, are especially susceptible.

The shifting climate exhibits itself in multiple forms, such as escalating temperatures (according WHO, climate change is projected to result in around 250,000 extra deaths yearly from malnutrition, diarrhoea, malaria as well as heat stress between 2030-2050)[1], unpredictable weather patterns, and heightened levels of air and water pollution. Empirical data indicates that from 2010 to 2020, the fatality rate caused by severe weather, flooding, and drought was 15 times greater in places with high susceptibility in comparision with very poor vulnerability.[2] These modifications have a direct influence on human health, particularly affecting young individuals who are more vulnerable due to their ongoing physical development and immune system maturation. The estimated 3.3 to 3.6 billion individuals are living in settings of significant susceptibility to the impacts of climate change.[3] Climate change amplifies preexisting health conditions such as respiratory illnesses (according to a 2010 study published in The Lancet, air pollution is accountable for approximately 1.3 million deaths in children under five each year), vector-borne diseases (the World Health Organisation cautions that climate change is expected to extend the periods during which vector-borne diseases can be transmitted), and malnutrition.The most recent assessments on Impacts & Physical Science, Vulnerability & Adaptation from the "Intergovernmental Panel on Climate Change (IPCC)" predict disastrous scenarios for the future of humanity.[4] The pronouncements made by the "United Nations Secretary-General António Guterres", referring to a "code red for humanity," signify that climate change has permeated all aspects of social, cultural, political, as well as economic existence.[5] Recent climatic events have exhibited an increase in temps in Europe and North America, widespread floods in Germany and China, the intense expansion of deserts in Southern Africa, along with forest fires in Greece,

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[1] NIH supports research to determine climate changes' effect on life expectancy – UCI Program in Public Health, (Oct. 26, 2022), https://publichealth.uci.edu/2022/10/26/nih-supports-research-to-determine-climate-changes-effect-on-life-expectancy/.

[2] https://report.ipcc.ch/ar6wg2/pdf/IPCC_AR6_WGII_SummaryForPolicymakers.pdf.

[3] Ibid

[4] *Intergovernmental Panel on Climate Change (IPCC) Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change.*, Cambridge University Press *(2021)*.

[5] *Secretary-General Calls Latest IPCC Climate Report 'Code Red for Humanity', Stressing 'Irrefutable' Evidence of Human Influence*, Press Release Secretary-GeneralStatements and Messages (Aug. 9, 2021), https://press.un.org/en/2021/sgsm20847.doc.htm.

Australia, North America, as well as Russia.[6] These occurrences serve as confirmation that these occurrences are no longer considered anomalies. The current implementation of mitigation policies is projected to result in a temperature increase of at least 2.7 °C by 2100, which exceeds the universal target of 1.5 °C. Additionally, G20 countries, responsible for almost 80% of worldwide emissions of greenhouse gases, are estimated to not meet their "Nationally Determined Contributions (NDCs)".[7]

In addition, severe weather phenomena can contribute to mental health issues such as anxiety and sadness, posing an additional risk to the overall well-being of young individuals. The existing legislative system in India, although it includes measures for environmental protection, requires enhancement to effectively tackle the unique difficulties presented by climate change and its consequences on the health of young people. The aim of the study is to establish a legal structure that supports the concepts of intergenerational justice and guarantees the safeguard of youth's right to a healthy environment.

The present research work is structured into five distinct sections. After this introduction, the subsequent part will analyse the scientific data that establishes a connection between climate change and the increasing burden of diseases among young people. The third portion will analyse the existing legal framework for environmental conservation in the country. The fourth portion will explore the concept of intergenerational justice and its relevance to climate change. Ultimately, the paper will suggest legal modifications and policy adjustments that are essential for achieving intergenerational fairness and securing a prosperous future for the youth of India. This paper seeks to make a valuable contribution to the ongoing discussion surrounding climate change and its impact on the health of individuals, with a specific emphasis on the susceptibility of young individuals in India. By promoting a strong legal system that gives priority to the concept of intergenerational justice, we can work towards a future where the well-being and health of younger generations are not negatively affected by previous environmental errors.

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[6] *United Nations Environment Programme (UNEP) Emissions Gap Report 2021: The Heat Is On—A World of Climate Promises Not Yet Delivered*, UNEP (2021).

[7] *Climate Action Tracker*, Warming Projections Global Update https://climateactiontracker.org/documents/997/CAT_2021-11-09_Briefing_Global-Update_Glasgow2030CredibilityGap.pdf.

II. Research Objectives

This legal study paper examines India's climate change, youth health, and intergenerational justice issues. It targets the following goals:

1. Evaluating the Current Legal Landscape:

This study will examine India's environmental law. This involves assessing climate change legislation, policies, and legal rulings and their implications on youth health.

2. Strengthening Accountability for Youth Health:

The study will examine how India's legislative framework might be reinforced to make the government accountable for climate-related disease prevention. Find gaps in existing legislation and propose revisions to increase the government's responsibility to prevent climate change and protect future generations' environment.

3. Intergenerational Equity through Environmental Law:

The study will examine intergenerational justice in Indian environmental law. This involves evaluating how environmental laws can protect future generations' rights, particularly to a healthy environment. This includes examining legal frameworks that promote sustainable activities, minimise pollution, and prioritise climate action to protect youth health.

4. Legal Reform Recommendations:

The study will offer legal and policy improvements based on legal framework analysis and intergenerational justice. This could involve new laws, revisions to current laws, or greater enforcement mechanisms to ensure environmental restrictions are executed and protect youth health.

This research seeks to strengthen India's legal system to protect future generations. Environmental law may promote intergenerational fairness and climate action accountability for young Indians, giving them a healthier future.

III. Research Methodology

This research uses doctrinal legal methods. To understand and interpret a legal issue, this technique analyses statutes, case law, and legal scholarship. The paper will examine India's climate change, youth health, and intergenerational justice laws. Research will use these primary sources like Indian Environmental Laws, Constitutional Provisions, International Environmental Agreements. Secondary sources like research journal articles, websites and research reports have also been referred to. This research will critically analyse these legal materials to find legal gaps and provide alternatives that promote intergenerational justice and protect Indian youth.

IV. Scientific Evidence of Climate Change's Impact on Youth Health

Climate change has transitioned from being a potential danger to a present fact, with observable impacts on human well-being. Adolescents, due to their maturing physiology and immune systems, are especially susceptible to the health consequences linked to an evolving environment. Scientific study has proven a worrisome correlation between climate change and an increase in respiratory, vector-borne, and waterborne diseases in young populations.

The empirical evidence demonstrates that hurricanes and air pollution pose a substantial risk to expecting mothers and newborns, resulting in increased likelihood of miscarriages, preterm birth, and adverse neonatal outcomes. Additionally, these environmental factors contribute to food poverty, which in turn leads to malnutrition among pregnant women.[8] It raises the probability of kids experiencing minimal birth weight, which is one of the primary variables which elevate the chance of infant mortality as well as morbidity.[9] According to UNICEF, more than 1 billion children, or half of the current global child population, reside in countries that are very vulnerable to the implications of climate change. This puts their survival at great risk, particularly due to factors such as undernutrition, air pollution, and illnesses.[10] This has a significant impact on the mortality and morbidity rates of children, with a strong likelihood of an increase in instances of

[8] *Sexual and Reproductive Health and Rights in National Climate Policy*, UNFPA ESARO (July 12, 2021), https://esaro.unfpa.org/en/publications/sexual-and-reproductive-health-and-rights-national-climate-policy.
[9] (Mar. 19, 2024), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3595418/.
[10] United Nations Children's Fund (UNICEF) *The Climate Crisis is a Child Rights Crisis: Introducing the Children's Climate Risk Index,* UNICEF (2021)

diarrhoea and pneumonia.[11] Even if current reductions in emissions pledges are met, individuals born in 2020 may expect to face a two- to sevenfold rise in weather occurrences, particularly heatwaves, in comparison to those born in the 1960s. This will have significant effects on their growth and good health.[12]

(A) Respiratory Woes:

Climate change contributes to a rise in air pollution as a result of variables such as wildfires and stagnant air conditions. The presence of particulate matter and ground-level ozone in the air worsens respiratory conditions like asthma and "Chronic Obstructive Pulmonary Disease (COPD)" in young individuals. A research conducted in 2010 and published in The Lancet calculated that air pollution is accountable for approximately 1.3 million fatalities in children under the age of five annually.[13] Based on a 2020 report published by the State of Global Air, India is home to 10 of the 20 most polluted towns around the globe.[14] The presence of air pollution has a substantial effect on young individuals, as research indicates an increase in the occurrence of asthma among children. Elevated temperatures foster optimal circumstances for plant proliferation, resulting in heightened pollen generation. Young individuals, especially those with pre-existing respiratory sensitivities, may experience aggravated allergies and asthma attacks as a result of this.

(B) Vector-Borne Threats:

Climate change disrupts atmospheric conditions, resulting in elevated temperatures and heightened precipitation. These circumstances provide optimal environments for the reproduction of mosquitoes, ticks, and other insects that carry and spread vector-borne illnesses like Lyme disease, dengue fever, and malaria. The WHO cautions that climate change is expected to extend the periods during which these diseases are transmitted, hence increasing the vulnerability of young individuals. A study conducted in 2015 and published in the scientific journal Nature Climate

[11] Id

[12] Thiery W, *Intergenerational Inequities in Exposure to Climate Extremes*, Science 158–160 (2021).

[13] https://www.thelancet.com/commissions/pollution-and-health.

[14] https://www.healtheffects.org/announcements/heis-state-global-air-releases-two-special-reports

Change projected that climate change might result in a further 3.5 billion instances of dengue disease worldwide by the 2080s.[15] India persists in combating vector-borne illnesses such as dengue and malaria. The 2018 report from the "National Vector Borne Disease Control Programme" (NVBDCP) revealed that there were more than 1.5 million instances of malaria in children below the age of 15. The anticipated exacerbation of this condition due to climate change would further endanger the lives of young individuals. Increasing temperatures are leading to the expansion of the geographical range of certain vector-borne diseases that were previously limited to specific regions. This can potentially subject young populations in previously untouched regions to novel health risks.

(C) Waterborne Woes:

Heavy rainfall and floods have the potential to pollute water sources with sewage and disease-causing microorganisms. These circumstances can lead to various waterborne diseases like diarrhoea, cholera, and typhoid fever. These infections primarily impact young individuals who have yet to fully develop their immune systems. As per WHO, diarrhoeal infections cause around 2.2 million deaths worldwide annually, primarily affecting children under the age of five.[16] The 2018 data from the "National Sample Survey Office (NSSO)" reveals that more than 16% of households in India do not have access to potable water. According to projections based on high emission instances, it is anticipated that there might be an increase of 48,000 fatalities among children under the age of 15 due to diarrhea by the year 2030.[17] The outcomes of climate change, like heightened floods and droughts, are expected to exacerbate water scarcity and pollute water sources, often compelling communities to depend on hazardous water sources, hence augmenting the vulnerability of young individuals to waterborne illnesses.

(D) The Vulnerability of Young People:

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[15] https://www.nature.com/articles/nclimate2747

[16] World Health Organization, Diarrhoeal Disease (May 2, 2024), https://www.who.int/news-room/fact-sheets/detail/diarrhoeal-disease.

[17] IPCC, Climate Change 2022: Impacts, Adaptation and Vulnerability – Chapter 7, https://report.ipcc.ch/ar6wg2/pdf/IPCC_AR6_WGII_FinalDraft_Chapter07.pdf (accessed May 13, 2025).

Young people are particularly vulnerable to these climate-related health problems due to various factors. Children and teenagers possess growing immune systems, which renders them less capable of combating infections and diseases. Adolescents frequently engage in outdoor activities and physical exercise, so subjecting themselves to elevated levels of air pollution and possibly contaminated surroundings. Nutritional deficiencies, such as malnutrition, pose a serious problem in many regions of the world. This condition further compromises the immune system, leading to young individuals becoming more vulnerable to illnesses associated with climatic conditions.

The scientific data establishing a connection between climate change and a rise in respiratory, vector-borne, and waterborne illnesses in young individuals is unequivocal and worrisome.[18] Taking action to combat and adapt to climate change is essential for safeguarding the well-being of succeeding generations. This includes the mitigation of greenhouse gas emissions, allocation of resources towards renewable energy sources, and enhancement of sanitation and water management systems. Furthermore, it is crucial to enhance healthcare systems and advance public health education, with a specific focus on young individuals, as essential measures to effectively anticipate and handle the health consequences of climate change. By recognising the empirical evidence and implementing proactive strategies, we may establish a more salubrious future for the younger generation, guaranteeing that they are not encumbered by the adverse health consequences of climate change. These numbers present a bleak portrayal, while the actual consequences of not taking action are far more worrisome. According to the World Bank, climate change is projected to result in a 2.8% reduction in India's GDP by the year 2050.[19] This encompasses the financial strain of providing medical care for climate-related ailments in young individuals, as well as the possible impact on the future workforce due to health challenges.

There is compelling evidence that climate change has a bigger effect on the healthcare of young individuals. The concerns encompassing respiratory issues, vector-borne infections, and waterborne ailments are genuine and demand prompt response.[20] Crucial measures include

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[18] Andrea De Giglio & Paolo Valerio, Climate Change and Its Impact on Water-Related Diseases: A Review of Scientific Evidence, 15(7) Water 1298 (2023), https://doi.org/10.3390/w15071298.

[19] PreventionWeb, Climate Change Could Shave 2.8% off India's GDP by 2050: World Bank, https://www.preventionweb.net/news/climate-change-could-shave-28-indias-gdp-2050-world-bank

[20] Cyril Caminade, Katy M. McIntyre & Anne E. Jones, Impact of Recent and Future Climate Change on Vector-Borne Diseases, 1436 Ann. N.Y. Acad. Sci. 157 (2019).

investing in renewable energy solutions, enhancing air and water quality management, and bolstering healthcare systems. By placing a high importance on the welfare of young individuals, we can protect the future of our planet and its residents.

(V) Analysis Of India's Environmental Laws

India, a country undergoing fast economic expansion, confronts a substantial dilemma in attaining equilibrium amongst development and environmental preservation. This study analyses the current environmental legislation in India, with a specific emphasis on its efficacy in managing pollution and safeguarding ecosystems.

(A) The Constitutional Framework:

"Life means not only physical existence. It means the use of every limb or faculty through which life is enjoyed. ...The right to life includes the right to a healthy environment."

- *Justice PN Bhagwati*

The "Constitution of India" forms the fundamental basis for the country's environmental conservation efforts. Article 48A requires the State to ensure the preservation and enhancement of the environment, as well as the protection of forests and wildlife. Article 51A(g) imposes an obligation on all citizens to safeguard and enhance the environment. These clauses establish a robust constitutional foundation for environmental legislation.

(B) Prominent Environmental Legislation:

India has a strong and well-developed system of environmental legislation. Some of the most vital actions include:

The "Environment (Protection) Act, 1986" is a law which aims to protect and conserve the environment. This legislation allows the Union Government the power to issue environmental notices and establish pollution control organizations at the central and state levels. The government

is empowered to implement actions aimed at avoiding and controlling environmental contamination, as well as enhancing the quality of the environment.

The aim of the "Water (Prevention and Control of Pollution) Act, 1974", is to prevent and control/curb pollution in water bodies. This act seeks to mitigate and manage water pollution by overseeing the release of industrial and municipal waste into bodies of water. Further, its purpose is to lay down guidelines for the treatment of wastewater and grant authorities the authority to enforce penalties against individuals or organisations that cause pollution.

The "Air (Prevention and Control of Pollution) Act, 1981", deals with the regulation and management of air pollution. This legislation aims to regulate air pollution by establishing air pollution control zones and setting emission standards for industrial activities. It grants authorities the ability to build surveillance stations and enforce penalties against those who break the rules.

The "Wildlife (Protection) Act of 1972" offers safeguards for the preservation of fauna and their ecosystems. The setting up of protected areas, like the sanctuaries and national parks, is carried out to ensure the conservation and preservation of wildlife. Additionally, the regulation of activities such as hunting and trading in animal products is implemented to maintain ecological balance and prevent illegal practices.

The "Forest (Conservation) Act of 1980" imposes limitations on the removal of protected status from forests and governs the utilisation of forest land for activities unrelated to forestry. The objective is to preserve and safeguard the nation's valuable forest canopy.

The "Biological Diversity Act, 2002" is a legislation that was enacted to regulate and promote the sustainable use, conservation, as well as equitable releasing of biological assets in India. The objective of this legislation is to preserve the variety of living organisms, ensure fair distribution of advantages resulting from their utilisation, and oversee the acquisition of biological resources.

(C) Relevant Case Laws Analysis

Judicial interpretation has a transformative role in evolving environmental jurisprudence in India. The Apex Court and High Courts have consistently reaffirmed the constitutional right to a clean and healthy environment as an integral part of Article 21. It examines a series of landmark decisions that establish the legal contours for climate action, environmental protection, intergenerational justice, and the safeguarding of youth health under Indian constitutional and environmental law.

One of the oldest recognitions of the right to a clean environment was in "Subhash Kumar v. State of Bihar"[21], where the Apex Court held that the right to life under Article 21 includes the right to enjoyment of pollution-free water and air. This judgment laid the foundation for reading environmental protection as a core human right. Building on this foundation, the Court in the series of "M.C. Mehta v. Union of India cases (1980s–2000s)" developed a rich body of environmental jurisprudence through public interest litigation. These include the "Oleum Gas Leak case"[22], where absolute liability was imposed for environmental harm; the "Ganga Pollution case"[23], which ordered the closure of polluting tanneries; and the "Taj Trapezium case"[24], which led to major reforms in air quality management around the Taj Mahal.

The doctrine of intergenerational equity, central to this paper, was first explicitly recognised in "Vellore Citizens Welfare Forum v. Union of India"[25]. The Court, referring to international environmental principles such as the Precautionary Principle and Polluter Pays Principle, stated that sustainable development includes the duty to conserve natural resources for the welfare of next generations. These principles were further expanded in "Indian Council for Enviro-Legal Action v. Union of India"[26], where the Court imposed heavy fines on industries responsible for toxic waste contamination, reinforcing that economic development cannot come at the cost of irreversible environmental damage.

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[21] *Subhash Kumar v. State of Bihar, A.I.R. 1991 S.C. 420 (India).*
[22] *M.C. Mehta & Anr. v. Union of India & Ors., A.I.R. 1987 S.C. 1086, (1987) 1 S.C.C. 395 (India).*
[23] *M.C. Mehta v. Union of India, A.I.R. 1988 S.C. 1115, (1988) 1 S.C.C. 471 (India).*
[24] *M.C. Mehta v. Union of India & Ors., A.I.R. 1997 S.C. 734, (1997) 2 S.C.C. 353 (India).*
[25] *Vellore Citizens Welfare Forum v. Union of India, A.I.R. 1996 S.C. 2715, (1996) 5 S.C.C. 647 (India).*
[26] *Indian Council for Enviro-Legal Action v. Union of India, A.I.R. 1996 S.C. 1446, (1996) 3 S.C.C. 212 (India).*

The case of "T.N. Godavarman Thirumulpad v. Union of India"[27] marked a turning phase for forest conservation. Through continuing mandamus, the Supreme Court transformed forest governance in India and ensured judicial oversight of environmental regulation. It is also one of the longest-running green PILs in Indian history, symbolising how judicial activism can compensate for administrative lethargy.

In a more recent and significant constitutional development, the Apex Court in "M.K. Ranjitsinh v. Union of India"[28] led by then Chief Justice D.Y. Chandrachud held that the right against the adverse effects of climate change is part of Article 21, thereby crystallising climate justice within the framework of fundamental rights. The Court emphasised that climate change is not merely an environmental problem but a direct threat to the dignity, health, and future of individuals, especially children as well as future generations. This decision is crucial for reinforcing the concept of intergenerational justice within the Indian legal context.

Internationally, cases like "Urgenda Foundation v. The Netherlands"[29] from the Dutch Supreme Court have established that governments have a legal obligation to reduce greenhouse gas emissions to protect the rights of next generations, a principle consistent with India's commitments under international law. Although not binding, such precedents are persuasive and align with India's constitutional ethos under Articles 21, 48A, and 51A(g).

The cumulative reading of these judgments reflects a strong and evolving recognition by the judiciary of the interlinkage between environmental degradation, climate change, youth health, and intergenerational equity. Courts have not only interpreted laws progressively but have also filled policy and regulatory gaps through judicial innovation. These rulings lend legal weight to the argument that the State must be held accountable for climate inaction and that the youth of India possess a justiciable right to a sustainable and healthy environment. These precedents justify the call for stronger statutory reforms, institutional accountability, and youth-centric climate litigation that this paper proposes.

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[27] *T.N. Godavarman Thirumulpad v. Union of India & Ors., A.I.R. 1997 S.C. 1228, (1997) 2 S.C.C. 267 (India).*
[28] *M.K. Ranjitsinh v. Union of India, [2024] 3 S.C.R. 1320 (India).*
[29] Makoto Meguro, State of the Netherlands v. Urgenda Foundation, 114 Am. J. Int'l L. 729, 735 (2020).

(D) Achievements and Challenges in Pollution Management:

These legislations have been moderately successful. Standards have been imposed by pollution control boards, and certain projects are required to undergo mandatory "Environmental Impact Assessments (EIAs)". India has established protected areas and other efforts to conserve biodiversity. Nevertheless, there are still notable obstacles that need to be addressed. The effectiveness of legislation is limited due to weak enforcement measures. The lack of staff and resources at the "Central Pollution Control Board (CPCB)" and "State Pollution Control Boards (SPCBs)" impede the process of monitoring and ensuring compliance. The presence of overlapping authority between central and state authorities can lead to confusion and inefficiency in the process of making decisions. Industrial lobbying involves influential sectors exerting pressure to advocate for relaxed restrictions or the weakening of environmental standards. Lack of public awareness on environmental rights and legal rules impedes citizen engagement in environmental conservation endeavours.

There are some identified concerns and areas where legislation is lacking. India continues to grapple with substantial difficulties in effectively regulating water pollution, despite the implementation of the Water Act. Rivers and groundwater resources are still being polluted by industrial effluents and untreated sewage. India grapples with acute air pollution, especially in urban regions. The Air Act has achieved some degree of success in controlling industrial emissions, nevertheless, the issue of vehicle pollution continues to be a significant concern.[30] Land pollution is caused by the presence of industrial waste and the inadequate management of solid waste. There is a necessity for more rigorous implementation of legislation and the encouragement of initiatives that convert trash into valuable resources.[31] Current legislation is insufficient in addressing the techniques for mitigating and adapting to climate change. Habitat loss and

[30] Shao-Yuan Zhang et al., Assessing the Impact of Climate Change on Global Public Health: Evidence, Trends, and Future Directions, Sci. Total Environ., https://doi.org/10.1016/j.scitotenv.2024.170209

[31] Earth5R, Waste Management in India: Solutions for a Cleaner Future ,https://earth5r.org/waste-management-india-solutions/#:~:text=Industrial%20waste%2C%20including%20chemical%20residues,to%20soil%20and%20groundwater%20contamination

deforestation persist despite the implementation of the Wildlife Act and FCA, leading to a decline in biodiversity. Stricter regulations and more rigorous enforcement are necessary.[32]

(E) Ecosystem Protection and Biodiversity Conservation:

The Forest Act has somewhat contributed to the preservation of forested areas. Nevertheless, deforestation and illicit logging persist as imminent dangers. The Wildlife Act has been instrumental in safeguarding endangered species, hence ensuring wildlife protection. Nevertheless, ongoing focus is necessary to address concerns such as habitat degradation and illegal hunting. India's abundant biodiversity is at risk from habitat fragmentation and climate change. Enhancing current laws and advocating for sustainable behaviours are crucial for the conservation of biodiversity.

(F) Recommendations for Improvement:

The viability of environmental legislation relies heavily on the presence of effective enforcement measures. It is crucial to enhance the capabilities of pollution control boards and environmental courts. By raising public knowledge and promoting community involvement in environmental protection initiatives, the effectiveness of legislation can be enhanced. Development plans must incorporate environmental issues to ensure sustainable growth. It is therefore paramount to periodically assess and revise the environmental framework in order to address the emerging issues such as e-waste and climate change effectively. Emphasis on resolving jurisdictional overlaps by precisely delineating the functions and responsibilities of both federal and state authorities should be made. Judicial activism has been crucial in safeguarding environmental rights through significant court rulings. Persistent judicial activism can guarantee more stringent implementation and responsibility. Corporate social responsibility activities that prioritise environmental sustainability should be promoted. India's environmental legislation exhibits a resolute dedication to safeguarding the environment. Nevertheless, there are still obstacles in efficiently controlling pollution and protecting ecosystems. Enhancing the implementation of regulations, promoting

[32] P. Vignesh & S. Sudhakar, Climate Change and Its Impact on the Health of Children, 12(1) Univ. Peer-Rev. J. Zool. 16 (2024), https://mbimph.com/index.php/UPJOZ/article/view/3840.

active involvement of the public, and incorporating environmental factors into development strategies are crucial measures to guarantee a more pristine and healthier future for India.

(VI) Gaps in Addressing Youth-Specific Vulnerabilities to Climate Change-Related Health Risks

Climate change presents a substantial peril to worldwide health, with young individuals being especially susceptible to its repercussions. Here is an analysis of important deficiencies in addressing the special vulnerability of young people to health risks associated to climate change:

(A) Knowledge and Awareness Gaps:

Numerous youths have a lack of opportunities to acquire comprehensive climate change education, impeding their comprehension of health hazards and solutions for adaptation. Climate change communication frequently prioritises adults, overlooking the distinct requirements and viewpoints of young individuals.[33] Youth mental health programmes fail to appropriately address the different consequences of climate change on mental health, including eco-anxiety.

(B) Policy and Action Gaps:

Policies frequently give more importance to immediate economic considerations at the expense of long-term environmental sustainability, disregarding the future that young generations will have to confront. There is often a lack of meaningful involvement of young people in decision-making processes concerning climate change mitigation & adaptation. Adolescents are seldom involved in these processes pertaining to climate change mitigation and adaptation techniques that have a direct impact on their well-being. A significant number of climate policies fail to adequately consider the demands and interests of children, as evidenced by the fact that only 42% of "Nationally Determined Contributions (NDCs)" explicitly include children or youth. UNICEF

[33] Hadi Taghizadeh-Hesary et al., The Role of Artificial Intelligence in Reducing Health Impacts of Climate Change: A Sustainable Finance Perspective, 127 Int'l Rev. Fin. Analysis (2024), https://www.sciencedirect.com/science/article/abs/pii/S1054139X24004464.

reports that only three nations explicitly mention children's rights, while only five countries clearly address human rights in relation to future generations including intergenerational equity.[34] Insufficient allocation of funds towards climate change measures that specifically target the youth, such as training programmes for developing green skills and the construction of climate-resilient infrastructure in schools is yet another concern.

(C) Healthcare System Gaps:

Healthcare systems in developing nations may lack the necessary capacity to effectively manage the growing number of climate-related ailments. Insufficient provision of services tailored to the needs and concerns of young individuals regarding the various health hazards due to climate change, such as heatstroke, in clinics and hospitals is a major problem. Data deficiencies pose a challenge to implementing effective treatments for the health repercussions of climate change on young individuals due to limited data collecting.

(D) Social and Economic Gaps:

Socioeconomic disparity exacerbates the vulnerability of marginalised young communities to the adverse effects of climate change. Climate change has the potential to disturb conventional means of making a living, thereby affecting the economic prospects and mental wellbeing of young individuals.[35] Marginalised populations and young people in poor nations frequently experience a greater impact from climate change and its health effects because they have limited access to resources and infrastructure.[36] Climate change poses a substantial danger to individual's means of making a living, especially in areas that rely heavily on agriculture. This has a direct influence on the food security and overall well-being of young individuals.[37] Climate-induced disasters have

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[34] *The Climate Crisis is a Child Rights Crisis: Introducing the Children's Climate Risk Index,* UNICEF (2021).

[35] Gitanjali Sah, Climate Change, Youth and Health: An Agenda for Action, 6 Lancet Reg'l Health – Southeast Asia 100130 (2023), https://www.sciencedirect.com/science/article/pii/S1877343523000696.

[36] Earth.Org, Marginalised Groups Are Disproportionately Affected by Climate Change (Nov. 6, 2023), https://earth.org/marginalised-groups-are-disproportionately-affected-by-climate-change/.

[37] Akanksha Khurana & Akriti Raj, Climate Justice Through the Lens of Indian Judiciary: Examining the Legal Mandate and Future Challenges, 5(1) Clim. Change & Env't Pol'y 100009 (2025), https://www.sciencedirect.com/science/article/pii/S266604902500009X.

the potential to interrupt educational services, hence impeding the long-term health and well-being prospects of young individuals.[38]

(E) Research and Innovation Gaps:

- Inadequate evidence exists regarding the precise health susceptibilities of young individuals to the effects of climate change.
- Insufficient progress in the advancement of technologies for early warning systems, climate-resilient infrastructure in schools, as well as youth centres.
- Insufficient research and development of appropriate mental health interventions for young individuals experiencing climate anxiety and other associated problems.

By addressing these gaps, we may establish a more all-encompassing strategy to safeguard young individuals from the health hazards related with climate change. The following items are included:

- Improving climate change education in schools and youth organisations.
- Combat disinformation by implementing focused efforts and foster media literacy among youth.
- Advocating for the involvement of the young mass in climate action and decision-making.
- Enhancing healthcare systems to tackle health challenges caused by climate change.
- Allocating resources to do research on the specific health vulnerabilities of young individuals and creating interventions that are tailored to address these vulnerabilities.
- Alleviating social and economic inequalities that worsen the consequences of climate change on young people.
- Enhance healthcare infrastructure and training to tackle health difficulties among young individuals that are caused by climate change.
- Guarantee fairness between generations in climate change policies, incorporate the opinions of the young population in decision-making processes, and enhance funding for activities that specifically target youth.

[38] Ayesha Siddiqah et al., Climate Change and Its Impact on Public Health: A Review, 60 Heliyon e237368 (2024), https://www.sciencedirect.com/science/article/pii/S2405844024037368.

- Offer educational programmes to healthcare professionals regarding climate-related health concerns in adolescents.

By bridging these gaps, we can enable young individuals to actively help in the construction of an improved sustainable and healthful future for their own and subsequent generations.

(VII) Intergenerational Equity Principles and Legal Framework

"Intergenerational equity requires us to ensure that the environmental costs we pay today are not disproportionately borne by future generations."

- *Mary Robinson (Former President of Ireland and UN High Commissioner for Human Rights)*

Climate change presents a substantial peril to human health, especially for forthcoming generations. The principle of intergenerational equity, which is upheld in both the Constitution of India and international environmental law, provides a robust legal structure to ensure that governments are held accountable for safeguarding the well-being of young individuals from the consequences of climate change. This study aims the principles of intergenerational equity, evaluates their implementation in the context of safeguarding the health of young people, and proposes techniques for employing these concepts in legal proceedings.

(A) Foundational Concept Intergenerational Equity:

Intergenerational equality is the ethical idea that the present generation has a duty to ensure that its activities do not jeopardise the future generations' ability to fulfil their own needs and lead healthy lives. This principle is applicable to the preservation of the environment, as it acknowledges that the deterioration of the environment in the present can have harmful effects on the health and welfare of future generations.

1. Intergenerational Equity in India's Constitution:

Although not specifically stated, the idea of intergenerational equity is inherent in the structure of India's Constitution. Article 21 ensures the fundamental rights to life and personal liberty, which may encompass the entitlement to a clean and sustainable environment. The Apex Court has construed the fundamental right to life and liberty to encompass the right to a healthy environment. This right extends to subsequent generations, indicating an obligation on the present generation to safeguard the environment as was held in the case of "Public Interest Foundation v. Union of India"[39]. Article 48A mandates the state to ensure the preservation and enhancement of the environment, as well as the protection of forests and wildlife, for the advantage of both current and future generations. Article 51A(g) of the constitution imposes an obligation on every citizen to save and enhance the environment, as well as to demonstrate empathy for all living beings. These articles, in addition to significant Apex Court rulings such as the "Vellore Citizens Welfare Forum Case"[40] and the "M.C. Mehta v. Union of India (Taj Mahal Case)"[41], have solidified the court's responsibility in maintaining intergenerational principles of equity and ensuring the enforcement of environmental preservation.

2. Intergenerational Equity in International Environmental Law:

Intergenerational equity is also acknowledged by international environmental law. "Principle 2 of the Stockholm Declaration (1972)" asserts that the basic entitlement to liberty, fairness, and satisfactory living conditions, within an environment of adequate quality to enable a life of respect and prosperity, and the duty to guard the environment for the upcoming generations, are crucial for guaranteeing the survival and well-being of humanity.[42] "Principle 3 of the Rio Declaration on Environment and Development (1992)" asserts that present generations have the entitlement to pursue their own development, while ensuring that the ability of future generations to fulfil their own needs is not compromised.[43] "Article 3 of the UN Framework Convention on Climate Change

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[39] Public Interest Foundation v. Union Of India, 3 AIR 4550 (Supreme Ct. 2018).
[40] Vellore Citizens Welfare Forum v. Union Of India, 5 AIR 2715 (Supreme Ct. 1996).
[41] M.C. Mehta v. Union Of India, 2 AIR 734 (Supreme Ct. 1996).
[42] United Nations, United Nations Conference on the Human Environment (Stockholm 1972), https://www.un.org/en/conferences/environment/stockholm1972
[43] United Nations Conference on Environment and Development, Rio Declaration on Environment and Development, U.N. Doc. A/CONF.151/26/Rev.1 (Vol. I) (Aug. 12, 1992), https://www.cbd.int/doc/ref/rio-declaration.shtml.

(UNFCCC), 1992" highlights the importance of maintaining stable levels of greenhouse gases in order to prevent any harmful human-induced disruptions to the climate system.[44] This essentially safeguards the well-being of future generations. These instruments provide a legal framework for holding states responsible for their actions and ensuring they prioritise environmental sustainability for the benefit of future generations.

2.1 Addressing Climate Change and Youth Health: Legal Principles for Intergenerational Justice:

"International environmental law principles, such as the polluter pays principle and the precautionary principle, can be used to strengthen India's legal framework for addressing climate change and its impact on youth health. We must adopt a global approach to this challenge, ensuring intergenerational justice on a wider scale."

- *Justice Kuldip Singh*

The precautionary principle, polluter pays principle, and public trust doctrine can boost India's climate change law for youth health. While not defined under Indian law, these principles are recognised by the judiciary and can be strong instruments in environmental litigation and policy advocacy.[45] The precautionary principle emphasises prevention even without scientific proof of harm. This principle suggests preemptive steps to address climate change-related health hazards in youth, even if the exact form and degree of those risks are still being explored.[46] The Polluter Pays Rule states that polluters should pay for pollution prevention, control, and cleanup. This idea implies that greenhouse gas emitting firms should pay for climate change mitigation and health adaptation, especially for young people.[47] In the Public Trust Doctrine the government holds

[44] United Nations Framework Convention on Climate Change, Article 3: Principles, U.N. Doc. FCCC/INFORMAL/84/Rev.1 (May 9, 1992), https://unfccc.int/resource/ccsites/zimbab/conven/text/art03.htm

[45] Preeta Dhar & Parul Gupta, Prevention, Precaution, and Polluter Pays Principles, in The Oxford Handbook of Environmental and Natural Resources Law in India (Philippe Cullet, Lovleen Bhullar & Sujith Koonan eds., Oxford Univ. Press, online ed. 2024), https://doi.org/10.1093/oxfordhb/9780198884682.013.12.

[46] Roger Brownsword, Law, Technology and Society: Reimagining the Regulatory Environment, 29(1) S.T.L. & TECH. 5 (2020), https://doi.org/10.1177/1461452919890283.

[47] Divya Srivastava & Shalini Saxena, Impact of Climate Change on Children's Health, in Climate Change and the Health Sector: Managing Threats and Opportunities 109–126 (A. Dhawan & M. Chaudhuri eds., Elsevier 2023), https://www.sciencedirect.com/science/article/abs/pii/B9780323857925000083.

natural resources for future generations under this theory. This concept emphasises the government's duty to conserve the environment for upcoming generations in the context of climate change.[48] Strategically applying these concepts to PILs, legal advocacy, and policy conversations can strengthen India's legal system to protect its youth from climate change. They support tighter environmental restrictions, polluter accountability, and intergenerational equity by prioritising future generations' health and well-being.

3. Legal Issues and Potential Advantages in India:

India acknowledges the entitlement to a sound environment and the principles of sustainable development, however it faces numerous obstacles.[49] The current environmental regulations frequently lack rigorous enforcement mechanisms, which enables ongoing pollution and environmental deterioration. Existing climate change and health policies frequently neglect to effectively address the particular vulnerabilities experienced by young individuals. The successful implementation of climate change mitigation and adaptation techniques necessitates substantial resources. Countries in the process of development, such as India, encounter limitations in terms of finances in this aspect.[50]

The notion of intergenerational equity, which is enshrined in India's Constitution and international environmental law, provides a robust legal framework. Intergenerational equity principles can be employed to ensure that governments are held responsible for safeguarding the health of young people in the background of climate change, utilising a range of legal and campaigning approaches.[51] Youth or environmental NGOs have the ability to initiate PILs by using Article 21 and 48A of the Constitution. These PILs contend that the inability of the government to address climate change is an infringement of the fundamental right to life and a sustainable environment

[48] Paul R. Epstein, Climate Change and Human Health , 36 Ann. Rev. Env't & Resources 373 (2011), https://www.annualreviews.org/content/journals/10.1146/annurev-environ-031411-165249.

[49] C.R. Kumar & M.A. Majid, Renewable Energy for Sustainable Development in India: Current Status, Future Prospects, Challenges, Employment, and Investment Opportunities, 10 Energy, Sustainability & Soc'y 2 (2020), https://doi.org/10.1186/s13705-019-0232-1.

[50] Lukoye Atwoli et al., Call for Emergency Action to Limit Global Temperature Increases, Restore Biodiversity, and Protect Health, 398 Lancet 939 (2021), https://www.sciencedirect.com/science/article/pii/S2210670721008295.

[51] Anabella Rosemberg, Strengthening Climate Resilience through the Just Transition for Decent Work, 10 Sustainability 3836 (2018), https://www.mdpi.com/2071-1050/10/11/3836.

for future generations. In addition to PILs, legal strategies can improve government transparency and accountability. The "Right to Information Act (2005)" lets youth and NGOs access air and water quality monitoring data, government climate action plans, and youth climate-related sickness statistics. Government policies or infrastructure projects that cause climate change and harm youth health might be challenged in court. Courts can order environmental impact assessments that consider youth health risks.

India, as a party to international environmental agreements, is legally bound to fulfil its commitments in addressing climate change. Activists have the ability to draw attention to the government's failures in meeting these responsibilities, specifically in relation to safeguarding the health of young people.[52] The right to health is a fundamental human right that is secured by international law. Legal action can be taken by alleging that the government's neglect in addressing the ramifications of climate change on the health of youth is a violation of this entitlement. Efforts to promote and raise awareness about a cause or issue through advocacy and public awareness campaigns. Emphasising the unequal and significant effect of climate change on young people. The "Environmental Impact Assessment (EIA)" should take into account the enduring health consequences of development initiatives on subsequent generations. By incorporating intergenerational equality principles, projects can be designed to safeguard the well-being of future generations, particularly the youth, and prevent any harm to their health. Facilitating communication between policymakers, scientists, and young people can help to bridge the divide between current and future generations. This conversation has the potential to result in climate policies that are more inclusive and give priority to the health and well-being of the younger generation.

3.1 The Power of Youth Activism:

The power of youth activism greatly enhances the effectiveness of PILs and legal techniques. Young individuals have the ability to enhance knowledge and understanding of the outcomes of climate change on their healthcare by utilising social media campaigns, educational efforts, and

[52] M.H. Bernstein & M.I. Hoffmann, The Politics of Implementing the Kyoto Protocol, 28 Ann. Rev. Energy & Env't 343 (2003), https://www.annualreviews.org/content/journals/10.1146/annurev.energy.28.050302.105603.

community outreach programmes.[53] Empowering young individuals with legal knowledge can motivate them to engage in PILs and legal advocacy initiatives, therefore guaranteeing their active participation in environmental decision-making processes and amplifying their voices. Youth organisations have the opportunity to form alliances with environmental NGOs, legal professionals, and public health experts in order to establish a unified front for safeguarding the health of young people in relation to climate change.[54]

- **Case Study: The "Fridays for Future" Movement in India:**

The international "Fridays for Future"[55] campaign, led by Greta Thunberg, has motivated the youth in India to engage in activism. Across the country, there has been a surge of student-led rallies advocating for more stringent environmental legislation and increased government responsibility for addressing climate change. These actions emphasise the influence of young activism in advocating for transformation.[56]

Young people in India can improve environmental laws and hold the government accountable for protecting their health from climate change by using PILs, legal methods, and youth activism.[57] The future of India's youth depends on its environment. Legal strategies, youth activism, and government accountability can help India create a future for young people. All parties—judges, politicians, environmental groups, and youth—must work together. Equipping young people with legal skills, developing their leadership skills, and directing their passion for climate change can create a more sustainable future.[58]

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[53] Rakesh Roshan & V. Sudha, A Study on the Impact of Climate Change on the Health of Children in India, 4 ShodhKosh: J. Hum., Soc. Sci. & Arts 17 (2023), https://www.granthaalayahpublication.org/Arts-Journal/ShodhKosh/article/view/4205.

[54] Patrick D. McGorry et al., Designing and Scaling Up Integrated Youth Mental Health Care, 21 World Psychiatry 61 (2022), https://doi.org/10.1002/wps.20938.

[55] *Fridays For Future is an international climate movement active in most countries and our website offers information on who we are and what you can do.*, (Mar. 27, 2022), https://fridaysforfuture.org/.

[56] *Martina Igini, Fridays for Future: How Young Climate Activists Are Making Their Voices Heard*, Earth.Org (Mar. 25, 2022), https://earth.org/fridays-for-future/.

[57] SankalpTaru Foundation, The Role of Youth Activism in Environmental Conservation, SankalpTaru Blog (Feb. 14, 2024), https://blog.sankalptaru.org/the-role-of-youth-activism-in-environmental-conservation/.

[58] World Economic Forum, Empowering Tomorrow's Climate Leaders: How Youth Influence Climate Action (July 2023), https://www.weforum.org/stories/2023/07/empowering-tomorrows-climate-leaders-how-youth-influence-climate-action/.

4. Challenges in Implementation and Enforcement:

There are multiple obstacles that hinder the successful execution and application of environmental legislation aimed at safeguarding the health of young individuals. Climate change mitigation and adaptation efforts frequently face opposition from more pressing economic development agendas. The excessive workload of the legal system can cause delays in resolving environmental disputes, impeding prompt action and establishing a feeble precedent for enforcement.

(IX) Conclusion: A Comprehensive Approach for a Healthy Future

The impact of climate change significantly affects the health and well-being of young individuals in India. The existing environmental legal system, although extensive in its coverage, lacks the necessary enforcement mechanisms to adequately tackle the distinctive health risks that climate change poses to young people.[59] This study has examined the constraints of current legislation, the obstacles impeding its implementation, and the efficacy of legal tactics and youth activism in advancing a more salubrious future.

Legal interpretation and PILs can promote youth-focused policies, but their impact is limited. Policy reform at several levels is needed to respond fully. Current environmental laws must be amended to address climate change and its negative consequences on youth health.[60] Climate risk assessments and health effect studies must be included in environmental decision-making. Industry emission rules and enforcement must be tightened to reduce air and water pollution, which pose serious health concerns to children. Investing in climate-adaptable infrastructure. To protect young people in vulnerable communities from floods and droughts, resilient infrastructure must be built. Climate-related health issues like heatstroke, respiratory illnesses, and waterborne

[59] Majra JP & Gur A, Climate Change and Health: Why Should India Be Concerned?, 13(1) Indian J. Occup. & Envtl. Med. 11, 11–16 (2009), https://doi.org/10.4103/0019-5278.50717.

[60] United Nations Development Programme, The Climate Dictionary: An Everyday Guide to Climate Change, UNDP Climate Promise, https://climatepromise.undp.org/news-and-stories/climate-dictionary-everyday-guide-climate-change.

diseases require resources and competencies from healthcare systems. This includes healthcare professional education and training and ensuring enough healthcare services for youth.

Young individuals are not merely passive recipients of the negative outcomes of climate change; they possess the ability to actively drive and bring about significant transformations. The following steps outline the process:

- Encouraging Youth Participation:

The participation of young people in environmental decision-making processes is of utmost importance. Educational institutions have the ability to foster climate knowledge and motivate young individuals to engage in public hearings and environmental activities.

- Encouraging youth-led advocacy:

Providing young individuals with legal education might motivate them to submit Public Interest Litigations (PILs) or engage in legal advocacy initiatives, guaranteeing that their opinions are taken into consideration in environmental decision-making procedures.

- Utilising the Influence of Social Media:

Social media campaigns have the potential to be a potent instrument in increasing awareness regarding the reverberations of climate change on the health of young individuals and rallying them to take action.

- Forging Alliances:

Cooperation among youth organisations, environmental NGOs, legal professionals, and public health experts can establish a cohesive front in safeguarding the health of youth in the light of climate change.

The future of India's youth and its environment are linked. A comprehensive climate change strategy must include legal interpretation, policy reform, and youth participation. All parties must work together. The Judiciary should enforce environmental laws and hold the government accountable for inaction. Policymakers should tighten environmental regulations, invest in climate-resilient infrastructure, and prioritise youth health in climate change adaptation. Environmental NGOs support youth-led initiatives and advocate for youth health policy changes. Public health specialists are asked to help healthcare systems address climate change-related health

issues affecting youth. Increase awareness, take action, and hold government and authorities accountable. Collaboration may create a future where the next generation inherits an ecologically sound planet and can thrive as responsible environmentalists.