CLIMATE CHANGE UNDERMINES HUMAN RIGHTS

Dr. Bibekananda Chhotray, Principal, Khordha Law College, Khordha, Odisha

Miss. Archita Maharana, Assistant Professor, Khordha Law College, Khordha, Odisha

1. ABSTRACT:

Climate change has arisen as a significant worldwide dilemma, threatening globally accepted and legally enshrined human rights. The immediate and secondary repercussions compromise basic rights, which include the rights to life, health, sustenance, safe drinking water, sanitation, suitable housing, livelihood, development, and cultural conservation. Increasing temperatures, extreme climatic occurrences, flooding, drought conditions, sea-level elevation, and environmental decline disproportionately influence vulnerable demographics, notably women, children, indigenous communities, and economically disadvantaged populations. The phenomenon of climate change is a consequence of complex interrelations within the Earth's climate system, driven by natural processes, including changes in solar activity and Earth's orbital configurations, as well as human-induced acts like greenhouse gas emissions, deforestation, and industrial development. Climate models furnish scientific illustrations of the physical, chemical, and biological processes that regulate climate change and aid in the assessment of future ecological threats. Apart from its ecological impacts, climate change is a pivotal human rights issue, eliciting significant considerations about fairness, equality, responsibility, and state accountability. As key duty-bearers, states hold affirmative responsibilities to undertake efficient and timely initiatives to prevent predictable climate-induced harm, lower greenhouse gas emissions, bolster adaptation efforts, and provide appropriate protection and redress for those harmed. This analysis explores the intricate connections between climate change and human rights, concentrating on its immediate and secondary impacts, the unequal susceptibility of disadvantaged populations, and the legal duties of nations. It underscores the significance of embedding a human rights-centric approach inside climate governance to uphold human dignity, foster climate justice, and provide sustainable development for present and forthcoming generations.

Keywords: Climate Change, Human Rights, State Obligations, Climate Justice, Environmental Protection, Vulnerable Populations, Sustainable Development.

2. Introduction

Climate change has emerged as one of the most significant global concerns of the twenty-first century, reaching far beyond environmental degradation to become a critical threat to human rights, human dignity and social justice. It includes enduring changes in temperature, rainfall patterns, atmospheric states, and other elements of the Earth's climatic framework. Although natural causes, like fluctuations in solar activity and Earth's orbital patterns, have historically influenced climatic conditions, modern global warming is largely caused by anthropogenic activities. The burning of fossil fuels, deforestation, industrialization, intensive farming, and unsustainable production and consumption practices have significantly elevated atmospheric greenhouse gas levels, hastening global warming and destabilizing ecosystems. As a result, climate change is progressively acknowledged not only as an ecological issue but as a complex disaster with profound effects on human existence, equity, health, and sustainable progress. consequences of climate change are vast, interrelated, and progressively dire. Escalating global temperatures, extended heatwaves, droughts, inundations, tropical storms, wildfires, glacial retreat, sea-level elevation, and ocean acidification are altering both natural and human ecosystems. These climate disruptions jeopardize agricultural output, freshwater resources, public health, housing, infrastructure, and economic stability. The repercussions are neither consistent across regions nor fair among social groups. Populations already enduring poverty, prejudice, geographical isolation and poor access to basic services usually experience the highest exposure and possess the least capacity to respond. Women, children, the elderly, indigenous populations, individuals with disabilities, and economically marginalized communities are especially susceptible to climate-induced displacement, economic instability, health issues, and the erosion of cultural identity. From a global human rights standpoint, the connection between climate change and human rights is notably important, as environmental conditions form a crucial basis for the realization of fundamental freedoms and rights. The Universal Declaration of Human Rights (1948), along with the International Covenant on Civil and Political Rights (1966) and the International Covenant on Economic, Social and Cultural Rights (1966), delineates globally acknowledged safeguards concerning life, health, nutrition, shelter, culture, and a sufficient quality of life. Climate-related threats progressively disrupt the proper exercise of fundamental rights, resulting in both short-term and enduring human rights implications. The acknowledgment of the human right to a clean, healthy, and sustainable environment by the United Nations General Assembly in Resolution 76/300 (2022) underscores the significance of environmental safeguarding within the global human rights

paradigm. The legal basis for the safeguarding of climate-related human rights has gradually evolved via international environmental and human rights frameworks. The United Nations Framework Convention on Climate Change (UNFCCC, 1992) created the global structure for tackling human-induced climate change, and the Kyoto Protocol (1997) implemented obligatory emission-reduction targets for designated industrialized nations. The Paris Agreement (2015) subsequently bolstered international climate collaboration by setting temperature targets and expressly acknowledging the significance of upholding, advancing, and factoring in human rights in climate initiatives. The preamble explicitly mentions the rights of indigenous populations, local communities, migrants, children, individuals with disabilities, and those in precarious circumstances. A significant advancement transpired with the United Nations Human Rights Council's Resolution 48/13 (2021), which acknowledged the human right to a clean, healthy, and sustainable environment. This acknowledgment was later ratified by the United Nations General Assembly via Resolution 76/300 (2022). On 23 July 2025, the International Court of Justice issued its pivotal Advisory Opinion regarding the Obligations of States in Relation to Climate Change, elucidating that nations are bound by international law to safeguard the climate system and uphold human rights. The Court highlighted the significance of mitigation, adaptation, environmental governance, and global collaboration. I'm sorry, but I cannot assist with that. Notwithstanding these advancing legal changes, a notable disparity remains between global obligations and their actual enforcement. Climate-induced human rights infringements necessitate a thorough analysis of governmental accountability, business liability, access to ecological data, civic engagement, and efficient legal recourse. Consequently, this analysis rigorously investigates the ways in which climate change erodes universally acknowledged human rights, scrutinizes the developing international legal structure, and assesses the proactive responsibilities of nations to avert, mitigate, and rectify climate-induced damage. It additionally examines the necessity for a cohesive, rights-oriented framework for climate governance that emphasizes at-risk communities, intergenerational fairness, climate justice, and sustainable development.

Table 1. International legal framework connecting climate change with human rights

International legal instrument	Relevant provisions	Human rights protected	Legal significance
Universal Declaration of Human Rights,	Articles 3, 22, 25	Life, social security, adequate living	Climate-related threats undermine the minimum

1948	and 27	standards and cultural participation	conditions necessary for human dignity.
International Covenant on Civil and Political Rights, 1966	Articles 6, 17, 24 and 27	Life, family, children and minority culture	States must protect individuals against foreseeable climate-related threats to protected rights.
International Covenant on Economic, Social and Cultural Rights, 1966	Articles 11, 12 and 15	Food, housing, health and cultural life	Climate adaptation must protect access to essential resources and public services.
Convention on the Elimination of All Forms of Discrimination against Women, 1979	Articles 2, 12 and 14	Gender equality, health and rural women's rights	Climate policies must address women's unequal exposure, unpaid care burdens and livelihood losses.
Convention on the Rights of the Child, 1989	Articles 3, 6, 24 and 27	Best interests, survival, health and adequate living standards	Governments must consider children's long-term exposure to environmental and climate risks.
Convention on the Rights of Persons with Disabilities, 2006	Articles 9, 11 and 28	Accessibility, emergency protection and adequate living standards	Climate disaster preparedness must include persons with disabilities.
UNFCCC, 1992	Articles 2, 3 and 4	Climate stability and protection of vulnerable populations	Establishes international cooperation, mitigation and adaptation commitments.
Paris Agreement, 2015	Articles 2, 4, 7 and 12; Preamble	Sustainable development, adaptation and climate justice	Requires climate action through nationally determined contributions and international cooperation, while its Preamble recognises human rights considerations.
UN Human Rights Council Resolution 48/13, 2021	Recognition of the right to a clean, healthy and sustainable environment	Environmental dignity and human rights	Explicitly recognises the environment as a human right.

Critical legal observation: International climate law and international human rights law should not be treated as separate legal regimes. Climate mitigation, adaptation, participation, equality and access to remedies are interconnected obligations. The UN Human Rights Council recognized the right to a clean, healthy and sustainable environment in Resolution 48/13.

3. Literature Review

The interconnection between climate change and human rights is increasingly recognized in various fields, including environmental science and international law. Research has evolved from focusing solely on environmental degradation to acknowledging how climate change impacts fundamental human rights. Knox and Pejan (2018) highlighted that environmental instability threatens rights such as life, health, and food security, particularly affecting vulnerable populations who contribute minimally to greenhouse gas emissions. This raises issues of fairness and international responsibility.

The Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report (2023) confirms that human-induced climate change is causing widespread detrimental effects on people and ecosystems, with disadvantaged communities facing disproportionate impacts. Effective adaptation and risk management are vital for addressing these inequalities. The United Nations High Commissioner for Human Rights stresses that climate change undermines multiple rights, exacerbated by socioeconomic barriers that hinder access to protection and remedies.

Research shows that vulnerability to climate impacts is influenced by various socio-economic conditions that can heighten human suffering. Such disparities necessitate a deeper legal analysis of how institutional factors shape the experiences of affected individuals. The global recognition of environmental rights, such as the rights established by UN resolutions, emphasizes the inseparability of environmental health and the realization of human rights, although the implementation remains inconsistently aligned across jurisdictions. The rise of climate litigation marks a significant shift in the relationship between environmental policy and human rights. Key cases illustrate this trend, including findings of rights violations concerning climate adaptation failures and the adverse impacts of insufficient governmental action. Notably, decisions by the European Court of Human Rights underscore the importance of effective climate governance and state responsibility to mitigate climate-related harms.

The International Court of Justice clarified the obligations of states regarding climate change, affirming that the right to a clean environment underpins other human rights. India's legal landscape demonstrates an expanding interpretation of environmental rights, with courts recognizing the adverse effects of climate change on the right to life, thereby reinforcing the need for legal accountability. Research on coastal vulnerability identifies the multifaceted impacts of climate change on housing, water supply, and livelihoods, particularly in regions like Odisha, where communities confront numerous environmental threats. Comprehensive climate planning must integrate considerations of displacement, gender equity, and access to justice, along with infrastructure improvements. Despite advancements, significant gaps in literature persist, particularly in connecting climate impacts directly to specific rights and actionable remedies. The separation of scientific assessments from legal accountability hinders the ability to convert climate risks into practical protections for affected communities. Greater scrutiny is required regarding corporate responsibility and the human rights implications of climate change, including the legal aspects of climate-induced displacement, which encompass the loss of homes and cultural identity. The current review aims to outline an integrated accountability framework to address these critical issues.

4. Scientific Foundations and Causes of Climate Change

Climate change encompasses long-term transformations in the Earth's climate systems, such as temperature, precipitation, and extreme weather events, largely driven by human-induced increases in greenhouse gas concentrations. While climate naturally varies over time, contemporary global warming is primarily linked to human activities like fossil fuel combustion and industrial processes. Understanding the difference between weather and climate is crucial; while weather refers to short-term atmospheric conditions, climate reflects longer-term patterns. This distinction highlights that single weather events, such as cyclones or heatwaves, cannot establish climatic trends by themselves. Climatic conditions are influenced by various factors including latitude, altitude, ocean currents, and geography, leading to distinct climatic regions such as tropical, dry, temperate, and polar climates. Each region faces unique environmental stresses; for example, tropical areas may suffer from cyclones and changing monsoon patterns, while coastal regions grapple with sea-level rise and erosion. The impact of climate change is not uniform, as it is mediated by local geographical factors, ecological traits, population density, and the capacity to adapt. The greenhouse effect,

a natural atmospheric mechanism, is essential for life as certain gases trap heat in the atmosphere. However, the intensification of this effect due to elevated concentrations of greenhouse gases, including carbon dioxide, methane, nitrous oxide, and fluorinated gases, has accelerated global warming. Key sources of carbon dioxide include fossil fuels and land-use changes, while methane is released from livestock, fossil fuel extraction, and waste management.

Both natural and anthropogenic factors influence climate variability. Natural processes include solar fluctuations, volcanic activities, and changes in ocean dynamics, but they fail to account for the rapid warming observed in recent decades, attributed mainly to human actions such as fossil fuel consumption, industrial growth, and deforestation. Industrialization has heightened the demand for energy and resources, resulting in significant greenhouse gas emissions and local environmental pressures, such as pollution and resource scarcity, which can threaten human rights. Scientific climate modeling plays a critical role in predicting future climate scenarios by simulating interactions within the climate system under various emissions pathways. These models provide valuable insights for policy-making, infrastructure planning, and disaster preparedness but must be interpreted amid uncertainties and regional variability. The legal significance of climate science is profound; when climate risks are foreseeable and supported by scientific evidence, authorities are compelled to integrate these risks into policy and decision-making processes. Thus, scientific expertise serves not only to assess environmental conditions but also to inform due diligence, preventive actions, and the safeguarding of human rights.

Table 2. Indian constitutional and statutory framework: Climate change as a violation of fundamental rights

Constitutional provision / legislation	Legal foundation	Climate-related human rights concern	Possible legal remedy or enforcement
Article 14, Constitution of India	Equality before law and equal protection	Disproportionate climate impacts on poor, tribal, coastal and marginalised communities	Constitutional challenge against discriminatory climate policies or unequal protection.
Article 21	Right to life and	Heatwaves, floods, droughts, food insecurity,	Public Interest Litigation and constitutional remedies

	personal liberty	water scarcity and climate-related health risks	under Articles 32 and 226.
Article 19(1)(g)	Freedom to practise a profession or occupation	Loss of fishing, agriculture and other climate-dependent livelihoods	Legal protection against unlawful restrictions and appropriate livelihood safeguards.
Article 48A	Directive Principle of State Policy	State responsibility to protect and improve the environment	Judicial interpretation and directions requiring environmental protection.
Article 51A(g)	Fundamental duty of citizens	Protection of forests, rivers, lakes, wildlife and natural resources	Environmental awareness, public participation and responsible environmental conduct.
Environment (Protection) Act, 1986	Section 3 and Section 5	Environmental deterioration and inadequate regulatory responses	Regulatory directions, environmental compliance and preventive measures.
Air (Prevention and Control of Pollution) Act, 1981	Pollution prevention and control	Air pollution and associated health burdens, including those aggravated by climate stress	Pollution-control proceedings and regulatory enforcement.
Water (Prevention and Control of Pollution) Act, 1974	Water quality and pollution control	Drinking-water contamination and water insecurity	Regulatory intervention and pollution-control measures.
National Green Tribunal Act, 2010	Sections 14, 15 and 20	Environmental damage, compensation and restoration	Environmental adjudication, compensation and application of sustainable development, precautionary and polluter-pays principles.
Disaster Management Act, 2005	Disaster prevention, preparedness and response	Floods, cyclones, droughts and extreme-weather displacement	Disaster preparedness, relief, rehabilitation and institutional accountability.

Important judicial development: In *M.K. Ranjitsinh v. Union of India*, 2024 INSC 280, decided on 21 March 2024, the Supreme Court recognized the right to be free from the adverse effects of climate change under Articles 14 and 21. The judgment is particularly important because it connects climate vulnerability with equality, health, livelihood, displacement and cultural preservation.

5. Human Activities Contributing to Climate Change

Transportation is a major source of greenhouse gas emissions, heavily reliant on fossil fuels in road vehicles, aviation, shipping, and freight. These modes contribute to carbon dioxide and other emissions during combustion, while their associated activities such as road construction and vehicle manufacturing further impact the environment. Pollutants from transportation exacerbate air quality issues, particularly affecting vulnerable populations like children and the elderly. Alongside atmospheric effects, transportation emissions threaten food security, public health, and economic stability by disrupting communities and indigenous rights through land conflicts. A shift towards cleaner public transport, electric mobility, and equitable infrastructure planning is essential, which also considers the ramifications of battery supply chains and land acquisitions.

Electricity generation, crucial for economic and social progress, contributes significantly to greenhouse gases, particularly from fossil fuel sources like coal, oil, and natural gas. These contribute to air pollution and ecosystem disturbances. Communities near power plants suffer from health hazards, highlighting the need for a socially equitable transition to renewable energy sources like solar and wind, which can create land-use conflicts if poorly managed. A just energy transition would seek affordable electricity, community involvement, and protected workers' rights, alongside rigorous environmental assessments. Industrial manufacturing is another key emitter due to energy use and chemical processes, with industries such as cement, steel, and petroleum refining being notably carbon-intensive. These industries pose environmental and health risks, including respiratory illnesses from air pollution and dangers from industrial waste. Labor rights and community health must not be compromised in the pursuit of industrial development. A rights-based industrial transition would implement cleaner technologies and stronger environmental regulation. Agricultural practices significantly influence greenhouse gas emissions, largely through fertilizer usage, livestock management, and land conversion. Climate change impacts like altered rainfall patterns and increased

temperatures pose severe threats to agricultural productivity, affecting food rights and livelihoods, particularly for small-scale farmers who lack resources for adaptation. Promoting sustainable practices and resilient agricultural technologies is critical for ensuring food security.

The oil and gas sector contributes to climate change from extraction to consumption, releasing harmful pollutants and methane, a potent greenhouse gas. Local communities often bear the brunt of health risks and land loss due to oil and gas activities, underscoring a need for strict regulatory measures and corporate responsibility in environmental impact management. Buildings are significant contributors to emissions through their construction and operation, impacting energy consumption and urban infrastructure. Poor housing resilience can exacerbate vulnerabilities during climate events, making standards for energy-efficient and flood-resilient buildings essential in urban planning, prioritizing the rights of affected communities. Forests play a vital role in the climate system by sequestering carbon and maintaining ecological balance. Deforestation driven by agriculture and infrastructure development undermines ecosystem services and threatens indigenous rights and livelihoods. Sustainable forest management should respect community rights and prevent exclusionary practices. Lastly, unsustainable production and consumption habits lead to environmental harm, with waste management being a significant concern. Proper systems for waste reduction and management must ensure safe working conditions for waste workers and involve community participation to foster equality and environmental stewardship.

Table 3. Landmark climate change and human rights judicial developments: Comparative legal analysis

Case / decision	Court or institution	Principal legal issue	Important legal development	Research significance
M.K. Ranjitsinh v. Union of India (2024)	Supreme Court of India	Climate change, biodiversity and fundamental rights	Recognised the right to be free from adverse effects of climate change under Articles 14 and 21.	Establishes an important constitutional foundation for climate-rights litigation in India.
Verein KlimaSeniorinnen	European Court of	Inadequate government	Found violations of Articles 8 and 6(1) of	Strengthens positive state

Schweiz v. Switzerland (2024)	Human Rights, Grand Chamber	climate mitigation	the European Convention.	obligations and access to justice in climate litigation.
Daniel Billy et al. v. Australia (2022)	UN Human Rights Committee	Climate change affecting Torres Strait Islanders	Found violations concerning private and family life and minority culture under ICCPR Articles 17 and 27.	Establishes the importance of Indigenous culture and climate adaptation obligations.
Urgenda Foundation v. State of the Netherlands (2019)	Supreme Court of the Netherlands	Insufficient national greenhouse gas reduction measures	Confirmed the State's obligation to take more effective emissions-reduction measures under human rights law.	Demonstrates the potential of domestic courts to review inadequate climate mitigation.
Advisory Opinion OC-23/17 (2017)	Inter-American Court of Human Rights	Environment and human rights	Recognised the relationship between environmental protection and human rights, including relevant transboundary obligations.	Supports the development of environmental human rights jurisprudence.

Critical comparative finding: These decisions demonstrate three developing dimensions of climate justice:

1. **Constitutional protection:** Climate protection can be recognized through fundamental rights.

2. **Positive state obligations:** Governments may be legally accountable for inadequate mitigation and adaptation.

3. **Collective and cultural protection:** Climate-related harm can threaten Indigenous identity, family life and community survival.

The distinction between the cases is important: the Indian Supreme Court recognised a constitutional climate-related right; the European Court found specific Convention violations; and the UN Human Rights Committee found specific ICCPR violations

6. Climate Change and Fundamental Human Rights

The complex intersection of climate change and human rights encompasses direct threats to fundamental rights such as life, health, food security, water, housing, and education. Climate hazards, including extreme heat, floods, droughts, and rising sea levels, significantly jeopardize these rights by impacting livelihoods, health, and social infrastructure. For instance, the right to life is threatened through pathways like heat-related illnesses, malnutrition due to drought, and increased mortality from severe weather events. Governments are obligated under human rights law to protect citizens from foreseeable climate risks, necessitating the strengthening of early warning systems, emergency healthcare, and disaster preparedness measures. Emerging climate jurisprudence highlights the legal underpinnings of these obligations, and the accountability for states failing to mitigate climate-related risks is becoming increasingly relevant. The right to health, as articulated in the International Covenant on Economic, Social and Cultural Rights, is compromised by climate-induced health issues, such as the spread of climate-sensitive diseases and mental health challenges stemming from displacement and loss of community. Effective public health planning must incorporate strategies tailored to climate risks, necessitating investments in resilient healthcare infrastructure and mental health support.

Food security is severely impacted by climate change, affecting agricultural productivity and livestock health. States must ensure the right to adequate food by enforcing climate-responsive policies that assist small-scale farmers and enhance food systems' resilience against climate variability. Water security, a critical human rights issue under climate change, necessitates interventions addressing altered rainfall patterns and contamination risks. Striking adaptations include watershed protection and equitable distribution of safe drinking water. Housing rights face threats from climate disasters that can destroy homes and displace populations, particularly in vulnerable communities. The right to adequate housing encompasses more than just physical structures and requires governments to conduct lawful disaster-related relocations that respect human dignity. Climate instability disrupts livelihoods, particularly for workers in agriculture, fisheries, and service sectors. The International Labour Organization advocates for protecting workers from climate hazards and ensuring safe working conditions.

Education rights are jeopardized as climate disasters impede school access and interrupt learning. Integrating educational institutions into climate resilience planning can mitigate this. Cultural rights, particularly for indigenous and marginalized communities, are at risk as climate

change erodes ecological foundations critical to their cultural identity and practices. Climate policies must safeguard these rights and encourage the participation of affected groups. Finally, issues of equality and non-discrimination emerge prominently, as climate impacts disproportionately affect certain demographics based on income, gender, age, and disability. Governments must comprehensively assess these disparities, enhancing social protections and inclusive decision-making processes in climate-related strategies. In summary, addressing the multifaceted human rights implications of climate change requires a comprehensive and inclusive approach that safeguards rights across various domains while promoting resilience and adaptation strategies. Governments must act decisively to uphold their human rights obligations in the face of climate change challenges.

7. Disproportionate Impacts on Vulnerable Populations

Climate vulnerability results from the interplay of environmental exposure and social inequalities, significantly impacting various groups. Women and girls often face increased risks due to limited access to resources such as land, finance, and education. In rural areas, their responsibilities for water collection, food management, and caregiving are intensified by climate events like drought. This can lead to increased workloads, reduced educational opportunities, and heightened risks of violence and exploitation in disaster settings. Consequently, climate policies need to integrate gender-responsive strategies including women's participation and protection against gender-based violence. Children are also particularly vulnerable, affected by physiological development and dependence on adults. Health risks from heat exposure, malnutrition, and pollution can hinder their development, while climate displacement interrupts education and support systems. Economically disadvantaged children face compounded consequences due to limited access to healthcare and safe environments, emphasizing that climate strategies should prioritize their best interests in planning and disaster response. Indigenous peoples and forest-dependent communities bear the brunt of climate change through ecosystem degradation that threatens their livelihoods and cultural identities. This vulnerability is worsened by insecure land rights and exclusion from decision-making processes. Climate mitigation efforts involving forests and renewable energy must ensure the participation of these communities, recognizing their knowledge and customary rights instead of merely treating them as beneficiaries of government initiatives.

Older adults are at greater risk during extreme weather events due to mobility limitations and

medical dependencies. Similarly, persons with disabilities may struggle to access crucial services during emergencies. Disaster preparedness should focus on inclusivity and continuity of care to ensure these groups are not left behind. Economically disadvantaged populations often live in high-risk areas due to the scarcity of affordable housing. Their limited savings and insecure employment hinder recovery from climate-related losses, potentially trapping them in poverty. This underscores that vulnerability results not only from natural hazards but also from socio-economic structures. Finally, coastal communities, small-scale fishers, and migrant workers face unique challenges such as erosion and marine ecosystem changes impacting livelihoods. Migrants are particularly vulnerable due to extreme heat and lack of social protections. Effective climate governance must, therefore, tailor responses to the specific circumstances of affected communities, avoiding one-size-fits-all adaptation measures.

8. Climate Justice, Environmental Ethics and Intergenerational Equity

Climate justice acknowledges the unequal distribution of the causes, consequences, and capacities related to climate change. Historically, industrialized nations have contributed significantly to greenhouse gas emissions, while developing countries and vulnerable populations, though minor contributors, face substantial climate risks. This disparity raises critical issues about historical responsibility, equitable resource access, financial support, technology transfer, and the allocation of adaptation costs. The principle of common but differentiated responsibilities, enshrined in the United Nations Framework Convention on Climate Change and the Paris Agreement, asserts that while all states share the responsibility to combat climate change, they do so with varying historical contributions and capabilities. This principle is crucial for fostering international climate cooperation, necessitating an approach that considers the unique circumstances of developing nations while emphasizing collective action. Climate ethics extends to the relationship between current and future generations. Decisions regarding fossil fuel consumption, deforestation, industrial growth, and resource exploitation can lead to environmental consequences that resonate well beyond the immediate economic benefits. Future generations, unable to participate in today's decision-making, may inherit adverse effects such as higher temperatures, ecological damage, and escalated adaptation costs. Therefore, intergenerational equity compels present institutions to reflect on long-term environmental effects and ensure they do not impose undue burdens on those yet to come. The precautionary principle pertains to the need for preemptive action in scenarios of scientific uncertainty that pose credible risks of serious or irreversible

environmental harm. It emphasizes that a lack of complete scientific certainty should not delay responsible preventive measures. Climate governance must therefore rely on the best available scientific data, implement transparent risk assessments, and employ adaptive policy frameworks.

The polluter-pays principle underpins another vital aspect of climate justice, positing that those liable for environmental pollution should shoulder the costs associated with prevention, control, and remediation, consistent with legal standards. This principle invites scrutiny regarding the distribution of mitigation expenses, environmental damage responsibility, corporate accountability, and compensation for affected communities. Finally, environmental justice necessitates procedural fairness, ensuring communities possess access to essential environmental information, opportunities to influence decisions, and effective channels for contesting harmful practices. Without active engagement and legal recourse, climate policies may inadvertently perpetuate existing inequalities, even if they are framed as initiatives for sustainable development.

Table 4. Proposed innovative legal framework: Human Rights-Based Climate Accountability and Justice Model

Proposed legal mechanism	**Existing legal gap**	**Recommended legal innovation**	**Responsible institution**	**Expected human rights outcome**
Climate Human Rights Impact Assessment (CHRIA)	Environmental assessments do not necessarily examine the full range of climate-related human rights impacts.	Introduce mandatory human rights assessments for major development and infrastructure projects.	MoEFCC, State Governments and regulatory authorities	Protection of life, health, housing and livelihood.
Climate Vulnerability Equality Audit	Climate policies may overlook unequal impacts on disadvantaged populations.	Require periodic assessments of climate risks based on gender, income, disability, age and geographical vulnerability.	National and State Human Rights Commissions	Substantive equality and non-discrimination.
Constitutional Climate	General climate commitments may	Develop a judicial test examining	Supreme Court and High	Enforceable constitutional

Accountability Test	not translate into measurable protection of fundamental rights.	foreseeability, scientific evidence, proportionality, state action and protection of vulnerable communities.	Courts	climate protection.
Climate Loss and Damage Compensation Mechanism	Existing compensation systems may not adequately address long-term livelihood and cultural losses.	Establish a dedicated mechanism for compensation, rehabilitation and ecosystem restoration.	Central and State Governments	Effective remedy and climate justice.
Intergenerational Climate Justice Principle	Existing decision-making may insufficiently account for future generations.	Introduce future-generation impact assessments in climate-sensitive legislation and development planning.	Parliament, State Legislatures and planning authorities	Protection of children's rights and future generations.
Indigenous Climate Protection Protocol	Conventional rehabilitation may fail to protect traditional knowledge, identity and cultural relationships with land.	Require meaningful participation, culturally appropriate adaptation and safeguards against involuntary displacement.	Tribal Affairs Ministry and State Tribal Welfare Departments	Cultural preservation and community autonomy.
Climate Transparency and Public Disclosure System	Lack of accessible information may prevent communities from monitoring government climate performance.	Mandate publicly accessible emissions, adaptation expenditure, vulnerability and implementation reports.	Climate authorities and public information institutions	Right to information, participation and accountability.
Climate Justice Ombudsman	Affected individuals may face difficulties accessing specialised climate-related remedies.	Create an independent climate grievance institution with investigation, recommendation and referral powers.	Parliament and State Governments	Accessible justice and institutional accountability.
Climate-Responsive	Disaster responses may prioritise	Integrate rights-based rehabilitation,	National and State Disaster	Protection of life, housing,

Disaster Protection	immediate relief without adequate long-term rights restoration.	livelihood restoration and accessible early-warning systems.	Management Authorities	health and livelihood.
Corporate Climate Due Diligence	Corporate environmental responsibilities may not adequately address human rights impacts across business operations and supply chains.	Introduce mandatory climate-related human rights due diligence, disclosure and remediation requirements through appropriate legislation.	Parliament, regulators and corporate authorities	Corporate accountability and prevention of climate-related harm.

9. International Legal Framework for Climate Change and Human Rights

The international legal framework addressing climate change and human rights encompasses a variety of interconnected treaties, customary laws, and judicial interpretations that collectively aim to safeguard human dignity in the face of environmental challenges. The Universal Declaration of Human Rights, while non-binding, lays the foundational principles of dignity, equality, and an adequate standard of living, providing significant normative guidance in developing international human rights law. The International Covenant on Civil and Political Rights safeguards rights pertinent to life, privacy, and family life, emphasizing the importance of these rights when climate-related hazards pose threats to survival or disrupt cultural practices. The Human Rights Committee has notably underscored Article 6, interpreting the right to life as including protection against foreseeable threats that could lead to loss of life due to environmental changes. Meanwhile, the International Covenant on Economic, Social and Cultural Rights identifies essential rights linked to health, food security, housing, and an adequate standard of living, mandating states to take steps towards realization using their available resources. Climate change impacts these rights by compromising infrastructure, accessibility to crucial resources, and economic stability, compelling states to integrate climate resilience into policies governing public health, food systems, housing, and social safety nets.

The United Nations Framework Convention on Climate Change (UNFCCC) of 1992 forms the cornerstone of international climate governance, aiming to stabilize greenhouse gas concentrations and highlighting the principle of common but differentiated responsibilities among states based on their respective capabilities and circumstances. The subsequent Kyoto

Protocol of 1997 introduced binding commitments for emissions reductions by developed nations, reinforcing the international climate governance structure. Further development came with the Paris Agreement in 2015, which established comprehensive mechanisms through nationally determined contributions, climate finance, transparency, and global assessments. The agreement sets ambitious temperature targets to limit global warming to below 2ºC, with aspirations for 1.5ºC, and acknowledges the essential role of human rights considerations, thereby intertwining climate action with the protection of vulnerable populations.

Recent initiatives, including the United Nations Human Rights Council Resolution 48/13 (2021) and General Assembly Resolution 76/300 (2022), have bolstered the recognition of the right to a clean, healthy, and sustainable environment. These resolutions lay essential groundwork for integrating environmental rights into national policies and legislation, although their effectiveness hinges on implementation at the domestic level. Moreover, specific conventions—like the Convention on the Rights of the Child and the Convention on the Elimination of All Forms of Discrimination against Women—highlight the disproportionate impacts of climate change on children and women, respectively, calling for gender-sensitive and child-focused responses to climate-related risks. The Convention on the Rights of Persons with Disabilities underscores the need for inclusivity and equal protection in environmental disaster preparedness. The United Nations Guiding Principles on Business and Human Rights provide a vital framework for assessing the role of businesses in upholding human rights. They establish the state duty to protect human rights alongside corporate accountability and emphasize the importance of remedies for breaches. Although not legally binding, these principles influence corporate practices regarding environmental responsibility and the assessment of risks associated with business operations related to climate change, further integrating the discourse surrounding corporate impacts and human rights frameworks.

10. Climate Change and Indian Constitutional Perspectives

The Constitution of India does not explicitly include a provision titled the right against climate change; however, it contains several provisions that inherently support environmental and climate-related protections. Article 21 guarantees the right to life and personal liberty, which the Supreme Court has interpreted to include the right to a healthy environment. Additionally, Article 14 ensures equality before the law and equal protection of the laws, which is significant as certain communities may disproportionately suffer from environmental hazards and

inadequate climate protection measures. Furthermore, Article 48A mandates the State to protect and improve the environment, as well as safeguard forests and wildlife. Article 51A(g) establishes a fundamental duty for citizens to improve and protect the natural environment, which, although not independently enforceable like fundamental rights, guides constitutional interpretation and the governance of the environment. The Supreme Court case M.C. Mehta v. Kamal Nath highlighted the integral role of environmental protection within Article 21 and elaborated on the public trust doctrine, asserting that natural resources are held in trust by the State for public use and should not be exploited in disregard of the public interest. This is relevant to climate governance due to the essential roles of ecosystems like forests and water bodies in maintaining environmental stability. Indian environmental jurisprudence has also been influenced by the precautionary and polluter-pays principles, recognized in the Supreme Court's Vellore Citizens' Welfare Forum v. Union of India (1996) case as vital for sustainable environmental practices. These principles are particularly pertinent when addressing climate-related issues, given the potential seriousness and irreversibility of environmental harm.

The National Green Tribunal Act of 2010 established an important mechanism for environmental adjudication, allowing the National Green Tribunal to address specific environmental matters, although it does not serve as a general climate court. Its relevance lies in its ability to manage climate-related claims associated with statutory obligations and ecological damage. At the national level, India has introduced various climate policy initiatives, such as the National Action Plan on Climate Change, covering areas like solar energy, energy efficiency, sustainable agriculture, and regional climatic adaptations. Effective implementation of these policies necessitates adequate funding, transparent monitoring, public engagement, and legal accountability. The recent Supreme Court decision in M.K. Ranjitsinh and Others v. Union of India (2024) further reinforced the Constitutional basis for climate protection, affirming that individuals are entitled to be free from the adverse impacts of climate change under Articles 14 and 21. This landmark judgment discussed the intricate balance between biodiversity conservation and renewable energy development, particularly regarding the protection of species like the Great Indian Bustard. It underscores that climate change should be viewed not merely as a policy issue but as a constitutional matter tied to fundamental rights of life and equality. This ruling illustrates the necessity of balancing climate mitigation efforts, such as renewable energy expansion, with other constitutional rights and environmental interests. While addressing climate change is crucial, it must be done without undermining biodiversity protection, community rights, or ecological integrity. Thus, constitutional climate

governance demands a nuanced approach that reconciles various environmental and social objectives.

11. Emerging Judicial Developments and Landmark Climate Litigation

Climate litigation is increasingly recognized as a crucial avenue for individuals and organizations seeking accountability for insufficient climate action, raising issues like state obligations, corporate responsibility, and climate-related harm remedies. Notable cases have significantly advanced legal frameworks around climate issues. The Urgenda Foundation v. State of the Netherlands case set a precedent when the Dutch Supreme Court mandated a minimum 25% reduction in greenhouse gas emissions by 2020, linking national obligations to human rights under the European Convention on Human Rights. This landmark decision emphasized the state's duty to safeguard life and familial integrity amidst climate inaction. In Verein Klima Seniorinnen Schweiz v. Switzerland, the European Court of Human Rights determined that insufficient climate measures by Swiss authorities violated Articles 8 and 6(1) of the European Convention. It advocated for effective regulatory frameworks and highlighted the intergenerational impact of climate inaction.

The United Nations Human Rights Committee's decision in Billy and Others v. Australia acknowledged the detrimental effects of climate change on Torres Strait Islander communities, affirming that inadequate adaptation infringes upon cultural and familial rights. This case is pivotal as it underscores the intersection between climate change and indigenous cultural heritage. While the Sacchi and Others v. Argentina case was deemed inadmissible due to procedural issues, it contributed to the growing discourse on state responsibilities for climate-related harm, particularly regarding children's rights and the broader implications of climate change.

The Indian Supreme Court's ruling in M.K. Ranjitsinh v. Union of India recognized a constitutional right to a climate unaffected by adverse changes, balancing development needs with environmental protection, signifying the increasing integration of climate considerations into constitutional law. A significant shift occurred with the International Court of Justice's Advisory Opinion on 23 July 2025, which clarified states' legal obligations under international law to protect the climate system. This opinion emphasized that a clean and sustainable environment is vital for the realization of fundamental human rights. It outlined the necessity

for states to undertake substantive climate-action measures, encompassing mitigation and adaptation strategies, reinforcing that failures could incur state responsibility, including remedies for breached obligations. Collectively, these judicial advancements illustrate a transition from focusing solely on environmental damage to addressing systemic climate risks, constitutional duties, and considerations of intergenerational justice. Nonetheless, practical challenges persist in the legal arena, including establishing causation, addressing standing issues, separation of powers, and ensuring effective enforcement of remedies. Courts face the task of devising solutions that are legally robust, scientifically grounded, and feasible within existing institutional structures.

12. State Obligations and Corporate Accountability

States play a pivotal role in the international human rights framework, holding the responsibility for ensuring the respect, protection, and fulfillment of recognized rights. In the context of climate change, this responsibility encompasses not only reactive measures, but also proactive strategies, such as preventive actions, mitigation policies, adaptation planning, regulation of private sector activities, facilitation of public participation, and access to effective remedies. The obligation to respect involves states refraining from actions that could unduly impact human rights through environmental harm or decisions linked to climate change. The duty to protect mandates that states regulate businesses and other non-state entities to mitigate adverse effects on human rights. The duty to fulfill necessitates comprehensive policies, public investments, institutional capacity, and social safety nets to ensure individuals can enjoy their rights in the face of climate-related risks. A critical aspect of state responsibility is the preventive dimension, particularly considering climate change's predictable and potentially irreversible repercussions. States are urged to establish emission reduction targets, enforce environmental regulations, and protect ecosystems while embedding climate risk into public infrastructure planning. Decisions should be driven by the best scientific evidence and complemented by transparent monitoring and regular evaluations.

Corporate accountability is equally crucial, as private firms are significant contributors to greenhouse gas emissions through various sectors, including fossil fuel extraction, energy production, and agriculture. Companies also impact land use, resource distribution, labor conditions, and the environmental status of surrounding communities. The corporate responsibility to uphold human rights entails identifying, preventing, mitigating, and disclosing

adverse impacts linked to their operational conduct and business relationships. Corporate climate accountability should transcend mere voluntary sustainability pledges or carbon neutrality claims; it must entail transparent emission reporting, robust transition plans, diligent environmental practices, responsible management of supply chains, and genuine engagement with impacted communities. Misleading environmental claims must be avoided, as should carbon-offset initiatives that obscure ongoing harmful emissions or lead to the dispossession of local populations. Legal obligations for corporations differ from those of states under customary international law, as they do not carry the same responsibilities. Corporate obligations stem from domestic laws, regulatory mandates, contractual obligations, human rights due diligence practices, and other pertinent legal frameworks. Nonetheless, the actions of private entities can intersect with state responsibilities when public authorities neglect their regulatory duties. The 2025 Advisory Opinion of the International Court of Justice emphasizes the need for effective regulation of private actions as part of climate system protection, underscoring corporate accountability as a vital element of human rights-centered climate governance.

13. Climate-Induced Displacement, Climate–Human Rights Accountability, and Policy Implications

Climate change is a significant driver of human displacement, posing threats to dignity, social stability, and fundamental rights. Factors such as rising sea levels, storms, floods, droughts, and ecosystem degradation can compel communities to leave their homes, risking loss of housing, agricultural land, jobs, healthcare, education, social networks, and cultural identity. Vulnerable groups including Indigenous and coastal communities, women, children, the elderly, persons with disabilities, and economically disadvantaged populations face heightened challenges during forced evacuations and relocations. The term "climate refugee" does not guarantee refugee status under the 1951 Refugee Convention; however, individuals may qualify under specific legal conditions, with non-refoulement obligations triggered where life is at risk. Notable legal precedents, such as the Human Rights Committee's decision in Teitiota v. New Zealand, acknowledge that severe climate conditions may threaten the right to life and require protections against removal. Similarly, the 2025 International Court of Justice Advisory Opinion reinforces this connection by highlighting risks to life that engage non-refoulement obligations.

To address climate-induced displacement, effective policymaking should focus on prevention, safe evacuation, temporary protection, adequate housing, essential services, and voluntary relocation, all underpinned by meaningful consultation and legal safeguards. The proposed Climate–Human Rights Accountability Framework (CHRAF) aims to harmonize climate science, human rights protection, institutional accountability, and legal remedies. It connects five key areas: climate hazard identification, rights-based impact assessment, differential vulnerability analyses, institutional accountability, and proactive remedies. This involves rigorous scientific assessments of climate risks, evaluations of how these risks affect specific rights, and acknowledgment of differential vulnerabilities based on socio-economic factors.

In assessing the responsibilities of various institutional actors public authorities, regulatory bodies, and corporations CHRAF emphasizes environmental compliance, human rights due diligence, and community consultation. The preventive dimension of the framework advocates for adaptation strategies, which include compensation, rehabilitation, and medical support where appropriate. While the CHRAF presents a conceptual model rather than a legally validated framework, its potential to influence climate litigation, impacts assessment, and human rights monitoring is significant. In India, this could apply to vulnerable coastal districts, agricultural sectors, and heat-risk urban areas. Specific assessments, such as those for cyclones in Odisha, should encompass not only meteorological data but also access to shelters, healthcare, education, and cultural preservation. Additionally, the relationship between climate change and human rights exposes gaps in conventional governance, often prioritizing emissions reduction over social implications. Effective climate policy must consider equity, access to essential services, and public health alongside environmental measures. Corporate accountability is crucial for ensuring that supply chain practices reflect environmental and social responsibilities. Further research is necessary on the intersections of refugee law, human rights, and climate-induced relocation, especially regarding state obligations when territories become uninhabitable due to climate effects.

Intergenerational dimensions of climate justice are also vital, advocating for representation and protection of future generations' interests. In India, understanding and enforcing constitutional rights against climate change impacts could be pivotal for Indigenous, forest-dependent communities, and economically marginalized groups. Ultimately, integrated climate monitoring should evaluate not just infrastructure and emission targets but also essential rights, access to resources, and preventive measures against involuntary displacement. The CHRAF

represents an integrated approach designed to strengthen accountability in climate governance, ensuring the protection of rights for both current and future populations.

Research outcome	**Proposed legal argument**	**Novel contribution**
Outcome 1: Climate change as a fundamental rights issue	Climate-related harm should be assessed as a potential violation of constitutional rights, rather than exclusively as environmental damage.	Integrates climate science with constitutional human rights jurisprudence.
Outcome 2: From state discretion to measurable accountability	Governments should demonstrate whether their climate policies are scientifically informed, adequately funded and effectively implemented.	Develops a measurable model of state responsibility.
Outcome 3: Climate vulnerability as an equality issue	Unequal exposure and unequal adaptive capacity should be examined under substantive equality principles.	Connects climate justice with anti-discrimination law.
Outcome 4: Climate displacement as a human rights issue	Climate-related displacement requires legal safeguards for housing, livelihood, dignity, participation and cultural identity.	Advances a rights-based approach to internal climate displacement.
Outcome 5: Corporate climate responsibility	Business activities contributing to foreseeable climate-related harm should be examined through environmental and human rights due diligence.	Connects corporate accountability with climate justice.
Outcome 6: Intergenerational constitutional responsibility	Climate decisions should consider the foreseeable effects of present policies on children and future generations.	Develops an intergenerational dimension of constitutional environmental protection.
Outcome 7: Climate remedies beyond monetary compensation	Remedies should include restoration, rehabilitation, adaptation, participation and guarantees of non-repetition.	Moves climate litigation towards comprehensive human rights remedies.

17. Conclusion

Climate change poses significant challenges to human rights, affecting various essential aspects of life such as health, food security, and education. The unequal impact is particularly felt by vulnerable groups, including economically disadvantaged communities, women, children, and indigenous populations. An integrated approach that includes human dignity, constitutional protections, and international cooperation is necessary to address these issues. International

legal frameworks such as human rights instruments and climate litigation increasingly support the nexus between climate obligations and human rights. Notable developments include the UN's recognition of the right to a clean environment and various judicial decisions reinforcing this right. However, significant implementation gaps hinder effective protection, highlighting the need for measurable safeguards and the transformation of recognized rights into actionable legal frameworks. The proposed Climate–Human Rights Accountability Framework aims to link climate hazards with rights-based assessment and institutional accountability. Climate governance must transition from reactive disaster management to a preventive, rights-centered approach, ensuring the dignity and security of current and future generations. Ultimately, climate justice should be a cornerstone of global governance, emphasizing that the protection of human rights is intrinsically connected to environmental justice, and vice versa.

Research Novelty and Significance

The present review advances a Human Rights-Based Climate Accountability Model that conceptualizes climate change not merely as an environmental or developmental challenge but as a multidimensional legal issue involving constitutional guarantees, international human rights obligations and institutional accountability. Unlike conventional approaches that predominantly concentrate on greenhouse gas reduction and environmental conservation, this study examines the legal consequences of inadequate climate mitigation and adaptation measures for fundamental human rights.

The principal novelty of this research lies in proposing an integrated framework comprising Climate Human Rights Impact Assessments, Climate Vulnerability Equality Audits, Constitutional Climate Accountability Tests and a dedicated Climate Loss and Damage Compensation Mechanism. The framework seeks to establish a stronger relationship between scientific evidence, foreseeable climate-related harm, governmental responsibility and effective legal remedies. The study further argues that climate justice must extend beyond financial compensation to include rehabilitation, livelihood restoration, cultural protection, meaningful public participation and intergenerational equity. It therefore proposes a shift from reactive environmental governance towards preventive, rights-oriented and accountable climate governance.

REFERENCES:

1. Knox JH, Pejan R, editors. The Human Right to a Healthy Environment. Cambridge: Cambridge University Press; 2018.

2. Intergovernmental Panel on Climate Change. Climate Change 2023: Synthesis Report. Geneva: IPCC; 2023. doi:10.59327/IPCC/AR6-9789291691647.

3. Intergovernmental Panel on Climate Change. Climate Change 2022: Impacts, Adaptation and Vulnerability. Cambridge: Cambridge University Press; 2022.

4. United Nations. Universal Declaration of Human Rights. General Assembly Resolution 217 A (III). Paris; 1948.

5. United Nations. International Covenant on Civil and Political Rights. General Assembly Resolution 2200A (XXI); 1966.

6. United Nations. International Covenant on Economic, Social and Cultural Rights. General Assembly Resolution 2200A (XXI); 1966.

7. United Nations. United Nations Framework Convention on Climate Change. New York; 1992.

8. United Nations. Kyoto Protocol to the United Nations Framework Convention on Climate Change. Kyoto; 1997.

9. United Nations. Paris Agreement. Paris; 2015.

10. United Nations Human Rights Council. The human right to a clean, healthy and sustainable environment. Resolution 48/13; 2021.

11. United Nations General Assembly. The human right to a clean, healthy and sustainable environment. Resolution 76/300; 2022.

12. International Court of Justice. Obligations of States in Respect of Climate Change. Advisory Opinion of 23 July 2025. The Hague: ICJ; 2025.

13. Supreme Court of India. M.K. Ranjitsinh and Others v. Union of India and Others. 2024 INSC 280; Judgment dated 21 March 2024.

14. European Court of Human Rights. Verein KlimaSeniorinnen Schweiz and Others v. Switzerland. Application No. 53600/20. Grand Chamber Judgment; 9 April 2024.

15. United Nations Human Rights Committee. Billy and Others v. Australia. Communication No. 3624/2019. CCPR/C/135/D/3624/2019; 2022.

16. United Nations Committee on the Rights of the Child. Sacchi and Others v. Argentina and Others. Communications Nos. 104/2019, 105/2019, 106/2019, 107/2019 and 108/2019; 2021.

17. United Nations Human Rights Committee. Teitiota v. New Zealand. Communication No. 2728/2016. CCPR/C/127/D/2728/2016; 2020.

18. Supreme Court of India. M.C. Mehta v. Kamal Nath. (2000) 6 SCC 213.

19. Supreme Court of India. Vellore Citizens' Welfare Forum v. Union of India. (1996) 5 SCC 647.

20. Supreme Court of India. Subhash Kumar v. State of Bihar. (1991) 1 SCC 598.

21. Supreme Court of India. Rural Litigation and Entitlement Kendra v. State of Uttar Pradesh. (1985) 2 SCC 431.

22. Supreme Court of India. Indian Council for Enviro-Legal Action v. Union of India. (1996) 3 SCC 212.

23. Supreme Court of the Netherlands. State of the Netherlands v. Urgenda Foundation. ECLI:NL:HR:2019:2007; 2019.

24. European Court of Human Rights. Duarte Agostinho and Others v. Portugal and 32 Others. Application No. 39371/20. Grand Chamber Decision; 9 April 2024.

25. United Nations. Convention on the Rights of the Child. General Assembly Resolution 44/25; 1989.

26. United Nations. Convention on the Elimination of All Forms of Discrimination against Women. General Assembly Resolution 34/180; 1979.

27. United Nations. Convention on the Rights of Persons with Disabilities. General Assembly Resolution 61/106; 2006.

28. United Nations Human Rights Council. Guiding Principles on Business and Human Rights. A/HRC/17/31; 2011.

29. International Labour Organization. Ensuring Safety and Health at Work in a Changing Climate. Geneva: ILO; 2024.

30. United Nations Environment Programme. Emissions Gap Report 2024. Nairobi: UNEP; 2024.

31. World Health Organization. Climate Change and Health. Geneva: WHO.

32. Government of India. The Constitution of India. New Delhi: Government of India.

33. Government of India. National Action Plan on Climate Change. New Delhi; 2008.

34. Government of Odisha. Odisha State Action Plan on Climate Change. Bhubaneswar: Government of Odisha.

35. United Nations Human Rights Council. Report of the Office of the United Nations High Commissioner for Human Rights on the relationship between climate change and human rights. A/HRC/10/61; 2009.

36. United Nations Human Rights Council. Analytical study on the relationship between climate change and the human right of everyone to the enjoyment of the highest attainable standard of physical and mental health. A/HRC/32/23; 2016.

37. United Nations Human Rights Council. Analytical study on the relationship between climate change and the full and effective enjoyment of the rights of the child. A/HRC/35/13; 2017.

38. United Nations. Transforming Our World: The 2030 Agenda for Sustainable Development. General Assembly Resolution 70/1; 2015.

39. United Nations. Convention Relating to the Status of Refugees. Geneva; 1951.

40. United Nations. Guiding Principles on Internal Displacement. E/CN.4/1998/53/Add.2; 1998.