

Climate Change, Child Rights and Education: Challenges and Pathways Towards Achieving SDGs

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ABSTRACT

Children play a central role in shaping the future of society, yet they remain among the most vulnerable to crises outside their control. Recent reports highlight how global shocks, from health emergencies to environmental hazards, have disproportionately undermined children's well-being and opportunities (UNICEF, 2021; World Bank, 2022). The Sustainable Development Goals (SDGs), adopted in 2015, seek to address these overlapping challenges by promoting equality, human rights, and climate action as part of a unified development agenda (United Nations, 2015). Within this framework, children occupy a unique intersection where their rights to education, protection, and development are continually threatened by climate unpredictability and weak policy enforcement (UNCRC, 1989; Ministry of Education, 2020).

Keywords: Climate Change, Child Rights, Education, SDGs, Human Rights.

Introduction

The idea of children being “at the crossroads” captures a defining moment of our time. Education, on one side, remains the most powerful tool for building resilience, enabling agency, and charting a pathway to a sustainable future (Sen, 1999; Nussbaum, 2011; UNESCO, 2020). Yet climate change, on the other side, is disrupting children's access to schooling, health, and safety, particularly in vulnerable regions such as South Asia (IPCC, 2022; UNICEF, 2021). These disruptions risk trapping children in cycles of exclusion, undermining both their growth and the achievement of the SDGs—an outcome made worse by systemic inequalities and inconsistent enforcement of entitlements (Government of India, 2009; Save the Children, 2020).

Against this backdrop, this paper examines how education, child rights, and climate change intersect in the Indian context. It emphasizes the importance of climate-sensitive policies and rights-based approaches that place children at the center of sustainable development strategies (UNESCO, 2021; UNICEF, 2023). Importantly, it also resists framing children merely as passive victims. Instead, drawing on work on youth agency and participation, it highlights their potential as active contributors to eco-social progress (Boyden, 2015; O'Brien, Selboe, & Hayward, 2018). Empowering this generation is not only a moral imperative but also a strategic necessity if the SDGs are to be achieved.

Literature Review

• Child rights and education within the SDG agenda

The 2030 Agenda places education and child rights at the heart of sustainable development through SDG 4 (Quality Education), SDG 3 (Health), SDG 10 (Reduced Inequalities), and SDG 16 (Justice and Strong Institutions) (United Nations, 2015). Education is recognized not just as a pathway to employment but as a human right that underpins survival, protection, and participation, as affirmed by the United Nations Convention on the Rights of the Child (UNCRC, 1989).

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In India, these commitments are institutionalized through the Right to Education (RTE) Act, 2009, which ensures free and compulsory schooling for children aged 6–14, and the National Education Policy (NEP) 2020, which emphasizes inclusive and holistic learning (Government of India, 2009; Ministry of Education, 2020).

Global monitoring shows mixed progress. UNESCO (2020) documents that while school enrolment has expanded, learning gaps persist particularly for marginalized groups, girls, and children with disabilities. India reflects these trends: poor infrastructure, digital exclusion, and dropout risks weaken the promise of RTE. The COVID-19 pandemic widened these disparities, with the World Bank (2022) reporting sharp increases in “learning poverty.”

Scholars like Sen (1999) and Nussbaum (2011) frame education as a capability-expanding instrument a tool for resilience and agency. Thus, education is not only an SDG in itself but also a multiplier that enables children to exercise other rights and participate in sustainable development.

- **Climate change as a child rights issue**

Climate change has emerged as one of the most significant threats to child rights. UNICEF (2021) identifies it as a child rights crisis, exposing children to disproportionate risks from extreme weather, pollution, food insecurity, and displacement. The IPCC AR6 (2022) confirms that South Asia is highly vulnerable, with recurrent floods, heatwaves, and cyclones directly affecting children’s health, safety, and education.

In India, air pollution represents one of the most significant climate-linked challenges. A recent Global Burden of Disease study (India State-Level Disease Burden Initiative Air Pollution Collaborators, 2021) estimated that 1.67 million deaths in 2019 were attributable to air pollution, accounting for 17.8% of all deaths, with economic losses equivalent to 1.36% of GDP. Although the study does not always break down impacts by age in all states, the scale of mortality and morbidity implies high vulnerability for children, whose lungs, immune systems, and overall development are more severely affected by toxic air. Beyond physical health, children also face psychological impacts, including climate anxiety and stress, as emphasized in the Lancet Countdown report (Watts et al., 2023).

From a rights-based perspective, these threats undermine the UNCRC guarantees to life, health, and development. UNICEF India (2019) and TERI (2020) highlight that without climate-sensitive interventions, Indian children will face a future of “life course disadvantage.” Importantly, children contribute the least to climate change but face the greatest risks a moral paradox that strengthens the case for integrating child rights into climate action.

- **Intersections: education disruption, protection risks, and inequality**

Research increasingly shows that climate and educational disruptions are interconnected. Natural disasters often destroy schools, displace families, and force children into dropout, child labour, or early marriage (Save the Children, 2020). In flood-prone regions like Bihar and Assam, repeated disasters lead to months of lost learning (UNESCO, 2020). Girls and marginalized castes are most affected, facing heightened risks of exclusion.

The COVID-19 pandemic further exposed these intersections. World Bank (2022) data shows that children in poor households simultaneously suffered income loss, digital exclusion, and environmental risks, creating a double burden. These disruptions demonstrate how structural inequalities poverty, caste, gender, disability shape the impact of climate change on children’s rights and education.

At the same time, schools can act as protective spaces. Education for Sustainable Development (ESD) builds climate literacy, disaster preparedness, and resilience. Studies highlight the role of school-based programs eco-clubs, WASH (Water, Sanitation, Hygiene) initiatives, and community engagement in reducing post-disaster dropout rates and improving recovery (Anderson, 2012; Bartlett, 2008).

- **Policy responses: toward climate-sensitive, rights-based education**

Scholars and policy institutions converge on a set of strategies. First, mainstreaming climate resilience in education strengthening infrastructure, creating continuity plans, and integrating climate content into curricula (UNESCO, 2021; UNICEF, 2023). Second, rights-based governance ensuring that RTE protections remain enforceable even during crises (Government of India, 2009; UNICEF, 2021). Third, equity-first targeting prioritizing support for rural and marginalized children with scholarships, devices, and school meals (World Bank & UNESCO, 2021). Finally, youth participation studies show that

when children are given platforms to contribute, climate policies become more inclusive and sustainable (Boyden, 2015; O'Brien et al., 2018).

Despite these recommendations, gaps persist. Few studies systematically measure the combined effect of climate shocks on education and rights in India. Data collection remains fragmented, and program evaluations are scattered. This paper addresses that gap by framing children as agents of sustainability whose empowerment is essential to achieving the SDGs.

Education and Child Rights in the SDG Agenda

Education is widely recognized as both a fundamental right and a cornerstone for achieving sustainable development. The Sustainable Development Goals place education at the center through SDG 4: Quality Education, which calls for inclusive and equitable access to learning opportunities for all. For children, education is not only about literacy and other skills; it is a cornerstone that determines their capacity to engage in a community, access opportunities, and to deal with a crisis such as poverty, imbalance, and climate change.

The UN Convention on the Rights of the Child, 1989, UNCRC, p. 89, which is a legitimate entitlement rather than a privilege, provides guidelines from a rights-based point of view. In India, the current loyalty is reflected in the RTE Act 2009, which guarantees free and compulsory education for children between 6 and 14 years of age. In the same way, the National Education Policy 2020 (NEP 2020) stresses diverse and comprehensive education, which is essential to prepare children for a rapidly changing world. The above standard structure demonstrates that education is crucial not only for the development of children but also for broader social and economic development.

However, the ground reality reveals a continuing gap between policy and practice. Despite an impressive increase in the school enrolment, obstacles such as poor infrastructure, teacher shortage, orientation disparity, and high dropout rates persist in order to limit the consequences of educational informs. The digital divide has a further widening inequality, as seen in the COVID-19 pandemic, while many children were not able to access E-learning. There remains a high risk of failure to include excluded groups, including children of low-income tribal communities, rural areas, otherwise undesirable castes, and communities. The present situation reflects a continuous struggle to achieve SDG 10: reducing inequalities in guidance.

Education also plays a vital role in advancing child rights beyond the classroom. It is directly related to the achievement of the SDG 3, gender equality (SDG 5) and the fair treatment of child labour and child exploitation. A functioning education system can break the intergenerational cycle of poverty and empower young people so that they can claim immunity from other areas. Education has a supplementary task of rescuing children, as well as knowledge and capacity for resilience, sustainable living, and public interaction, in the context of the climate crisis.

Lastly, children's education should never be simply a scientific goal but rather a matter of profound comprehensive human rights intertwined with several SDGs. Ensuring its realization requires more than legal frameworks; it demands strong implementation, accountability, and a focus on equity. If children are to remain at the heart of renewable energy development, then education must be used as a tool for approval, social righteousness, and climate resilience, bridging the gap between rights on paper and opportunities around the world.

Climate Change and Child Vulnerability

Climate change is often described as the specific problem of our generation, despite the fact that for children it is more than an abstract global issue it is a living reality that influences their well-being, guidance, and general development (UNICEF, 2021; IPCC, 2022). Although children contribute minimal GHG emissions, they are disproportionately affected by its consequences (UNICEF, 2021). That means that global warming is not only a crisis of the environment but also a serious issue of child rights.

The threat to their health and wellbeing (SDG 3) is one of the most visible influences on global warming in relation to children United Nations, 2015; UNCRC, 1989). Respiratory diseases, malnutrition, and waterborne diseases have been exacerbated by rising temperatures, frequent heatwaves, and worsening Air pollution (India State-Level Disease Burden Initiative Air Pollution Collaborators, 2021; Watts et al., 2023). Recurrent heatwaves and prolonged drought have a direct effect on infant nutrition and food security in India (World Food Programme, 2021). Floods and cyclones also frequently destroy the welfare framework, leaving the child without access to essential services (UNICEF India, 2019).

The disruption of Education (SDG 4) is another important dimension (UNESCO, 2020). Unnatural catastrophes frequently damage educational institutions, displace clans and force children to flee. Floods interrupt thousands of children's education in Assam and Bihar every single year (Save the Children, 2019). Relocation owing to a climate catastrophe, as well as the exposure of children to increased risks of child labour, trafficking, and early marriage, sabotage their freedoms to safety and protection (ILO, 2023; UNICEF, 2021). These demonstrations show how climate change interacts with the current vulnerabilities, deepening inequalities rather than creating new ones in isolation. The urban situation provides them with a source of difficulties. Toxic air quality has become a year-round concern in the city of Delhi, especially in the impending closure of the schools and the extended health challenges for children (India State-Level Disease Burden Initiative Air Pollution Collaborators, 2021). Furthermore, the psychological impacts of climate stress, such as anxiety about catastrophe or uncertain futures, are becoming more and more apparent (Hickman et al., 2021). The relevance of acknowledging children not just as physical victims but also as individuals whose mental and emotional development is at stake.

Global warming is a serious threat to the standards of living, health, education, and growth that are respected in the UN Convention on the Rights of the Child (UNCRC, 1989). If these rights are systematically undermined by environmental degradation, then achieving the Sustainable Development Goals (particularly SDG 13: Climate Action) becomes almost impossible (United Nations, 2015).

Despite the obstacles, children are often absent from the debate on climate policy. Most strategies focus on energy transitions, technology, or economic growth, while overlooking how children's everyday lives are shaped by environmental risks (UNICEF, 2019; UNDP, 2020). Still, children aren't passive. Around the world, the youth movement has shown that teenagers can be strong advocates for action on climate change (Han & Ahn, 2020; O'Brien et al., 2018; United Nations, 2019). Acknowledge that this agency and supporting organizations are important in terms of participation.

Climate change increases the vulnerability of children already faced with recent challenges in terms of rights and development (UNICEF, 2021; IPCC, 2022). Seeing climate change through the eyes of a child's vulnerability and shift the conversation from distant environmental concerns to urgent human rights concerns (Bartlett, 2008; Anderson, 2012). Defending children against climate issues is not only a moral imperative but also a prerequisite for building a robust and environmentally sustainable society.

Intersections: Rights, Education, and Climate Challenges

The realities of child rights, education, and climate change do not exist in isolation; they are intertwined in ways that exacerbate vulnerabilities and require integrated responses (UNICEF, 2021; UNESCO, 2020). When a school building is destroyed by a flood, it is not only an educational setback; it is also a breach of the child's right to safety, education, and security (Save the Children, 2019). Similarly, while a poor air quality forces school closures, a child loses not only the classroom time, in addition to the crucial prospects of nutrition and social development commonly provided by the schools (India State-Level Disease Burden Initiative Air Pollution Collaborators, 2021).

The COVID-19 pandemic demonstrated how crises can compound each other, deepening children's vulnerabilities. When schools shut down during lockdowns, families in disaster-prone regions simultaneously faced the impacts of floods and cyclones. The result was a "double burden" where children not only lost access to classrooms but also to vital nutrition, social support, and a sense of stability. Evidence from UNICEF and the World Bank shows that the poorest households suffered the sharpest setbacks, while Save the Children (2020) found that girls were at particular risk, often being pulled into early marriage or domestic work. These patterns reveal that the threats children face is rarely single-dimensional; they stem from overlapping inequalities of gender, poverty, and geography, which climate change and pandemics amplify rather than create a new.

An interdisciplinary approach is essential if sustainable development is to advance meaningfully. Education on its own cannot fully prepare children to withstand climate shocks, just as child rights cannot be safeguarded without addressing environmental degradation. Research shows that policies narrowly focused on infrastructure or technology often miss the lived realities of children in marginalized communities, where risks from poverty, gender, and geography converge (UNDP, 2020; UNICEF, 2019).

Yet, this intersection of challenges also opens possibilities. Schools, for instance, can become hubs of resilience by integrating climate literacy, disaster preparedness, and sustainability practices into everyday learning (Anderson, 2012; UNESCO, 2021). When such initiatives are combined with rights-

based models, children are positioned not as passive victims but as active participants with agency to shape their futures (Boyden, 2015; O'Brien et al., 2018).

In this way, the crossroads of education, rights, and climate emerge not only as spaces of vulnerability but as points of transformation, offering opportunities to break cycles of exclusion and chart inclusive, sustainable futures.

Policy Pathways and Recommendations

If children are truly “at the crossroads,” then policies must move beyond fragmented approaches and adopt child-centered strategies that integrate education, rights, and climate action. Several pathways can guide this transformation.

- **Climate-Sensitive Education:** School curricula should include environmental literacy, disaster preparedness, and sustainability practices. Teaching children about climate resilience not only prepares them for future challenges but also empowers them as agents of change in their communities. Programs such as school eco-clubs or experiential learning projects can make education more relevant and practical (MoEFCC, n.d.; Centre for Environment Education [CEE], n.d.)
- **Strengthening Rights-Based Frameworks:** Laws like the Right to Education Act must be matched by stronger implementation and accountability. Governments need to ensure that schools remain functional even during climate disruptions, with backup plans for safe learning spaces and digital access. Monitoring mechanisms should specifically track the impact of environmental crises on child rights.
- **Community and Child Participation:** Children should be included in decision-making processes related to disaster management and local development. Platforms that encourage youth voices in climate dialogues whether through student councils, NGOs, or digital forums can foster leadership while grounding policies in lived experiences.
- **Multi-Sector Collaboration:** Education, health, environment, and social welfare departments must coordinate rather than work in silent. Partnerships with NGOs, international agencies, and local communities can bridge gaps in resources and implementation. This is especially critical in regions prone to recurring climate shocks.
- **Equity and Inclusion:** Special attention must be given to marginalized children those in rural areas, slums, or conflict-prone regions who face the harshest climate impacts and the greatest barriers to education. Policies must prioritize equity to ensure that climate action does not deepen inequalities.

In sum, effective policy requires a shift from viewing children as passive victims to recognizing them as central actors in building sustainable futures. By embedding child rights into climate and education strategies, governments and societies can ensure that the youngest generation not only survives crises but thrives as leaders of change.

Conclusion

Children today are standing at a decisive crossroads. Their right to education, health, and protection is being tested by a world where climate change, inequality, and weak systems often collide. If ignored, these overlapping crises will not only rob millions of children of their futures but also make the Sustainable Development Goals unachievable. But if addressed with urgency and vision, children can become the driving force behind a more resilient and sustainable world.

The way ahead is clear: education is needed to adapt to a changing world, rights standards need to be moved from paper to practice, and society needs to change to see children as active competitors rather than passive victims. We see proof of the fact that children are shaping the future every time a child goes to school, even in the event of a flood, every time a girl resists early marriage through education, and every time a young person expresses his or her demands for a fair climate justice.

Empower them to never be a charity; it's an essential thing. By putting children at the heart of sustainable development, we invest not just in their survival but in the collective survival of humanity. The choice is ours: to leave children stranded at the crossroads, or to walk with them toward a just, inclusive, and sustainable future.

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