

CLIMATE JUSTICE: FROM VULNERABILITY TO RESILIENCE

Abstract:

This chapter explores the evolution of climate justice as a transformative framework that bridges the divide between vulnerability and resilience in an era of escalating climate crises. It argues that climate change is not only an environmental issue but also an ethical, political, and developmental challenge rooted in global inequities. Drawing on theories of distributive, ecological, and capabilities-based justice, the chapter reconceptualizes resilience as a process of empowerment and structural transformation rather than mere adaptation. Using the Sundarbans as an illustrative case, it demonstrates how local communities embody “resilience from below” through participatory and gender-inclusive strategies. The proposed Resilience Justice Framework (RJF) integrates ecological ethics, participatory governance, and indigenous epistemologies to promote equitable climate action. Ultimately, the chapter reframes climate justice as both a moral imperative and a practical pathway toward sustainable, inclusive futures grounded in solidarity, recognition, and ecological care.

Authors:

Kajul Chauhan, Assistant Professor of Geography, Rayat Bahra University, Mohali

INTRODUCTION

Climate change has emerged as a defining challenge of the twenty-first century, profoundly reshaping global ecological, economic, and social systems ([Rangwala et al., 2019](#)). Although its impacts are universal, they are far from being evenly distributed. Communities in the Global South, indigenous populations, small island nations, and marginalized groups often face the most severe consequences despite contributing the least to greenhouse gas emissions. This inequity has led to the evolution of *climate justice*, a framework that situates climate change not only as an environmental issue but also as a question of ethics, equity, and human rights. It emphasizes the need to recognize historical responsibilities, unequal capabilities, and differentiated vulnerabilities among nations and communities.

The concept of climate justice extends beyond mitigation and adaptation strategies to include social inclusion, gender equity, and intergenerational fairness ([Waheed & Waheed, 2022](#)). This challenges existing development paradigms that perpetuate environmental degradation and social inequality. The growing frequency of extreme weather events, rising sea levels, and ecological disruptions has made it clear that resilience cannot be achieved without justice. Global mechanisms, such as the Paris Agreement and the Loss and Damage Fund, underscore the necessity of fair transitions and shared accountability. In this context, moving “from vulnerability to resilience” represents both a moral and practical imperative. This entails empowering vulnerable communities, reimagining governance structures, and fostering sustainable practices that ensure that no one is left behind in the face of a climate crisis.

This chapter explores the evolving discourse on *climate justice* and examines how societies can transition from conditions of vulnerability to resilience ([Moffett, 2021](#)). It aims to unpack the ethical, political, and developmental dimensions of climate change, moving beyond technocratic responses that often dominate global climate debates. By situating climate justice within the broader context of social and environmental equity, this chapter seeks to highlight how unequal

power structures, historical emissions, and patterns of development shape both exposure to and recovery from climate risk.

This chapter also seeks to bridge the conceptual gap between vulnerability and resilience ([May-Chahal & Kelly, 2020](#)). Vulnerability reflects existing inequalities and systemic fragilities, whereas resilience embodies the capacity to anticipate, absorb, and recover from climate shock. Through this lens, the chapter emphasizes that resilience-building must not merely restore the status quo but also transform unjust structures that perpetuate risk and marginalization. Ultimately, the chapter aims to contribute to a more inclusive understanding of sustainability, one that integrates justice, participation, and transformation at its core. This study intends to provide scholars, policymakers, and practitioners with insights into designing equitable climate responses that empower communities and foster long-term resilience.

CONCEPTUAL CLARIFICATION

Climate justice integrates the ethical, political, and social dimensions of climate change, shifting attention from purely scientific or environmental concerns to issues of equity, rights, and responsibility ([Bolte et al., 2023](#)). It emphasizes that climate change is not only an environmental problem, but also a moral and distributive one; its causes and impacts are unevenly distributed across societies and generations. The term gained prominence in the late 1990s and the early 2000s through the activism of environmental justice movements that highlighted how marginalized communities often bear the heaviest burdens of environmental degradation despite contributing the least to it.

Drawing upon the principles of human rights, ecological sustainability, and global fairness, climate justice calls for addressing structural inequalities that make certain groups more vulnerable to climate risk ([Karim & Zannat, 2025](#)). It also insists that mitigation and adaptation policies respect the rights of the affected populations, particularly in the Global South. International discussions, such as those surrounding the UN Framework Convention on Climate Change (UNFCCC) and the Paris Agreement, have further institutionalized the idea by linking climate action with development, equity, and justice. In essence, climate justice reframes climate change as a question of who is responsible, who suffers, and who decides.

The idea of climate justice evolved gradually from the earlier environmental justice movements that emerged in the United States during the 1980s ([Cassegård & Thörn, 2017](#)). These movements contested the disproportionate siting of hazardous industries and waste facilities in the poor and minority communities. The recognition that environmental harm followed existing social and racial hierarchies provided the moral foundation for a broader, global critique, eventually transforming it into the notion of climate justice.

By the 1990s, global environmental discourse had begun to reflect this shift. The 1992 Rio Earth Summit and the adoption of the UNFCCC introduced the principle of ‘common but differentiated responsibilities and respective capabilities’ (CBDR-RC), acknowledging historical inequalities in greenhouse gas emissions ([Durán & Scott, 2024](#)). Activists and scholars have increasingly argued that industrialized nations, as the primary contributors to climate change, have owed a climate debt to developing nations facing its consequences. This period also saw the

rise of networks such as Climate Justice Now! movement, and the Global South's advocacy for equitable adaptation and finance mechanisms.

In the 2000s and the 2010s, climate justice became an established framework in both academic and policy debates ([Cassegård & Thörn, 2017](#)). It has expanded to encompass intergenerational justice (fairness between present and future generations) and intra-generational justice (equity within the current generation). The Paris Agreement (2015) reaffirmed this orientation by emphasizing human rights, gender equality, and sustainable development alongside emission targets. The concept has since evolved to include procedural justice (participation in decision making) and recognitional justice (acknowledging diverse knowledge systems and cultural identities). Today, climate justice functions as a transformative paradigm that links environmental sustainability with social transformation and resilience building in the face of escalating climate crises. While climate justice shares conceptual space with several related ideas such as environmental justice, sustainability, adaptation, loss and damage, and resilience, it possesses distinct analytical and normative dimensions.

Environmental justice has moral and historical roots. However, while environmental justice primarily addresses localized inequities (such as pollution and resource allocation), climate justice operates on a global scale, connecting atmospheric change to systems of colonialism, capitalism, and development ([Pezzullo, 2021](#)). This underscores transnational inequalities and the global political economy of carbon emissions. Sustainability, often framed as balancing environmental, economic, and social goals, tends to focus on maintaining an ecological balance for future generations. Climate justice complements this by emphasizing moral responsibility and redistribution, insisting that sustainability without justice risks perpetuates systemic inequalities.

Adaptation and resilience are operational dimensions of climate response ([Forsyth, 2023](#)). Adaptation focuses on adjusting to climate impacts, whereas resilience highlights the capacity to recover from shocks. Climate justice contextualizes both, arguing that not all societies have equal adaptive capacities or resources to build resilience. Thus, resilience building must address structural vulnerabilities and not just technical preparedness.

Finally, the emerging discourse on “loss and damage” compensation for irreversible climate harms extends the justice frame by demanding accountability and reparations from major emitters ([Chenier & Tremblay, 2025](#)). By contrast, climate equity often serves as a more technical or policy-oriented concept within international negotiations, focusing on burden-sharing formulas. In sum, climate justice synthesizes ethical reflections and political critique. It is not merely a subset of environmental governance, but a framework of transformation that demands systemic change from extractive, unequal economies toward inclusive, resilient, and ecologically balanced futures.

THEORETICAL FOUNDATIONS

The idea of *climate justice* rests on the interweaving of theories from political philosophy, environmental ethics, and developmental studies ([Zhao, 2023](#)). It frames climate change not merely as an environmental issue but as a profound question of equity, rights, and power. Three major theoretical foundations underpin the discourse: distributive justice, capabilities approach, and ecological justice. Distributive Justice forms the ethical basis of climate justice debates.

Rooted in John Rawls's principles of fairness and equality, it emphasizes the allocation of both the burdens and benefits of climate change. The Rawls' *difference principle* suggests that inequalities are acceptable only if they benefit the least advantaged. Applied to climate change, this implies that the global North, historically responsible for the majority of greenhouse gas emissions, has a moral obligation to assist vulnerable populations in the global South who suffer disproportionately from climate impacts. Distributive justice thus justifies frameworks such as *Common but Differentiated Responsibilities (CBDR)* in international climate negotiations, reflecting differentiated capabilities and historical responsibilities.

The Capabilities Approach, advanced by Amartya Sen and Martha Nussbaum, extends this logic by shifting attention from resources to *human capabilities* ([Bari, 2020](#)). Climate justice, from this lens, safeguards people's freedom to live lives they value despite environmental disruptions. For instance, climate change undermines basic capabilities, such as health, shelter, food security, and mobility. Vulnerable communities often lack adaptive capacity, making them less resilient. Thus, the focus of climate policy should not only be on mitigating emissions, but also on expanding the adaptive and resilience capacities of marginalized groups, ensuring that their substantive freedoms are protected against environmental degradation.

Ecological Justice broadens moral communities beyond human societies, including non-human species and ecosystems ([Wienhues, 2020](#)). It challenges anthropocentric frameworks by recognizing the intrinsic value of nature. Thinkers such as Dobson and Eckersley argue for a form of justice that includes the right of ecosystems to exist and regenerate. This perspective complements human-centered justice by stressing that resilience requires maintaining the integrity of ecological systems. Without ecological sustainability, human adaptation efforts are short lived and superficial. Thus, ecological justice bridges the moral and material dimensions of climate resilience.

Environmental Justice, originating from social movements in the United States, offers an important empirical and activist foundation ([Scandrett et al., 2010](#)). This highlights how marginalized communities, often poor and racialized, bear the brunt of pollution and environmental hazards. In the climate context, this translates into the idea that those least responsible for emissions face the gravest consequences from coastal flooding to food insecurity. Therefore, environmental justice strengthens climate justice by grounding it in lived experiences and collective struggle.

Together, these theories converge on a shared ethical intuition: justice demands that climate vulnerability be transformed into resilience through fair distribution, empowerment, and ecological care ([Poo & Yang, 2022](#)). Thus, climate justice has become both a moral principle and a policy framework that integrates social equity with environmental sustainability. While there is broad consensus on the normative appeal of climate justice, theoretical divergences have emerged around its focus and implementation. Three major perspectives liberal egalitarian, cosmopolitan, and ecological or post-humanist offer competing, yet complementary interpretations.

The liberal egalitarian perspective emphasizes fairness among nations and individuals within existing political structures ([Adigüzel et al., 2017](#)). It supports compensation mechanisms,

carbon trading, and equitable burden sharing but often assumes state sovereignty as a unit of justice. Critics argue that this framework is too procedural and fails to challenge structural inequalities embedded in global capitalism. It risks treating climate justice as a matter of technocratic redistribution, rather than systemic transformation.

The cosmopolitan perspective, inspired by thinkers like David Held and Thomas Pogge, pushes justice beyond national boundaries ([Rupniewski, 2021](#)). It views all individuals as equal moral subjects, in a shared global order. From this perspective, climate change is a global public issue requiring transnational governance, global taxation mechanisms, and collective responsibility. Cosmopolitanism deepens the moral reach of climate justice but faces challenges of feasibility and legitimacy in a world divided by political and economic interests.

In contrast, ecological or post-humanist perspectives drawing from deep ecology, ecofeminism, and postcolonial environmental thought contest human-centered frameworks altogether ([Chakraborty, 2015](#)). They emphasize interdependence among species, critique extractivist capitalism, and advocate relational ontologies that connect social and ecological resilience. Postcolonial and feminist scholars, such as Vandana Shiva and Ariel Salleh have highlighted how colonial and patriarchal structures produce both social and ecological vulnerabilities. From their standpoint, climate justice must involve decolonizing knowledge and restructuring the global economy toward care, reciprocity, and sustainability.

These perspectives do not need to be considered as antagonistic. Rather, they reveal the layered complexity of climate justice, which must balance human rights, ecological integrity, and global interdependence ([Schapper, 2018](#)). This chapter adopts an integrated theoretical lens that combines the capabilities approach with ecological justice situated within the framework of global distributive ethics. The rationale for this synthesis is twofold: it acknowledges the social inequalities that shape vulnerability, while affirming the ecological interdependence necessary for long-term resilience.

The capabilities approach provides a people-centered understanding of resilience ([Berr et al., 2024](#)). It enables an analysis of how climate change limits real freedoms, especially for marginalized groups, and how policy can enhance adaptive capacities. By focusing on agency, dignity, and opportunity, this framework links climate justice to broader goals of sustainable human development. It captures how resilience is not merely the ability to “bounce back” but the capacity to *transform* structures of vulnerability into systems of empowerment.

At the same time, ecological justice ensures that human-centered strategies do not reproduce ecological degradation ([Wienhues, 2020](#)). It situates resilience within the health of natural systems and recognizes that human well-being depends on maintaining an ecological balance. By integrating ecological ethics with distributive principles, this framework moves beyond compensatory justice to transformative justice, in which social equity and environmental sustainability reinforce each other.

Furthermore, this lens aligns with contemporary debates in resilience theory, which highlight adaptive governance, social learning, and systemic transformation ([Steelman, 2022](#)). By blending normative theories of justice with ecological systems thinking, this chapter conceptualizes

climate justice as a dynamic process rather than a static end state. It foregrounds *relationality* between humans and nature, between global and local actors, and between vulnerability and power. In essence, this theoretical synthesis justifies a holistic understanding of climate justice, one that addresses historical inequities, protects ecological integrity, and nurtures the capabilities required for resilient futures. It reframes climate justice not only as a demand for fairness, but also as a blueprint for sustainable coexistence.

DEBATES, GAPS, AND THEORETICAL CHALLENGES

The discourse on climate justice is marked by enduring tensions between global responsibility, local vulnerability, and differentiated capacities for adaptation ([Haar & Levy, 2024](#)). One of the central controversies lies in the allocation of responsibility for historical and current greenhouse gas emissions. The North–South divide continues to shape negotiations, with developing countries arguing for climate reparations and equitable adaptation financing, whereas developed nations resist legally binding obligations. This asymmetry exposes the inadequacy of frameworks like “common but differentiated responsibilities” (CBDR), which, though normatively significant, often falter in implementation.

A second key tension concerns the framing of justice itself: whether climate justice should be primarily distributive (focused on fair allocation of burdens and benefits), procedural (focused on participatory decision-making), or recognitional (focused on the acknowledgment of marginalized identities and worldviews) ([Sultana, 2021](#)). These dimensions often overlap, but can conflict in practice. For instance, global carbon markets may claim distributive fairness, but perpetuate procedural exclusions for indigenous and frontline communities. The vulnerability–resilience dichotomy presents another conceptual tension. Vulnerability frameworks highlight exposure and risk, whereas resilience emphasizes adaptability and transformation. However, excessive emphasis on “resilience” can inadvertently shift responsibility to affected communities to cope, rather than holding structural systems accountable for generating risk. Critics argue that resilience discourse, when co-opted by neoliberal governance, risks normalizing inequalities and depoliticising systemic injustice.

Finally, the controversy over technological versus socio-political solutions divides the field ([Wahab, 2013](#)). While some advocate green technology, geoengineering, or market-based mitigation, others insist that genuine climate justice demands structural transformation, addressing capitalism, patriarchy, colonialism, and extractivism. Thus, the core debate remains: Is climate justice a technical problem of redistribution or a political project of reimagining global ethics and power?

Critical perspectives on climate justice have expanded the field beyond mainstream environmental governance to investigate its underlying power dynamics ([Fine & Love-Nichols, 2021](#)). Postcolonial and decolonial scholars contend that climate injustice is inseparable from the historical legacies of imperialism and uneven geography of development. For them, the climate crisis represents not merely an ecological disruption, but a continuation of colonial extraction and epistemic domination. Decolonial theorists call for a shift from technocratic management to epistemic justice, recognizing indigenous knowledge systems, local cosmologies, and alternative ontologies of nature that challenge Western anthropocentrism.

Feminist perspectives contribute to a crucial layer by emphasizing the gendered dimensions of vulnerability and resilience ([Clay, 2022](#)). They highlight how women, especially in the Global South, bear disproportionate burdens of climate impacts while being systematically excluded from adaptation planning. Feminist political ecologists argue that climate justice cannot be achieved without transforming gendered power relations in property rights, labor, and care economies. Intersectional frameworks further reveal how gender intersects with race, class, caste, and geography to produce layered vulnerability.

From a critical political economy perspective, climate change is seen as a symptom of the capitalist mode of production that commodifies nature and privileges profit over planetary well-being ([Prah & Bland, 2024](#)). Scholars such as Andreas Malm and Jason Moore critique “green capitalism” as a false solution that sustains the structures causing ecological crises. They advocate an eco-socialist transformation rooted in democratic ownership, redistribution, and degrowth. Environmental justice movements from Standing Rock to Narmada provide a praxis-oriented critique connecting local struggles to global systems of domination. These movements asserted that justice cannot be achieved without procedural inclusion or ecological sovereignty. The “rights of nature” movement, for example, redefines justice beyond human-centered frameworks, expanding moral and legal standing to ecosystems themselves.

Together, these critical perspectives expose the inadequacy of dominant climate governance paradigms that rely on market logic and state-centric diplomacy ([Alexander et al., 2018](#)). They call for a radical rethinking of justice not as compensation within existing structures, but as transformation toward more equitable, plural, and sustainable worlds. Despite significant theoretical advances, the literature on climate justice exhibits several notable gaps that limit both conceptual clarity and policy relevance.

First, there is a persistent north-centric bias in academic and policy discourse ([Johnston, 2021](#)). Much of the literature remains anchored in Western normative theories of justice Rawlsian fairness, utilitarianism, or liberal cosmopolitanism which inadequately capture the lived realities of marginalized communities in the Global South. This has led to the under-theorization of *contextual justice*, where local histories, cultural epistemologies, and community practices shape distinct understandings of fairness and resilience.

Second, while Vulnerability and Resilience have become key analytical tools, they are often underintegrated ([Vulnerability and Resilience, 2020](#)). The literature tends to treat vulnerability as a static condition and resilience as a dynamic capacity without adequately theorizing their relational interplay. Few frameworks address how structural vulnerabilities such as land dispossession, caste exclusion, or debt dependency constrain the possibility of resilience. Bridging this conceptual gap is essential for developing holistic models that move from reactive to proactive transformations.

Third, there is a lack of empirical grounding in marginalized contexts. Studies often prioritize large-scale modeling and global negotiations over ethnographic and participatory approaches that foreground community voices ([Joshi & Deng, 2024](#)). This creates a disconnect between theory and practice, where the politics of knowledge production who speaks for whom and in what language remains unexamined. Fourth, the literature insufficiently engages in intergenerational

and interspecies justice. While sustainability rhetoric frequently invokes future generations, few frameworks operationalize justice that extends across temporal and ecological boundaries. How responsibilities are distributed across time and species remains a largely theoretical question that lacks normative consensus.

Finally, the policy-practice gap persists. Despite the rhetorical prominence of “climate justice,” mainstream adaptation and mitigation policies often reproduce inequalities through top-down governance and technocratic solutions ([Zhang & Su, 2023](#)). Bridging this divide requires more robust integration of social theory, participatory governance, and indigenous epistemologies into climate policy design. In sum, future scholarship must move toward a plural, intersectional, and decolonial framework that links vulnerability and resilience not merely as adaptive states but as ethical and political commitments to justice.

APPLICATION OR ILLUSTRATION

The Sundarbans, a vast mangrove delta shared by India and Bangladesh, exemplify how climate injustice unfolds in ecologically fragile and economically marginalized regions ([Claudino-Sales, 2018](#)). Rising sea levels, increasing salinity, frequent cyclones, and loss of biodiversity have eroded the livelihoods of millions of people, depending on fishing, farming, and forest production. These climate-induced transformations disproportionately affect women, indigenous communities, and landless poor groups already burdened by socioeconomic inequality.

After Amphan (2020), the compounded crises of displacement, food insecurity, and loss of income have exposed the region’s deep structural vulnerabilities ([Hossain et al., 2021](#)). However, the same region also provides a living example of *resilience from below*. Local communities, often supported by grassroots NGOs, have developed adaptive strategies, such as salt-tolerant paddy cultivation, community seed banks, and elevated housing structures. Women’s self-help groups played an important role in rebuilding food security and ensuring social support networks during the post-disaster recovery.

What emerges in Sundarbans is not just a struggle for environmental survival but a moral and political claim to *climate justice* ([Petroni, 2025](#)). Local movements call for the recognition of the historical responsibility of industrialized nations and demand equitable access to climate finance and sustainable adaptation technologies. The case demonstrates that climate justice is not merely about reducing emissions or providing compensation; it is about empowering vulnerable communities to shape their own futures. The transition from vulnerability to resilience in Sundarbans reflects how justice-oriented adaptation can realign ecological sustainability with social dignity.

The case of Sundarbans highlights a crucial theoretical insight: *resilience* cannot be separated from *justice* ([Nagenborg, 2019](#)). In mainstream environmental policy discourse, resilience often refers to the ability of a system to “bounce back” from disturbances. However, such a technocratic framing risks depoliticizing vulnerability by overlooking the structural inequalities that produce and reproduce exposure to climate risks. The climate justice lens reclaims resilience as a process of *transformative empowerment* rather than mere adaptation.

Theoretically, this aligns with the *capabilities approach* of Amartya Sen and Martha Nussbaum, which emphasizes expanding people's real freedom to live lives they value ([Bari, 2020](#)). Climate justice extends this framework to environmental contexts by insisting that adaptive capacities must be grounded in social equity, rights, and participation. Similarly, the notion of *procedural justice* in environmental governance, ensuring fair participation in decision making, is essential for resilient futures. Without participatory inclusion, resilience initiatives risk reinforcing existing hierarchies or creating “green exclusions.”

From a postcolonial perspective, this case also exposes the geopolitics of vulnerability ([Young, 2020](#)). Global North–South inequalities in emissions, finance, and technology transfers perpetuate climate injustice. The call for *loss and damage* reparations reflects an ethical rebalancing of global responsibility. Here, resilience is not passive endurance but an act of resistance and reimagining what scholars like Rob Nixon term “slow violence” resistance, where marginalized communities quietly but persistently challenge the structural roots of ecological degradation.

Thus, the shift from vulnerability to resilience must be understood as both a material and epistemic transformation; it demands new ways of knowing, governing, and relating to nature. Climate justice, when applied as a living practice, reframes resilience not as survival within inequality but as the collective construction of sustainable, dignified futures.

CONTRIBUTION AND INNOVATION

This chapter introduces a transformative perspective on climate justice by reframing it not merely as a discourse of vulnerability and compensation, but as a dynamic process of resilience-building and epistemic inclusion ([Fakhoury et al., 2025](#)). Traditional frameworks of climate justice often emphasize the asymmetrical distribution of climate burdens, focusing on who suffers the most and who should bear responsibility. While this remains essential, such a vulnerability-centric view can inadvertently reproduce narratives of dependency and helplessness, particularly concerning marginalized and indigenous communities. The new perspective advanced here moves beyond these binaries to highlight agency, adaptation, and knowledge co-production as being central to justice in the climate era.

By linking vulnerability with resilience, this chapter underscores the capacity of communities to shape their ecological futures actively ([Yang, 2020](#)). It foregrounds the idea that justice must be rooted not only in the redistribution of resources, but also in the recognition of plural knowledge and local adaptive strategies. Climate justice, in this sense, becomes a dialogic process in which indigenous ecological ethics, feminist environmental thought, and local adaptation practices interact with global policy mechanisms to produce a more inclusive and sustainable future.

This approach also innovates conceptually by connecting *climate vulnerability* with *epistemic vulnerability* the marginalization of certain ways of knowing and being ([Johnson, 2020](#)). By acknowledging the cognitive injustices embedded in global climate governance, this chapter contributes to a broader paradigm shift from the politics of aid to that of partnership. Thus, climate justice is reinterpreted as a pathway to collective resilience, where empowerment, participation, and recognition become as vital as emission reduction and financial transfers.

Building on this rearticulation, this chapter proposes a synthesis that integrates ecological ethics, participatory governance, and local resilience frameworks into the discourse on climate justice ([Lovan, 2017](#)). It argues that true justice in the Anthropocene must transcend the nation-state- and market-centric frameworks that currently dominate global negotiations. Instead, it should evolve into a polycentric system in which decision-making authority is distributed across scales, from local communities to transnational networks, anchored in principles of solidarity, care, and co-responsibility.

The proposition advanced here is the “Resilience Justice Framework” (RJF), a conceptual model that blends social justice principles with adaptive capacity ([Dogan, 2022](#)). The RJF recognizes that climate change is not only an environmental issue, but also a crisis of governance, identity, and knowledge. This suggests that climate responses must be locally grounded, context-sensitive, and informed by diverse epistemologies, including indigenous cosmologies, feminist care ethics, and post-colonial critiques of development. Through this framework, resilience is not simply the ability to “bounce back” but the ability to *transform* to reorganize systems and relationships in ways that promote equity and sustainability.

This synthesis contributes theoretically by bridging the gap between justice and adaptation and practically by offering a framework for inclusive policy design ([Schlosberg, 2012](#)). This calls for knowledge pluralism, in which scientific models and community narratives coexist to guide adaptive actions. Moreover, it emphasizes that building resilience is itself a form of justice, empowering vulnerable populations to become co-creators of their environmental futures. By embedding justice in resilience, this chapter proposes a paradigm that is simultaneously ethical, ecological, and emancipatory. Ultimately, this contribution reframes climate justice as a forward-looking project that cultivates resilience through recognition, redistribution, and representation. It calls upon policymakers, scholars, and civil society to embrace a plural and participatory vision of the climate futurerooted in care, cooperation, and collective flourishing.

IMPLICATIONS AND FUTURE DIRECTIONS

The discourse on climate justice extends beyond environmentalism into the domains of ethics, political theory, and epistemology. ([Eckersley, 2022](#)) It redefines justice by linking vulnerability with structural inequalities economic, racial, gendered, and geopolitical. Theoretically, this implies a shift from anthropocentric and state-centric approaches toward a relational understanding of human and ecological well-being. Climate justice challenges the traditional liberal framework of distributive justice by introducing the dimensions of *recognition*, *procedural fairness*, and *capability enhancements*. This underscores the idea that vulnerability is socially produced, rather than naturally inevitable, thus demanding an intersectional and decolonial analytical lens. Future theoretical models must integrate concepts such as ecological citizenship, intergenerational equity, and epistemic justice to account for the plural ways communities experience and respond to climate risk. By framing resilience as a process of empowerment rather than adaptation alone, climate justice provides a critical framework for reimagining agency in a rapidly changing world, where justice is not only about survival but also about the right to shape sustainable futures.

Emerging research on climate justice must consider both the global and local dynamics of resilience-building ([Newell et al., 2021](#)). There remains an urgent need to empirically examine

how marginalized communities negotiate climate vulnerabilities through local knowledge systems, social networks, and institutional mechanisms. Comparative studies between the Global North and Global South can illuminate the diverse trajectories of adaptation, governance, and justice outcomes. Interdisciplinary methodologies combining political ecology, environmental sociology, and data-driven climate modeling can generate nuanced insights into the intersections of inequality, governance, and sustainability. Research should also explore the political economy of climate finance: who benefits from adaptation funding, and whose vulnerabilities remain unaddressed. Additionally, digital technologies and AI offer new avenues for monitoring vulnerability and predicting climate-induced displacement; however, their use raises ethical and accessibility concerns that merit critical inquiry. Future scholarship must thus connect ecological data with lived experiences, translating justice-oriented theory into measurable and inclusive frameworks for resilience assessment.

For policymakers and practitioners, the transition from vulnerability to resilience requires embedding justice principles in all stages of climate governance: planning, implementation, and evaluation ([Oulahen et al., 2019](#)). This entails participatory decision-making that prioritizes the voices of those most affected, including indigenous people, women, and youth. Building resilience cannot be reduced to technical adaptation projects; it must involve strengthening local capacities, securing land and resource rights, and promoting equitable access to green technologies and financing. Urban planners and development agencies must adopt vulnerability mapping and community-led adaptation planning to ensure that resilience is context sensitive and inclusive. Furthermore, integrating climate justice into education and public policy training can cultivate a new generation of leaders who are equipped to navigate the ethical and practical dimensions of sustainability. The relevance of climate justice in practice thus lies in transforming governance models from reactive crisis management to proactive systems of care, accountability, and empowerment, ensuring that resilience becomes both a moral and material commitment to the future.

CONCLUSION

The pursuit of climate justice signifies a critical shift from reactive frameworks of vulnerability to proactive paradigms of resilience ([Fakhoury et al., 2025](#)). Throughout this chapter, it has been argued that climate change is not merely an environmental phenomenon but also a deeply political and ethical issue that reflects historical inequities, unequal power relations, and structural marginalization. Vulnerability, as discussed, is often a socially produced condition, shaped by factors such as poverty, gender, race, and geography, rather than a natural state of exposure. Therefore, addressing vulnerability requires a systemic transformation rather than mere adaptation measures.

Resilience, in this context, must be understood beyond technical or ecological recovery; it entails empowering communities to exercise agency, redefine development priorities, and participate meaningfully in decision-making processes ([Sharma et al., 2020](#)). A transition requires integration of indigenous knowledge, local adaptation strategies, and global solidarity to create inclusive and sustainable pathways. Thus, climate justice calls for redistributive, recognitional, and procedural equity, ensuring that those most affected by climate impact are also central to shaping solutions.

This chapter contributes to ongoing debates by reframing resilience as a justice-oriented framework, rather than a managerial response ([Wietrzykowski, 2025](#)). This highlights that the future of climate governance depends on embedding justice into every layer of policy, from mitigation and adaptation to finance and technology transfer. Ultimately, climate justice invites a reimagining of our collective futures one grounded in empathy, accountability, and shared responsibility. By transforming vulnerability into resilience through equitable and inclusive approaches, societies can move toward not only surviving the climate crisis but also reshaping it into an opportunity for global renewal and moral progress.

References

- Adigüzel, Y., Coban, G. U., & Flomenbom, O. (2017). From the Physiocrats to Fairness in Nations. *Reports in Advances of Physical Sciences*, 01(01), 1750001. <https://doi.org/10.1142/s2424942417500013>
- Alexander, E. A., Kapletia, D., & Phillips, W. (2018). Shifting logics: limitations on the journey from ‘state’ to ‘market’ logic in UK higher education. *Policy & Politics*, 46(4), 551–569. <https://doi.org/10.1332/030557317x15052077338233>
- Bari, C. (2020). *Sviluppo umano come neo-Bildung. Il contributo Amartya Sen e Martha Nussbaum per la formazione postmoderna*. 12(19), 223–243. <https://doi.org/10.15160/2038-1034/2225>
- Berr, K., Ziehfreund, S., Welcker, M., Biedermann, T., & Zink, A. (2024). A qualitative exploration of the patient journey in axial spondyloarthritis towards a people-centered understanding. *Scientific Reports*, 14(1). <https://doi.org/10.1038/s41598-024-70420-8>
- Bolte, G., Dandolo, L., Gepp, S., Hornberg, C., & Lumbi, S. L. (2023). Climate change and health equity: A public health perspective on climate justice. *Journal of Health Monitoring*, 8(Suppl 6). <https://doi.org/10.25646/11772>
- Cassegård, C., & Thörn, H. (2017). *Climate justice, equity and movement mobilization* (pp. 32–56). Routledge. <https://doi.org/10.4324/9781315618975-3>
- Chakraborty, R. (2015). The Deep Ecology/Ecofeminism Debate: an Enquiry into Environmental Ethics. *Journal of Indian Council of Philosophical Research*, 32(1), 123–133. <https://doi.org/10.1007/s40961-015-0005-y>
- Chenier, S., & Tremblay, D. (2025). Climate Reparations and Legal Accountability: Bridging International Law and Environmental Justice. *Interdisciplinary Studies in Society, Law, and Politics*, 4(2), 265–279. <https://doi.org/10.61838/kman.isslp.4.2.23>
- Claudino-Sales, V. (2018). *The Sundarbans, Bangladesh and India* (pp. 39–45). Springer Netherlands. https://doi.org/10.1007/978-94-024-1528-5_6
- Clay, N. (2022). *Vulnerability and Resilience* (pp. 44–55). Routledge. <https://doi.org/10.4324/9781003014041-6>
- Dogan, S. (2022). Social justice-oriented school counsellors and programmes: A new conceptual framework for social justice principles. *Education 3-13*, 51(6), 1017–1026. <https://doi.org/10.1080/03004279.2022.2039262>
- Durán, G. M., & Scott, J. (2024). *Global EU Climate Action and the Principle of Common but Differentiated Responsibilities and Respective Capabilities*. 161–186. <https://doi.org/10.5040/9781509940981.0014>

- Eckersley, R. (2022). *Environmentalism And Political Theory*. Routledge. <https://doi.org/10.4324/9781315072111>
- Fakhoury, R., Lerner, A. B., & Hayes, J. (2025). *The Dilemma of Dual Vulnerability in the Pursuit of Climate Justice*. Center for Open Science. https://doi.org/10.31235/osf.io/hsa2b_v1
- Fine, J. C., & Love-Nichols, J. (2021). Language and climate justice: A research agenda. *Journal of Sociolinguistics*, 25(3), 453–473. <https://doi.org/10.1111/josl.12469>
- Forsyth, T. (2023). *Climate Change Adaptation and Resilience* (pp. 198–206). Routledge. <https://doi.org/10.4324/9781003409748-32>
- Haar, R. J., & Levy, B. S. (2024). *Promoting Climate Justice* (pp. 422–438). Oxford University Pressnew York. <https://doi.org/10.1093/oso/9780197683293.003.0020>
- Hossain, A., Ahmed, B., Rahman, T., Sammonds, P., Zaman, S., Benzadid, S., & Jakariya, M. (2021). Household food insecurity, income loss, and symptoms of psychological distress among adults following the Cyclone Amphan in coastal Bangladesh. *PloS One*, 16(11), e0259098. <https://doi.org/10.1371/journal.pone.0259098>
- Johnson, C. R. (2020). Epistemic Vulnerability. *International Journal of Philosophical Studies*, 28(5), 677–691. <https://doi.org/10.1080/09672559.2020.1796030>
- Johnston, A. (2021). Handbook on Regional Economic Resilience. *Eurasian Geography and Economics*, 64(4), 529–531. <https://doi.org/10.1080/15387216.2021.1971544>
- Joshi, K. D., & Deng, X. (Nancy). (2024). IT Research in Marginalized Contexts: An Evolving Landscape. *ACM SIGMIS Database: The DATABASE for Advances in Information Systems*, 55(2), 6–13. <https://doi.org/10.1145/3663682.3663684>
- Karim, M. A., & Zannat, N. A. (2025). *Climate Justice and Human Rights* (pp. 43–58). Igi Global. <https://doi.org/10.4018/979-8-3373-0619-3.ch003>
- Lovan, W. R. (2017). *Participatory Governance*. Routledge. <https://doi.org/10.4324/9781315247335>
- May-Chahal, C., & Kelly, E. (2020). *Vulnerability and resilience intersections* (pp. 113–140). Policy. <https://doi.org/10.1332/policypress/9781447354505.003.0005>
- Moffett, L. (2021). *Vulnerability, resilience and the responsive state in transitional societies* (pp. 78–92). Routledge. <https://doi.org/10.4324/9780429023149-7>
- Nagenborg, M. (2019). Urban resilience and distributive justice. *Sustainable and Resilient Infrastructure*, 4(3), 103–111. <https://doi.org/10.1080/23789689.2019.1607658>

Newell, P., Naess, L. O., Price, R., Torres Contreras, G. A., & Srivastava, S. (2021). Toward transformative climate justice: An emerging research agenda. *WIREs Climate Change*, 12(6). <https://doi.org/10.1002/wcc.733>

Oulahen, G., Rutledge, A., Harford, D., O'Connell, E., & Mortsch, L. (2019). Local practitioners' use of vulnerability and resilience concepts in adaptation to flood hazards. *Climatic Change*, 153(1–2), 41–58. <https://doi.org/10.1007/s10584-019-02386-w>

Petroni, L. (2025). Every Climate Struggle is a Political Struggle: New Trends in Climate Justice,. *Brazilian Political Science Review*, 19(2). <https://doi.org/10.1590/1981-3821202500020005>

Pezzullo, P. C. (2021). *Environmental justice and climate justice* (pp. 229–244). Routledge. <https://doi.org/10.4324/9780367855680-18>

Poo, M. C.-P., & Yang, Z. (2022). Optimising the resilience of shipping networks to climate vulnerability. *Maritime Policy & Management*, 51(1), 15–34. <https://doi.org/10.1080/03088839.2022.2094488>

Prah, E., & Bland, S. (2024). Climate Change and Healthscapes: Toward a Postcolonial Critique for Planetary Well-being. *South African Review of Sociology*, 54(4), 448–463. <https://doi.org/10.1080/21528586.2024.2417172>

Rangwala, I., Palazzi, E., & Miller, J. R. (2019). *Projected Climate Change in the Himalayas during the Twenty-First Century* (pp. 51–71). Springer. https://doi.org/10.1007/978-3-030-29684-1_4

Rupniewski, M. (2021). Jakie prawo ludów? John Rawls i Thomas Pogge o solidarności ponadnarodowej. *Myśl Polityczna. Political Thought*, 10(4), 71–86. <https://doi.org/10.31268/mppt.2021.39>

Scandrett, E., Crowther, J., Hemmi, A., Mukherjee, S., Shah, D., & Sen, T. (2010). Theorising education and learning in social movements: environmental justice campaigns in Scotland and India. *Studies in the Education of Adults*, 42(2), 124–140. <https://doi.org/10.1080/02660830.2010.11661593>

Schapper, A. (2018). Climate justice and human rights. *International Relations*, 32(3), 275–295. <https://doi.org/10.1177/0047117818782595>

Schlosberg, D. (2012). Climate Justice and Capabilities: A Framework for Adaptation Policy. *Ethics & International Affairs*, 26(4), 445–461. <https://doi.org/10.1017/s0892679412000615>

Sharma, P., Stanger, N., & Savarimuthu, B. T. R. (2020). *Mining Decision-Making Processes in Open Source Software Development*. 200–209. <https://doi.org/10.1145/3383219.3383240>

- Steelman, T. (2022). *Adaptive governance* (pp. 580–591). Edward Elgar.
<https://doi.org/10.4337/9781800371972.00060>
- Sultana, F. (2021). Critical climate justice. *The Geographical Journal*, 188(1), 118–124.
<https://doi.org/10.1111/geoj.12417>
- Vulnerability and Resilience*. (2020). Lexington Books. <https://doi.org/10.5040/9781978720237>
- Wahab, A. A. (2013). The Controversy over Huckleberry Finn. *International Journal of Pedagogical Innovations*, 1(1), 47–51. <https://doi.org/10.12785/ijpi/010107>
- Waheed, S., & Waheed, H. (2022). Impact of climate finance on gender equity for sustainable global development: Can aid for climate action also aid gender equity? *Brazilian Journal of Science*, 1(7), 82–94. <https://doi.org/10.14295/bjs.v1i7.145>
- Wienhues, A. (2020). *Introducing Ecological Justice* (pp. 1–24). Policy.
<https://doi.org/10.1332/policypress/9781529208511.003.0001>
- Wietrzykowski, M. (2025). Reframing Ongoing Debates: New Perspectives Modifying Moral Insights to Improve Patient Care. *The Journal of Medicine and Philosophy: A Forum for Bioethics and Philosophy of Medicine*, 50(4), 225–230. <https://doi.org/10.1093/jmp/jhaf012>
- Yang, L. E. (2020). *Managing water-related vulnerability and resilience of urban communities in the Pearl River Delta* (pp. 121–141). Hamburg University Press Publishing House Of the Hamburg State & University Library. <https://doi.org/10.15460/hup.105.781>
- Young, R. J. C. (2020). 9. *Globalization from a postcolonial perspective* (pp. 118–128). Oxford University. <https://doi.org/10.1093/actrade/9780198856832.003.0010>
- Zhang, L., & Su, X. (2023). It is top-down governance: examining environmental public-private partnerships in China. *Asia Pacific Journal of Public Administration*, 47(1), 28–49.
<https://doi.org/10.1080/23276665.2023.2258518>
- Zhao, X. (2023). A Comparison of Theories Related to Climate Justice. *International Journal of Frontiers in Sociology*, 5(9). <https://doi.org/10.25236/ijfs.2023.050902>