DIMENSIONS AND INTERPRETATIONS OF CLIMATE JUSTICE: NOTES FOR THE DISCUSSION

DIMENSÕES E LEITURAS SOBRE JUSTIÇA CLIMÁTICA: NOTAS PARA O DEBATE

DIMENSIONES Y LECTURAS SOBRE LA JUSTICIA CLIMÁTICA: NOTAS PARA EL DEBATE

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ABSTRACT: Climate justice is a rising topic, both in theory and in practice, and is part of a dispute of categories between disciplines and ideologies that seek to define it and connect it with other theories, for example. This discussion aims to permeate different readings of climate justice and discuss the historical dimensions of justice that some of these readings have adopted. From a literature review, the multiplicity of the term and the possibilities of appropriation by different actors are demonstrated. The position defended is that climate justice must be multiple and intersectional, as indicated in the majority of studies, but also anti-systemic, because climate injustices are the reproduction of historical injustices.

KEYWORDS: Climate Justice. Justice Theories. Intersectionality.

RESUMO: A justiça climática é um tema em ascensão, tanto na teoria como na prática, e se insere numa disputa de categorias entre disciplinas e ideologias que buscam defini-la e conectá-la a outras teorias, por exemplo. A presente discussão objetiva percorrer diferentes leituras da justiça climática e discutir dimensões históricas de justiça que algumas dessas leituras têm adotado. A partir de revisão de literatura, mostra-se a multiplicidade do termo e as possibilidades de apropriação por diferentes atores. A posição defendida é de que a justiça climática deve ser múltipla e interseccional, como indicado na maioria dos estudos, mas também, antissistêmica, pois as injustiças climáticas são a reprodução de injustiças históricas.

PALAVRAS-CHAVE: Justiça climática. Teorias de justiça. Interseccionalidade.

RESUMEN: La justicia climática es un tema en ascenso, tanto en la teoría como en la práctica, y es parte de una disputa de categorías entre disciplinas e ideologías que buscan definirla y conectarla con otras teorías, por ejemplo. Esta discusión pretende permear diferentes lecturas de la justicia climática y discutir las dimensiones históricas de la justicia que algunas de estas lecturas han adoptado. A partir de una revisión de literatura, se muestra la multiplicidad del concepto y las posibilidades de apropiación por parte de diferentes actores. La posición defendida es que la justicia climática debe ser múltiple e interseccional, como indicado en la mayoría de los estudios, pero también antisistémica, pues las injusticias climáticas son la reproducción de injusticias históricas.

PALABRAS CLAVE: Justicia climática. Teorías de justicia. Interseccionalid.

Introduction

This text explores different interpretations of climate justice, aiming to identify its main distinctions and to outline how the concept has been addressed within the academic field. This inquiry demonstrates that climate justice is neither singular nor homogeneous, but rather a contested notion, similar to other concepts such as sustainable development and sustainability. To this end, the text provides a brief historical overview of justice in philosophy and political theory. It draws primarily on two central authors in environmental justice—Schlosberg (2007) and Kuehn (2000), the latter considered here as a precursor to climate justice—to support the conceptual readings presented.

Although not a systematic review, the bibliographic survey conducted encompasses a wide range of perspectives, from overlapping approaches to more limited ones. The aim is not to offer a single or innovative definition, but to present a spectrum of possibilities that vary according to purpose and appropriation of the term. In doing so, the text contributes to critical debates on this emerging interpretation of injustices (re)produced in our world, with an emphasis on the global context of climate change.

Climate justice may mean one thing to an organization, another to an activist, and something entirely different for governments and the judiciary, with additional variations in how the private sector appropriates the concept. Hence, the discussion provided here is important, demonstrating that no single definition exists, as climate justice is a relatively new idea—considering the Bali Principles of Climate Justice, published in 2002, as a landmark in its formal establishment.

It is also crucial to deepen and disseminate regional readings that consider North-South differences, as well as the specificities of Brazilian territory, briefly addressed in this text. A clear contradiction emerges in claims that the application of climate justice is difficult to measure and requires indicators or metrics. From the perspective adopted here, however, it is evident when a public policy reinforces climate and environmental inequalities, structural racism, patriarchy, and colonialism.

Believing that data science alone can resolve historical and structural problems in our territories is a false dilemma. In the Global South, the struggle for climate justice must necessarily be anti-systemic, as the system itself has generated the inequalities that persist over centuries. This serves as the starting point and positional stance of this article in critical debates on climate justice.

By navigating distinct philosophical and political formulations of justice—from distributive approaches to contemporary critical theories—this article proposes a reading of climate justice that does not reduce inequalities to technical management, but recognizes them as expressions of historical conflicts of class, race, gender, and territory. Understanding that environmental racism and colonialism continue to structure the production and experience of climate vulnerabilities, we aim to show how climate justice, as both a concept and practice, must remain contested. The theoretical advancement pursued here reaffirms the plural, intersectional, and anti-systemic nature of this agenda, emphasizing its urgent importance for the Global South. We invite the reader, therefore, to engage with these layers, recognizing that climate justice is not merely a new field of study, but a political struggle for lives and dignified futures.

Materials and Methods

A theoretical literature review was conducted on the broad theme of "justice" using the Google Scholar and Scopus databases. Searches were performed using only the descriptor "justice," with initial texts selected based on relevance in Google Scholar and citation count in Scopus. A continuous process of cross-referencing followed, whereby references cited in each text were examined for additional relevant sources. Efforts sought to include both classical authors frequently cited in the literature and more recent, updated contributions. Key readings for this study included *The Idea of Justice* (2009) by Amartya Sen and *Reframing Justice in a Globalized World* (2007) by Nancy Fraser.

The same procedures were applied using the descriptor "climate justice in the Global South" to identify studies addressing variations in the appropriation of the debate in territories most affected by climate change. Specific readings that informed this focus included *Who Needs Climate Justice in Brazil?* (2022), prepared by the Gender and Climate Working Group of the Observatório do Clima, and *Why North-South Intersectionality Matters for Climate Justice: Perspectives of South Asian Australian Youth Climate Activists* (2022), by the Sapna South Asian Climate Solidarity collective. Gray literature, such as organizational reports, was also included in this review.

Dimensions of Justice: What Defines It?

To examine the notion of climate justice, it is first necessary to understand the broader concept of justice and the dimensions that may inform reflections on climate justice. A brief overview of justice theories (Table 1) establishes a foundation for the subsequent discussion. This theoretical review addresses questions such as: What does it mean to be just? What constitutes injustice? Are these ideas universal, or at least approximating universality?

Table1 – Overview of justice theories referenced in this study

Theories	Authors	Considerations
Justice as welfare	Amartya Sen and Martha Nussbaum (capabilities approach)	Although Amartya Sen, Martha Nussbaum, and Ronald Dworkin consider welfare to be a relevant element in justice, their theories do not strictly fit into the traditional conception of welfare based on utility maximization or subjective satisfaction. The capabilities approach, developed by Sen and Nussbaum, emphasizes justice as the promotion of real opportunities for individuals to fully develop their capabilities and exercise meaningful choices in their lives, transcending the mere distribution of goods or the maximization of subjective welfare. Dworkin, in formulating his theory of distributive justice, shifts the focus to equality of resources, arguing that justice must ensure an equitable allocation of means that enable the realization of individual life plans. Thus, although well-being is an aspect considered in his formulations, his conceptions of justice are predominantly based on broader normative criteria, such as freedom, equal opportunity, and individual autonomy.
	Ronald Dworkin (ideal theory of distributive justice)	
Justice as fairness	John Rawls (ideal theory of justice as fairness)	John Rawls, following the Kantian line of human dignity (Trivisonno, 2021), in his theory of justice as fairness, grounds the concept of justice in normative principles that ensure the equitable distribution of rights, duties, and resources within the basic structure of society. Through the thought experiment of the original position and the veil of ignorance, Rawls seeks to establish a just social order, securing both individual liberty and equality of opportunity, with particular attention to maximizing the conditions of the least advantaged, in accordance with the difference principle. In contrast, Robert Nozick, in Anarchy, State, and Utopia, presents a libertarian conception of justice centered on the protection of individual rights and the legitimacy of processes for the acquisition, transfer, and rectification of holdings. His theory rejects distributive models aimed at substantive equity, arguing that justice consists in preserving individual liberty and limiting state interference to the essential functions of a minimal state. Thus, while Rawls develops a conception of justice based on distributive equity and the correction of socioeconomic inequalities, Nozick advocates a procedural approach in which justice is determined by conformity to principles of legitimate acquisition. Accordingly, only Rawls's theory can be rigorously framed within the notion of justice as fairness, whereas Nozick's perspective aligns more closely with justice as respect for fair processes and individual rights.
	Robert Nozick (libertarian and minimal state conception)	

Source: Author's own (2025).

Brief Historical Overview

This study is grounded in the work of David Schlosberg (2007)—a seminal author in the field of environmental justice—and in *A Brief History of Justice* by David Johnston (2011), which introduces historical discussions on justice. This is followed by the discussion of the transition from environmental justice to climate justice by Schlosberg and Collins (2014). Schlosberg (2007) identifies three main dimensions of justice: distributive, procedural, and recognition, to which some approaches add restorative justice and others, as will be discussed below.

According to Schlosberg (2007), distributive justice refers to the equitable allocation of environmental benefits and burdens, ensuring that vulnerable groups are not disproportionately affected. Procedural justice emphasizes fair participation in environmental decision-making, ensuring that all communities have an active voice. Recognition justice involves respect for the identities, cultures, and ways of life of different groups, ensuring that their knowledge and rights are considered in environmental policies. Restorative justice, in turn, focuses on addressing historical environmental injustices through compensation and restorative measures.

While Schlosberg's work provides a solid theoretical foundation, this study seeks not only to offer a brief historical overview of the ideal of justice to demonstrate that climate justice does not emerge in isolation, but as a continuation of debates and actions developed over time. Accordingly, this research explores how different conceptions of justice intersect and evolve in contemporary discourse.

A central notion for discussing justice is the recognition of differences among individuals. In what is commonly called Western Antiquity, particularly in Greece and Rome, such differences were often used to justify social hierarchies, such as the distinction between nobles and plebeians, favoring the former. In contemporary times, however, justice has increasingly been conceived as a means to promote equity and benefit the least advantaged (Kaufmann, 1969; Johnston, 2011). In Western civilizations, the systematization of justice as a central philosophical concept developed with Greek schools of thought, particularly through Plato and Aristotle.

For Plato (Republic, ca. 380 BCE), justice is the harmony between the parts of the soul and of society, achieved when each class of the *polis*[3] fulfills its function properly. Aristotle (Nicomachean Ethics, ca. 340 BCE; Politics, ca. 330 BCE) differentiates between distributive justice, which regulates the proportional allocation of goods according to merit, and corrective justice, which aims to restore equality in transactions and interpersonal relations. Both philosophers established justice as an essential principle for the organization of the city-state and for individual ethics, profoundly influencing subsequent conceptions of the topic.

The etymology of the word "justice" reflects Aristotle's idea of "giving each one their due" and is also associated with the legal system, which mediates justice among individuals (Romita, 2009, p. 11, our translation). Aristotle, for example, developed the notion of complete justice, composed of distributive and corrective justice (Johnston, 2011). Distributive justice establishes that resources and responsibilities should be allocated proportionally, considering both merit and need, whereas corrective justice seeks to restore balance in interpersonal relations through reparations and legal intervention.

Other conceptions of justice derive from Christianity, with classical authors such as Thomas Aquinas and Augustine, who regarded justice as a virtue. In modernity, further contributions come from thinkers such as Thomas Hobbes, who advocated absolutism to ensure harmony and justice; Jeremy Bentham, who argued from a utilitarian perspective that acts are not unjust if they achieve a general common good; and Immanuel Kant, whose deontological approach emphasized individual rights and held that injustice occurs when these rights are violated in the name of a "greater good" (Johnston, 2011).

Kant is considered here as one of the thinkers whose ideas can be indirectly related to climate justice. He proposed that rights are not merely natural, but that their existence depends on reason and the moral capacity of individuals (Johnston, 2011). This approach reflects his role as a central figure of the Enlightenment, which emphasized the importance of reason in formulating ethical and social principles.

It is important to note that the early conceptions of justice discussed here were developed in slaveholding societies deeply marked by patriarchal structures, where these norms were often regarded as natural and therefore unquestioned. This reality meant that justice was considered only for certain privileged groups, while others—such as women, children, and

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[3] A political community composed of free, autonomous, and self-sufficient citizens who deliberate on the common good (Johnston, 2011).

enslaved individuals—were treated as inferior, thus evidencing the inherent injustice of these conceptions.

Regarding these different dimensions of justice, when Schlosberg (2007) sought to bridge political theories of justice with the definition of environmental justice for social movements, he examined not only distributive justice but also recognition, procedural justice, participation, and the capabilities approach. Kuehn (2000), in turn, also explores corrective environmental justice, in which the cause and outcome of an injustice are addressed through punishment of the responsible party and reparations to those affected.

In this context, Schlosberg's argument is reinforced (2007, p. 9, our translation): "Rather than insisting on a single, comprehensive, and static definition of justice, the point is that we genuinely need a plurality of themes to apply to particular cases, depending on the context."

One theory of justice that receives particular attention in contemporary studies—and is highlighted here as this section synthesizes key points from justice theories up to the conception of climate justice—is John Rawls's theory of justice as fairness (1971). According to Pogge (2007, p. 7, our translation), "no one concerned with social justice in the real world can afford not to study it closely." Furthermore, this theory is considered a close approximation to ideas of climate justice, as will be detailed, although neither Rawls (1971) nor Pogge (2007) addressed the topic directly.

John Rawls developed the theory of justice as fairness, which has served as a foundation for numerous subsequent authors to develop complementary or critical theories of justice. David Schlosberg, for instance, does not reject Rawls's concept of distributive justice; rather, he argues that it must be expanded to encompass more comprehensive definitions within environmental justice. Schlosberg (2007) is therefore a central author for this study, as it adopts this position.

For Rawls (1971), a just society is not necessarily one of complete equality but one structured according to the principle of fairness. In his conception, social and economic inequalities may exist only if they satisfy two conditions: first, that all individuals have fair equality of opportunity, meaning that advantageous positions are accessible to everyone regardless of their background; and second, that inequalities are arranged to benefit the least advantaged, in accordance with the Difference Principle. Justice as fairness thus seeks to correct arbitrary inequalities and ensure that no one is disadvantaged by social circumstances beyond their control.

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Contemporary applications of Rawls's theory can be observed in policies such as racial quotas, quotas for people with disabilities, for low-income populations, and for Indigenous peoples; the taxation of large fortunes; and agrarian reform. Related to this study, the discussion of climate-related loss and damage[4] also aligns in part with Rawls's framework, as it prioritizes the least advantaged, promotes equity, and is grounded in a social contract among states committed to the Paris Agreement.

It is important to distinguish between equity and equality. Equality presupposes the same conditions for all; equity recognizes the differing conditions individuals face due to their circumstances; and justice involves a broader restructuring of the systems that produce these inequalities (Figure 1).

Figure 1 – Illustration of the differences between inequality, equality, equity, and justice
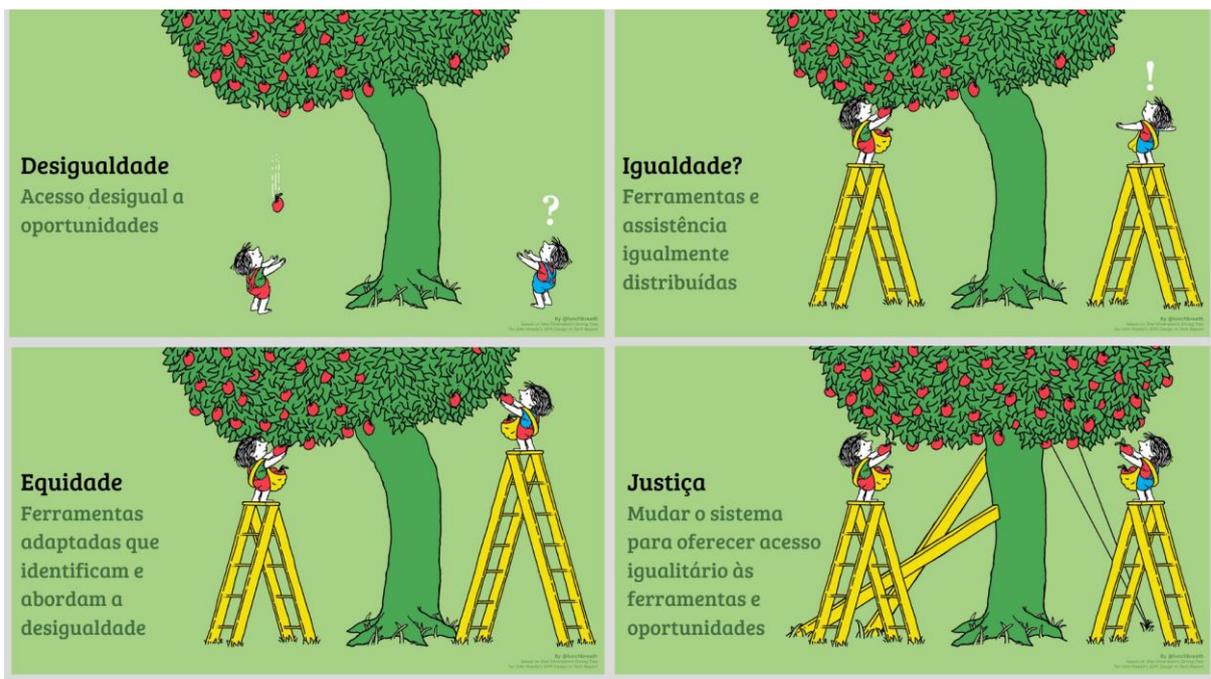
Source: Adapted from Torres (2021).

For Rawls (1971), inequalities are not inherently just simply because individuals differ naturally in talents or abilities. On the contrary, he argues that social and economic inequalities

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[4] Losses and damages are the result of global climate change and include physical and/or financial losses, such as property, assets, infrastructure, agricultural production, and others that are difficult to quantify economically, such as degraded health, loss of cultural heritage, and loss of knowledge of traditional communities. This issue was introduced in 1991 by the Alliance of Small Island States and officially adopted in the 2015 Paris Agreement, in Article 8 (Boyd *et al.*, 2021).

are only justified if they meet the two fundamental criteria: fair equality of opportunity and the Difference Principle. This implies that all individuals must have the same opportunities to compete for advantageous positions in society, regardless of arbitrary factors such as social origin, gender, or race. Furthermore, any income or status inequalities are legitimate only if they improve the situation of the least advantaged.

Rawls (1971) also rejects the idea that advantages arising from natural talents are morally deserved, as these talents are distributed randomly by the "natural lottery." Consequently, institutions must not only recognize individual differences but also create structures that prevent these differences from generating exclusion or unjust privileges. Thus, his conception of justice does not aim to eliminate all inequalities but to ensure that they exist within an equitable system where no group is structurally disadvantaged and where the advancement of the more privileged contributes to the benefit of society as a whole.

The distinction between ideal and non-ideal theory of justice is essential for understanding how normative principles interact with real-world imperfections. For Rawls (1971), ideal theory defines the conditions of a just society under well-ordered institutions, while non-ideal theory addresses concrete injustices and strategies to mitigate them. This distinction can also be applied to law: historically, legal norms have reflected structural inequalities, such as laws legitimizing slavery or contemporary regulations that continue to restrict the rights of certain groups. However, the mere fact that a legal system permits injustices does not automatically exemplify non-ideal theory in the philosophical sense, as non-ideal theory specifically concerns strategies for transitioning toward an ideal of justice, not simply the existence of flawed norms.

Therefore, beyond merely acknowledging the plurality of ideal theories, it is crucial to understand how these frameworks can guide concrete policies that bring real societies closer to more just models, ensuring that justice does not remain an abstract concept but translates into effective institutional and social change.

Different Dimensions of Justice

It is unsurprising that the conceptions of justice formulated by Aristotle, Kant, and Rawls (Trivisonno, 2021), while foundational for political philosophy, are considered by more recent authors, such as Schlosberg (2007), insufficient to fully address the challenges of environmental justice. Schlosberg therefore looks to social movements for the definitions

carried by activists themselves, empirically contributing to these theories of justice and shaping the environmental justice agenda in the United States and globally.

Among the idealized definitions of justice in these debates throughout the twenty-first century, the distributive, recognition, procedural, participatory, corrective, and capability-based dimensions are most detailed below, particularly following Schlosberg (2007) and Kuehn (2000).

It is relevant to note that Schlosberg (2007) frames justice to include the non-human natural world, suggesting the notion of ecological justice for animals, vegetation, and ecosystems. He critiques Rawls's liberal distributive theory, which, for example, excluded non-human beings from being considered victims of injustice, although Rawls acknowledged that nature is more than a resource and must be cared for rather than exploited. Whyte (2011), however, criticizes Schlosberg for not incorporating Indigenous perspectives on nature, which he considers a failure of recognition and a form of injustice.

In this sense, climate justice—the focus of this study—concerns both the human and non-human world, recognizes that nature has its own rights and can be subject to injustice, and emphasizes that the knowledge, experiences, and relationships of Indigenous peoples must be foundational for any actions seeking climate justice, climate adaptation, and the resilience of communities and territories.

Distributive justice is the most commonly applied framework across fields, including climate adaptation (Coggins *et al*., 2021). It addresses the equitable distribution of goods and opportunities and, in an environmental context, can refer to "the fair distribution of burdens resulting from environmentally harmful activities or environmental benefits from government and private sector programs" (Kuehn, 2000, p. 10684). Schlosberg (2007) further explains that distributive justice focuses on what is distributed and how it is distributed in the pursuit of a just society.

Historical cases of environmental injustice illustrate this: in Warren County, USA, in 1982, protests highlighted the unequal placement of hazardous waste landfills in predominantly Black, low-income neighborhoods (General Accounting Office, 1983). Whyte (2011) notes that by 1990, there were 1,100 landfills located on Indigenous reservations in the U.S. In Brazil, Herculano (2001) cites the Cidade dos Meninos in Rio de Janeiro, an area initially designated as an educational complex for impoverished children and adolescents, which later hosted a pesticide factory that was improperly decommissioned and abandoned, contaminating the youth and other residents.

More recent examples in São Paulo reveal that those most affected by floods or water crises are socially and economically marginalized. As Ludermir (2024) and Louback and Lima (2022) show, victims of socio-environmental and climate disasters in Brazil are stratified by race, social class, gender, regionality, postal code, and other intersections, yet public authorities often ignore these inequities.

Procedural justice, in contrast, emphasizes institutional decision-making processes and the participation of diverse actors. It is concerned not only with the representative involvement of those affected but also with ensuring that participation allows for both agreement and disagreement without coercion or threat (Kuehn, 2000; Schlosberg, 2007). Even the design of participatory processes can generate procedural injustice—for example, when public hearings are scheduled at inconvenient times or locations, or when essential documents are inaccessible to the public (Kuehn, 2000).

Schlosberg (2007) argues that recognition justice should not be viewed as opposed or separate from distributive justice but as a fundamental cause of it. Social and political exclusion of groups such as Indigenous peoples, traditional communities, and racial minorities prevents equitable access to rights and resources, making distributive justice incomplete without proper recognition. Fraser (2007), a critical theorist and scholar of feminist and Marxist studies, extends this argument, emphasizing that justice encompasses not only material distribution but also cultural recognition and political representation.

For Fraser (2007), participatory parity in society depends on three interconnected dimensions: the economic structure, which regulates access to resources (distribution); cultural hierarchies, which determine which groups are valued or marginalized (recognition); and the political sphere, which defines who has a voice in institutional decision-making (representation). The lack of recognition for certain groups not only exacerbates distributive inequalities but also undermines their ability to claim rights and influence political processes, perpetuating systemic exclusion.

Although the state has a crucial role in recognizing cultural diversity and knowledge—such as the Brazilian Federal Constitution's acknowledgment of popular, Indigenous, and Afro-Brazilian cultures in Articles 210, 215, 231, and 232—it cannot "distribute" this recognition arbitrarily across society. Considering these dimensions, alongside distributive justice, aligns with Amartya Sen's assertion that "justice is fundamentally connected to how people live and not merely to the nature of the institutions that surround them" (Sen, 2009, p. 9, our translation).

This underscores a central insight of Sen (2009): justice depends as much on individuals as it does on institutions.

Sen (2009) thus differs from other dimensions of justice—such as procedural justice—or from thinkers like Rawls (1971), who focus primarily on institutions as the pathway to justice. Whyte (2011), presenting an Indigenous perspective, emphasizes that it is precisely the relationships—built on consensus, trust, reciprocity, and responsibility—with nature that must be restored, as colonialism, still embedded in institutions and societies, disrupted them, and climate justice must address this legacy.

Corrective justice, as outlined by Kuehn (2000), refers to "doing justice" through punishment of those who violate laws or infringe rights, combined with repair of damages to individuals or communities affected by the act of injustice. In other words, it addresses both the cause and the outcome of injustice. This definition connects closely to accountability debates in climate justice, particularly regarding the necessity of climate finance.

It is also important to note that the Bali Principles of Climate Justice, formulated on the eve of the 2002 World Summit on Sustainable Development by an international coalition of social movements (Indigenous and fisher communities) and environmental organizations (Greenpeace, Friends of the Earth, and others), explicitly emphasize accountability through the concept of ecological debt, as seen in Principles 4, 7, 8, and 9:

> [...] 4. Climate Justice asserts that governments are responsible for addressing climate change in a manner that is democratically accountable to their people and in accordance with the principle of common but differentiated responsibilities. [...]
> 7. Climate Justice requires recognition of an ecological debt owed by industrialized governments and transnational corporations to the rest of the world due to their appropriation of the planet's capacity to absorb greenhouse gases.
> 8. Affirming the principle of ecological debt, Climate Justice demands that the fossil fuel and extractive industries be strictly held accountable for all past and present lifecycle impacts related to greenhouse gas production and associated local pollutants.
> 9. Affirming the principle of ecological debt, Climate Justice protects the rights of victims of climate change and associated injustices to receive full compensation, restoration, and redress for the loss of land, livelihoods, and other damages (Bali Principles of Climate Justice, 2002, pp. 1–2, translated and emphasis added).

Demonstrating the complementarity and connection between justice theories, particularly corrective and procedural justice, Kuehn (2000) presents empirical data from the U.S. Environmental Protection Agency collected between 1985 and 1991. These data reveal

that, in cases of environmental injustice, penalties for violations of environmental laws were 46% higher in predominantly white areas than in areas with ethnic-racial minority populations. This indicates that enforcement of environmental sanctions is influenced by the racial characteristics of the victims.

The capability-based approach, developed by Amartya Sen and Martha Nussbaum, emphasizes ensuring that individuals have the freedoms necessary to develop a functional and fulfilling life. Schlosberg (2007) extends this approach to environmental justice, arguing that environmental protection is essential for safeguarding human capabilities. For instance, if reading is considered a desirable function, literacy and education are the necessary capabilities to achieve it. Applied to the environmental context, the ability to maintain mobility and safety during extreme climate events is fundamental to enabling individuals to sustain a functional life amidst climate change.

Sen (2009) presents an approach that, while compatible with the Kantian Enlightenment tradition, diverges from contractarian institutionalism promoted by Kant, Hobbes, Bentham, and Rawls. He emphasizes that individuals' rational choices influence the rights of others in ways that complement rather than contradict these traditions. Individual behavior, according to Sen, is as critical as institutions in promoting justice or perpetuating social injustices, thereby enriching the debate by integrating social realities and human capabilities while acknowledging institutional importance.

The interconnection between these theories becomes evident when Schlosberg (2007) argues that a lack of respect and recognition prevents individuals from actively participating in their communities, including political and institutional spheres, thereby facilitating procedural injustices. Talukdar (2022) corroborates this, presenting data on Australian climate justice activists from South Asian immigrant families. These activists reported feeling excluded from predominantly white, locally-born climate advocacy groups, and their differing experiences and contexts regarding climate change led many to disengage, highlighting how lack of identification and belonging can limit active participation in social movements.

According to Juhola *et al.* (2022), restorative justice remains relatively underexplored both theoretically and in climate adaptation practices compared to other dimensions— distributive, recognition, and procedural justice. Central to restorative justice are accountability, followed by compensation and/or repair owed by perpetrators to those harmed, focusing on people and relationships. The authors cite loss-and-damage discussions and climate litigation

cases as examples of restorative justice[5] aligning with Corvino and Andina's (2023) argument that contemporary climate justice primarily centers on the need for climate finance. Accountability for climate change impacts is closely tied to the difficulty of attributing specific consequences to particular actors (Juhola *et al.*, 2022).

More recently, Andina (2023) introduces a transgenerational justice perspective, reflecting on distributive aspects of global climate justice, which remain the most prominent in justice debates. The author emphasizes asymmetric power and temporal relations in climate change, noting that past and present generations always hold decision-making power over future generations. Andina (2023) argues that future generations, while victims of injustices, also hold rights and responsibilities, similar to the consideration of non-human entities having rights, as neither future generations nor non-human nature can express dissatisfaction or protect themselves. Furthermore, Andina highlights that widely studied justice theories, including Rawls (1971), are insufficient to address problems where reciprocity or compensation between generations is impossible, as one party—the future generation—does not yet exist to consent to proposed terms.

Table 2, presented below, summarizes the various theories of justice[6], their authors, key concepts, and practical examples that help identify their characteristics and specificities.

Table 2 – Summary of selected dimensions of justice

Theory of Justice	Author(s)	Main Ideas	Practical Examples
Distributive Justice	Aristóteles, Kant, Rawls and Schlosberg	Addresses the equitable distribution of goods and opportunities, focusing on "what" and "how" resources are allocated to achieve a just society. Examples include the distribution of environmental resources and historical injustices faced by marginalized communities.	Racial quota policies, income redistribution programs.

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[5] Climate litigation can refer to any judicial or administrative action related to climate change. In Brazil, it is addressed by the judiciary to oversee public policies or hold polluting companies accountable, for example (Sousa, 2022).

[6] This review focuses on the most prominent justice theories in the specialized literature, which is why it does not delve into—although it recognizes their central relevance—critical perspectives such as Marxist, neo-Marxist, and ecosocialist approaches. Authors like Karl Marx, David Harvey, Erik Olin Wright, and John Bellamy Foster, among others, provide essential interpretations of the structural dimensions of inequality and the socio-environmental impacts of capitalism, but they are not the focus of the analytical framework adopted here. Their exclusion, therefore, results from a theoretical-methodological delimitation rather than a judgment on the relevance of these perspectives. Nancy Fraser is the representative of these discussions mobilized here to complement the debate, which certainly warrants deeper exploration in future studies.

Recognition Justice	Schlosberg and Fraser	Emphasizes the social and political recognition of marginalized groups, arguing that exclusion impedes equitable access to rights and resources, thereby contributing to distributive injustice. Participation parity is essential.	Recognition of Indigenous rights, affirmative action initiatives.
Procedural Justice	Kuehn and Schlosberg	Focuses on decision-making processes and the involvement of diverse actors, aiming to ensure that all affected parties have a voice and can agree or disagree without coercion. The structure of these processes can itself generate procedural injustices.	Public hearings, community consultations.
Corrective Justice	Kuehn	Concerns accountability for rights violations and the remediation of harm, seeking to correct both the causes and outcomes of injustices. Accountability is central to climate justice and ecological debt.	Compensation for victims of environmental disasters, environmental litigation.
Capability-Based Justice	Amartya Sen, Martha Nussbaum and Schlosberg	Centers on ensuring individuals have the freedoms and capabilities necessary to lead functional and quality lives. Environmental protection is essential to securing these capabilities in the context of climate change.	Education and training programs, access to healthcare services.
Data Justice	Ruha Benjamin, Kate Crawford and Safiya Noble	Examines the ethical implications of data use, addressing issues of privacy, transparency, and fairness. Highlights how algorithms and data systems can perpetuate racial and social inequalities, advocating for ethical and equitable data practices.	Transparency in decision-making algorithms, data audits.
Transgenerational Justice	Andina	Discusses the asymmetric power relations between generations and the responsibilities of present generations toward future ones. Emphasizes that future generations have rights and duties, highlighting the limitations of traditional justice theories in addressing these issues.	Environmental preservation policies to secure resources for future generations, financing of climate actions aimed at long-term sustainability.

Source: Author elaboration (2025).

Readings of Climate Justice

To better synthesize these propositions of justice—derived from political theories and the right to climate justice—this study draws on authors who bridge these perspectives, such as Sultana (2021) and her concept of critical climate justice. According to Sultana, critical climate justice involves collaboratively "unlearning" among different groups to continuously refine the concept by incorporating new perspectives.

Sultana (2021) builds extensively on feminist theories and emphasizes avoiding reductionism in her approach. This study aligns with that perspective; therefore, the previous section sought to understand justice in its plurality rather than limit it to a single theory or framework. Throughout the discussion, the interrelation of various theories and practical examples demonstrating feasibility and benefits is emphasized. For instance, the funding of loss and damage mechanisms[7], can be interpreted as an act of corrective climate justice, holding polluters accountable and compensating those most affected. Simultaneously, this action also constitutes distributive climate justice, as it transfers resources from countries enriched at the expense of those facing structural deficits resulting from that exploitation.

Amorim-Maia *et al.* (2022) present an intersectional approach to climate justice, which aligns with Sultana's perspective by prioritizing the intersecting vulnerabilities of populations. While Amorim-Maia *et al*. (2022) focus on urban planning and climate adaptation, Sultana (2021) emphasizes social relationships, proposing political power redistribution and new North–South alliances enabled by climate justice.

The term "climate justice" also appears in the Paris Agreement[8] Although it is mentioned only once without a precise definition, its context conveys significant meaning:

> Observing the importance of ensuring the integrity of all ecosystems, including oceans, and the protection of biodiversity, recognized by some cultures as Mother Earth, and acknowledging the importance, for some, of the concept of "climate justice" when adopting measures to address climate change (Ministério da Ciência, Tecnologia e Inovação [MCTIC], 2015, p. 7, our translation).

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[7] See more at: https://unfccc.int/loss-and-damage-fund-joint-interim-secretariat. Accessed on: Jan. 30, 2026.

[8] Decree No. 9,073, of June 5, 2017, which enacts the Paris Agreement under the United Nations Framework Convention on Climate Change, concluded in Paris on December 12, 2015, and signed in New York on April 22, 2016. Available at: https://www.planalto.gov.br/ccivil_03/_ato2015-2018/2017/decreto/d9073.htm. Accessed on: Jan. 30, 2026.

By including the phrase "[…] recognized by some cultures as Mother Earth" (MCTIC, 2015, p. 7, our translation) alongside the mention of climate justice, the text emphasizes the connection with Indigenous peoples worldwide, highlighting the consequences of climate change on their territories and their demands for ecosystem and biodiversity protection.

This reinforces the notion that climate justice must consider both human and non-human worlds—ecosystems, fauna, and flora—as discussed by Schlosberg (2007) and complemented by Whyte (2011), who incorporates Indigenous worldviews. Based on these authors and the Paris Agreement text, any dimension of climate justice should integrate human and non-human considerations and Indigenous knowledge. Moreover, a precedent for this perspective was established during the 2010 World People's Summit on Climate Change and the Rights of Mother Earth in Cochabamba, Bolivia, five years prior to the Paris Agreement.

The Paris Agreement text also reflects intersectionality, explicitly acknowledging the rights of diverse social groups, including migrants, children, people with disabilities, and women. The use of the term "climate justice" was likely inspired by pre-existing climate justice principles, established thirteen years before the Agreement, which placed Indigenous peoples prominently among the first three of twenty-seven principles.

In these terms, climate justice emphasizes the sacredness of Mother Earth, the rights of Indigenous, traditional, and directly affected communities to representation, participation, and leadership in international negotiations, and opposes multinational corporations and fossil fuel exploitation, while also highlighting worker safety, health, and women's rights.

Kashwan (2021, p. 2, our translation) defines climate justice as a way to "recognize and redress the unequal distribution of the costs and burdens of climate change and climate responses of various kinds." He examines climate justice in the Global North and identifies three key dimensions—distributive, procedural, and recognition-based—previously discussed. Kashwan also stresses the historical origins of climate injustices, which must be acknowledged as a first step toward achieving justice.

Frequently, discussions focus on the effects of climate change and potential solutions but neglect the underlying causes rooted in exploitative relationships, thereby reproducing the patterns that generate these changes. For example, Kashwan (2021) critiques carbon taxation and the expansion of renewable energies, such as wind and solar, which require more rare minerals and thus increase mining. Both practices disproportionately impact impoverished and racialized communities.

Louback and Lima (2022) define climate justice in the Brazilian context based on interviews with key frontline actors experiencing climate injustices in the country—primarily Indigenous, Black, quilombola, peripheral, fishing, and rural women—where climate justice is "[...] a way to combat racial, gender, and class injustices, and all other axes of oppression that, combined, ultimately culminate in impacts on the climate and the environment" (Louback; Lima, 2022, p. 180, our translation). This definition is central to the present study and aligns with Sultana's (2021) concept of critical climate justice, particularly in its focus on women and on collaborative engagement across diverse experiences of injustice.

Thus, there are countless possibilities, and this study navigates several of them. Some approaches, starting from the study of justice itself or environmental and climate justice, focus on distributive and institutional aspects, while others introduce new elements, such as intergenerationality, social relations, and intersectionality. It is essential to critically assess who is using which definition and what objectives are effectively pursued.

Conclusions

From the foregoing, it is clear that climate justice can adopt distributive, recognition-based, procedural, corrective, and restorative demands, among others, with the primary distinction often being the actors to whom these demands apply—whether institutions or individual and social groups. In this sense, while classical social contract theories alone are insufficient for climate justice, their contributions remain important, as a focus solely on institutions does not address all injustices.

In the case of climate justice, the Paris Agreement functions as a social contract among signatory states, establishing rules and limitations regarding greenhouse gas–producing activities and responsibilities for both emissions and solutions. More specifically, recent funding agreements for loss and damage mechanisms can be interpreted as both corrective and distributive climate justice measures, holding polluters accountable and transferring resources to compensate those most affected—provided this does not impose new debts on the recipients.

Beyond the diverse demands climate justice can assume, it is understood here that the actors to be favored—through an equity lens—include both the human and non-human world and Indigenous peoples globally. Furthermore, climate solutions that genuinely achieve justice must adopt an explicitly intersectional perspective, as exemplified by the Bali Principles of

Climate Justice, leaving no ambiguity regarding race, class, gender, ethnicity, or diverse capacities in policies, summits, or decision-making forums.

Multiplicity and intersectionality are thus key features of contemporary climate justice debates. This construction should advance an anti-systemic approach that prioritizes historically excluded social groups in decision-making, ensuring these groups are empowered in climate agreements and can (re)construct power relations between humans and between humans and territory.

From the discussion, research limitations and opportunities emerge in the field of climate justice, which is growing and contested across disciplines. Systematic reviews of climate justice definitions or analyses of regions most actively adopting the concept are relevant avenues, including the use of expanded databases. Empirical studies with frontline communities, inspired by Louback and Lima (2022), are also essential. Therefore, climate justice represents a fertile and developing academic field in Brazil.

In summary, climate justice cannot be understood without directly confronting the structures that produce environmental inequalities and organize the distribution of climate impacts according to capital logic. Environmental racism, patriarchy, colonialism, and extractivism are not byproducts but core pillars of this system, responsible for commodifying territories, bodies, and ways of life. In the Global South—particularly Brazil—climate justice can only be realized as an expanded class struggle, recognizing that racialized, impoverished, Indigenous, quilombola, peripheral, fishing, and peasant populations bear the costs of development that has never served them.

Thus, climate justice demands rupture, not reconciliation, with the socioecological crisis–producing system. It must be intersectional and anti-capitalist, oriented toward radical redistribution of power among humans, across generations, and between worlds—human and non-human. Only then can it move beyond rhetoric to become an instrument of systemic transformation and collective emancipation.

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