

Access to Climate Justice from a Transnational Perspective

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How to cite this paper: Valero, D. M. C., Staffen, M. R., & Bodnar, Z. (2023). Access to Climate Justice from a Transnational Perspective. *Beijing Law Review*, 14, 1162-1182. <https://doi.org/10.4236/blr.2023.143062>

Received: July 26, 2023

Accepted: September 2, 2023

Published: September 5, 2023

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Abstract

The general objective of this research is to analyze access to climate justice from a transnational perspective. The significant consequences of the global climate crisis, coupled with the inadequacy of traditional governance and regulatory models, justify the conduct of new research on the subject with a focus on transnational theory. Thus, as a result of this research, it was concluded that given the alarming data related to environmental damages affecting climate change and its global impacts, it is necessary to create policies based on transnational theory as a governance and regulatory strategy with the potential to improve the perspectives for access to climate justice, including the involvement of superior courts of the countries and even international courts. As for the methodology employed, it is worth noting that the inductive method was used in the investigative phase, the Cartesian method in the data processing phase, and the final text was composed based on deductive reasoning. Throughout the various stages of the research, techniques such as referencing, categorization, operational concepts, and bibliographic research were utilized.

Keywords

Transnationality, Climate Justice, Access to Justice

1. Introduction

This research intends to approach reflections on the unequal distribution of the negative consequences resulting from the climate crisis, as well as the criteria for assigning responsibilities and governance strategies to increase effective access to

environmental justice. The theory of transnationality as a governance and regulation strategy is indicated as a theoretical possibility.

The overwhelming consequences of the global climate crisis, combined with the insufficiency of traditional models of governance and regulation, justify further research on the subject with a focus on the theory of transnationality.

The effective protection and defense of the environment, on a spatially adequate scale, challenges new political, legal and even economic strategies so that more sustainable and truly effective alternatives are offered.

As for the methodology employed, it is noteworthy that in the investigation phase, the inductive method was used, in the data treatment phase, the Cartesian method was used and the final text was composed based on deductive reasoning. In the various phases of the research, techniques of the referent, category, operational concept and bibliographical research were used (Pasold, 2021).

2. Climate as a Transnational Demand

The approach to access climate justice must necessarily involve governance strategies that go beyond the perspective of the National States, as it encompasses a complex transnational demand in the most diverse perspectives.

Notably, globalization processes have increasingly created a world market, a new supra and transnational order that allows the free movement of capital, products, goods and services. Space was made for the exercise of a hegemonic power of a technical, economic and financial nature spread across the planet, which demonstrates the reduction (crisis) of the State¹ and institutes instruments of global governance. However, transnationality is not restricted to the ranks of an international operation fully architected by the autonomy of the will, including the possibility of choosing a legal rule, as Philip Jessup (1965) initially thought. The State lost its qualification as the only lord of the order (Arnaud, 2007: p. 3).

From the fragility of the traditional national actors, spaces of debility started to be occupied, notably after the Second World War, by transnational interests constituted through new institutions, difficult to characterize in the light of the Modern political-legal glossary (Staffen et al., 2011). The traditional homogeneity in political-legal thinking had been lost. To a greater or lesser extent, a scenario of institutional tension was installed, in which the “old” state institutions and, similarly, individuals, are faced with feelings of turbulence (Giudice, 2011).

As Günther Teubner (2004) manifested, the driving force of Law is no longer the desire for legal limitation of absolute domestic powers, but, above all, the regulation of polycentric dynamics related to the circulation of models, capital,

¹The warning of Sabino Cassese deserves to be reproduced on this occasion: “*Infine, il transnazionalismo dell’ordine giuridico globale suggerisce cautela nel parlare di crisi dello Stato e di fuga verso il livello globale, perchè la dinamica del sistema amministrativo globale è largamente dipendente dallo Stato o da suoi frammenti*” (Cassese, 2006: pp. 12-13) [Finally, the transnationalism of the global legal order suggests caution when speaking of a crisis of the State and of an escape towards the global level, because the dynamics of the global administrative system is largely dependent on the State or on its fragments.]

people and institutions in physical and virtual spaces. To this extent, it is necessary to reconsider the existing relationships between Law and State, between public and private, between different legal scenarios and legal authorities, under penalty of exhaustion of the models resulting from endless fractures.

In these terms, the decline of the national Constitutional State and the rise of a transnational paradigm of law stems, substantially, from the penetration of governance criteria in the affairs and public policies of the States, logistically supported by technological advances (Staffen, 2018). Economic globalization produces a process of legal globalization² by reflex. For Armin von Bogdandy (2014), internationalization has become a way of life.

Thus, the process of globalization needs to be understood as an expression of systemic interdisciplinarity (Cotterrell, 2012). Therefore, Transnational Law, no matter how incipient it may be, has as its object the understanding and regulation of relations arising from globalizing flows.

The recurrence of economic, environmental, health, political, humanitarian and energy crisis events, as well as the rise of risks arising from the terrorist threat, accelerated the formation of polycentric clusters for the management and regulation of these new manifestations. On the other hand, the accelerated development of new technologies, goods and services, meant that the standardization incident on these departed from flows other than state ones.³

Notably between 1980 and 1990, the characterization of the usual conception of government is transferred to the meaning of governance, based on the postulates of Rosenau and Czempiel (1992), given the combination of institutions, policies and joint initiatives with clear and defined objectives. With that, the problem of governing the world merges in contexts that pervade military alliances (NATO); intergovernmental institutions (UN, UNESCO, UNICEF, WHO and the like); regional bodies (European Council); post-imperialist associations (Commonwealth, Community of Portuguese Speaking Countries); quasi-political orders (European Union, Mercosur, UNASUR); summit (G-20, G-8, BRICS) and thousands of other NGOs.

For Francis Snyder (1999), globalization is governed by the totality of strategically determined, contextually specific and often episodic conjunctions, radiated

²In these terms: “*Le grandi multinazionali hanno spesso superato la capacità di amministrazione dei singoli Stati nazionali. Se non apprezzano il regime fiscale o normativo in un Paese, esse minacciano di trasferirsi altrove e gli Stati entrano sempre più in competizione fra loro nella disponibilità di offrire condizioni favorevoli, poiché hanno bisogno di quegli investimenti.*” (Crouch, 2005: p. 35) [Large multinationals have often exceeded the administrative capacity of individual nation States. If they do not like the tax or regulatory regime in one country, they threaten to move elsewhere, and States increasingly compete with each other in willingness to offer favorable terms, because they need those investments.].

³Although working with the theory of legal regimes, the arguments of Salem Hikmat Nasser deserve to be highlighted: “Transnational legal regimes, to be legal, either must presuppose a different definition of law, in order to differentiate them from what makes legal the regimes that are part of public international law, or should presuppose an expanded, more inclusive definition that can encompass both types of sets of norms, rules, etc. At the same time, international trade law, environmental law, *lex mercatoria*, *lex constructionis*, *lex digitalis*, are offered as examples of these functional regimes that would be the expression of the fragmentation of global law” (Nasser, 2015: p. 104).

from different places around the world, with institutional, normative and procedural elements that are specific, but not necessarily exclusive. In these terms, there is a global form of legal pluralism. A pluralism that is neither unitary nor uniform; neither organic nor structured.

This diagnosis represents precisely the exhaustion of the State and international institutions of a monist-dualist nature. The strands of Transnational Law are articulated at multiple levels, governments, local administrations, intergovernmental institutions, ultra-state and national courts, networks, hybrid bodies (public-private), non-governmental organizations and the individuals themselves.⁴

These inter-governmental institutions, through which States seek greater legitimacy and means of promoting public policies, are classified in the following categories, according to Kingsbury, Kirsch and Stewart (2005):

administration by formal international organizations; administration based on collective action by transnational networks of governmental officials; distributed administration conducted by national regulators under treaty regimes, mutual recognition arrangements or cooperative standards; administration by hybrid intergovernmental-private arrangements; and administration by private institutions with regulatory functions. (p. 20)

Furthermore, there is a progressive increase in private organizations in dealing with global affairs, with regulatory management, in the most diverse areas of incidence and material competence. They are originally private entities, with no governmental ties, dedicated to environmental protection, fishing control, the fruition of water rights, food security, finance and trade, the internet, pharmaceuticals, the protection of intellectual property, the protection of refugees, the certification of raw material as to their origin, the preservation of competition, arms control and the fight against terrorism, air and naval transport, postal services, telecommunications, nuclear energy and its waste, instruction, immigration, health and sport.

In these terms, the transnational dimension of Law does not seek to promote the eradication of the State and its spaces of government. It is not interested in a vertical chain of entities as well. However, what is perceived is the real impossibility of separation between national, international and transnational spaces, as it was intended to articulate in the past with the national-international dyad. The central cause of this projection is the indisputable ability prevailing in organizations arising from globalizing flows to relate directly with subjects and civil so-

⁴“This new legal paradigm permeates the state normative fabrics, using the channels that globalization itself creates (*in primis* those economic and judicial ones) and subtracting sovereignty from ‘traditional’ institutions. Therefore, it is the ‘language of interests’ that makes the boundary between hard Law (Constitution, laws, etc.) and soft Law (judicial antecedents, ‘programs for structural adjustment of State finances’, etc.) ever more subtle and irrelevant. The transnational normative language declares itself more as an engine of ‘convergences’ and ‘dialogues’ than of differences: the rhetoric of cosmopolitanism hides the imperative connotation of global law, taking advantage of the absence of an apparatus of public powers to which attribute the coercive function and the presumed position of equality of legal subjects” (Oliviero & Cruz, 2012).

ciety, without passing through official bodies of power.

It promotes, therefore, the change from the traditional way of thinking of institutions to a context of horizontal connectivity of legal systems, creating linkages, a paradigm supported by credibility in networks, a true complex regime (Leebron, 2002). Consequently, the focus on the disunity between the public and the private is definitely no longer important, due to the driving dynamics behind it.

However, the inquiry about the instruments of respect for norms is frequently reborn, after all, in the domestic (national) field, the finality of decisions and sovereignty resulting from the legitimate exercise of force by power prevails, however, transnational scenarios do not enjoy this prerogative. Thus, as a consequence of this panorama of linkages, what is perceived is the observance of norms through instruments of induction and substitution, so that watertight legal contents are included in combined guidelines.

It is exactly from this perspective that the climate debate takes on much more consistent and promising contours, as the fight for climate justice is necessarily a global scale issue that calls for synergistic action by all people and institutions.

3. For a Transnational Climate Justice: Challenges and Perspectives

The effective protection and defense of the environment, on a spatially adequate scale, challenges new political, legal and even economic strategies so that more sustainable and truly effective alternatives are offered.

This is so, in the most sensitive themes in the environmental sphere, because global awareness occurred very late on. It was only after the end of the Second World War that the effects of the continuous and irregular exploitation of natural resources entered the international agenda. Environmental awareness is organized, so to speak, through conferences and reports undertaken as a worldwide effort (Bodnar & Hernández, 2022).

The Stockholm World Conference on the Human Environment, with the famous Brundtland Report, effectively generated unprecedented mobilization for limits to growth and a strong warning about the need to balance development with environmental protection.

Aiming at a more consistent environmental policy, one of the main virtues of the 1972 Stockholm Conference was the recognition that the environmental problems of developing countries were different from those of the developed ones.

Among developed countries, a large part of the environmental problems resulted from the intensification of the use of natural resources by sophisticated technologies, high energy consumption and a pattern of consumption of industrialized goods that generates waste and residues. On the other hand, in developing countries, demographic problems, poverty and land exhaustion would be leading to an equally serious environmental degradation. (Neder, 2002: p. 32)

It was after the Stockholm Conference that the United Nations Environment

Program (UNEP) was created, the first international program with an exclusively environmental focus, containing 26 principles that deal with the rights and obligations of individuals and governments with regard to the preservation of the environment.

In 1985, the Vienna Convention for the Protection of the Ozone Layer was adopted, another important treaty on environmental issues. Its main contribution was the concern and consequent ban on the use of chlorofluorocarbons, known as CFCs, which destroy ozone in the atmosphere. The Vienna Convention contributed to the emergence, in 1987, of the Montreal Protocol on Substances that Deplete the Ozone Layer, which was the first legally binding environmental treaty, signed with the objective of protecting the ozone layer and eliminating the production and consumption of substances responsible for its destruction (Rei & Farias, 2017).

These concerns were reiterated at the Rio 92 Conference, in which the United Nations Framework Convention on Climate Change was signed, a historic milestone that gave rise to the Conferences of the Parties (COPs⁵), summits responsible for monitoring the effectiveness of actions related to greenhouse gas emissions into the atmosphere, among other effective measures to overcome situations of climate injustice (Jokura, 2022).

Greenhouse gases, although they correspond to less than 0.001% of the atmosphere, which is made up mainly of oxygen (21%) and nitrogen (78%), are essential for preserving heat on the planet. However, if emissions continue to increase at the current rates, scientists anticipate a warming of the order of 1.5 to 4.5 degrees centigrade over the next 100 years and, consequently, significant changes in the rain and wind cycles, and in the level of the sea. (Biato, 2005: p. 240)

As a result, the United Nations Framework Convention on Climate Change (UNFCCC) was created in Brazil in 1992, on the occasion of the United Nations Conference on Environment and Development, held in Rio de Janeiro and popularly known as Eco-92.

Even though it is still immature, the UNFCCC has awakened in the world community concern about the emission of gases, enhancing debates on the subject, as well as pressure for all countries to get involved and take the problem seriously, without failing to recognize the sovereignty of states.

However, it was only in 2015 that climate justice was formally made explicit by the UN, in the preamble to the Paris Agreement, the term climate justice appears in recognition of the influence of inequalities on the climate crisis, bearing in mind that developed countries are primarily responsible for gas emissions, causing serious consequences for developing countries. In view of this, the climate justice movement aims to guarantee the recognition of those most responsible and reparation to those affected in respect for the principle of equity (Sydenstricker & Moreira, 2020).

⁵Acronym for Conference of the Parties, regular meetings between the countries that make up the United Nations Framework Convention on Climate Change (UNFCCC) (Jokura, 2022).

The Conference of the Parties to the United Nations Framework Convention on Climate Change is held annually with the aim of assessing the situation of climate change on the planet and proposing mechanisms to ensure the effectiveness of the Convention.

The last Conference, COP 27, was held in November 2022, in the city of Sharm El-Sheikh, Egypt. The main objective of COP 27 was the reiteration and fulfillment of previously established commitments and the targets for reducing greenhouse gas emissions established in previous sessions, with a view to accelerating action on climate change (Guitarrara, 2022).

Among the specific objectives of the 27th session of the COP, it is possible to highlight the following:

- Implementation of the Glasgow Climate Pact, a document resulting from the COP 26 that took place in 2021. One of the requirements of this pact is the review of the targets for reducing carbon emissions that must be met by 2030 by the signatory countries.
- Improving actions on adapting to climate change and mitigating its effects. One example is the implementation of sustainable food systems, a goal to which Brazil has been committed, with a view to directly helping other nations.
- Monitoring financial agreements and funding commitments for underdeveloped and developing countries to ensure greater transparency in meeting climate action goals.
- Ensuring the joint work of governments, the market and civil society in the implementation of new solutions and also in practice to be able to reduce the impacts of climate change in the medium and long term. It is also important that these solutions and measures help underdeveloped countries in particular (Guitarrara, 2022: p. 1).

However, the main differential of this edition in relation to COP 26 is the recognition of the need to adopt measures at the multilateral level to compensate developing countries for the consequences of extreme events resulting from climate change, in addition to the implementation of actions to facilitate a just transition. Thinking about compensation for losses and damages for developing countries affected by natural disasters related to climate change, in addition to making all the goals established possible, the importance of financing was highlighted at COP 27 and for this reason, a loss and damage fund was created (Brazilian Petroleum and Gas Institute [IBP], 2022).

In addition to the creation of the Climate Fund, given the emerging need to implement mechanisms that achieve the millennium development goals, it is necessary to mobilize resources to increase equity and environmental justice under changing climate conditions, which requires the participation of impacted communities and the involvement of civil society, as well as relying on non-traditional sources of funding, including partnerships with the private sector and adherence to principles of transparency in spending, monitoring and evaluation (Reckien et al., 2018).

This is because the impacts of climate change differ between people and groups because of the interaction of socioeconomic conditions based on income; assets; and discrimination related to minority status, race or ethnicity, sex and gender, age, poor health and impaired mobility. These characteristics influence where people live and how severely they are affected (Reckien et al., 2018). The differences on the environmental problems between developing countries and developed ones produce the worsening of social inequalities, political instabilities and risks of new models of colonialism.

In the history of climate conferences, Brazil has always played a leading role, due to the fundamental role that Brazil has to play in the preservation of the Amazon rainforest. As well mentioned by the IBP:

Brazil's leading role in global discussions on climate and the environment is not limited to being an Amazonian country. In the energy sector, the country is in a leading position due to the composition of an energy matrix with a high share of renewable energy sources (44% of total generation in 2021). Under these conditions, the energy sector also has a lower volume of GHG emissions, which is equivalent to about 30% of the country's total emissions, and constitutes a much lower participation when compared to other national experiences. (IBP, 2022: p. 4)

Therefore, Brazil occupies a prominent position in global terms, since around 83% of its electrical matrix comes from renewable sources. In addition, the country has high cost competitiveness in the generation of electricity and an extensive transmission network, which represents a favorable scenario for the diffusion of GH2 (Brazilian Climate Observatory, 2022).

However, despite the positive position in relation to renewable energy, Brazil also presented some setbacks at COP 27,

the emissions of greenhouse gases grew in 2021 for the fourth year in a row and reached 2.4 billion gross tons, the highest increase since 2003 (12%). Deforestation is out of control and will almost certainly exceed 10,000 square kilometers in 2022. (Brazilian Climate Observatory, 2022: p. 3)

Nonetheless, COP 27 represents a milestone in Brazilian environmental and climate policy, strengthening the idea of climate justice. Among the commitments assumed are the reduction of gas emissions by up to 50% by the year 2028 and zero deforestation, reiterating the importance of immediate actions to mitigate the effects of global warming and climate change, as well as the construction of a policy that recognizes inequality between developed and developing countries (Guitarrara, 2022).

It is important to point out that the current economic model, based on the exploration of natural resources, as well as inadequate environmental management practices, has contributed to the advance of deforestation, loss of biodiversity and climate change, which can be clearly observed in the Brazilians biomes – Amazon, Cerrado, Caatinga, Atlantic Forest, Pantanal and Pampa.

According to Campoli and Stivali (2023) the determinants of deforestation are

related to land use, such as:

1) land expansion for agriculture and pastures; 2) extraction of natural resources, such as wood; and 3) infrastructure expansion. Changes in land use directly reflect changes in the ecosystem and reduction in vegetation cover. The stimulus for these actions comes from economic incentives called “underlying causes”, linked to market factors, urbanization, infrastructure, culture and management. (p. 7)

Forests and natural ecosystems store large amounts of carbon, both in the vegetation structure and in the soil. Compared to forests in temperate climates, tropical forests are denser and have less seasonal fluctuations in the flow of carbon, constituting important carbon stocks that contribute to the stability of the global climate. Tropical forests still shelter about 50% of terrestrial biodiversity, play a fundamental role in regulating the supply of water resources and in soil conservation. According to the United Nations (UN), about 1.6 billion people depended on forests for their livelihoods in 2011 (REDD + Brasil, 2019).

Thus, deforestation and forest degradation are activities that assume a large portion of the responsibility for the emission of greenhouse gases (GHG), especially carbon dioxide (CO₂), which cause climate change. According to the Intergovernmental Panel on Climate Change, the Forestry and Other Land Use sector accounted for 12% of global emissions from 2000 to 2009 (REDD + Brasil, 2019).

However, it is important to remember that there is an imbalance in research efforts to understand the effects of the loss and fragmentation of natural habitats on biodiversity, with the majority of studies being carried out in the Amazon (42.7%), followed by the Atlantic Forest (19.2%) and Cerrado (18.7%), with relatively few works in the Pampa, Pantanal, Caatinga and Coastal and Marine Zone (Bustamante & Metzger, 2019).

Nevertheless, it is indisputable that in addition to contributing to the greenhouse effect, deforestation generates other negative impacts on society and the environment. Threatening species of fauna and flora with the destruction of habitats, directly affecting the livelihood of millions of people, compromising the water supply of millions more and contributing to the loss of fertile soils and erosion. Deforestation and fires also affect the local climate by reducing humidity in the affected areas and may affect the flow of rain in the territory (REDD + Brasil, 2019).

The tendency is that these changes lead to the disappearance of endemic species and biotic homogenization, with consequent loss of ecological interactions and ecosystem functions, reducing the potential of these areas to provide ecosystem services (for example, the potential to sequester carbon and thus contributing to climate regulation) and promoting the expansion of species that can be considered pests or disease vectors (Bustamante & Metzger, 2019).

Projections indicate that Brazil will be affected by climate change, with an average increase in temperature of 2°C to 3°C by 2070, affecting mainly the Mid-

west, North and Northeast regions. A significant reduction in rainfall is also expected, with an increase in drought events, mainly in eastern Amazonia, in the Cerrado and in the Caatinga (Bustamante & Metzger, 2019).

Faced with this possible reality, REDD+⁶ was created under the UNFCCC to encourage developing countries to conserve and restore their forests. The conservation and recovery of forests brings benefits for the mitigation and adaptation to climate change, in the face of its adverse effects, while providing benefits for the conservation of biodiversity and offering ecosystem services for the peoples who live in the forest, and also for populations living in urban centers, such as climate regulation (REDD + Brasil, 2019).

The National Commission for REDD+, established by Decree no. 10,144, of November 28, 2019, is responsible for coordinating, accompanying, monitoring and reviewing the National Strategy for REDD+ in Brazil and for coordinating the preparation of requirements for access to payments for results of REDD+ policies and actions in Brazil, recognized by the United Nations Framework Convention on Climate Change (Ministry of the Environment, 2022).

The Commission is destined to formulate guidelines and issue resolutions on various topics: the implementation of the National Strategy for REDD+; consideration and respect for REDD+ safeguards; payments for REDD+ results in Brazil, recognized by the UNFCCC; the allocation of reduced emissions, including the definition of a percentage destined to federal entities, within the scope of their competence, and to private initiative programs and projects of forest carbon; eligibility for access to payments for REDD+ results achieved by the Country; the raising, by eligible entities, of funds from payments for REDD+ results; the use of funds from payments for REDD+ results raised by eligible entities; regulation of technical standards and methodologies for the development of REDD+ projects and actions; and the formulation, regulation and structuring of financial and market mechanisms to promote and encourage the reduction of emissions derived from REDD+ (Ministry of the Environment, 2022).

The Commission is made up of representatives of the Ministries of the Environment, who chair it; of Foreign Affairs; of the Economy; Agriculture, Livestock and Supply; and Science, Technology, Innovations and Communications. The National Commission also comprises a representative of state environmental agencies and a representative of the Brazilian organized civil society, represented by the Executive Secretary of the Brazilian Forum on Climate Change (Ministry of the Environment, 2022).

Another relevant measure instituted was the Action Plan for the Prevention and Control of Deforestation in the Legal Amazon (PPCDAm), regulated by Decree no. 11,367, of January 1, 2023, which establishes the Permanent Inter-

⁶REDD+ is an incentive developed under the UNFCCC to financially reward developing countries for their results in Reducing Greenhouse Gas Emissions from Deforestation and Forest Degradation, considering the role the conservation of forest carbon stocks, sustainable management of forests and enhancement of forest carbon stocks (Ministry of the Environment, 2016).

nisterial Commission for the Prevention and Control of Deforestation, reestablishes the PPCDAm and provides for the Action Plans for the Prevention and Control of Deforestation in the Cerrado, the Atlantic Forest, the Caatinga, the Pampa and the Pantanal.

Art. 12. The Permanent Interministerial Commission for the Prevention and Control of Deforestation will define the procedures and specific actions for the prevention and control of deforestation in the Atlantic Forest, Caatinga, Pampa and Pantanal, within a period of six months, counted from the date of publication of this Decree. (Decree no. 11,367, 2023)

It is important to mention that the PPCDAm had been revoked in 2020, and succeeded by the National Plan for the Control of Illegal Deforestation and Recovery of Native Vegetation 2020-2023, which covers all biomes, however, has been reestablished now, in 2023.

The PPCDAm was created in 2004 and its objective was to continuously reduce deforestation and create the conditions for the transition to a sustainable development model in the Legal Amazon. One of the main initial challenges was to integrate the fight against deforestation into Brazilian State policies. Assuming that the fight against the causes of deforestation could no longer be conducted in isolation by environmental agencies, the complexity and transversality of the challenge would require coordinated efforts from different sectors of the Federal Government (Ministry of the Environment, 2017).

The main guidelines of the PPCDAm were:

a) Valuation of the forest for the purpose of conserving biodiversity, forest management of timber and non-timber products and the provision of environmental services; b) Incentives for better use of areas already deforested on “sustainable bases”, contemplating technological innovations; c) Taking urgent measures for land and territorial planning; d) Improvement of instruments for monitoring, licensing and inspection of deforestation with innovative methodologies; e) Strengthening of a culture of strategic planning for infrastructure works, involving the adequate analysis of alternatives, preventive, mitigating and compensatory measures; and f) Implementation of a monitoring system for the dynamics of deforestation and related public policies in the Amazon. (Zanin et al., 2022: p. 124)

The PPCDAm was structured to face the causes of deforestation in a comprehensive, integrated and intensive way, with actions articulated around three thematic axes: 1) land and territorial organization, 2) environmental monitoring and control and 3) promotion of sustainable production activities (Ministry of the Environment, 2017).

4. Access to Climate Justice and the Millennium Development Goals

The climate issue is directly or indirectly related to several sustainable development goals provided for in the UN 2030 agenda. This is an imperative that

must guide the actions of all public powers, and also serve as a guiding compass for the courts in the implementation and strong control of public policies, especially the Federal Supreme Court, which is the greatest guardian of the Constitution.

So that environmental justice has the purpose of redistributing social and environmental goods, equalizing fundamental socio-environmental rights, in addition to bringing together a set of ethical principles that are intended to influence a new social and environmental rationality in the current model of globalizing capitalism (Carvalho, 2013).

However, before analyzing access to climate justice in view of the millennium development goals proposed in the 2030 agenda, it is important to present data referring to some states in relation to deforestation and degradation, in order to demonstrate where the main problems are located. This mapping is carried out through the Amazon Deforestation Monitoring Project by Remote Sensing (PRODES, Amazônia), coordinated by the National Institute for Space Research (INPE), responsible for periodically monitoring the rate of deforestation of the biome in Brazil.

The PRODES project performs satellite monitoring of clear-cut deforestation in the Legal Amazon and has produced, since 1988, annual deforestation rates in the region, which are used by the Brazilian government to establish public policies. Annual rates are estimated from the deforestation increments identified in each satellite image covering the Legal Amazon. The first presentation of the data is carried out until December of each year, in the form of an estimate, when approximately 50% of the images covering the Legal Amazon are normally processed. Consolidated data are presented in the first half of the following year (INPE, 2023: p. 1).

Thus, according to PRODES, the Legal Amazon suffered deforestation in a total area of 12695.47 km² in 2022. The State that suffered most from deforestation was Pará with an area of 4531.24 km², equivalent to 35.69% of the total area, then comes the State of the Amazon with deforestation in an area of 3047.68 km², 24% of the total area, the other States that suffered from deforestation are, successively, Mato Grosso with 2021.75 km², 15.92% of the total area, Rondônia with 1452.20 km², 11.43% of the total area, Acre with 1005.65 km², 7.92% of the total area, Maranhão with 298.83, 2.35% of the total area, Roraima with 293.18 km², 2.30% of the total area, Tocantins with 30.96 km², 0.24% of the total area and Amapá with 13.98 km², 0.11% of the total area (INPE, 2023).

The Amazon Institute of People and the Environment (IMAZON), one of the main platforms for information and control of deforestation and the Brazilian biome, brings the most up-to-date information, in recent years it has been observed that deforestation in the Amazon rainforest continues to rise. In March 2023, SAD (a non-governmental Alert System developed by IMAZON) detected 344 square kilometers of deforestation in the Legal Amazon, an increase of 180% compared to March 2022, when deforestation totaled 123 square kilometers. Deforestation detected in March 2023 occurred in Amazonas (30%), Pará (27%),

Mato Grosso (25%), Roraima (8%), Rondônia (6%), Maranhão (3%) and Acre (1%) (Amorim et al., 2023).

IMAZON announced that the area of forest deforested in the Legal Amazon in the first eight months of 2022 was the largest in the last 15 years. According to data from IMAZON, in August alone, 1415 km² were cut down. In addition, forest degradation caused by logging and burning increased 54 times (Peixoto, 2022).

It is important to point out that the emission of greenhouse gases in Brazil is different from those of the rest of the world. While the emission of greenhouse gases and non-renewable energy sources in several countries is caused by the use of fossil fuels and non-renewable energy sources, Brazilian emissions are mainly caused by changes in land use, responsible for a large part of burning and deforestation. According to the System for Estimating Greenhouse Gas Emissions (SEEG), in 2018, 68% of emissions came from agribusiness and land use change (Sydenstricker & Moreira, 2020).

However, as shown in the previous topic, Brazil is failing to fulfill the commitments assumed in the Paris Agreement and the goals established in the National Policy on Climate Change of 2009. Among the goals signed was the obligation to reduce deforestation in the Amazon by 80% compared to 1996-2005 levels, however, deforestation in the area is growing at alarming rates, as shown by data from the INPE (Sydenstricker & Moreira, 2020).

One of the main concerns is related to the Climate Fund, a fund created to finance the adoption of measures to mitigate climate change. In Brazil, one of the Federal Government's main instruments for long-term financing and investment in all segments of the Brazilian economy is the Brazilian Development Bank (BNDES). Since the 1970s, one of the BNDES' fundraising mechanisms has been the issuance of foreign bonds. The last funding, in 2017, was in green bonds, totaling US\$ 1 billion, maturing in 2024. These resources were invested in wind energy projects that created 1323 MW of new installed generation capacity, which represents more than 420 thousand tons of CO₂e sequestered from the atmosphere. This was considered the first initiative among Brazilian financial institutions.

In 2020, the BNDES started a new funding of 1 billion BRL (Brazilian currency [*Reais*]) with maturity in two years, this time in the domestic market, through the issuance of Green Financial Bills (LFV [*Letras Financeiras Verdes*]), with the aim of diversifying funding sources and stimulating the market to invest in green bonds. The LFV follows the same framework as the 2017 green bonds, ensuring that the application of resources is destined to finance environmentally sustainable projects, attested by a verification company, specialized in the environmental area. Resources must be allocated to wind or solar generation projects.

The current scenario of global warming and cases of climate change has given new challenges to global society. UN and Intergovernmental Panel on Climate Change (IPCC) scientists' reports confirm the participation of human

beings in these processes and warn of the intensification of climate events. The consequences of these events, such as the increase in global temperature, rainfall, heat waves and rising sea levels, put the well-being of civil society at risk, especially those that are more vulnerable to this context (Armada & Branco, 2018).

In view of this, Trannin (2020) highlights the importance of implementing climate-related public policies that have equity as the center of their objectives:

Climate change adaptation policies have the potential to reduce social inequalities and there are significant lessons for their development that can be learned from local adaptation experiences made by native communities, which are generally the most vulnerable and with the least means to mitigate climate change, related issues. (p. 16)

Therefore, the most affected populations, usually from the poorest countries, should be supported through opportunities to adapt to the impacts of climate change financed by the countries which are the most responsible for greenhouse gas emissions, for climate justice to be done. And for climate justice to be effectively done, action is needed on a global scale. It is necessary to share climate adaptation resources and skills with all peoples and communities. (p. 17)

As can be seen, there are several challenges, delays and setbacks faced by Brazil in complying with the 2030 agenda. According to Gameiro (2021), in at least nine of the 17 goals, Brazil is showing a setback: in the areas of environment, promoting peaceful and inclusive societies, tackling poverty and hunger. The return of Brazil to the Hunger Map, the growth of poverty, environmental policies contrary to sustainable development, the regression of gender equality policies and the shrinking of health and education programs.

Of the 168 targets applicable to Brazil provided for in the 17 Sustainable Development Goals, 110 (65.47%) are in recession. According to the report's methodology, this expresses the policies and actions that were "discontinued, negatively altered or suffered budget drain". Last year, the number of goals in recession was 92. Among those that made progress, only one goal made it in a "satisfactory" way, according to the document; another 24 showed insufficient progress, that is, below the necessary for its implementation by 2030; 11 goals remained or entered into stagnation and 14 are "threatened", which means that, even if there are no setbacks, they are at risk due to "actions or inactions whose repercussions compromise their achievement". Regarding eight of the targets there is not enough data available. (Fundação Oswaldo Cruz [FIOCRUZ], 2022: p. 1)

With regard to the commitment to zero deforestation, on September 15, 2022, researchers from the Alberto Luiz Coimbra Institute for Graduate Studies and Engineering Research of the Federal University of Rio de Janeiro (COPPE/UFRJ) released a study that points out that, if Brazilian environmental policy continues

to follow its current course, greenhouse gas emissions will exceed by 137% the target assumed by the country in the Paris Agreement and in its Nationally Determined Contributions (NDC), for 2030. In addition, the continuity of deforestation could lead to the point of no return as, according to the study, the annual rate of deforestation in the Amazon increased from 754 thousand hectares in 2018 to 1.3 million hectares in 2021, with an average increase of 183 thousand hectares/year, and if this reality remains, the Amazon will be led to an irreversible savannization process (COPPE/UFRJ, 2022).

According to the COPPE/UFRJ study, for Brazil to be able to comply with the international agreements of the 2030 agenda, it is essential to contain the increase and decrease in annual deforestation rates, mainly in the Amazon. In addition, they point out that the Amazon is the main source of other benefits to Brazilian society, such as maintaining the climate in the region and transporting moisture to other Brazilian regions, a fundamental contribution to the availability of water resources and agricultural productivity in the country (COPPE/UFRJ, 2022).

In addition to assuming long-term commitments, it is essential that the State concretely implement the millennium development goals, including the impetus and intense control of the Judiciary.

In Colombia, several recognitions were also made to nature as a subject of rights following the thesis defended by the Constitutional Court in Sentence T-622 of 2016 on the Atrato River. For the Supreme Court of Justice of Colombia, protector of the rights of the Amazon rainforest, in its Judgment 4, 360 of 2018, “an intergenerational agreement is created on the measures that will be adopted to reduce deforestation and the emission of greenhouse gases, as well as the adaptation and mitigation strategies to climate change in each of the vulnerable cities and municipalities in the country” (Supreme Court of Justice of Colombia, 2018).

an intergenerational agreement is created on the measures that will be adopted to reduce deforestation and the emission of greenhouse gases, as well as the adaptation and mitigation strategies to climate change in each of the vulnerable cities and municipalities in the country. (Supreme Court of Justice of Colombia, 2018: p. 49)

In Colombian doctrine, they are also known as biocultural rights, because they relate human beings as part of nature. This is how rivers, forests and snowy mountains have been recognized by the judicial system and doctrine as subjects of law (Pinto Calaça et al., 2018).

The judicialization of climate issues in Brazil gains strength and acceptance and demonstrates that access to climate justice cannot be just a rhetorical commitment by the government, but it must be part of an axiological agenda that finds support in several fundamental rights, including those of future generations (Staffen, 2023).

One of the most paradigmatic decisions on the subject was rendered in an action proposed by the Brazilian Socialist Party (PSB [*Partido Socialista Brasileiro*]), by the Socialism and Freedom Party (PSOL [*Partido Socialismo e Liberdade*]), by the Workers' Party (PT [*Partido dos Trabalhadores*]) and by the *Rede Sustentabilidade* party, a direct action of unconstitutionality by omission. The action was motivated by the fact that the Union, since 2019, has not implemented the National Fund on Climate Change (Climate Fund) and thus failed to apply its large resources to the adoption of measures to mitigate climate change.

According to an article published on the website of the Federal Supreme Court (STF [*Supremo Tribunal Federal*]) on the decision of the aforementioned direct action of unconstitutionality by omission:

The rapporteur rejected the Ministry of the Environment's allegation that the non-functioning occurred because the new regulatory framework for sanitation was expected. According to the minister, the fund's resources are not intended exclusively or mainly for this sector. In addition, the Annual Resource Application Plan (PAAR) for 2020 and 2021, later approved, was not limited to the allocation of frozen resources for sanitation, directing them to all lines available for financing at the Brazilian Development Bank (BNDES).

According to Barroso, the reimbursable resources were all allocated by the 2020 and 2021 PAAR to the BNDES and directed, as a priority, to the urban environment. Non-reimbursable funds were fully allocated to the *Lixão Zero* [Zero Waste] project, by the government of Rondônia, with the amount of R\$ 212772.00 being retained to meet fiscal targets. (STF, 2022a)

In the judgment of the direct action of unconstitutionality by omission, which took place in October 2022, the representative of the Attorney General Office (AGU [*Advocacia-Geral da União*]) sustained that, since 2019, more than 400 million BRL have been disbursed to projects in progress. She also said that only new projects were suspended, due to negotiations between the Union and donor countries on the governance of the fund. According to the AGU, a new model is needed to obtain more transparency, efficiency and control in the application of resources and greater visibility of the results (STF, 2022b).

The STF, after a multidisciplinary public hearing, prohibited in an exemplary manner the contingency of revenues that make up the National Fund on Climate Change (Climate Fund) and ordered the federal government to adopt the necessary measures for its operation, with the consequent allocation of resources. The STF also recognized the failure of the Union in relation to the non-full application of resources from the fund of 2019 (Wedy, 2023).

The decision of the STF that the prohibition of contingency is not justified in view of the serious Brazilian environmental context, it is necessary to emphasize the constitutional protection for the environmental protection (article 225 of the

1988 Federal Constitution). In fact, demonstrated data, even by satellite, show that in the year 2021 deforestation increased by more than 22% and reached an area of 13,235 km², representing a 76% increase in annual deforestation compared to 2018 (Wedy, 2023).

5. Conclusion

The effective protection and defense of the environment, on a spatially adequate scale, challenge new political, legal and even economic strategies so that more sustainable and truly effective alternatives are offered. This is because, in the most sensitive themes in the environmental sphere, global awareness occurred very late on. Only after the end of the Second World War did the effects of the continuous and unregulated exploitation of natural resources appear on the international agenda. Environmental awareness is organized, so to speak, through conferences and reports undertaken as a worldwide effort.

The dynamics of globalization and transnationality, therefore, must be adjusted not only for the socialization of environmental risks and damage, but especially for the adequacy of standards of protection and fair access to environmental assets without compromising future generations or peripheral regions.

The data presented in this research show important challenges, but also opportunities and possibilities that can be implemented, including the involvement of economic sectors and the market. As a theoretical possibility, the theory of transnationality is indicated as a governance and regulation strategy with the potential to improve the perspectives for access to climate justice, including with emphasis on the protagonism of the superior courts of the countries and even of the international courts, especially considering the low effectiveness of the international treaties in some countries.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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