

/STUDIES/

SUMMARY OF RATIONALES FOR CLIMATE LITIGATION IN BRAZIL

/LEGAL
ARGUMENTS FOR
THE INCLUSION
OF THE CLIMATE
VARIABLE IN
ENVIRONMENTAL
LICENSING/

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PREFACE

Environmental licensing has been for decades one of the most important instruments for the prevention of environmental damages in Brazil. However, within the scope of climate governance, environmental licensing tends to be relegated to secondary tier in comparison to instruments like sectoral adaptation and mitigation plans, market instruments, and financial, fiscal, credit, and cooperation mechanisms. There are strong reasons why licensing can support efforts to mitigate and adapt to climate change. The study prepared by the Research Group “Law, Environment and Justice in the Anthropocene” (JUMA/NIMA/PUC-Rio) demonstrates with argumentative clarity and fresh empirical data the need to integrate environmental licensing into climate policy, both for mitigation and adaptation purposes.

The first reason is that environmental licensing is a normative requirement that is already embedded in several provisions of the Brazilian legal system, and it is the appropriate instrument for the identification, assessment, and mitigation of all environmental impacts resulting from activities that are potentially degrading to the environment. The National Environmental Policy – PNMA (Law 6,938/1981), for example, defines “pollution” as the degradation of environmental quality resulting from activities that directly or indirectly harm the health, safety, and well-being of the population and create adverse conditions for social and economic activities, among other types of adverse effects on the environment. It is well

established that greenhouse gases (GHG) emissions negatively impact the natural, economic, and social systems, effects that are covered by the concept of pollution of the PNMA. Such negative effects—the drop in agricultural productivity, the proliferation of diseases, the increase in extreme weather events such as rainfall, droughts, forest fires, and heat waves, the loss of biodiversity, and many others—could be even greater if GHG concentrations resulting from accumulated emissions reach a level above the levels that will lead the planet to an increase in the average temperature of more than 1.5 °C. In this way, GHG emissions are a type of pollution that can and must be controlled through environmental licensing.

The absence of reference about environmental licensing in the federal climate policy contrasts with the provisions of several subnational climate laws, especially the norms that explicitly recognize environmental licensing as an instrument of climate policy. This study prepared by JUMA identifies subnational norms that create positive incentives for activities and projects which advance climate commitments, such as renewable energy projects. In some Brazilian states, projects that play an essential role in the transition to a low carbon economy benefit from a simplified licensing procedure. Additionally, in international law, the State’s obligation to include the climate dimension into Environmental Impact Assessment (EIA) emerges as an obligation of international customary law, at least for activities that may result in significant GHG emissions.¹

¹ Mayer, B. Climate Assessment as an Emerging Obligation under Customary International Law Mayer, B. *International and Comparative Law Quarterly*, 68(2), 271-308, 2019.

It is therefore clear that there are several normative sources from which one can draw a legal duty to carry out an environmental licensing that takes into account climate change. This is a legal duty that empowers environmental agencies to require concrete measures from business enterprises in the course of the licensing of activities or projects with the potential to release a significant amount of GHG emissions into the atmosphere. Such measures include the preparation and submission of emissions inventories, use of best technologies to reduce emissions, and offsetting emissions.²

The second reason is that while the current system of environmental licensing has an intrinsic climatic dimension, an explicit consideration of its potential to promote climate mitigation and adaptation could translate into further action. For instance, within the licensing of activities with significant environmental impact, Brazilian environmental agencies can require companies to implement or maintain conservation units as a compensatory measure for environmental damages. Conservation units, as well as other categories of protected areas, protect native vegetation and the sustainable use of existing natural resources (Article 2, IX of the Brazilian National Climate Change Policy – PNMC). Furthermore, these areas function as carbon sinks, they remove and store atmospheric carbon in plant biomass and soil. Once climate action becomes part of the licensing process, when issuing licenses, environmental agencies could request compensatory measures such as deforestation monitoring technologies (e.g., cameras on highways) and forest restoration programs.

The possibility of making climate norms and plans compatible with environmental licensing is reaffirmed through the judicialization of climate change. In recent years, courts in different countries have annulled, suspended, or modified several

environmental licenses (or equivalent administrative authorizations) for disregarding the climate impacts of projects, whether positive (projects that contribute to reducing emissions or capturing carbon) or negative (projects that may be affected by climate change – adaptation – or that increase GHG emissions). This work provides an unprecedented contribution to the study of climate litigation related to authorizations, permits, and licenses for GHG-emitting projects. This work mapped at least 46 cases filed in the courts or extrajudicial bodies across the world, of which 38 sought a court order to impose on the environmental agencies, or to the companies directly: the obligation to mitigate GHG emissions; the review of environmental impact assessment studies; or even the annulment of an environmental license or permit for not having adequately considered the climate variable.

In addition to shedding light on the essential role of environmental licensing in mitigation and adaptation efforts in the context of the climate crisis through robust theoretical and empirical legal analysis, this study is timely. This is due especially to an ongoing attempt to overhaul the legal framework for environmental licensing in Brazil. The Chamber of Deputies approved a bill which was sent to the Federal Senate in May 2021. As it currently stands, the bill distorts the role of environmental licensing as an instrument for identifying, evaluating, and mitigating the environmental impacts of potentially degrading activities and projects. Several provisions of the bill (PL 2,159/202) under consideration by the Federal Senate make room for a significant increase in GHG emissions in Brazil, which is worrying given the current scenario where the country's emissions curve continues to soar due to the significant increase of deforestation in the Amazon, Cerrado and Atlantic Forest in recent years.

² Regarding the binding or discretionary nature of the decisions and determinations of public bodies during the stages of environmental licensing, cf.: Leal, Guilherme. *Environmental Impact Study and Climate Change*. In: SETZER, Joana; CUNHA, Kamyla; FABBRI, Amália S. Botter (Coords.). *Climate litigation: new frontiers for environmental law in Brazil*. São Paulo: Thomson Reuters Brazil, 2019.

By systematizing legal arguments – based on empirical data – that show that environmental licensing already holds the status of an instrument of climate policy, the present work offers a critical and unprecedented contribution to policymaking in Brazil. Rather than competing for space with sectoral planning instruments and market instruments, environmental licensing can play a complementary role, reinforcing climate governance from a localized and procedurally well-defined perspective for reducing emissions and achieving the objective of carbon neutrality.

Environmental licensing is, therefore, a necessary and adequate instrument for governments to assess the impacts of authorizing new sources of greenhouse gas emissions against their climate commitments within

the framework of a legally defined administrative process.

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INTRODUCTION

This publication summarizes the primary analyses and findings of the research published in the e-book *Climate Litigation in Brazil: Legal Arguments for the Inclusion of the Climate Variable in Environmental Licensing*.¹ It consolidates the results of research carried out during 2020 by the Research Group Law, Environment, and Justice in the Anthropocene of the Environmental Law Division of the Interdisciplinary Center for the Environment at the Pontifical Catholic University of Rio de Janeiro (JUMA /NIMA/PUC-Rio), with financial support from the Climate and Society Institute (*Instituto Clima e Sociedade* – iCS).²

Climate variable is here defined as the climate dimension of environmental impacts. The study argued that the climate variable is already present, implicitly or explicitly, in Brazilian Environmental law. The starting point for the identification and construction of a set of legal arguments specifically aimed at demanding the consideration of the climate variable in environmental licensing is the Public Power's duties in relation to the climate and the environment when conducting environmental licensing procedures. Environmental licensing and the prior assessment of environmental impacts

are the main tools for the preventive control of activities that, directly or indirectly, generate negative socio-environmental impacts – including climate impacts (due to the direct or indirect emission of greenhouse gases – GHG).

The study seeks to categorize legal arguments to foster climate litigation in Brazil based on norms related to environmental licensing and the evaluation of environmental impacts. The analysis concentrates on environmental licensing and environmental impacts due to their relevance as essential preventive, mitigating, and compensatory tools for addressing social and environmental impacts of climate change. The research focuses on federal and state legislation, and domestic and foreign cases.

The research categorizes strategic and specific legal arguments focused on preventive or compensatory liability, particularly in environmental licensing. The research focuses on this particular tool due to its relevance to the preliminary control and feasibility evaluation of potentially polluting activities, and its role in the harmonization of economic activity and environmental protection.³

1. Available in Portuguese only at: MOREIRA, Danielle de Andrade (Editor.). *Climate Litigation in Brazil: Legal Arguments for the Inclusion of the Climate Variable in Environmental Licensing*. Rio de Janeiro: PUC-Rio, 2021. E-book (Coleção Interseções. Série Estudos). ISBN 978-65-88831-32-8. Available at: <http://www.editora.puc-rio.br/cgi/cgilua.exe/sys/start.htm?infoid=956&sid=3>. Last visited on 28 Jul. 2021. [hereinafter e-book].

2. All quotations were translated by the authors.

3. Discussing the relevance of environmental licensing in the fight against the climate crisis, Caio de Souza Borges emphasizes that "that environmental licensing has its place guaranteed as an instrument of climate policy," playing an important complementary role to market and financial mechanisms. Environmental licensing, continues Borges, "is, therefore, a necessary and adequate means for the government to assess, in a legally disciplined process, the consequences of new sources of greenhouse gas emissions on the country's ability to honor its climate commitments." BORGES, Caio de Souza. Preface, e-book, at 26.

The analytical framework presented here seeks to offer litigants – such as the Public Ministry⁴, the Public Defender's Office, and civil society organizations – theoretical and empirical arguments for demanding the effective consideration of GHG emissions of potentially polluting activities in environmental licensing procedures. Whether through administrative, judicial, or alternative methods of conflict resolution, the ultimate goal is that all stakeholders, including those indirectly impacted by licensing procedures, e.g., the financial and insurance sectors, take the climate variable into account at the early planning stages of their activities. As a result, this work seeks to improve climate governance by (i) increasing demands on government for the insertion of the climate variable in decision-making processes with significant environmental and climatic impacts and (ii) increasing pressure on the private sector to avoid, mitigate, and compensate its GHG emissions. Additionally, as a result of growing research and understanding of the topic under consideration, the judicial branch will become increasingly familiar with the topic, its intricacies, specificities, opportunities, and urgency.

Fundamental principles of Brazilian environmental law underpin this research and inform the categorization of its findings. Moreover, the study is also premised on the assumption that the climate change is already part of Brazilian environmental law – the right to a stable climate is contained in the constitutional right to an ecologically balanced environment, expressly established in article 225 of the Federal Constitution (CF 88). Thus,

the general Brazilian environmental regulatory regime encompasses the regulation of climate change emissions, as seen in the National Environmental Policy Act (PNMA, Federal Law 6.938/1981). Additionally, the regime also contains norms specifically regulating climate, such as the National Climate Change Policy Act (PNMC, Federal Law 12.187/2009). In this normative context, legal instruments for environmental protection, e.g., environmental licensing, rise as demonstrably viable tools capable of addressing matters related to the pursuit of a stable climate.

In light of the above objectives, the e-book consists of four parts: (1) the discussion of the doctrinal premises embedded in the Brazilian environmental legal system which inform the legislative and case law research and define key terminology;⁵ (2) the survey and analysis of Brazilian legislation (federal, Federal District, and state) related to the inclusion of the climate variable in environmental licensing (Category A); (3) the survey and analysis of Brazilian case law in the Superior Court of Justice (STJ), the Federal Supreme Court (STF)⁶, and other selected leading cases relevant to the inclusion of the climate variable in environmental licensing (Category B); and (4) the survey and critical analysis of foreign cases of climate litigation associated with environmental licensing (Category C).⁷ Finally, the work also includes three annexes with the specific studies, templates, and diagnostic tools used for the development of categories A, B and C.⁸

4. The Public Ministry in Brazil combines jurisdictional powers of the attorney general and prosecutor's offices. It is an independent agency which has standing to investigate and prosecute various activities. The office has been particularly active in the field of environmental law.

5. The key concepts highlighted take into account the Brazilian context and are relevant to understanding climate matters as inserted in the broader legal framework of environmental protection. These concepts are the following: environment; climate changes; environmental degradation; environmental impact; environmental damage; pollution; environmental study; environmental licensing; climate litigation; climate justice; and ecosystem services.

6. The *Supremo Tribunal Federal* (STF) is the supreme constitutional court in Brazil. The *Superior Tribunal de Justiça* (STJ) is the country's higher court with jurisdiction over non constitutional matters.

7. The research enabled the creation of a database from the main results (quantitative and qualitative) obtained in Categories A and C, with interactive images and graphics at the JUMA/NIMA/PUC website. Available at <https://www.juma.nima.puc-rio.br/base-dados-clima-licenciamento-ambiental>. Last visited on 17 Jan. 2022.

8. Available at <http://www.editora.puc-rio.br/cgi/cgilua.exe/sys/start.htm?inford=956&sid=3>. Last visited on 17 Jan. 2022.

RESEARCH CATEGORIES

2.1. Survey and analysis of Brazilian legislation (federal, state, and Federal District) for a evaluation of the legislative framework relevant to the inclusion of the climate variable in environmental licensing (Category A)

Category A of the research surveyed and analyzed Brazilian legislation (federal, state and the Federal District) structured around two main concepts: “environmental licensing” and/or “climate”. The research’s overarching goal is to contribute to judicial and extrajudicial legal action to demand that the climate variable be considered in environmental licensing procedures in Brazil.

For the legislative survey, selected keywords¹ were filtered in three phases: (i) Phase 1: legislative quantitative survey based on keywords in the *LegisAmbiental*

Database, of the *Norma Ambiental*² platform (7,553 hits – 2,011 federal and 5,542 state); (ii) Phase 2: application of a qualitative-quantitative filter, with the suppression of overlaps and initial assessment of the legislation’s relevance for the research (1,406 results); and (iii) Phase 3: application of a qualitative filter to select potentially relevant norms for the research purposes (671 hits), followed by the analysis of the entire content of each selected text; the selection of relevant excerpts; and the classification of the results obtained in an independent file (Annex A).

The 671 norms obtained in Phase 3 were analyzed according to the following classifications: (i) type of norm: “Constitution,” “Law,” “Decree,” “Ordinance/Resolution,” or “others”; (ii) regulatory subject:³ “environmental licensing,” “climate,” “both” or “neither”; and (iii) how the climate variable was inserted in the environmental licensing norms:⁴ “explicit,” “implicit,” “contextual arguments,” or “non-existent.”

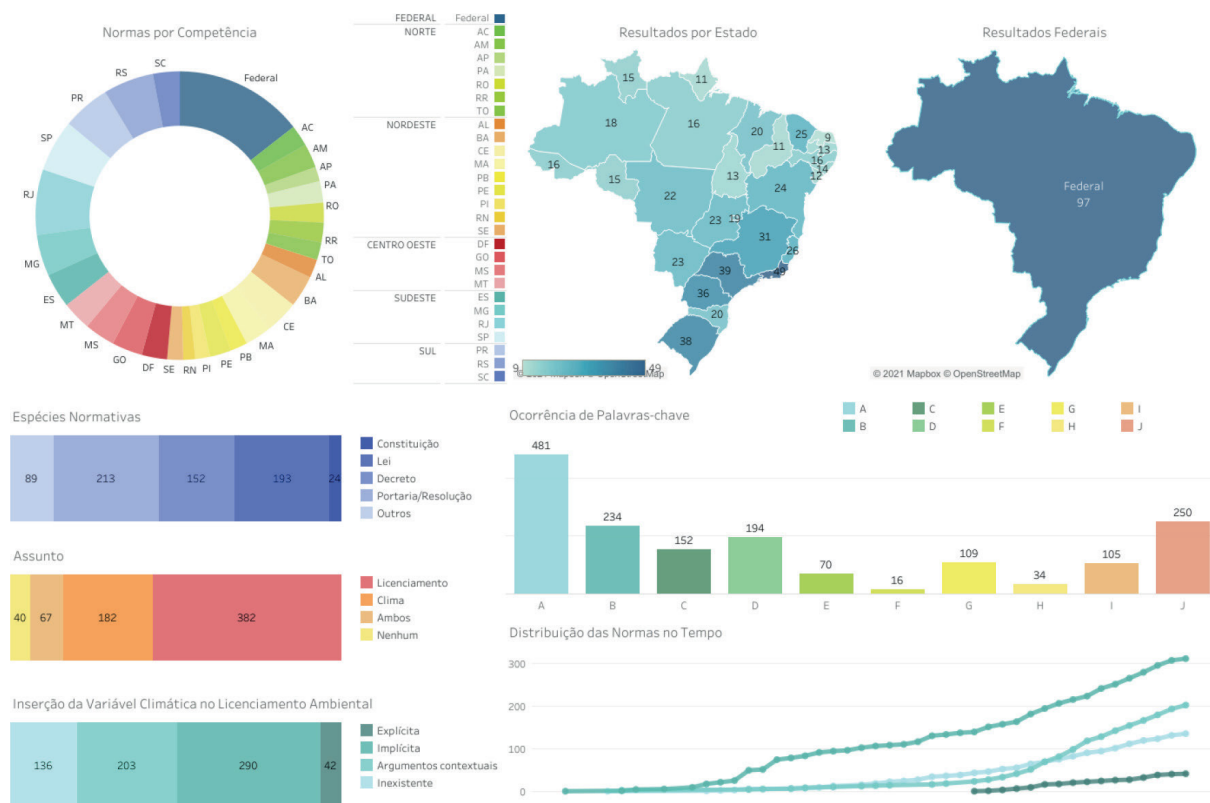
1. The selected keywords are the following: (i) “A” (impact AND environment* AND licen* OR authorization); (ii) “B” (“environmental impact study” OR “environmental impact assessment”); (iii) “C” (inventory AND clim* OR gas OR gases); (iv) “D” (“greenhouse effect” AND gas OR gases); (v) “E” (Global AND warming OR climate*); (vi) “F” (“Paris agreement”); (vii) “G” (mitigation AND climate* AND gas OR gases); (viii) “H” (“reduction targets” AND clim* OR gas OR gases); (ix) “I” (adaptation AND clim* AND gas OR gases) and (x) “J” (change* AND clim*). The occurrence of keywords in phases 1 (quantitative) and 3 (qualitative) can be seen in the graphs produced for the study, present both in the e-book itself and in Tableau. In both phases, the keywords that generated more occurrences were those in codes “A” and “J”.

2. The *LegisAmbiental* Database, from the *Norma Ambiental* platform (<https://www.normaambiental.com.br/>) is the most comprehensive database of environmental law in Brazil. The Platform allows the regulatory keyword survey of federal, state, and over 380 municipalities.

3. “Environmental licensing” refers to norms containing, wholly or partially, references to environmental licensing procedures or its respective environmental studies (e.g., Environmental impact statements, environmental impact assessments). “Climate” refers to norms focusing on climate issues or wholly or partially referencing climate matters.

4. The study classified the inclusion of the climate variable in the environmental licensing as (i) in “explicit,” (ii) “implicit,” (iii) “contextual arguments,” or (iv) “non-existent.” The “explicit” insertion occurs when the norm expressly includes provisions that provide for the analysis of the climate variable in the licensing. The insertion is considered to be “implicit” when the norm does not expressly provide for the consideration of the climate variable in the environmental licensing, but it is possible to identify “implicit” references in this sense. These norms (i) expressly present broad definitions of the environment, environmental degradation, environmental impact or pollution for the understanding and/or preparation of the environmental licensing procedure and environmental studies, allowing a comprehensive interpretation of the concepts, in that climate is included, or (ii) expressly address the climate issue and relate it to relevant institutes for the environmental licensing procedure – presenting, for example, the concept of climate impact, the need for a strategic environmental assessment or the imposition of GHG

RESULTS OF QUALITATIVE ANALYSIS. ALL FEDERATED ENTITIES (CATEGORY A – PHASE 3)⁵



Source: JUMA

Category A results revealed a significant number of norms that explicitly or implicitly include the climate variable in environmental licensing. It also revealed a significant number that presented only contextual arguments.

Of the 671 norms analyzed in their entirety, forty-two were classified as containing an “explicit” insertion of the climate variable in the environmental licensing in eighteen federated entities,⁶ e.g., resolutions from the National Council on the Environment (CONAMA

emission inventories – although they do not deal with licensing. There were also rules that deal with “climate” and “licensing”, but do not expressly provide for the inclusion of the climate variable in the environmental licensing. These norms, in the way they were written, lead to an interpretation that considers the climatic dimension of environmental impacts. The norms identified as offering “contextual arguments” have excerpts that only help in the construction of legal arguments to support the thesis that the climate impact must be considered in the environmental licensing. Among them, there are norms that contain elements that demonstrate the commitment of the federated entity to face the climate crisis in a connected and inseparable way from the environmental issue. In general, these norms do not establish rules regarding the environmental licensing procedure and the assessment of environmental impacts, but they can help in the interpretation regarding their scope as including the climate issue. From the interpretation of these norms, it is not possible to infer, implicitly or explicitly, the requirement that the climate variable be considered in the environmental licensing, but it is possible to identify contextual arguments that can be mobilized as a basis for recognizing the importance of the climate issue, as a topic covered by environmental norms. The classification “non-existent” and, therefore, irrelevant to the research, refers to cases in which the norm does not provide any reference that can be utilized for the analysis of the need to include the climate variable in the environmental licensing, whether “explicit”, “implicit” or as “contextual arguments”.

5. Visual representation of Category A, phase 3 findings. Graphical representations of this phase’s findings are also available (only in Portuguese) in interactive form at the JUMA website: <https://www.juma.nima.puc-rio.br/base-dados-clima-licenciamento-ambiental>. Translation of graph captions and legends: Results by jurisdiction (Federal, North, Northeast, Center West, Southeast, South). Results by state. Federal results. Keyword results. Chronological distribution. Type of norm (Constitution, Public law, decree, Resolution, other). Regulatory subject (environmental licensing, climate, both, neither). Insertion of the climate variable in the environmental licensing statutory text (explicit, implicit, contextual arguments, non-existent).

6. Rules explicitly including the climate variable in environmental licensing: (i) Federal Union: CONAMA Resolution 462/2014; IBAMA Normative Instruction 12/2010; (ii) Amazonas: Law 3.135/2007; (iii) Bahia: CEPAM Resolution 3.663/2006; CEPAM Resolution 4.636/2018; (iv) Ceará: COEMA Resolution 6/2018; (v) Espírito Santo: Law 9.531/2010; (vi) Goiás: Law 16.497/2009; Decree 8.892/2017; Ordinance SECIMA 36/2017; (vii) Maranhão: Law 10.382/2015; SEMA Ordinance 74/2013; (viii) Mato Grosso: Complementary Law 233/2005; Complementary Law 582/2017; (ix) Mato Grosso do Sul: Law 4.555/2014; (x) Pará: Law 9048/2020; (xi) Paraná: Law 17.133/2012; Decree 9.085/2013; SEDEST Resolution 47/2019; (xii) Pernambuco: Law 14.090/2010; CONSEMA Resolution 04/2010; (xiii) Rio de Janeiro: Law 5.690/2010; Law 7.122/2015; Decree 41.318/2008; Decree 43.216/2011; Decree 46.890/2019; Joint Resolution SEA/FEEMA 22/2007; INEA Resolution 64/2012; INEA Resolution 65/2012; (xiv) Rio Grande do Sul: Law 13.594/2010; Law 14.864/2016; (xv) Rondônia: Law 4.358/2018; Law 4.437/2018; (xvi) Santa Catarina: Law 14.829/2009; Law 17.542/2018; (xvii) São Paulo Law 13.798/2009; Decree 55.947/2010; Resolution SMA 88/2008; SMA Resolution 74/2017; (xviii) Tocantins: Law 1.917/2008; Law 3.179/2017; Normative Instruction NATURATINS 9/2018. The following entities do not have any “explicit” insertion of the climate variable in environmental licensing: Federal District, Acre, Alagoas, Amapá, Minas Gerais, Paraíba, Piauí, Rio Grande do Norte, Roraima, and Sergipe.

Resolution 462/2014),⁷ and the Institute on the Environment (IBAMA Normative Instruction 12/2010).⁸ Among the total number of “explicit” insertion norms, seventeen are in state climate change policies, nineteen refer to positive climate impact, thirteen relate to renewable energy licensing (wind, solar, biogas, etc.). The existence of forty-two rules with “explicit” insertion of the climate variable in environmental licensing reinforces the argument that Brazil is fertile ground for climate litigation by demonstrating that there is a vast regulatory universe of current norms that litigants can utilize for judicially and extrajudicially if governmental agencies fail to act.

Another important result is the identification of norms that provide for the simplification or prioritization for licensing activities that, although potentially polluting, have the purpose of – or that end up – sequestering GHGs from the atmosphere. These were classified as positive climate impact norms,⁹ of which nineteen are of “explicit” insertion and one of “implicit” insertion of

the climate variable in the environmental licensing, distributed in fourteen federated entities.¹⁰ An example of a rule that provides for a positive climate impact is Law 7.122/2015 of the State of Rio de Janeiro, instituting the State’s policy for solar energy incentives.¹¹

The twenty-four constitutions analyzed (federal, state, and the Organic Law of the Federal District)¹² were classified as “environmental licensing” and “implicitly” inserting the climate variable in environmental licensing because, in general, they require an environmental impact statement for activities potentially causing significant environmental degradation, along with the government duties of licensing potentially polluting activities and controlling environmental pollution.¹³

In addition to the findings *supra* indicated, the following themes recurrently appeared in the statutory frameworks: (i) norms on climate change policies (twenty federal entities / twenty four norms);¹⁴ (ii) establishment of climate change forums (twenty federated entities / twenty norms);¹⁵ (iii) norms on low carbon

7. CONAMA Resolution 462/2014 establishing procedures for the environmental licensing of wind energy generating projects on land. The regulation mentions the climate issue explicitly in its considerations and establishes simpler and/or specific rules for projects with a positive climate impact.

8. Normative Instruction IBAMA 12/2010 requiring IBAMA’s Licensing Board to evaluate, in the process of licensing activities capable of emitting GHG, the mitigating measures described by the proponent, in compliance with the Brazilian commitments within the United Nations Framework Convention on Climate Change. Additionally, the regulation determines that the Terms of Reference prepared by IBAMA to guide the Environmental Impact Studies must include mitigating and compensatory measures for environmental impacts in line with the National Plan on Climate Change. This is, therefore, a rule that explicitly provides for the consideration of the climate variable in environmental licensing.

9. Norms of favorable impact include, for example, those simplifying or facilitating the licensing of projects related the Clean Development Mechanism (CDM), carbon capture, solar, and wind energy generating projects.

10. The Following rules provide for the simplification or prioritization of the licensing of activities classified as having a positive climate impact: GHGs capture: (i) Federal Union: CONAMA Resolution 462/2014; (ii) Amazonas: Law 3.135/2007; (iii) Bahia: CEPAM Resolution 4.636/2018; (iv) Ceará: Resolution COEMA 6/2018; (v) Goiás: Law 16.497/2009; Decree 8.892/2017; Ordinance SECIMA 36/2017; (vi) Maranhão: Law 10.382/2015; SEMA Ordinance 74/2013; (vii) Pernambuco: Law 14.090/2010; (viii) Piauí: Decree 17.557/2017 (“implicit” reference); (ix) Rio de Janeiro: Law 7.122/2015; (x) Rondônia: Law 4.358/2018; (xi) Rio Grande do Sul: Law 14.864/2016; (xii) Santa Catarina: Law 14.829/2009; Law 17.542/2018; (xiii) São Paulo: Resolution SMA 74/2017; (xiv) Tocantins: Law 1917/2008; Law 3.179/2017; Normative Instruction NATURATINS 9/2018.

11. The law considers the positive climate impact and explicitly provides the climate variable’s inclusion in environmental licensing. It establishes the State Policy for Incentives to the Use of Solar Energy and expressly mentions the use of the “environmental licensing instrument for the promotion of photovoltaic solar energy, simplifying the issuance of licenses for solar energy projects and inserting photovoltaic solar generation facilities as part of the environmental conditions of projects within the feasibility instruments of the National, State and Municipal Plans for the Mitigation of Climate Change.” It is a rule that regulates, therefore, the environmental licensing procedure, establishing simpler and/or specific rules for projects with a positive climate impact.

12. Constitutions within the research’s scope: (i) Federal Union: Federal Constitution/1988; (ii) Alagoas: State Constitution/1989; (iii) Amazonas: State Constitution/1989; (iv) Amapá: State Constitution/1991; (v) Bahia: State Constitution/1989; (vi) Ceará: State Constitution/1989; (vii) Federal District: Organic Law/1993 (viii) Espírito Santo: State Constitution/1989; (ix) Goiás: State Constitution/1989; (x) Maranhão: State Constitution/1989; (xi) Mato Grosso: State Constitution/1989; (xii) Mato Grosso do Sul: State Constitution/1989; (xiii) Minas Gerais: State Constitution/1989; (xiv) Pará: State Constitution/1989; (xv) Paraíba: State Constitution/1989; (xvi) Paraná: State Constitution/1989; (xvii) Piauí: State Constitution/1989; (xviii) Rio de Janeiro: State Constitution/1989; (xix) Rio Grande do Norte: State Constitution/1989; (xx) Rio Grande do Sul: State Constitution/1989; (xxi) Rondônia: State Constitution/1989; (xxii) Santa Catarina: State Constitution/1989; (xxiii) Sergipe: State Constitution/1989; (xxiv) São Paulo: State Constitution/1989.

13. By understanding climate change as a phenomenon resulting from GHG emissions, which fall within the scope of what is understood as “pollution” responsible for various environmental impacts, the Constitutions can be interpreted as implicitly providing for the inclusion of the climate variable in environmental licensing. They include implicit references to the breadth of the concepts of “environmental degradation,” “environmental impact,” or “pollution” as comprising climate impact analysis, if any, in environmental licensing.

14. Norms on climate change policies: (i) Federal Union: Law 12.187/2009; Decree 9.578/2018; (ii) Amazonas: Law 3.135/2007; (iii) Bahia: Law 12.050/2011; (iv) Ceará: Law 16.146/2016; (v) Federal District: Law 4.797/2012; (vi) Espírito Santo: Law 9.531/2010; (vii) Goiás: Law 16.497/2009; (viii) Mato Grosso: Complementary Law 582/2017; (ix) Mato Grosso do Sul: Law 4.555/2014 (x) Pará: Law 9.048/2020; (xi) Paraíba: Law 9.336/2011; (xii) Paraná: Law 17.133/2012; Decree 9.085/2013; (xiii) Pernambuco: Law 14.090/2010; (xiv) Piauí: Law 6.140/2011; (xv) Rio de Janeiro: Law 5.690/2010; Decree 43.216/2011; (xvi) Rio Grande do Sul: Law 13.594/2010; (xvii) Rondônia: Law 4.437/2018; (xviii) Santa Catarina: Law 14.829/2009; Decree 55.947/2010; (xix) São Paulo: Law 13.798/2009; (xx) Tocantins: Law 1.917/2008.

15. Norms on climate change forums: (i) Federal Union: Decree 9.082/2017; (ii) Amazonas: Decree 42.368/2020; (iii) Amapá: Decree 5.096/2013; (iv) Bahia: Decree 9.519/2005; (v) Ceará: Decree 29.272/2008; (vi) Espírito Santo: Decree 4.503-R/2019; (vii) Goiás: Decree 8.652/2016; (viii) Maranhão: Law 10.161/2014; (ix) Mato Grosso: Law 9.111/2009; (x) Minas Gerais: Decree 44.042/2005 (xi) Pará: Decree 254/2019; (xii) Pernambuco: Decree 33.015/2009; (xiii) Piauí: Decree 12.613/2007; (xiv) Paraná: Law 16.019/2008; (xv) Rio de Janeiro: Decree 46.912/2020; (xvi) Rondônia: Decree 16.232/2011; (xvii) Rio Grande do Sul: Decree 45.098/2007; (xviii) Santa Catarina: Decree 3.273/2010; (xix) São Paulo: Decree 49.369/2005; (xx) Tocantins: Decree 4.550/2012.

agriculture (*agricultura de baixo carbono*, ABC) (twenty federated entities / twenty five norms);¹⁶ (iv) norms on desertification (five federated entities / eight norms);¹⁷ (v) vehicular pollution control plans (eleven federated entities / twelve norms);¹⁸ (vi) rules on payment for ecosystems services (nine federated entities / nine norms);¹⁹ (vii) environmental compensation (seventeen federated entities / twenty eight norms);²⁰ and (viii) norms on solid waste management (twenty federated entities / thirty four norms).²¹

The main findings of the survey and analysis of the Brazilian legislation carried out in Category A of the research confirm the hypothesis initially raised that Brazil is a fertile ground for climate litigation when it comes to the requirement that climate impacts be considered in environmental licensing procedures. Category A's findings are the following: (i) environmental licensing and prior assessment of environmental impacts are legal instruments capable of facing the multifaceted aspects of the climate crisis; and (ii) the existing regulatory framework, strategically utilized, can and should be applied specifically to climate change and used in climate litigation, in or outside of court, through alternative dispute resolution mechanisms.

In fact, although there are still relatively few judicial cases with predominantly climate change arguments, the Brazilian legal system has a vast set of principles and

norms that allow – and, arguably, encourage – legal action, which the present research findings ultimately seek to encourage.

2.2. Survey and analysis of Brazilian court cases (STJ, STF and other leading cases) that illustrate the need to include the climate variable in environmental licensing (Category B)

Category B of the research surveyed and analyzed Brazilian case law contributing to the thesis that the climate variable should be considered in environmental licensing. Here, the study focused on the evaluations of judgments from the STJ and STF interpreting the pertinent legislation and relevant to the research thesis.

Unlike in Category A, the Brazilian case law analysis in Category B did not necessarily aim to identify judgments that applied norms considering the climate variable in environmental licensing. There was also no attempt to carry out an exhaustive survey of climate litigation judgments in Brazil. Rather, the relevance of the selected case law came from, for example, a decision's consideration of environmental impacts, environmental degradation, and pollution (actual or potential). Many of these decisions evaluated these concepts

16. Norms on Low Carbon Agriculture (ABC): (i) Federal Union: Decree 10.431/2020; BACEN Resolution 3.896/2010; Interministerial Ordinance MAPA/MDA 984/2013; MAPA Ordinance 230/2015; (ii) Acre: Decree 5.675/2016; (iii) Alagoas: Decree 47.825/2016; (iv) Amazonas: SEPROR Ordinance 69/2013; (v) Bahia: SEAGRI Resolution 1/2013; (vi) Federal District: Decree 35.807/2014; (vii) Goiás: Decree 7.690/2012; (viii) Maranhão: SAGRIMA Resolution 1/2012; (ix) Mato Grosso: Decree 430/2016; (x) Mato Grosso do Sul: Decree 14.159/2015; (xi) Minas Gerais: SEAPA Resolution 1.233/2013; (xii) Paraíba: Decree 36.407/2015; SEDAP Ordinance 85/2013; (xiii) Paraná: Law 17.441/2012; (xiv) Pernambuco: Decree 45.165/2017; (xv) Piauí: Decree 15.518/2014; (xvi) Rio de Janeiro: SEAPPA Resolution 14/2018; (xvii) Rio Grande do Sul: Decree 49.484/2012; Decree 50.590/2013; (xviii) Rondônia: SEAGRI Ordinance 45/2015; (xix) São Paulo: SAA Resolution 57/2016; (xx) Tocantins: Decree 5.000/2014.

17. Rules on desertification: (i) Alagoas: Law 7.441/2012; (ii) Ceará: Law 14.198/2008; Decree 29.272/2008; (iii) Paraíba: Law 7.414/2003; Law 9.950/2013; (iv) Pernambuco: Law 14.091/2010; Decree 35.386/2010; (v) Rio Grande do Norte: Law 10.154/2017.

18. Norms on Vehicle Pollution Control Plans (PCPV): (i) Bahia: INEMA Ordinance 488/2011; (ii) Ceará: Resolution COEMA 14/2011; (iii) Federal District: Decree 33.853/2012; (iv) Goiás: Decree 8.389/2015; (v) Paraná: SEMA Resolution 66/2010; SEMA Resolution 02/2012; (vi) Rio de Janeiro: CONEMA Resolution 70/2016; (vii) Rio Grande do Sul: Joint Ordinance SEMA/SARH/FEPAM/DETRAN 57/2010; (viii) Santa Catarina: Decree 3.532/2010; (ix) São Paulo: CONSEMA Resolution 05/2012; (x) Sergipe: CEMA Resolution 21/2011; (xi) Tocantins: Decree 5.376/2016.

19. Rules on Payment for Ecosystem Services (PSA): (i) Amazonas: Law 4.266/2015; (ii) Bahia: Law 13.223/2015; (iii) Goiás: Decree 9.130/2017; (iv) Mato Grosso do Sul: Law 5.235/2018; (v) Paraná: Law 17.134/2012; (vi) Pernambuco: Law 15.809/2016; (vii) Rondônia: Law 4.437/2018; (viii) Santa Catarina: FATMA Ordinance 124/2016; (ix) São Paulo: Decree 55.947/2010.

20. Norms on environmental compensation: (i) Federal Government: Law 9.985/2000; Decree 4.340/2002; CONAMA Resolution 371/2006; IBAMA Normative Instruction 08/2011; (ii) Alagoas: Law 7.776/2016; (iii) Amazonas: Complementary Law 53/2007; Law 4.266/2015; (iv) Bahia: Decree 16.988/2016; (v) Ceará: COEMA Resolution 09/2003; COEMA Resolution 4/2018; (vi) Espírito Santo: Law 9462/2010; (vii) Goiás: Law 14.247/2002; Law 20.694/2019; (viii) Maranhão: Law 9.412/2011; (ix) Mato Grosso: Law 9.502/2011; Decree 2.594/2014; (x) Mato Grosso do Sul: Law 3.709/2009; Decree 12.909/2009; (xi) Minas Gerais: Decree 45.175/2009; (xii) Pará: Decree 2.033/2009; Normative Instruction SEMA 05/2014; (xiii) Pernambuco: Law 13.787/2009; CONSEMA Resolution 04/2010; (xiv) Piauí: Law 7.044/2017; CONSEMA Resolution 07/2005; (xv) Rio Grande do Norte: Complementary Law 272/2004; (xvi) São Paulo: Decree 60.070/2014; (xvii) Sergipe: CEMA Resolution 08/2013.

21. Rules on solid waste: (i) Federal Government: Law 12.305/2010; Decree 7.404/2010; MMA Ordinance 307/2019; (ii) Alagoas: Law 7.749/2015; (iii) Amazonas: Law 4.457/2017; Decree 41.863/2020; (iv) Bahia: Law 12.932/2014; Decree 14.024/2012; (v) Ceará: Law 16.032/2016; Decree 26.604/2002; (vi) Federal District: Law 5.418/2014; (vii) Espírito Santo: Law 9.264/2009; (viii) Goiás: Law 14.248/2002; Normative Instruction SEMARH 07/2011; (ix) Mato Grosso: Law 7.862/2002; (x) Mato Grosso do Sul: IMAP Ordinance 01/2002; (xi) Minas Gerais: Law 18.031/2009; Decree 45.181/2009; (xii) Paraná: Law 12.493/1999; Law 19.261/2017; (xiii) Pernambuco: Law 14.236/2010; (xiv) Rio de Janeiro: Law 4.191/2003; (xv) Rio Grande do Sul: Law 9.921/1993; Decree 38.356/1998; FEPAM Ordinance 18/2018; Technical Directive DIRTEC 1/2015; DIRTEC Technical Guideline 4/2017; DIRTEC Technical Guideline 3/2018; FEPAM Technical Guideline 2/2019; (xvi) Rondônia: Law 1.145/2002; (xvii) Roraima: Law 416/2004; (xviii) São Paulo: Law 12.300/2006; (xix) Sergipe: Law 5.857/2006; (xx) Tocantins: Law 3.614/2019.

broadly and in their completeness, including their direct and indirect repercussions, as well as their cumulative and synergistic effects, so that it is possible to identify the ways in which the inclusion of the climate variable in environmental licensing could be justified.

Category B utilized the same ten keywords gathered in the legislative research (Category A), adapted for compatibility with each the court system research platforms.²² As a result, quantitatively, 597 judgments were identified: 191 from the STJ and 406 from the STF. After applying a qualitative-quantitative filter, twenty-five judgments were selected for content evaluation: thirteen from the STJ and twelve from the STF. The analysis was based on the judgment's summary, and, if needed for clarity, a preliminary evaluation of the full decision. Additionally, if the lack of clarity persisted, the third phase of Category B's research undertook a detailed analysis of the entire content of each decision (qualitative analysis).

Of this universe of twenty-five judgments, eight STJ and six STF cases had excerpts from decisions and/or pleadings selected to contribute to the construction or consolidation of the thesis that the climate variable should be considered in environmental licensing. The selected excerpts of these fourteen cases (eight from the STJ and six from the STF) deal with various topics. The eight STJ cases deal with the following: (i) the use of fire in sugar cane production;²³ (ii) the use of fire in cattle ranching;²⁴ (iii) environmental compensation

related to conservation units;²⁵ (iv) environmental licensing of a hydroelectric project;²⁶ (v) land use permitting for the construction of a beach tent;²⁷ (vi) illegal construction adjacent to protected river areas;²⁸ (vii) Environmental Impact Statement omissions;²⁹ and (viii) Environmental Impact Study for constructing and installing a hydroelectric plant.³⁰ The six STF cases discuss the following topics: (i) the importation of used tires;³¹ (ii) the use of fire associated with sugar cane and agricultural activities;³² (iii) the electromagnetic field of electric power transmission lines;³³ (iv) the extraction and commercialization of asbestos;³⁴ (v) the constitutional validity of the Forest Code;³⁵ and (vi) the requirement of a Neighborhood Impact Study.³⁶

In addition to these cases, fifteen other leading cases were evaluated. These additional cases, filed in various tribunals (some still pending), were included because of their relevance to the research's overarching goal. Of the universe of fifteen cases, ten were selected for their research relevance. These cases address the following matters: (i) atmospheric pollution due to industrial activity (*Cerâmica Formigres*);³⁷ (ii) environmental damage caused by an airline (*KLM Cia Real Holandesa de Aviação*);³⁸ (iii) livestock activity on properties where illegal deforestation has occurred (BOVINORTE);³⁹ (iv) climate damage resulting from the use of charcoal from illegal deforestation (*Siderúrgica São Luiz*);⁴⁰ (v) use of fire in sugarcane production;⁴¹ (vi) environmental licensing of mining activity (*Mina Guaíba Project*);⁴²

22. The adaptations of Category A can be consulted in the Category B methodology, in the e-book.

23. STJ. Segunda Turma. AgRg nos EDcl no REsp 1.094.873/SP. Rel. Min. Humberto Martins. Brasília, DJe 04/08/2009.

24. STJ. Segunda Turma. REsp 1.000.731/RO. Rel. Min. Herman Benjamin. Brasília, DJe 25/08/2009.

25. STJ. Segunda Turma. REsp 896.863/DF. Rel. Min. Castro Meira. Brasília, DJe 19/05/2011.

26. STJ. Segunda Turma. AgInt no AREsp 915.965/MS. Rel. Min. Mauro Campbell Marques. Brasília, DJe 04/10/2016.

27. STJ. Segunda Turma. REsp 1.410.732/RN. Rel. Min. Herman Benjamin. Brasília, DJe 17/10/2013. STJ.

28. STJ. Segunda Turma, REsp 1.782.692/PB. Rel. Min. Herman Benjamin. Brasília, DJe 13/08/2019.

29. STJ. Primeira Turma. REsp 1.468.152/PR. Rel. Min. Sérgio Kukina. Brasília, DJe 03/09/2019.

30. STJ. Primeira Turma, REsp 1.216.188/PR. Rel. Min. Regina Helena Costa. Brasília, DJe 17/10/2019.

31. STF. Tribunal Pleno. ADPF 101/DF. Rel. Min. Cármen Lúcia. Brasília, DJe 24/06/2009.

32. STF. Tribunal Pleno. RE 586.224/SP. Rel. Min. Luiz Fux. Brasília, DJe 05/03/2015.

33. STF. Tribunal Pleno. RE 627.189/SP. Rel. Min. Dias Toffoli. Brasília, DJe 03/04/2017.

34. STF. Tribunal Pleno. ADI 4.066/DF. Rel. Min. Rosa Weber. Brasília, DJe 24/08/2017.

35. STF. Tribunal Pleno. ADC 42/DF. Rel. Min. Luiz Fux. Brasília, DJe 28/02/2018.

36. STF. Primeira Turma, Rcl 35.699 AgR/RJ. Rel. Min. Rosa Weber. Brasília, DJe 27/04/2020.

37. STJ. Segunda Turma. REsp 1.635.468/SP. Rel. Min. Herman Benjamin. Brasília, DJe 06/12/2016.

38. The case is pending in two circuits: TRF-3. Terceira Turma. Apelação Cível 0046991-68.2012.4.03.9999. Rel. Des. Fed. Antonio Cedenho. São Paulo, DJe 24/05/2017; STJ. Primeira Turma. REsp 1.856.031/SP. Rel. Min. Benedito Gonçalves. Brasília, DJe 14/12/2020.

39. TRF-1. 7ª Vara Federal Ambiental e Agrária. ACP 1016503-53.2019.4.01.3200. Juíza Federal Jaiza Maria Pinto Fraxe. Brasília, DJe 05/03/2020.

40. TRF-1. 15ª Vara Federal Cível. ACP 1010603-35.2019.4.01.3800. Juiz Federal Substituto Felipe Eugênio de Almeida Aguiar. Pending decision on the merits.

41. TRF-3. 2ª Vara Federal de Campinas. Ação Civil Pública 5008327-46.2017.4.03.6105. Juiz Federal José Luiz Paludetto. São Paulo, DJe 13/12/2020.

42. TRF-4. 9ª Vara Federal de Porto Alegre. ACP 5049921-30.2020.4.04.7100. Juíza Federal Substituta Clarides Rahmeier. Pending decision on the merits.

(vii) compliance, by the federal government, with the Action Plan for the Prevention and Control of Deforestation in the Legal Amazon (PPCDAM);⁴³ (viii) requirement of Neighborhood Impact Study (Municipality of Niterói);⁴⁴ (ix) Energy compensation of Fossil Fuel Thermal Power Plants (Brazilian Association of Thermoelectric Generators – ABRAGET);⁴⁵ and (x) implementation of the carbochemical Complex in Rio Grande do Sul.⁴⁶

The case law findings showed that actions specifically based on the climate issue were still relatively scarce at the time of the research in the period of July to December of 2020, although climate litigation in Brazil has recently been more frequent and robust. All selected decisions were published from 2009 onwards, with a significant increase since 2016. The ten most relevant cases analyzed were filed since 2016, with one exception for a 2012 filing. Therefore, any available decisions are relatively recent.

In sum, from a universe of forty Brazilian judicial cases analyzed in Category B (thirteen from STJ, twelve from STF, and fifteen leading cases), twenty-four (eight from STJ, six from STF, and ten leading cases) had relevant excerpts from decisions and/or pleadings supporting the consideration of the climate variable in environmental licensing.

Based on the research findings, the following recurring themes were identified: (i) the need to carefully consider scientific aspects beyond legal ones, as well as the confirmation of the human responsibility for climate impacts and the importance of respecting the inherent interdisciplinarity of the environmental and climate issue; (ii) the affirmation of the right to an ecologically balanced environment as a fundamental human right, including the right to climate stability; (iii) the recognition of the breadth of the concepts of “environment,” “environmental degradation,” “pollution,” “environmental damage,” and “environmental impact,” as well as the consequent broad scope of the content of environmental studies, in order to include the defense of a stable climate by considering the potential climate impacts of human activity; (iv) the confirmation of the feasibility of limiting the exercise of economic activities in

order to protect the environment, which can be done through the imposition of limits on GHG emissions, as well as the requirement to compensate for climate impacts; (v) the need to comply with fundamental principles of environmental law, in particular the principles of prevention and precaution, preservation of climate integrity and adaptation to climate change, all of which can be applied in environmental licensing procedures, substantiating the requirement for the consideration of the climate risks of a certain activity or enterprise; and (vi) the obligation of the government to actively act in the defense of the environment and, therefore, of a stable climate, both in the environmental licensing and in enforcement procedures based on police powers.

The identification of these recurring themes confirmed the initial hypothesis that there are cases in the Brazil – decided or not – that offer strong arguments that can be utilized to support the inclusion of the climate variable in environmental licensing, so that climate impacts are properly prevented, mitigated and/or compensated.

2.3. Survey and critical analysis of leading foreign cases of climate litigation on environmental licensing (Category C)

Category C of the research analyzed leading cases of climate litigation dealing with environmental licensing and similar procedures in foreign jurisdictions. The existence of a significant number of climate litigation cases predicated on questioning GHG emitting projects in environmental licensing facilitated the analysis and confirmed the centrality of licensing procedures beyond the Brazilian jurisdiction. The study, however, recognizes that states vary in their approach to the authorization and implementation of projects subject to environmental impact assessments. Therefore, this analysis adopted a broader concept of “licensing,” to include not only the authorization procedure itself, but also related environmental studies. Additionally, this category includes cases that, while not directly dealing with licensing procedures or environmental impact assessment, have important repercussions for climate impact evaluation,

43. TRF-4. 11ª Vara Federal de Curitiba. ACP 5048951-39.2020.4.04.7000. Juiz Federal Substituto Flávio Antônio da Cruz. Pending judgment on the merits.

44. TJ/RJ. Décima Sétima Câmara Cível. ACP 0006155-57.2013.8.19.0002. Rel. Des. Elton M. C. Leme. Rio de Janeiro, DJe 28/08/2019.

45. TJ/RJ. Órgão Especial. IAI 0282326-74.2013.8.19.0001. Rel. Des. Heleno Ribeiro Pereira Nunes. Rio de Janeiro, DJe 11/09/2017.

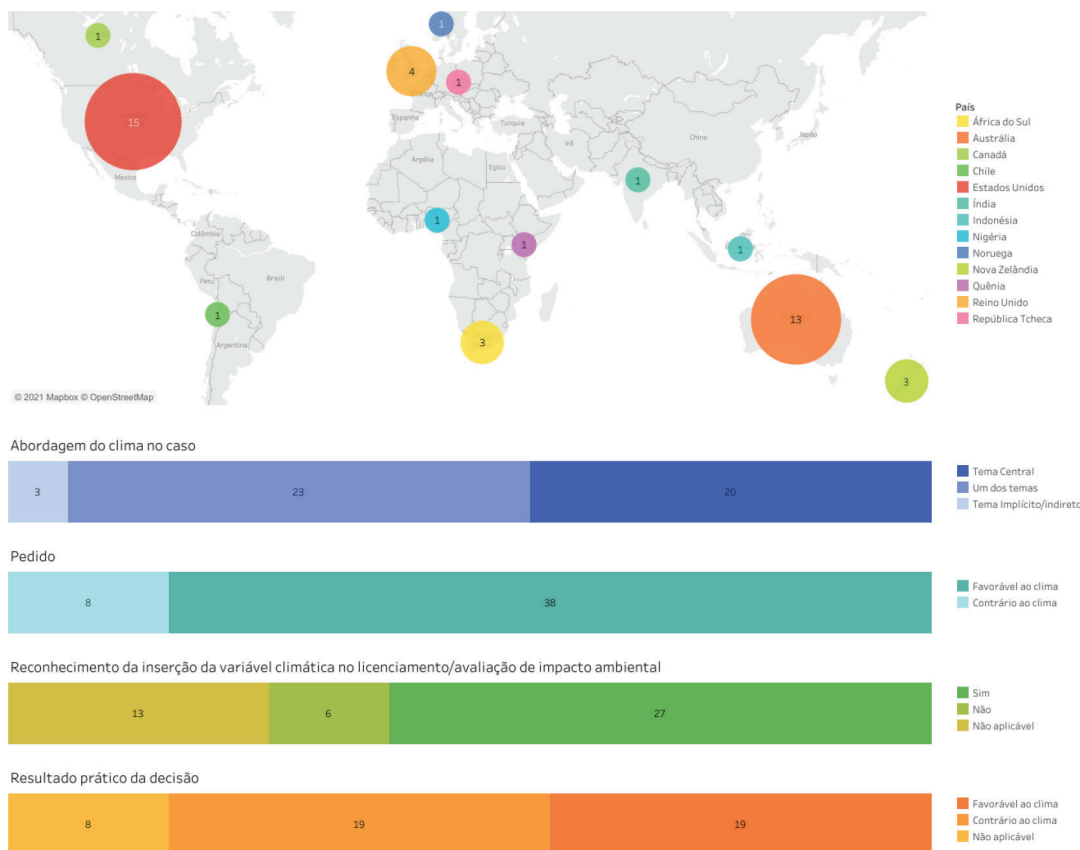
46. TJ/RS. 10ª Vara da Fazenda Pública. ACP 9065931-65.2019.8.21.0001. Juiz de Direito Eugênio Couto Terra. Rio de Janeiro. Pending judgment on the merits.

as they discuss, for example, the regulation of climate change or the scope of relevant concepts, such as pollution and environmental impacts.

The research examined paradigmatic foreign cases dealing with environmental licensing and/or assessment of environmental impacts and climate change, as well as cases discussing GHG emissions. The study selected forty six cases after a non-exhaustive survey based on reports and academic literature on climate

litigation.⁴⁷ These cases are distributed in the following jurisdictions: (i) South Africa (three cases); (ii) Australia (13 cases); (iii) Canada (one case); (iv) Chile (one case); (v) United States of America (15 cases); (vi) India (one case); (vii) Indonesia (one case); (viii) Nigeria (one case); (ix) Norway (one case); (x) New Zealand (three cases); (xi) Kenya (one case); (xii) United Kingdom (four cases); and (xiii) Czech Republic (one case, the request being made by Micronesia).

DISTRIBUTION OF CASES PER COUNTRY (CATEGORY C)⁴⁸



Source: JUMA

47. Consulted texts consisted mostly of academic articles and research reports prepared by authors and research centers specialized in the study of climate litigation. The material was selected for its relevance and potential contribution to intended analysis. Detailed information on the methodology for the selection and analysis of foreign cases can be found in Appendix 1 of the complete work, e-book, at 150 to 154. The texts analyzed were the following: ADLER, Dena P. *U.S. Climate Change Litigation in the Age of Trump: Year One*. Sabin Center for Climate Change Law, Columbia Law School. 2018. Available at: <http://columbiacimatelaw.com/files/2018/02/Adler-2018-02-Executive-Summary-for-Climate-Change-Litigation-in-the-Age-of-Trump-Year-One.pdf>. Accessed on: 8 Jan. 2021; ADLER, Dena P. *U.S. Climate Change Litigation in the Age of Trump: Year Two*. Sabin Center for Climate Change Law, Columbia Law School. 2018. Available at: <http://columbiacimatelaw.com/files/2019/06/Adler-2019-06-US-Climate-Change-Litigation-in-Age-of-Trump-Year-2-Report.pdf>. Accessed on: 8 Jan. 2021; SETZER, Joana; BYRNES, Rebecca. *Global Trends in Climate Litigation: 2019 Snapshot*. London: Grantham Research Institute on Climate Change and the Environment and Center for Climate Change Economics and Policy, London School of Economics and Political Science, 2019. Available at: <https://www.lse.ac.uk/granthaminstitute/publication/global-trends-in-climate-change-litigation-2019-snapshot/>. Accessed on: 7 Jul. 2020; SETZER, Joana; BYRNES, Rebecca. *Global Trends in Climate Litigation: 2020 Snapshot*. London: Grantham Research Institute on Climate Change and the Environment and Center for Climate Change Economics and Policy, London School of Economics and Political Science, 2020. Available at: <https://www.lse.ac.uk/granthaminstitute/publication/global-trends-in-climate-change-litigation-2020-snapshot/>. Accessed on: 7 Jul. 2020. KEELE, Denise M. *Climate Change Litigation and the National Environmental Policy Act*. *Journal of Environmental Law*, vol. 30, no. 2, 2018, p. 285-309. EBB, Romany M. *Climate Change, FERC, and Natural Gas Pipelines: The Legal Basis for Considering Greenhouse Gas Emissions under Section 7 of the Natural Gas Act*. Sabin Center for Climate Change Law, Columbia Law School. 2019. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3402520. Accessed on: 8 Jan. 2021. UNITED NATIONS ENVIRONMENT PROGRAM. *The Status of Climate Change Litigation – a Global Review*. Available at: <https://wedocs.unep.org/bitstream/handle/20.500.11822/20767/climate-change-litigation.pdf?sequence=1&isAllowed=y>. Accessed on: 7 Jan. 2021. PEEL, Jacqueline; LIN, Jolene. *Transnational Climate Litigation: The Contribution of The Global South*. In: *American Journal of International Law*, v. 113, n. 4. 2019, p. 679-726.

48. Cases per country in Category C. Additional visual and interactive representation available at JUMA (only em Portuguese): <https://www.juma.nima.puc-rio.br/base-dados-clima-licenciamento-ambiental>. Translation of graph captions and legends: South Africa, Australia, Canada, Chile, United States of America, India, Indonesia, Nigeria, Norway New Zealand, Kenya, United Kingdom, Czech Republic. Climate Approach in the Case (Main Theme, One of the Themes Discussed, Implicit/indirect Theme). Objectives in Filing the Lawsuit (Favorable to the Insertion of the Climate Variable, Opposed to the Insertion of the Climate Variable). Recognition of the Climate Variable in Licensing/Evaluation of Environmental Impacts (Yes, No, Not Applicable). Case Result (Favorable to the Insertion of the Climate Variable, Opposed to the Insertion of the Climate Variable, Not Applicable).

The intention was not to undergo an exhaustive analysis of all the cases that dealt with the subject, but to select some specific cases that could contribute to arguments supporting the inclusion of the climate variable in licensing procedures, and identify issues that are challenged or resisted in certain jurisdictions. Then, a critical analysis of the selected reference cases was carried out, based on the following texts: (i) the last decision on the merit issued at the time; (ii) the complaint, in cases without a decision on the merits; or (iii) the summaries of pleadings available on the consulted platforms for cases still in progress and with multiple decisions.⁴⁹ Among the forty six cases analyzed, forty one had a decision on the merits, five still did not.

While this study did not categorize the universe of foreign cases, it created classifications applicable to the leading cases examined, identifying the main legal arguments considered relevant to the aims of this research. The classifications related to (i) the approach to climate in the case; (ii) the request; (iii) the recognition of the inclusion of the climate variable in licensing and/or environmental impact assessment; and (iv) the case result for the climate.

The first classification concerns how the climate change and/or GHG emissions were addressed in the analyzed text. This issue may be the case's central theme; one of the themes discussed; or a topic indirectly or implicitly discussed. In twenty cases, the climate was a central theme, directly addressing climate change, and demanding its inclusion in the utilization of existing legal tools. In twenty-three cases, the climate was one of the themes addressed alongside other environmental matters. Strategically, this approach proved advantageous: the association of the climate variable with other environmental issues increased the chances of a positive result for environmental protection. In three cases, while climate

was not explicitly addressed, the discussions generated implications for climate regulation more broadly.⁵⁰

The second classification concerns the plaintiff's objective in filing the lawsuit. The research identified cases in which the plaintiff sought to advance the climate agenda and cases in which they sought to prevent it, supporting of other interests. Thirty-eight cases were classified as "climate-friendly," in which plaintiffs requested the consideration of the climate variable in environmental licensing – seeking the prevention of GHG emissions intensive projects, the approval of projects with a favorable climate impact – or the advancement of climate regulation broadly. On the other hand, eight cases were identified as "against the climate," seeking to disregard the climate variable the environmental licensing – pursuing the approval of projects intensive in GHG emissions or the rejection of projects with a positive climate impact – or climate deregulation more broadly.⁵¹

The third classification deals with recognizing the inclusion of the climate variable in the judicial decisions, referring to the consideration of climate change or GHG emissions in the licensing process or the environmental impact assessment. In twenty-seven cases, courts recognized, even if only to a certain extent, the need to anticipate and evaluate effects on climate change or GHG emissions from the project's implementation or related disputed normative act.⁵² Contrastingly, six cases refuted this obligation, including decisions in which, despite not explicitly denying the need to evaluate climate impacts, courts understood this assessment was not relevant in the project's approval. In thirteen cases the insertion of the climate variable was considered not applicable where (i) there was no decision on the merits; (ii) the decision did not explicitly discuss climate change or GHG emissions in the licensing and/or environmental impact assessment; or (iii) there was no discussion of a

49. The main databases consulted: *Sabin Center for Climate Change Law*, available at : <http://climatecasechart.com/>, last visited on 12 Jan. 2022; *Graham Research Institute on Climate Change and the Environment*, available at <https://climate-laws.org/>. Last visited on 14 Jan. 2022.

50. The low number of cases discussing climate as an implicit or indirect theme arises from the research design itself, whose objective was to identify arguments for the inclusion of the climate variable in environmental licensing. Thus, the analysis prioritized cases that explicitly addressed the climate issue to compare with cases that require climate assessment in environmental licensing in Brazil.

51. Results reflect the research design, see *supra* note 47. The study also included cases seeking measures against climate protection, for a more diverse context highlighting potential arguments that could appear in Brazilian litigation.

52. In the United States, proposed major federal action with the potential to cause significant environmental impacts requires the preparation of environmental impact statement (EIS). The country's National Environmental Policy Act and its regulatory framework have a broad scope, requiring the preparation of an EIS for both proposed legislation and major federal action significantly affecting environmental quality.

specific act/undertaking preceded by a licensing procedure and/or environmental impact assessment.⁵³

Finally, the fourth classification deals with the decision's practical result as "favorable to the climate" or "against the climate." Nineteen cases were favorable to the climate, including decisions that mandated cancellation of a GHG emitting project authorization and that affirmed licenses for projects that would positively impact the climate, as well as decisions that reinforced the need to regulate GHG emissions or climate change. On the other hand, nineteen cases were identified that were considered to have adverse effects on the climate, including decisions paving the way for the authorization of GHG emitting projects and the simplification of the regulatory framework of climate change or GHG emissions, particularly when courts understood that the impacts that must be foreseen in the licensing and/or in the environmental impact assessment are restricted. Eight cases were considered "not applicable," including those without a decision on the merits or whose decision did not present practical results for the climate.

Comparing the third and fourth classifications revealed that the mere recognition of the climate variable does not mean that a court will make a climate favorable decision. Thus, a climate litigation strategy should not be limited to purely recognizing the inclusion of the climate variable, but rather should also seek to persuade the judge as to the relevance of climate change and the risks of not anticipating its impacts.

This research also investigated the relationships between the different classifications. The cross-examination of the classifications indicated that there is a diversity of possible strategies for climate-friendly decisions and that addressing climate as the central theme is not necessarily the best alternative. Of the twenty cases in which climate change was addressed as a central theme, in twelve courts recognized the inclusion of the climate variable in licensing procedures, but only six resulted in climate favorable decisions. By contrast, in the twenty-three cases in which the climate variable was presented as "one of the environmental issues," in fifteen courts recognized the need to include climate and twelve obtained a favorable decision.

Thus, it might be strategically wise to present climate change as one relevant aspect of the environmental discussion, in connection with other important aspects, rather than as the dominant relevant aspect.

In addition to the classifications presented, the present research extracted from these cases nine relevant arguments for Brazilian climate litigation, whether in favor or against the defense of climate stability, as follows: (i) the denial of the need to assess climate impacts in the environmental impact study or in the environmental assessment due to the absence of an express requirement; (ii) the need for climate impact assessment in licensing and/or environmental impact assessment without resulting in climate-friendly decisions, based on the grounds that (ii.a) other relevant interests prevail, (ii.b) negligible individual GHG emissions of a project compared to global emissions, (ii.c) only the project's direct GHG emissions should be considered and (ii.d) substitution of the proposed project's GHG emissions from those other sources; (iii) the existence of an implicit obligation to analyze climate impacts in the environmental impact assessment; (iv) the broad understanding of the environmental and climate impacts to be considered in the environmental impact assessment; (v) the consideration of positive climate impacts in the assessment of environmental impacts; (vi) the need for the environmental impact study to foresee both the project's harm and the benefits; (vii) the applicability of general principles of Environmental Law in the environmental licensing process and in the consideration of climate change; (viii) the applicability of international climate treaties internally in the context of environmental licensing process and/or in the environmental impact assessment; and (ix) the consideration of environmental justice and/or human rights in the context of environmental licensing and/or environmental impact assessment.

The arguments were extracted from pleadings and opinions analyzed in each case, reflecting positions advanced by the parties, courts decisions, and magistrates' opinions, including dissents. They were highlighted due to their relevance to the research objectives; their recurrence and depth in the cases analyzed; and their applicability in the Brazilian context.

53. Included here were cases discussing norms applicable to environmental licensing, but not addressing a specific licensing project.

RELATIONSHIPS BETWEEN THE RESULTS OF CATEGORIES A, B AND C AND MAIN CONCLUSIONS

From the survey and analysis of the Brazilian legislation (federal, state and the Federal District) (Category A), Brazilian case law (Category B), and leading cases in foreign jurisdictions (Category C), it was possible to identify a set of relevant arguments to the research's goal and, ultimately, confirm the viability of considering the climate variable in the environmental licensing procedures conducted in Brazil.¹

3.1. The right to a stable climate is recognized as part of the fundamental human right to an ecologically balanced environment (issue present in Categories A, B and C)

The survey, classification, and analysis of the legislation carried out in Category A confirmed that Brazil has a vast body of legislation to implement the right to a stable climate. This framework is composed of specific norms on climate, such as the PNMC (Law 12.187/2009); general norms on the environment, such as the PNMA (Law 6.938/1981); and numerous

norms at the federal, state, and Federal District levels. Broad environmental matters permeate climate legislation, and climate concerns are explicitly or implicitly present in general environmental legislation. Also, the recognition of the right to a stable climate is inseparable from the fundamental human right to an ecologically balanced environment prescribed in the Federal Constitution, guiding the elaboration, interpretation, and application of all infra-constitutional legislation. This conclusion does not emerge only from the constitutional text; it results from a factual imperative: the dimension and disruptive nature of the climate crisis constitute an existential threat to the web of life of which we all are a part and which enables all human and ecological relationships.

The legal basis to support this thesis was also identified in the Brazilian case law analysis of Category B. Among the selected twenty four case excerpts (eight from STJ, six from STF, and ten leading cases), the theme appears in two of them, as stated, for example, in the complaint of the Public Civil Action pending before the Federal Regional Circuit of the 4th Region: the right to climate stability is a “fundamental right and duty implicitly

1. Here, the study presented relationships between the research categories, rather than describing all the recurrent themes identified in Category B or the nine relevant legal arguments presented in Category C.

enshrined in the federal constitution.”² Also, the Federal Supreme Court (STF), based on Advisory Opinion OC-23/17 of the Inter-American Court of Human Rights, affirmed the existence “of an undeniable relationship between the protection of the environment and the realization of other human rights, as well as the impact of environmental degradation and the adverse effects of climate change on the enjoyment of human rights.”³

In Category C, discussing foreign case law, the recognition of the right to an ecologically balanced environment as a fundamental right was not identified in all cases, due to the specificities of the different jurisdictions analyzed. However, even in countries where there is no such recognition, it was possible to observe, in the judicial opinions, the inclusion of the climate variable within the concept of “environment” with the correlated affirmation that mechanisms of environmental protection must also be applied to combat climate change. This situation was observed, even if implicitly, especially when courts understood that there should be an assessment of all relevant environmental impacts, including climate impacts – from forty-six analyzed cases, twenty-seven foreign leading cases were identified in which there was a recognition of the need to include the climate variable in the licensing and/or environmental impact assessment.

It is also worth noting that certain foreign courts do not consider the existence of an express legal provision related to the analysis of climate impacts necessary, since this requirement might be derived, even if implicitly, from the adequate interpretation of existing environmental laws. This understanding was one of the nine relevant recurring legal arguments identified in the analysis of foreign case law *supra*.⁴ Analyzed cases also approached climate change as a threat to the ecological balance of the planet, affirming, in other words, that the fostering of activities that increase GHG emissions or lead to climate change is incompatible with an ecologically balanced scenario.

The analysis of this case law universe, therefore, leads to the conclusion that the guarantee of a fundamental human right to an ecologically balanced environmental presupposes the defense of climate stability.

3.2. The concepts of “environment,” “environmental degradation,” and “pollution,” among others, are broad, including, albeit implicitly, climate change (issue observed in Categories A, B and C)

Of the 671 norms analyzed in their entirety (Category A), this study categorized 290 norms as implicitly inserting the climate variable in environmental licensing and another 203 as containing contextual arguments for this insertion. The research categories arose from the presence, in the normative texts, of references confirming the broad scope of the concepts of “environmental degradation,” “environmental impact,” and/or “pollution.” Thus, in this normative context, the protection of the environment must necessarily encompass climate, even if implicitly. Another forty-two norms explicitly provided for the consideration of the climate variable in environmental licensing, which also confirms the breadth of the alluded concepts. Interpretations of the law in this sense were perceived in twelve of the twenty-four Brazilian judicial cases highlighted, forming the greatest recurrence of a theme in Category B.

These Category B interpretations in Brazilian case law refer to the concepts of “environment,” “environmental degradation,” “pollution,” “polluter,” “environmental damage,” and/or “environmental impact.” These interpretations occurred in different ways, both in pleadings and in decisions, such as the treatment of indirect polluter liability which opens the way for the consideration of indirect impacts on the climate and the requirement in the complaints of leading cases for the consideration of the climate variable in environmental studies within

2. TRF-1. 15ª Vara Federal Cível. ACP 1010603-35.2019.4.01.3800. Juiz Federal Substituto Felipe Eugênio de Almeida Aguiar. Pending judgment on merits.

3. STF. Tribunal Pleno. ADC 42/DF. Rel. Min. Luiz Fux. Brasília, DJe 28/02/2018.

4. This argument was identified in the following cases: in South Africa (i) *EarthLife Africa Johannesburg v. Minister of Environmental Affairs and Others*, (ii) *Trustees for the Time Being of the GroundWork Trust v. Minister of Environmental Affairs, KiPower (Pty) Ltd, and Others*, (iii) *Trustees for the Time Being of GroundWork v. Minister of Environmental Affairs, ACWA Power Khanyisa Thermal Power Station RF (Pty) Ltd, and Others*, and in the United States of America (USA) (iv) *Border Power Plant Working Group v. US Department of Energy*, (v) *Massachusetts v. EPA* and (vi) *Center for Biological Diversity v. National Highway Traffic Safety Administration*.

the environmental licensing process. The pleadings and substantive decisions interpret the environmental regulatory framework referencing climate change as logically inserted in traditional legal concepts of Environmental Law, allowing the right to a stable climate to be addressed as inherent in or, at least, associated with the right to a healthy environment.

Regarding this interpretation, it is worth noting IBA-MA's broad characterization of "climate environmental damage" e "climate change impact" in an ACP's complaint⁵. The same expansive conceptualization is present in Justice Herman Benjamin's opinion in an appeal,⁶ determining that the concept of "environment" encompasses climate.

In Category C, foreign case law, this study identified twenty-seven cases, out of the forty-six analyzed, in which there was some recognition of the climate variable's inclusion in the environmental licensing and/or environmental impact assessment, based on the understanding of climate impacts as a form of environmental impacts. Additionally, this research also highlighted cases that expressly considered the breadth of the concepts of "environment," "environmental impact," and "pollution," concluding for the need for an environmental assessment of the climate variable, even in the absence of an express normative requirement. In these cases, there was an understanding of an implicit obligation to assess climate impacts in the environmental impact statement – such interpretation was one of the nine relevant legal arguments supra identified. A paradigmatic case in which this argument was developed was the South African *EarthLife Africa Johannesburg v. Minister of Environmental Affairs and Others*. In this

case, the court stated that there would be no need for an express legal requirement mandating the analysis of climate impacts – the obligation could be extracted from the broader regulatory context. Moreover, the court emphasized that environmental laws contain broad concepts precisely to avoid limiting their efficacy because of the impossibility of predicting in advance all relevant environmental impacts.

Another relevant identified argument was the scope of the environmental and climate impacts considered in the environmental impact assessment, present in sixteen of the forty six foreign cases analyzed.⁷ Here, courts, based on the broad concept of environmental impact supra described, included not only direct but also indirect and cumulative impacts; scope 3 emissions;⁸ and positive environmental impacts resulting from projects under consideration in environmental licensing procedures and the evaluation of environmental impacts.

3.3. The fundamental principles of environmental law are applicable to the climate issue, and the protection of the climate is, therefore, included in the legal protection of the environment (an issue observed especially in Categories B and C, but also identified in Category A)

Several fundamental principles of Environmental Law were identified in the survey of norms carried out in Category A (both in general norms of environmental protection and in specific norms on climate), but it was

5. TRF-1. 15ª Vara Federal Cível. ACP 1010603-35.2019.4.01.3800. Juiz Federal Substituto Felipe Eugênio de Almeida Aguiar. Pending judgment on merits.

6. STJ. Segunda Turma. REsp 1.000.731/RO. Rel. Min. Herman Benjamin. Brasília, DJe 25/08/2009.

7. This argument was identified in the following cases: in South Africa (i) *EarthLife Africa Johannesburg v. Minister of Environmental Affairs and Others*, (ii) *Trustees for the Time Being of the GroundWork Trust v. Minister of Environmental Affairs, KiPower (Pty) Ltd, and Others*, (iii) *Trustees for the Time Being of GroundWork v. Minister of Environmental Affairs, ACWA Power Khanyisa Thermal Power Station RF (Pty) Ltd, and Others*; in Australia (iv) *Australian Conservation Foundation v. Latrobe City Council*, (v) *Gray v. Minister for Planning*, (vi) *Hunter Community Environment Center Inc. v. Minister for Planning and Delta Electricity*, (vii) *Coast and Country Association of Queensland Inc. v. Smith*, (viii) *Gloucester Resources Limited v. Minister for Planning*, in the USA (ix) *Mid States Coalition for Progress v. Surface Transportation Board*, (x) *Border Power Plant Working Group v. US Department of Energy*, (xi) *Center for Biological Diversity v. National Highway Traffic Safety Administration*, (xii) *High Country Conservation Advocates v. United States Forest Service*, (xiii) *Myersville Citizens for a Rural Community, Inc. v. fed. Energy Regulatory Comm'n*, (xiv) *Sierra Club v. Federal Energy Regulatory Commission*, United Kingdom (xv) *Plan B Earth and Others v. Secretary of State for Transport*; and in the Czech Republic (in a case originating in Micronesia) (xvi) *Micronesia Transboundary EIA Request*.

8. Classification originating in the World Business Council for Sustainable Development and World Resources Institute (WRI) *Greenhouse Gas Protocol* considering scope 1, 2 and 3 GHG emissions. Scope 1 emissions are direct GHG emissions from sources that are owned or controlled by a company; scope 2 emissions are indirect GHG emissions from the generation of electricity purchased and consumed by the company; scope 3 all other indirect gas emissions are scope 3 emissions: GHG resulting from a company's activities but occurring from sources not owned or controlled by the company (including extraction and production of purchased materials, transportation of purchased fuels, and use of sold products and services). Available at: <https://ghgprotocol.org/standards/scope-3-standard>. Last visited on 14 Jan. 2022.

in the case law analysis that this study confirmed the applicability of these principles to environmental protection and, as a result, climate stability.

In Brazilian and foreign cases (Categories B and C), this research frequently encountered the statement that the principles of prevention and precaution must be observed. The cases applied these principles both in licensing procedures, considering its eminently preventive nature, and in the consideration of climate change, given the matter specificities which might still contain some degree of imprecision in scoping its impacts. These specificities justify the need for a preventive-precautionary approach, broadly understood, towards environmental assessments related to climate change in order to overcome the complexities intrinsically associated with anticipating its impacts. Five of the forty judgments analyzed in Category B address this issue, of which four originate in the STF. STF judgments also associated the precautionary principle with risk management, which can – and should – be understood as including climate risks.⁹

In the Brazilian case law, this research identified the following references: (i) the governmental obligation to act in defense of the environment – forbidding insufficient governmental action¹⁰ (five cases); (ii) the principle of preservation of climate integrity (e.g., Forest Code) (one case in the Superior Justice Tribunal)¹¹; and climate change adaptation to promote the reduction of vulnerabilities due to climate change (identified in two cases).¹²

In foreign cases, ten of the forty-six cases analyzed utilized the general principles of environmental law in

environmental licensing procedures and in the consideration of climate change, which the research identified as one of the nine relevant arguments. In addition to applying the principles of prevention and precaution,¹³ several cases utilized the principle of intergenerational solidarity.¹⁴

3.4. The assessment of the distribution of socio-environmental burdens and benefits – including climate damages – of proposed projects is a relevant aspect in the decision-making regarding the installation and operation of potentially polluting activities (an issue observed especially in Categories A and C, but also present in Brazilian case law, although in cases not analyzed in Category B)

From the normative survey (Category A), it was possible to verify a concern with the distribution of an activity's social burdens and benefits, which necessarily arises from the reading of the PNMA (Law 6.938/1981) in conjunction with CONAMA Resolution 001/1986.

These rules impose the consideration of direct and indirect impacts; cumulative and synergistic effects; positive and negative consequences in the short, medium and long term ranges, as well as the distribution of socio-environmental burdens and benefits, in the environmental impact statement (Res. CONAMA 001/1986, article 6, II; III). The same concern is expressly provided

9. STF. Tribunal Pleno. ADPF 101/DF. Rel. Min. Cármen Lúcia. Brasília, DJe 24/06/2009; STF. Tribunal Pleno. ADI 4.066/DF. Rel. Min. Rosa Weber. Brasília, DJe 24/08/2017; STF. Tribunal Pleno. ADC 42/DF. Rel. Min. Luiz Fux. Brasília, DJe 28/02/2018.

10. STF. Tribunal Pleno. RE 627.189/SP. Rel. Min. Dias Toffoli. Brasília, DJe 03/04/2017; STF. Tribunal Pleno. ADC 42/DF. Rel. Min. Luiz Fux. Brasília, DJe 28/02/2018; STJ. Segunda Turma. REsp 1.000.731/RO. Rel. Min. Herman Benjamin. Brasília, DJe 25/08/2009; STJ. Segunda Turma. REsp 1.635.468/SP. Rel. Min. Herman Benjamin. Brasília, DJe 06/12/2016; TJ/RJ. Órgão Especial. IAI 0282326-74.2013.8.19.0001. Rel. Des. Heleno Ribeiro Pereira Nunes. Rio de Janeiro, DJe 11/09/2017.

11. STJ. Segunda Turma, REsp 1.782.692/PB. Rel. Min. Herman Benjamin. Brasília, DJe 13/08/2019.

12. STF. Primeira Turma, Rcl 35.699 AgR/RJ. Rel. Min. Rosa Weber. Brasília, DJe 27/04/2020; TJ/RJ. Décima Sétima Câmara Cível. ACP 0006155-57.2013.8.19.0002. Rel. Des. Elton M. C. Leme. Rio de Janeiro, DJe 28/08/2019.

13. The principles of prevention and precaution were identified in the following cases: in South Africa (i) *EarthLife Africa Johannesburg v. Minister of Environmental Affairs and Other*; (ii) *Trustees for the Time Being of the GroundWork Trust v. Minister of Environmental Affairs, KiPower (Pty) Ltd. and Other* (in the complaint analyzed); (iii) *Trustees for the Time Being of GroundWork v. Minister of Environmental Affairs, ACWA Power Khanyisa Thermal Power Station RF (Pty) Ltd, and Others* (in the complaint reviewed); in Australia (iv) *Greenpeace Australia Ltd. v. Redbank Power Co*; (v) *Thornton v. Adelaide Hill Council*; (vi) *Gray v. Minister for Planning*; (vii) *Gloucester Resources Limited v. Minister for Planning*; in the USA (viii) *Coalition for Responsible Regulation v. EPA*; and in the United Kingdom (ix) *Plan B Earth and Others v. Secretary of State for Transport* (decision of the Court of Appeals).

14. The principle of intergenerational solidarity was identified in the following cases: in Australia (i) *Australian Conservation Foundation v. Latrobe City Council*; (ii) *Thornton v. Adelaide Hill Council*; (iii) *Gray v. Minister for Planning*; and (iv) *Gloucester Resources Limited v. Minister for Planning*.

for in the PNMC (Law 12.187/2009, article 3, III).¹⁵ It is also worth noting Decree 9.571/2018, establishing the National Guidelines on Business and Human Rights, which provides, among various corporate sustainability initiatives, the duty to “adopt measures to make operations more efficient, in order to reduce greenhouse gas emissions, so as to contribute to the fight against climate change.” Additionally, the Decree requires corporations to address adverse human rights’ impacts with which they have had some involvement, including by preventively internalizing the respective negative externalities of their activity. The regulation, therefore, mandates a commitment from the private sector to the defense of human rights, in connection with its environmental and climate dimensions.

The same discussion was present in the selected foreign leading cases (Category C). In these cases, environmental justice was a considered criterion in the assessing environmental impacts within the scope of the licensing procedures, including the evaluation of climate impacts.¹⁶ Courts understood that project impact analysis should pay attention to the relative distribution of burdens and benefits on the population, with special attention to vulnerable groups, evaluating whether this distribution occurs in an equitable way. The criterion of environmental justice was also considered in the analysis of cumulative impacts, as in the US case *Sierra Club v. Federal Energy Regulatory Commission*. The decision stressed the importance of considering these impacts, especially when they can further aggravate the situation of already vulnerable communities. The court determined the elaboration of a new Environmental Impact Statement (EIA) since the original one did not sufficiently address GHG emissions. However, the court also ruled that the original EIA had sufficiently considered environmental justice.

When applied to the climate issue, discussions of environmental justice also raised the issue of

intergenerational solidarity. Here, the choices of current generations regarding the authorization of highly GHG-emitting projects impact future generations, who will, thus, feel the impacts of climate change more intensely. In the Australian case *Gloucester Resources Limited v. Minister for Planning*, for example, the court discussed the injustice of allocating climate burdens more intensively to future generations. The court also highlighted the inequality in the distribution of environmental and climate burdens and benefits of the project in question, with the benefits concentrated in the short term and for certain favored groups, and the negative impacts experienced more intensely by the project’s surrounding population and by vulnerable groups. Accordingly, the court’s understanding led to the rejection of the project.

3.5. It is possible – and necessary – to limit economic activity in defense of the environment and climate (an issue observed especially in Categories B and C, although also present in Category A, in the Federal Constitution)

Brazilian and foreign case law confirmed that the defense of the environment conditions economic activity. It is possible – more than that, necessary – to impose limitations on activities that impact the environment and, more specifically, the climate.

In Brazilian case law (Category B), the argument was present in four of the twenty-four cases that were relevant to the research, confirming that economic activities are conditioned by environmental protection through the effective implementation of PNMA instruments, such as environmental licensing and the assessment of environmental impacts. Often, the basis of

15. Determining that implementation measures must “take into account the different socioeconomic contexts of its application, distribute the resulting burdens between economic sectors and the affected population and communities in an equitable and balanced way and weigh individual responsibilities as to the origin of the emission sources and the effects caused on the climate.”

16. Aspect identified as one of the relevant legal arguments – “Necessity of compliance with environmental justice and/or human rights criteria in the context of environmental licensing and/or environmental impact assessment”- found in seven of the forty-six foreign reference cases analyzed: Australia (i) *Gloucester Resources Limited v. Minister for Planning*, USA (ii) *Sierra Club v. Federal Energy Regulatory Commission*, (iii) *Standing Rock Sioux Tribe et al. v. U.S. Army Corps of Engineers and Dakota Access, LLC*, (iv) *Atlantic Coast Pipeline, LLC v. Federal Energy Regulatory Commission*; Indonesia (v) *Greenpeace Indonesia and Others v. Bali Provincial Governor*; Nigeria (vi) *Gbemre v. Shell Petroleum Development Company of Nigeria Ltd., National Petroleum Corporation and Attorney General*; and Norway (vii) *Greenpeace Nordic Ass’n and Nature and Youth v. Ministry of Petroleum and Energy*.

these decisions was article 170, item VI, of the Federal Constitution, establishing that the defense of the environment is a principle of the economic order. In this sense, the opinion of Minister Luiz Fux, in ADC 42/DF, stands out, stating that “the focus on economic growth without due ecological concern is a present and future threat to the progress of the nations and even to the survival of the human species.”¹⁷ In one case, the court determined that utilizing the best available technology enabled the economic viability of an activity without compromising environmental protection.¹⁸

Among foreign case law (Category C), courts vary in their approaches to evaluating economic and climate considerations. This study found a preponderance of climate concerns in part of the decisions. It also identified, however, courts balancing those concerns with economic activity or security concerns. Thus, in certain instances, courts prevented the implementation of projects due to omissions or insufficiencies in the environmental impact assessment regarding the analysis of adverse climate impacts. In other instances, climate change was a relevant consideration, nevertheless, in balancing the interests present in the case, economic benefits, such as job creation, and energy security concerns ultimately prevailed.¹⁹

Despite these varying approaches on how to reconcile economic activity and climate concerns, in four of the forty-six leading foreign cases, courts emphasized the importance of evaluating the projects’ harm, including effects on climate, in addition to their beneficial consequences in the environmental impact statement (in fact, this rationale is one of the nine relevant legal arguments supra identified).²⁰ This discussion emerged mainly in cases where the project’s proponent alleged, on one hand, that it was impossible to predict the climate effects of the activity or the regulation in dispute, while, on the other hand, articulating in detail their

respective benefits, particularly economic ones (such as job creation). In these instances, courts affirmed that, in granting permits for GHG emitting activities, the evaluation of the interests at bay must be carefully undertaken and balanced to consider the economic activities’ negative impact.

3.6. The positive climate impact of projects subject to environmental licensing is a relevant factor to be considered (issue noted in Categories A and C)

In Category A, twenty out of the 671 norms analyzed established simplified and/or specific environmental procedures for projects with positive climate impacts. These norms simplify or prioritize certain environmental licensing procedures for activities that, although potentially polluting – and therefore subject to environmental licensing – have the purpose of (or end up) sequestering carbon from the atmosphere. These norms include, for example, those related to CDM’s projects; carbon capture, solar, and wind energy generating projects. They demonstrate that it is possible to adapt and facilitate environmental licensing procedures in case of positive impacts.

In Category C, the positive climate impact was considered differently. In four of the forty-six leading foreign cases examined, courts determined that positive climate impacts should be considered within the scope of the environmental impact statement, broadly conceptualized.²¹ In these cases, courts recognized that the project may have potentially beneficial mitigating impacts through the use of, for instance, renewable energy or energy efficiency plans, and that these benefits should be considered in the environmental impact statements and in the decision-making processes for

17. STF. Tribunal Pleno. ADC 42/DF. Rel. Min. Luiz Fux. Brasília, DJe 28/02/2018.

18. STJ. Segunda Turma. AgRg nos EDcl no REsp 1.094.873/SP. Rel. Min. Humberto Martins. Brasília, DJe 04/08/2009.

19. See, e.g., Australia (i) *Greenpeace Australia Ltd. v. Redbank Power Co.*; (ii) *Haughton v. Minister for Department of Planning and Others*; (iii) *Xstrata Coal Queensland Pty. Ltd. and Others v. Friends of the Earth – Brisbane and Others*; (iv) *Coast and Country Association of Queensland Inc. v. Smith and Others Energy, Norway* (v) *Greenpeace Nordic Ass’n v. Ministry of Petroleum and Energy, United Kingdom* (vi) *H.J. Banks & Co. v. Secretary of State for Housing, Communities, and Local Government*.

20. See, e.g., USA (i) *Center for Biological Diversity v. National Highway Traffic Safety Administration*, (ii) *High Country Conservation Advocates v. United States Forest Service*, (iii) *Sierra Club v. Federal Energy Regulatory Commission*, New Zealand (iv) *Greenpeace New Zealand v. Northland Regional Council*.

21. See, e.g., USA (i) *Center for Biological Diversity v. National Highway Traffic Safety Administration*; New Zealand (ii) *Greenpeace New Zealand v. Northland Regional Council*, (iii) *Greenpeace New Zealand Inc. v. Genesis Power Ltd*, United Kingdom (iv) *Wildland Ltd. and the Welbeck Estates v. Scottish Ministers*.

granting environmental permits. These rationales are predicated on the understanding that GHG emissions' reduction projects and norms should be encouraged, including within environmental license procedures, given the national commitments to decarbonize the economy.

3.7. Final considerations

The legal arguments identified both at the intersection of the research categories and within the categories specifically and strategically support the preventive, mitigating, and compensatory responsibility for climate impacts in the context of environmental licensing and environmental impact assessment. This study found that entities with standing to file public civil actions²², particularly the Public Ministry, the Public Defender's Office and organized civil society, have a solid basis to

demand, in litigation or through alternative means of dispute resolution, that the relevant direct and indirect GHG emissions from potentially polluting activities are effectively considered in the respective environmental licensing procedures.

There are, therefore, a significant number of norms, principles, and legal arguments capable of supporting the understanding that the climate variable must be effectively considered in the planning phase of activities subject to environmental licensing, resulting in the reduction and/or compensation of the respective GHG emissions. Such incorporation of climate concerns allows society to face the climate crises and guarantee the fundamental human right to an ecologically balanced environment (and a stable climate). Conversely, neglecting to thus consider climate impacts subjects society and the ecological system, of which it is a part, to unacceptably serious – and avoidable – risks.

22. Public civil action (*ação civil pública*) is the procedural instrument to promote civil liability for damages caused to the environment, to the consumer, to goods and rights of artistic, aesthetic, historical, touristic, and scenic value.

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