Original article http://dx.doi.org/10.18623/rvd.v22.2755-ing

PUNITIVE AND REPARATORY ENVIRONMENTAL PROTECTION: COMPARATIVE ANALYSIS BETWEEN BRAZIL AND SPAIN

TUTELA AMBIENTAL SANCIONATÓRIA E REPARATÓRIA: ANÁLISE COMPARATIVA BRASIL E ESPANHA

Article received on: 06/07/2024
Article accepted on: 02/19/2025

Marcelo Kokke*
* Escola Superior Dom Helder Câmara (ESDHC), Belo Horizonte/MG, Brazil
Lattes: http://lattes.cnpq.br/0844891247797428
Orcid: https://orcid.org/0000-0001-5696-4747
marcelokokke@yahoo.com.br

Elcio Nacur Rezende*
* Escola Superior Dom Helder Câmara (ESDHC), Belo Horizonte/MG, Brazil
Lattes: http://lattes.cnpq.br/7242229058954148
Orcid: https://orcid.org/0000-0002-2369-8945
elcionrezende@yahoo.com.br

Rubén Miranda Gonçalves**
** Facultad de Ciencias Jurídicas, Universidad de Las Palmas de Gran Canaria (ULPGC),
Las Palmas de Gran Canaria, Spain
Orcid: https://orcid.org/0000-0002-8492-6104
ruben.miranda@ulpgc.es

The authors declare no conflict of interest.

Abstract
This article presents a comparative analysis of Brazilian and Spanish legal framework over environmental protection. The environmental protection approach is evaluated under punitive perspectives, regarding criminal and administrative aspects, as well as under environmental damages reparation perspective. The article proposes as goal the evaluation of legal models, in special of Brazilian legal framework in order to explain possibilities of thinking and improvements. From descriptive and critical methodologies, the article links national and international normative systems, in favor of Environmental Law systemic analysis. The

Resumo
Este artigo apresenta uma análise comparativa entre os marcos regulatórios brasileiro e espanhol sobre a tutela ambiental. A abordagem da tutela ambiental é avaliada a partir da perspectiva sancionatória, considerando aspectos penais e administrativos, assim como da reparação dos danos ao meio ambiente. Propõe-se como objetivo a avaliação crítica dos modelos, em especial, do modelo brasileiro, a fim de expor possibilidades de reflexão e aprimoramento. Por meio das metodologias crítica e descritiva, o artigo conecta a sistemática normativa nacional à sistemática normativa internacional, em favor da análise sistêmica do Direito Ambiental. O artigo adota essa metodologia a fim de proporcionar

article adopts this methodology in order to obtain practical comparative wins. It concludes that there is a real possibility of improvement of environmental protection measures in Brazil, specifically, considering the environmental administrative punishment. Regarding specific results, the article manages the reflection of Brazilian legislation and the deep approach of regional legislation role.
Keywords: Brazil; environmental damage; Spain; environmental protection.

ganhos comparativos práticos. Conclui-se pela possibilidade de aprimoramento das modalidades de tutela ambiental no Brasil, em especial, em relação às sanções administrativas ambientais. Em termos de resultado específico, articulam-se a necessidade de reflexão da normatização brasileira e o aprofundamento do papel da legislação regional.
Palavras-chave: *Brasil; dano ambiental; Espanha; tutela ambiental.*

Introduction

The comparative analysis of legal models for the management and protection of environmental assets contributes to reflections on improvements and alternative possibilities. Although information flows and communicative interactions have currently reached levels never seen in the continuum of globalization and the so-called 4th Industrial Revolution (Schwab, 2016), there still remains a certain degree of superficiality in comparative assessments and analyses. To a significant extent, these levels of superficiality can be attributed to the Cartesian application and general non-situated analyses that are unrelated to systemic assessments.

This article proposes, by using a descriptive and critical methodology, to develop a comparative systemic assessment between the punitive and reparatory environmental protections provided for in the Spanish and Brazilian legal systems. The aim is to demonstrate, in conjunction, the governing differences between the Spanish and Brazilian regulatory systems, based on the typology of environmental liability, in its civil, criminal, and administrative spheres. The comparative assessment is carried out using a systemic approach, which works with guiding principles aimed at capturing the complexity of the interactions present in an assessment. To this end, regulatory texts were selected according to their relevance and affinity with the topic, which allowed the elaboration of the text in its interaction and practical production of results. Relevant judicial decisions were also used, considering mainly the aspects of environmental responsibility.

The recursive principle and the dialogical principle stand out here, based on the theoretical framework centered on Edgar Morin's complex thinking.

Based on complex thinking, supported by the recursive principle, the research

aims to demonstrate that the punitive matrix for criminal offenses in Brazil follows a different path from that established in Spain. While in Spain the establishment of administrative and criminal penalties will be progressive, according to the levels of severity of the environmental offense and differentiated in their application, in Brazil there is an accumulation of applications, causing conflicting panoramas of reciprocal emptying. It is argued here that the cumulative factor may lead to levels of questioning regarding the legitimacy of the State's punitive exercise, in addition to weakening the environmental administrative bodies' punitive potential.

On the other hand, the application of systemic assessment from the perspective of civil liability also determines different fields of implementation in relation to the imputations of reparations for damage, especially with regard to the subjective element of liability. In this sense, it is necessary to place both countries under the perspective of the community influences provided by the European Union and Mercosur, considering the differences between the economic blocs. Therefore, an assessment is made of the national States' internal regulations, common in their conventional adjustment rule and community in their binding bond.

In a sequential step, elements of similarity and distinction between the legal regimes are addressed, as well as perspectives of regulatory confrontation. In correlation, the punitive matrix is discussed in terms of potential penalties for individuals and legal entities, with a legal and jurisprudential approach. In a scenario typical of a risk society, environmental analysis and assessment of legal responses and regulatory confrontation require that environmental damage and degradation be assessed from the perspectives of civil, criminal, and administrative liability.

The topic addressed here reveals its relevance insofar as it allows for reflection on the Brazilian model, whether to reaffirm its options in light of the Spanish model or to consider possibilities for improvement. The analysis and assessment are also developed based on judgments from the Superior Court of Justice (STJ) and the Federal Supreme Court (STF) in Brazil, in light of the reasons for decisions in judgments from the Spanish Supreme Court. The aim is to facilitate an exchange of assessments and investigation of the argumentative reasons for judgments applying legal standards.

The hypothesis raised, therefore, consists of affirming that Brazil is following a path opposite to Spain regarding legal liability for environmental damage.

The proposed problem concerns the questioning of the points of similarity and divergence between Brazilian and Spanish regulations in the regulation of sanctions and reparations for environmental degradation. Although environmental protection and the normative expression of the enshrinement of environmental

quality are present in international conventions, bilateral, and multilateral treaties, this does not mean that there is an identity of models for exercising normative and executive state practice in providing this protection. It is argued that identifying normative responses and structural arrangements for implementing international standards and their dialogue with domestic positive law is a necessary path to understanding Environmental Law under levels of complexity and interconnection.

1 Complex thinking in Morin: understanding the contextualization of environmental legislation

The word "complex" has its etymological origin in Latin, *complexus*, *complecti*, meaning a self-contained, an internal grouping. Edgar Morin (2005) identifies *complex* as the paradox between the one and the multiple, the grouping that is woven into a diversity of components of the phenomenal world that demands analysis and synthesis, enabling support for understanding reality and its manifestation. The French philosopher and sociologist, recognized as one of the greatest thinkers of the century, considers that "simplifying modes of knowledge mutilate rather than express realities or the phenomena they deal with" (Morin, 2005, p. 5, free translation)[1], thus "complex thinking aspires to multidimensional knowledge" (Morin, 2005, p. 6, free translation)[2].

In this sense, complex thinking "is driven by a permanent tension between the aspiration for knowledge that is not fragmented, compartmentalized, or reductive, and the recognition of the unfinished and incomplete nature of any knowledge" (Morin, 2005, p. 7, free translation)[3]. Effective understanding of regulatory frameworks in different countries requires handling and applying the systematics of complex thinking. A comprehensive analysis through fragmented or simplistic means reduces regulatory assessment to a simple description of normative conglomerates, which is of little value on a reflective scale.

A comparative analysis of regulatory frameworks or regimes in different countries aimed at their effective and critical understanding cannot be based on mere textual comparisons. Normative life is not limited to random decision-making by which a given legal system adopts a given standard and another adopts a

1 In the original: "modos simplificadores de conhecimento mutilam mais do que exprimem realidades ou os fenômenos de que tratam".

2 In the original: "o pensamento complexo aspira ao conhecimento multidimensional".

3 In the original: "é animado por uma tensão permanente entre a aspiração a um saber não fragmentado, não compartimentado, não redutor, e o reconhecimento do inacabado e da incompletude de qualquer conhecimento".

different one. It is necessary to have a critical analysis of the derivation factors and the combined understanding of the vectors that influence different legal matrices, thus enabling the implementation of a true critical and analytical dialogue of regulatory fields of Law.

In other words, it is necessary to analyze the development of the regulatory matrix, dismissing alleged attempts at fragmentation. Here, the so-called *problem of knowledge* arises. Morin (2005) argues that knowledge operates through a selection of significant data simultaneously with a rejection of insignificant data, sometimes leaving in the background the critical reasons and reflexive thinking that justify the selection itself, as well as the dynamics of comprehensive organization. Arbitrary cutting in reality does not configure reality in the fractional portion. Understanding different regulatory frameworks depends on situating them in complexity panoramas.

If simplifying thinking leads to fragmentation, complex thinking interconnects multiplicities, aspiring to understand them not in a direct and linear relationship, but rather in ways of reciprocal and spiral communication in promoting development. This interlocution of multiplicities is a necessary step towards the contextual understanding of environmental standards. The contextualization of environmental legislation based on complex thinking determines a correlation between the part and the whole (Morin, 2005). This correlation provides paradoxes and complementarity in the system, considering that "a system is a whole which is formed at the same time as its elements are transformed" (Morin, 1992, p. 112).

Based on the reflective frameworks of complex thinking, it is possible to understand the national states' environmental regulations as inserted into an interconnected fabric of international standards, established in treaties and conventions, as well as regional standards, developed by organizations or compositions of national states in communities or other arrangements categorized as economic blocs. Whether they are mandatory (hard law) or non-mandatory (soft law), international and regional standards will be added to national states' standards to create an environmental regulatory system of flows and counterflows, of coherence and paradoxes, a system that can only be understood from the perspective of complexity.

This perspective assumes even higher levels of relevance when Environmental Law is discussed in relation to other legal branches. It is perhaps the legal branch with the greatest implications of systemic effects arising from internal, regional, and international dialogues. Adjustments, conventions, treaties, or even political and social events of global significance, such as those that have occurred in the

climate area, promote impulses, compression, and anticipations in legal systems. Perhaps debates and controversies about electoral models, or types of punishment, or even the regulation of marital relations, cannot, without great difficulty, mobilize attention beyond the national State in which they take place. The same situation does not occur in environmental matters. Disaster risks, impacts of oil licensing, greenhouse gas emissions, nuclear risk management, water and soil contamination, traditional peoples and their way of life, among others, go beyond territorial limits to reach the regional and global *agora*.

International treaties and conventions, or even environmental conferences, have repercussions in terms of normative vectors for the elaboration of legal diplomas, for the conformation of national States' legal systems. The most important examples are the 1972 Stockholm Conference and the 1992 Rio Declaration. The enactment of these acts, which were not even considered hard law, has been used as a legislative trigger in national states and as a support for the legitimacy of the content vector. On the other hand, resistance and demands within the internal spheres of states require and reflect the limits and formations of these international and regional acts.

In this vein, there is no doubt that, internationally, there is a growing concern for the environment and the urgent need to attribute legal responsibility to those responsible for degradation. Therefore, all nations must broaden their scope of environmental protection, whether in the field of the Judiciary or Executive Branch, and, above all, going beyond legal science, requiring an inter and transdisciplinary study to correctly assess the illegality. In this sense:

> The unveiling of interdisciplinary administrative spaces already begins in the very evaluation of what is degradation or pollution. Environmental quality is defined by technical and management criteria. The identification of what adversely affects the biota also depends on evaluative criteria and conceptual frameworks. Environmental limits and standards explicitly demand thresholds and technical motivations to establish what these limits are and what these standards consist of. In other words, technical criteria and scientific evaluation, combined with evaluative management judgments, will be the defining point between what is and what is not pollution, between what is lawful and what is unlawful (Reis; Kokke; Couto, 2022, p. 168).

These influxes and reflux, harmonization and paradoxes can only be understood from complex thinking, which implies hermeneutic and intellectual porosities between the internal, regional, and international spheres of environmental legal standardization. Understanding and comparatively analyzing a country's environmental regulatory framework therefore requires a deep spiral of connection and reflection on the formulations of domestic law in light of regional standards

derived from economic blocs, as well as international standards developed with a global purpose. The comparative analysis between state environmental law frameworks depends, by derivation, on a reciprocal framework at regional and global levels and, successively, on the contextual assessment of proximity and distance, given the internal political, economic, cultural, and social circumstances.

The fact that two countries share adherence to international conventions or international treaties aimed at protecting environmental assets does not mean that the principles or directives will be implemented in a similar way. International standards, as a rule, present levels of plasticity and openness to accommodate the objectives and guiding principles to the operational and implementation situations specific to a national State's legal-normative history (Heller, 2004).

Based on this dynamic, it is argued that the expression of protection of ecological assets continually continues to encounter institutes and matrices that precede it in existence and conformation. Environmental protection is carried out through structural and normative rearrangements of existing legal tools in the face of new social, economic, cultural and, increasingly, ecological demands. In other words, when legal standards determine the protection of environmental assets and liability for their degradation, they encounter previous institutes forged under the aegis of Civil Law, Administrative Law, and Criminal Law. The absorption of environmental protection standards occurs from an accommodation of the new objectives of ecological protection to the repertoire of instruments and conceptual matrices existing in a given time and space.

Along these lines, the Declaration of the Stockholm Conference, held in 1972, in its Principle 13, determines that States must ensure compatibility between development and the need to protect and improve the environment (UN, 1973). However, it is up to each State to define the system for this protection. The established governance logic coordinates classic patterns of approaching sovereignty with the progressive need to achieve higher levels of ecological protection. There is true environmental governance focused on environmental implementation. Therefore, Principle 17 establishes that "Appropriate national institutions must be entrusted with the task of planning, managing or controlling the environmental resources of States with a view to enhancing environmental quality" (UN, 1973, p. 5).

In terms of this framework that governs accommodation arrangements between perspectives of international solidarity in environmental protection with guidelines for safeguarding sovereignty, Principle 21 determines that "States have, in accordance with the Charter of the United Nations and the principles of

international law, the sovereign right to exploit their own resources pursuant to their own environmental policies […]" (UN, 1973, p. 5). Two other international conventions, which directly identify state action, including the imposition of reparatory and punishment measures for environmental degradation, assume the directive for internal implementation by national States.

The Brazilian Convention on International Trade in Endangered Species of Wild Fauna and Flora (Cites), enacted by Decree 76.623/1975, determines, in its Art. VIII, item 1, that States shall adopt appropriate measures to ensure compliance with the provisions of the Convention and to prohibit trade in species that violate the regulatory control provisions therein, including to sanction violations (Brasil, 1975). The Convention on Biological Diversity, enacted by Decree 2.519/1998, in its Art. 3, ratifies the framework then provided for in Stockholm regarding respect for each State's national attribution to regulate aspects of control and sanctions for regulatory violations (Brasil, 1998b).

The United Nations Framework Convention on Climate Change (UNFCCC), enacted by Decree No. 2.652/1998, adheres to the same framework. In its recitals, it establishes that States, in accordance with the Charter of the United Nations and the principles of International Law, have an inherent right to exploit their natural resources, in accordance with their environmental and development policies. However, they simultaneously have the responsibility to ensure that activities under their jurisdiction or control do not cause damage to the environment, their own or that of other States or areas beyond their sovereign jurisdiction (Brasil, 1998c).

Therefore, there is no format for configuring liability modalities by international treaties or conventions, which must be established by the national State's jurisdiction. It is in the concrete context in question that the regulatory institutes of civil liability, aimed at repairing environmental damage, criminal liability, and administrative liability must be understood – the last two aimed at imposing sanctions for regulatory violations that attract punitive character. An effective understanding of these institutes depends on situating them in a complex whole of reciprocal and recursive repercussion, in which the institute is interconnected with regional and international dynamics, influencing them and being influenced by them.

2 Brazilian and Spanish regulatory matrices: normative and comparative contexts

The implementation of environmental regulatory postulates can take on different forms in national states. Historical factors, political situations and, mainly, the contours of the classical fields of law are determining factors in how environmental standards will develop in a country. It is precisely this diversity that has led to different contours in the implementation of environmental liability in Brazil in relation to its materialization in Spain. Another point is also worth highlighting. The Spanish matrix for implementing domestic Law is linked to more concrete directives for conformation, established by the European Union. This situation is not repeated to the same extent when analyzing the situation in Brazil in relation to Mercosur. In other words, European Union standards impose normative designs on the Spanish system, while Mercosur standards are presented only as references for soft law that are rarefied and not densified.

Directive 2004/35/EC of the European Parliament and of the Council of the European Union establishes guidelines on environmental liability in terms of prevention and reparation for environmental damage. The directive has a dual nature, with situations in which subjective liability for environmental damage is provided for, which requires fault, alongside liability that is configured as objective liability and, therefore, does not require fault. The provision is in Article 3, item 1, as well as in Article 8, item 4, of the regulation. There is a division of types of liability according to the activity carried out. Thus, it follows that:

> This Directive should also apply, as regards damage to protected species and natural habitats, to any occupational activities other than those already directly or indirectly identified by reference to Community legislation as posing an actual or potential risk for human health or the environment. In such cases the operator should only be liable under this Directive whenever he is at fault or negligent (UE, 2004).

This directive even allows for the limitation period for the claim for recovery of environmental costs, set at 10 years, in accordance with its Article. 10, something unthinkable in terms of Brazilian regulations (UE, 2004), in which both the STF (Tema [Topic] 999) and the STJ established the imprescriptibility. The European directive distributes the activities in referential relationships contained in its Annex III, among which are, for example, manufacture, use, storage, processing, filling, emission into the environment, and transport of dangerous substances (UE, 2004). For activities not listed therein, liability will depend, according to the

wording of art. 3 of Directive no. 35, on fault or negligence. There is, therefore, a fixation in the regulations of Community law of subjective liability and subject to prescription. In addition, art. 4 defines that this directive is applicable only to environmental damage or the imminent threat of such damage, caused by diffuse pollution, whenever it is possible to establish a causal link between the damage and the activities of individual operators (UE, 2004).

In Brazil, the formulation of objective liability for environmental damage has its most robust structural seed in the outlines set forth in the formulation of Law No. 6.938/1981. The provision is found in Art. 14, Paragraph 1, which states that, without preventing the application of administrative penalties, the polluter is obliged, regardless of the existence of fault, to compensate or repair the damage caused to the environment and to third parties affected by its activity (Brasil, 1981). Complex thinking allows us to understand the matrix of this formulation, which cannot be simply captured as an occurrence of spontaneous generation.

Law No. 6.938/1981 is a direct reflection of the Stockholm Conference, held nine years earlier. In fact, the year after the Conference, Brazil created the Special Secretariat for the Environment (SEMA), via Decree No. 73.030/1973, which would later be combined to form IBAMA, via Law No. 7.735/1989 (Brasil, 1989).

The influence on the adoption of the objective liability model in Brazil is linked to the process of standardizing liability for nuclear damage. The rise of the environmental issue occurred in the 1970s in a chained manner with the discussions on nuclear containment. In its Principle 26, the Stockholm Conference provided for the containment and control of nuclear weapons. The nuclear risk was palpable on both the global stage and the national stage, with the construction of the Angra I nuclear power plant (Milaré, 2018).

State regulation, in this context, came with Law No. 6.453/1977, in which Art. 4 determined civil liability regardless of fault in the case of repair of nuclear damage (Brasil, 1977). This context of connection between environmental risk as a whole and nuclear risk had a decisive influence on the establishment of environmental liability as objective in Brazil. The legislative and jurisprudential option of accepting objective liability by the theory of integral risk for the environment comes from the joint germination in the Brazilian scenario of the nuclear and ecological problems per se.

European Union's normative determination followed a different line, and even reaches the exemption of reparatory liability if the case reveals situations of exclusion of liability. The ecological discussion itself and the nuclear discussion

followed autonomous paths, although not divorced and in no way distant from each other. Article 8, item 4, of Directive 2004/35 allows the Member States of the Community to exempt the responsible party from liability if he proves that it was not at fault or negligent and that the damage was caused by an emission or event expressly permitted and that he fully complies with an authorization issued or granted under the national legislative and regulatory provisions implementing the legislative measures adopted by the Community (UE, 2004).

Furthermore, there may be no liability if the emission, activity, or any form of use of a product occurred in the course of activities that the operator proves were not considered likely to cause environmental damage according to the state of scientific and technical knowledge when the emission occurred or the environmental impact occurred The hypotheses in question for exclusion of liability do not exist in the Brazilian legal system. The occurrence of environmental damage in Brazil, regardless of the state of science or technology, or even the existence of an environmental license, does not eliminate the liability for repairing environmental damage. The theory of integral risk has been established in environmental liability for the repair of damages, which in itself eliminates the exclusions of liability.

From a punitive perspective, there is a specific directive that influences the regulations of the Member States in terms of both Criminal Law and Punitive Administrative Law. Directive 2008/99/EC of the European Parliament and of the Council, of 19 November 2008, on the protection of the environment under criminal law presents the qualitative nature as a vector, by differentiating criminal responses from punitive administrative responses. Among the recitals of the directive, item 3 states that the experience gained in the Member States of the European Community has revealed the insufficiency of purely reparatory means of protecting ecological assets (UE, 2008). Thus, the punitive rules reinforce the protective reparatory rules, considering social disapproval qualitatively different from administrative sanction or mechanisms of action for damages in civil law.

EU Directive 2024/1203 established new rules on environmental protection through criminal law and replaced Directives 2008/99/EC and 2009/123/EC (UE, 2024). Although it maintains the premises of its predecessors, this directive establishes that the list of environmental criminal offenses contained in Directive 2008/99/EC should be revised, and additional criminal offenses should be added based on the most serious breaches of EU law in the environmental field. Punishments should be strengthened in order to strengthen their deterrent effect, and the effectiveness of detection, investigation, prosecution, and judicial decision-making in relation to environmental criminal offenses should be improved (García, 2024).

The qualitative nature implied by EU Directive 2024/1203 resulted in the specific adoption of a punitive standard with the enactment of penal and administrative punitive rules by the Member States. The directive requires Member States to provide criminal punishments for serious infringements of Community law provisions relating to environmental protection. The rule establishes a punitive method that corresponds to the punitive gradation according to the qualitative configuration of the infringement. According to its Art. 3, acts and omissions committed intentionally or at least with gross negligence constitute a criminal offense. The following stand out here: air pollution, illegal waste disposal, and behavior that causes significant deterioration of a habitat located in a protected site (Art. 3, i; UE, 2024).

Similarly to Brazil, it is possible configuration of crime by legal entity. Article 6, item 1, determines that Member States must ensure that legal persons can be held liable for the infringements referred to in articles 3 and 4 of EU Directive 2024/1203, in the event that they are committed for their benefit by any person holding a management position, acting either individually or as a member of one of its bodies (UE, 2024). In addition, legal entities may be held liable if there is a lack of supervision or control that makes the infraction possible. Liability occurs regardless of the liability of the individual who acted with intent or gross negligence, a position that is also in line with that established by the STF in Brazil, in RE 548.181/PR (Brasil, 2013).

The spheres of civil, criminal, and administrative punitive liability are also interconnected with regulatory and risk management practices related to environmental disasters, whether of anthropogenic or purely natural origin (Carvalho; Damacena, 2013). The relevant regulatory provision here concerns the European Union's Civil Protection Mechanism (CPM), defined by Decision No. 1313/2013 of the European Parliament and of the Council of the European Union (UE, 2013), which was subsequently amended by Decision No. 2019/420 (UE, 2019). The mechanism seeks to establish bases for solidarity and cooperation, with protocols for action and response, whether in the face of natural disasters or anthropogenic disasters.

The CPM is part of the risk management logic, with determinations for vulnerability analysis and prevention measures aimed at mitigation, with reinforcement of the response capacity when dealing with disasters. The provisions of the decisions are linked to Directive 2007/60/EC, which governs the assessment of venture risk (UE, 2007). The triple dimension of accountability safeguards the effectiveness of the CPM provisions. The identification of an emergency is

converted into the predictability of the risk that may materialize. Thus, Decision 1313 changed the name of the European Emergency Response Capacity (ECER) or voluntary common reserve to European Civil Protection Reserve (UE, 2013).

In the European framework, the regulatory provisions for damage and risk management are interconnected with the provisions for civil, administrative, and even criminal liability. There is a dynamic of governance articulated between regulatory matrices. Article 1, item 3, of Decision No. 1313 determines the objective and purpose of the mechanism as focused on promoting solidarity between Member States through practical coordination and cooperation, but without this implying prejudice to the liability of either the State or private actors (UE, 2013). Thus, mechanisms of cooperation and reciprocal support are seen as part of the Member State's primary liability.

A similar situation is not directly captured in Brazilian disaster legislation. Law No. 12.608/2012 (National Civil Defense and Protection Policy – PNPDEC; Brasil, 2012) only began to establish a connection between risk management and liability for environmental, social, and economic damage caused by disasters in 2023. Law No. 14,750/2023 substantially changed this connection point. In addition to better determining the management of the disaster cycle, it established the objectives of the PNPDEC as including risk analysis and disaster prevention in the environmental licensing process, as well as promoting the accountability of the private sector in adopting disaster prevention measures and in preparing and implementing a contingency plan or a related document (Brasil, 2023).

In the European Union scenario, the provisions of the directives establish a series of responsibilities for managing the territory and risks related to its vulnerability, in order to achieve levels of resilience in the face of potential disasters. Member States are analyzed according to their risk management capacity, understood as the capacity of Member States or their regions to reduce, adapt, or mitigate to acceptable levels the risks, impact, and probability of a disaster, identified from risk assessments, in accordance with Article 4, item 8, of the aforementioned Decision 1313 (UE, 2013). Risk management capacity is assessed according to technical, financial, and administrative capacities, by ensuring in an appropriate manner the process of assessment, planning for prevention and preparation, and adoption of response measures.

The systemic nature of risk management will involve the coordination of mechanisms linked to the disaster cycle (Carvalho; Damacena, 2013) with environmental responsibility forecasts. Once again, complex thinking comes to the fore. Disasters resulting from environmental violations attract the assessment of

typicality for the incidence of criminal punishment, precisely because of their qualitative nature, as well as the fluidity of stricter levels of civil liability. Community legislation implies a direct effect, insofar as it involves all domestic legislation in an integrated and systemic hermeneutical harmony in which each country's norms must be in tune with the established normative vectors.

In this sense, the regulatory provisions of the European Union imply direct effects on the Member States, a factor that influences both Spanish legislation and the hermeneutical formation of its application. However, the situation is not repeated in Mercosur.

While the European Union has an influence of community legislation for the purposes of affirming domestic regulations, in Mercosur the opposite direction is observed. The triggers or support for international standards present in treaties and conventions do not have a similar effect to that which would be obtained with fixations derived from the regional discursive and deliberate flow with implications for driving domestic legislation. The still inconspicuous and incisive nature of Mercosur normative activities outlines extremely incipient normative vectors that, at times, even go unnoticed by the member countries' populations and their political-democratic centers. It is evident that the aspirations for extension and linkage are very different between Mercosur and the European Union, although this does not mean that critical development is impossible with regard to existing potentialities and also with regard to those that are ignored.

Mercosur is trying out valves in its relations and standardizations that allow for thematic niches of strengthening, with the environment being one of them. Nevertheless, soft law is developed with low intensity and density, in a true stage of normative timidity that enables perspectives that do not reach levels of unity in development by member countries. As a result, there is no regional vector in Mercosur solid enough to support and drive the countries' regulations at levels of uniformity or coherence with an ecological-protective programming vector established on an international scale.

Mercosur standards fall short of a vectorial trigger or even of a support for the development of a basis, either by the Member States' Legislative or Executive branch. The Common Market Treaty, enacted in Brazil by Decree No. 350/1991, indicates in its recitals that environmental preservation is one of its objectives (Brasil, 1991). However, although more than three decades have passed, both from a quantitative and a qualitative perspective, there has been little development of normative or guiding principles that drive development from an environmental perspective.

Mercosur has four important resolutions on environmental matters and three relevant decisions. Resolution No. 53/1993 establishes a code of conduct for the imports of biological control agents and their release into the environment (Mercosul, 1993). Nonetheless, the provisions are only incorporated by Paraguay, through EP Decree No. 15.000/96, and by Uruguay, in Decree No. 393/997 (Paraguai, 1996; Uruguai, 1997). Resolution No. 38/2019 provides for the preparation of a plan for the prevention, monitoring, control, and mitigation of invasive alien species (Mercosul, 2019). It thus refers to an open development prognosis, not yet densified.

Resolution No. 45/2002 aims to have regulatory effects on Mercosur based on the Johannesburg Implementation Plan, as well as the Latin America Sustainability Initiative. One of its main objectives is to incorporate the environmental component into sectoral policies and include environmental considerations in Mercosur decision-making (Mercosul, 2002). This last resolution is in line with Resolution No. 8/2001 and takes the draft decision on the Mercosur Framework Agreement on the Environment to the Common Market Council.

The Framework Agreement is present in Decision No. 2/2001, with an additional protocol presented by Decision No. 14/2004 (Mercosul, 2001b, 2004). Unlike the European Union directives, the Framework Agreement presents levels of abstraction that are much greater than normative requirements for compliance. The Framework Agreement establishes, in its Article 1, the commitment to the principles set out in the 1992 Rio de Janeiro Declaration (Mercosul, 2001b). Its provisions aim to promote principles to be adopted by the legislation of Mercosur members, aimed at sustainable development and achieving environmental quality standards. The open prospective content of the Agreement is verifiable by its article 5, which states:

> Article 5. The States Parties shall cooperate in compliance with the International Agreements that address environmental matters to which they are parties. This cooperation may include, when deemed appropriate, the adoption of common policies for the protection of the environment, the conservation of natural resources, the promotion of sustainable development, the presentation of joint communications on issues of common interest and the exchange of information on national positions in international environmental forums (Mercosul, 2001b, free translation)[4].

4 In the original: "Art. 5º. Os Estados Partes cooperarão no cumprimento dos Acordos Internacionais que contemplem matéria ambiental dos quais sejam parte. Esta cooperação poderá incluir, quando se julgar conveniente, a adoção de políticas comuns para a proteção do meio ambiente, a conservação dos recursos naturais, a promoção do desenvolvimento sustentável, a apresentação de comunicações conjuntas sobre temas de interesse comum e o intercâmbio de informações sobre posições nacionais em foros ambientais internacionais".

The indication of openness, with the reference to "when deemed appropriate" (Mercosul, 2001b, free translation)[5], in addition to the strictly principled nature of the references for action, contrasts with the vectorial determinations of conduct present in the European Union. A protocol of possibilities is established, with great caution so that the regulations of the Common Market do not advance beyond the preconceived levels for their acceptability of extremely limited interference. This is certainly one of the reasons for the lack of reference and even low expectations regarding Mercosur's potential to address environmental problems.

The Additional Protocol to the Framework Agreement contained in Decision No. 14/2004 did not change its matrix from the perspective of binding actions. Nonetheless, it did introduce an important regional approach to risk management. The Additional Protocol concerns Cooperation and Assistance in Environmental Emergencies. This does not provide a comprehensive approach that covers all dimensions of the disaster cycle, or even considerations of environmental liability. Even so, it is still a feasible way for the Common Market to project itself towards more sophisticated levels of action in regional risk management and in the protection of ecological assets and vulnerable populations (Mercosul, 2004).

A duty of solidarity was established between the States Parties, provided for in Art. 2, according to which they will provide reciprocal cooperation and assistance when an emergency occurs with actual or potential consequences for the environment or the population, whether in their own territory or in another Member State (Mercosul, 2004). The regulation outlines general bases for the development of civil defense action plans and response to environmental disaster situations, with exchanges of information and shared measures of technology and personnel. A protocol of actions for notification of environmental emergencies is established, as well as for international assistance from States.

Although the design of an effective regional disaster management model appears to be rehearsed for future strengthening, unlike the formulations of the European Union, its central focus remains on attention to natural disasters. Therefore, there is a gap regarding anthropogenic disasters and environmental damage as a whole and, by extension, regarding the civil, administrative, and criminal liabilities arising therefrom. In scenarios of economic, cultural, and geographic interconnection, situations of *bis in idem* and jurisdiction for imputation of civil and criminal liability are pressing and predictable issues that may occur in practice. However, there are no trends in Mercosur for prior treatment of the matter.

There are no channels for dialogue between risk management and the

5 In the original: "quando se julgar conveniente".

determination of environmental liabilities, whether in the civil, administrative, or criminal spheres. All of those are implicitly left to the development of domestic legislation, and Mercosur mechanisms are not a source of guidance or reference for coherent normative treatments or even with a dialogical content between countries. There is a real political and legal obstruction in the adequate application of critical development based on the recursive principle.

The recursive principle refers to a spiral of self-producing and self-organizing dynamics (Morin, 2005). Morin's complex thinking conceives the application of the principle on a scale of continuity through which the generation of effects becomes in itself the cause of new factors that derive reactive effects. There is a sequential and spiral web through which causality interconnects cause and effect in a dual functional performance. The effect becomes the cause, and the cause, the effect. In other words, there is a continuity in which the initial and the final are interconnected in a continuity conjugation.

The complex thinking of Morin (1992) applies here, which enables critical analysis and the establishment of a diagnostic perspective regarding the diverse and, at times, frustrating performance of the potential for environmental regulation in Mercosur compared to the regents in the European Union. If in the European Union the flow of the recursive principle provides a continuous spiral between cause and effect, reciprocally involving internal, community, and international legislation on environmental matters, in Mercosur and its Member States there is a deficiency in this appealing integration, causing gaps between the expression of internal law, regional standards, and the general provisions of international environmental standards.

3 Environmental regulatory frameworks in Spain and Brazil and their implications for recursion by the European Union and Mercosur

The recursive principle causes a spiral of constructions and reconstructions that relate the international normative bases to the internal normative bases of both Brazil and Spain. However, the low-density flow of Mercosur regional standards produces an inverse flow, that is, the Brazilian normative matrix influences the scenario of potential for the creation and application of regional standards more than vice versa.

This is also linked to the context of each country's political-administrative organization and to the way in which international environmental standards undergo processes of reciprocal integration in the global-regional-local dynamics. The

integration of governmental levels is directly affected by the model of political-administrative organization. In the Spanish context, the system of local competences is closely related to the State's autonomous model.

In the dynamics of the model, which is organized into municipalities, provinces and autonomous communities, Miguez Macho (2002, p. 38, free translation) explains that, in the Spanish structure, "local entities are not simple internal divisions of the autonomous communities, but of the State as a whole, with equal recognition of autonomy towards them"[6]. The normative basis of the provision is in Art. 137 of the Spanish Constitution (España, 1978). There is management autonomy, but it is centered and linked to bases of structural organization. The European Union's standards are projected onto all political-administrative spheres, and not only onto the sphere of the central government. In this line, Art. 138 establishes the principle of solidarity as a governing principle of territorial organization and, simultaneously, Art. 135, item 2, determines that the State and autonomous communities cannot incur a structural deficit that exceeds the margins established by the European Union for its Member States (España, 1978). In this regard, Solís (2007, p. 75, free translation) highlights that, "if there is a common characteristic of the new Statutes of Autonomy proposed since 2005, it is that they all clearly resort to a claim for European self-affirmation"[7]. In Brazilian national terms, it would be as if the Member States of the federation implemented in their internal rules direct provisions contained in the Mercosur rules.

In Brazil, the principle of solidarity has a meaning linked to generations as a whole, especially when it comes to environmental matters, as provided for in art. 225 of the Constitution of the Federative Republic of Brazil (CRFB) (Wedy; Moreira, 2019). In addition, it is linked to the federative structure, in a federalism of environmental cooperation in which the development of the inspection activity occurs through the exercise of common competence among the federated entities, according to Art. 23 of the CRFB (Bim; Farias, 2019). Nevertheless, the incorporation of international standards depends on the federal legislative process, through which international treaties and conventions are approved by the National Congress (Art. 49, I) and by the President of the Republic (Art. 84, VIII; Brasil, 1988).

There is no direct recursive flow between the legislation or legislative

6 In the original: "los entes locales no son simples divisiones internas de las Comunidades Autónomas, sino del Estado en su conjunto, con igual reconocimiento de autonomía que aquéllas".

7 In the original: "si existe una característica común a los nuevos Estatutos de Autonomía propuestos a partir de 2005 es que en todos se recoge claramente una pretensión de autoafirmación europea".

potential of the federative member states, much less their municipalities, and the implementation or vector of implementation of international or regional environmental standards provided for in a treaty, convention, or other instrument. Not even the Mercosur's general deliberations can be a factor of direct reference influence, although they can, of course, be a driving factor for the eventual exercise of their own competence, given the concurrent competence provided for in Art. 24, VI, of the CRFB (Brazil, 1988).

Spanish appealing environmental governance still displays other differences in relation to Brazil. The principle of solidarity in the Spanish Constitution refers to levels of economic and financial commitment, so that there are measures that mitigate imbalances between the regions of the country and, simultaneously, promote a coherent and integrated organization of the management of environmental resources (España, 1978). The nature of the governing principle of the political and administrative organization can be verified in Law No. 7/1985, to establish the levels of local autonomy (Macho, 2002).

Law No. 7/1985 establishes, in its Art. 84-bis, the general rule that a license or preventive action is not necessary for activities or undertakings unless there is a justification aimed at protecting the environment specifically verified in the place where the activities are carried out (España, 1985). In addition, these reasons for requirement demand that the presentation of a self-declaration of compliance is not sufficient or even when, "due to the scarcity of natural resources, the use of public domain, the existence of unequivocal technical impediments or due to the existence of public services subject to regulated tariffs, the number of economic operators in the market is limited"[8] (España, 1985, free translation).

The legal framework aims to articulate a punitive and regulatory matrix with incursions determined based on predictions supported by legally foreseen situations and managed based on concrete, verified, or foreseeable impacts according to the type of activity. These predictions of the Spanish model will imply a differentiation between Punitive Administrative Law and Criminal Law, according to the qualitative level of the infraction. A model of opening is articulated based on risk assessment with regard to the characteristics of the undertaking, combining regional, national, and community legislation. Likewise, the predictions of the type of civil liability, objective or subjective, based on the activity, are supported by this risk management assessment. In other words, environmental management

8 In the original: "por la escasez de recursos naturales, la utilización de dominio público, la existencia de inequívocos impedimentos técnicos o en función de la existencia de servicios públicos sometidos a tarifas reguladas, el número de operadores económicos del mercado sea limitado".

and the response to environmental damage are determining factors for the content of the administrative or criminal application in the punishment, as well as the gradation and regulatory framework for damage repair.

The matter is regulated in Art. 84-bis.2 of Law No. 7/1985, by determining that facilities or physical infrastructures for the exercise of economic activities will only be subject to an authorization regime when established by law, with their essential requirements being defined, as well as in the situation of being susceptible to causing damage to the environment and urban surroundings, to public safety or health and to historical heritage (España, 1985). Risk assessment is based on the potential, size, and contaminating or dangerous nature

In the Brazilian system, risk assessment or risk-oriented environmental management does not influence the establishment of the regulatory framework, whether for civil, criminal, or administrative liability. On the contrary. In terms of reparation, the risk management levels of the enterprise or activity are irrelevant for defining the liability matrix, as defined in Art. 14 of Law No. 6.938/1981 and in the case law of the STJ (REsp 1374284/MG – Repetitive Theme 707) (Brasil, 1981, 2014). From a criminal and administrative perspective, in addition to the liability being cumulative, the management or participation of the person responsible for the occurrence of the degradation will only influence the analysis of the gradation of the penalty, as provided for in Art. 6 of Law No. 9.605/1998 (Brasil, 1998a).

The Spanish autonomous system, although it assumes its own premises and consequences between the legislative and administrative activities of the governmental spheres, also assumes as necessary an effective participation of the state spheres in the formulation and execution of the organization of the territory. This organization works with the management of environmental assets and the risks implied by human activities. Article 45 of the Spanish Constitution resembles, in several points, the Brazilian constitutional provisions. Article 45.1 defines that everyone has the right to enjoy an environment suitable for the person development, just as everyone has the duty to preserve it (Spain, 1978). It then determines that public authorities shall ensure the rational use of all natural resources, with the aim of protecting and improving the quality of life and defending and restoring the environment, based on collective solidarity.

In terms of environmental licenses and authorizations, there is a significant difference. Law No. 7/1985 expressly allows, in its Art. 84-bis.3, the possibility of concurrent licenses between government levels, although it establishes requirements for this. The rule states that, in the event of competing licenses

or authorizations, the local authority must expressly justify the need to defend the general interest in the specific case and the one it seeks to protect, expressing the reason for considering the act issued by another public sphere as insufficient for this purpose (España, 1985). In Brazil, Complementary Law No. 140/2011 takes a different direction. Its art. 13 determines that enterprises and activities are licensed or authorized environmentally by a single federative entity, in accordance with the attributions established in the Complementary Law (Brasil, 2011).

In terms of liability, Art. 45.3 of the Spanish Constitution defines the coexistence of criminal liability with administrative liability (España, 1978). However, unlike the Brazilian system, they are not cumulative, and criminal liability may absorb administrative liability, or even administrative liability may make the application of criminal liability unnecessary. This point is extremely relevant and is specifically regulated by Law No. 26/2007, when defining environmental liability (España, 2007).

Article 6 of Law No. 26/2007 regulates the concurrence between administrative and criminal liability in matters of damage to environmental assets with regard to civil liability, that is, the liability to repair the environmental damage caused. The non-concurrence is present in Article 36 of this law, which, nevertheless, maintains the application of cumulation with the liability to remedy the damage (España, 2007). Thus, there is a logic of prohibiting *bis in idem* between criminal charges and charges relating to the sanctioning law, which has an administrative, albeit punitive, basis. The interpretative basis for the gradation between Punitive Criminal Law and Punitive Administrative Law can be drawn from the judgments of the Spanish Supreme Court.

The central point of definition between administrative and criminal punishments is the severity of the environmental damage caused. Here, we can see a direct flow of influence from the standards established in European directives. Article 325 of the Spanish Penal Code defines crimes against natural resources and the environment. The provision refers to the penalization of infractions that cause or may cause substantial damage to the quality of air, soil, water, fauna, or flora (España, 1995). The comprehensive basis for the non-cumulation of administrative and criminal punishment can be seen in ruling 916/2008, reiterated in other judgments, such as STS 2121/2016:

> And Ruling 916/2008, of December 30, through its art. 325, requires that an element of typicality is the severity of the danger to which the imbalance of natural systems or, as the case may be, people's health is subjected. If it does not reach this level, the behavior may only give rise, if applicable, to administrative

> punitive reactions. To find the average type of severity referred to in art. 325 of the Penal Code, it is necessary to pay attention to the proportion in which both the anthropocentric factor, that is, people's health, and the natural conditions of the ecosystem (soil, air, water) are endangered, which therefore influence the land, fauna, and flora that are endangered. This is a constitutive element of the criminal type whose concurrence must be determined concretely, through evidence[9] (España, 2016, free translation).

The Spanish Supreme Court made clear, in Decision No. 916/2008, the hermeneutic line of separation between Punitive Administrative Law and Punitive Criminal Law. Therefore, unlike Brazil, where administrative and criminal punishments are simultaneous, in Spain it is the assessment of the degree of harm to the legal interest that determines the suitability of criminal punishment:

> An analysis of Article 325 of the Penal Code reveals that the gravity of the risk produced is the key point that will allow us to establish the boundary between a merely administrative offense and a criminal offense, since the aforementioned provision requires that the typified conduct "may seriously harm the balance of natural systems". And "if the risk of serious harm is to people's health, the prison sentence will be imposed starting from half of that provided for in the law. Criminal punishments should therefore be reserved for those conducts that place the protected legal asset (the environment) in a situation of serious danger, with ordinary protection, both preventive and punitive, corresponding to administrative action and regulation[10] (España, 2008, free translation).

Although the Spanish punitive discipline differs from the Brazilian one in terms of the administrative punishment and penal exercise, both legal systems express the cumulation of punitive requirements with the provisions for remedying damages caused to environmental assets. Furthermore, the hermeneutical

9 In the original: "Y en la sentencia 916/2008, de 30 de diciembre, se establece que art. 325 exige como elemento de tipicidad, la gravedad del peligro a que se somete al equilibrio de los sistemas naturales, o en su caso, a la salud de las personas. De no alcanzar este nivel, el comportamiento sólo podrá dar lugar, en su caso, a reacciones sancionadoras administrativas. Para encontrar el tipo medio de la gravedad a que se refiere el art. 325 del Código penal habrá que acudir a la medida en que son puestos en peligro, tanto el factor antropocéntrico, es decir la salud de las personas, como a las condiciones naturales del ecosistema (suelo, aire, agua) que influyen, por lo tanto, en la gea, la fauna y la flora puestas en peligro. Se trata de un elemento constitutivo del tipo penal cuya concurrencia debe determinarse, en concreto, mediante la prueba".

10 In the original: "El examen del artículo 325 del Código Penal revela que es la gravedad del riesgo producido la nota clave que permitirá establecer la frontera entre el ilícito meramente administrativo y el ilícito penal ya que el mencionado precepto exige que las conductas tipificadas 'puedan perjudicar gravemente el equilibrio de los sistemas naturales', Y 'si el riesgo de grave perjuicio fuese para la salud de las personas la pena de prisión se impondrá en su mitad superior'. La sanción penal debe reservarse, por consiguiente, para aquellas conductas que pongan el bien jurídico protegido (el medio ambiente) en una situación de peligro grave, correspondiendo la protección ordinaria tanto preventiva, como sancionadora, a la actuación y regulación administrativa".

construction reveals that both in Brazil and in Spain it was the courts that established the dynamics of correlation between Punitive Law and Criminal Law from the punitive aspect, supporting the hermeneutical development of the legislation.

Another relevant point shows convergences between the regulatory matrices. The Spanish Penal Code (Ley Orgánica 10/1995) expressly admits the legal entities' criminal liability, following the guidelines of the community standards. In its art. 31-bis, it provides that legal entities are criminally liable for crimes committed in their name or on their behalf, as well as for their direct or indirect benefit, whether by their legal representatives or by anyone authorized by them to make decisions or that has the power to organize or control (España, 1995).

The provision then establishes situations of exclusion or weighting of liability, including based on the analysis of the size of the legal entity. Regarding the penalties applicable to legal entities, the Code establishes, in its Art. 33.7, fines by quotas or proportionally, considering the damage or degradation caused. The dynamics of the penalty by fines is verified in Art. 328, located in the chapter that deals with crimes against natural resources and the environment, which, apart from the restriction of activities and rights, establishes financial sanctions in direct proportion to the damage caused (España, 1995).

Additionally, Art. 33.7 provides for penalties aimed at the suspension of activities, which may not exceed five years, closure of establishments or units, as well as a specific temporary or definitive prohibition regarding the activity that is the object of the crime (art. 33.7, e; Spain, 1995). Moreover, there is the provision for disqualification from obtaining subsidies or public financing, as well as a prohibition on entering into contracts with the public sector or receiving tax or social security benefits or incentives for a period of up to 15 years. In addition to the punishments provided for therein, two others stand out and are interesting for analysis, especially because they are not directly provided for in Brazilian environmental legislation.

The first of these is the compulsory dissolution of the legal entity. The truth is that Art. 24 of Law no. 9.605/1998 provides that a legal entity established or used predominantly for the purpose of permitting, facilitating, or concealing the practice of an environmental crime will have its forced liquidation decreed, and its assets will be considered an instrument of the crime and, as such, forfeited in favor of the National Penitentiary Fund (Brazil, 1998a). This provision is in line with Art. 5, XIX, of the CRFB (Brazil, 1988). The Spanish Penal Code, in its Art. 33.7, b, determines that the dissolution of a legal entity can be applied in itself as a criminal punishment (España, 1995).

The provision of Brazilian law is not restricted to the purely criminal sanctioning field, opening space, including for civil actions aimed at forced liquidation (Brazil, 1988). The Spanish law determines that the dissolution of a legal entity results in the definitive loss of its personality, as well as its legal capacity for negotiation or proceedings, and the entity loses the ability to carry out any activity, even if lawful (España, 1995). Here, a penalty is imposed as a result of the criminal prosecution.

The main distinction between the normative matrices concerns judicial intervention as a result of the environmental criminal prosecution, something not directly provided for in Brazilian legislation. Article 33.7, g, of the Spanish Penal Code establishes as a penalty applicable to legal entities judicial intervention to safeguard the rights of workers or creditors for a period deemed necessary, not exceeding five years (España, 1995). Intervention can be used, from an environmental perspective, to protect and provide for the repair of environmental damage, whether diffuse ecological or individual environmental. The intervention procedure is provided for in art. 33:

> The intervention may affect the entire organization or be limited to some of its establishments, sectors, or business units. The Judge or Court, in the decision or, subsequently, by means of an order, will determine exactly the content of the intervention and will determine who will be in charge of the intervention and within what timeframe progress reports must be made to the judicial body. The intervention may be modified or suspended at any time with a prior report from the intervenor and the Public Prosecutor's Office. The intervenor will have the right to access all the facilities and locations of the company or legal entity and to receive all the information they deem necessary for the exercise of their functions. The regulations will determine the aspects related to the exercise of the intervenor's function, with the necessary remuneration or qualification[11] (España, 1995, free translation).

Once again, there is a harmonious argumentative and teleological cohesion between Spanish and European Community legislation. Therefore, it is possible to affirm the appealing nature between the regulatory spheres, that is, a spiral flow in which the normative vectors of European standards are added to and

11 In the original: "La intervención podrá afectar a la totalidad de la organización o limitarse a alguna de sus instalaciones, secciones o unidades de negocio. El Juez o Tribunal, en la sentencia o, posteriormente, mediante auto, determinará exactamente el contenido de la intervención y determinará quién se hará cargo de la intervención y en qué plazos deberá realizar informes de seguimiento para el órgano judicial. La intervención se podrá modificar o suspender en todo momento previo informe del interventor y del Ministerio Fiscal. El interventor tendrá derecho a acceder a todas las instalaciones y locales de la empresa o persona jurídica y a recibir cuanta información estime necesaria para el ejercicio de sus funciones. Reglamentariamente se determinarán los aspectos relacionados con el ejercicio de la función de interventor, como la retribución o la cualificación necesaria".

drive the Member State's line of conduct, which, in turn, is added to the initial vector. Intervention in a private company is legally provided for as a way to ensure repair of damages and, thus, guarantee the effectiveness of environmental liability commands.

While in the Spanish matrix, criminal punishment for environmental violations is rooted in the European environmental regulatory framework, in Brazil all environmental penalization articulation comes from the constitutional text. Article 225, Paragraph 3, of the CRFB, establishes that conduct and activities considered harmful to the environment will subject offenders, whether individuals or legal entities, to criminal and administrative punishment, regardless of the obligation to repair the damages caused (Brasil, 1988). Here is the source of triple and cumulative liability in environmental matters.

The infra-constitutional regulation carried out by Law No. 9,605/1998 indicates, in Article 3, that legal entities will be held administratively, civilly, and criminally liable in cases where the infraction is committed by decision of their legal or contractual representative, or of their collegiate body, in the interest or benefit of their entity. Next, Article 21 defines that the penalties applicable to legal entities are fines, restriction of rights and provision of services (Brasil, 1998a). In addition to these, as mentioned, it is also possible to articulate, on a criminal scale, the indication of liquidation of the legal entity constituted or used predominantly for environmental unlawful acts. Nonetheless, there is no legal space for judicial interventions in business management.

Regarding the scope of application of penalties, the STF has established that the liability of legal entities and that of individuals are not reciprocally dependent. The STF overcame the previous position of the STJ and determined, in RE 548.181/PR, that the "Federal Constitution does not condition the criminal liability of a legal entity for environmental crimes to the simultaneous criminal prosecution of the individual allegedly responsible within the company. The constitutional norm does not impose the necessary double imputation"[12] (Brasil, 2013).

On this point, unlike the Spanish matrix, which relied on the progressive implementation of community and national norms for the purpose of determining the punishability of legal entities and the punitive autonomy in relation to individuals, the Brazilian normative basis only achieved hermeneutical definition based on the judicial debate and the conclusion of the thesis by the STF. The low

12 In the original: "Constituição Federal não condiciona a responsabilização penal da pessoa jurídica por crimes ambientais à simultânea persecução penal da pessoa física em tese responsável no âmbito da empresa. A norma constitucional não impõe a necessária dupla imputação".

normative density on an international and regional scale led to a shift in the environmental discursive field to the Judiciary.

Final considerations

A comparative analysis of the models of environmental punitive and environmental reparatory protection allows us to identify a recursive nature between international, community, or regional legislation and the States' national legislation. However, while the density and intensity of the recursive principle are prominent in the Spanish regulatory framework, in the Brazilian regulatory framework there is a low affirmation of recursion. This low density means that Brazilian environmental regulatory development, whether for ratification purposes or for reflection or reconfiguration purposes, require extensive criticism and analysis related to comparative law, at the risk of depriving national legislation of other references.

In terms of punitive law, the Brazilian regulatory framework demands critical analyses and development regarding the always cumulative and, at times, ineffective overlap between administrative liability and criminal liability for environmental violations. Although punitive law is integrated by punitive law and criminal law, constant overlap tends to produce negative effects.

Punitiveness and the effectiveness of Sanctioning Law are weakened. After all, the scale of application of administrative punishments by the environmental agency will always be in line with the judicial punitive applications that occur in criminal proceedings. On the other hand, any and all environmental infractions or offenses are dragged into the criminal sphere, including situations that could have their containment or reprehensible solution well articulated in the punitive administrative sphere.

Regarding the regulatory framework for reparations, questions arise beyond the purely establishing model of the obligation centered on objective liability by the theory of integral risk. There is no point in establishing broad legal rules if the result is merely the judicial approval of the duty to repair without the repair itself actually occurring on a real scale. It is necessary to equip the system with effective ways to support action for damages, beyond the duty abstractly recognized in the legislation. In this regard, risk management and environmental governance assessment are essential. Moreover, there is the role of the internal management of private enterprises, which must adapt and function in favor of an increasingly sophisticated framework for diagnosis, management, and risk prevention.

The structural and contextual framework reveals the impossibility of

managing or addressing environmental problems without considering their profound interconnection and complexity. Environmental sanctioning and reparation protection demands dialogue and interconnection of management, as well as continuous assessments of how national States address their respective ecological problems, without ever neglecting the peculiarities and institutions of each country, in order to avoid inadequate or unsuitable regulatory transplants for the different realities from which they were forged.

References

BIM, E. F.; FARIAS, T. Competência ambiental legislativa e administrativa. *In:* FARIAS, T.; TRENNEPOHL, T. *Direito Ambiental Brasileiro*. São Paulo: Thomson Reuters, 2019. p. 98-152.

BRASIL. Lei n. 14.750, de 12 de dezembro de 2023. Altera as Leis nºs 12.608, de 10 de abril de 2012, e 12.340, de 1º de dezembro de 2010, para aprimorar os instrumentos de prevenção de acidentes ou desastres e de recuperação de áreas por eles atingidas, as ações de monitoramento de riscos de acidentes ou desastres e a produção de alertas antecipados. *Diário Oficial da União:* seção 1, Brasília, DF, p. 1, 13 dez. 2023. Available from: https://www.planalto.gov.br/ccivil_03/_ato2023-2026/2023/lei/l14750.htm. Access on: Feb. 11, 2025.

BRASIL. Superior Tribunal de Justiça. Tema repetitivo n. 707. Recurso Especial – REsp n. 1374284/MG. Relator: Ministro Luís Felipe Salomão. 2ª Seção. *Diário da Justiça Eletrônico*, Brasília, DF, 5 set. 2014. Available from: https://processo.stj.jus.br/repetitivos/temas_repetitivos/pesquisa.jsp?novaConsulta=true&tipo_pesquisa=T&cod_tema_inicial=707&cod_tema_final=707. Access on: Feb. 11, 2025.

BRASIL. Supremo Tribunal Federal (1ª Turma). *Recurso Extraordinário n. 548.181/PR*. Recurso Extraordinário. Direito Penal. Crime ambiental. Responsabilidade penal da pessoa jurídica. Condicionamento da ação penal à identificação e à persecução concomitante da pessoa física que não encontra amparo na Constituição da República. Recorrente: Ministério Público Federal. Recorrido: Petróleo Brasileiro S/A – Petrobras. Relatora: Min. Rosa Weber. *Diário da Justiça Eletrônico*, Brasília, DF, 6 ago. 2013. Available from: https://redir.stf.jus.br/paginadorpub/paginador.jsp?docTP=TP&docID=7087018. Access on: Feb. 11, 2025.

BRASIL. Lei n. 12.608, de 10 de abril de 2012. Institui a Política Nacional de Proteção e Defesa Civil – PNPDEC; dispõe sobre o Sistema Nacional de Proteção e Defesa Civil – SINPDEC e o Conselho Nacional de Proteção e Defesa Civil – CONPDEC; autoriza a criação de sistema de informações e monitoramento de desastres; altera as Leis nºs 12.340, de 1º de dezembro de 2010, 10.257, de 10 de julho de 2001, 6.766, de 19 de dezembro de 1979, 8.239, de 4 de outubro de 1991, e 9.394, de 20 de dezembro de 1996; e dá outras providências. *Diário Oficial da União:* seção 1, Brasília, DF, p. 1, 11 abr. 2012. Available from: https://www.planalto.gov.br/ccivil_03/_ato2011-2014/2012/lei/l12608.htm. Access on: Feb. 11, 2025.

BRASIL. *Lei Complementar n. 140, de 8 de dezembro de 2011*. Fixa normas, nos termos dos incisos III, VI e VII do caput e do parágrafo único do art. 23 da Constituição Federal, para a cooperação entre a União, os Estados, o Distrito Federal e os Municípios nas ações administrativas decorrentes do exercício da competência comum relativas à proteção das paisagens naturais notáveis, à proteção do meio ambiente, ao combate à poluição em qualquer de suas formas e à preservação das florestas, da fauna e da flora; e altera a Lei no 6.938, de 31 de agosto de 1981. *Diário Oficial da União:* seção 1, Brasília, DF, p. 1, 9 dez. 2011. Available from: https://www.planalto.gov.br/ccivil_03/leis/lcp/lcp140.htm. Access on: Feb. 11, 2025.

BRASIL. *Lei n. 9.605, de 12 de fevereiro de 1998*. Dispõe sobre as sanções penais e administrativas derivadas de condutas e atividades lesivas ao meio ambiente, e dá outras providências. *Diário Oficial da União:* seção 1, Brasília, DF, p. 1, 13 fev. 1998a. Available from: https://www.planalto.gov.br/ccivil_03/leis/l9605.htm. Access on: Feb. 11, 2025.

BRASIL. Decreto n. 2.519, de 16 de março de 1998. Promulga a Convenção sobre Diversidade Biológica, assinada no Rio de Janeiro, em 05 de junho de 1992. *Diário Oficial da União:* seção 1, Brasília, DF, p. 1, 17 mar. 1998b. Available from: https://www.planalto.gov.br/ccivil_03/decreto/d2519.htm. Access on: Feb. 11, 2025.

BRASIL. Decreto n. 2.652, de 1º de julho de 1998. Promulga a Convenção-Quadro das Nações Unidas sobre Mudança do Clima, assinada em Nova York, em 9 de maio de 1992. *Diário Oficial da União:* seção 1, Brasília, DF, p. 6, 2 jul. 1998c. Available from: https://www.planalto.gov.br/ccivil_03/decreto/d2652.htm. Access on: Feb. 11, 2025.

BRASIL. Decreto n. 350, de 21 de novembro de 1991. Promulga o Tratado para a Constituição de um Mercado Comum entre a República Argentina, a República Federativa do Brasil, a República do Paraguai e a República Oriental do Uruguai (TRATADO MERCOSUL). *Diário Oficial da União:* seção 1, Brasília, DF, 22 nov. 1991. Available from: https://www.planalto.gov.br/ccivil_03/decreto/1990-1994/d0350.htm. Access on: Feb. 11, 2025.

BRASIL. Lei n. 7.735, de 22 de fevereiro de 1989. Dispõe sobre a extinção de órgão e de entidade autárquica, cria o Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis e dá outras providências. *Diário Oficial da União:* seção 1, Brasília, DF, p. 2729, 23 fev. 1989. Available from: https://www.planalto.gov.br/ccivil_03/leis/l7735.htm. Access on: Feb. 11, 2025.

BRASIL. [Constituição (1988)]. *Constituição da República Federativa do Brasil*. Brasília, DF: Presidência da República, 1988. Available from: https://www.planalto.gov.br/ccivil_03/constituicao/constituicao.htm. Access on: Feb. 11, 2025.

BRASIL. *Lei n. 6.938, de 31 de agosto de 1981*. Dispõe sobre a Política Nacional do Meio Ambiente, seus fins e mecanismos de formulação e aplicação, e dá outras providências. *Diário Oficial da União:* seção 1, Brasília, DF, p. 16509, 2 set. 1981. Available from: https://www.planalto.gov.br/ccivil_03/leis/l6938.htm. Access on: Feb. 11, 2025.

BRASIL. Lei n. 6.453, de 17 de outubro de 1977. Dispõe sobre a responsabilidade civil por danos nucleares e a responsabilidade criminal por atos relacionados com atividades nucleares e dá outras providências. *Diário Oficial da União:* seção 1, Brasília, DF, 17 out. 1977. Available from: https://www.planalto.gov.br/ccivil_03/leis/l6453.htm. Access on: Feb. 11, 2025.

BRASIL. Decreto n. 76.623, de 17 de novembro de 1975. Promulga a Convenção sobre Comércio Internacional das Espécies da Flora e Fauna Selvagens em Perigo de Extinção. *Diário Oficial da União:* seção 1, Brasília, DF, p. 15450, 19 nov. 1975. Available from: https://www.planalto.gov.br/ccivil_03/decreto/antigos/d76623.htm. Access on: Feb. 11, 2025.

BRASIL. Decreto n. 73.030, de 30 de outubro de 1973. Cria, no âmbito do Ministério do Interior, a Secretaria Especial do Meio Ambiente – SEMA, e dá outras providências. *Diário Oficial da União:* seção 1, Brasília, DF, p. 11024, 30 out. 1973. Available from: https://www2.camara.leg.br/legin/fed/decret/1970-1979/decreto-73030-30-outubro-1973-421650-publicacaooriginal-1-pe.html. Access on: Feb. 11, 2025.

CARVALHO, D. W.; DAMACENA, F. D. L. *Direito dos Desastres*. Porto Alegre: Livraria do Advogado, 2013.

ESPAÑA. Tribunal Supremo. *STS 2121/2016, de 28 de abril de 2016*. Available from: https://www.poderjudicial.es/search/openDocument/ef65327050f89ff7. Madrid: Tribunal Supremo, 2016. Access on: Feb. 11, 2025.

ESPAÑA. Tribunal Supremo. *STS 916/2008, 30 de Diciembre de 2008*. Madrid: Tribunal Supremo, 2008. Available from: https://vlex.es/vid/-53908690. Access on: Feb. 11, 2025.

ESPAÑA. Ley 26/2007, de 23 de octubre, de Responsabilidad Medioambiental. *Boletín Oficial del Estado*, n. 255, p. 43229-43250, 24 out. 2007. Available from: https://www.boe.es/buscar/act.php?id=BOE-A-2007-18475. Access on: Feb. 11, 2025.

ESPAÑA. Ley Orgánica 10/1995, de 23 de noviembre, del Código Penal. *Boletín Oficial del Estado*, n. 281, p. 33987-34058, 24 nov. 1995. Available from: https://www.boe.es/buscar/act.php?id=BOE-A-1995-25444. Access on: Feb. 11, 2025.

ESPAÑA. Ley 7/1985, de 2 de abril, Reguladora de las Bases del Régimen Local. *Boletín Oficial del Estado*, n. 80, p. 8945-8964, 3 abr. 1985. Available from: https://www.boe.es/buscar/act.php?id=BOE-A-1985-5392. Access on: Feb. 11, 2025.

ESPAÑA. Cortes Generales. Constitución Española. *Boletín Oficial del Estado*, n. 311, 29 dez. 1978. Available from: https://www.boe.es/biblioteca_juridica/codigos/codigo.php?id=387_Constitucion_Espanola_____Constituicao_Espanhola&modo=2. Access on: Feb. 11, 2025.

GARCÍA, S. G. *Directiva (UE) 2024/1203 del Parlamento Europeo y del Consejo de 11 de abril de 2024,* relativa a la protección del medio ambiente mediante el Derecho penal y por la que se sustituyen las Directivas 2008/99/CE y 2009/123/CE. *Actualidad Jurídica Ambiental*, n. 145, p. 52-55, 2024. Available from: https://www.actualidadjuridicaambiental.com/legislacion-al-dia-union-europea-responsabilidad-penal/. Access on: June 6, 2024.

HELLER, H. *Teoría del Estado*. Granada: Comares, 2004.

MACHO, L. M. El sistema de las competencias locales ante el nuevo pacto local. *Revista de Estudios de la Administración Local y Autonómica*, Madrid, n. 289, p. 37-58, maio/ago. 2002. Available from: https://revistasonline.inap.es/index.php/REALA/article/view/9143. Access on: Jan. 29, 2025.

MERCOSUL. *Resolução n. 38, de 15 de julho de 2019*. Diretrizes para a elaboração de um plano para a prevenção, o monitoramento, o controle e a mitigação das espécies exóticas invasoras. Santa Fé, 2019. Available from: https://normas.mercosur.int/simfiles/normativas/73868_RES_038_2019_PT_Diretrizes%20Especies%20Exoticas.pdf. Access on: Feb. 11, 2025.

MERCOSUL. *Decisão n. 14, de 8 de julho de 2004*. Protocolo adicional ao Acordo-Quadro sobre Meio Ambiente do Mercosul em matéria de cooperação e assistência perante emergências ambientais. Puerto Iguazú, 2002. Available from: https://normas.mercosur.int/simfiles/normativas/50959_DEC_014-2004_PT_FERR%201_ProtAdicAcdoMeioAmbiente.pdf. Access on: Feb. 11, 2025.

MERCOSUL. *Resolução n. 45, de 28 de novembro de 2002*. Pautas negociadoras do SGT n. 6 – Meio Ambiente. Brasília, DF, 2002. Available from: https://normas.mercosur.int/simfiles/normativas/15853_RES_045-2002_PT_FE_Pautas%20Negociadoras%20SGT%20N%206%20Meio%20Ambiente_Ata%204_02.pdf. Access on: Feb. 11, 2025.

MERCOSUL. *Resolução n. 8, de 26 de abril de 2001*. Projeto de decisão. Assunção, 2001a. Available from: https://normas.mercosur.int/simfiles/normativas/50948_RES_008-2001_PT_FERR_Projeto%20Decis%C3%A3o_Ata%201_01.pdf. Access on: Feb. 11, 2025.

MERCOSUL. *Decisão n. 2, de 22 de junho de 2001*. Acordo-Quadro sobre Meio Ambiente do Mercosul. Assunção, 2001b. Available from: https://normas.mercosur.int/simfiles/normativas/50965_DEC_002-2001_PT_FERR_Acordo%20Meio%20Ambiente_MCS_Ata%201_01.pdf. Access on: Feb. 11, 2025.

MERCOSUL. *Resolução n. 53, de 24 de setembro de 1993*. Código de Conduta para a importação e liberação ao meio ambiente de agentes de controle biológico. Montevidéu, 1993. Available from: https://normas.mercosur.int/simfiles/normativas/31039_RES_053_1993_PT_C%C3%B3digo_Conduta_MAmbiente_Agentes_Biologico.doc. Access on: Feb. 11, 2025.

MILARÉ, É. *Direito Ambiental*. São Paulo: Thomson Reuters, 2018.

MORIN, E. *Introdução ao pensamento complexo*. Tradução Eliane Lisboa. Porto Alegre: Sulina, 2005.

MORIN, E. *Method:* towards a study of humankind. Translated and introduced by J.l. Roland Bélanger. New York: Lang, 1992. v. 1.

PARAGUAI. *Decreto do PE n. 15.000/96, de 4 de outubro de 1996*. Assunção, 1996. Available from: https://normas.mercosur.int/public/normativas/1917. Access on: Feb. 11, 2025.

REIS, E. M. B.; KOKKE, M.; COUTO, M. J. Interdisciplinary and transdisciplinary application in administrative decision-making spaces in environmental matters. *Veredas do Direito*, Belo Horizonte, v. 19, n. 44, p. 249-276, may/aug. 2022. Available from: https://revista.domhelder.edu.br/index.php/veredas/article/view/2315/25438. Access on: April 17, 2024.

SCHWAB, K. *A Quarta Revolução Industrial*. Tradução Daniel Moreira Miranda. São Paulo: Edipro, 2016.

SOLÍS, D. O. Las relaciones entre la Unión Europea y las comunidades autónomas en los nuevos estatutos. *REAF*, n. 4, p. 69-128, 2007.

UNIÃO EUROPEIA. Diretiva (UE) 2024/1203 do Parlamento Europeu e do Conselho, de 11 de abril de 2024, relativa à proteção do ambiente através do direito penal e que substitui as Diretivas 2008/99/CE e 2009/123/CE. *Jornal Oficial da União Europeia*, Luxemburgo, 11 abr. 2024. Available from: https://eur-lex.europa.eu/legal-content/pt/ALL/?uri=CELEX:32024L1203. Access on: Feb. 11, 2025.

UNIÃO EUROPEIA. Decisão (UE) 2019/420 do Parlamento Europeu e do Conselho, de 13 de março de 2019, que altera a Decisão n. 1313/2013/UE relativa a um Mecanismo de Proteção Civil da União Europeia. *Jornal Oficial da União Europeia*, Luxemburgo, 20 mar. 2019. Available from: https://eur-lex.europa.eu/legal-content/PT/ALL/?uri=CELEX:32019D0420. Access on: Feb. 11, 2025.

UNIÃO EUROPEIA. Decisão n. 1313/2013/UE do Parlamento Europeu e do Conselho, de 17 de dezembro de 2013, relativa a um Mecanismo de Proteção Civil da União Europeia Texto relevante para efeitos do EEE. *Jornal Oficial da União Europeia*, Luxemburgo, 20 dez. 2013. Available from: https://eur-lex.europa.eu/legal-content/pt/TXT/?uri=CELEX%3A32013D1313. Access on: Feb. 11, 2025.

UNIÃO EUROPEIA. Directiva 2008/99/CE do Parlamento Europeu e do Conselho, de 19 de novembro de 2008, relativa à protecção do ambiente através do direito penal (Texto relevante para efeitos do EEE). *Jornal Oficial da União Europeia*, Luxemburgo, 6 dez. 2008. Available from: https://eur-lex.europa.eu/legal-content/PT/ALL/?uri=CELEX%3A32008L0099. Access on: Feb. 11, 2025.

UNIÃO EUROPEIA. Directiva 2007/60/CE do Parlamento Europeu e do Conselho, de 23 de outubro de 2007, relativa à avaliação e gestão dos riscos de inundações (Texto relevante para efeitos do EEE). *Jornal Oficial da União Europeia*, Luxemburgo, 6 nov. 2007. Available from: https://eur-lex.europa.eu/legal-content/PT/ALL/?uri=CELEX:32007L0060. Access on: Feb. 11, 2025.

UNIÃO EUROPEIA. *Directive 2004/35/CE of the European Parliament and of the Council*, of 21 April 2004, on environmental liability with regard to the prevention and remedying of environmental damage. *Official Journal of the European Union*, Luxembourg, 30 apr. 2004. Available from: https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2004:143:0056:0075:en:PDF. Access on: Feb. 11, 2025.

UNITED NATIONS. *Report of the United Nations Conference on Environmental and Development*. Rio de Janeiro, 3-14 June 1992. Vol. 1. Resolutions Adopted by the Conference. New York: UN, 1993. Available from: https://docs.un.org/en/A/CONF.151/26/Rev.1(vol.I). Access on: Feb. 11, 2025.

UNITED NATIONS. *Report of United Nations Conference on the human environment*. Stockholm, 5-16 June 1972. United Nations, 1973. Available from: https://docs.un.org/en/A/CONF.48/14/Rev.1. Access on: Feb. 11, 2025.

URUGUAY. *Decreto n. 393/997, de 22 de octubre de 1997*. Montevideo: Presidencia de la Republica, 1997. Available from: https://www.impo.com.uy/bases/decretos/393-1997. Access on: Feb. 11, 2025.

WEDY, G.; MOREIRA, R. M. C. *Manual de Direito Ambiental*: de acordo com a jurisprudência dos Tribunais Superiores. Belo Horizonte: Fórum, 2019.

ABOUT THE AUTHORS

Marcelo Kokke
Post-doctoral degree in Public- Environmental Law from Universidad de Santiago de Compostela, Santiago de Compostela, Spain. PhD and Master's degrees in Law from Pontifícia Universidade Católica do Rio de Janeiro (PUC-RIO), Rio de Janeiro/RJ, Brazil. Specialist Certification in Ecology and Environmental Monitoring from Universidade de Araraquara (UNIARA), Araraquara/SP, Brazil. Specialist Certification in Constitutional Procedure from Centro Universitário Metodista Izabela Hendrix (IMIH), Belo Horizonte/MG, Brazil. Degree in Law from Universidade Federal de Minas Gerais (UFMG), Belo Horizonte/MG, Brazil. Professor at the PhD and Master's Degree Program in Environmental Law and Sustainable Development of Dom Helder Escola Superior (DHES), Belo Horizonte/MG, Brazil. Federal Prosecutor for the Attorney General's Office (AGU), Belo Horizonte/MG, Brazil. Leader of the Bioethics, Law, and Environmental Philosophy Research Group.

Elcio Nacur Rezende
Post-doctoral degree from University of Castilla-La Mancha (UCLM), Madrid/Toledo, Spain, and from Università degli Studi di Messina (UNIME), Messina, Italy. PhD and Masters' degrees in Law from Pontifícia Universidade Católica de Minas Gerais (PUC-MINAS), Belo Horizonte/MG, Brazil. Professor at Escola Superior Dom Helder Câmara (ESDHC), Belo Horizonte/MG, Brazil. Prosecutor for the National Treasury.

Rubén Miranda Gonçalves
Post-doctoral degree in Law from Universidade do Estado do Rio de Janeiro (UERJ), Rio de Janeiro/RJ, Brazil. PhD and Masters' degrees in Administrative Law from Universidad de Santiago de Compostela (USC), Santiago de Compostela, Spain. Degree in Law from USC. Professor of Philosophy of Law at Universidad de Las Palmas de Gran Canaria (ULPGC), Las Palmas de Gran Canaria, Spain. Substitute judge at Superior Court of Justice of Canarias, Las Palmas de Gran Canaria, Spain.

Authors' participation
All authors contributed equally to the preparation of this article.

How to mention this article (ABNT):
KOKKE, M.; REZENDE, E. N.; GONÇALVES, R. M. Punitive and reparatory environmental protection: comparative analysis between Brazil and Spain. *Veredas do Direito*, Belo Horizonte, v. 22, e222755, 2025. Available at: http://www.domhelder.edu.br/revista/index.php/veredas/article/view/2755. Access on: Month. day, year.