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Foundations of Ecological Justice for the Recognition of the Gaps in Peru as subjects of Law

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ABSTRACT: The accelerated degradation of Andean Lake ecosystems due to intense extractive activities, urban growth and climate change reveals a structural failure of conventional environmental law, whose anthropocentric ontology reduces nature to an object of resources instead of recognizing it as an entity with rights. This article examines the theoretical and dogmatic foundations of ecological justice, as a viable framework for the recognition of the Peruvian high Andean lagoons, as subjects of law within an ecocentric constitutional paradigm. Based on Earth Jurisprudence, Robyn Eckersley's (2004) ecological democracy, Val Plumwood's (2002) critique of anthropocentric dualism, and the biocentric turn embodied in the Latin American tradition of Buen Vivir, Sumak Kawsay, we argue that the transition from a State governed by Environmental Law to an Ecological State governed by Law is, both dogmatically coherent and ecologically necessary. Through the comparative constitutional analysis of emblematic precedents such as the Atrato River ruling in Colombia, (T-622/16), the Te Awa Tupua Law of New Zealand, (2017), and the Spanish law on the recognition of legal personality of the Mar Menor, (Law 19/2022) we demonstrate that granting the gaps autonomous procedural legitimacy, immunity from structural degradation and an enforceable right to integral restoration constitutes, not a legal fiction, but a scientifically grounded and constitutionally legitimate response to the ecological emergency. This article argues that the current Peruvian regulatory framework, based on Law No. 29338, is institutionally insufficient to address this emergency and proposes a concrete doctrinal path oriented towards an ecocentric constitutional reform.

1. INTRODUCTION

The contemporary ecological crisis that marks the beginning of the Anthropocene constitutes one of the most profound epistemological challenges facing legal theory and constitutional governance in the twenty-first century. The accelerated deterioration of terrestrial ecosystems, the anthropogenic collapse of biodiversity, the depletion of aquifer systems and the feedback dynamics of global climate change have highlighted the structural limitations of the traditional legal frameworks of the nineteenth century. Liberal legal dogma, built on the Cartesian subject/object dichotomy, is ontologically incapable of providing effective protection to the biosphere. (Plumwood, 2002; Stone, 1972). In this context of systemic ecological vulnerability, Peru's lake ecosystems, particularly the high Andean lagoons, are showing themselves to be sacrifice zones subject to the converging pressures of extractive industries, historical mining pollution, urban eutrophication, and the institutional weakness of the state apparatus.

Peruvian lagoons are not static bodies of water; They constitute complex ecosystem nodes that perform biocentric functions of irreplaceable importance such as the hydrological regulation of watersheds, carbon sequestration, regional climate stability, the maintenance of endemic habitats and the metabolic and spiritual bases of peasant communities and indigenous peoples. (Gudynas, 2011; Acosta, 2010). Despite this strategic centrality, the Peruvian legal system maintains a profound dogmatic myopia as it continues to regulate these bodies of water through the matrix of Law No. 29338, Water Resources Law, which instrumentalizes water from a predominantly anthropocentric and utilitarian perspective. Peruvian positive law reduces the gaps to the category of natural resources or public domain goods subject to human appropriation, management and exploitation, stripping them of their status as living entities with the right to existence and the regeneration of their life cycles (Andia & Andia, 2024; Zaffaroni, 2012).

This conception reflects the classic paradigm of Environmental Law, which operates under a logic of indirect or reflex protection and assumes that nature is protected only to the extent that its degradation affects a subjective human right health, property or life. This instrumentalist approach has generated a deep gap in the implementation of conservationist policies and a crisis of regulatory effectiveness. The systematic degradation of the Andean aquifers reveals that we are not facing a mere administrative inefficiency, but a structural crisis of the ontological model that sustains Western law, which has separated humanity from the community of the Earth. (Berry, 1999; Eckersley, 2004).

In the face of this paradigm, this article argues for the incorporation of ecological justice as a fundamental philosophical-legal vector for the reconstruction of Environmental Law and constitutionalism in Peru. Unlike traditional environmental justice focused on the equitable distribution of environmental burdens and benefits among human beings, ecological justice advocates the expansion of the justice community to include non-human entities. (Low & Gleeson, 1998). This ecocentric turn recognizes that nature has an intrinsic value, independent of the economic or relational utility attributed to it by human beings, thus redefining the cardinal concepts of legal damage and reparation.

From this analytical perspective, the recognition of Peruvian gaps as subjects of law is not a rhetorical metaphor or a whimsical legal fiction, but an imperative of ecosystem survival and dogmatic coherence. This implies a transition from an Environmental Rule of Law to an Ecological Rule of Law, expanding the legal community and legal personality to biotic systems. (Bosselmann, 2008). In this way, the gaps would be endowed with autonomous procedural legitimacy, immunity from the degradation of their fundamental ecological structure and an enforceable right to their integral restoration.

The conceptual framework of this study is based on the critical corpus of ecocentric philosophy and Earth Jurisprudence. It examines Robyn Eckersley's (2004) postulates of ecological democracy, Val Plumwood's (2002) critique of anthropocentric dualism, Christopher Stone's seminal thesis (1972) on the procedural legitimacy of natural environments, and the Latin American biocentric turn captured in the concept of Buen Vivir (Sumak Kawsay), developed by Eduardo Gudynas (2011) and Alberto Acosta (2010). Likewise, the research is positioned within the growing field of global constitutionalism of the rights of nature, critically analyzing the jurisprudential and legislative dialogue established by transnational milestones such as the Atrato River Judgment in Colombia (Constitutional Court, T-622/16, 2016), the Te Awa Tupua Law of New Zealand (2017), and the recognition of the Mar Menor in Spain as a subject with legal personality. (Law 19/2022).

In this sense, this article addresses the following research problem: To what extent do the foundations of ecological justice offer a viable and necessary dogmatic matrix to overcome the anthropocentric bias of the Peruvian legal system, allowing the recognition of the gaps as subjects of law endowed with autonomous procedural protection? Through a dogmatic-analytical method and a comparative law approach, we have tried to demonstrate that the transition to ecocentrism is not only dogmatically valid, but also constitutes the only adaptive way capable of conferring real effectiveness to the protection of Peru's vulnerable hydrological ecosystems against the contemporary pressures of industrial development.

In this article they review the theoretical foundations of ecological justice and Earth Jurisprudence; the anthropocentric structure of Peruvian water law is critically examined; a comparative constitutional analysis of international precedents on the legal personality of nature is carried out; the dogmatic conditions and institutional architecture necessary to recognize Peruvian lagoons as subjects of law are developed; the objections and limitations are addressed and, finally, the conclusions and a research agenda are presented.

The progressive deterioration of Peru's lagoons, particularly those located in high Andean regions, reveals the structural limitations of Peruvian Environmental Law to guarantee effective, autonomous and comprehensive protection of aquatic

ecosystems against phenomena such as mining pollution, overexploitation of natural resources and the effects of climate change. Although these ecosystems perform essential functions related to water regulation, climate stability and biodiversity conservation, they continue to be legally conceived as goods destined for economic exploitation or resources subject to state administration.

The persistence of an anthropocentric paradigm in the Peruvian legal system has limited the recognition of the intrinsic value of the gaps and has hindered the development of mechanisms of legal representation, ecological guardianship and autonomous protection against their progressive environmental degradation. For these reasons, the need arises to determine how the foundations of ecological justice can sustain the recognition of Peru's lagoons as subjects of law within the framework of contemporary environmental constitutionalism.

The purpose of this research is to analyze the ethical, philosophical-legal and doctrinal foundations of ecological justice that support the recognition of the gaps in Peru as subjects of law, with the purpose of proposing legal criteria aimed at strengthening their autonomous, integral and ecocentric protection within the Peruvian legal system. The study also examines the normative limitations of Peruvian Environmental Law and analyzes comparative law experiences related to the rights of nature, particularly the cases of the Atrato River in Colombia, the Whanganui River in New Zealand and the Mar Menor in Spain, in order to identify legal mechanisms adaptable to the Peruvian context.

The research argues that the foundations of ecological justice provide legal support for recognizing the lagoons of Peru as subjects of law, since they allow overcoming the anthropocentric paradigm of Peruvian Environmental Law, recognizing the intrinsic value of aquatic ecosystems and consolidating mechanisms of legal representation, ecological guardianship and autonomous protection against environmental degradation. The limitations of the Peruvian environmental legal model derive from a predominantly anthropocentric regulatory structure, which conceives of lagoons only as water resources subject to exploitation and administrative management, thus restricting their comprehensive legal protection.

The relevance of this research lies in addressing one of the largest gaps in Peruvian Environmental Law, which is the absence of a legal framework that recognizes gaps as subjects of law and guarantees their autonomous protection in the face of the contemporary ecological crisis. From a theoretical perspective, the study contributes to the development of ecological justice as a philosophical-legal category applicable to Peruvian Environmental Law, proposing an ecocentric reinterpretation of the legal system and expanding the legal community towards nature.

From a legal and normative perspective, the research provides criteria for the construction of a future Organic Law for the recognition of the lagoons of Peru as subjects of law, based on principles of ecological justice, environmental precaution, intergenerational equity and ecological non-regression.

2. MATERIALS AND METHODS

This research has been developed under a legal-normative approach of a dogmatic, critical and reconstructive nature, oriented to the analysis of the Peruvian legal system in the face of the contemporary ecological crisis and the structural limitations of Environmental Law in the protection of lake ecosystems. From this perspective, the study is not limited to an exegetical interpretation of legal provisions. On the contrary, it proposes a theoretical and axiological reconstruction of the legal system based on the foundations of ecological justice, eco-constitutionalism and the rights of nature.

The research adopts a descriptive-propositional level, since, in a first stage, it critically examines the constitutional, legislative and doctrinal framework related to the legal protection of gaps in Peru and, subsequently, formulates legal criteria aimed at the recognition of these ecosystems as subjects of law. In this sense, the study combines the systematic analysis of the current legal framework with a propositional dimension aimed at the reformulation of the predominant anthropocentric paradigm in the Peruvian environmental legal system.

Methodologically, the research uses the legal-dogmatic method to interpret and systematize the institutions, principles and categories of contemporary Environmental Law; the legal-hermeneutical method to develop an evolutionary and axiological interpretation of constitutional and environmental provisions; the comparative method to examine international experiences related to the legal recognition of nature, particularly the cases of the Atrato River in Colombia, the Whanganui River in New Zealand and the Mar Menor in Spain; and the argumentative method to build a coherent legal proposal aimed at supporting the expansion of the concept of legal subjectivity towards the gaps in Peru.

The study is based on a multidimensional epistemological articulation composed of three complementary approaches. The ius naturalist approach provides the basis for recognizing the intrinsic value of nature and the need to expand the legal community towards ecosystems; The positivist-normative approach allows for a critical examination of the structure of the Peruvian legal system, its normative gaps and conceptual limitations; while the sociological approach to law makes it possible to evaluate the material effectiveness of environmental protection mechanisms in the face of the progressive deterioration of the high Andean lagoons.

The research techniques used include documentary analysis of national and international legislation, specialized doctrine, constitutional jurisprudence and comparative experiences on the rights of nature. Likewise, normative analysis sheets, comparative matrices and doctrinal systematization instruments are used in order to guarantee methodological rigor, argumentative coherence and scientific consistency in the construction of the legal proposal developed in this research.

3. RESULTS AND DISCUSSION

3.1 Previous studies

Fuentes Sáenz de Viteri (2022) argues that the recognition of nature as a subject of rights within the Ecuadorian constitutional system represents a substantial transformation of contemporary Environmental Law, because it goes beyond the traditional anthropocentric paradigm and incorporates an ecocentric approach based on the intrinsic value of ecosystems. The author emphasizes that constitutional recognition alone is insufficient if it is not accompanied by effective jurisdictional mechanisms capable of guaranteeing the enforceability of the rights of nature. In this sense, the study highlights the importance of ecological restoration, legal representation and specialized judicial interpretation as essential elements for the operation of ecological constitutionalism. The effectiveness of the rights of nature depends not only on their normative incorporation, but also on the existence of institutional and procedural mechanisms that ensure their real and effective protection. (Fuentes Sáenz de Viteri, 2022).

Bellmont (2018) analyzes the evolution of environmental justice and its jurisdictional application, arguing that this concept has progressively expanded into broader forms of ecological justice. The author points out that environmental justice initially emerged as a response to inequalities in the distribution of environmental burdens among human populations; however, contemporary legal theory increasingly recognizes the need to incorporate ecosystems within the sphere of legal and moral protection. Belmont emphasizes that this transition from environmental justice to ecological justice allows for the development of legal approaches geared toward recognizing nature as part of the legal community. Ecological justice is a necessary evolution of constitutional and environmental law to respond effectively to contemporary ecological crises and ensure the protection of ecosystems beyond purely anthropocentric interests. (Bellmont, 2018).

Wilson and Inkster (2018) argue that indigenous water governance systems do not conceive of water as a simple natural resource, but as a living entity endowed with spiritual, cultural, and relational value within the community. Through the study of indigenous communities in the Yukon, the author demonstrates that water governance based on reciprocity, collective responsibility and ancestral knowledge offers a more sustainable and comprehensive approach than traditional management systems focused exclusively on the State. The study highlights that the exclusion of indigenous perspectives from environmental governance has led to the disconnect between legal systems and ecological realities. For Wilson and Inkster, the recognition of rivers and bodies of water as living entities requires the incorporation of intercultural governance mechanisms that legitimize indigenous participation and recognize the relational dimension between communities and ecosystems. (Wilson & Inkster, 2018).

Charpleix (2018) examines the legal and territorial implications of the Te Awa Tupua Act in New Zealand, whereby the Whanganui River was recognized as a legal person and living entity. The author emphasizes that the effectiveness of this recognition lies in the establishment of co-governance mechanisms between the State and Maori communities, allowing the river to be represented by ecological guardians responsible for protecting its integrity and well-being. The study shows that the legal personality of ecosystems should not be understood only as a symbolic declaration, but as an operational legal mechanism capable of transforming environmental governance, ecological restoration and territorial management; and that the recognition of ecosystems as legal subjects becomes effective when it is accompanied by institutional structures, community participation, and long-term restoration policies aimed at ecological sustainability. (Charpleix, 2018).

3.2. Ecological crisis and legal vulnerability of Peru's lagoons

The progressive deterioration of the high Andean lagoons is one of the most critical manifestations of the structural ecological crisis that Peru is currently facing. The expansion of extractive activities, particularly metal mining, together with industrial dumping, the inadequate disposal of solid waste and the cumulative effects of climate change, have generated accelerated processes of ecosystem degradation that compromise the hydrological and environmental stability of various regions of the country. This problem is especially serious in the high Andean lake ecosystems, whose ecological fragility increases their vulnerability to anthropogenic pressures and the insufficiency of effective environmental protection mechanisms.

In this context, emblematic cases such as the Patarcocha Lagoon, located in Cerro de Pasco, show the profound limitations of environmental public policies and the reduced capacity of the legal-administrative system to respond effectively to ecological damage. Despite the intervention of state institutions and the existence of environmental control mechanisms, pollution and degradation processes continue to severely affect water quality, biodiversity and the ecological functions of this ecosystem. This shows that traditional environmental control measures have been insufficient to guarantee comprehensive and preventive protection of the lagoons.

Although Article 2, paragraph 22, of the Political Constitution of Peru (1993) recognizes the fundamental right to enjoy a balanced and adequate environment for the development of life, in line with the autonomous recognition of the right to a healthy environment formulated by the Inter-American Court of Human Rights in Advisory Opinion OC-23/17, In practice, the legal protection of ecosystems continues to be subordinated to economic, productive and extractive interests. The current environmental legal model maintains a predominantly anthropocentric logic, in which nature is conceived as a resource susceptible to human exploitation and not as an entity endowed with intrinsic value and autonomous legal protection. Consequently, the gaps remain in a condition of structural legal vulnerability, due to the absence of specific mechanisms of legal representation, ecological guardianship and autonomous protection against their progressive deterioration.

The anthropocentric paradigm has historically constituted one of the central foundations of modern legal construction, establishing a hierarchical relationship between human beings and nature. Within this logic, ecosystems are conceived as objects of appropriation, exploitation and economic use, while environmental protection is justified solely in terms of their usefulness for human life and well-being. This reductionist conception has had a decisive influence on the configuration of classical Environmental Law and on the regulatory structures of contemporary States.

However, the deepening of the global ecological crisis and the exhaustion of traditional models of development have promoted a doctrinal transformation towards ecocentric perspectives of environmental protection. In this context, ecological justice emerges as an alternative paradigm that recognizes the interdependence between humans and ecosystems, as well as the intrinsic value of nature regardless of its economic or instrumental utility.

Arne Naess (1973), Holmes Rolston III (1988) and Val Plumwood (2002) argue that nature has ecological dignity and moral value of its own, which implies the need to rethink traditional legal categories and expand the sphere of legal protection to include non-human entities. From this perspective, ecocentrism does not only represent a conceptual expansion of Environmental Law, but a structural transformation of the relationship between society, State and nature.

In this sense, the transition from anthropocentrism to ecocentric law implies recognizing that lake ecosystems are not mere objects of state administration or economic exploitation, but complex ecological entities that fulfill essential functions for the climatic, hydrological and biological stability of the Peruvian territory. This paradigm shift requires a reinterpretation of the legal system based on the principles of ecological justice and contemporary environmental constitutionalism.

3.3. Ecological justice as a transformative legal foundation

Ecological justice represents a substantial extension of the classical concept of justice developed by traditional legal theories. While environmental justice focuses primarily on the equitable distribution of environmental benefits and burdens among human groups, ecological justice incorporates nature within the sphere of moral and legal consideration, recognizing that ecosystems possess intrinsic value and deserve autonomous protection from environmental degradation processes.

From this perspective, Robyn Eckersley (2004) argues that the community of justice must extend to all components of the biosphere, overcoming the anthropocentric vision that limits rights exclusively to human beings. Similarly, Andrew Dobson

(2003) warns that the legal exclusion of nature constitutes a structural form of ecological invisibility, since it prevents the recognition of ecosystems as self-interested entities and restricts their protection to indirectly human concerns.

In this context, ecological justice not only seeks to strengthen environmental conservation mechanisms, but also to profoundly transform the relationship between law, society and nature. This implies recognizing that lagoons have their own ecosystem interests related to preservation, ecological balance, water purity and regenerative capacity, which must receive autonomous legal protection.

Therefore, the legal recognition of gaps as subjects of law constitutes a logical consequence of the ecological justice paradigm, which allows the legal community to be extended to ecosystems and the establishment of institutional mechanisms of legal representation, ecological guardianship and jurisdictional protection aimed at guaranteeing their comprehensive protection against contemporary environmental degradation.

From this same perspective, Robyn Eckersley (2004) argues that the community of justice must be extended to all components of the biosphere, overcoming the anthropocentric vision that restricts the attribution of rights exclusively to human beings.

3.4. Legal post-positivism and expansion of legal subjectivity

Legal post-positivism constitutes one of the main theoretical foundations that justify the contemporary expansion of the concept of legal subjectivity towards non-human entities. Unlike classical legal positivism, which focuses exclusively on the formal validity of legal norms, post-positivism recognizes that the legal system is composed not only of legal rules, but also of constitutional principles, values, and axiological criteria that guide the interpretation and application of law. Contemporary law requires evolutionary interpretations capable of responding to new social, ethical and environmental challenges. (Atienza, 2013; Zagrebelsky, 1995). From this perspective, the legal system cannot remain static in the face of the global ecological crisis, but must develop new legal categories aimed at guaranteeing the effective protection of ecosystems and the material conditions that sustain life.

The expansion of legal subjectivity towards nature is fully compatible with the contemporary constitutional State. Just as historically the law recognized legal personality to corporations, associations, municipalities and other abstract collective entities, it can currently recognize legal subjectivity to ecologically relevant ecosystems when such recognition is necessary to guarantee their integral protection.

The incorporation of the gaps within the legal community implies recognizing that these ecosystems have autonomous ecological interests susceptible to judicial protection, legal representation and specialized regulatory guarantees. In this sense, legal post-positivism provides the dogmatic foundation necessary to justify an ecocentric reinterpretation of Peruvian Environmental Law and support the recognition of gaps as subjects of law within the framework of contemporary ecological constitutionalism.

Table 1. Comparative experiences of legal recognition of nature

Jurisdiction / ecosystem	Legal instrument	Recognition	Featured mechanism
Ecuador	Constitution of 2008	Nature as a subject of rights	Rights to exist, persist, regenerate, and be restored
Colombia – Atrato River	Judgment T-622/16 (2016)	Rio as a subject of rights	Institutional and community guardianship
New Zealand – Whanganui River	Te Awa Tupua Act 2017	Rio as a living entity and legal subject	Co-governance between the Maori State and the Maori community
Spain – Mar Menor	Law 19/2022	Ecosystem and watershed with legal personality	Institutional representation, participation and legal defence

Note. Authors' elaboration based on Fuentes Sáenz de Viteri (2022), Constitutional Court of Colombia (2016), Charpleix (2018) and Law 19/2022 (2022).

3.5. Rights of nature and comparative experiences

One of the most influential doctrinal precedents in the contemporary development of the rights of nature is found in the work of Christopher Stone, particularly in his argument in *Should Trees Have Standing?* (1972), where he questions the traditional foundations of legal theory by asking whether trees and other elements of nature can have procedural legitimacy. Stone argues that there is no dogmatic or legal impediment to recognizing rights to natural entities, since the category of legal subjectivity constitutes a historically dynamic legal construction susceptible to expansion. This argument represented a turning point in the evolution of contemporary Environmental Law and significantly influenced subsequent constitutional, legislative and jurisprudential developments related to the rights of nature.

In the Latin American context, the Constitution of Ecuador of 2008 constitutes one of the most relevant precedents in terms of legal recognition of nature. Through articles 71 to 74, the constitutional text expressly recognizes the Pachamama nature as a subject of rights, establishing its rights to exist, persist, regenerate and be fully restored. This recognition implies a break with the traditional anthropocentric paradigm and consolidates an ecocentric vision of environmental constitutionalism.

Likewise, the Constitutional Court of Colombia, through Judgment T-622/2016, recognized the Atrato River as a subject of rights to protection, conservation and restoration. This decision incorporated mechanisms of ecological representation through a system of institutional and community guardianship made up of state representatives and ethnic riverside communities. The ruling constitutes one of the most important jurisprudential developments in Latin American ecological constitutionalism, recognizing the need to comprehensively protect ecosystems against structural processes of environmental degradation.

In the case of New Zealand, the Te Awa Tupua Act (2017), granted legal personality to the Whanganui River, recognizing it as a living and indivisible entity. The New Zealand model incorporated a system of co-governance between the State and indigenous Maori communities, integrating cultural, spiritual and ecological elements within the State's legal framework. This precedent demonstrates the possibility of articulating intercultural mechanisms of legal representation aimed at the comprehensive protection of strategic ecosystems.

Similarly, Spain's Law 19/2022 recognised the ecosystem of the Mar Menor and its basin as a legal entity, establishing mechanisms for judicial defence, citizen participation and institutional representation to guarantee its ecological preservation. This experience constitutes one of the first legislative recognitions of the rights of nature in Europe and evidences the growing consolidation of ecocentric models of environmental protection within contemporary legal systems.

Taken together, these comparative experiences demonstrate that the legal recognition of ecosystems as subjects of law is not a merely theoretical formulation, but a legally viable category, operative and compatible with contemporary constitutional systems. Likewise, these experiences show that granting legal personality to nature strengthens the mechanisms of legal representation, ecological restoration and judicial protection against environmental degradation processes.

3.6. Eco-constitutionalism and ecological constitutionalism

Eco-constitutionalism represents a contemporary evolution of constitutionalism aimed at incorporating ecological limits to the exercise of state power and redefining the relationship between law, society and nature within the constitutional state. This doctrinal approach maintains that environmental protection cannot be reduced to a secondary administrative function, but constitutes a structural element for the effectiveness of fundamental rights and the sustainability of life itself. Ecological stability is an indispensable condition for the material existence of contemporary constitutionalism. (Kotzé, 2019; May & Daly, 2015). From this perspective, environmental degradation not only compromises the ecosystem balance, but also the effectiveness of fundamental rights such as life, health, access to water and human development. Consequently, ecological constitutionalism proposes to incorporate principles of sustainability, precaution and ecosystem protection within the structural core of the constitutional order, recognizing that the preservation of nature constitutes a precondition for the real enforcement of fundamental rights.

In the case of Peru, although the Political Constitution recognizes the fundamental right to enjoy a balanced and adequate environment for the development of life, there is still no solid regulatory development aimed at the autonomous recognition of ecosystems as subjects of legal protection. Environmental regulation continues to be based predominantly on administrative, utilitarian and anthropocentric criteria, thus limiting the consolidation of effective mechanisms for comprehensive ecological protection.

In this context, this research argues that the recognition of lagoons as subjects of law constitutes a concrete expression of Peruvian eco-constitutionalism that would strengthen the comprehensive protection of aquatic ecosystems and consolidate an ecocentric reinterpretation of the constitutional order in the face of contemporary environmental challenges.

Table 2. Theoretical foundations for ecocentric legal protection

Rationale	Author(s) / source	Contribution to the recognition of gaps
Ecological Justice	Eckersley (2004); Dobson (2003)	It expands the community of justice and incorporates its own ecological interests.
Ecocentrism and the crisis of anthropocentrism	Plumwood (2002); Naess (1973); Rolston (1988)	It sustains the intrinsic value of nature and the overcoming of the instrumental approach.
Rights of Nature	Stone (1972); Gudynas (2011)	It is the basis for the possibility of recognizing legal subjectivity to natural entities.
Ecological rule of law	Bosselmann (2008); Kotzé (2019)	It proposes to integrate ecological limits and the protection of nature into the constitutional order.
Recognition and legal community	Honneth (1995); Taylor (1994)	It allows us to interpret the legal exclusion of nature as a problem of recognition.

Note. Prepared by the author based on the theoretical framework developed in the article.

3.7. Philosophy of recognition and nature

The philosophy of recognition, developed primarily by Axel Honneth (1995) and Charles Taylor (1994), provides a relevant theoretical basis for understanding the legal exclusion of nature as a form of structural invisibilization within modern legal systems. This approach argues that the denial of recognition constitutes a form of moral, political, and legal exclusion that restricts the possibility of effective protection of certain subjects or entities within the legal community.

Applied to the environmental field, this perspective shows that nature has historically been reduced to the category of an object of state appropriation, exploitation or administration, denying it recognition as an entity endowed with intrinsic value. In this sense, the absence of legal personality for ecosystems is not only a technical omission within the legal system, but a structural manifestation of ecological subordination derived from the dominant anthropocentric paradigm.

From this perspective, recognizing gaps as subjects of law implies expanding the legal community towards nature and overcoming the limitations of the traditional anthropocentric model. This recognition represents an act of legal and ecological reparation aimed at guaranteeing effective mechanisms for the representation, defense and comprehensive protection of ecosystems in the face of contemporary processes of environmental degradation.

Table 3. Proposed regulatory architecture for the recognition of gaps

Proposed component	Contents	Legal purpose
Legal personality	Express recognition of strategic lake lagoons and ecosystems as subjects of law.	Provide legal subjectivity and autonomous protection.
Ecological guardianship	Participation of state institutions, peasant communities, indigenous peoples and environmental organizations.	Guarantee representation, monitoring and permanent conservation.
Legal representation	Mechanisms for taking action against polluting, extractive or industrial activities.	Ensure autonomous procedural defense of the ecosystem.
Ecological restoration	State obligation to carry out recovery, remediation and comprehensive restoration.	Repair the damage and recover ecological integrity.
Environmental principles	Caution, not environmental regression and in dubio pro natura.	Strengthen preventive and ecocentric protection.

Note. Prepared by the author based on the regulatory proposal developed and on Ostrom (2011) and Carhuatocto (2023).

3.8. Regulatory proposal for Peru

Based on the doctrinal, constitutional and comparative analysis developed throughout this research, the formulation of an Organic Law for the recognition of the gaps in Peru as subjects of law is proposed, aimed at consolidating an ecocentric model of environmental protection within the national legal system.

First, the proposal establishes the express recognition of legal personality for strategic lake lagoons and ecosystems, granting them autonomous legal representation and comprehensive protection. It also incorporates the creation of ecological guardianship systems made up of state institutions, peasant communities, indigenous peoples, and environmental organizations following the model of collective management of common goods described by Ostrom (2011), in order to guarantee permanent mechanisms for monitoring, defense, and ecosystem conservation. Similarly, the proposal seeks to strengthen the participation of local communities and indigenous peoples in the processes of management and protection of the lagoons, recognizing the relevance of traditional knowledge and the historical, spiritual and ecological relationship between these communities and aquatic ecosystems.

The regulatory proposal also incorporates autonomous judicial representation mechanisms aimed at enabling the procedural defence of lagoons against polluting, extractive or industrial activities that compromise their ecological integrity. In addition, it establishes the state's obligation to carry out ecological restoration, environmental recovery and comprehensive remediation actions against the ecosystem damage caused. Finally, the proposal promotes the incorporation of contemporary principles of Environmental Law, such as the precautionary principle, the principle of environmental non-regression and the principle in dubio pro natura (Carhuatocto, 2023), all of them aimed at strengthening the preventive, restorative and ecocentric protection of lake ecosystems within the Peruvian legal system.

4. CONCLUSION

FIRST: The research shows that the contemporary ecological crisis highlights the structural limitations of the anthropocentric paradigm that sustains Peruvian Environmental Law to guarantee an effective, comprehensive and autonomous protection of the high Andean lagoons against processes of pollution, hydrological degradation and extractive exploitation. Despite the existence of constitutional and environmental norms aimed at the protection of natural resources, the current legal framework continues to be insufficient to address the complexity of ecological degradation that affects lake ecosystems, particularly due to the predominance of utilitarian and economically oriented approaches within environmental governance.

SECOND: Ecological justice constitutes an ideal philosophical and legal foundation to extend the traditional concept of legal subjectivity to ecosystems, since it recognizes the intrinsic value of nature and the interdependence between human and non-human systems. From this perspective, ecological justice provides the axiological and doctrinal basis necessary to reinterpret Environmental Law from an ecocentric approach capable of overcoming the limitations of classical anthropocentric legal models.

THIRD: The analysis of comparative experiences shows that the legal recognition of nature as a subject of rights constitutes a legally viable category and constitutionally compatible with contemporary legal systems. The cases of Ecuador, Colombia, New Zealand and Spain show that the granting of legal personality to ecosystems strengthens the mechanisms of ecological guardianship, legal representation, environmental restoration and jurisdictional protection against environmental degradation processes.

FOURTH: The recognition of the gaps as subjects of law would strengthen the institutional mechanisms of legal representation, jurisdictional defense and ecosystem protection in the face of the progressive environmental deterioration that affects various lake ecosystems in Peru. Such recognition would also contribute to the strengthening of environmental governance through the incorporation of participatory and intercultural mechanisms that involve local communities, indigenous peoples, and environmental institutions in ecosystem protection processes.

FIFTH: The incorporation of eco-constitutionalism into the Peruvian legal system is necessary to respond adequately to the environmental challenges of the twenty-first century. This incorporation would make it possible to reinterpret the constitutional system from an ecocentric perspective oriented towards ecological sustainability, environmental justice and the effective protection of the material conditions necessary for the continuity of life.

SIXTH: The absence of autonomous mechanisms of legal protection for lagoons constitutes one of the main regulatory gaps in Peruvian Environmental Law. Consequently, the recognition of ecosystems as subjects of law would not only represent a symbolic transformation, but also a substantial legal innovation capable of strengthening preventive, restorative and jurisdictional mechanisms for environmental protection.

SEVENTH: The normative proposal developed in this research constitutes a coherent legal alternative for the reconfiguration of Peruvian Environmental Law based on the foundations of ecological justice, promoting a comprehensive protection model aimed at the recognition of Peru's gaps as subjects of law. In this sense, the proposed framework contributes to the consolidation of a new paradigm of environmental protection based on ecological dignity, intergenerational equity, environmental precaution and the principle of *in dubio pro natura*, thus strengthening the transition towards an ecocentric constitutional order compatible with contemporary environmental challenges.

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AUTHOR CONTRIBUTIONS

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CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

ETHICS STATEMENT

Ethical approval was not required for this study.

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