

Environmental liability: thoughts on juridical aspects of environmental impact assessment

La responsabilidad medio ambiental: reflexiones sobre aspectos jurídicos de la evaluación de impacto ambiental

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Abstract: *In law, it is argued that it is not the “names” and/or “nomenclatures” that matter, and should not matter, but the effects of legal concepts and/or categories. Therefore, the concepts formulated by laws and regulations are functional, i.e., they are aimed - fundamentally - at integrating factual assumptions and legal consequences. Given this previous disquisition, this article proposes a theoretical comparison of the insights that inspire the Environmental Impact Assessment System (Europe/Spain/Autonomous Communities) and Chapter II of Title V of the General Regulation of Environmental Management that develops Law N° 1333 of the Environment (Bolivia) and brings up the Ecuadorian legal experience (opening the door to an exploration -in extenso- that will have a later character and spirit).*

Keywords: *environment, environmental conservation, environmental economics, environmental impact assessment, environmental legislation.*

Resumen: En Derecho se aduce que no importan, que no deben importar, los “nombres” y/o “nomenclaturas” sino los efectos de las figuras y/o categorías jurídicas. Por lo tanto, los conceptos formulados por leyes y reglamentos son funcionales, es decir, se dirigen -fundamentalmente- a integrar supuestos de hecho y consecuencias jurídicas. En atención a esta disquisición previa, a través de este artículo se propone una comparación teórica de los conocimientos que inspiran el Sistema de Evaluación de Impacto Ambiental (Europa/España/Comunidades Autónomas) y Capítulo II del Título V del Reglamento General de Gestión Ambiental que desarrolla la Ley N° 1333 del Medio Ambiente (Bolivia) asimismo, se trae a colación a la experiencia legal ecuatoriana (abriendo la puerta a una exploración -in extenso- que tendrá un carácter y ánimo ulterior).

Palabras clave: ambiente, conservación ambiental, economía medioambiental, evaluación del impacto ambiental, legislación ambiental.

Introduction

Environmental damage caused by human actions has caused “incalculable and difficult to repair” (Estrada et al., 2016, p. 85) and, in some circumstances, irreparable damage (Delgado, 2020). This is because humans “by interacting with the set of abiotic (solar energy, soil, water and air) and biotic (living organisms) elements that surround them, can negatively influence them, producing undesired effects with often irreversible consequences”. (Rodríguez et al., 2011, p. 514)

However, when this environmental deterioration has been caused by unlawful actions, in breach of legal provisions, or accidentally, there is a “principle of *in natura* reparation” arising from these events, which according to Solarte (2005):

If the damage is pecuniary damage, the reparation of this will seek to re-establish the lost patrimonial balance, incorporating again, in-kind or in pecuniary equivalent, the assets whose loss or deterioration caused the diminution of said legal universality in its active component, particularly in terms of the interest that the victim had in them. (p. 191)

In this logical order, the need to analyse the institution of Environmental Impact Assessment (EIA) is justified, the provisions of which are specifically stipulated in legal frameworks such as those of Bolivia, Ecuador, and Spain. This assessment becomes indispensable to determine and calculate the impact caused and to establish the necessary remediation measures at the site where the environmental damage occurred.

This contribution, does not propose a literal comparison of the statements in both frameworks to explore further considerations to understand the “rationality” of each instrument. However, a conceptual summary of the Spanish system of rules is developed - with a special focus on the Andalusian Community - and the related framework is shown for the Bolivian and Ecuadorian cases.

In this order of ideas, we will begin by explaining the apparent similarity between the Environmental Impact Assessment System (Spain)

- identified as SE- and the Instruments of Regulation of Particular Scope referred to in Chapter II of Title V (Bolivia) - identified as B - and the Ecuadorian one - identified as E-. The selection of these three experiences has been made to the extent that:

- a. They propose systems that can be characterised as examples of direct regulation - established based on a Command-and-Control approach. That is, they involve direct interference in the industry, sector, or environmental activity by the part of State legislation or regulations (*collective action*) dividing what is permitted (legality) and what does not satisfy or obey these considerations (illegality and “extralegality”).
- b. They provide an account of experiences in which interaction and feedback have taken place, anchored even in the similarity of visions of their part of their doctrine.

In this sense, a theoretical-conceptual exercise is proposed that can be described as qualitative, in which deductive and inductive reasoning will take precedence to scrutinise ideas that have arisen in the heart of a doctrine concerned with contemporary environmental problems and, in a context of the fourth industrial revolution and, consequently, of the ius-economic resizing of individual and collective property rights - understood *in abstracto* - as the primacy of the personal over the real and the triumph of a system built from the notion of the personal over the real, of the ius-economic resizing of individual and collective property rights - understood *in abstracto* - as the primacy of the personal over the real and the triumph of a system built on the notion of passive and universal obligation to manage “exclusion” and “alienability” on the part of the “community” and the “global village”.

I. The concept of environment

According to the United Nations Development Programme (2019), the word environment makes:

Reference to the “natural” environment, or the sum of all living and abiotic components surrounding an organism, or group of organisms. The natural environment comprises physical components, such as air, temperature, terrain, soils, and bodies of water, as well as living components, plants, animals, and micro-organisms. (p. 1)

A review of the international literature also establishes that:

The concept of environment is discussed in its abstract form within the general systems framework. The environment of a system can be progressively specified in a logical sequence from the primitive concept of “everything that is not the system” through the concepts of substantial environment, of another system that influences the system under consideration, of another system coupled to elements of the considered system, of “influencing” and “influenced” environments, and culminating with the concept of the environmental system. The degree of specification sought depends upon the available information about the system and the goals of the researcher. The environment of an element (subsystem) which is part of a system is in the general case partially internal and partially external to the system. The characterization of the environment may change fundamentally in nature with changing levels of conceptualization. The abstract concept of environment is valid for any situation, including time-varying systems. (Gallopín, 1989, p. 60)

Therefore, there is evidence to sustain that international doctrine opts for a broad conceptualisation of the environment that coincides with the opinion of Conde and Arana (2020) in maintaining that “the concept of environment constitutes an indeterminate juridical concept” (p. 109). However, the first comment assumes that in social sciences (law and other areas) it must exist:

1. A division between dogmatic positions constructed from a *normative approach* (ought to be) and those that are held from a positive and/or descriptive/prescriptive stance. That said, we can assert that theoretical precision is possible by approaching a concept and its definition in a specific way that contributes to its positive analysis and characterisation and operational and functional development. In short, a narrow conceptualisation of the environment would focus on a definition and assume that we are dealing with a system that is the result of a rational constructivist exercise and

that requires understanding actions and facts (regardless of whether they are of human origin or not) in terms of “practice-based knowledge for sustainable and low carbon futures”. Therefore, if the aim is not to present a normative characterisation that is open to ideological and even institutional capture (once it is put into practice through rules, principles and entities focused on its “enforcement”), we consider that it is entirely valid not to try to distinguish between an ecocentric¹ and an anthropocentric viewpoint.

2. However, from a doctrinal compiler’s point of view, we can argue that the desire to understand the existing distance between ecocentric and anthropocentric points of view prevails.

This is shared to some extent by Conde and Arana (2020) when they argue that:

Almost all scholars of environmental law have tried to define the environment or have ascribed to some of the definitions given by other authors to delimit what elements are contained in such an expression what reality it refers to. (p. 123)

Ecocentrist positions are still in the minority - when the discourse is oriented towards the theoretical-conceptual - and this is reflected in a process that involves the stages a) government plan - b) public policy - c) formulation/implementation of legal and regulatory tools. This is important insofar as we live both in Latin America and Spain in a context where a *command-and-control* logic prevails. In other words, it would be decisive in the design of legal standards that seek to adopt sanctioning and preventive functions.

1 The term ecocentrism is chosen because biocentrism “morally recognizes all living things, ecocentrists work from a relational ontology and are interested in the integrity not only of populations and species, but also in broader ecological communities at multiple levels of aggregation” (Eckersley, 2007, p. 306) (cited by Toca, 2011, p. 199).

II. The indeterminacy of the legal concept of “adequate environment” to establish a subjective right to the environment

For Conde and Arana (2020):

Almost all scholars of environmental law have tried to define the environment or have ascribed to one of the definitions given by other authors to delimit what elements are contained in such an expression, i.e., what reality it refers to.

(...) has no legal value if it is not previously known what it encompasses what it is intended to protect; an approach that is also valid for its restoration or improvement. (pp. 105-106)

In this sense, defining exactly what comprises the environment and, even more so, an adequate environment, has been complex for those lawyers specialised in the environmental legal branches. However, although it is not possible to determine what should be protected, it is possible to consider the visualisation of environmental impacts, even more so considering that there is a right to the environment in International Law since Environmental Law is born as a legal imperative that seeks “protection in the parameters of the biosphere for the development of the person, who has the right to enjoy a healthy or adequate environment” (Ruiz, 1990, p. 46).

In this sense, regarding the human right to a healthy and balanced environment, in the Ecuadorian case:

The constitutional recognition of the legal personality of Nature or Pachamama constitutes a break in the history of contemporary Constitutional Law, not only regarding the protection of Nature and the environment, but also about the subjects of rights. The Ecuadorian ecological constitution seeks to go beyond the foundations of classical constitutionalism, based on the anthropocentric social contract. (Melo, 2013, p. 43)

In this context, we must refer to climate change, which:

It is perhaps the main expression of the ecological degradation referred to in the Brundtland Report. For the United Nations Framework Convention on Climate Change, also adopted at the Rio Conference, climate change is understood as a change in climate attributed directly or indirectly to human activity. The UNFCCC would allow the adoption in 1997 of the Kyoto Protocol, which would enter into force until February 2005, and which consists of an international agreement to reduce emissions of greenhouse gases that cause global warming. (Bolaños, Ortega and Reyes, 2015, p. 34).

From these ideas, we can express that the impact of the indeterminacy of the legal concept “environment -adequate-” for the configuration of a subjective right to the environment can be “relativised”. That is to say, the legal and practical relevance of, for example, distinguishing between a) the natural environment; b) the man-made environment; and c) the social environment can be questioned. Therefore, the following question arises: What is the real contribution of wandering in search of the definition of an indeterminate concept?

For example, when we focus on a law function (by the random selection we propose the functions sanction and prevention).

A: Individual who pollutes (and generates - in addition - damage or a real negative externality).

B: Environment on which the actual pollution or negative externality falls.

Concern with sanctioning and/or prevention does not require concern with the concept of environmental damage or impairment. But merely on an action that exceeds a regulatory or legal standard. Therefore, the action of harming or polluting effectively requires that we aim to establish a scheme of analysis that can be preliminarily represented as follows:

$$B \text{ for Pollution} > P \text{ for Effective Penalty} \times C_t \text{ Penalty} \\ 1 > 0,94$$

Consequently, the important thing is to determine operational (limited and specific) protection standards and their projection within a scheme that pursues general and/or specific objectives.

Next, from a revisionist approach, Law is not restricted to reasoning constructed solely based on the logical principle of non-contradiction (which involves disquisitions around the notions of word, concept, and definition). Let us remember, that in Law there are also approaches that have been constructed from the notion of function and, consequently, the purpose of Law in society or collective environments that require order and government (spontaneous order) but necessarily command and control (directed order). Thinking in functional terms does not involve abstracting logical-deductive concepts but focusing on the effects and consequences of action (e.g., to regulate or not to regulate) from a concise “base parameter”.

If the environment is a breakdown of the concept of *subjective rights* (“property rights”), what matters is the original rule of property rights and how the function of this is characterised, but not - necessarily - the derivations from the original notion. Certainly, such considerations are formulated as theses (not hypotheses) and require a development more characteristic of critical reason (“philosophy of and for”) in law than of an area or branch of law. In this sense, we recognise that our proposal requires a complementary development based on the existing contributions of Felix Cohen and others (to the extent that these may or may not be incorporated) (Gherzi, 2016).

III. The Judgment of the European Court of Human Rights of 9 December 1994

The *López Ostra v. Spain* (1994) judgment, delivered by the European Court of Human Rights on 9 December 1994, is based on:

Ms. Gregoria López Ostra, residing at Diputación del Río el Lugarico, Lorca, Murcia. Gregoria López Ostra, residing in the Diputación del Río el Lugarico district of Lorca, Murcia, brought an action under Law 62/1978 of 26 De-

ember 1978 before the Murcia Regional Court (Administrative Division) for the unauthorised installation of a treatment plant for water and waste from various tanneries in Lorca, on account of the health problems it was causing him and the degradation of the environment and his quality of life, alleging as grounds for the action infringement of his right to inviolability of the home and his right to physical and moral integrity. (s.p.)

Because of the above, it is necessary to consider that the Court of Appeal dismissed the appeal, stating that the reason for this dismissal was that the nuisance caused by the odours, fumes and noise from the installations did not pose a danger to health or violate fundamental rights, but only represented a deterioration in the quality of life. The Supreme Court upheld this ruling, dismissing Mrs López Ostra's appeal, and the Constitutional Court (STC 26-2-1990) also dismissed the subsequent amparo appeal because the fumes, smells and noise did not constitute a violation of the fundamental rights alleged.

The European Court, however, also considered the instrument provided by Law 62/1978 to be adequate, as it understood that such broadcasts violated the right to inviolability of the home and physical integrity, understanding that the circumstances alleged by the appellant made the enjoyment of her home unbearable and seriously endangered her health. Subsequently, the Murcia Supreme Court has partially upheld similar appeals, such as the one heard in S. of 21-2-2001, Ar. 649, in which the defendant Local Administration was ordered to put an end to the bad smells emanating from a sewage treatment plant based on the fundamental right to personal and family privacy and the inviolability of the home, as this implies respect for certain guarantees and powers which include the right to prohibit all kinds of invasions of the home, not only those that involve direct physical penetration, but also those that may be made indirectly through the production of noise and even though the emission of bad smells that disturb the private life of persons in that enclosure that constitutes their home, which must be exempt and immune to external invasions or aggressions by other persons or public authorities.

As for the reasoning behind the commentary, it validates that solving problems of law does not always require the definition-concept binomial. Rather, reasoning in terms of the function of the system. In this

case, the function of the system aims to make a property rule and its attributes prevail. Therefore, it is reasoned in terms of real externalities and how these affect the infringement of a property right. Paradoxically, this coincides with the latest decision of the European Court in considering “the instrument provided by Law 62/1978 to be adequate, as it understood that such emissions infringed the right to inviolability of the home and physical integrity, on the understanding that the circumstances alleged by the appellant made the enjoyment of her home unbearable and put her health at serious risk.

Furthermore, in the case presented, the functional criterion is identified in the rule to establish “who is liable”. In terms of information management, financial capacity, the criterion of prevention of activities with harmful scale, among others, it can be concluded that it was the Local Administration which incurred in an example of a *deep pocket*, perverse strategic position and conduct and that the Administered (Mrs Gregoria López Ostra) was limited by considerations that have to do with problems that, *prima facie* and apparently, are related to “information asymmetry” and other market failures. Then, despite this, some may confuse efficiency and economic reasoning and contrast them with the purpose of the law (the search for justice). We would then be faced with a case where it is the rule (protection of property rights) and its coherent and functional application (not abstracted in an empty concept of “what is being protected”) that allows us to reach solutions to real problems. Certainly, this type of analysis can be gradual, but we consider that Stage 1 allows us to reach a “compromise solution” and this is satisfactory in social and/or collective terms.

Finally, being concerned with functionally analysing a social/legal problem means generating incentives. Reflections in terms of what a concept is and what it involves will take a back seat when we intend to talk about compliance with an identified pattern, and this is based on a value that may even be the result of a random selection process. To conclude, we outline our analysis through the following exemplification:

Damage to the environment = Actual impact on the environment

- a. 1 to 5 “tolerable” effects or effects that can be internalised by the system itself in the short, medium, or long term.
- b. 5 to 10 intolerable affectations as it implies the transfer of social costs that are no longer efficient to manage through the socialisation of costs (justice system, administration, tax system or others).

IV. Environmental Impact Assessment System Considerations

According to Mendoza (2021), we can define Environmental Impact Assessment (EIA) as “an environmental policy instrument currently adopted in numerous jurisdictions (countries, regions, or local governments, as well as by international organisations such as development banks and private entities)” (p. 2). It is recognised in international treaties as a potentially very effective mechanism for preventing environmental damage and promoting sustainable development.

Likewise, for the same author, EIA is:

A management tool that allows environmental policies to be enforced and to be incorporated early in the development and decision-making process. Therefore, it evaluates and allows correcting human actions and avoiding, mitigating, or compensating their eventual negative environmental impacts, acting in a preventive manner in the management process. (Mendoza, 2021, p. 3).

Finally, Mendoza (2021) explains that there are different additional definitions of Environmental Impact Assessment (EIA) such as the following:

Impact assessment, simply defined, is the process of identifying the future consequences of a present or proposed action (International Association for Impact Assessment, IAIA, n. d.). (Cited by Mendoza, 2021, pp. 6-7).

(...) the process aimed at identifying, predicting, interpreting, presenting, and communicating, by preventive means, the effect of a project on the environment; and as an administrative instrument/procedure for project control

which, supported by a technical study on the environmental impact of a project (EEIA) and a public participation process, allows the competent environmental authority to issue an Environmental Impact Statement rejecting, approving, or modifying the project. (Gómez Orea, 1994) (cited by Mendoza, 2021, pp. 6-7).

(...) is the process of analysing different alternatives to differentiate their comparative advantages and disadvantages, and assigning an order of priority according to the factors that are considered most in the choice, whether they are purely economic, environmental, cultural, etc. (Durán, 1994) (cited by Mendoza, 2021, pp. 6-7).

(...) is a set of preventive techniques and procedures for identifying, predicting, evaluating, interpreting, proposing corrections and communicating results, about the cause-effect relationships (positive and negative) between a development project or programme and the physical, biological, and socio-economic environment. (J. Leal, 1997) (cited by Mendoza, 2021, pp. 6-7).

It should be noted that one of the main regulatory models that have been considered in Latin America is the “Spanish model” of autonomous character. In this order of ideas, for the establishment of the Environmental Impact Assessment system in Spain, it proposes the use of a series of tools whose conception responds to a functional operational approach. Among these tools, the following stand out:

a. Integrated Environmental Authorisation

The Junta de Andalucía (2015) and Geobiental (2021) agree that the Integrated Environmental Authorisation (AIA) is:

(...) a tool for administrative intervention that seeks to bring together the different sectoral authorisations required for the start-up of a given activity. The AAI comes into force under Law 16/2002, establishing regulation for those activities and facilities that have a significant impact on the environment. It is regulated under Royal Decree 815/2013, of 18 October, which approves the Regulation on industrial emissions and the development of Law 16/2002, of 1 July, on integrated pollution prevention and control. The Integrated Environmental Authorisation (AIA) includes in its regulations those

environmental and related aspects considered by the competent environmental authorities. (s. p.)

b. Unified Environmental Authorisation

About the Unified Environmental Authorisation (AAU), the Junta de Andalucía (2015) mentions that:

The Unified Environmental Authorisation (UEA) integrates into a single resolution the environmental impact assessment and the different environmental authorisations and requirements that, following the applicable sectorial legislation, the promoter of certain actions must obtain from the competent Regional Ministry for the Environment and public law entities dependent on it before their execution or start-up. In **Andalusia**, the Unified Environmental Authorisation is regulated by Decree 356/2010 of 3 August. (s. p.)

c. Environmental Assessment of Plans and Programmes

For the Ministry for Ecological Transition and the Demographic Challenge (2020), the Environmental Assessment of Plans, Programmes and Projects:

(...) is the technical and administrative procedure by which all aspects of environmental protection are taken into consideration in the decision-making process. This procedure contributes to the participation of the affected administrations and the interested public, being of great utility as a channel of public participation to integrate and adequately consider their environmental concerns. Since 1986 it has been incorporated into Spanish legislation about environmental impact assessment for specific projects and activities and, since 2006, also for Plans and Programmes are drawn up by the Administration. (s. p.)

d. Environmental Qualification

For Professor Conde Antequera (2015) the environmental qualification:

(...) is the procedure carried out by local councils to analyse the environmental consequences of the implementation, extension, modification, or transfer

of activities subject to this procedure, according to Annex I of the LÓGICA (eminently urban activities), to verify their compliance with current environmental regulations and to determine corrective measures? (p. 74)

e. Environmental Pollution Control Authorisations

For the Environment Area of the Provincial Council of Cadiz, Environmental Pollution Control authorisations consist of “Authorisations for emissions into the atmosphere, discharges into coastal and continental waters, waste production and waste management” (Junta de Andalucía, 2015, n. p.).

To specify the above, a direct legal comparison can be made. In this case, we proceed to expressly refer to the Bolivian regulatory and regulatory framework. This is mainly represented by the General Regulation of Environmental Management of the Bolivian Environmental Law (No. 1.333).

V. Comparative law: Bolivia, Ecuador, and Spain

The proposed legal comparison of the instruments of environmental prevention (System of Environmental Impact Assessment) under the Spanish model (SE) with the instrument of regulation of particular scope referred to in Chapter II of Title V (of the normative instruments of environmental management) of the General Regulation of Environmental Management which develops Law N° 1333 of the Environment of Bolivia (B) and the Ecuadorian norms referring to the prevention and environmental responsibility of the Ecuadorian model (E) can be expressed in different ways. Inattention to the argumentative framework presented in this article, we proceed to develop the following proposal for comparison constructed from a legal-functional perspective and in the light of the positive economic approach:

Both the Spanish and Bolivian frameworks focus on the use of “standards” (satisfactory or acceptable minimums) to ensure the use and scope of improvements in terms of environmental quality. The review of

both regulatory frameworks has led us to consider that it is conceived as an intrinsic notion the need to think about combining aspects linked to the environment (as a diffuse concept), what concerns or derives from the concept of “emissions” or “physical aspects” and the impact (relevance) of the “technological”, which is largely related to the administration of *regulatory* management, among others.

In line with the similarities, we can also argue that both instruments provide for *enforcement through* “regulatory bureaucracies”. However, it is at this point those differences also emerge. Spain foresees that its enforcement system will fall on the Autonomous Communities while Bolivia does not consider this type of governance and institutional implementation.

This is certainly also reflected in the quality of regulatory development, which allows us to identify that Spain denotes a better thought-out model that reflects the maturity in terms of public policy design and implementation (although valid criticisms can be integrated from a perspective of trade-offs between the marginal -potential- benefits of the system and its administrative costs (as presented by Guido Calabresi).

This comment holds although Bolivia puts forward a model that attempts to define the role of “incentives” and thus identifies a system that is permeable to a pragmatic and market-based view of regulatory and regulatory practice.

On the other hand, it is worth noting that the review of both instruments also allows inferring that:

1. Bolivia’s design is less complete and more permeable in terms of Regulatory Capture. This is so, since the “legal product” offered by Bolivia does not allow for clear parameterizing -that is, with consistent levels of coordination- of the relationship that arises between regulators and the regulated, and this has led to the neglect of the interests of the public (general interest) and is reflected in its imperfect protection, as has been argued by the majority Bolivian doctrine.
2. Bolivia’s model is based on a stale “legalism” that may derive from its aspiration to protect the “rights of Pachamama” and to consider

that the written text per se respects principles such as legality or gives effect to respect for the rule of law (Porto, 2011).

3. Spain, on the other hand, is much more permeable and does not stifle aspects such as the dynamic binomial of competition and enterprise, which is crucial for achieving regulatory objectives in a competitive economic environment (regardless of whether a “popular and solidarity economy model with a market” is superimposed on a “social market economy”). In practice, this is also reflected in the prevalence of inflexible and complicated rules, as Bolivian colleagues have also emphasised in their speeches.
4. The model offered by Spain allows regulatory bureaucrats to avoid causing harm to those on whom the regulatory system falls. In this sense, Spain’s exercise, although perfectible, allows for the integration of the role of the regulatory bureaucrat, the regulatory instrument and control of conduct by the regulated party (optimising the model in terms of efficiency, effectiveness, and efficacy).

Regarding Article 10 of Law 1333 of the Environment of Bolivia (1992):

Article 10.- Ministries, public bodies, and institutions of a national, departmental, municipal, and local nature, related to environmental issues, must adapt their organisational structures to have a body for matters related to the environment. Likewise, in coordination with the Secretary of the Environment, they shall support the execution of programmes and projects aimed at preserving and conserving the environment and natural resources.

However, it is considered necessary to implement or suggest that the institutional design of this figure considers the following:

- i. From the proposed legislative technique presented in Article 10 of Law No 1333 on the Environment, it can be assumed - a priori - that a model has been established that has not projected - fully - the problem of the costs of inter-sectoral coordination, the administrative costs of the system (as a whole) and how these can be reflected in higher social costs.

- ii. Although the Secretariat of the Environment plays a “coordinating” role, given the relevance of the environmental sphere, an alternative institutional design could be used. If it has been detected that there are multiple entities related to environmental issues, based on a focus on reducing transaction costs, a model could be used that centralises processes beyond simply requiring “adapting organisational structures to have a body for environmental matters”.
- iii. However, Bolivia must foresee the “integration” of entities with related spheres through bodies and a coordinator. Above all, in a context where Latin American states need to optimise the administration of their resources to achieve superlative goals (superior or first-order legal goods) such as environmental protection.

Article 25 of that body of law also states that:

Article 25.- All works, public or private activities, before their investment phase, must compulsorily have the identification of the category of environmental impact assessment, which must be carried out according to the following levels: 1. Does not require a specific analytical EIA, but a conceptual review may be advisable. Does not require EIA. (Law 1333, 1992, art. 25)

In that sense, deterrence as an approach (*ex-ante* control mechanism) is socially important. Deterrence” is an approach which, however, is justifiably criticised in law for its potential “social cost” and for opening the door to conflicts between the administration and the administered. Therefore, the requirement to monitor the compliance of supervisory bodies (authority) with their objectives and to introduce an evidence-based and “problem-solving” approach is more than essential. The aim is to avoid problems of “institutional capture” and that, because of correcting “market failures”, “state failures” are generated and affect factors such as the predictability of the “institutional framework” (legal certainty).

The wording of the article can be considered interesting, but it generates scenarios of exemption from “requirements” that indicate distrust. Furthermore, it is not clear that there is an exemption methodology in this article in the form of a *de minimis* rule (among others). Therefore, although it is important to have such an article, it would be worthwhile

to improve its wording (especially if we are in an area governed by the principle of legality).

In this framework, Law 1333 (1992), emphasises that:

Article 26.- The works, projects, or activities that, due to their characteristics, require the Environmental Impact Assessment Study as prescribed in the previous article, before their execution, must have the Environmental Impact Statement (EIS), processed by the competent sectorial organisms, issued by the Departmental Secretariats of the Environment, and approved by the National Secretariat. The homologation must be verified within a pe-remptory period of twenty days, otherwise, the EIS will be consolidated without the respective homologation. In the case of projects of national scope, the EIS should be processed directly before the National Secretariat of the Environment. The Environmental Impact Statement will include the studies, technical recommendations, norms, and limits, within which the works, projects of activities evaluated and registered in the Departmental Secretariats and/or National Secretariat of the Environment must be developed. The Environmental Impact Statement will become the technical-legal reference for the periodic qualification of the performance and execution of such works, projects, or activities.

This article seems to be the most solvent and consistent of the three that have been analysed. However, systematic reading of the three articles allows us to assume that a reform would be important to generate even greater regulatory integration and derived processes.

5.1. Considerations on the Institutional Framework of environmental regulations in Ecuador

As a first approach, in the case of *Delfina Torres vs. Petroecuador* (2003), the Court established that: “the non-contractual civil liability for risky or dangerous activities, in which fault is presumed, relieves the victim from providing the means of proof of negligence, carelessness or inexperience; it is then up to the defendant to demonstrate that the event occurred due to force majeure, fortuitous event, the intervention of a foreign element or the exclusive fault of the victim.” (p. 18).

Then, with the 2008 Constitution of the Republic of Ecuador, it is essential to refer to the mandates contained in that regulatory body, since it recognises the right to a healthy environment:

The right of the population to live in a healthy and ecologically balanced environment that guarantees sustainability and good living, *sumak kawsay*, is recognised. The preservation of the environment, the conservation of ecosystems, biodiversity and the integrity of the country's genetic heritage, the prevention of environmental damage and the recovery of degraded natural spaces are declared to be in the public interest. (CRE, 2008, art. 14)

Furthermore, in the subsequent article, it is mentioned that the State will oversee promoting the use of clean environmental technologies and the use of non-polluting and low-impact energies (CRE, 2008, art. 15). The same article prohibits all types of weapons, chemicals, technologies, and agents that are harmful or that affect human health, food sovereignty or ecosystems (CRE, 2008, art. 15). 15), which means that any action that causes environmental damage is prohibited and, therefore, affects the right to a healthy and ecologically balanced environment, according to article 14 of the Constitution, the right to health, according to article 32 of the same constitutional body of law and article 66 number 27, which recognises the right to live in a healthy and pollution-free environment as a freedom right, among other rights that are directly and indirectly related.

It should be noted that Article 71 and 10 of the Ecuadorian Constitution (2008) recognises nature's right to full respect for its existence, maintenance, and regeneration, as it is possible to demand that the authorities comply with nature's rights. This is because, as a normative evolution, this body of law recognises nature as a subject of rights, as well as its right to restoration, considering cases of serious or permanent environmental impact (CRE, 2008, art. 72). Taking into consideration the principle of *in dubio pro natura* established by the Constitution in article 395 number 4.

For this reason, in 2017 the Organic Environmental Code (2017) was enacted on 12 April 2017, which has as one of its aims to "regulate activities that generate environmental impact and damage, through rules and

parameters that promote respect for nature, cultural diversity and the rights of present and future generations” (art. 3.5), and also considers that one of the duties of the State and individuals is to inform, communicate or report any activity that causes pollution and produces environmental damage (Organic Environmental Code, 2017, art. 7.5).

In addition, both civil, administrative, and criminal environmental liability is established. In the criminal sphere, the provisions of the Comprehensive Organic Penal Code -COIP- (2014) are applied, since in its article 71 referring to penalties for legal persons, in number 5 it is mentioned that penalties will apply to legal persons who must fully remedy the environmental damage caused, also considering that this penalty does not prescribe as established in article 75 of the same body of law. On the other hand, a prison sentence is stipulated for the person who commits crimes against environmental management, which are described in the COIP.

Likewise, concerning integral responsibility, this is considered as an environmental principle that considers the responsibility of the person who performs an action that generates an impact on the environment, by using certain substances or other toxic materials (Organic Environmental Code, 2017, art. 9.1).

For this reason, Ecuadorian regulations provide for a legal shield to protect the environment, since environmental liability exists for causing damage, as everyone will have the legal obligation to be “responsible for the environmental damage or impacts they have caused” (Organic Environmental Code, 2017, art. 10). In addition, strict liability is established, since any person who causes damage will be liable, even if “there is no malice, fault, or negligence” (Organic Environmental Code, 2017, art. 11).

5.2. Some reflections on the institutional framework at the national, departmental, municipal, sectoral and SERNAP levels in Bolivia.

The Bolivian proposal seems extremely important. It is essential for performance analysis and any formulation of “regulatory improvement”.

However, it is also perfectible in terms of introducing mechanisms of control, balance, and optimisation of resources for the provision of services that avoid the problem of “institutional capture” or the emergence of perverse effects/incentives that manipulate or distort the behaviour of “regulated agents”. Although there are interesting alternatives of “governance of collective action” - expressed in Law No 1333 of the Environment - we are left with some doubts as to the achievement of results reached in a socially desirable (optimal), i.e., sustainable, efficient, and fair manner.

5.3. Effects of a possible enactment of a Bolivian law like the Spanish and Ecuadorian environmental liability law

Establishing a comparative analysis such as the one proposed requires specificity. In this sense, it is proposed to do so by mentioning the relationship with the system of environmental liability existing in Bolivian legislation, assessing the effects of a possible enactment of a law in Bolivia like the Spanish and Ecuadorian environmental liability law.

Furthermore, it is pertinent to consider that a “structural” change at the institutional, legal, and regulatory level is required if the objective of “transplanting” the model of the Spanish Environmental Responsibility Law (Law 26/2007, on Environmental Responsibility) to Bolivia is to be pursued.

This is so because we are faced with two institutional, legal and regulatory contexts (the realm of *formal rules*) that obey divergent belief systems (ideologies).² This is accentuated if it is assumed that law is “politics” and, in good faith, is expressed and applied through legislation

2 Certainly, this prior consideration is accentuated if we enter the realm of informal rules that guide human conduct (social-legal customs, usages, and social norms, among others). This is relevant if we consider that the predominant regulatory approaches in advanced economies (OECD) simply reproduce and apply with relatively high efficiency pragmatic “rational” regulation models, where cost-benefit analysis and cost-effectiveness analysis are manifestly combined with “modern” discernments of justice such as the proposal of Calabresi and Melamed, concerned with “avoiding the waste of resources” (a concept understood in a broad and non-economistic sense).

and regulations that “respond” to public policies that in turn denote a government plan and, before that, a political ideology.

The prevailing *belief system* (Clements, 2017) in the sister country of Bolivia does not allow its legal operators to conceive and understand the background of previous experience (which is not restricted to replicating or emulating it - expressly - in a written text within your legal system despite its relevance in the country’s “Kelsenian pyramid”) and the institutional design that derives from an “accumulated knowledge” divergent from what is characterised as the “Andean cosmovision”. This, for example, explains why the Bolivian jurist perceives in other regulatory proposals (which have also been constructed under the logic of *command and control* like the Bolivian one) foreign “mercantilist” proposals (De Soto and Ghersi, 1987) (cited by Salcedo et al., 2020).

This argument becomes even more important if we consider that a modern “liability system” must be able to overcome mono-objective proposals (e.g., prevention) or the irresolute preponderance of a particular type of objective. Modern models combine - effectively - four objectives such as a) sanction and/or punishment; b) compensation and/or reparation, c) prevention (general and specific) and c) precaution.³ In addition, they must be inserted in a coordinated (harmonised) manner within their legal system (which is complicated in systems where spurious transplantation is the rule and not harmonisation and integration - of contemporary European inspiration).⁴

5.3.1. Valuing effects (A)

Reflecting on the scope of a legal framework, it is justified to start from Article 1 (Object) of Chapter I (General Provisions) of the Spanish Environmental Liability Act 26/2007, which regulates the responsibility of ope-

3 Moreover, it places national or domestic law in a situation of non-dependence of not requiring legal frameworks or supranational headquarters for the true protection - optimization - of rights.

4 We even risk thinking that we would be facing a case that requires constitutional reform and a complex process of regulatory harmonization.

rators to prevent, avoid and repair environmental damage, following Article 45 of the Constitution and the principles of prevention and *polluter pays*.⁵

Although the change is justified by criteria such as the Bolivian model acquiring greater “institutional strength” (a macro-regulatory approach typical of comparative neo-institutional approaches such as those contributed by Aoki and others), it involves risks that are expressed through general effects on legal security or, to put it another way, a negative increase in the perception of a short-term legal risk.

5.3.2. Assessing effects (B)

Let us also consider that Art. 2 of the Spanish Law 26/2007 (2007) on Environmental Liability states that environmental damage implies:

Damage to wild species and habitats, i.e., any damage that produces significant adverse effects on the possibility of achieving or maintaining the favourable conservation status of these habitats or species. The significance of such effects shall be assessed concerning the baseline status (...).

This consideration would require a reconfiguration of the current model in Bolivia which, despite including areas such as the characterisation of incentives in the environmental sphere, and unlike the Spanish experience, does not incorporate an express and maximalist C-B logic in its theoretical matrix and its legislative formulation. This becomes even more evident if we resort to a preliminary example: Environmental Risk Analysis, which is relevant insofar as this variable is essential for the study of environmental liability and any calculation exercise based on modelling the behaviour of “agents” in terms of rejection, neutrality, and propensity to risk.

5 This principle is not alien to the Bolivian experience. However, its understanding is far removed from “economistic” thoughts and has been constructed with a “social approach”. This idea would involve a reconfiguration of the Bolivian legal proposal more concerned with - apparently - less onerous aspects such as *deterrence* (prevention). Therefore, the enactment of a law in Bolivia like the Spanish Environmental Liability Law would require first a reconfiguration of its *legal enforcement* structure and, consequently, an increase in “*administrative or tertiary costs*”, i.e., the costs of introducing a case into the legal system (an idea we owe to Professors Calabresi and Melamed).

For Spanish legislation, environmental risk is the *function* that relates the *frequency of occurrence* of an accidental scenario to its *negative consequences* (real negative externalities or the effect on a property or subjective right) on the environment.

Risk = Frequency of Occurrence x Consequences

This formulation can be refined using this alternative:

Risk = Probability x Frequency of Occurrence x Consequences

Therefore, the implicit -macro logic of the Spanish legal framework makes it possible to obtain an economic valuation of the cost of repairing the environmental damage generated by the reference scenario selected (even randomly) to establish, for example, a financial guarantee.⁶

Here another adaptation in the Bolivian legal modelling stands out. Internalising a logic of effects and consequences that makes the use of the financial guarantee recurrent as a tool destined -exclusively- to cover the expenses derived from the reparation of any environmental damage that an agent might cause because of an accident originated during the development of its activity. This logic for the Bolivian system moves away from the idea of *protecting Mother Earth* or *Pachamama* (geocentric and biocentric) and is conceptualised as neoliberal “mercantilism” that denotes an anthropocentric nuance.

Certainly, this goes beyond the tangled disquisition involving the characterisation of the geocentric-biocentric versus the anthropocentric and that which could be adduced from the theoretical matrix that informs the Bolivian system of rights protection. In this sense, it is necessary to understand the *ratio of* the Spanish system which, overcoming ideological foundations, aims to cover⁷ the obligations of the activity con-

6 It is important to remember that an Environmental Risk Analysis or ERA is required to determine the amount of financial security.

7 In our view the precise action verb would be “anticipate” and its calculation formula involves thinking - potentially - in terms of *opportunity cost* and its related short-, medium- and long-term effects.

cerning the prevention and avoidance of environmental damage and the reparation of environmental damage caused by the development of the activity of an (economic) agent or operator.

VI. Applied Environmental Impact Assessment

The case analysed refers to the work carried out by the company GEO-PARK PERÚ S.A.C. (GeoPark). This company promoted a project that aimed to exploit oil from the Situche Central oilfield, which would then be transported using a flexible pipeline to the Sargento Puño Base Camp (CBSP), where it would be stored in tanks and transported by the river along the Morona River by barge to the Morona Pumping Station (EBM) owned by Petroperu.

Although I consider that the proposed and described model (transport activity) resulted in a high risk of environmental impact, in compliance with the legal framework in force in 2018, GeoPark prepared a Detailed Impact Assessment (EIA-d) of the Project. This was carried out by the consulting firm Engineers & Environmental Perú S.A. (E&E Perú S.A.), registered by Directorial Resolution No 037-2017- SENACE/DRA, in the National Registry of Environmental Consultants of the National Environmental Certification Service for Sustainable Investments (SENACE).

For this case, initial doubts about transportation are since GeoPark proposed a project involving development drilling (of the Situche Central field), its production facilities and the transportation of crude oil by barge for subsequent delivery to Petroperu.

However, GeoPark argued that its Project would generate:

1. A positive impact on the national and regional economy by enabling demand for goods and services, employment generation.
2. In addition to an increase in oil production.

3. A real and empowering benefit for the productive chains linked to oil activity.
4. Social development of the communities closest to the Project implementation area.

On the other hand, interestingly, the field assessment for the Environmental Baseline studies was carried out during the years 2017-2018 related to the Very Wet Season-TMH (May, December 2017; March 2018) and the Wet Season-TH (September 2017; June 2018).

To this end, a methodology was proposed that considered the sequence of work that was used for the elaboration of the EIA-d comprised the following:

- i. Approval of the PPC, Terms of Reference (ToR) and EIA-d Work Plan.
- ii. Field data collection for the Baseline in both seasons (TMH and TH).
- iii. Laboratory analysis of samples (air, water, soils, sediments, hydrobiology)
- iv. Field data collection for the Social Baseline.
- v. Elaboration of Environmental and Social Baseline Reports
- vi. Preparation of EIA-d Reports and Chapters.

Finally, we must indicate that the company complied with the regulations in force in Peru since it proposed a Baseline study of the EIA-d, which began with the collection of field information in the two (2) seasons, following the Work Plan indicated in the Report N° 055-2017-SENACE-J- DCA/UPAS and the Specific ToR approved by Directorial Resolution N° 040-2018- SENACE/JEF/DEAR dated 14 March 2018 and a Work Plan that included the suggestions of the reviewing entities.

Compliance with the regulations and the submission of the report aimed at GeoPark's claim to the competent administrative authority (SENACE) that:

- a. Compliance with the presentation of the Work Plan in line with the content established in Annex III of D.S. N° 005-2016- MINAM.
- b. Communicate the implementation of field visits to supervise the elaboration of the baseline.
- c. Communicating the contributions received from the opinion formers and with the opinion of the different State entities.

In other words, there was formal compliance with the Peruvian legal and regulatory basis, which allowed GeoPark to obtain approval from SENACE in 2019.

VII. Conclusions

Concerning the issue of compliance (closely linked to the cost of enforcement), Spain's model reveals its scope and limitations in that it does not have a complex system of rules with major problems of scope. The opposite is the case of Bolivia, which allows inferring the subsistence of a problem of "funding" of the regulatory-regulatory system, among other relevant aspects. In the Ecuadorian case, the environment is fully protected in a preventive manner and once the damage has been caused since liability for these affectations to what is considered a subject of rights (nature) is objective.

This brief exercise is introductory and requires further analysis and critical appraisal. The purpose, however, was to use "concise" examples to theoretically assess. In addition, it should be considered that it could be a highly complex rational and constructivist exercise consisting of identification and prediction activities. Therefore, it poses a challenge that requires technical mastery and broad expertise to be able to execute it according to the general interest.

There is also a need to manage different “scales of planning and execution”. Certainly, this requires a robust methodology and demonstrated organisational capacity. In that sense, it is required to start from or be based on a scientific analysis of the environment, as it is necessary to work with a projective approach, which means that it is necessary to include “mitigation measures” (design). Similarly, regulation should be focused on as an essential input for policymaking and enforcement by the environmental administration.

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