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Challenges in the Regulation of Payments for Environmental Services: Lessons from São Paulo State, Brazil

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Abstract

Brazil has a deficit of 27 Mha of native vegetation in rural properties and the ambition to restore 12 Mha by 2030 (Nationally Determined Contributions—Paris Agreement), while the state of São Paulo has committed to reforesting 1.5 Mha by 2025. The regulation of payment for environmental services (PES) is a new topic in the Brazilian legal system that also aims to contribute to this commitment. In 2021, a federal law established the national PES policy. For São Paulo state, the current regulation is a decree from 2022. This study analyzes whether the regulation of PES made by São Paulo state conveys all the actions provided for in the federal law, as well as whether there is effective public governance in this state's regulation. This analysis is essential, since São Paulo regulated this through a decree and not specifically through legislation, which, in theory, reduces public participation and governance. We used an exploratory and deductive method to evaluate whether São Paulo's regulation adequately reflects federal provisions and governance principles, ensuring the planning and implementation of PES.

Keywords: regulations; environmental services; provision of services; State of São Paulo

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1. Introduction

Brazil has committed, through the Paris Agreement, to restore 12 million hectares of native vegetation by 2030 [1], while São Paulo, the richest state in the country, has pledged to reforest 1.5 Mha by 2025. Based on these premises, it becomes essential that both Brazil and the state of São Paulo adopt specific measures for environmental preservation [2].

The concept of environmental service, according to legal determination, refers to individual or collective activities carried out to ensure the maintenance, restoration, or improvement of ecosystem services [3]. In this sense, payment for environmental services (PES) refers to compensation or remuneration (which may be financial or provided through other benefits) to the providers of these services, through agreements established between the payer (e.g., the State) and the providers, e.g., landowners [4].

The concept widely accepted by the international literature involving PES can be summarized as a voluntary transaction in which a well-defined service is purchased by an

environmental service buyer through an environmental service provider, on the condition that the provider guarantees the delivery of the environmental service [5].

Federal Law No. 14.119/2021 establishes the concept of payment for environmental services (FPESL) and sets forth a series of concepts and rules for its regulation. Its objectives are clearly defined, aiming primarily to organize the actions of public authorities, civil society organizations, and private actors with respect to PES, as well as to maintain, restore, or improve ecosystem services across the national territory. Furthermore, it suggests actions of restoration, conservation, sustainable management, and ecosystem maintenance, such as (i) conservation and restoration of native vegetation; (ii) conservation of landscapes of great scenic beauty; (iii) sustainable management of agricultural systems [3].

It is worth clarifying that the expressions "environmental services" and "ecosystem services" are used as synonyms in this case. However, some authors distinguish between them, referring to ecosystem services as those that occur naturally, whereas environmental services involve human intervention, such as agricultural planting, and reforestation, among others [6].

This article analyzes the concept of payment for environmental services, discussing how it contributes to structuring Brazilian environmental governance and the country's efforts to address climate change. In this sense, the main purpose of this study is to examine whether the regulation of PES adopted by the State of São Paulo encompasses all the actions provided for under federal law. From this analysis, it will be possible to determine whether São Paulo's PES regulation ensures public governance in the discussion and whether it fully incorporates the provisions of federal legislation.

The FPESL also establishes criteria for the application of these objectives, which are listed exhaustively. To eliminate any doubt, the FPESL may be applied to the following locations: (i) areas covered with native vegetation [. . .]; (ii) areas subject to ecosystem restoration, recovery of native vegetation cover, or agroforestry planting; (iii) integral protection conservation units, extractive reserves, and sustainable development reserves [. . .]; (iv) indigenous lands, quilombola territories, and other areas legitimately occupied by traditional populations, subject to prior consultation [. . .]; (v) landscapes of great scenic beauty, primarily in areas of special tourist interest; (vi) fishing exclusion areas, meaning areas interdicted or reserved where fishing activity is prohibited temporarily, periodically, or permanently by act of the public authority; (vii) priority areas for biodiversity conservation, as defined under the FPESL by (a) an act of public authority (e.g., conservation of biological diversity, as stated in Law No. 14.653/2023); (b) objects (e.g., areas subject to ecosystem restoration, recovery of native vegetation cover, or agroforestry planting, as stated in Law No. 14.119/2021); and (c) application criteria (e.g., prohibition of applying public funds for payment of environmental services, as stated in Law No. 14.119/2021) [3].

At the state level, Decree No. 66.549/2022 of São Paulo state establishes the State Policy on PES (SDPES). The objective of SDPES is to encourage actions that contribute to the maintenance, recovery, or improvement of ecosystem services within the state, as set forth and conveyed by the FPESL. In summary, SDPES must remain consistent with the FPESL, meaning it cannot create norms that diverge from those already established under federal law [7]. Beyond a purely normative analysis, the intention of this text is also to demonstrate that norms should be interpreted fluidly, aiming for an interpretation that guarantees the best effectiveness for the PES.

2. Materials and Methods

This research sought to answer the following question: What are the challenges in the regulation of payment for environmental services in the State of São Paulo when compared with the federal law? The answer to this question is given through an analysis of the

regulation of payment for environmental services made by the State of São Paulo in relation to the FPESL (Brazilian Forum for the Promotion of Sustainable Rural Development) and if the state regulations guarantee public participation in accordance with democratic norms (FPESL and the Brazilian Constitution). Therefore, the importance of this analysis lies in its contribution to the structuring of Brazilian environmental governance and the country's efforts to address climate change. Specifically, it analyzes whether the PES regulation adopted by the State of São Paulo encompasses all the actions foreseen in the FPESL. Based on this analysis, it is possible to determine whether the regulation of the PES (São Paulo State Budget) guarantees the participation and discussion of the population in the process of creating the regulatory norm and whether it fully incorporates the provisions of federal legislation. Therefore, a comparison was made between all the legal actions listed and permitted under the FPESL (Art. 7) and SDPES (Art. 4), so we could verify, in fact, the conflicting interpretation emerging from this comparison.

Initially, the analysis of these legislations began with the premise of listing all actions provided for in the FPESL (first column of Table 1), so that the reader could identify the actions established for PES. In the second column, the actions provided for in the SDPES were listed and grouped according to their proximity to themes already contained in the FPESL. In the results session, a new spreadsheet was created and named "conflicting interpretation", highlighting the unrestricted interpretation carried out by the SDPES, which does not fully encompass all the actions established in the FPESL and, in fact, reveals divergent interpretations from the SDPES.

Table 1. Comparison between FPSEL and SDPES.

Federal Law N. 14.119/2021	**State Decree N. 66.549/2022**
(a) I—conservation and restoration of native vegetation, wildlife, and the natural environment in rural areas, particularly those with high biological diversity, important for the formation of biodiversity corridors, or recognized as priority areas for biodiversity conservation, as defined by Sisnama agencies;	I—protection, conservation, and restoration of terrestrial, riverine, lacustrine, transitional, and marine ecosystems, as well as the promotion of the ecosystem services associated with them in Nature Conservation Units and on private lands; III—restoration of native vegetation, including in areas under legal protection; XI—conservation of wildlife, maintenance of release areas, and monitoring for the reintroduction of wild animals into nature; XII—conservation of the genetic variability of native plant species; XIII—conservation of native plant and animal species threatened with extinction;
(b) II—conservation of vegetation remnants in urban and peri-urban areas that are important for maintaining and improving air quality, water resources, and population well-being, as well as for the formation of ecological corridors;	VI—adoption of Nature-Based Solutions in rural, urban, and peri-urban areas for the conservation of water and soil resources and for the prevention of natural disasters; IX—formation of ecological corridors; XVIII—actions for the conservation and restoration of urban and peri-urban ecosystems that contribute to local climate regulation, the mitigation of heat islands, noise reduction, and human well-being, as well as to containing urban expansion in sensitive areas.
(c) III—conservation and improvement of water quantity and quality, especially in watersheds with critical vegetation cover that are important for human supply and animal watering, or in areas subject to disaster risk;	II—protection and conservation of remnants of native vegetation in rural, urban, and peri-urban areas, especially in areas of high importance for the conservation of biodiversity, water, and soil;
(d) IV—conservation of landscapes of great scenic beauty;	X—conservation of natural landscapes of great scenic beauty and relevant cultural interest;

Table 1. *Cont.*

Federal Law N. 14.119/2021	State Decree N. 66.549/2022
(e) V—restoration and recomposition of native vegetation cover in degraded areas, through the planting of native species or by agroforestry systems;	IV—restoration of degraded areas;
(f) VI—sustainable management of agricultural, agroforestry, and agrosilvopastoral systems that contribute to carbon capture and retention and to the conservation of soil, water, and biodiversity;	V—sustainable management of multifunctional forests and agricultural, agroforestry, and agrosilvopastoral systems that contribute to carbon capture and retention and to the protection and conservation of biodiversity, water resources, and soil; VII—carbon sequestration in biomass and soil in rural, urban, and peri-urban areas; VIII—reduction in emissions from deforestation and degradation, capture and retention of carbon in biomass and soil;
(g) VII—maintenance of areas covered by native vegetation that could be subject to authorization for suppression for alternative land use.	XIV—conservation of native species that provide ecosystem services relevant to food security, such as pollination and biological control of pests and diseases; XV—conservation of native species that provide ecosystem services relevant to public health, such as the control of vectors and pathogens; XVI—control and eradication of exotic species with potential to invade natural ecosystems; XVII—prevention of fires in native vegetation.

To avoid any doubt about the selection procedure carried out, the first column lists all the actions foreseen in the FPESL, considering this regulation as the basis for interpretation. The second column lists all the actions developed by the SDPES. The respective actions were selected based on the criteria of similarity and greater proximity of the action to FPESL. This comparison allows for the identification of challenges in the implementation and development of the PES.

The methodological criterion for selecting actions is based on the principle of legality. This is because compliance with a rule, whether federal or state, must, as a rule, be literal. Therefore, public governance cannot make an extensive interpretation of the legal text. The Public Administration cannot grant rights of any kind, create obligations, or impose prohibitions on those subject to its authority; for this, it expressly depends on the legal text. This is the perfect application of the principle of legality [8].

3. Results

When comparing the actions of these legal norms, we identify that some of them were not analyzed by the São Paulo State government, which limits the actions based on local governance. The table below (Table 2) demonstrates the interpretative conflict. The first column highlights all the actions of the FPESL, and the second column shows the interpretative gaps regarding the actions that the SDPES did not regulate.

Table 2. Legal and Interpretive Conflict.

Federal Law N. 14.119/2021	**Conflicting Interpretation**
(a) I—conservation and restoration of native vegetation, wildlife, and the natural environment in rural areas, particularly those with high biological diversity, important for the formation of biodiversity corridors, or recognized as priority areas for biodiversity conservation, as defined by Sisnama agencies;	(a.1) There is a restriction of interpretation when the SDPES mentions only the verb "to restore" in relation to native vegetation, leaving out actions that could be carried out under the verb "to conserve"; (a.2) There is no mention of the importance of forming "biodiversity corridors" for biodiversity conservation in the SDPES; (a.3) There is no mention of areas "recognized as priorities for biodiversity conservation, as defined by Sisnama agencies"; (a.4) There is no mention in the SDPES of the need for conservation and restoration of native vegetation, wildlife, and the natural environment in rural areas.
(b) II conservation of vegetation remnants in urban and peri-urban areas that are important for maintaining and improving air quality, water resources, and population well-being, as well as for the formation of ecological corridors;	(b.1) There is no explanation of the concept and forms of conservation of vegetation remnants in the SDPES; (b.2) There is no explanation of the concept and forms of conservation regarding peri-urban areas in the SDPES, nor of their scope; (b.3) There is no mention in the SDPES of the forms of maintenance and improvement of water resources.
(c) III conservation and improvement of water quantity and quality, especially in watersheds with critical vegetation cover that are important for human supply and animal watering, or in areas subject to disaster risk;	(c.1) There is no mention in the SDPES of how to improve the conservation of watersheds with vegetation cover; (c.2) There is no mention in the SDPES of what animal watering is and how it should be implemented; (c.3) There is no mention in the SDPES of the forms of conservation and improvements in areas subject to disaster risk.
(d) IV conservation of landscapes of great scenic beauty;	(d.1) The FPESL does not provide regulation limiting it to areas of relevant cultural interest, but rather to all areas of landscapes with great scenic beauty; thus, the SDPES ends up restricting the interpretation and application of PES;
(e) V restoration and recomposition of native vegetation cover in degraded areas, through the planting of native species or by agroforestry systems;	(e.1) There is no mention in the SDPES that areas must be restored and recomposed through the planting of native species or by agroforestry systems.
(f) VI sustainable management of agricultural, agroforestry, and agrosilvopastoral systems that contribute to carbon capture and retention and to the conservation of soil, water, and biodiversity;	(f.1) In the SDEPS, there is a restriction of interpretation when it defines that sustainable management must be carried out in multifunctional forests, since the LFPSA does not impose this restriction.
(g) VII maintenance of areas covered by native vegetation that could be subject to authorization for suppression for alternative land use.	(g.1) There is no mention in the SDPES of what constitutes areas subject to suppression for alternative land use.

4. Discussion

The use of PES is being adopted more and more, both in Brazil and throughout the world [9]. In the 2000s and 2010s Brazil is expanding the application of PES at local and regional levels. Some examples, such as Ecological ICMS, Ecological Income Tax, Fund Analysis of the National Policy on Payment for Environmental Services in Light of International Best Practices, are a truly effective application of PES [10].

Reconciling economic growth with the preservation of environmental integrity stands out as one of the most pressing challenges of contemporary society [11]. Inadequate ecosystem management can disrupt biogeochemical and hydrological cycles, accelerate

biodiversity loss, and intensify climate instability, thus representing significant threats to human health and general well-being [12].

Within this conceptual framework, it is important to mention that Payment for Environmental Services (PES) emerged as a conscious strategy to connect the compensations between environmental and development objectives. The principle of "whoever uses pays" and "whoever provides receives" aims to contribute to the generation of ecosystem services, which should be remunerated, and those who benefit from them should pay for them. This is a true economic incentive or compensation for land users who adopt activities that promote ecosystem services [13].

Despite the existence of many initiatives in Brazil, it was only in 2021 that the federal law was instituted, establishing concepts, objectives, actions and criteria for the implementation of these payments in the country [3]. It is in this sense that the effectiveness of good regulation of PES (Sustainable Production and Development) is essential, because if these programs are well structured, they can generate considerable environmental benefits and support sustainable development [14]. Given that Brazil and its institutions are subject to the principle of legality, the fragility and harm linked to the PES is evident, stemming from a São Paulo state regulation that fails to specify and restricts possible applications of the actions foreseen in the FPESL.

The Constitution of the Federative Republic of Brazil (Federal Constitution of 1988—CF) consolidated, through its specific chapter on environmental protection (Art. 255), equity, balance, and environmental security within the Brazilian legal framework. In this chapter, the role of the State in regulating and protecting the environment is made explicit, as part of the citizens' rights. In this context, Brazil has been building a fairly robust legal and regulatory framework regarding environmental protection [7,8], largely as a result of social struggles associated with the country's re-democratization throughout the 1980s.

The evolution of fundamental rights has led to significant changes in the entire legal system. The fundamental right to a healthy environment required legal norms to be adjusted to ensure the effective realization of environmental protection. For instance, Article 5, LXXIII of the CF [9] established the instrument *Popular Action* (*Ação Popular*) as a mechanism allowing any citizen to bring a case before the Judiciary to defend a collective interest, such as environmental protection [15]. The same Constitution also guarantees the instrument of *Public Civil Action* (*Ação Civil Pública*), with the same purpose, but available only to legally entitled entities, such as the Public Prosecutor's Office (*Ministério Público*) [16]. Additionally, by the CF, the fundamental right to an ecologically balanced environment for all implies interpretations and limitations upon other fundamental rights [17].

For instance, in a public civil action in the municipality of Ilhabela (State of São Paulo), the court ordered the regularization of an illegal subdivision, the demolition of buildings in environmental protection areas, and the adoption of measures to repair environmental and urban damage. In this case, the constitutional right to an ecologically balanced environment prevailed over the right to property [18]. As the CF is the fundamental law of Brazilian society [19], the norms governing PES in São Paulo state—the federal law of 2021 and the state decree of 2022—must comply with the value-based premises established in the CF [1,6]. The decree is the instrument used to formalize unilateral administrative acts issued by the head of the Executive (federal, state, district, or municipal). Thus, in the case of PES in São Paulo, the decree serves only to regulate the federal law and cannot deliberate, create, or innovate differently from what has already been established [20].

Nevertheless, the CF assigned the most significant share of normative competence to the Legislative, not to the Executive. Intrinsic to our concerns regarding the effectiveness of SDPES is the principle of legality, which constitutes a fundamental guarantee of citizens

and guides the administrative activity of the State. This guarantee is expressed in the participation of the people or their elected representatives in producing norms (laws) that introduce innovation into the legal order [20].

On the other hand, a decree "*is a legal norm of a general and external nature, which derives its validity and effectiveness from the very law it regulates and is intended to clarify, detail, as well as facilitate its operability and application, often referred to as substantive or material law*" [21].

In this regard, decrees do not foster public and civic participation in the production of the norms that govern society [21] and may lead to the establishment of ineffective and even harmful regulations for the environment, as in the case of Federal Decree 99.547/1990, which dealt with the protection of the Atlantic Forest [22]. It was only through Federal Law 11.428 (Atlantic Forest Law) that society's participation in the process of public governance was ensured [23], culminating in a normative instrument capable of promoting the conservation of this biome [24]. Thus, unlike the drafting of a decree, the making of laws follows a long and complex process, with broader participation of society, as illustrated in Figure 1.

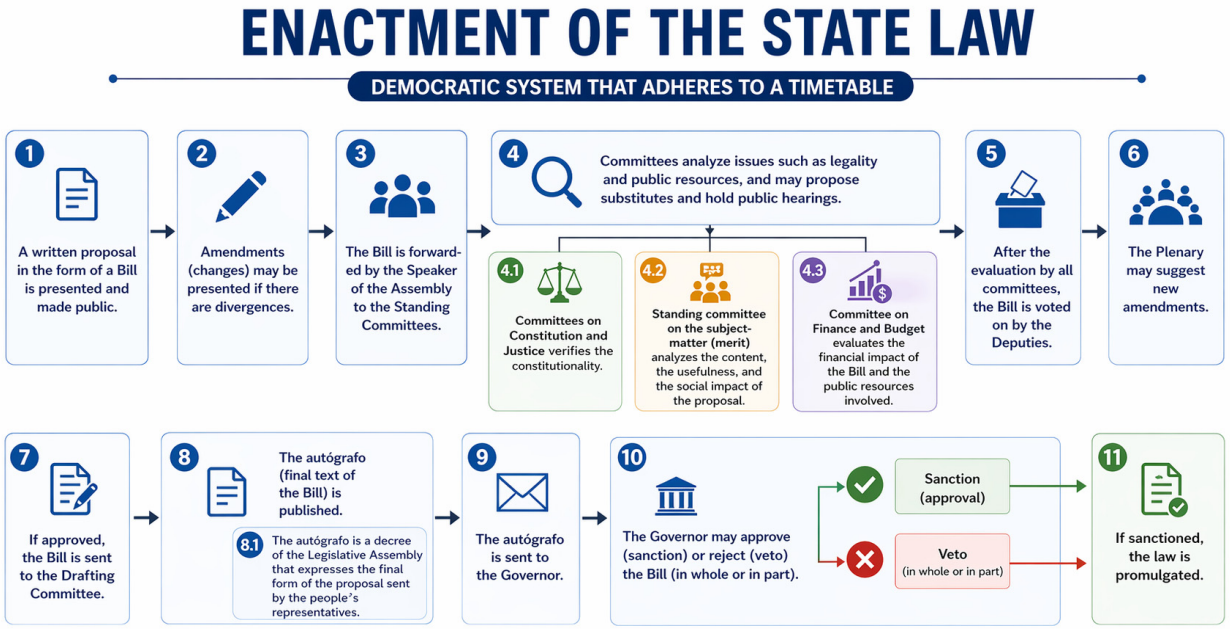

Figure 1. Enactment of the state law.

Thus, the legislation process enables the interaction among different actors representing society, in addition to fostering a technical dialog focused on the environment, ultimately providing transparency and justification to such an important matter—which is of interest both to the State of São Paulo and to Brazil [25].

Regarding a decree, its production does not involve public governance, as its issuance is carried out by the head of the Executive (federal, state, or municipal), which in this case is the Governor of the State of São Paulo [26]. Put simply, it should be noted that SDPES regulates and establishes situations that regulate the FPESL in a monocratic act (Figure 2).

When analyzing Figure 2, in conjunction with Figure 1, it is easily perceived that the SDPES, in the way it is framed, constitutes a fragile instrument for the specification and regulation of the FPESL, as it does not allow for public participation [20].

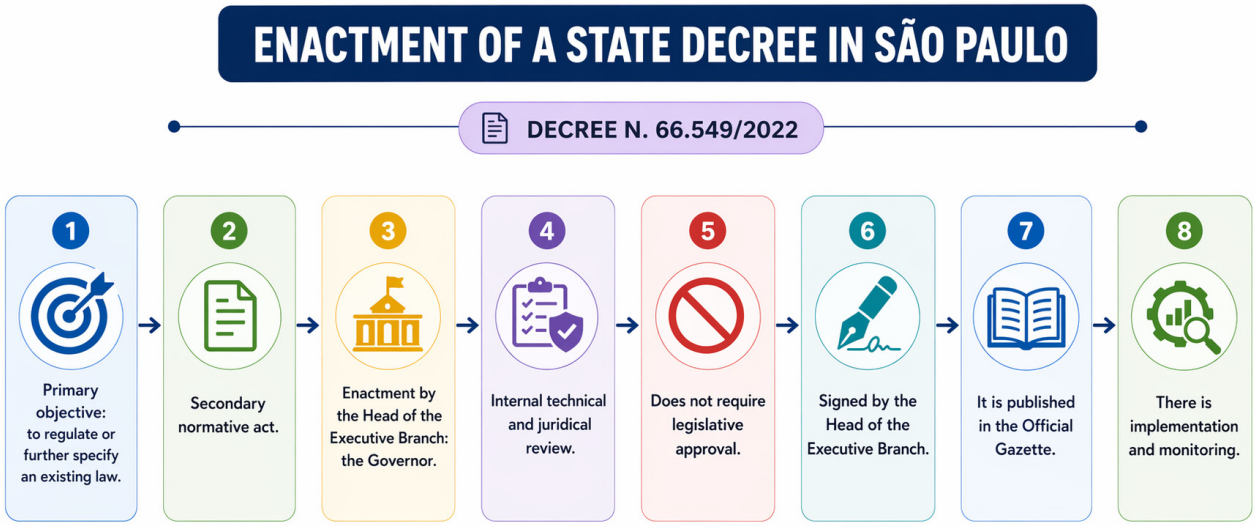

Figure 2. Enactment of a state decree in São Paulo.

Regarding the principle of public participation, this is enshrined in Brazilian environmental legislation through several norms. In a brief temporal overview, this principle is found in the (a) the National Environmental Policy Law (Law No. 6.938/81), in its Art. 4, item V, which provides for the "dissemination of environmental management technologies, the disclosure of environmental data and information, and the formation of public awareness about the need to preserve environmental quality and ecological balance"; (b) the Atlantic Forest Law (Law No. 11.428/2006), in its Art. 6, sole paragraph, which emphasizes the importance of actions ensuring transparency of information and acts, democratic management, procedural celerity, and free administrative services provided to small rural producers and traditional populations; (c) the National Policy on Climate Change (Law No. 12.187/2009), in its Art. 3, which establishes citizen participation; (d) the National Solid Waste Policy (Law No. 12.305/2010), which ensures "cooperation among different spheres of government, the business sector, and other segments of society" (item VI), and the "right of society to information and social control" (item X), in addition to other regulations not mentioned here [20].

Thus, the principle of public participation is intrinsically linked to the principle of justification, which is established by the CF through Art. 93, IX, and by Art. 4 of the Constitution of the State of São Paulo (CESP). This principle requires that public acts be duly reasoned, with the purpose of ensuring the protection of citizens' fundamental rights. The legal content of the CESP provides as follows:

"Article 4°—In administrative proceedings, regardless of their subject matter, the following shall be observed, among other requirements of validity: equality among the administered parties and due process of law, particularly with respect to the requirements of publicity, the right to adversarial proceedings, the right to a full defense, and reasoned orders or decisions" [25].

Although this is not a disciplinary administrative proceeding and/or one aimed at eventual punishment or consequences for the administered party, the provision is interpreted analogously; in other words, the provision serves to ensure that acts of the public administration are carried out in a manner that prioritizes greater effectiveness for the administered. It is important to emphasize that the use of a state decree to regulate a federal norm is not being prohibited. Our intention is to demonstrate that the use of a statute (law) is the most appropriate instrument to give transparency to public acts, as shown in Figure 1, highlighting above all the legitimate participation of the public and stakeholders [26].

Thus, the enactment of a state law in São Paulo to regulate the FPESL is the instrument with the greatest effectiveness in the Democratic Rule of Law. This is because the legislative process ensures the participation of public governance and legislative review committees, which provide guidelines for, in principle, the fair application of the fundamental right to the environment. In this sense, it is understood that justification (*motivação*) is, as a rule, necessary both for binding acts and for discretionary acts, since in this way there is no lack of a guarantee of legality, as it benefits both the administered and the Administration [27].

As already noted, the CESP itself includes justification (*motivação*) among its principles, as also evidenced in its Art. 111, which provides "The direct, indirect or foundational public administration of any of the branches of government of the State shall abide by the principles of legality, impersonality, morality, publicity, reasonableness, purpose, justification, public interest, and efficiency" [20].

Furthermore, it is essential to address the principle of purpose, given its intrinsic connection with the topic. The purpose of an administrative act is what it seeks to achieve through its implementation. Imagine, for instance, an administrative act issued by the Municipality of São Paulo, which provides for the protection of native vegetation within that municipality. What is the purpose of this act? To protect the environment regarding native vegetation in the municipality of São Paulo, aiming at the greater public interest. Therefore, the State is not allowed to pursue interests different from the public interest. The principle of purpose is expressly drawn from the constitutional prohibition of abuse of power (CF, Art. 5, XXXIV, "a"; LXVIII; LXIX), since the public interest is the shared interest of all citizens [28].

The final reflection is meant to affirm that the vitality of contemporary governance requires the effective participation of the population in deliberations on collective issues. An authentic governance rejects the reduction of citizenship to voting alone, as such a limitation empties its transformative potential and reduces citizens to mere spectators. Despite the merit of the State environmental decree, for the exercise of power to be legitimate, the State must justify its decisions in a transparent and rational manner, especially in the creation of laws and policies. The absence of such accountability undermines governance quality, and distances society from collective construction, demonstrating that legitimacy requires accountability and constant dialog, whereby legal norms emerge from participatory and plural processes [29].

Such substantive participation demands a plural and accessible informational ecosystem that exposes citizens to different perspectives and promotes qualified debate. Dialogical environments that encourage the constructive confrontation of ideas are crucial for well-founded collective decisions [30].

The SDPES authorizes the State Secretariat for Environment, Infrastructure, and Logistics to coordinate PES projects (PES may only be implemented through projects, Art. 8) and defines the possible and permitted actions through an exhaustive list (a list of actions that may be carried out, not allowing for exceptions or the inclusion of new items) in Art. 4 [7]. Thus, it is argued that the way in which the actions are provided for in the decree is specific, insufficient, and limited. This is because, as will be demonstrated below, such actions restrict the federal interpretation or even create an extensive interpretation beyond what was proposed by Art. 7 of the FPESL. By presenting an exhaustive list, even if expressed in some points in a generic way, the SDPES ultimately limits the interpretation of the federal law and provides interpreters with different possibilities of meaning, which may diverge from that established in federal legislation—a fact that can severely affect the proper application of PES in the State of São Paulo [7].

The regulation of PES by the SDPES concerns fundamental rights, as it regulates norms related to the right to the environment. In this sense, Moraes [31] has already taken a posi-

tion on the matter: "The environment must, therefore, be considered the common heritage of all humanity to ensure its full protection, especially with regard to future generations, guiding all actions of the State Public Authority toward comprehensive domestic legislative protection and adherence to international pacts and treaties that safeguard this fundamental third-generation human right, in order to prevent harm to the collectivity arising from the appropriation of a given good (natural resource) for an individual purpose".

Thus, the regulation of PES becomes essential for the full protection of the environment. The legal regulatory mechanisms involving PES are of utmost importance for environmental sustainability, as they also serve to balance nature conservation and economic development through agrosilvopastoral activities [32].

Using human action to ensure that the environment is protected in favor of the collective interest constitutes an economic instrument of environmental management, grounded in the protector–receiver principle, in which incentives are linked to enhance preservation, sustainable use, and the protection of the environment [33].

The importance of raising these arguments lies in demonstrating that there is no legal possibility for the adoption of norms that hinder or regress the legal framework concerning the environment. Therefore, the recognition of the environment as a fundamental right is essential to prevent any form of setback in Environmental Law, in the name of ensuring both effectiveness and the intangible nature of human rights [34].

Based on the premises of the importance of regulation concerning PES, such regulation must involve environmental governance in the country, as well as prioritize mechanisms of dialog between the State and organized social groups, in order to establish clear criteria for defining, monitoring, implementing, and overseeing PES and other environmental public policies, it becomes mandatory that no norm may regress or create the possibility of regression of the fundamental right linked to the environment [32].

In contemporary society, and with particular focus on the State of São Paulo, it becomes mandatory that no norm may regress or create the possibility of regression of the fundamental right linked to the environment. In the literature, this is expressed through the Principle of Non-Regression in Environmental Law, which may be defined as the limitation on the adoption of legislative, legal, and administrative–normative measures that result in the regression of the protection, conservation, and restoration of the environment and biodiversity [35].

Thus, if environmental norms are prohibited from regressing, this situation corroborates the understanding that the list of fundamental rights is not exhaustive but rather illustrative. This is because fundamental rights are not literally limited to the constitutional text. It is necessary to analyze the particularities of the case under discussion, as well as the demands of society, so that the fundamental right can be applied to the specific case. Therefore, the impossibility of a state decree regulating PES through an exhaustive, monocratic list—where conduct and actions are predetermined—ultimately places the comprehensive protection of the environment at risk [35].

As well as to the norms under debate, Table 1 highlights the provisions regulating the actions listed in the SDPES as compared with those set forth in the FPESL. It is evident that legal certainty is lacking, since state regulation, by presenting an exhaustive list of actions, (i) allows for interpretations that diverge from the FPESL, and (ii) renders the state regulation authoritarian in relation to citizens, given that there was no effective participation of society, researchers, institutes, and others during the drafting of the state decree—unlike what occurs in the enactment of a law (Figure 1) [23].

Legal certainty allows citizens "to know the prevailing law, to assess its scope, and to have confidence in the legal order projected for the future, with the expectation that the

control mechanisms established in the past will preserve individual rights and freedoms in the face of future vicissitudes" [36].

The closer relationship between the Public Administration (at all federal levels) and civil society is beneficial to ecological protection, as it stimulates collective and democratic action. The protagonism of the actors involved (individuals and legal entities), with respect to political participation in environmental matters, depends largely on the existence of legislative, administrative, and judicial mechanisms capable of ensuring the realization and effectiveness of society's role, making the effective action of the State in structuring and enabling this participation essential [37].

Effective public participation requires diverse representation in decision-making arenas. The presence of vulnerable groups in municipal legislatures, for example, is vital to incorporate plural perspectives into local policies. Institutional barriers, however, still limit such inclusion, highlighting how seemingly technical reforms, such as expanding the number of legislative seats, can positively influence representation. These changes demonstrate that institutional adjustments are effective tools for strengthening democracy, demanding constant attention to the rules that shape participation [38].

This participatory logic proves especially urgent in light of the ecological crisis, whose overcoming demands more than isolated policies or the mere delegation of power through voting. Direct engagement of the population in the formulation, implementation, and oversight of socio-environmental laws is essential. Spaces such as public hearings and participatory councils thus become crucial tools for including diverse voices in the pursuit of fair solutions. The environmental crisis, therefore, reveals a crisis of representation and equity, whose response lies in expanding mechanisms of active citizenship and in the collective commitment to socio-environmental justice [39].

Therefore, given the absence of democratic participation in the SDPES, it is important to conduct a didactic and objective analysis of this situation, to make clear the possible violation of fundamental rights and the "blank" interpretation that has been carried out.

5. Conclusions

If the interest of the State of São Paulo is to regulate federal legislation, then it is necessary to do so through an appropriate instrument (by means of a law), as this ensures the application of the democratic legislative process. It is argued that another approach to the subject of PES through state law would bring greater legal certainty for the realization of a participatory and decentralized public governance.

Federal Law No. 14.119/2021 represents progress in relation to environmental legislation in Brazil by establishing incentives for environmental preservation. Although most of its consequences are positive, as shown in the above table, the non-democratic interpretation of the federal law—disregarding public interest, fundamental rights, and the reasoning of acts—may restrict and limit the effective fulfillment of PES. The enactment of a state law is essential to define conducts and procedures that make it possible to analyze the structural framework of PES, its management, and the socioeconomic characteristics of potential beneficiaries, in such a way as to ensure that the most vulnerable groups are not left unprotected or harmed—fundamental elements that, however, are neglected in the Decree.

From this perspective, PES implemented through state legislation constitutes the effective application of a strengthened democratic, integrated, and shared management. The expansion of citizen participation and the effective application of political pluralism corroborate the core objective of the Federal Constitution (set forth in Art. 1, V of the CRFB), as participatory spaces in management qualitatively enhance the public response to social demands. The real participation of citizens demonstrates the importance of civic

involvement in environmental, educational, housing, health, and other councils, providing opportunities not only for participation in the State's decision-making process but also for shaping the relationship between the State and Civil Society in the sphere of public policies and regulatory procedures.

However, upon analyzing the two normative acts, it becomes evident that SDPES, in seeking to establish criteria pre-defined in the FPESL, creates (i) open and fragile concepts, which generate legal uncertainty for citizens, and (ii) promotes the weakening of actions that involve Public Governance in the determination of rules. Thus, it is argued that the way SDPES was structured not only fails to ensure public governance in the regulation of PES but also violates the constitutional principles of motivation and purpose, as it limits the possibilities for solutions, planning, and implementation of PES in São Paulo state.

Finally, PES is a relatively new practice at both the state and national levels. Therefore, establishing secure, fair, and effective payment mechanisms that guarantee its application and enforcement—ensuring that local communities are adequately compensated for the services they provide—constitutes the effective implementation of a successful governance instrument.

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Abbreviations

The following abbreviations are used in this manuscript:

PES	Payments for Environmental Services
FPESL	Federal Law No. 14.119/2021

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