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Artigo

MITIGATION OF ENVIRONMENTAL LIABILITIES IN BRAZILIAN COMPANIES: WHAT DOES THIS HAVE TO DO WITH COMPLIANCE?

MITIGAÇÃO DO PASSIVO AMBIENTAL EM EMPRESAS BRASILEIRAS: O QUE É QUE ISTO TEM A VER COM COMPLIANCE?

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ABSTRACT: This study aimed to identify the social and environmental policies implemented by the State-owned companies of the Union of Direct Control in the mitigation of environmental liabilities. Regarding the methodological procedures, it was characterized as a comparative study of the cross-section type. The research universe corresponds to the state-owned companies in Mixed Economy Society of open capital of direct control of the Union, namely, Banco do Brasil, Eletrobrás, Petrobras, Banco da Amazônia and Banco do Nordeste. The data showed that the companies have social and environmental sustainability practices compatible with the market in which they operate. Not all companies define the environmentally adequate final disposal of solid waste. Only Eletrobrás and Petrobras have conditioning and compensation measures to mitigate environmental damage. Eletrobrás and Petrobras have environmental impact studies,

technical notes for impact actions and Environmental Impact Reports. All companies have policies, requirements, and socio-environmental guidelines in their hiring processes, and have compliance programs in place. Although some of the elements that were checked were absent, it is evident from the literature that socio-environmental policies and actions allow companies to manage their risks, identify environmental liabilities related to their activities, from their hiring, project execution, supply of goods and services, and disposal of their solid waste.

KEYWORDS: Social and Environmental Policies, State-Owned Enterprises, Environmental Liabilities.

RESUMO: Este estudo teve como objetivo identificar as políticas socioambientais implementadas pelas estatais da União do Controle direto na mitigação dos passivos ambientais. Com relação aos procedimentos metodológicos, caracterizou como um estudo comparativo do tipo transversal (*crosssection*). O universo da pesquisa corresponde às empresas estatais em Sociedade de Economia mista de capital aberto do controle direto da União, a saber, Banco do Brasil, Eletrobrás, Petrobras, Banco da Amazônia e Banco do Nordeste. Os dados evidenciaram que as empresas possuem práticas de sustentabilidade socioambiental compatíveis com o mercado que atuam. Nem todas as empresas definem a disposição final ambientalmente adequada dos resíduos sólidos. Apenas as empresas Eletrobrás e Petrobras possuem medidas condicionantes e de compensação na mitigação dos danos ambientais. As empresas Eletrobrás e Petrobras possuem estudos de impacto ambiental, notas técnicas para as ações de impacto e Relatórios de Impacto Ambiental. Todas as empresas possuem políticas, requisitos, e diretrizes socioambientais em suas contratações e possuem programa de integridade (*compliance*). Apesar de as empresas apresentarem ausência de alguns elementos verificados, fica evidente, a partir da literatura, que as políticas e ações socioambientais permitem que as empresas gerenciem seus riscos, identifiquem os passivos ambientais relacionados às suas atividades, desde suas contratações, execução de projetos, oferta de bens e serviços e descarte dos seus resíduos sólidos.

PALAVRAS-CHAVE: Políticas Socioambientais, Estatais da União, Passivos Ambientais.

1. Introduction

State Law 13,303/2016 addresses the "legal statute of the public company, the mixed economy society and its subsidiaries, within the scope of the Union, the States, the Federal District and the Municipalities, including those based abroad", in order to encourage adherence to governance instruments in the structure of companies. This law enabled innovations in the management of companies by regulating the implementation of new standards of governance, risks, and *compliance* in the bylaws of these companies. In the same year, 2016, Decree No. 8,945/16 was issued, which clarifies points of the Law of State-Owned Companies and defines the deadline for adherence by these companies, which had until June 2018 to promote the adaptations and practices necessary for this process.

The law of state-owned companies, *per se,* innovates by corroborating with governance practices to the extent that it verses on the duty of state-owned companies to adopt environmental sustainability and corporate social responsibility practices compatible with the market in which they operate; costs and benefits, direct and indirect, of an economic, social or environmental nature, including those related to maintenance, disposal of assets and waste; environmentally adequate final disposal of solid waste; mitigation of environmental damage through conditioning measures and environmental compensation; basic project containing adequate treatment of the environmental impact; and in contracting have environmental sustainability criteria.

Therefore, a state-owned company is defined as "an entity with legal personality of private law, whose majority of the voting capital belongs directly or indirectly to the Union" (law 13.303; 2016). This corroborates the consideration that in a public company, the state company must have a majority of the voting capital (resources coming exclusively from the public sector). In the mixed economy company, on the other hand, the composition

of the capital stock allows the participation of the private sector, although the majority of the voting shares belong directly to the Union. The derivation of companies can still be classified as dependent companies and independent companies, according to the State Law 13.303/2016.

Dependent state-owned companies are defined based on Complementary Law 101/2000, in its article 2, as "a controlled company that receives financial resources from the controlling entity for the payment of personnel expenses or general expenses or capital, excluding, in the latter case, those resulting from an increase in shareholding interest".

In these terms, *compliance* is related to Brazilian practices due to the strong influence of the state apparatus on the economy. Thus, this means postulating about which regulatory, normative, cultural, and cognitive forces of the institutional environment are shaping the organizational system of the information generated. Consequently, it asks: **what are the responses of individual organizations in each company?** And what **are the regulatory influences in a way that elaborates a uniform response for all organizational fields in order to induce organizational isomorphism, in terms of environmental compliance?** The main institutional pressure has to do with compliance with environmental regulations to which companies are subject and how these regulations can corroborate with the (ex)inclusion of key markets. All this adds up to the market context involving customers, shareholders and competitors, establishing cultural-cognitive/mimetic pressure that will take shape in measures called standardization.

In a general context, therefore, the consequences involving *compliance* strengthen the concern with the environmental accounting approach, relativizing possible revenue losses (or gains) and potential damage to the economy.

2. Corporate Environmental Accounting

From this perspective, Vanzo (2016) defines the environment as being the provider of resources (inputs) for the development of the economy, man, and society, and as the receiver of the waste produced in the development process. Philippi Jr et al. (2016) emphasize the importance of sustainable development patterns by observing the four pillars of sustainability, namely: social, economic, environmental, and cultural. Therefore, it was appropriate to make this questioning.

The relationship between man and nature in terms of the use of natural resources has gained space and visibility in society and in the corporate world. Companies need to use strategies, manage environmental costs, and implement mitigating, preventive, and restorative measures as a result of the use and degradation of the environment.

For Kohn (2015), environmental studies that involve impact, management plans, audits, zoning, and surveys of environmental liabilities and equivalents have the purpose of optimizing the impacts entailed by the transformation of the environment arising from the execution of projects and enterprises, some environmental losses being tangible, or intangible, although they can be measured by the environmental penalties and burdens they cause.

To this end, companies need to manage the environmental risks inherent to the activity performed, since risk management is indispensable to enable the development of companies, being a corporate process operationalized by the Board of Directors, Executive Board, and other employees through the definition of strategies that enable the identification of events capable of affecting the company and, consequently, allow managing risks in order to keep them compatible with the risk appetite of the organization, thus corroborating to the optimization of its objectives (Azevedo, 2017).

To subsidize the monitoring of risks, it is essential to observe the *compliance* program. Sousa, Moita Neto and Silva (2020) emphasize that the *environmental compliance* program must include the action plan that aims at protecting the company from committing environmental violations and being punished with fines and lawsuits, since the program enables the company's cost reduction, as the good environmental practices are observed and instilled in the processes, corroborating for the prevention of the imputation of civil and criminal liability for eventual damages caused to the environment, and in the propagation of its image with shareholders and society in general.

From this perspective, environmental assets represent a portion of the total assets of the entity, consisting of environmental assets and liabilities forming the set of assets, rights and obligations of the company that meet both the purpose of protection and conservation of the environment, when affected directly or indirectly by the entity, and the purpose of recovery and the obligations arising from the penalties incurred by the company when it damages the environment without proper repair (Vanzo, 2016).

Vanzo (2016) conceptualizes environmental liabilities as an entity's present obligation, derived from past events related to costs or measures adopted, or that should be adopted, with a view to the responsible management of the environmental effects of the entity's activities and whose settlement is expected to result in the outflow of resources capable of generating economic benefits.

Thus, the damage caused to the environment, also called environmental liabilities, are objects of measurement and disclosure so that companies can implement measures to repair, preserve and pay compensation. In this context of disclosing information about environmental liabilities, accounting acts as a generator and provider of the necessary information through the generation of accounting reports.

In this same sense, Vanzo (2016) defines Environmental Accounting as a branch of accounting that cares for the registration and disclosure of facts related to the environment, generating useful information for management, acting as a "guardian" of the organizations' assets and subsidizing the support and management of environmental assets in order to contribute to their preservation.

In this approach, the *World Bank* (2014) emphasizes that despite their public ownership, many SOEs have weaknesses in controls, internal processes, accounting and auditing practices, compliance procedures, low levels of disclosure and accountability. Many of these problems result from the lack of a clear performance monitoring system to ensure accountability, especially for top management. It further emphasizes that the lack of transparency and disclosure of information undermines performance monitoring and increases the chances of corrupt actions within the entity, even as, in the face of privatization, governments continue to own and manage domestic commercial enterprises in critical sectors - such as finance, infrastructure, manufacturing, energy, and natural resources - and in strategic sectors in order to foster expansion and development.

It is based on the arguments presented that this research aims to identify the social and environmental policies implemented by the State-owned companies of the Union of Direct Control in the mitigation of environmental liabilities.

2.1 Environmental Liability and Risk Management

The definitions concerning *compliance*, environmental risk management and environmental liabilities are inscribed within the passive side of corporate accounting. Sánchez (1998) says that legal obligations arise from requirements established in law, regulations, and interpretation. If not observed, the company is subject to the penalties provided by law. However,

there are constructive obligations that arise from voluntary commitments (good practices) undertaken by the company. Good environmental management practices consider the sector of activity and the set of economically feasible procedures to reduce the environmental impacts of its activities, products or services.

Law No. 6938/1981 of the National Environmental Policy, in its Article 4, refers to the imposition on the polluter and the predator (payer) of the obligation to recover and or compensate for the damage caused, and the user, of contribution for the use of environmental resources for economic purposes, being the polluter obliged, regardless of fault, to compensate or repair the damage caused to the environment and third parties affected by its activity. In this perspective, organizations that carry out economic activities, or not, are held liable for damages caused to the environment.

For this, a set of effective planning and execution actions is required so that the risks of environmental damage are minimized. Thus, Bissacot (2016) emphasizes that environmental risk management instruments have become essential tools for the characterization, minimization, and elimination of potential environmental risks related to industrial operations.

Among the management measures, one can mention the **risk management *compliance*** programs[1] . In this understanding, Giovanini (2014) affirms that *compliance* refers to the fulfillment of the rules and laws that regulate and influence the conduct inside and outside companies. And that it is connected to the compliance with the laws and internal and external regulations to the organization, but whose evolution goes beyond the simple compliance with the legislation, since it also seeks consonance with the

[1] Miranda (2017) clarifies that the term *compliance* is disseminated as a synonym for integrity. The term originates from the English verb to *comply,* which means to obey and be in conformity with laws, norms, and rules. This term was coupled with other themes, such as ethics and mitigation of corrupt practices in the organization, instilling values in the agents, since they are the ones who execute the processes and rules.

principles of the company, reaching ethics, morality, honesty and transparency in the conduct of business and in all attitudes of people.

Carvalho (2021) emphasizes that the Integrity Program is considered a strategic part of a company, and should be present in the daily conduct of employees and collaborators who act on its behalf, whether suppliers or any intermediaries. He considers that the *Compliance System* can contribute to the construction of a solid culture of ethics, integrity, and to a better society.

Management measures are implemented based on environmental management policies and best practices. Thus, environmental risk management in Brazil presents a set of actions aimed at prevention, mitigation, warning, response and recovery in situations of risks and disasters (Olivato & Junior, 2020).

Risk management has enabled new skills and elements for decision making and for the continuity of the economic system. The identification of risks can consider the survey of past experiences, lessons learned, the good practices of organizations, conduct research and tools that can bring knowledge to the practices of the issue analyzed. The identification of risks can run through the use of tools, namely, cause and effect diagrams, failure mode analysis, failure tree, event trees, business impact analysis, structured "what if" technique, human reliability assessment, *bowtie analysis,* protection layers analysis, probability/consequence matrix, multicriteria decision analysis, being the basic structure of risk management divided into risk recognition, assessment, treatment and mitigation (Lopes, Morais & Barbieri, 2016).

Batello et al. (2009) point out that failure to adequately manage environmental issues can lead to high penalties and discontinuity of the enterprise, through the application of fines by environmental agencies that lead to incalculable losses, through the loss of its reputation (image) with the society and its customers. Thus, it is necessary to use actions aimed at

environmental risk management, through the use of Environmental Liability Management System.

According to Freitas (2014), disaster risk reduction should be based on actions focused on the legal scope, on the analysis and management of the causes of disasters, on reducing the degree of exposure to threats and hazards, on reducing socio-environmental vulnerabilities, on soil and environmental management, and on preparedness for adverse events.

From the above, it is understood that environmental risk management focuses on facing the risks instilled in the actions and operations of the entity, which have the challenge of managing its environmental liabilities.

The CPC (2000) defines liabilities as a present obligation of the entity to transfer an economic resource as a result of past events. The obligation is the duty or responsibility that the entity does not have the practical ability to avoid, that is, the obligation is always due to the other party (or parties). And, to meet the definition of liability, it must meet the following requirements: the entity has an obligation; the obligation is to transfer an economic resource; the obligation is a present obligation that exists as a result of past events.

Sperandio et al. (2005) emphasize that environmental liabilities are linked to the company's daily life as environmental alterations are caused by its economic activities. Thus, the term environmental liability should not only be associated with the disasters that have occurred and that have affected, in some way, the ecosystems, including obligations of other natures. Still, environmental liabilities do not always include penalties for damage to the environment. In some cases, the company's social responsibility generates the execution of preventive measures in order to avoid environmental impacts, and the economic and financial effects of these measures trigger the environmental liability.

Environmental liabilities, in the view of Vanzo (2016), relate to the cost of measures adopted, or that should be adopted, or even, obligations

contracted, voluntarily or involuntarily, in the search for responsible environmental management, and may be liabilities already known (normal) as polluters or harmful to the environment, intrinsic to the activity, and also those arising from situations not amenable to control by companies and outside the context of operations.

Ribeiro and Martins (1999) define environmental liabilities as the probable sacrifices of economic benefits arising from present obligations to transfer assets, or provide services in the future, resulting from a transaction. It refers to the economic results that will be sacrificed due to the preservation, recovery, and protection of the environment. It also focuses on environmental expenditures, which may result from past and current year's expenses, the acquisition of assets, and the possible eminence of risks, should they materialize.

Batello et al. (2009) emphasize that environmental liabilities are related to inconsequential operations of different types of activities, whether linked to the exploitation of natural resources, improper handling of inputs, raw materials, industrialized products, and undesirable by-products generated during the industrial process.

For Vanzo (2016), environmental liabilities arise from the relationship between the company and the environment, and arise due to noncompliance with the environmental legislation in force or, further, from maintenance problems or human failures related to the production stages, potential causes of accidents. They also arise as a result of the protection and maintenance of the environment, fines and penalties for legal violations, compensation to third parties for damages incurred, and estimated expenses for the recovery and restoration of degraded areas.

Also according to the author, the identification of environmental obligations is possible through environmental impact studies (EIAs), which enable the identification of impacts at different levels of their respective control mechanisms, allowing the measurement of environmental liabilities.

Environmental Impact Studies (EIAs) consist in identifying, in a detailed way, all the consequences and impacts of the environmental activities performed by the entities, and the measures to be taken to avoid or minimize such impacts. Examples are deforestation and burning; water contamination of seas, rivers and lakes; emission of pollutant gases; incorrect disposal of waste; soil contamination; air contamination; fines due to violations of environmental laws, i.e., negligent actions that cause climate effects, depletion of the ozone layer, acid rain, air quality, damage from heavy metals, odors resulting from volatile organic waste, noise pollution; waste management of waste with toxic content, polluting spills, anti-ecological effects, water quality. In general, the triggering event for environmental liabilities occurs when the environment is degraded.

From this perspective, an entity will recognize a provision for environmental damage whenever obligations arise regarding penalties or costs to repair environmental damage and that may generate the future outflow of resources representing economic benefits for their settlement (Vanzo, 2016).

Sánchez (1998) defines the management of environmental liabilities as a field of environmental management that has been consolidating worldwide, being of interest to governments, companies and communities that suffer the consequences of environmental degradation. This requires the development and application of tools for environmental liability management, aided by multidisciplinary methods.

According to Vanzo (2016), the damage caused to the environment, also called environmental liabilities, are objects of measurement and disclosure so that companies can implement measures of repair, preservation and payment of compensation. In this context of disclosing information about environmental liabilities, accounting acts as a generator and provider of the necessary information through the generation of accounting reports. Environmental accounting is a branch of accounting that cares for the

registration and disclosure of facts related to the environment, generating useful information for management, acting as a "guardian" of the assets of organizations, providing support and management of environmental assets and contributing to their preservation.

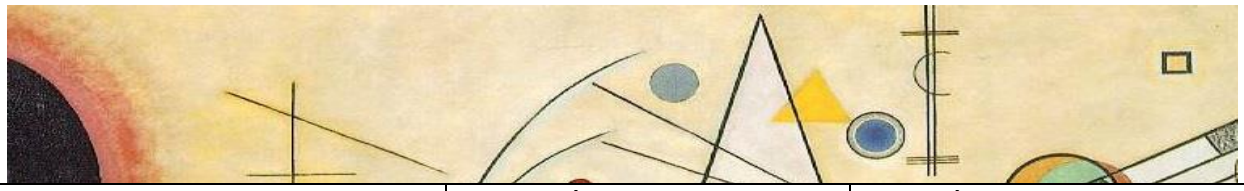
3. Methodological Procedures

This study is classified as a comparative study of the ***cross-sectional*** type, used by Gerring (2007), in which different levels of analysis are established, focusing on the comparative variation of the various (cross) studies, which take into consideration a delimited temporal cut-off for data collection. In this context, we sought to compare the environmental risk management policies implemented by the state-owned companies of the Union of Direct Control in the mitigation of environmental liabilities.

The research universe corresponds to the state-owned companies directly controlled by the Union. According to the 2021 National Treasury, state-owned companies total 46 (forty-six) by the year 2020, of which 39 (thirty-nine) are public companies (those which have 100% public capital in their structure), and 7 (seven) are mixed economy companies (those which have public and private capital in their capital composition). Of these, 5 (five) are publicly traded and 2 (two) are privately held. Publicly traded companies trade their shares on the stock exchange and privately held companies have a restricted group of investors. This study was limited to the analysis of publicly traded companies, totaling five (5) companies.

Table 1: Shareholding Portfolio of Direct Federal Control

PUBLIC COMPANIES	**MIXED ECONOMY COMPANY OPEN CAPITAL**	**MIXED ECONOMY COMPANY PRIVATELY HELD**
ABGF - Agência Brasileira Gestora de Fundos Garantidores e Garantias S.A.	BB - Bank of Brazil	CEASAMINAS- Central Supply Center of Minas Gerais



BNDES - National Bank for Economic and Social Development	Eletrobrás - Centrais Elétricas Brasileiras S.A	Telebrás - Telecomunicações Brasileiras S.A
CAIXA - Caixa Econômica Federal	Petrobras - Petróleo Brasileiro S.A	
CMB - Brazilian Mint	BASA- Bank of the Amazon	
DATAPREV - Social Security Information and Technology Company	BNB- Banco do Nordeste	
ECT - Brazilian Post and Telegraph Company		
EMGEA - Asset Management Company		
EMGEPRON - Management Company of Naval Projects		
FINEP - Financier of Studies and Projects		
HEMOBRAS - Brazilian Company of Hemoderivatives and Biotechnology		
INFRAERO - Brazilian Airport Infrastructure Company		
PPSA - Brazilian Petroleum and Natural Gas Administration Company		
SERPRO - Federal Data Processing Service		
CEAGESP- Companhia de Entrepostos e Armazéns Gerais de São Paulo		
CDC - Companhia Docas do Ceará		
CDP- Cia Docas do Pará		
CDRJ - Dock Company of Rio de Janeiro		
CODEBA - Company of Docks of the State of Bahia		
CODERN - Dock Company of Rio Grande do Norte		
CODESP - Dock Company of the State of São Paulo		
CODESA - Dock Company of Espírito Santo		
AMAZUL - Blue Amazon Defense Technologies S.A		
CEITEC - National Center of Advanced Electronic Technology S.A		
CODEVASF - Development Company of the São Francisco and Parnaíba Valleys		

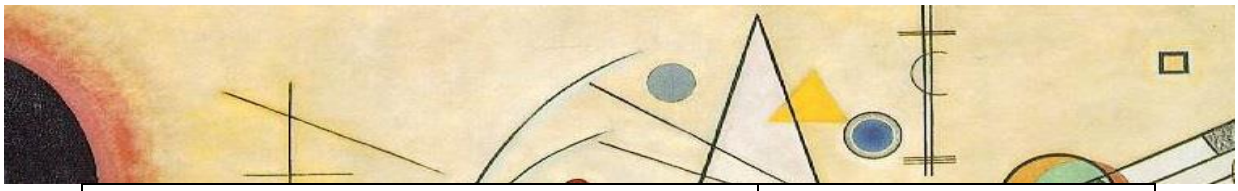
CONAB - National Supply Company	
CPRM - Company for Mineral Resources Research	
EBC- Empresa Brasil de Comunicação S.A	
EBSERH - Brazilian Company for Hospital Services	
EMBRAPA- Brazilian Agricultural Research Corporation	
EPE- Energy Research Company	
EPL - Planning and Logistics Company S.A.	
HCPA - Hospital de Clínicas de Porto Alegre	
IMBEL -Indústria de Material Bélico do Brasil	
VALEC - Brazilian Company of Urban Trains	
CBTU- Cia BR. Urban Trains	
HNSC - Hospital Nossa Senhora da Conceição S.A	
TRENSURB - Empresa de Trens Urbanos de Porto Alegre S.A	
INB - Nuclear Industry of Brazil	
NUCLEP-Nuclebras Heavy Equipment	

Source: National Treasury (2021)

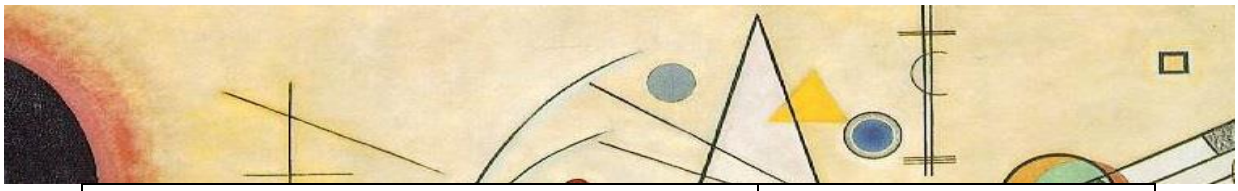
The choice for the group of companies was due to the fact that they operate in different segments, namely: food supply, communications, hospitals, industry, railroad infrastructure, water infrastructure, research, project implementation and expansion, and metropolitan transportation, and for the accessibility of information, since they are required to disclose their financial reports and governance information (integrity program, risk management policies, integrated management report, environmental report, code of ethics and integrity, and bylaws), as shown in Table 2 below.

Table 2: Activity Sectors of the Companies under the direct control of the Federal Government

Public Companies	**Sectors of Activity**
ABGF - Agência Brasileira Gestora de Fundos Garantidores e Garantias S.A.	Services



DATAPREV - Social Security Information and Technology Company	
PPSA - Brazilian Petroleum and Natural Gas Administration Company	
SERPRO - Federal Data Processing Service	
PPSA - Brazilian Petroleum and Natural Gas Administration Company	
SERPRO - Federal Data Processing Service	
EMGEA - Asset Management Company	
BNDES - National Bank for Economic and Social Development	Banking and Financial Services
CAIXA - Caixa Econômica Federal	
FINEP - Financier of Studies and Projects	
CMB -Brazilian Mint	Industry
INB - Nuclear Industry of Brazil	
NUCLEP-Nuclebras Heavy Equipment	
HEMOBRAS - Brazilian Company of Hemoderivatives and Biotechnology	
CEITEC - National Center of Advanced Electronic Technology S.A	
IMBEL -Indústria de Material Bélico do Brasil	
EBC- Empresa Brasil de Comunicação S.A	Communications
ECT - Brazilian Post and Telegraph Company	
HCPA - Hospital de Clínicas de Porto Alegre	Health
EBSERH - Brazilian Company for Hospital Services	
HNSC - Hospital Nossa Senhora da Conceição S.A	
CEAGESP- Companhia de Entrepostos e Armazéns Gerais de São Paulo	Supply
CONAB - National Supply Company	
INFRAERO - Brazilian Airport Infrastructure Company	Ports and Airports
CDC - Companhia Docas do Ceará	
CDP- Dock Company of Pará	
CDRJ - Dock Company of Rio de Janeiro	
CODEBA - Company of Docks of the State of Bahia	
CODERN - Dock Company of Rio Grande do Norte	
CODESP - Dock Company of the State of São Paulo	
CODESA - Dock Company of Espírito Santo	



AMAZUL - Blue Amazon Defense Technologies S.A	Research and Development
CPRM - Company for Mineral Resources Research	
CODEVASF - Development Company of the São Francisco and Parnaíba Valleys	
EMBRAPA- Brazilian Agricultural Research Corporation	
EPE- Energy Research Company	
EPL - Planning and Logistics Company S.A.	
EMGEPRON - Management Company of Naval Projects	
VALEC - Brazilian Company of Urban Trains	Transportation
CBTU- Cia BR. Urban Trains	
TRENSURB - Empresa de Trens Urbanos de Porto Alegre S.A	
MIXED ECONOMY COMPANY OPEN CAPITAL	
BB - Bank of Brazil	Banking and Financial Services
BASA- Bank of the Amazon	
BNB- Banco do Nordeste	
Eletrobrás - Centrais Elétricas Brasileiras S.A	Energy
Petrobras - Petróleo Brasileiro S.A	
MIXED ECONOMY COMPANY PRIVATELY HELD	
CEASAMINAS- Central Supply Center of Minas Gerais	Supply
Telebrás - Telecomunicações Brasileiras S.A	Communications

Source: National Treasury (2021)

Regarding data collection and analysis techniques, the research is classified as qualitative, since the companies' documents were collected for analysis and verification of environmental risk management policies and practices. Data mining took place in December 2022. The analysis of the documents was done through a qualitative search (filtering) of the governance documents based on the normative framework of the Law of state-owned companies, according to Chart 3.

Table 3: Policy instruments of socio-environmental governance of state-owned companies

Social and Environmental Governance Policies
Does the company have environmental sustainability and social responsibility practices (compatible with the market in which it operates)?
Does the company have policies for costs and benefits, direct and indirect, of an economic, social or environmental nature (including those related to maintenance, disposal of goods and waste)?
Does the company define the environmentally adequate final disposal of the solid residues?
Does the company have actions to mitigate environmental damage by means of conditioning measures and environmental compensation?
Does the company have a basic project containing adequate environmental impact treatment?
Does the company use environmental sustainability criteria in its hiring?
Does the company have a *compliance* program?

Source: Adapted from the State Law nº13.303/2016 by authors

Thus, a qualitative survey was carried out, taking into consideration the main environmental risk management policies listed in the State Companies Act, with the scope of identifying the use of these policies among the companies analyzed.

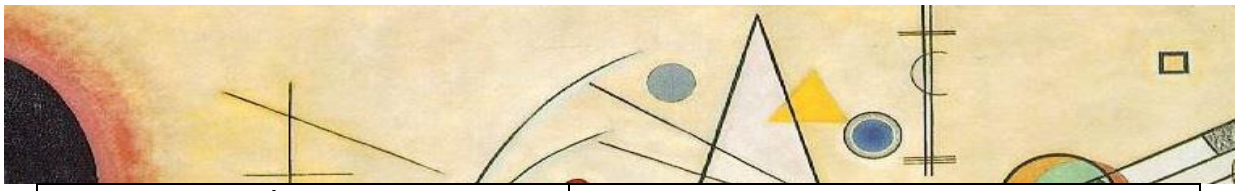
4. Results and Discussions

From the search of the documents analyzed in this study, it was identified that the companies, namely, Banco do Brasil (BB), Eletrobrás, Petrobras, Banco da Amazônia S.A. (Basa) and Banco do Nordeste do Brasil S.A. (BNB) disclose their policies on their websites and these meet the *compliance* standard.

4.1 Policies and Instruments Disclosed by the State Companies Banco do Brasil, Eletrobrás and Petrobrás

Table 4: Policy instruments of socio-environmental governance of state-owned companies

Companies	**Policies**
BB - Bank of Brazil	Sustainability, ethics, and transparency
Eletrobras - Centrais Elétricas Brasileiras S.A	Corporate Governance, ethics, transparency and sustainability



Petrobras - Petróleo Brasileiro S.A	Society and Environment and Transparency
BASA- Bank of the Amazon	Transparency
BNB- Banco do Nordeste	Sustainability and transparency

Source: Research data, (2022).

The company Banco do Brasil has a tab on sustainability, supplier relations, ethics and integrity, and transparency, containing the following information: annual public policy and corporate governance letter; annual report; bylaws; information disclosure policy; related-party transactions policy; code of ethics; sustainable purchasing and disposal standard; supplier relations policy; and risk management report.

The company Eletrobras has the following tabs: corporate governance, ethics and transparency, and innovation and sustainability: bylaws; code of conduct; suppliers' guide of conduct; environmental policy; dam safety policy; consequences policy; risk management policy; water resources policy; regulation policy; social responsibility policy; sustainability policy; related-party transactions policy; bylaws of the strategy, governance and sustainability committee; supplier integrity program; environmental impact report - RIMA; code of conduct; *compliance* program; sustainability policies.

Petrobras has tabs and links to disclose the policies aimed at the society and the environment and transparency, with information focused on the safety, environment, and health policy; climate change; water resources; biodiversity; operational safety; environmental licensing; information focused on the sustainability report; socioenvironmental; environmental impact reports of ongoing projects; public hearings; licenses in effect; *compliance* program; code of conduct and ethics; code of conduct; code of good practices; ethical conduct guide for suppliers; social statute; social responsibility and human rights policies; relationship with communities; social investment; performance in early childhood; performance in culture; Petrobras gas donation initiative; support for principles and initiatives.

The Banco Amazônia company has a transparency tab, with the following information: integrated management and sustainability report; annual reports on internal audit activities; risk management reports; the company has several financing programs aimed at encouraging the production of renewable energy and the purchase of green transportation in urban areas. It has a sustainability tab, with the disclosure of the following information: environmental, social and governance agenda; annual governance policy letter; information disclosure policy; related-party transactions policy; evaluation of goals and results; by-laws; integrity management policy; by-laws of the strategic environmental, governance and sustainability committee; by-laws of the strategic credit, risk and capital committee; integrity program; and social, environmental and climate responsibility policy (PRSAC).

The Banco do Nordeste company has a sustainability and transparency tab, with the following information: social, environmental and climate responsibility policy; sustainability strategy; social and sports investments; sustainability reports; governance, transparency and ethics; statute; code of conduct and ethics and integrity; risk management.

From the data collected available on the websites, a qualitative analysis of the documents was carried out with the purpose of identifying whether the companies have policies for environmental sustainability and social responsibility practices; policies for costs and benefits, direct and indirect, of an economic, social or environmental nature; define the environmentally adequate final disposal of solid waste; have environmental damage mitigation actions by means of conditioning measures and environmental compensation; basic project containing adequate treatment of the environmental impact; use, in their hiring, environmental sustainability criteria; and have a *compliance* program.

4.2 Social and Environmental Policies Compatible with the Market in which they operate

We sought to identify the environmental and sustainability instruments and policies, the segment in which the companies operate, and environmental sustainability and social responsibility practices compatible with the market in which they operate.

Banco do Brasil is a multiple bank. It operates in the practice of all active, passive and accessory banking operations, in the provision of banking, intermediation and financial supply services in their multiple forms and in the exercise of any activities allowed to the institutions that are part of the National Financial System, including through digital platforms; in the commercialization of agricultural products, besides promoting the circulation of goods and services in general; and as an instrument of execution of the Federal Government's credit and financial policy. The Bank aligned its Sustainability plan with the Sustainable Development Goals (SDGs) of the United Nations (UN), and renamed it Agenda 30 BB. It has a governance and management policy, administrative practices, sustainable business, social investments and indexes, awards and recognition. From the policies, it was possible to identify the actions aimed at strengthening the management of socio-environmental risk in business, processes and commercial relations of the Bank; focus on sustainability, accompanied by the control of environmental impacts, and minimizing the consumption of natural resources, waste generation and Greenhouse Gas (GHG) emissions; it has Sustainability guidelines for agribusiness credit, irrigated agriculture, electric energy, civil construction, mining, oil and gas, transportation, and pulp and paper. These actions seek to give visibility to the business and administrative practices adopted, reinforcing compliance with its public commitments and in alignment with the principles of socio-environmental responsibility contained in its policies.

The company Eletrobrás is engaged in carrying out studies, projects, construction and operation of power plants and power transmission and distribution lines, as well as the execution of corporate acts arising from these activities, such as the commercialization of electric power; and promotes and supports research in the energy sector, related to the generation, transmission and distribution of electric power, as well as studies for the use of reservoirs for multiple purposes, prospecting and development of alternative sources of power generation, incentive to the rational and sustainable use of energy, and implementation of intelligent energy networks.

Petrobras highlights a research and innovation line in which the mining, refining, processing, trade and transport of oil from wells, shale or other rocks, and its derivatives, natural gas, and other fluid hydrocarbons, in addition to energy-related activities, are in line 1 of commercial *compliance* aligned to the ISO14012 standards. The social-environmental practices are carried out through the Petrobras Social-environmental Program, composed of four lines of action, focused on strategic issues for the company and on the priorities of the areas where it operates: education, sustainable economic development, the ocean, and forests. Education focuses on integral human development, preparation for exercising citizenship, respect for the environment, promoting human rights, fighting inequality, and qualification for access to decent work, with the articulation among the several social players[2] involved in the educational processes.

[2] Valuing actions that contribute to the development of early childhood; sustainable economic development supports initiatives aimed at strengthening production models, service provision, and the formation of inclusive and participative networks, contributing to the promotion of job creation, entrepreneurship, creativity, and innovation, in a sustainable manner; the ocean action line includes initiatives aimed at the conservation of coastal and marine species and ecosystems, contributing to the sustainable development of the oceans, associated with environmental education; and the forests action line includes initiatives aimed at the conservation and recovery of forests and natural areas with the protection of biodiversity, focusing on the removal and maintenance of carbon stocks and adaptation to

Banco Amazônia is a financial institution that has the purpose of executing the Federal Government's policy in the Amazon Region regarding credit for economic and social development; provide services and perform all operations inherent to the banking activity; and exercise the functions of financial agent of the federal regional development agencies. Regarding sustainability practices, the bank has actions related to the ASG Agenda (Environmental, Social and Governance), with a focus on activities that generate social, environmental and economic benefits to society aimed at granting green financing, expanding institutional partnerships for the sustainable development of the Amazon.

Banco do Nordeste is engaged in promoting the development and circulation of goods by means of financial, service, technical and training assistance to enterprises of economic and social interest. It may practice all active, passive and accessory banking operations, provide securities consultancy, banking, intermediation and financial supply services in their multiple forms and exercise the administration of securities portfolios and any activities allowed to the institutions integrating the National Financial System, including operations related to the issue and administration of credit cards. Social and environmental responsibility in the Bank integrates the business management strategy transversally, permeating all the institutional dynamics in the conduction of business and processes and in the relationship with stakeholders. We promote environmental management, which guides and encourages the efficient use of resources, as well as the proper disposal of materials and selective collection, seeking to reduce the negative impacts and increase the positive impacts of activities on the environment, the economy and society. In the social context, we highlight the Bank's support for projects that aim to benefit populations in socially vulnerable situations,

climate change, generating environmental and social benefits, encouraging environmental education

through the use of tax incentives to invest in third sector projects aimed at children, teenagers, the elderly, people who need oncologic attention, and people with disabilities, as a way to transcend credit to increase social welfare. Accessibility issues are also an object of responsible action, in the sense that it enables the products and services offered by the Bank to be within everyone's reach. The Bank's Socio-environmental Responsibility Policy (PRSA) permeates its organizational structure and guides the institution's other policies on socio-environmental issues.

In general, it can be seen that all companies present policies and practical actions related to the market in which they operate and explore economic activities. The actions reach the environmental, social, and economic dimensions and, consequently, align with the environmental liabilities related to their respective activities. In this understanding, Azevedo (2017) emphasizes that companies need to manage the environmental risks inherent to the activity performed, since risk management is indispensable to enable the development of companies.

4.3 Policies of an Economic, Social or Environmental Nature

Regarding the companies having policies for costs and benefits, direct and indirect, of an economic, social or environmental nature (including those related to maintenance, disposal of goods and waste), it was found that the Banco do Brasil company has sustainable purchasing and disposal standards in its policies and logistics; supports projects focused on social assistance, education for the future, reapplication of social technologies, productive inclusion and income generation allied to sustainable development and environmental care, and volunteer actions.

The company Eletrobrás has a risk management policy and its objective is to establish principles, guidelines and responsibilities to guide the identification, evaluation, treatment, monitoring and communication

processes of the risks inherent to the activities of Eletrobrás companies, incorporating the risk view to its strategic planning and decision making, in compliance with the applicable regulations and the best market practices.

The company Petrobras presents the main risk factors associated directly and indirectly with the activity, as well as presents how the risk is governed and treated. The topics that are subject to possible events and risk factors are: climate resilience and transition to a low-carbon economy; regulatory environment, market opening, and competition; safety and commitment to life; accident and leakage prevention; economic and financial resilience; and socioeconomic impacts. Sustainability risks are also considered emerging risks, i.e. new long-term risks, arising from external factors, in which a potential for significant impact on a large part of the operations is identified and which may require adaptations of strategies (measures and decision-making).

At Banco Amazônia, it was not identified in the instruments disclosed any direct or indirect action related to cost and benefit policies, whether direct or indirect, of an economic, social or environmental nature. However, the company presents guidelines that foster, in its actions, the promotion of the sustainable development of the Amazon, within the scope of its business, by means of the offer of financial products and services that are suitable to the needs of clients and users; support to undertakings that maintain compliance with sustainable practices in business, with respect to the environment, protection and conservation of ecosystems, biodiversity and natural resources; it maintains norms, policies and products related to the concession of credit, the appreciation for the minimization of climate changes, in order to make the low carbon economy feasible; promotes *Due Diligence* in its processes in order to combat practices of exploitation of child labor and analogous to slavery, criminal proceeds of prostitution and sexual exploitation of minors; implements actions aligned with the Sustainable Development Goals of the United Nations, seeking to increase the positive

impacts of its performance in the community where it operates; seeks to reduce the impacts of climate change, through credit policies that induce and encourage its customers to adopt sustainable practices.

The company Banco do Nordeste, in its administrative and commercial operations, consumes materials that are potentially waste generators, such as paper, plastics (disposable cups), fluorescent lamps, printer toners and batteries. Potential generators also include packaging of products consumed, debris from civil works, garden pruning waste, electro-electronic and general rejects. Regarding recyclable materials, Banco do Nordeste participates, since 2007, in the Coleta Seletiva Solidária Program, which aims to promote the selective disposal of recyclable waste produced on the Bank's premises and its destination to associations and cooperatives of recyclable materials collectors, mainly in its Administrative Center (CAPGV).

The companies that present differentiated actions in relation to policies for costs and benefits, direct and indirect, of an economic, social or environmental nature and for maintenance, disposal of assets and waste are the companies Banco do Brasil, Petrobras and Banco do Nordeste. The company Eletrobrás presents risk management policies for the activity and good market practices, however, no policy focused on socio-environmental issues was identified. And the company Banco Amazônia presents guidelines for the promotion of the sustainable development of the Amazon within the scope of its business, however, no policy with the scope focused on socio-environmental issues. In this context, the companies that have risk management policies identify the risk factors related to their activities, have actions to dispose of their waste, and are ahead of the companies that do not, since they recognize that, when exploring their respective activities, they generate, in some way, some impact, be it environmental or social. Such actions make it possible to identify possible environmental liabilities and, consequently, to monitor and implement control and mitigation actions. In this approach, Bissacot (2016) says that environmental risk management

instruments have become essential tools for the characterization, minimization, and elimination of potential environmental risks related to industrial operations.

4.4 Environmentally Appropriate Waste Disposal

With regard to the environmentally adequate final disposal of solid waste, the findings set out in the following paragraphs were identified.

The Banco do Brasil company has socio-environmental policies; integration of efforts; economy of natural resources; minimization in waste generation; reduction of pollutant emissions; guarantee of product origin; use of low toxicity products; adoption of clean technologies; fair trade; conscious consumption; development of productive processes and management of micro and small companies, and maximization of results. As for disposal, there are elements that show the recognition of the importance of the correct disposal, however, there are no defined procedures regarding the company's actions. The company emphasizes that the improper disposal of waste can contaminate groundwater and surfaces, as well as the soil, and that it is necessary that the products be sent to their manufacturers for reuse (reuse/recycling) of their components.

At Eletrobrás, the instruments disclosed do not clearly evidence any provision on the treatment given to the final disposal of waste. However, it presents a booklet with questions and answers which tells information directed to science about the importance of the disposal of solid waste. In this understanding, the company reinforces that it is in the interest of Eletrobrás Companies to know the practices of suppliers regarding waste management to encourage the exchange of information and a greater adhesion to the adequate procedures by suppliers.

Petrobras defines, in detail, in the annual management report, the environmentally[3] appropriate actions for solid waste treatment. The waste disposal process is carried out by contractors (the companies involved in waste management are licensed or authorized by the competent environmental authorities).

At Banco Amazônia, the instruments disclosed do not show any provision about the treatment given to the final disposal of waste.

The Banco do Nordeste has policies for the environmentally adequate final disposal of solid waste; there is a contracted company responsible for the collection and adequate disposal of common waste. Regarding recyclable materials, the Bank has a partnership with the Catadores Associations Network for the collection and destination of this material. Other residues, such as fluorescent lamps, tree prunings and common garbage, are collected by specialized companies. The Bank also uses the public collection system, except for hazardous waste, which follows the regulation in force. With the intention of improving the waste management process, the Bank prepared a

[3] Since 2013, the company has developed initiatives to minimize solid waste generation, aligned with the concept of circular economy, from the following processes: processing of oily residual streams, with the recovery of hydrocarbons and reduction of oily waste generation at the Shale Unit (SIX) in Paraná, which allowed avoiding the generation of approximately 112 thousand tons of oily waste, in 2021, contributing to the production of shale oil, naphtha and liquefied petroleum gas (LPG); operation of an oil recovery unit at the Alberto Pasqualini Refinery (Refap) that allowed, in 2021, the reuse of 11,000 m³ of oily residual currents, with the recovery of hydrocarbons and the production of green petroleum coke, avoiding the generation of oily residues; recycling of all the diatomaceous earth cake generated in the biofuel filtration stage in the biodiesel production units. In 2021, two thousand tons were recycled, 42% in the production of ceramic artifacts and 58% in the manufacture of cement; and the reprocessing in plants of the pulp and paper industry, of the spent soda (hydrogen sulfide) generated in the caustic treatment of light and medium currents in our units, enabling its reuse as a substitute for raw material in the process of wood digestion and lignin extraction. By the year 2021, the total spent soda (hydrogen sulfide) destined for our units will be approximately two thousand tons. The company presents the data (quantities) and specifications of the destination of the hazardous and non-hazardous waste destined are transported to allow treatment or final disposal that is environmentally adequate for the technology destinations, namely, refining, natural gas and energy; exploration and production; technology service storage and transportation; and biofuels; reuse as fuels; recovery, recycling and reuse; incineration (with energy recovery); biological treatment; incineration (without energy recovery); disposal in landfills; and other (waste submitted to non-conventional technologies, or, more than one type of treatment).

Solid Waste Management Plan in all of its units. Besides recyclable waste, other types of waste are generated in its activities, such as: electro-electronic equipment, fluorescent lamps, batteries, mineral oil, common waste, pruning residues and civil construction waste. This type of residue is collected by specialized companies, which are also responsible for its decontamination and adequate final destination.

In summary, Petrobras and Banco do Nordeste have environmentally adequate solid waste treatment and disposal policies. Banco do Brasil, on the other hand, recognizes the importance of correct disposal, however, there are no procedures defined in relation to the final destination of waste. The company Eletrobrás does not evidence, in a clear manner, any guidance on the treatment given to its waste. And Banco Amazônia does not disclose and does not evidence any policy regarding the treatment given to the final disposal of waste. Depending on the impact generated by irregular and incorrect disposal, companies can generate environmental liabilities that can be subject to fines and punishments. Thus, Sperandio et al. (2005) emphasize that environmental liabilities are linked to the company's daily life as environmental changes are caused by its economic activities.

4.5 Conditioning and Environmental Compensation Measures

The following information shows whether the companies have actions to mitigate environmental damage by means of conditioning measures and environmental compensation.

The company Banco do Brasil publishes the risk management report, recognizing the risks involved in the activity, however, it does not present conditioning measures or environmental compensation. It recognizes the possibility of losses arising, directly or indirectly, from adverse social and environmental impacts resulting from the bank's administrative and business practices, or from publics related to its operation; and the adverse impacts

to operations resulting from conjunctural aspects related to the social and environmental unsustainability of the production modes and consumption patterns in force, comprising the administrative practices that involve the possibility of losses arising from socio-environmental impacts generated by the institution's administrative activities; in the financial support with the possibility of losses arising from socio-environmental impacts related to the characteristics of products and services or to the activities financially supported by the institution, as well as identified in assets offered as guarantee or in payment endorsement; by the participations with the possibility of losses arising from socio-environmental impacts generated by investments or participations in companies with absence or inefficiency of socio-environmental policies and management and/or high level of exposure; and by the socio-environmental conjuncture with the possibility of losses arising from changes verified in the political, cultural, economic or financial conditions related to socio-environmental issues.

The company Eletrobrás has conditioning and compensation measures in the mitigation of environmental damage. The company presents the impacts on water per type of undertaking and the mitigation and compensation actions. In hydroelectric power plants, the impact is presented, followed by the mitigation and compensation: alteration of hydrosedimentological dynamics - hydrosedimentological monitoring program; alteration of the river regime/decrease in downstream flow - hydrosedimentological monitoring program; alteration in water table levels - hydrogeological monitoring program/water table and groundwater quality monitoring program; change of regime from lotic to lentic - water quality monitoring program; change of surface water quality - water quality monitoring program; erosion of the river banks downstream of the reservoir - erosion monitoring/ Reposition of riparian vegetation. In thermoelectric power plants, there is: consumptive use of water in the generation process - program for monitoring water consumption and quality; possibility of

contamination of the water by residues/oil spills - program for monitoring the quality of the water/emergency assistance plan; alteration of parameters such as temperature, turbidity and pH in the water returned - plan for monitoring the quality of the water and effluents. In the transmission lines and substations, there is the consumptive use of water in the transmission process/consumptive use of water for current conversion - program for monitoring water consumption and quality/addition of a product to the cooling water capable of increasing the number of cycles in the converting substation towers. Floating solar plants (in reservoirs) present oil leakage (equipment collapse) - contingency plan/implementation of containment basins. It is worth pointing out that, for the impacts pointed out, there is the identification of where it is more common to occur, but not necessarily always, regardless of the phase of the project or undertaking, as well as the intensity, magnitude and importance of the impact depends on the size of the undertaking and the characteristics of the region.

Petrobras adopts conditioning and compensation measures. Based on the management report, it was identified that about R$5.5 million were invested in research and development projects in lines of research related to minimizing, reusing, and environmentally sustainable destination of residues, in order to study solutions that make it possible to use the residues produced as an input for high value-added products, such as, for example, using oily sludge to produce asphalt products; the development of research into the use of drilling gravel as a mineral supplement to enrich poor soils; actions to prevent loss of containment and leaks that can result in impacts on the environment and people. The spill response plans are structured at the local, regional, and corporate levels; as for the destination of drilling fluids, actions related to operational efficiency in line with the practices of the *offshore* oil and gas industry were adopted, maximizing the use of the inputs used and minimizing the waste discharged. In 2021, the company

invested in mitigation and compensation projects for socioeconomic impacts to the tune of R$107.7 million.

At Banco Amazônia, the instruments disclosed do not clearly show the provisions for mitigating environmental damage through conditioning measures and environmental compensation. However, this company presents risk management and climate change measures, incorporated in its risk analysis, observing the threats and opportunities related to environmental issues and climate change, which may impact, directly and indirectly, the institution; it seeks the improvement of socio-environmental criteria in credit, adopting the guidelines established in this policy and maintaining observance of the exposure to risks related to ASG issues and climate change; It seeks to implement improvements in its systems, routines and operating procedures in order to keep records of data related to effective losses due to socio-environmental damage and climate change; it adopts procedures in the creation of new products and services subject to the management of risks related to social, environmental, governance and climate issues; and it establishes specific criteria and mechanisms for the assessment and monitoring of the ESG and climate risk of operations related to economic activities with greater potential for environmental damage.

The Banco do Nordeste does not present any direct action related to the mitigation of environmental damage through conditioning measures and environmental compensation, despite having practical measures of treatment and disposal of recyclable waste, there is the disposal and correct destination of other types of waste generated on its premises, such as waste electrical and electronic equipment, fluorescent lamps, mineral oil, pruning waste, construction waste, among others. The sustainability strategies also define the attributions of the teams: to disseminate the ESG culture (environmental, social and governance) in the institution; implement the Social and Environmental Responsibility Policy (PRSA); propose and monitor sustainability metrics; promote and support social and environmental

initiatives in the Bank's other units; manage the Environmental Management System; and manage the credit sustainability regulations.

The companies Eletrobrás and Petrobras have conditioning and compensation measures to mitigate environmental damage. The companies Banco do Brasil, Banco Amazônia and Banco do Nordeste have neither conditioning measures nor environmental compensation. The data show that none of the banks have conditional mitigation and compensation actions for the environmental damage generated. In view of this, it is understood that companies that have actions to address their environmental liabilities manage their risks and monitor and correct the predictable environmental impacts inherent to their activities. Vanzo (2016) states that environmental liabilities refer to the cost of measures adopted, or that should be adopted, or even, obligations contracted, voluntarily or involuntarily, in the search for responsible environmental management, and may be liabilities already known (normal) as polluters or harmful to the environment, intrinsic to the activity, and also those that arise from situations that cannot be controlled by companies and outside the context of operations.

4.6 Environmental Impact Treatment

It was analyzed whether the companies have a basic project containing adequate treatment of the environmental impact.

No basic project or information about the treatment of environmental impact was identified in any of Banco do Brasil's instruments.

The company Eletrobrás has environmental impact studies and technical notes for impact actions. The annual management report emphasizes that the Environmental Impact Studies of the operations consider minimum flows for the maintenance of environments, species and ecological processes downstream of the hydroelectric plants; and consider the quality and temperature of the water returned to the body of water, more

specifically, in the case of thermoelectric plants, aiming at the minimum impact on ecosystems and habitats.

The company Petrobras presented, in its management report, the number of projects under development. It had 37 projects under implementation, of which 81% (i.e., 30 projects) met the EIA/RIMA (Environmental Impact, or Environmental Impact Report) criteria, in which the socio-environmental impacts are identified and assessed throughout the life cycle of the undertakings, in order to subsidize the definition of preventive, mitigating, and compensatory measures in the stages of installation, operation, and deactivation of such undertakings.

In the Banco Amazônia company, the instruments disclosed do not evidence any provision on the adequate treatment of the environmental impact.

The Banco do Nordeste does not have a basic project containing adequate treatment of environmental impact. However, it has a Social, Environmental and Climate Responsibility Policy (PRSAC), which consists of a set of principles and guidelines of a social, environmental and climate nature to be observed by the entire Bank in the conduct of its business, activities and processes, as well as in its relationship with stakeholders.

In this sense, it is noteworthy that the company Eletrobrás has environmental impact studies and technical notes for the impact actions and the company Petrobras has Environmental Impact Reports. The companies Banco do Brasil, Banco Amazônia and Banco do Nordeste have no basic project or information about the treatment of environmental impact. Corroborating with Vanzo (2016), the identification of environmental obligations is possible through environmental impact studies (EIAs)[4] , which

[4] The Environmental Impact Studies (EIS) consist in identifying, in a detailed way, all the consequences and impacts of the environmental activities carried out by the entities and the measures to be taken to avoid or minimize such impacts.

enable the identification of impacts at different levels, in view of the respective control mechanisms, enabling the measurement of environmental liabilities.

4.7 Environmental Sustainability Criteria in Contracting

We tried to verify if the companies use environmental sustainability criteria in their hiring.

Banco do Brasil uses sustainable purchasing and contracting that considers environmental, economic and social criteria at all stages of the contracting process, transforming the BB's purchasing power into an instrument for environmental protection and economic and social development. It mentions the guidelines to be considered: lower impact on natural resources such as flora, fauna, air, soil and water; preference for materials, technologies and raw materials of local origin; greater efficiency in the use of natural resources such as water and energy; greater job creation, preferably with local labor; longer useful life and lower maintenance cost of the asset and the work; use of innovations that reduce the pressure on natural resources; and environmentally regular origin of natural resources used in goods, services and works.

Eletrobras, through the company's suppliers' conduct guide, regulates, in accordance with the supply logistics policy of Eletrobras companies, in the contracting promoted and in the work processes of the supply chain, the adoption of measures which contribute to the achievement of the Sustainable Development Goals (SDG) of the United Nations' Agenda 2030. In the hiring promoted by the companies, the aspects of sustainability, corporate integrity, Human Rights, and environment are observed, according to the guidelines established by the company. Therefore, the supplier must know and observe, where applicable, the policies of Eletrobrás companies (Eletrobrás Companies' Supply Logistics Policy; Eletrobrás Companies'

Sustainability Policy; Eletrobrás Companies' Integrity Program (*Compliance*); Eletrobrás Companies' Social Responsibility Policy; Eletrobrás Companies' Environmental Policy).

The company **Petrobras**, through the ethical conduct guide for suppliers, defines sustainability guidelines that must be observed by suppliers who contract with the company. Among the considerations, one can mention: **prevent and mitigate** environmental impacts resulting from its activities and products, seeking to improve environmental quality; **ensure the traceability of** the origin of the wood used directly or indirectly in the execution of its activities, to indicate that it comes from a production process managed in an ecologically appropriate, socially fair and economically viable manner; **prevent, monitor and control the** impacts of its activities on the communities where it operates; consider the specific HSE requirements (deadline, quality, management and safety, environment and health) established for its activities[5] .

The **Banco Amazônia** company, through its hiring policy, promotes the necessary interaction between the Bank and its suppliers, valuing sustainable practices in the processes of hiring goods and services, aimed at building an economically viable, socially fair and environmentally sustainable society. The following activities are observed in its processes: contracts and manages third-party goods and services in compliance with the foreseen legislations; adopts, preferably, products and technologies of local origin; gives priority to the regional market, the micro and small companies in the acquisition of products and services, promoting sustainable development; repudiates the use of child labor or in degrading conditions or conditions

[5] In this way, HSE strengthens climate change mitigation with a focus on education, training, awareness building, learning from experience, and sharing lessons learned; transparently communicating information and performance on HSE and climate change mitigation; seeking alignment with industry best practices in HSE and climate change mitigation, in compliance with legislation, regulation, norms and standards, as well as zero fatality, zero leakage ambitions and sustainability commitments; continuously implementing improvement in HSE and climate change mitigation.

analogous to slavery, as well as the use of discriminatory practices based on religious beliefs, race, color, sex sexual orientation, political party, social class, nationality; contributes to greater job generation, preferably with local labor; prioritizes goods and works with longer useful life and lower maintenance cost; favors the use of innovations that reduce or minimize the consumption of natural resources; prioritizes the acquisition and use of products and services with social and environmental additionalities, such as: recycled, recyclable, eco-efficient, biodegradable with low intensity of natural resource use and greenhouse gas emissions; requires proof of environmentally regular origin of natural resources used in goods, services and works; encourages competitiveness; and stimulates sustainable management, aiming at a society with better products and lower economic, social and environmental risks.

The **Banco do Nordeste** company considers all bidding edicts for the acquisition of goods and contracting of services. The Bank stresses that, in its relationship with its suppliers, it is essential to adopt an action model that allows and guarantees the dissemination of good management practices, respect for human rights, compliance with labor legislation and environmental conservation. In its procurement of goods and services, it considers the following guidelines: low impact on natural resources, such as flora, fauna, air, soil and water.[6]

All companies have social and environmental policies in their contracting processes, that is, it is necessary to observe and comply with the requirements, policies, and guidelines of the respective companies so that transactions and contracting can occur, in order to avoid environmental

[6] Greater efficiency in the use of natural resources, such as water and energy; greater job creation, preferably with local labor; longer useful life and lower maintenance cost of the asset and of the work; use of innovations that reduce the pressure on natural resources; sustainable origin of the natural resources used in the goods, services and works; use of timber and non-timber forest products originating from sustainable forest management or reforestation.

liabilities. Ribeiro and Martins (1999) define environmental liabilities as the probable sacrifices of economic benefits arising from present obligations to transfer assets, or provide services in the future, resulting from a transaction, referring to the economic results that will be sacrificed due to the preservation, recovery and protection of the environment.

4.8 Compliance Program

Regarding the *compliance* program, it was identified that Banco do Brasil has a *compliance* program that involves the entire institution in the mission of ensuring the effective management of the compliance risk and the strengthening of the internal control system, contributing to: mitigating business risks, disseminating the internal control and *compliance* culture; inhibiting illegal acts; reducing financial losses; preventing damage to reputation. The Program gives the Bank the necessary credibility to demonstrate its ethical positioning and responsible and sustainable practices in the conduct of its business.

Eletrobras has an integrity *(compliance)* program and has developed ongoing actions to comply with the laws, rules, standards and regulations established for our activities, as well as to improve the process of prevention, detection and treatment of non-conformities from the following dimensions: development of the integrity program management environment - aimed at unequivocal support for the promotion of the culture of ethics and integrity, demonstrated by the governance collegiate bodies, through actions that evidence such positioning; through periodic risk analysis - consisting of the identification, evaluation, treatment and monitoring of vulnerabilities and fraud and corruption risk factors; structuring and implementing integrity program policies and procedures - is based on the creation and implementation of the basis for disseminating knowledge related to the culture of ethics and integrity, with policies and other regulations addressing

the topic being developed, implemented and followed in the daily activities of the companies, according to their applicability; communication and training - dissemination of the program through periodic communication and training activities adapted to each type of public; and program monitoring, remediation measures and application of penalties - continuous monitoring of the program through internal auditing, SOX controls, availability of a channel for complaints, management and treatment of manifestations.

Petrobras has a program that is aimed at the various stakeholders, including: senior management, company employees and their equity stakes, customers, suppliers, investors, partners, public authorities, and all those who relate to or represent the interests of Petrobras in its business relationships, through the three pillars (detection, prevention, and remediation), which aim to continuously reinforce ethics, integrity, and transparency in all business dealings.

Banco Amazônia has an integrity program, which comprises a set of institutional measures aimed at the prevention, detection, punishment and remediation of practices related to fraud and corruption, irregularities, ethical and conduct deviations. It covers senior management, employees and other stakeholders, such as suppliers, business partners and relationship groups.

Banco do Nordeste has an integrity program. This program requires the joint effort of the senior management, employees and other collaborators to commit to complying with the guidelines set forth in the bank's integrity policies, especially the integrity and ethics policy and the code of ethical conduct and integrity, as well as to developing and maintaining standards, communications, systems, processes, rules, routines and controls that faithfully reflect the established guidelines. The integrated management of integrity risks, in turn, is part of the Internal Controls System, taking into account the responsibilities attributed to the Internal Controls and *Compliance* Policy in its three (3) lines of defense of the internal controls

system: ownership over risks; functions that impact other risks; and functions that provide independent evaluations.

In general, all the companies analyzed have an integrity *(compliance)* program that focuses on actions directed at internal controls, risk mitigation, improvement of the process of prevention, detection, and treatment of non-conformities, development of standards, integrity and ethics policies, and other policies that foster good management practices. Giovanini (2014) says that *compliance* refers to the fulfillment of the rules and laws that regulate and influence the conduct inside and outside companies. And that it is connected to the compliance with the laws and regulations both internal and external to the organization, but whose evolution goes beyond the simple compliance with the legislation, since it also seeks consonance with the principles of the company, reaching ethics, morality, honesty, and transparency in the conduct of business and in all people's attitudes.

5. Final Considerations

This study sought to identify the social and environmental policies implemented by the state-owned companies of the Union of Direct Control in the mitigation of environmental liabilities. The data showed that the companies disclose their governance instruments and socio-environmental tools on the portal transparênciabrasil.com.

Companies have social and environmental sustainability practices that are compatible with the market in which they operate; the greater the impact of the activity performed, the more detailed and elaborate the policies are. The policies reach the environmental, social, and economic dimensions and, consequently, align with the environmental liabilities related to the respective activities.

Not all companies present information regarding policies for costs and benefits, direct and indirect, of an economic, social or environmental nature

and for maintenance, disposal of assets and waste. Only the companies Banco do Brasil, Petrobras and Banco do Nordeste have such policies, while Eletrobrás and Banco Amazônia do not.

Not all companies define the environmentally adequate final disposal of solid waste. Only Petrobras and Banco do Nordeste have environmentally adequate policies for the treatment and disposal of solid waste. Banco do Brasil, Eletrobrás, and Banco Amazônia neither disclose nor evidence any policy regarding the treatment given to the final disposal of waste.

Only Eletrobrás and Petrobras have conditioning and compensation measures to mitigate environmental damage. The companies Banco do Brasil, Banco Amazônia and Banco do Nordeste have neither conditioning measures nor environmental compensation.

The companies Eletrobrás and Petrobrás have environmental impact studies, technical notes for the impact actions and Environmental Impact Reports. The companies Banco do Brasil, Banco Amazônia and Banco do Nordeste do not have a basic project, or information about the treatment of environmental impact.

All companies have policies, requirements, and socio-environmental guidelines in their hiring, as well as all companies have *compliance* programs directing actions aimed at internal controls, risk mitigation, improvement of the process of prevention, detection, and treatment of non-conformities, preparation of standards, integrity and ethics policy, and other policies that foster good management practices.

Given the above, one verifies the need for greater attention to the policies and information disclosed by companies, since they operate in the market, i.e., trade their shares on the stock exchange and need to meet the different stakeholders. There is also the State Law No. 13,303/2016, with a deadline for adherence in June 2018, however, the data were collected in December 2022, thus evidencing the non-conformity in its entirety of the

analyzed socio-environmental policies, i.e., the non-adherence to the normative instrument.

Despite the absence of some elements verified, it is evident from the literature that socio-environmental policies and actions allow companies to manage their risks, identify environmental liabilities related to their activities, from their hiring, execution of projects, supply of goods and services, and disposal of their solid waste. As a suggestion for future research, it is recommended that this study be extended to other companies under the direct control of the union.

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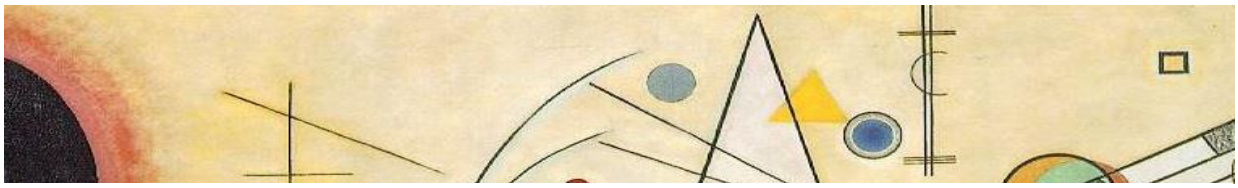

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