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Organization of Accounting Information Related to Environmental Issues

Organização das Informações Contábeis Referente às Questões Ambientais

Organización de la Información Contable Relacionada con Temas Ambientales

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KEYWORDS

Environmental Costs.
Cement Factory.
Environmental Protection.

Abstract: The present study sought to identify in a cement factory located in João Pessoa, which was chosen due to the potentially polluting characteristic that the sector presents, what is the way of organizing the accounting information referring to environmental issues in view of its actions for protection, maintenance and repair of the environment. With the growing interest in protecting the environment, organizations are facing environmental issues and costs. The research methodology obtained a qualitative profile, where a case study was made, which used the interview, observation and analysis of documents, triangulating the information that was obtained. The respondents were the accountant and the environmental engineer, who showed the detailed budget document and the nomenclatures of the accounts related to the company's environmental costs, which circled between the costs of evaluating the measurement of environmental noise, costs with analysis of drinking water, inspection and recharge of fire-fighting equipment, safety signs, equipment calibration service, waste collection service, among others. All accounts presented by the company are classified as prevention accounts and fixed accounts, in the interview the environmental engineer emphasized that variable and unexpected costs are not accounted for, given the large budgetary slack adopted by the entity, which already anticipates the possible expenses that may arise. The research contributes to the literature by showing a new possible classification for environmental costs, presenting the reality of the environmental

costs of a potentially polluting company, identifying its nomenclatures.

PALAVRAS-CHAVE

Custos Ambientais.
Fábrica de Cimento.
Proteção Ambiental.

Resumo: O presente estudo buscou identificar em uma fábrica de cimento localizada em João Pessoa, que foi escolhida pela característica potencialmente poluidora que o setor apresenta, qual a maneira de organização das informações contábeis referentes às questões ambientais frente às suas ações para proteção, manutenção e reparo do meio ambiente. Com o crescente interesse de proteger o meio ambiente, as organizações estão se deparando com questões e custos ambientais. A metodologia da pesquisa obteve um perfil qualitativo, onde foi feito um estudo de caso, que utilizou da entrevista, observação e análise de documentos, triangulando as informações que foram obtidas. Os respondentes foram o contador e a engenheira ambiental, que mostrou o documento de orçamento detalhado e as nomenclaturas das contas relacionadas aos custos ambientais da empresa, que circundavam entre custos de avaliação de medição de ruídos ambientais, custos com análises de água potável, inspeção e recarga de equipamento de combate a incêndio, sinalização de segurança, serviço de calibração de equipamentos, serviço de coleta de resíduos, entre outros. Todas as contas apresentadas pela empresa são classificadas como contas de prevenção e contas fixas, na entrevista a engenheira ambiental enfatizou que não são contabilizados custos variáveis e inesperados, visto a grande folga orçamentária adotada pela entidade, que já se antecipa aos possíveis gastos que podem surgir. A pesquisa contribui para a literatura exibindo uma nova classificação possível para os custos ambientais, apresentando a realidade dos custos ambientais de uma empresa potencialmente poluidora, identificando as suas nomenclaturas.

PALABRAS CLAVE

Costos Ambientales.
Fábrica de Cemento.
Protección Ambiental.

Resumen: Este artículo buscó identificar en una fábrica de cemento ubicada en João Pessoa, que fue elegida debido a la característica potencialmente contaminante que presenta el sector, cuál es la forma de organizar la información contable referente a las cuestiones ambientales en vista de sus acciones de protección, mantenimiento y reparación del medio ambiente. Con el creciente interés en proteger el medio ambiente, las organizaciones se enfrentan a problemas y costos ambientales. La metodología de investigación obtuvo un perfil cualitativo, donde se realizó un estudio de caso, el cual utilizó la entrevista, observación y análisis de documentos, triangulando la información que se obtuvo. Los encuestados fueron el contador y el ingeniero ambiental, quienes mostraron el documento de presupuesto detallado y las nomenclaturas de las cuentas relacionadas con los costos ambientales de la empresa, que circularon entre los costos de evaluación con medición de ruido ambiental, costos con análisis de agua potable, inspección y recarga de equipos contra incendio, señalización de seguridad, servicio de calibración de equipos, servicio de recolección de residuos, entre otros. Todas las cuentas que presenta la empresa se clasifican como cuentas de prevención y cuentas fijas, en la entrevista el ingeniero ambiental enfatizó que no se contabilizan los costos variables e imprevistos, dada la gran holgura presupuestaria adoptada por la entidad, que ya anticipa los posibles gastos que pueden surgir. La investigación contribuye a la literatura al mostrar una nueva clasificación posible para los costos ambientales, presentando la realidad de los costos ambientales de una empresa potencialmente contaminante, identificando sus nomenclaturas.

Introduction

Discussions about environmental costs are commonplace. The attention to these costs has grown in recent years, and large companies have differentiated themselves and disclosed such costs, assuming that they are essential (López-Menéndez, Péres & Moreno, 2014; Qiu, Shaukat & Tharyan, 2016). Environmental costs arise from environmental protection, including pollution and waste reduction activities, environmental assessment monitoring, and the environmental impact of a product based on its damage and prevention costs (Nematchowa & Reiter, 2019).

The imminent importance given to sustainability issues for organizations has required the integration of environmental aspects into corporate decision-making (Figge & Hahn, 2013). These activities have been growing with the increase in environmental regulations, and the visible concern of society (Silva, Cunha, Klann & Scapin, 2011).

The idea of researching a cement factory located in João Pessoa appeared after viewing on the company's website its concern with the environmental damage it causes and its possible mitigation, knowing that the cement industry has a high polluting potential (Maury & Blumenschein, 2012) and since the company promoted the city, generating countless jobs and bringing important visibility to the region. The factory researched is a Brazilian private equity company that is a leader in the cement market in the countries of Portugal, Argentina, Mozambique and Cape Verde, it is vice-leader in the Brazilian and Paraguayan markets and has a relevant share in the South African and Egyptian markets.

Some companies that directly affect the environment have been more concerned with trying to remedy and pay for environmental damage, since the population's demand for environmental preservation is even more intense. Being sustainable, unlike what was commonly debated, has become a social function, and more people are involved in its construction. According to Faccioli, Hanley, Torres and Font (2016), the financial costs that arise in the present, in relation to environmental preservation, bring environmental

benefits at some point in the future.

Countries in Western Europe and East Asia, such as Austria, Germany and China, have invested heavily in green growth strategies, and companies present in these countries have shown interest in combating access to markets for imported products that do not comply with the production process and do not meet environmental protection requirements (Nguyen & Tran, 2019).

When it comes to cement, it must be used intensively, it was considered a landmark of civilization, which used this raw material to construct countless buildings, houses, stores, among other types of constructions (Maury & Blumenschein, 2012; Medeiros & Levy, 2015). The number of companies grew over the years, requiring larger and more distinct spaces.

The location where cement factories are located has presented not only environmental, but also social impacts. Impacts related to the communities surrounding the factories were commonplace and some of them caused conflicts with their inhabitants, both by generating problems in the natural environment and by issues related to human health, such as air, water, or soil contamination. Currently, not all cement factories are problematic, since some of them are increasingly behaving in a way that complies with legislation, seeking greater socio-environmental responsibility (Maury & Blumenschein, 2012).

Due to the potentially polluting characteristics of cement factories, described by Normative Instruction No. 11 of April 13, 2018, which determined that the manufacturing and elaboration of non-metallic mineral products like the production of ceramic material, cement, plaster, asbestos, glass and similar materials such as a potentially polluting activity, over the years standards emerged that covered the operations and certain precautions that such factories should follow. Cement is extremely important when we consider the growth of cities and the number of projects that are built daily. Observing this increasing use of cement and the great pollution that its factories can cause, legislation has emerged to resolve these problems. Freitas and Nóbrega (2014) inferred that the pollutants emitted in the manufacture of cement are considered dangerous air pollutants, such as volatile organic compounds,

ammonia, chlorine, hydrogen chloride and products of incomplete combustion.

The competitive market today requires companies to differentiate themselves from each other, and a possible means identified by them is investment in the social side, investment in the sustainability of the organization, since a good image of this sustainability tends to bring a better reputation for the company. The civil construction sector is in continuous progress, meaning that the factories that produce the raw materials for this sector are constantly on the rise. Due to this, the concern with the identification and recognition of environmental costs is latent, given the intense internationalization of companies and the need for consolidation in the market, because according to Bocasanta, Pfitscher and Borgert (2016), it is essential to consolidate sustainability with development.

The global concern about environmental issues is growing, with greater attention being paid to the quality of the environment and the business possibility of sustainable development, given the environmental consequences and the influence that it has increasingly exerted in the context of strategies for organizations (Jing & Songqing, 2011, Alewine & Stone, 2013). Organizations are therefore interested in actions that prevent possible damage to the environment, due to the understanding of the essentiality of costs as indicators of company efficiency (Al-msary, Nasrawi & Alisawi, 2023).

For Garcia and Oliveira (2009), environmental costs are considered to be amounts incurred with the aim of protecting the environment. These costs must be identified by the company. Henri, Boiral and Roy (2016) infer that environmental costs reflect organizations' management of controlling and optimizing the costs of a given environmental strategy.

It is essential that environmental costs be disclosed in the financial statements of entities, in order to meet the informational demands of users who seek to identify whether the company acts with socio-environmental responsibility (Moreno & Viegas, 2016). Environmental costs are a subset of a broader universe of costs essential for adequate decision-making and must be allocated to avoid a decline in the quality of products offered by

companies, as well as in the quantity of human life and natural resources (Tinoco & Kraemer, 2008, Dyani, 2017).

The interest in the topic was due to the lack of qualitative material in the area that could deepen and understand, from the perspective of the managers of the organization in question, the impact and opinion on the environmental costs that a potentially polluting company like theirs presents. The aim, therefore, was to discuss a topic so latent and present in the lives of the population, which has suffered the bonuses and burdens of this exacerbated growth in civil construction and consequently the increase in production of one of its raw materials, which is cement.

With all this said, this article aims to identify, in a cement factory located in João Pessoa, which was chosen due to the potentially polluting characteristics that the sector presents, how accounting information regarding environmental issues is organized in relation to its actions for protection, maintenance and repair of the environment.

According to Li, Tian, Li and Qi (2018), when organizations disclose accounting information related to environmental protection, it is possible to understand the general situation of the environment and make an objective assessment of the company's environmental contribution.

The aim is to contribute to the field of study of environmental accounting and to literature in general by investigating how environmental issues that impact financial aspects and, consequently, the entity's accounting are handled, as well as identifying which protection plans and policies of prevention exist, providing a possible new nomenclature and classification for environmental costs.

Theoretical Elements of the Research

Environmental Accounting Information

Environmental accounting information has been a source of growing interest among academics, companies, regulatory agencies, professional associations, and others since the mid-1980s, when such information began to be taken

seriously by organizations (Mata, Fialho & Eugênio, 2018; Jing & Songqing, 2011).

There is an incessant search to arrive at an ordering of information related to an entity's activities, mainly by regulatory bodies, which constantly seek standardization to facilitate, mainly the understanding of companies' accounting information, seeking to identify what happened in the past and make decisions future ones (Fernández-Roca, López-Manjón & Gutiérrez-Hidalgo, 2018). Information related to the environment is no different either, several organizations are looking for ways to standardize it to facilitate the understanding by the interested public

Accounting information is essential for organizations. With it, entities can direct the path they will follow and correct possible errors they may find. For Aurelia-Aurora and Sorina-Geanina (2012), the factors that contributed to the development of environmental accounting include the high demand for information disclosure and the tendency of organizations to develop a strategy more focused on sustainability, identifying methods and procedures to control operations and generate information for the purpose of decision-making. This allows the organization to use resources more consciously.

Environmental accounting information has been increasingly taken into consideration for the purpose of business operations, seeking to direct the company's strategic planning, thinking not only about financial aspects, but also about environmental aspects (Rodrigue, Cho & Laine, 2015). According to Lee and Hutchison (2005), despite all the benefits that accounting information related to the environment presents, there is a concern about the lack of disclosure or even limited disclosure carried out by organizations.

In general, companies do not disclose this type of information, which shows a lack of knowledge or interest in this aspect of social responsibility. Furthermore, environmental information tends to be more widely disclosed when there are stricter laws or when there is pressure from society.

Reports that include information on environmental costs are essential not only for users

to be able to visualize the costs that companies have with the environment, but mainly for the control and organizational monitoring of these costs and a subsequent analysis of how to reduce them.

For Paiva (2003) there are several aspects that must be incorporated by the accounting information generated by accounting, such as relevance, reliability and comparability. Lee and Hutchison (2005) complement this by inferring that accounting issues related to the environment are increasingly relevant to a multitude of stakeholders and accounting professionals need to understand the increased demand for timely disclosure of firm information.

The information generated from environmental reports makes data on the company's performance available to all stakeholders, allowing them to understand the impact the organization has on the environment and what it does to address this (Tinoco & Kraemer, 2008).

Therefore, the essentiality of disclosing environmental accounting information, its benefits and the highlight in the literature of the scarcity of this information on the part of organizations stand out.

Environmental Costs

Environmental costs, from a business perspective, refer to a company's ability to fulfill its environmental protection responsibilities and take appropriate measures (Jing & Songqing, 2011). The practice of managing environmental costs is improved based on the principles of sustainable development, developing and implementing new management mechanisms, that aim to achieve environmental goals and objectives (Taygashinova & Akhmetova, 2019).

The Canadian Research Report defines environmental-related costs as those related to the prevention, reduction and repair of damage; losses; fines, penalties and compensation for third parties, excluding costs related to safety activities (Ribeiro, 2010).

Environmental costs are, therefore, all those costs that are directly or indirectly linked to the

environment, whether in relation to the protection, neutralization, depreciation or depletion of assets that are environmental in nature (Ribeiro, 2010).

There are several descriptions of what environmental costs are. The vast possibility of these costs leaves organizations free to determine them as they wish.

Regarding the nomenclature of environmental costs, there is no single nomenclature, since it is necessary to adapt the accounts to each sector covered, or to each environmental event or disaster, giving rise to new costs and thus the list is completed, without exhausting the classification (Fonseca, Machado, Costa & Souza, 2016).

Due to the different ways of naming and accepting environmental costs, Ribeiro (2010) infers that it seems that there will always be gray areas, in which common sense is needed to decide which costs qualify in this way.

In addition to the plurality of possible names for environmental costs, there is also an extensive literature that addresses the possible methods of measuring these costs, framing them in relation to the different sectors and adapting them to the specific reality of each organization.

For Thomaz and Callan (2016), estimating and evaluating the environmental costs of organizations is very complex and risky. Although it is possible to measure in a more tangible way the benefits that preservation and care can bring, determining their costs is still difficult. There is constant literature that states the difficulty of measuring environmental costs. But more than difficult, many organizations do not perform this type of measurement because they believe it is extremely costly and ultimately does not bring benefits to the organizational decision-making process (Rodrigo et al., 2015).

Environmental costs are not easy to describe, and organizations tend to be reluctant to identify such costs. However, for proper environmental management, identifying environmental costs is an essential part of accounting, making their recognition essential (Xuefeng & Wangcong, 2011).

Environmental costs can arise from various sources, but essentially they are related to the processes of preservation, conservation and

recovery of environmental and natural resources, whether used by the entity as inputs or simply generated through the elimination of waste that comes from the organization's production process (Fonseca et al., 2016).

The ways in which environmental information is organized will be some of the future defining factors of effective and prominent organizations in the competitive environment. Thus, proactive action by entrepreneurs to promote innovations that aim at "clean" production processes will be fundamental in their strategic issues, giving them powerful competitive advantages (Silva, 2001).

It is clear that costs can be explicitly associated with the benefits achieved in the current period, and that they will be charged to them, basically including the costs of operating environmental protection systems (Ribeiro, 2010).

For Fonseca et al. (2016) the costs refer to expenses incurred in neutralizing and preventing environmental impacts inherent to the production process. However, many of the environmental costs of organizations also result in future economic benefits for the external society, as a result of a better environment in relation to the conservation of natural resources (Ribeiro, 2010).

The responsibility of entities with environmental issues raises questions for managers about "if" and "how" social responsibility practices influence the performance of companies and how to manage the environmental variables of organizations (Melo, Barbosa, Araújo & Leal, 2012). Concern about environmental costs, whether they are highlighted or classified, does not only interfere with the financial results of the organization, but tends to impact the organization as a whole.

The understanding of environmental costs is quite broad and discussed in the literature, however, because there is no direct relationship between costs and the products and services offered by the entity, consumers' understanding of the real cost of the product is almost non-existent. However, according to Jim and Songqing (2011), it is possible that there is a combination of the manufacturing costs of the products with their respective environmental costs. Thus, the environmental result is also the assessment of an

intangible asset, which results from a possible increase in revenue from the sale of the company's products and services, greater than it would be under normal conditions without the adoption of an environmental control system.

Rodrigues, Machado and Cruz (2011) corroborate that despite their relevance, many environmental costs are disregarded when incorporated into product costs and are treated as external costs. This means that companies are unable to identify in isolation which values truly represent environmental costs.

Knowing the environmental costs of an organization can serve as a basis for managers to establish public policies that minimize environmental damage. And the incessant search for details of these environmental costs permeates organizations, in order to increasingly obtain accurate and reliable information, thus reducing informational asymmetries

Classification of Environmental Costs

Several classifications have been developed to determine what the environmental costs would be, which according to Jing and Songqing (2011) are increasing and enormous in light of the increase in the industrialization process.

Tinoco and Kraemer (2008) emphasize that environmental costs can basically be classified as external or internal. External costs can be incurred as a result of a company's production or existence, while internal costs are those related to the company's front line and are easily identifiable. Still from the authors' perspective, internal costs can be segregated into direct costs, appropriate to a product; indirect costs, which occur causally; and contingent or intangible costs, considered as potential internal costs that may occasionally impact the company's effective operations (Neitzke, Gonçalves, Oliveira, Machado & Gibbson, 2015).

For Hansen and Mowen (2010), costs are classified as: environmental prevention costs (those arising from activities that are performed by entities to prevent the production of contaminants or actions that would cause damage to the environment), environmental detection costs (costs

of activities performed to determine whether the entity's products, processes or other activities are adequately following environmental standards), internal environmental failure costs (those incurred for the elimination, containment or management of contamination and waste produced that were not discharged into the environment), external environmental failure costs (these are the costs incurred and paid by the company that involve activities performed after discharging contaminants and waste into the environment) and finally, unrealized costs of external failures, known as social costs (which are the costs of activities performed after discharging contaminants and waste into the environment).

Despite the various ways of classifying costs, the essence of cost classification is the same. The allocation of environmental costs to their respective extents tends to make it easier for managers to assess where the greatest costs are occurring and possibly examine possibilities for reducing or controlling them.

The goal of the manager who deals with environmental costs is to reduce the impact of business activities on the environment, providing positive economic results in this process (Leonardo, Bulla & Abbas, 2013). In order to know the impact, it is necessary to discriminate the activities and costs incurred by them, hence the concern and interest of organizations.

Regardless of which classification the company adopts, it needs to be aware of the possibilities that exist, so that it can direct environmental costs and classify them in the best way.

Disclosure of Environmental Costs

The costs arising from environmental events have an effect on the results and financial position of the companies, which makes their disclosure essential (Rodrigues et al., 2011).

It is extremely important to disclose the environmental costs of the entity, but the lack of legislation and enforcement that requires organizations to disclose them, makes this data still very scarce. Despite the concerns of investors and other stakeholders about environmental policies

and such disclosures, there is a scarceness of sources of information (Cormier & Magnan, 1999).

The entities that disclose these costs tend to do so in management reports, that is, in a document separate from the organization's mandatory balance sheets and statements, documents that are often unaudited and insufficient in terms of their reliability and portrayal of reality. Yu, Guo and Luu (2018) corroborate by inferring that the content of these reports varies too much, due to the lack of regulatory guidelines on how certain information should be reported.

Ribeiro (2010) infers that the management report is normally limited to presenting qualitative data and, therefore, is subject to a certain dose of subjectivism and the convenience of the company. Paiva (2003) points out that accounting reports published in Brazil, with rare exceptions, are incomplete with regard to activities related to the environment. They are incomplete both in terms of management reports and in the explanatory notes published by organizations.

Still regarding the possible use, by companies, of preparing reports that address environmental aspects, being only positive speeches about it, Ribeiro (2010) believes that although excessive marketing is indeed perceived, it is necessary to recognize the positive factor that the information provided by companies that do so, has encouraged competitors to carry out similar or better actions, which therefore benefits the society as a whole.

It is clear that the quantity of information we have about the costs incurred by companies is still very insignificant. Several legal and mandatory measures will need to be taken, so that companies start to disclose them correctly, and not just point out the actions they take in favor of the environment. Economic development that does not pay attention to the capacity of natural resources and the environment, and consequently their consecutive disclosures, will have problems in the future (Andi Yuliana, 2018).

Numerous companies are producing and publishing guidelines for behavior, actions and disclosure of information related to the environment. Some of these institutions are listed by Ribeiro (2010, p. 108): “Coalition for Environmentally Responsible Economics — CERES; Global Environmental Management

Initiative — GEMI; Japan Federation of Economic Organizations — Keidanren; Responsible Care Program; Business Charter for Sustainable Development — ICC; Global Reporting Initiative — GRI; Global Compact; Accountability 1000 — AA1000”. However, none of them yet require organizations to detail these costs, classifying and itemizing them.

According to Paiva (2003), all expenses and provisions made for the environment must be evidenced, as well as all situations directly related to nature that may harm the interests of minority shareholders or represent risks to the continuity of the company and society.

Methodological Elements of the Research

Aiming to develop a more in-depth study on the reality experienced by the cement factory and seeking to understand how accounting information regarding environmental issues is organized in relation to actions to protect, maintain and repair the environment on the part of the company, the research will be exploratory, descriptive, qualitative and a case study.

The strategy used was the case study. The case study was chosen because it has an exploratory nature, in order to obtain greater depth in the analysis and inferences of the study (Yin, 2010). The case study was conducted in a cement factory located in João Pessoa, Paraíba, which was chosen due to its accessibility for collecting the data necessary to conduct the research, together with the ease of contact obtained.

The business group studied was founded in 1968 in Apiaí – São Paulo and since then has shown a growth trajectory. João Pessoa's unit has 53 employees and is comprised of operational areas such as: cement silo, overhead crane, electrical rooms, crusher, two cement grinding buildings and a bagging room. As a guide for employees, there is a board at the entrance to the factory informing which critical activities are being carried out and in which operational complex of the entity, in order to ensure that the entire company is aware of what is happening and takes the necessary precautions.

This research used observation, semi-

structured interviews and analysis of documents and booklets provided by the company. The use of more than one information collection technique is indicated by Oliveira (2011) as being appropriate for conducting case studies.

These techniques were used together in order to provide a better understanding of the way in which the processing and discrimination of accounting information regarding the organization's environmental costs was carried out. Document analysis was used to verify the booklets that were provided by employees and, more specifically, to verify the budget documents present in the organization. The techniques were applied to enable subsequent triangulation. Stake (2011) defines triangulation as the act of bringing more meaning and reliability to the data obtained.

To implement the information collection techniques, the company's professionals were contacted, and they would be responsible for providing us with the necessary information via email, so it could be scheduled the best day to conduct the interviews. The interviews lasted approximately three hours. The semi-structured interview included questions about how the organization views environmental costs and the terms used. This stage of the interview was essential to provide a broad view of the general questions addressed in the research.

In the observation, it was possible to see some of the organization's practices, such as the placement of motivational banners and attitudes that should be taken by employees. Some of the attitudes listed are: building sustainable partnerships, always considering the customer, committing to results, leading by example, strengthening the team, having an innovative stance, optimizing processes, thinking safely, exercising permanent influence and constantly challenging oneself. We were also shown videos presenting the organization, with information about its upward growth and its environmental practices, which lasted more than an hour. For Stake (2011), data from observation is extremely valuable. And that was what was perceived in light of what was possible to see in the organization.

After the video, we spent approximately thirty minutes analyzing documents such as the organization's brochures and budgets. As Yin (2010) inferred, the documents can be useful due to the details they contain, such as the spelling of names, titles, and organizations used by the organization.

In total, the visit to the organization lasted approximately four and a half hours, which was the time spent on observation, interviews, and document analysis. After the visit, discourse analyses were performed in the interviews in order to arrive at the research findings.

The technique of discourse analysis was chosen to carry out the findings. For Flick (2009) discourse analysis allows for a broader focus on the material that was obtained. Michel (2015) further adds that discourse analysis comes from content analysis and seeks to deepen the understanding of the text beyond the words.

Presentation and discussion of the results

This section will discuss and portray the findings of the research and the important points of the semi-structured interview, observation and analysis of documents that were carried out at the entity.

At first, when we arrived for the visit, we were welcomed by employees who showed us informative videos about the entity, which was founded in 1968 and is headquartered in Portugal. It also has the equivalent of sixteen units in Brazil, and the unit under study is located in João Pessoa. The video also revealed that João Pessoa's unit has 53 employees, approximately 10% of whom are female and the remainder are male.

Information about the organization's programs was also presented in the video, and we saw that one of its concerns is the development of the local community. In view of this interest, it trains and subsequently hires such members to form its staff, aiming to develop the community and further promote consumption in the region. After the presentation of the introductory videos where we were shown general information about the company, we were directed to the employees

responsible for whom we would interview.

(environmental engineer)

The interviews were conducted with the environmental engineer and the accountant of the entity, in order to clarify with them, who are responsible for preparing and approving budgets regarding the probable environmental costs that the organization incurs, how the organization views such costs.

The first topic of the interview was about the company's environmental protection practices and the interviewee stated that the company has several programs such as plans for the recovery and execution of degraded areas, a survey of mining operations located in sensitive areas and a plan entitled "Think Consciously", where the company reinforces the need for employees to think consciously even in actions related to the electricity consumed and water used in processes.

We use several environmental protection practices. To avoid the worst, we have programs such as active care, where employees commit to taking care of each other, both in the execution of processes and in the use of personal protective equipment (PPE) and a plan called "Think Consciously", where we encourage employees to use less water and always turn off the lights when they leave their offices. (environmental engineer)

Regarding the classification of costs adopted by the entity, the respondents stated that all costs related to the preservation, maintenance and assessment of environmental costs are considered fixed costs, with no variable costs, corroborating the statement made by Ribeiro (2010) about the measurement of environmental costs being hindered by the limitations of the instruments used by accounting and given that most of these costs fall under indirect and fixed costs.

In light of the above regarding the only fixed environmental costs presented by the company, it was observed from the respondents' responses that it is extremely difficult to quantify possible variable costs that may arise, which forces employees to increase their budgets in order to avoid future problems.

We always budget more for our bills, to avoid any surprises that may occur and to always have some money to cover eventualities.

When asked about the costs the company incurs with revegetation, we received the response that the costs we were asking employees about were seen as investments by the company, and since the entity presents a high risk due to the constant explosions that are carried out and the amount of flammable and dangerous materials it uses, the company needs to constantly invest in revegetation and carry out tests to evaluate the processes and its structure.

When asked what the company's biggest costs were, the interviewees claimed that prevention costs were the ones that had the biggest impact on the cement plant's budget, mainly because the company uses scopes for these possible prevention costs from the budget planning process.

Our biggest costs are certainly prevention, we spend to avoid future problems. (environmental engineer)

When questioned about the presence of flowcharts aimed at environmental prevention, the respondents stated that there is no flowchart, there are only practices that are disseminated to all members of the company, in order to obtain the necessary prevention and care.

Finally, when asked about the environmental costs that were budgeted by the entity, the interviewees provided us with the detailed budget that described the package, the description of the accounting account, the cost center researched, which was the cost center named as SSMA - Health, Safety and Environment, together with the description of the budgeted item, which was the environmental costs of the researched unit.

At first, in the detailed budget, there is a column referring to the package related to the costs, which vary in: administrative support; taxes, insurance and fines; and third-party services. After this classification of packages, the accounting accounts were presented with their respective descriptions.

Regarding to the administrative package, the existing account balance is that of other rentals, which refer to ambulance rentals contained in the security cost center. In the package of taxes,

insurance and fines there are accounts broken down as other municipal and state taxes and environmental fees, which are basically fees for renewing firefighter licenses, waste collection fees, water concession renewal fees, water concession consumption fees, environmental license renewal fees, environmental control and inspection fees.

Regarding the third-party service package, there are accounts for laboratory materials and services, also present in the environmental cost center, which include items such as filter paper, chlorine dosing pump and safety signs/plaques.

The next accounts are named as safety materials, present in the safety cost center and refer to personal protective equipment, maintenance of applicable legislation software, technical report on environmental working conditions and environmental risk prevention program.

Another account presented by the interviewees in documents was the one named other fixed services, included in the security cost center, such as inspection and recharging of fire-fighting equipment and water potability services. The accounts included in the environmental cost center refer to the analysis of water potability every six months; effluent analysis services; waste collection services; septic tank emptying services; water tank cleaning services; calibration services for safety, health and environmental equipment; pest control and pest control services; and calibration services for water meters, costs classified by Hansen and Mowen (2010) as environmental prevention costs.

Other account balances present in the environmental cost center are the accounts for other occasional services, broken down by the assessment of environmental noise measurements; chimney monitoring services with two measurements and an environmental emergency kit consisting of waste collectors.

After presenting all the accounts that appear in the cost centers that included safety, health and the environment, the interviewees were asked about the frequency of new accounts being included in the budget. The interviewees stated that the budget is rarely changed and that every six months the environmental engineer evaluates and forwards to

the company's accounting department, at most changes in values related to some accounts.

We adjust our budget every six months, but the inclusion of new accounts in it is almost non-existent. What is usually done is to increase the budgeted amounts. (environmental engineer)

When asked about the costs that would fit into rework or evaluation costs, internal and external failures, these were not presented by the interviewees, who stated that almost the entire company's budget, which is present in the Environment and Safety cost center, presents a substantial scope to cover any possible unforeseen events that may happen.

Based on the materials observed and the interviews obtained, it was noted that the company's focus is primarily on preserving the environment, always maintaining a significant scope, in case something unexpected happens and is not budgeted for by the entity.

Unlike the proposal by Hansen and Mowen (2010), that companies, in addition to describing the environmental costs they incur, also need to describe the benefits that arise from these environmental protection actions, the company studied does not provide a description of the benefits that this preservation causes, but one of the interviewees stated that due to the entity's campaigns and routine actions, the benefits exist, but it was not possible to explicitly describe them.

Final Considerations

Environmental concerns on the part of companies are latent. In the case study in question, it was possible to see that organizations prefer to overestimate their budgets with values related to environmental preservation rather than incur later, unknown and unexpected expenses. The company in question then chose to work with large budget gaps and consider all possible bills that could arise regarding environmental costs.

It was seen that, despite not being a publicly-held company, where there is an obligation to describe certain accounts, the company studied is concerned with the expenses that preservation,

detection and failures may incur, always budgeting the amounts to cover such costs and preparing its own description of the nomenclature of environmental costs.

As the research was carried out in a qualitative way, it was possible to describe how a cement factory views its costs and what nomenclatures it uses, thus enabling another classification for the sector, which increasingly seeks to adapt to environmental legislation and standards, given the its polluting potential and growing participation in the national and international market.

Environmental costs have an impact on the company's financial situation as a whole, which forces organizations to understand them more effectively in order to identify, in terms of their environmental costs, which costs fall into the classification of prevention costs, environmental detection costs, internal environmental failures or even external environmental failures. It is worth noting that the company studied does not use account classification, but we can infer that most of the accounts detailed by the company are classified as prevention accounts.

It is suggested for future research that more companies in the cement sector be studied, to identify which possible classifications they use, in order to arrive at a more complete and better classification for the sector. It is also suggested that companies in other sectors be researched, to see the similarities or differences in the classifications of environmental costs.

This research contributed to showing a new classification for environmental costs, a classification that can be adopted and shaped according to the needs of other companies that present similar characteristics and observe that it is possible to use such classification to benefit their business and their information in general.

It is known that each company is unique and tends to rely on specific information and accounts, but, by being aware of a new classification for the accounts that are part of its accounting, it is possible to facilitate the adaptation and effective use of such nomenclatures.

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