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Revista de Educação e Pesquisa em Contabilidade
Journal of Education and Research in Accounting

Periódico Trimestral, digital e gratuito publicado pela Academia Brasileira de Ciências Contábeis

ABRACICON
ACADEMIA BRASILEIRA DE CIÊNCIAS CONTÁBEIS

ISSN 1981-8610

REPeC, Brasília, v. 10, n. 1, art. 1, p. 5-23, Jan./Mar. 2016
Available online at *www.repec.org.br*
DOI: http://dx.doi.org/10.17524/repec.v10i1.1334

Environmental Financial Information: differences in disclosure levels among Brazilian companies

Abstract

Issues related to the environment and sustainability have motivated interests of the academic community and organizations. The current model of society is permeated by excessive production and consumption, which is exacerbating man's relationship with nature. It is a fact that, to subsist, society needs the manufacturing of products and delivery of services, but it is also known that manufacturing products and providing services impact the environment. The impact also differs according to the activity that is developed. In Brazil, Law No. 10.165/2000 determines on the National Environmental Policy and ranks companies according to the environmental impact they cause. This research analyzed the voluntary disclosure of environmental financial information in Brazilian companies, classified into sectors with different environmental impacts. Therefore, we investigated the Standardized Financial Statements of the companies that make up the IBrX-50 index, in its portfolio from May to August 2014, in the years 2011, 2012 and 2013. The measure ranked the environmental financial information, distributing the data into seven categories and 30 subcategories. The most evidenced category relates to environmental investments, with 58% of the information disclosed. The highest amount presented was in the category of environmental liabilities and contingencies, with R$259.84 billion. The results show that there is a difference in the disclosure of environmental financial information compared to the amount of sentences disclosed without the number of subcategories evidenced. The nonparametric test and content analysis showed that, in the years analyzed, companies with high environmental impact disclose more environmental financial information.

Key words: Environmental financial information. Disclosure. Brazilian companies.

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Published in Portuguese and English. Original Version in Portuguese.

Received in 9/14/2015. Ask to Revise on 11/28/2015. Resubmitted on 1/19/2016. Accepted on 2/10/2016 by Dr. Valcemiro Nossa (Editor).
Published on 3/31/2016. Organization responsible for the journal: Abracicon.

1. Introduction

To subsist, society needs the manufacturing of products and delivery of services, but it is also known that manufacturing products and providing services impact the environment. The level of this impact is distinguished according to the activity performed. In Brazil, Law No. 10.165/2000 – determines on the National Environmental Policy and ranks the companies in small, medium and high environmental impact.

Society has been demanding the positioning of organizations and a way to act more responsibly with regard to the activities they develop, since the use of environmental resources is inevitable. Therefore, the conscious use of these resources is crucial. For the organization to have a good reputation in the social and environmental sense, it is important to conduct actions with transparency and reliability. Thus, it is noticed that issues related to the environment and sustainability in different areas, as well as in social and environmental accounting, have motivated interests not only of the academic community, but also of companies (Gray, 2002; Deegan, 2002; Parker, 2011).

Another requirement concerns the growing demand for improved disclosure of facts that affect not only the environment, but also the financial and economic issues of companies. Several countries have developed, since the 1970s, a process of awareness raising, realizing the need to control product manufacturing processes and waste emissions. However, Rover, Murcia, Borba & Vincent (2008) state that, in Brazil, there is no mandatory disclosure of environmental information, but some organizations try to present guidelines on environmental disclosure for companies.

Despite any obligation, there are rules that attempt to standardize the environmental information with a view to further understanding. Some companies report such information separately in reports, but the required formal document used by all companies that are listed at the Brazilian Securities and Exchange Commission (CVM) are the Standardized Financial Statements (SFSs). In this report, listed companies disclose economic and financial information and may have a variety of additional information, in which they voluntarily mention environmental information.

Therefore, as there is no obligation, each company chooses to voluntarily disclose environmental information in different reports, created over the years by organizations concerned with environmental issues. This advertising is usually related to the aspects of management the company wants and decides to be important, on a discretionary basis.

Based on the demand to improve the dissemination of facts that affect not only the environment, but also the financial and economic issues of organizations, this study aimed to analyze the voluntary disclosure of environmental financial information in Brazilian companies classified in sectors with different environmental impacts.

2. Literature Review

2.1 Environmental disclosure

Organizations have been pressured to position themselves in relation to their activities and environmental issues. In response to demands from stakeholders, it is clear that the disclosure of environmental financial information by organizations has become a growing and voluntary practice.

Environmental disclosure is part of the steps of the accounting cycle proposed by Szuster, Szuster, Szuster and Szuster (2009): collection; recognition; accumulation process; summarization; and disclosure. The collection gets information about transactions conducted by the entity; recognition involves the need or not to answer when, how and at what amount an act or accounting fact should be recognized; the accumulation process is the structuring of the database based on the registers made; summarization consists of a summary of the data organized to transform them into information useful to accounting users; and finally the disclosure, which makes this set of information public.

In the 1970s, there was a wide range of research on this theme. Belkaoui (1976) conducted a study that investigated reports from 50 American companies and the impact of the disclosure of environmental pollution on the stock price of the companies on the stock exchange. In the following decade, the 80s, other authors focused their publications in the same sense: Igram and Frazier (1980); Wiseman (1982) and Freedman and Jaggi (1986). And since the 1990s, surveys are increasingly frequent, particularly: Harte and Owen, 1991; Epstein and Freedman, 1994; Gray, Walters, Bebbington and Thompson, 1995 and Milne and Adler, 1998.

In the following years, due to the increasing importance attributed to environmental issues, many authors continued studying environmental disclosure, leading to an even greater proliferation of research on the theme (Iman, 2000; Al-Khater & Naser, 2003; Villiers & Staden, 2006; Cho, Roberts & Patten, 2010; Cho, Guidry, Hageman & Patten, 2012; Andrikopoulos & Kriklani, 2013; Burgwal & Vieira, 2014; Ferreira, Borba & Rose, 2014). In Brazil, some authors also focused their studies on the same subject (Rover et al 2008; Ribeiro Nascimento & Bellen, 2009; Freitas & Potter, 2011; Santos, Vargas, Adams & Lavarda, 2012; Fernandes, 2013; Abreu Fernandes Assis & Silva Filho, 2014).

The concern with matters relating to the environment has stimulated organizations to disclose information. Although not mandatory, the disclosure of such data has been identified as a strategy and a competitive advantage. Thus, the studies cited were concerned with identifying which variables exert positive or negative influence with regard to the disclosure of environmental information. In addition, they sought to check what types of environmental information are most cited and whether the level of disclosure influences the participation in some environmental index.

2.2 Guidelines for environmental disclosure in Brazil

In Brazil, the disclosure of environmental information is not mandatory. Laws 6.404/1976, 11.638/2007 and 11.941/2009 did not discuss clearly how the provisions on environmental issues should be allocated in the Management Report, Notes and supplementary reports. The Brazilian Securities and Exchange Commission (CVM) proposes, in Guiding Opinion No. 15/1987, the inclusion in the Management Report of information about the investments the company made in the environment (Abreu et al., 2008). Another recommendation is the standard and Audit Procedure No. 11 by the Institute of Independent Auditors of Brazil (IBRACON, 1996) - revoked by the National Board on 05.24.2011, and Federal Council Accounting Resolution No. 1.003/2004 (CFC, 2004), approving the Brazilian Technical Accounting Standard No. 15.

CVM Instruction No. 331/2000 brings one item that refers to qualitative information in the Annual Information Form - (IAN). Focused on environmental accounting, Vellani (2011) summarizes the IAN report as a document sent by companies listed on BM&FBOVESPA to the CVM to show, through item 15, the company's relationship with ecosystems. Today, as this instruction was revoked by 480/2009, the IAN form, used in the disclosure of non-financial information, was replaced by the Reference Form (FR), which differs by the level of requirement.

The Brazilian Institute of Social and Economic Analysis (IBASE) developed a Social Balance Sheet model that suggests the disclosure of environmental expenses for use by companies, with the following subdivision: environmental investments related to the company's operations and investments in environmental programs/external projects. According to Abreu et al. (2008, p. 6), "although this IBASE model is already a breakthrough in the disclosure of environmental information in the social balance sheet, it deserves greater deployment and sophistication, in order to generate significantly useful information for users."

One can also mention ITG 2004 – Interaction between the Entity and the Environment (CFC, 2013), which was in public hearing until September 10th 2013 in order to "define the concepts and criteria for the disclosure of quantitative and qualitative environmental information in the financial statements that reflect the entity's interactions with the environment."

The mandatory disclosure of environmental information is being sought, for example, through the Senate draft law No. 289 from 2012, which is going through the National Congress. This law can enforce the publication of the sustainability report for Publicly-Traded Corporations (S.A).

The search for disclosure also occurs through the integrated report which, according to the International Council for Integrated Reporting (IIRC, 2014), is a "concise document on how the strategy, governance, performance and prospects of an organization, in the context of their external environment, lead to the creation of value in the short, medium and long term."

Despite the lack of legal standards, Ribeiro (2006, p. 141) states that "there is a reasonable amount of guidance as to the form and content of environmental information disclosure and in the companies that have already taken the initiative to highlight their behavior towards these questions, unfortunately, the majority takes the descriptive form, without measures".

3. Method

For the study, the companies listed on the IBrX-50 index were selected, related to the portfolio from May to August 2014 (years 2011, 2012 and 2013), which measures the total return of a theoretical portfolio composed of 50 stocks, selected among the most traded on BM & FBOVESPA in terms of liquidity, weighted in the portfolio by the market value of the stocks available for trading. To be listed on the IBrX-50 index, companies need to rank among the 50 most liquid securities, provided that the following requirements are met: to rank among the 50 stocks with the highest tradability index in the last twelve months and have been traded in at least 80% of trading sessions in the same period (BM & FBOVESPA, 2014).

In the research, a sample was chosen that includes companies with the three levels of pollution (small, medium and high), according to Law No. 10.165 from December 27th 2000. The final sample consists of 46 companies, because three of them (Bradesco, Petrobras and Vale) participate in the index with preferred and common stock. BB Security was established in December 2012 and went public in April 2013. As it does not have the research documents in the three years of study and cannot present the evolution in the period, the company was removed from the sample. Table 1 shows the classification of sectors that make up the survey sample and the pollution potential.

Table 1

Classification of activities that are potentially polluting and use environmental resources

Polluting Potential	Sector	Total per sector	Total companies
High	Industrial Goods	1	10
	Non-Cyclical Consumption	1	
	Basic Materials	7	
	Oil, gas and biofuels	1	
Medium	Non-Cyclical Consumption	5	8
	Cyclical Consumption	1	
	Public Utility	2	
Low	Construction and Transportation	5	5
Non polluting	Non-Cyclical Consumption	1	23
	Cyclical Consumption	6	
	Financial and others	13	
	Telecommunication	3	
Total		**46**	**46**

Source: elaborated by the authors

The choice of the SFSs to develop the research was due to the fact that, in the specific case of Publicly-Traded Corporations (SA), the Brazilian Securities Commission CVM regulates and requires disclosure of SFSs by means of CVM Instruction 331 (04.04.2000), as amended by CVM 431/2006 and 469/2008 and Revoked by CVM Instruction 480/2009, contained in the following documents, among others consolidated financial statements of the last three fiscal years and adjusted/adapted to the Brazilian accounting environment, accompanied by Management Reports, Independent Auditors' Opinion, SFS form and Notes to the Financial Statements. To standardize the data, a measure was elaborated with the main issues found in previous studies on environmental financial information (Table 2).

Table 2

Summary of Environmental Financial Information concepts

Environmental financial information	
Environmental Investments	Resources applied in the environmental area that protect, reduce or eliminate a potential risk for nature, whether educational or operational.
Tangible Environmental Assets	Goods and rights gained with the intention to control, preserve and recovery the environment with the prerogative of producing benefits.
Intangible Environmental Assets	Environmental immaterial goods and rights.
Contingent Asset	Refers to an uncertain realization of an environmental gain and should not be accounted for.
Liabilities and Contingencies	Are the liabilities deriving from damage provoked to nature resulting from the company's activities, leading to the delivery of assets, services or renouncing to future economic benefits.
Environmental Revenues	Are the resources from the sale of byproducts, ecological products, waste and recycled material, as well as from environmental management services.
Environmental Costs and/or Expenses	The environmental costs are resources consumed in the production process to produce a revenue; while the expenses relate to the spending not related to product manufacturing.

Source: elaborated by the authors

The disclosure was categorized, according to Rover et al. (2008), in Qualitative (Q), Quantitative Non-Monetary (QNM) and Quantitative Monetary (QM). The Qualitative information is mentioned in descriptive terms; Quantitative Non-Monetary reported in non-financial figures; and the Quantitative monetary in financial figures. The amounts mentioned in the consolidated SFSs were considered. For the measure, the following categories were developed: environmental investments, with five subcategories, tangible environmental assets, with three subcategories; intangible environmental assets, with two subcategories; contingent assets, environmental liabilities and contingencies, with four subcategories; environmental revenues, with four subcategories; and environmental costs and/or expenses, with twelve subcategories, totaling seven categories and thirty subcategories (Table 3).

Table 3

Environmental financial information measure

Categories	Environmental Financial Information
Environmental Investments	Maintenance/modification in operational processes to improve the environment; recovery of degraded areas; environmental education for employees, subcontractors, self-employed professionals and company managers; environmental education for the community; environmental programs and projects.
Tangible Environmental Assets	Machinery/equipment/facilities to reduce pollutant residues; machinery/equipment/facilities to manufacture by-products; inventory of raw material and parts and accessories used in the reduction of elimination process of pollution levels.
Intangible Environmental Assets	Brand, license and/or patent; development of environmental products and technologies.
Contingent Asset	Contingent asset
Liabilities and Contingencies	Liability and probable provision; possible provision; remote provision; unlikely provision.
Environmental Revenues	Sale of recyclable material; sale of carbon credits; sale of sustainable products/subproducts; sale of waste.
Environmental Costs and/or Expenses	Maintenance/modification in operational processes to improve the environment; recovery of degraded areas; environmental education for employees, subcontractors, self-employed professionals and company managers; environmental education for the community; environmental programs and projects; environmental licenses and/or certifications; consultancy to elaborate environmental impact assessment (EIA) and environmental impact report (Rima); research spending to develop environmental products and technologies; estimated losses due to reduction to recoverable value of environmental assets; amortization, depletion and depreciation; commercials; spending on carbon credit acquisition.

Source: elaborated by the authors

In the data collection, especially for the allocation of information to spending or investment, the treatment by the company was observed. Another important point is that some companies disclosed the value of their investments or environmental costs along with other areas, such as infrastructure or production. In such cases, the treatment given to the classification of the sentence was quantitative non-monetary information, since it was not known how much of that amount was referring to the environmental area.

The information was extracted from the SFSs, based on the search and reading of keywords, which were: ambient; pollutant; residue; recycling; carbon; sustain; degradability; and eco-efficient.

To analyze the data, content analysis was used. The selection of the statistical technique, performed using parametric or non-parametric tests, depends on the results of the Normality and Homogeneity tests. The Univariate Normality test covers the Kolmogorov-Smirnov test and Shapiro-Wilk test. The Homogeneity of Variances test was performed using the Levene test (Fávero, Belfiore, Silva & Chan, 2009). Both tests were performed using the software SPSS.

As the results of the Univariate Normality and Homogeneity of Variances tests rejected the null hypothesis, for this study, we used the nonparametric Kruskal-Wallis test, which considers K independent samples.

4. Results

To analyze the environmental financial information, the measure composed of seven categories and thirty subcategories was used. During the collection of information from the SFSs, the item "expenses on carbon credit acquisition" had to be added.

In the years analyzed, companies showed a total of 595 sentences, being 190 in 2011, 211 in 2012 and 194 in 2013. In general, the environmental classes showed differences in the behavior of the sentences disclosed. The categories of environmental investments, tangible assets and environmental cost and/or expenses showed an increase in financial reporting in 2012 compared to 2011, and a reduction in relation to 2013. The categories of intangible environmental assets, environmental liabilities and contingencies and revenues showed a gradual increase over the years, showing more sentences in 2013. The identification of the distribution of sentences in the categories Qualitative (Q), Quantitative Non-Monetary (QNM) and Quantitative Monetary (QM) is shown in Table 4.

Table 4
Number of sentences per category

Categories	2011	2012	2013	2011	2012	2013	2011	2012	2013
	Q	Q	Q	QNM	QNM	QNM	QM	QM	QM
Environmental Investments	74	78	59	21	26	31	21	20	18
Tangible Environmental Assets	6	4	8	2	2	0	2	5	2
Intangible Environmental Assets	2	3	3	0	0	0	1	1	1
Contingent Assets	0	0	0	0	0	0	0	0	0
Environmental Liabilities and Contingencies	1	2	2	5	5	7	20	23	28
Environmental Revenues	1	1	3	0	0	0	1	1	1
Environmental Costs and/or Expenses	27	30	22	2	6	5	4	4	4
Total	**111**	**118**	**97**	**30**	**39**	**43**	**49**	**54**	**54**

Legend: Q – Qualitative, QNM – Qualitative Non Monetary and QM – Qualitative Monetary

Source: elaborated by the authors

Among the ratings of Qualitative information, the highest number of sentences is for environmental investments, followed by environmental costs and/or expenses. The item environmental revenues and environmental contingencies ranks last. It is noteworthy that the contingent assets were not mentioned in any of the SFSs. Regarding the number of sentences of Non-Monetary Quantitative information, greater disclosure was found on environmental investments and lesser disclosure on intangible environmental assets and environmental revenues, both equal to zero.

Among the Quantitative Monetary information, the highest number of sentences is for the sub-category of environmental liabilities and contingencies, again with intangible environmental assets and environmental revenues ranking last. The Environmental Investment category increased disclosure of Quantitative Monetary information and reduced the disclosure of Qualitative information, which can demonstrate a better quality of information over the years of the study, especially in 2013 (Table 5).

Table 5

Sum of amounts in three years studied

Subcategories	2011	2012	2013	Total (R$ Thousand)
	Total (R$ Thousand)	Total (R$ Thousand)	Total (R$ Thousand)	
Environmental investments	108.937.177,50	4.755.425,69	4.975.545,70	118.668.148,89
Tangible environmental assets	79,89	154.330,04	160.608,89	315.018,82
Intangible environmental assets	7.437,00	9.664,00	9.317,00	26.418,00
Contingent assets	0,00	0,00	0,00	0,00
Environmental liabilities and contingencies	63.426.664,00	129.840.048,00	66.571.782,00	259.838.494,00
Environmental revenues	6.950,00	2.862,00	8.400,00	18.212,00
Environmental costs and/or expenses	52.687,00	51.227,00	36.489,00	140.403,00

Source: elaborated by the authors

The highest amount is found in the category of environmental liabilities and contingencies (R$259.8 billion), followed by environmental investments (R$118.6 billion). The category that received fewer resources, except for contingent assets, was environmental revenues, with R$18.2 million.

The subcategories distinguish the type of information and clarify the provision of resources in the categories of environmental financial information in accordance with the presentation of each company. Table 6 shows the ratings of evidence in the subcategories linked to the category environmental investments.

Table 6

Disclosure of subcategories linked to the category Environmental Investments

Environmental Investments	2011			2012			2013		
	Q	QNM	QM	Q	QNM	QM	Q	QNM	QM
Maintenance/modification in operational processes to improve the environment	17	9	11	17	11	9	21	15	7
Recovery of areas degraded by the company or others	2	1	4	1	0	4	1	0	2
Environmental education for employees, subcontractors, self-employed professionals and company managers	5	0	1	6	0	0	5	1	0
Environmental education for the community	8	2	1	16	2	1	9	6	3
Environmental programs and projects	42	9	4	38	13	6	23	9	6
Total	**74**	**21**	**21**	**78**	**26**	**20**	**59**	**31**	**18**

Legend: Q – Qualitative, QNM – Qualitative Non Monetary and QM – Qualitative Monetary

Source: elaborated by the authors

In the category Environmental Investments, Qualitative information decreased in 2013. However, Quantitative Non-Monetary information increased, which can demonstrate a better disclosure in the companies. The Quantitative Monetary information dropped across the study period. It is noted also that the most cited subcategories were environmental programs and projects and maintenance / modification of operational processes to improve the environment, respectively.

Table 7 shows the disclosure of monetary financial information in the sample related to the Environmental Investment category and subcategories.

Table 7

Amount disclosed in the category Environmental Investments

Environmental Investments	2011		2012		2013	
	Total (R$ Thousand)	Average (R$ Thousand)	Total (R$ Thousand)	Average (R$ Thousand)	Total (R$ Thousand)	Average (R$ Thousand)
Maintenance/ modification of operational processes for environmental improvement	3.410.903,00	310.082,09	3.030.398,00	336.710,89	3.286.120,00	410.765,00
Recovery of areas degraded by the company or others	474.918,70	118.729,68	598.839,00	199.613,00	493.500,00	164.500,00
Environmental education for employees, subcontractors, self-employed professionals and company managers	29,00	29,00	0,00	0,00	0,00	0,00
Environmental education for the community	172,00	172,00	20.206,00	10.103,00	275.266,00	91.755,33
Environmental programs and projects	105.051.154,80	26.262.788,70	1.105.982,69	221.196,54	920.659,70	153.443,28
Total	**108.937.177,50**	**26.691.801,47**	**4.755.425,69**	**767.623,43**	**4.975.545,70**	**820.463,62**

Source: elaborated by the authors

In 2011, the first subcategory obtained a total of R$3.4 billion, and the average investment in maintenance / modification of the operational processes for the improvement of the environment amounted to R$310 million. The recovery of degraded environments averaged R$118 million and totaled R$474 million, but one company is responsible for 71% of the investment, with R$337 million. Only one company invested in the subcategories of Environmental Education, which is why the total value and average are equal. The sub-category with the highest investment in 2011 was environmental programs and projects with R$ 105 billion.

The subcategory that obtained the largest amount of investments in 2012 was maintenance / modification of operational processes to improve the environment, with a total of R$3.03 billion, followed by environmental programs and projects with R$1.1 billion. The subcategory environmental education for employees, contractors and independent contractors of the entity was not mentioned even once in that year.

In 2013, repeating the previous year, the subcategory that received more investment is maintenance / modification of operational processes to improve the environment, with R$3.2 billion. The subcategory environmental education for employees, contractors, and independent contractors of the entity was not mentioned even once again.

It can be observed that the total amount invested is higher in 2011, with R$108 billion. The year 2012 presented R$4.7 billion, and 2013 R$4.9 billion. The year 2012 corresponds to 4% of 2011 and, between 2012 and 2013, there was an increase by approximately R$200 million.

Companies may or may not show their environmental assets separately from the total assets, but few companies in the sample chosen did so (Table 8).

Table 8
Evidence of subcategories linked to the category Tangible Environmental Assets

Tangible Environmental Assets	2011			2012			2013		
	Q	QNM	QM	Q	QNM	QM	Q	QNM	QM
Machinery/equipment/facilities for polluting waste reduction	6	2	2	4	2	4	8	0	2
Inventory of raw material, parts and accessories used in the reduction or elimination process of pollution levels	0	0	0	0	0	1	0	0	0
Total	**6**	**2**	**2**	**4**	**2**	**5**	**8**	**0**	**2**

Legend: Q – Qualitative, QNM – Qualitative Non Monetary and QM – Qualitative Monetary

Source: elaborated by the authors

The behavior of tangible environmental information varied irregularly among Q, QNM and QM evidence. The year 2012 presented the largest number of Quantitative Monetary sentences. Only the subcategory machinery/equipment/polluting waste reduction facilities presented evidence in all years and ratings. In the subcategory inventory of raw material and parts and accessories used in the reduction or elimination process of pollution levels, one sentence was found in 2012. And no information was discussed about machinery/equipment/facilities for the production of by-products (Table 9).

Table 9
Amounts disclosed in the category Tangible Environmental Assets

Tangible Environmental Assets	2011		2012		2013	
	Total (R$ Thousand)	Average (R$ Thousand)	Total (R$ Thousand)	Average (R$ Thousand)	Total (R$ Thousand)	Average (R$ Thousand)
Machinery/ equipment/ facilities for reduction of polluting waste	80,79	40,40	70.330,04	17.582,51	160.608,89	53.536,30
Inventory of raw materials and parts and accessories used in the reduction or elimination process of pollution levels	0,00	0,00	84.000,00	0,00	0,00	0,00
Total	**80,79**	**40,40**	**154.330,04**	**17.582,51**	**160.608,89**	**53.536,30**

Source: elaborated by the authors

In this category, in 2011, the only subcategory addressed was machinery/equipment/facilities to reduce polluting waste, to the amount of R$80.7 thousand. In 2012, total investments in the category amounted to R$154.3 million and, in 2013, R$160.6 million, with a difference of R$6.3 million. However, it is observed that the amount in 2012 was split between the subcategories Machinery/equipment/facilities to reduce polluting waste and Inventory of raw materials and parts and accessories used in the process of reducing/eliminating pollution. In 2013, only the first received monetary values. The companies in the sample evidenced Intangible Environmental Assets as shown in Tables 10 and 11.

Table 10

Evidence of subcategories linked to the category Intangible Environmental Assets

Intangible Environmental Assets	2011			2012			2013		
	Q	QNM	QM	Q	QNM	QM	Q	QNM	QM
Brand, license and/or patent	1	0	1	1	0	1	2	0	1
Development of environmental products and technologies	1	0	0	2	0	0	1	0	0
Total	**2**	**0**	**1**	**3**	**0**	**1**	**3**	**0**	**1**

Legend: Q – Qualitative, QNM – Qualitative Non Monetary and QM – Qualitative Monetary

Source: elaborated by the authors

The category Intangible Environmental Assets showed a larger number of sentences in the subcategory brand, license and/or patent, with an evolution of one Qualitative sentence in 2013, while the remaining evidence was unchanged.

Table 11

Monetary assets evidenced in the category Intangible Environmental Assets

Intangible Environmental Assets	2011		2012		2013	
	Total (R$ Thousand)	Average (R$ Thousand)	Total (R$ Thousand)	Average (R$ Thousand)	Total (R$ Mil)	Average (R$ Thousand)
Brand, license and/or patent	7.437,00	7.437,00	9.664,00	9.664,00	9.317,00	9.317,00
Total	**7.437,00**	**7.437,00**	**9.664,00**	**9.664,00**	**9.317,00**	**9.317,00**

Source: elaborated by the authors

In the sample of 46 companies, only one disclosed the value of brand, license and/or patent. Note that, over the three years, the same amount is repeated in the total and average columns. The companies did not calculate the amounts related to the development of products and technologies in the environmental area. The amounts disclosed increased from 2011 to 2012, by $ 2.22 million and dropped by R$347 thousand in 2013.

Table 12

Evidence of subcategories linked to the Category Environmental Liabilities and Contingencies

Environmental Liabilities and Contingencies	2011			2012			2013		
	Q	QNM	QM	Q	QNM	QM	Q	QNM	QM
Liabilities and Probable provision	0	2	17	1	2	18	1	3	23
Possible provision	1	1	2	1	1	3	1	2	3
Remote provision	0	1	1	0	1	2	0	1	2
Unlikely provision	0	1	0	0	1	0	0	1	0
Total	**1**	**5**	**20**	**2**	**5**	**23**	**2**	**7**	**28**

Legend: Q – Qualitative, QNM – Qualitative Non Monetary and QM – Qualitative Monetary

Source: elaborated by the authors

The category Environmental Liabilities and Contingencies showed a positive evolution in the total value of the evidence. The subcategory liabilities and probable provision showed the largest number of Quantitative Monetary sentences (Table 12).

Information about the provisions is not only found in the notes to the financial statements, but also in the balance sheet, justifying the larger number of Quantitative Monetary evidence in this category (Table 13).

Table 13
Amounts disclosed in category Environmental Liabilities and Contingencies

Environmental Liabilities and Contingencies	2011	2012		2013	
	Total (R$ Thousand)	Total (R$ Thousand)	Average (R$ Thousand)	Total (R$ Thousand)	Average (R$ Thousand)
Liability and probable provision	63.227.094,00	3.512.616,33	128.920.505,00	6.785.289,74	63.261.578,00	2.635.899,08
Possible provision	198.378,00	99.189,00	906.287,00	302.095,67	3.308.558,00	827.139,50
Remote provision	1.192,00	1.192,00	13.256,00	6.628,00	1.646,00	1.646,00
Total	**63.426.664,00**	**3.612.997,33**	**129.840.048,00**	**7.094.013,40**	**66.571.782,00**	**3.464.684,58**

Source: elaborated by the authors

In monetary term, the highest incidence of environmental liabilities and contingencies was in 2012, with R$129.8 million, being R$128.9 million of liabilities and probable provision. Next comes 2013 and then 2011. The category average in 2011 was R$3.6 billion. In 2012, the average increased by 50.94%, with R$7.09 billion and, in 2013, there was a decrease by 48.84% compared to 2012, with the amount of R$ 3.4 billion. These are averages, that is, there are significant differences between the amount accrued by one company in relation to another. The item unlikely provision was not counted. Environmental revenues were hardly mentioned in the SFSs (Table 14).

Table 14
Evidences of subcategories linked to the category Environmental Revenues

Environmental Revenues	2011			2012			2013		
	Q	QNM	QM	Q	QNM	QM	Q	QNM	QM
Sale of sustainable products/ subproducts	0	0	0	1	0	0	2	0	0
Sale of waste	1	0	1	0	0	1	1	0	1
Total	**1**	**0**	**1**	**1**	**0**	**1**	**3**	**0**	**1**

Legend: Q – Qualitative, QNM – Qualitative Non Monetary and QM – Qualitative Monetary

Source: elaborated by the authors

The companies did not reveal sentences in the subcategories sale of recyclable material and sale of carbon credits. In relation to the other subcategories, the most evident in the three years was the sale of waste, showing an increase in 2013 in the qualitative sentences regarding the sale of sustainable products/ subproducts (Table 15).

Table 15

Amounts evidenced in category Environmental Revenues

Environmental revenues	2011		2012		2013	
	Total (R$ Thousand)	Average (R$ Thousand)	Total (R$ Thousand)	Average (R$ Thousand)	Total (R$ Thousand)	Average (R$ Thousand)
Sale of waste	6.950,00	6.950,00	2.862,00	2.862,00	8.400,00	8.400,00
Total	**6.950,00**	**6.950,00**	**2.862,00**	**2.862,00**	**8.400,00**	**8.400,00**

Source: elaborated by the authors

A single company disclosed amounts for environmental revenues, specifically the sale of waste. In 2011, that company obtained a revenue of R$ 6.9 million; in 2012, R$ 2.8 million; and in 2013, R$ 8.4 million. The environmental expenses and/or costs are detailed in tables 16 and 17.

Table 16

Evidences of subcategories linked to the category Environmental Costs and/or Expenses

Environmental Costs and/or Expenses	2011			2012			2013		
	Q	QNM	QM	Q	QNM	QM	Q	QNM	QM
Maintenance in operational processes to improve the environment	1	1	1	2	2	1	1	1	1
Recovery of degraded environments	2	1	1	1	2	1	1	2	2
Environmental programs and projects	1	0	0	0	0	0	0	0	0
Licenses and/or certifications	16	0	1	20	0	0	16	0	0
Spending on research for the development of environmental products and technologies	5	0	0	5	2	1	3	2	1
Amortization, exhaustion and depreciation	1	0	1	1	0	1	0	0	0
Spending on carbon credit acquisition	1	0	0	1	0	0	1	0	0
Total	27	2	4	30	6	4	22	5	4

Legend: Q – Qualitative, QNM – Qualitative Non Monetary and QM – Qualitative Monetary

Source: elaborated by the authors

The treatment by the company was chosen as a measure used to distinguish between environmental investment and environmental costs and/or expenditure. The most prevalent subcategories were environmental licensing and/or certifications and spending on research for the development of products and technologies in the environmental field, respectively. Among the twelve subcategories, five received no sentence whatsoever, namely: environmental education for employees, contractors, self-employed professionals and company managers; environmental education for the community, consultancy for preparation of Environmental Impact Assessment (EIA) and Environmental Impact Report (Rima); estimated losses due to impairment of environmental assets; and advertising. It can be observed that most of the information that divide space between the categories Investment or Expenditure/Cost was allocated in the first, and respecting the company's position in relation to the event.

Table 17

Amounts evidenced in the category Environmental Costs and/or Expenses

Environmental Costs and/ or Expenses	2011		2012		2013	
	Total (R$ Thousand)	Average (R$ Thousand)	Total (R$ Thousand)	Average (R$ Thousand)	Total(R$ Thousand)	Average (R$ Thousand)
Manutenção nos processos operacionais para a melhoria do meio ambiente	24.327,00	24.327,00	27.326,00	27.326,00	23.999,00	23.999,00
Recuperação de ambientes degradados	6.860,00	6.860,00	23.472,00	23.472,00	10.390,00	5.195,00
Licenciamentos e/ou certificações ambientais	21.500,00	21.500,00	0,00	0,00	0,00	0,00
Gastos com pesquisa para desenvolvimento de produtos e tecnologias na área ambiental	0,00	0,00	429,00	429,00	2.100,00	2.100,00
Total	**52.687,00**	**52.687,00**	**51.227,00**	**51.227,00**	**36.489,00**	**31.294,00**

Source: elaborated by the authors

Although the category Environmental Costs and/or Expenses contains the highest number of sub-categories, it is not in this category that the greatest disclosure of monetary sentences was observed.

Of the 12 sub-categories, only five reveal values specified by the companies. These are: maintenance of operational processes to improve the environment, restoration of degraded areas; environmental licenses and / or certifications; spending on research and development of products and technologies in the environmental field; and amortization, depletion and depreciation. The latter, despite presenting income R$ 0.00, is the amount disclosed, since it is reported that nothing has been amortized until that date. Except for spending on research, the other subcategories increased their disclosure of costs / expenses in 2012, with a reduction in 2013.

The companies were classified by pollution potential; according to Annex VIII of Law 10.165 from 2000. The companies were allocated in the following categories: high, medium, small and non-polluting. Table 18 shows the averages per classification according to the pollution potential. It is noteworthy that the high pollution potential of the sample is composed of ten companies, medium of eight companies, small of five companies and non-polluting of 23 companies.

Table 18

Average disclosure

Polluting potential	Three-year average per company	Average sentences per year
High	8,30	83
Medium	6,75	54
Low	2,93	15
Non-polluting	2,06	47

Source: elaborated by the authors

The high environmental impact companies rank first in terms of average number of sentences per year, followed by medium, non-polluting and low environmental impact companies. When the average is calculated per company, however, the later two invert their positions, in that non-polluting companies disclose the smallest amount of environmental information.

In the sample: (i) the average disclosure of ten companies classified as high environmental impact varies from 0.67 to 16 sentences; (Ii) the average disclosure of eight companies classified as medium im-

pact varies from 0.00 to 27.33 sentences; (Iii) the five companies classified under small environmental impact reported between 0.33 and 5.67 sentences; and (iv) the 23 companies considered non-polluting presented between 0.00 and 12.33 sentences.

According to Fávero et al. (2009, p. 144), nonparametric tests "do not require numerous or restrictive assumptions about the data distribution." The authors (2009) state that "these methods are mathematically simple, easy to perform and apply not only to quantitative, but also to nominal and ordinal data."

The behavior of the sample indicates what test should be applied. In the case of this study, "K" independent samples - ordinal indicates the Kruskal-Wallis test. The significance of the test was 0.000 (coefficient lower than 0.01), which leads to the rejection of the null hypothesis and shows that there are differences in the distributions of the samples, i.e. states that there are differences in the disclosure of financial information in companies with different potential pollution levels. The test results which considered the three-year period are shown in Table 19.

Table 19
Mean ranking based on Kruskal-Wallis test

Ranks	PPGU	N	Mean Rank
Disclosure	High	30	106,28
	Medium	24	83,54
	Small	15	62,77
	Non-polluting	69	50,09
	Total	**138**	

Source: elaborated by the authors

Through the nonparametric Kruskal-Wallis test, it can be observed that there are differences in the level of disclosure of environmental financial information regarding the classification of Law No. 10.165 / 2000 in high, medium and low impact, while companies not described in that law are classified as non-polluting. The test shows that the companies of high environmental impact disclose more environmental financial information to the detriment of non-polluting companies, which disclose less information.

5. Conclusion

This research aimed to analyze the voluntary disclosure of environmental financial information in companies ranked in sectors with different environmental impacts. To achieve this goal, the SFSs of companies in the IBrX-50 Index were analyzed for the period from 2011 till 2013. Based on the content analysis obtained based on the proposed measure, the results showed that 595 environmental financial sentences were observed, including 190 in 2011, 211 in 2012 and 194 in 2013.

In the identification of the environmental financial information in the SFSs, the most evident was the category Environmental Investments, with 348 sentences, representing 58% of the information disclosed. In that category, the companies showed most Environmental Liabilities and contingencies, with R $ 259.84 billion.

Regarding disclosure in the subcategories, in the category Environmental Investments, the category with the largest number of sentences was Environmental Programs and Projects, also showing the largest amount invested, R$ 107.07 billion. In the category Tangible Environmental Assets, the largest disclosure occurred in the subcategory machines/equipment/facilities to reduce polluting waste, which also showed the highest amount of resources applied, R$ 231.01million. The subcategory brand, license and/or patent was the most publicized in intangible environmental assets, and the only subcategory that disseminated monetary values. As for the category Contingent Assets, no disclosure was observed. The main disclosure in the category Environmental Liabilities and Contingencies was for the subcategory liability and probable

reserve, with 67 sentences, also showing the highest amount disclosed, R$ 225.41 billion. In Environmental Revenues, the best representative of the category was the sale of waste, with five sentences, being the only subcategory that disclosed monetary values. And in the category Environmental costs and/or expenses, the subcategory environmental licensing and/or certifications showed the largest number of sentences, but the subcategory that revealed the highest application of resources during the study period was maintenance in operational processes to improve the environment, with R $ 75.65 million.

As to the average disclosure per pollution potential in the three years, the highest average is found in high environmental impact companies; followed by the medium, small and non-polluting companies. When considering the mean number of sentences disclosed per year, however, a higher average is observed among non-polluting companies than among companies with small environmental impact.

The non-parametric Kruskal-Wallis test and the results showed that, concerning the disclosure of environmental financial information, high environmental impact companies rank first in terms of disclosure, followed by the medium, small and non-polluting companies, confirming the analysis in this study. In view of the results, it could be perceived that most information is disclosed in companies with a high pollution potential.

6. References

Abreu, M. C. S.; Fernandes, J. S.; Assis, F. S. & Silva Filho, J. C. L. (2008). Evolução da conduta ambiental de empresas siderúrgicas brasileiras sob a óptica dos relatórios de evidenciação ambiental. Revista Universo Contábil, 4(4), pp. 57-76. Recuperado de http://proxy.furb.br/ojs/index.php/universocontabil/article/view/1060.

Al-Khater, K. & Naser, K. (2003). Users' perception of corporate social responsibility and accountability: evidence from an emerging economy. Managerial Auditing Journal, 18. DOI: 10.1108/02686900310482678

Andrikopoulos, A. & Kriklani, N. (2013). Environmental disclosure and financial characteristics of the Firm: The Case of Denmark. *Corporate Social Responsibility and Environmental Management, 20*, pp. 55–64. DOI: 10.1002/csr.1281

Bebbington, J. & Larrinaga, C. (2014) Accounting and sustainable development: An exploration. *Accounting, Organizations and Society*. DOI: 10.1016/j.aos.2014.01.003

Belkaoui, (1976). A. The impact of the disclosure of the environmental effects of organizational behavior on the market. *Financial Management,* 5(4), pp. 26-31. Recuperado em http://www.jstor.org/stable/3665454

BM&FBOVESPA. *Índice Brasil 50* - IBrX 50 Recuperado em 23 agosto, 2014, de

http://www.bmfbovespa.com.br/indices/ResumoIndice.aspx?Indice=IBrX50&Opcao=0&idioma=pt-br.

BRASIL. Lei n. 6.404, de 15 de dezembro de 1976. Dispõe sobre as Sociedades por Ações. Brasília, 15 de dezembro de 1976; 155º da Independência e 88º da República. Recuperado em: http://www.planalto.gov.br/ccivil_03/LEIS/L6404consol.htm

_____. Lei n. 10.165, de 27 de dezembro de 2000. Altera a Lei no 6.938, de 31 de agosto de 1981, que dispõe sobre a Política Nacional do Meio Ambiente, seus fins e mecanismos de formulação e aplicação, e dá outras providências. Brasília, 27 de dezembro de 2000; 179o da Independência e 112o da República. Recuperado em: http://www.planalto.gov.br/ccivil_03/Leis/L10165.htm

_____. Instrução CVM nº 331, de 4 de abril de 2000. Dispõe sobre o registro de companhia para emissão e negociação de certificado de depósito de valores mobiliários – Programas de BDRs Níveis II e III com lastro em valores mobiliários de emissão de companhias abertas ou assemelhadas, com sede no exterior. Diário Oficial [da] União, 2000. Recuperado em: http://www.cvm.gov.br/legislacao/inst/inst331.html

_____. Lei n. 11.638, de 28 de dezembro de 2007. Altera e revoga dispositivos da Lei no 6.404, de 15 de dezembro de 1976, e da Lei no 6.385, de 7 de dezembro de 1976, e estende às sociedades de grande porte disposições relativas à elaboração e divulgação de demonstrações financeiras. Brasília, 28 de dezembro de 2007; 186o da Independência e 119o da República. Recuperado em: http://www.planalto.gov.br/ccivil_03/_ato2007-2010/2007/lei/l11638.htm

_____. Lei n. 11.941, de 27 de maio de 2009. Altera a legislação tributária federal relativa ao parcelamento ordinário de débitos tributários; concede remissão nos casos em que especifica; institui regime tributário de transição, alterando o Decreto no 70.235, de 6 de março de 1972, as Leis nos 8.212, de 24 de julho de 1991, 8.213, de 24 de julho de 1991, 8.218, de 29 de agosto de 1991, 9.249, de 26 de dezembro de 1995, 9.430, de 27 de dezembro de 1996, 9.469, de 10 de julho de 1997, 9.532, de 10 de dezembro de 1997, 10.426, de 24 de abril de 2002, 10.480, de 2 de julho de 2002, 10.522, de 19 de julho de 2002, 10.887, de 18 de junho de 2004, e 6.404, de 15 de dezembro de 1976, o Decreto-Lei no 1.598, de 26 de dezembro de 1977, e as Leis nos8.981, de 20 de janeiro de 1995, 10.925, de 23 de julho de 2004, 10.637, de 30 de dezembro de 2002, 10.833, de 29 de dezembro de 2003, 11.116, de 18 de maio de 2005, 11.732, de 30 de junho de 2008, 10.260, de 12 de julho de 2001, 9.873, de 23 de novembro de 1999, 11.171, de 2 de setembro de 2005, 11.345, de 14 de setembro de 2006; prorroga a vigência da Lei no 8.989, de 24 de fevereiro de 1995; revoga dispositivos das Leis nos 8.383, de 30 de dezembro de 1991, e 8.620, de 5 de janeiro de 1993, do Decreto-Lei no 73, de 21 de novembro de 1966, das Leis nos 10.190, de 14 de fevereiro de 2001, 9.718, de 27 de novembro de 1998, e 6.938, de 31 de agosto de 1981, 9.964, de 10 de abril de 2000, e, a partir da instalação do Conselho Administrativo de Recursos Fiscais, os Decretos nos 83.304, de 28 de março de 1979, e 89.892, de 2 de julho de 1984, e o art. 112 da Lei no 11.196, de 21 de novembro de 2005; e dá outras providências. Brasília, 27 de maio de 2009; 188o da Independência e 121o da República. Recuperado em: http://www.planalto.gov.br/ccivil_03/ato2007-2010/2009/lei/l11941.htm

Burgwal, D. & Vieira, R. (2014). Determinantes da divulgação ambiental em companhias abertas holandesas. *Revista Contabilidade e Finanças, 25*(64). DOI: http://dx.doi.org/10.1590/S1519-70772014000100006

Cho, C. H., Roberts, R. W. & Patten, D. M. (2010). The language of US corporate environmental disclosure. *Accounting, Organizations and Society*, *35*, pp. 431–443. DOI :10.1016/j.aos.2009.10.002

Cho, C. H.; Guidry, R. P.; Hageman, A. M. & Patten, D. M. (2012). Do actions speak louder than words? An empirical investigation of corporate environmental reputation. *Accounting, Organizations and Society*, *37*, pp.14-25. DOI: 10.1016/j.aos.2011.12.001

CFC. ITG 2004 – Interação da Entidade Com o Meio Ambiente: Normas Brasileiras de Contabilidade. Brasília: CFC, 2013. Recuperado em 30 outubro, 2014 de http://crcpb.org.br/noticias/itg-2004-interacao-da-entidade-com-o-meio-ambiente/

_____. NBC T 15 – Informações de Natureza Social e Ambiental: Resolução CFC nº 1.003/04, de 19 de agosto de 2004. Brasília: CFC, 2004. Recuperado em 18 maio, 2014 de <www.cfc.org.br/sisweb/sre/docs/RES_1003.doc>

COMISÃO DE VALORES MOBILIARIOS. Parecer de Orientação CVM n. 15, de 28 de dezembro de 1987. Procedimentos a serem observados pelas companhias abertas e auditores independentes na elaboração e publicação das demonstrações financeiras, do relatório da administração e do parecer de auditoria relativos aos exercícios sociais encerrados a partir de dezembro de 1987. Aprovado pelo colegiado em reunião de 28 de dezembro de 1987. Recuperado em: http://www.cvm.gov.br/legislacao/pare/pare015.html

_____. INSTRUÇÃO CVM N. 331 de 04 de abril de 2000. Dispõe sobre o registro de companhia para emissão e negociação de certificado de depósito de valores mobiliários – Programas de BDRs Níveis II e III com lastro em valores mobiliários de emissão de companhias abertas ou assemelhadas, com sede no exterior. Aprovado pelo colegiado em reunião em 24 de março de 2000, com fundamento no disposto nos arts. 19 e 21 da Lei nº 6.385, de 7 de dezembro de 1976. Recuperado em: http://www.cvm.gov.br/legislacao/inst/inst331.html

_____. INSTRUÇÃO CVM N. 431 de 29 de maio de 2006. Altera as Instruções CVM nos 331 e 332, ambas de 4 de abril de 2000. Aprovado pelo colegiado em reunião em 26 de maio de 2006, com fundamento no disposto nos arts. 8o , inciso I, 19 e 21 da Lei no 6.385, de 7 de dezembro de 1976. Recuperado em: http://www.cvm.gov.br/export/sites/cvm/legislacao/inst/anexos/400/inst431consolid.pdf

_____. INSTRUÇÃO CVM N. 469 de 02 de maio de 2008. Dispõe sobre a aplicação da Lei nº 11.638, de 28 de dezembro de 2007. Altera as Instruções CVM n° 247, de 27 de março de 1996 e 331, de 4 de abril de 2000. Aprovado pelo colegiado em reunião em 30 de abril de 2008, com fundamento nos §§ 3º e 5º do art. 177 da Lei no 6.404, de 15 de dezembro de 1976, combinados com os incisos II e IV do § 1o do art. 22 da Lei no 6.385, de 7 de dezembro de 1976, e tendo em vista, ainda, o disposto na Lei nº 11.638, de 28 de dezembro de 2007. Recuperado em: http://www.cvm.gov.br/legislacao/inst/inst469.html

_____. INSTRUÇÃO CVM N. 480, de 7 dezembro de 2009 com as alterações introduzidas pelas instruções CVM Nº 488/10, 509/11, 511/11, 520/12, 525/12, 547/14, 552/14, 561/15, 567/15, 568/15 E 569/15. Dispõe sobre o registro de emissores de valores mobiliários admitidos à negociação em mercados regulamentados de valores mobiliários. Aprovado pelo Colegiado, em reunião realizada em 18 de novembro de 2009, com fundamento nos arts. 21 e 22 da Lei nº 6.385, de 7 de dezembro de 1976. Recuperado em: http://www.cvm.gov.br/legislacao/inst/inst480.html

CONSELHO INTERNACIONAL PARA RELATO INTEGRADO – IIRC. Relato Integrado. Brasil, 2014. Recuperado em 15 outubro, 2014, de <http://www.theiirc.org/wp-content/uploads/2014/04/13-12-08-THE-INTERNATIONAL-IR-FRAMEWORK-Portugese-final-1.pdf>

Deegan, C. (2002). The legitimizing effect of social and environmental disclosures – a theoretical foundation. *Accounting, Auditing and Accountability Journal, 15*(3), pp. 282-311. DOI: http://dx.doi.org/10.1108/09513570210435852

Epstein, M. J. & Freedman, M. (1994). Social disclosure and the individual investor.

Accounting, Auditing & Accountability Journal, 7 (4), pp. 94-109. DOI: http://dx.doi.org/10.1108/09513579410069867

Fávero, L. P.; Belfiore, P.; Silva, F. L. & Chan, B. L. (2009) *Análise de dados*: modelagem multivariada para tomada de decisões. Rio de Janeiro: Elsevier.

Fernandes, S. M. (2013). Fatores que influenciam o *disclosure* ambiental: um estudo nas empresas brasileiras no período de 2006 a 2010. *Revista Ambiente Contábil*, *5*(2), pp. 250 – 267. Recuperado de http://periodicos.ufrn.br/ambiente/article/view/4159

Ferreira, D. D. M.; Borba, J. A. & Rosa, C. A. (2014). As contingências ambientais das empresas estrangeiras que publicam suas demonstrações financeiras em IFRS no mercado norte americano. *Revista Universo Contábil*, *10*(3), p. 134-154, jul./set. DOI:10.4270/RUC.2014323

Freedman, M. & Jaggi, B. (1986). Pollution disclosures, pollution performance and economic performance. *Omega The International Journal of management Science*, *10*(2), pp. 167-176. Doi:10.1016/0305-0483(82)90051-2

Freitas, D. P. S. & Oleiro, W. N. (2011). Contabilidade ambiental: A evidenciação nas demonstrações financeiras das empresas listadas na BM&FBOVESPA. *REUNIR – Revista de Administração, Contabilidade e Sustentabilidade, 1*(2), pp. 65-81. DOI: http://dx.doi.org/10.18696/reunir.v1i2.29

Gray, R. (1992). Accounting and environmentalism: An exploration of the challenge of gently accounting for accountability, transparency and sustainability. *Accountting, Organization and Society*, *17*(5), pp. 399 – 425. DOI: doi:10.1016/0361-3682(92)90038-T

Gray, R.; Walters, D.; Bebbington, J. & Thompson, I. (1995). The greening of enterprise: An exploration of the (non) role of environmental accounting and environmental accountants in organisational change. *Critical Perspectives on Accounting, 6*(3), 211-239. DOI: doi:10.1006/cpac.1995.1021

Gray, R. (2002). The social accounting project and accounting organizations and society. Privileging engagement, imaginings, new accountings and pragmatism over critique? *Accounting, Organizations and Society, 27*(7), pp.687-708. DOI: doi:10.1016/S0361-3682(00)00003-9.

Harte, G. & Owen, D. (1991). Environmental Disclosures in the Annual Reports of British Companies: A Research Note. *Accounting, Auditing & Accountability Journal, 4*(3), 51-61. DOI: http://dx.doi.org/10.1108/09513579110144442

Imam, S. (2000). Corporate social performance reporting in Bangladesh. *Managerial Auditing*

Journal, 15, pp. 133-141. DOI: http://dx.doi.org/10.1108/02686900010319384.

Ingran, R. W. & Frazier, K. (1980). Environmental Performance and corporate disclosure. *Journal of Accounting Research, 18*(2), pp. 614-622. DOI: 10.2307/2490597

INSTITUTO BRASILEIRwO DE CONTADORES. Normas e Procedimentos de Auditoria –

NPA n. 11: estabelece os liames ente a Contabilidade e o meio ambiente. Balanço e Ecologia. São Paulo, 1996. Recuperado em 15 setembro, 2014 de <http://www.ibracon.com.br/ibracon/Portugues/detPublicacao.php?cod=124>

Milne, M. J. & Adler, R. W. (1998). Exploring the reliability of social and environmental disclosures content analysis. *Accounting, Auditing & Accountability Journal, 12* (2), 237-256. DOI: http://dx.doi.org/10.1108/09513579910270138

Moreira, N. B. *et al.* (2014). Fatores que Impactam a Divulgação Voluntária de Informações Socioambientais na Percepção dos Gestores. *REUNIR: Revista de Administração, Contabilidade e Sustentabilidade*, *4*(1), pp. 62-82. DOI: http://dx.doi.org/10.18696/reunir.v4i1.188

Parker, L. (2011). Twenty-one years of social and environmental accountability research: A coming of age. *Accounting Fo*rum, 35, pp. 1-10. DOI: http://dx.doi.org/10.1016/j.accfor.2010.11.001.

Ribeiro, M. S. (2006). *Contabilidade ambiental.* São Paulo: Saraiva.

Ribeiro, A. M.; Nascimento, L. F. & van Bellen, H. M. (2009). Evidenciação ambiental: Uma análise comparativa multissetorial entre Brasil, Estados Unidos e Inglaterra. *Revista Contemporânea de Economia e Gestão*, *7*(1), pp. 07-22. Doi:10.19094/116.

Rover, S.; Murcia, F. D.; Borba, J. A. & Vicente, E. F. R. (2008) Divulgação de informações ambientais nas demonstrações Contábeis: um estudo exploratório sobre o *disclosure* das empresas brasileiras pertencentes a setores de alto impacto ambiental. *RCO – Revista de Contabilidade e Organizações, 3*(2), pp. 53 - 72. DOI: http://dx.doi.org/10.11606/rco.v2i3.34713

Santos, P. S. A.; Vargas, A. J.; Almeida, D. M. & Lavarda, C. E. F. (2012) Nível de *disclosure* verde e a reputação corporativa ambiental das companhias brasileiras de capital aberto. *Revista Contemporânea de Contabilidade*, 18, pp. 63-82. DOI: http://dx.doi.org/10.5007/2175-8069.2012v9n18p63.

SENADO FEDERAL – Projeto de Lei do Senado nº 2012. Altera a Lei nº 6.404, de 15 de dezembro de 1976, para dispor sobre a obrigatoriedade de Relatório de Sustentabilidade para as companhias ou sociedades anônimas. Senador VITAL DO RÊGO. Recuperado em: http://legis.senado.leg.br/mateweb/arquivos/mate-pdf/112619.pdf

Szuster, N.; Cardoso, R. L.; Szuster, F.; Szuster, F. R.; Szuster, F. R. (2009) *Contabilidade geral:* Introdução à Contabilidade Societária. 2ª. ed. São Paulo: Atlas.

Vellani, C. L. (2011). *Contabilidade e Responsabilidade Social.* 1ª edição.

Villiers, C. & Staden, C. (2006) Can less environmental disclosure have a legitimizing effect? Evidence from Africa. Accounting, Organization and Society, 31, pp. 763-781. doi:10.1016/j.aos.2006.03.001

Wiseman, J. (1982) An evaluation of environmental disclosures made in corporate annual reports. Accounting, Organization and Society, 7(1), pp. 553-563. doi:10.5539/ijbm.v7n14p18