Environmental Indicators in Brazilian Forestry Companies

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Abstract

In the context of sustainable economic development, several indicators have been proposed to describe the social responsibility of a company, as well as to measure how far a country is from achieving sustainability. This work aims to investigate how Brazilian forestry companies inform environmental indicators in their sustainability reports. The study covers the years of 2009 and 2010, and is delimited to Brazilian join-stock forestry companies. The environmental indicators described were proposed by the Global Reporting Initiative. The relevance of this research lies in the importance of the topic in the present days and in the consideration of social and environmental aspects when evaluating a company. The results show that out of the nine companies surveyed, only five of them developed sustainability reports in 2009 and 2010. This is worrying, since such companies make up the elite stratum of Brazilian forestry companies.

Keywords: sustainable economic development, sustainability, sustainability reports, Global Reporting Initiative

1. Introduction

The process known as economic globalization that occurred in the 1980s in developed countries and later around the world has led to social and cultural changes that keep happening. These changes are fostered by new global social paradigms (ROCHA, 2001).

One of these paradigms became known as sustainability or sustainable economic development, which believes in the possibility of achieving economic development without endangering the natural resources for future generations. (REDCLIFT, 2006; UNITED NATIONS/UNCSD, 2012b; VIZEU *et al*, 2012; BM&FBOVESPA, 2014b).

Redclift (2006) makes a historical resume on the use of the term "sustainable economic development", since its inception in 1987 until 2005. The author notes that the term has been employed in various discourses (academic, planning, business or environmental policy) some which are mutually exclusive.

Hanai (2009) emphasizes that sustainable economic development brings numerous contradictions between discourse and practice. However, this author believes that it is a viable alternative, because the aspirations of sustainability lead to new ways of thinking and acting in projects of local interventions.

In the context of sustainable economic development terms like social responsibility, environmental responsibility, eco development, stakeholders, among others, are gradually gaining ground in the national and international corporate world, as well as composing research topics in various science areas (BUSCH, 2008; HANAI, 2009; PADILHA, 2009; CINTRA, 2011; LINO, 2011; ABNT, 2012).

This is due to a moment of redefinition of values in society, which hopes to be a growing concern with, for example, air pollution, water contamination, soil and food, the planet's natural resources depletion, climate change, concentration of wealth, poverty, misery, unfair working conditions, jobbery, unethical practices in politics and business (MANCINI, 2008; PADILHA, 2009; HANAI, 2009; CINTRA, 2011; LINO, 2011; UNITED NATIONS/UNCSD, 2012a, 2012b; UNITED NATIONS/UNFCCC, 2012).

As a result of these social changes, in recent years it has been proposed that the social responsibility of a company, regardless of the productive sector it belongs to, should be a factor when evaluating it. Thus, amplifying this assessment beyond the economic and financial aspects (SILVA; QUELHAS, 2006; VITAL *et al* 2009; GLOBAL REPORTING INITIATIVE, 2012a).

In this scenario, since the last three decades there has been a development of wider business reports than the traditional financial statements. As examples there are the social reports and sustainability reports. (CINTRA, 2011; CALIXTO, 2013).

Currently, the models of sustainability reports adopted worldwide by most organizations are those proposed by the Global Reporting Initiative (GRI) (CAMPOS *et al*, 2013; OLIVEIRA *et al*, 2013). The GRI, founded in 1991, is an international non-governmental, non-profit organization, based in Amsterdam, Netherlands, whose mission is to make standard sustainability reports to be adopted by all organizations (GRI, 2012a, 2012c).

The sustainability report version used in this research is the GRI G3.1 model, which proposes 84 indicators: 30 of them are environmental indicators, 11 of human rights, 15 labor practices and decent work conditions indicators, 10 of Society, 9 of product liability and 9 economic indicators (GRI, 2012b, 2012e).

As Hanai (2009) states, sustainability indicators are necessary tools in the evaluation of the practices of social responsibility of a given organization. The author points out that the most important indicators are those that can reflect the interests and views of different social actors affected by these companies' activities.

Veiga (2010) makes a retrospective, since 1972, about the search for indicators that would allow for the evaluation of sustainability in its various dimensions: economic, environmental, social, quality of life. For the author, these indicators should be able to replace the Gross Domestic Product (GDP) index and to estimate how far a country is from achieving sustainability.

Veiga (2010) refers to the Report by the Commission on the Measurement of Economic Performance and Social Progress (Stiglitz-Sen-Fitoussi, 2009), stating that the Commission comes to sustainability much more broadly than the adjective "sustainable" usually suggests. The author observes that originally the idea expressed by "sustainable" referred to the need for the socioeconomic process to retain its natural foundations or its biocapacity.

Cavalcanti (2012) questions about the optimal size of the economic scale that nature can admit. The author states that there can only be development that is sustainable, because if it is unsustainable, it will come to an end. He argues that who holds the economic development is nature, the ecosystem, with its rules and natural limits. For the author, sustainable economic development is to minimize the use of nature, and at the same time obtaining maximum social welfare.

This work aims to investigate how Brazilian forestry companies are reporting environmental indicators in their sustainability reports. The relevance of this research lies in the importance of the topic in the present days and in the consideration of social and environmental aspects when evaluating a company, instead of only taking into account the economic and financial aspects like the general evaluating methods do.

As stock exchanges around the world have proposed that the social responsibility of a company should also be an evaluating factor (MARCONDES; BACARJ, 2010; EXAME ABRIL.com, 2012; BM&FBOVESPA, 2014a), the question is whether, in Brazil, forestry companies are following this guideline.

2. Materials and Method

This research is delimited to Brazilian forestry companies legally constituted as joint-stock companies. These companies have their capital divided into shares that are traded on the main Brazilian stock exchange, BM&FBOVESPA, and are listed in the basic materials sector, in the wood and paper segment.

They constitute a convenience sample of Brazilian forestry companies, but express an elite stratum of such a universe, since they are subject to mandatory transparency of their production practices and to a more rigorous specific legislation of intense scrutiny.

Table 1shows the companies investigated, its year of foundation, its early sustainability reports and some of their general characteristics.

In order to examine the environmental indicators of each of these companies, this study was based on their sustainability reports from 2009 and 2010. In general they adopted the GRI G3.1 model. Only Klabin SA did not formally use such a model in 2009. Four of them did not develop such reports during the period in question, as it can be seen in Table 1.

The sustainability reports analyzed were obtained on the companies' own web pages, as well as on the GRI data bank (GRI, 2012d).

Table 2 presents the indicators mapped in this work, their codes and meanings. They are the 30 environmental indicators proposed by the GRI in the G3.1 model.

A sustainability report that follows the GRI guidelines is classified into A, B or C, depending on the amount of reported indicators and quality of the information provided. If the report is audited by external auditors it gets the plus sign (+). (GRI, 2012e).

In Brazil, sustainability reports are not yet mandatorily audited by external auditors.

Table 3 shows the classification given to the sustainability reports analyzed in this work.

This work is a qualitative and descriptive study.

3. Results and Discussion

By Table 1, one sees that from all the Brazilian forestry companies listed on the BM&FBOVESPA in May 2012, about half of them prepared sustainability reports in 2009 and 2010. These companies began sustainability reporting less than ten years ago.

For a society that wants to achieve sustainability, this scenario is disturbing, even more so because such companies are the elite stratum of Brazilian forestry companies.

Table 1 also shows that companies that prepared sustainability reports are large, with thousands of employees, and presented together a well greater economic performance than those companies that did not prepare such reports. Companies that did sustainability reports had together a net revenue of R\$ 18,416,272,000.00 in contrast with R\$ 6,278,648,000.00 of those that did not, and R\$ 2,433,560,000.00 against R\$ 814,088,000.00 of net income in 2010. This table also shows that two among the four companies which have not developed sustainability reports in the period in question, showed loss in 2010.

These results support the observations of Vital *et al* (2009) and Silva and Quelhas (2006) that, rather than being a cost, sustainability investments make the most suitable companies to continue in the market.

But it can also mean that sustainability is being understood as a byproduct of the economic advantages offered, being social and environmental issues subordinated to the logic of expansion and accumulation, as pointed Lino (2011) and Vizeu *et al* (2012).

By Tables 1 and 3, it appears that the companies Duratex SA and Suzano Papel e Celulose SA began elaborating sustainability reports earlier than the other companies, but were the ones that advanced the least in its development. Suzano Papel e Celulose SA remained at the C+ level and although Duratex SA has risen from C to A, it did not submit their sustainability reports to external audit.

As for the environmental indicators presented in Table 2, for several of them the investigated companies reported only data from their production units (branches), independently and without apportioning the total. This is the case, for example, indicators EN2, EN3, EN4 and EN10 regarding Celulose Irani SA; EN1, EN10, EN19, EN20, EN21, EN22, EN28, EN30 of Fibria Celulose SA; EN20, EN21 of Klabin SA; EN1, EN2, EN3, EN4, EN8, EN19, EN20, EN21, EN22, EN24 and EN25 of Suzano Papel e Celulose SA.

This makes it difficult to have an overview of the company as a whole. And indicates that the companies themselves had no holistic view of themselves, or did not give due importance to the sustainability reports or were, perhaps, unwilling to provide an overview about themselves.

Through the sustainability reports analyzed, it was common to find contradicting information referent to the year of 2009, when comparing data reported in the sustainability reports of 2009 and reintroduced in 2010.

To illustrate this, there are the EN8, EN9, EN22, EN30 indicators of Fibria SA, although other companies have also committed such contradictions.

It was also common to find tables and graphs with data missing the proper units of measurement (e.g. Fibria, 2009, p. 104), or units that are not standardized (e.g. Fibria, 2009, p. 102), missing or incomplete titles (e.g. Duratex, 2010, p. 32, 41; Fibria, 2009, p. 60, 69, 70; Fibria, 2010, p. 84), charts with percentages without informing the absolute values (e.g. Duratex, 2009, p. 28, 82; Duratex, 2010, p. 27, 52, 58; Fibria, 2009, p. 70, 109, 110; Fibria, 2010, p. 85, 139; Celulose Irani, 2009, p. 39, 45), among other problems.

Furthermore, there was not any information on the pages about where to find the results of the indicators, wrong information about the pages and the failure to indicate the codes of indicators throughout the text, which forced a pioneering search for data, since they were scattered between texts, photographs and images over the reports. This was also observed by Leite Filho *et al* (2009) on Brazilian companies classified as A+ by the GRI in 2007.

All these aspects made it difficult to find the values of the indicators, as well as understand what it was intended to disclose in such reports.

Table 4 shows how the environmental indicators, proposed by the GRI, were reported in 2009 and 2010 by the investigated companies. There has been no reporting of indicators EN13, EN25, EN27 for almost all of them. Apparently, these indicators are difficult to measure, to describe or to monitor. Only Fibria Celulose SA reported the EN27 indicator, but merely informed that there were no packages recovered from the products sold.

Some indicators were presented as incomplete or in a general way. For example, for EN6, EN7 and EN26 most companies reported only initiatives being taken, not mentioning the reductions achieved with such initiatives.

For EN5, Klabin SA in 2009 and Fibria Celulose SA in 2010, reported that initiatives were being taken. Thus, not meeting the indicator's request. Fibria Celulose SA reported in 2009 that there was no reduction of energy. And in 2010, regarding EN7, it also stated that there was no reduction on indirect energy consumption.

Although EN3, EN4 and EN7 indicators point out to the type of energy that is referred to (direct or indirect), the same does not happen with EN5, which probably makes it a bit confusing.

Regarding the indicator EN9 only Suzano Papel e Celulose SA reported it. Celulose Irani SA reported that, for the removal of water in rivers and lakes, the process of being granted permission by the government was underway. Duratex SA stated that it was following the requirements of environmental agencies. Fibria Celulose SA reported that the granting of the environmental agency ensured compliance to environmental requirements. And Klabin SA stated that it did meet the legislation requirements and it sought to excel such requirements.

These reports show an understanding by the investigated companies that protection and supervision over water sources are primarily a responsibility of the government, implying that they are exempt from any doubts regarding the process of capitation of water and dismissing the need of reporting any data.

More than describing social responsibility practices or raising concern for companies about possible punishments of inspection agents, sustainability indicators are a proposal for changes on the way of thinking about the traditional ways of facing productive activities.

About the EN11 indicator, Celulose Irani SA in 2010 mentioned lawsuits investigating environmental damages as well as the definition of legal reserve areas and protocol in environmental agencies were scheduled for 2011.

Regarding EN12, some companies reported only positive impacts. This is the case of Duratex SA, which generally reported that it only adopts adequate environmentally practices, and that their activities did not cause significant damage to biodiversity.

The practice of emphasizing positive aspects and conceal negative aspects of the production process, was explicitly admitted by Suzano Papel e Celulose SA in 2009 and 2010, before the assessment of their sustainability reports for stakeholders.

For EN13, in 2009 Celulose Irani SA reported owning certification by the Forest Stewardship Council (FSC) understanding that it was a guarantee of proper forest management.

For EN15, only Klabin SA and Fibria Celulose SA, both in 2010, responded satisfactorily to the statement of the indicator. They presented detailed framework of species of fauna and flora with habitats in the affected areas of their productive operations and discriminated species by level of extinction risk.

Regarding the indicator EN17, Duratex SA failed to differentiate it from EN16, because, perhaps, the wording of EN16 is not self-explanatory.

Further explanations of the G3.1 model for each indicator can be found at GRI (2012e). Although Duratex SA prepared their sustainability reports since 2004, the non-submission of them to an external audit may have hindered overcoming problems as noted in the report of EN16.

For EN23, most companies surveyed reported that there had been no records of significant spills. Except Duratex SA which informed a spill in 2010 without significant environmental damage, and Fibria SA reported a significant spill in 2009.

For EN24, Fibria Celulose SA reported generating no hazardous waste under the Basel Convention and Duratex SA in 2010, reported that there was no generation of hazardous waste what so ever.

For EN25, Duratex SA limited its reporting in 2010 stating to be following standards set by government agencies, and Fibria SA in 2010, said there was no impact of its operations on biodiversity of water bodies or on habitats affected by discharges and drainage of water.

For EN28, Celulose Irani SA in 2009 and 2010, Klabin SA in 2010 and Suzano Papel e Celulose SA in 2010, reported that there were no significant fines or non-monetary sanctions due to noncompliance with environmental laws and regulations.

For EN29, in 2010 Celulose Irani SA announced initiatives being taken. Thus, not responding the indicator's request for information regarding environmental impacts due to the transportation of materials, products or employees.

In some sustainability reports examined, as Duratex SA, for example, it was reported that environmental and social indicators referred solely to the company's operations in Brazil, and that financial indicators covered all its production units, both in Brazil and abroad.

This indicates that although the world conferences on the environment began over two decades ago (e.g. the Rio 92), the culture of reporting environmental and social impacts were still very regionalized by the companies investigated.

Some of them even at the expense of providing data on environmental and social aspects of its production process, used sustainability reporting to emphasize predominantly financial and economic data, as was the case of Duratex SA. This practice seems contradictory to the mission of sustainability reporting, providing evidence of how the company sees the purpose of a sustainability report.

In general, from the sustainability reports examined, it can be seen the concern of companies like Celulose Irani SA, Duratex SA, Fibria Celulose SA, Klabin SA and Suzano Papel e Celulose SA in obtaining forestry certification for the management of productive areas, utilizing residues for processing into biomass and monitoring emissions for the sale of carbon credits.

However, as noted by Busch (2008), in Brazil, there is still a long way to go so that a forestry certification is really understood as a social and environmental certification.

Individually, the companies investigated reinforce the discourse that, as far as environmental liability goes, the impact of its production activities are positive, since, according to them, its planted forests capture much more carbon in the atmosphere than they emit.

While some companies like Duratex SA and Suzano Papel e Celulose SA already elaborate sustainability reports for several years, it was revealed that in 2009 and 2010 the reports were still at a very early stage. Nevertheless, the sustainability reports examined also showed relative concerns of Celulose Irani SA, Duratex SA, Fibria SA, Klabin SA and Suzano Papel e Celulose SA to provide information about sustainability indicators.

These companies, respected their specificities, seem to be seeking to follow the global guidelines, required by various stock exchanges, each in its own way, about the need for companies to develop accountability regarding their social responsibility practices.

On the other hand, the companies Companhia Melhoramentos de São Paulo SA, Eucatex SA, Santher SA and Suzano Holding SA proved to be far behind the other investigated companies in regard to transparency and reporting of their social responsibility practices.

By their web pages, cannot be noticed any effort in elaborating adequate sustainability reports. Although they state to be concerned with the values recommended by sustainable economic development.

The results in sustainability reports examined here reinforce the observations of authors such as Cintra (2011), Lino (2011) and Mancini (2008), who question whether the integration of social and environmental information with traditional economic business information (although in an early stage of integration) has led to a cultural change in organizations. If sustainability is even inserted in the management of the companies that publish sustainability reports or if it has an important role in decision-making by firms.

However, they also reinforce conclusions drawn by Cintra (2011), Padilha (2009) and Hanai (2009) to be socially relevant the disclosure of sustainability reports, since, as the authors note, the more a company progresses in developing their sustainability reports, the more is expected that such disclosure to influence the inclusion of sustainability into management practices of the organization even more.

Social relevance that can be achieved if there is adequate legislation and enforcement, well-informed consumers, and if the indicators built in conjunction with stakeholders become significant for businesses and for the productive sector, as Padilha (2009) notes.

4. Conclusions

It can be seen that the sustainability reports for the years 2009 and 2010, when existent, of Brazilian forestry companies listed on the BM&FBOVESPA in May 2012, were still at a very early stage, with four of the nine companies surveyed, not even preparing such reports.

In general, the sustainability reports examined appear to have been made in a haste with tables and graphs poorly produced, lacking objectivity, standardized units of measures, among other problems, and presenting calls for the reader to have faith in the company.

Because of this, these reports serve more as propaganda, aiming to disseminate the company's name with internal and external public (investors, employees, creditors) than necessarily as technical reports, such as the traditional financial statements.

It is important to Brazilian society that sustainability reports become no longer just a recommendation of the BM&FBOVESPA, but to be mandatory for companies, and supervised by the government, such as the financial reports. Maybe then there may be more credible information presented in the reports. What will enable the objective evaluation of practices of corporate social responsibility, advance in comparisons between companies, and encourage more sustainability values.

Probably it is very difficult to modify the Brazilian culture, extending the planning horizons of individuals and society, so that investors start to consider other aspects besides economic and financial ones, when assembling their portfolios on the BM&FBOVESPA. Changes in perceptions of investors probably would also force businesses to reconsider some of their traditional attitudes toward society.

For example, companies that with their products cause harm to public health, contamination of soil, water, air and food, impairment of flora and fauna, which are not interested in management transparency, which use child or slave labor, among others, could cause more damage to individuals and to life in society than the benefits and immediate profits resulting from manufacturing operations.

Thus, here is shared the view that the adjective sustainable, in economic development, should not be just be a byproduct of the economic advantages offered, but motive governments and society to encourage organizations that seek this form of development. As concluded Cavalcanti (2012), sustainability is a moral choice that society must do.

Although Brazil is home to two major global conferences on sustainable economic development, Rio 92 and Rio +20, it is still very precarious the practice of Brazilian companies when developing their sustainability reports, and most of them do not even participate in this current international debate.

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Table 1: Brazilian Forestry Companies Listed on the BM&FBOVESPA - Brazil - May/2012

Company's	Year of	SR since	Area of	Net revenue, in	Net income in	Number of
name	fundation		business	2010, in R\$	2010, in R\$	employees, in 2010
Celulose Irani SA	1941	2006	Paper, Furniture, Florestry, Packaging	447,472,000	34,360,000	P: 1,687; O: 769
Companhia de Melhoramentos de São Paulo SA	1890	-	Publisher, Florestry, Fibers	100,705,000	(-25,768,000)	P: 360; O: 36; T: 7; C: 220 ⁽¹⁾
Duratex SA	1962	2004	Wood, Sanitary Ware	2,741,800,000	467,200,000	P: 9,542; O: 1,682; T: 148
Eucatex SA	1951	-	Fibers	794,002,000	119,997,000	No information
Fibria Celulose SA	1941	2009	Paper, Cellulose	7,050,000,000	603,000,000	P: 5,037; O: 11,919
Klabin SA	1978	2007	Florestry, Paper	3,663,000,000	560,000,000	P: 8,481; O: 6,122; T: 63
Santher Fábrica de Papel Santa Therezinha SA	1938	-	Paper, Cellulose	864,266,000	(-44,201,000)	No information
Suzano Holding SA	1954	-	Stockholder	4,519,675,000	764,060,000	No information
Suzano Papel e Celulose SA	1987	2004	Florestry, Cellulose, Paper	4,514,000,000	769,000,000	P: 4,352

Notes: 1) SR= Sustainability Reporting.

- 2) P=Permanent, O=Outsourced, T=Trainees, C=Contractors.
- 3) Fibria Celulose SA was formed by the annexation of Aracruz Celulose SA by Votorantim Papel e Celulose SA, on September 2009.
- 4) SA meaning Anonymous Society.
- 5) USD 1.00 = R\$ 1.66, in December 30, 2010.

⁽¹⁾ Data of 2011.

Table 2: Environmental Indicators Proposed by the Global Reporting Initiative (GRI), in Version G3.1

بال ر								
#	Code	Meaning of indicator						
01	EN1	Materials used by weight or volume.						
02	EN2	Percentage of materials used that are recycled input materials.						
03	EN3	Direct energy consumption by primary energy source.						
04	EN4	Indirect energy consumption by primary source.						
05	EN5	Energy saved due to conservation and efficiency improvements.						
06	EN6	Initiatives to provide energy-efficient or renewable energy based products and services, and						
		reductions in energy requirements as a result of these initiatives.						
07	EN7	Initiatives to reduce indirect energy consumption and reductions achieved.						
08	EN8	Total water withdrawal by source.						
09	EN9	Water sources significantly affected by withdrawal of water.						
10	EN10	Percentage and total volume of water recycled and reused.						
11	EN11	Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas						
		of high biodiversity value outside protected areas.						
12	EN12	Description of significant impacts of activities, products, and services on biodiversity in						
		protected areas and areas of high biodiversity value outside protected areas.						
13	EN13	Habitats protected or restored.						
14	EN14	Strategies, current actions, and future plans for managing impacts on biodiversity.						
15	EN15	Number of IUCN Red List species and national conservation list species with habitats in areas						
		affected by operations, by level of extinction risk.						
16	EN16	Total direct and indirect greenhouse gas emissions by weight.						
17	EN17	Other relevant indirect greenhouse gas emissions by weight.						
18	EN18	Initiatives to reduce greenhouse gas emissions and reductions achieved.						
19	EN19	Emissions of ozone-depleting substances by weight.						
20	EN20	NO, SO, and other significant air emissions by type and weight.						
21	EN21	Total water discharge by quality and destination.						
22	EN22	Total weight of waste by type and disposal method.						
23	EN23	Total number and volume of significant spills.						
24	EN24	Weight of transported, imported, exported, or treated waste deemed hazardous under the						
21	21,121	terms of the Basel Convention Annex I, II, III, and VIII, and percentage of transported waste						
		shipped internationally.						
25	EN25	Identity, size, protected status, and biodiversity value of water bodies and related habitats						
20	21,20	significantly affected by the reporting organization's discharges of water and runoff.						
26	EN26	Initiatives to mitigate environmental impacts of products and services, and extent of impact						
	21.120	mitigation.						
27	EN27	Percentage of products sold and their packaging materials that are reclaimed by category.						
28	EN28	Monetary value of significant fines and total number of non-monetary sanctions for noncompliance						
_0		with environmental laws and regulations.						
29	EN29	Significant environmental impacts of transporting products and other goods and materials used for						
/		the organization's operations, and transporting members of the workforce.						
30	EN30	Total environmental protection expenditures and investments by type.						
		total environmental protection expenditures and investments by type.						

Note: Available: https://www.globalreporting.org/resourcelibrary/G3.1-Comparison-Sheet.pdf(May 25, 2012).

Company's name	Year of SR	N° of Pages in SR	Classification Granted to the RS
Celulose Irani SA	2009	102	A+
Celulose Italii SA	2010	137	A+
Duratex SA	2009	144	С
Duratex SA	2010	174	А
Fibria Celulose SA	2009	132	B+
FIDHa Celulose SA	2010	188	B+
Klabin SA	2009	70	-
Kiabili SA	2010	83	C+
Sugano Donal a Calulaca SA	2009	136	C+
Suzano Papel e Celulose SA	2010	107	C+

Table 3: Classification of Sustainability Reports for the Years 2009 and 2010 Brazilian Forestry Companies Listed on the BM&FBOVESPA - Brazil - May/2012

Notes: 1) SR=Sustainability Report.

2) Klabin SA, in 2009, did not formally use the model of SR proposed by the Global Reporting Initiative.

3) SA meaning Anonymous Society.

Table 4: Manner in Which the Environmental Indicators Proposed by the Global Reporting Initiative are Reported in Sustainability Reports of 2009 and 2010, of Brazilian Forestry Companies Listed on the BM&FBOVESPA, in May/2012

#	Code of indicator	Celulose Irani SA		Duratex SA		Fibria Celulose SA		Klabin SA		Suzano Papel e Celulose SA	
		2009	2010	2009	2010	2009	2010	2009	2010	2009	2010
01	EN1	R	R	R	R	PR	PR	R	R	PR	PR
02	EN2	PR	PR	R	R	R	R	NR	R	PR	PR
03	EN3	PR	PR	R	R	R	R	R	R	PR	PR
04	EN4	PR	NR	NR	PR	R	R	R	R	PR	PR
05	EN5	R	R	NR	NR	R	NR	NR	R	NR	NR
06	EN6	PR	PR	NR	NR	PR	PR	NR	NR	PR	PR
07	EN7	PR	PR	NR	NR	PR	R	NR	NR	NR	NR
08	EN8	R	R	R	R	PR	PR	PR	R	PR	PR
09	EN9	NR	NR	NR	NR	NR	NR	NR	NR	R	R
10	EN10	PR	PR	R	R	PR	PR	NR	R	NR	NR
11	EN11	PR	NR	R	R	PR	PR	PR	PR	NR	PR
12	EN12	PR	PR	NR	NR	PR	PR	PR	PR	NR	PR
13	EN13	NR	PR	NR	PR	PR	PR	PR	PR	NR	PR
14	EN14	R	R	R	R	R	R	R	R	NR	R
15	EN15	PR	PR	NR	PR	R	R	PR	R	NR	PR
16	EN16	R	R	R	R	R	NR	NR	PR	PR	PR
17	EN17	R	R	NR	NR	R	NR	NR	R	PR	PR
18	EN18	R	R	R	R	R	R	PR	PR	PR	PR
19	EN19	PR	PR	NR	NR	R	R	NR	NR	NR	PR
20	EN20	R	R	NR	NR	PR	PR	PR	PR	PR	PR
21	EN21	PR	PR	R	R	PR	PR	NR	PR	PR	PR
22	EN22	R	R	PR	PR	PR	PR	NR	PR	PR	PR
23	EN23	R	R	R	R	R	R	NR	R	R	NR
24	EN24	PR	PR	NR	R	R	R	NR	R	PR	PR
25	EN25	NR	NR	NR	NR	NR	NR	NR	NR	NR	PR
26	EN26	NR	PR	PR	PR	NR	PR	R	NR	R	R
27	EN27	NR	NR	NR	NR	R	R	NR	NR	NR	NR
28	EN28	R	R	NR	R	PR	PR	NR	R	R	R
29	EN29	PR	NR	NR	NR	NR	R	NR	NR	NR	NR
30	EN30	R	R	R	R	R	R	R	PR	PR	PR

Notes: 1) R=Relate, PR= Partial relate, NR=Does not relate.

3) SA meaning Anonymous Society.

²⁾ Companhia de Melhoramentos de São Paulo SA, Eucatex SA, Santher SA e Suzano Holding SA did not make sustainability reports in 2009 and 2010.