

APPLICATION AND IMPACTS OF SUSTAINABLE DEVELOPMENT GOALS IN LARGE BRAZILIAN INDUSTRIES

APLICAÇÃO E IMPACTOS DOS OBJETIVOS DE DESENVOLVIMENTO SUSTENTÁVEL NAS GRANDES INDÚSTRIAS BRASILEIRAS

Submission: March 1, 2022
Accept: October 25, 2022

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ABSTRACT

Objective: To verify whether large private companies in the industrial sector operating in Brazil meet the Sustainable Development Goals (SDGs) established by the UN in the 2030 Agenda, in order to provide a return to society on business performance on the agenda of sustainable development.

Methods: The research is characterized as qualitative, with exploratory and descriptive purpose, and documentary procedure. Content analysis was chosen as a technique to investigate the collected data.

Results: There is a partial compliance of the SDGs by the 20 largest private companies in the industrial sector that have recently published sustainability reports.

Conclusions: The report is an important part of sustainability in corporations but presenting it annually does not turn the company into a sustainable organization. Therefore, questions are suggested that can bring companies' actions closer to the dimensions proposed in the 2030 Agenda. It is also recommended to standardize the SDGs as ways to implement sustainable attitudes in companies and, therefore, to build better sustainability reports. This may favor comparative analyses between similar organizations and the implementation of responsible practices capable of responding to the challenges of the 21st century.

Keywords: Sustainable Development; Agenda 2030; Sustainable Development Goals; Industry; Brazil.

RESUMO

Objetivo: Verificar se as grandes empresas privadas do setor industrial atuantes no Brasil atendem aos Objetivos de Desenvolvimento Sustentável (ODS) estabelecidos pela ONU na Agenda 2030, a fim de disponibilizar um retorno à sociedade sobre a atuação empresarial na pauta do desenvolvimento sustentável.

Métodos: A pesquisa caracteriza-se como qualitativa, com finalidade exploratória e descritiva, e procedimento documental. A análise de conteúdo foi eleita como técnica de investigação dos dados coletados.

Resultados: Há um cumprimento parcial dos ODS pelas 20 maiores empresas privadas do setor industrial que publicaram recentemente relatórios de sustentabilidade.

Conclusões: O relatório é uma parte importante da sustentabilidade nas corporações, mas apresentá-lo anualmente não transforma a empresa em uma organização sustentável. Portanto, sugerem-se questionamentos que podem aproximar as ações das empresas às dimensões propostas na Agenda 2030. Também, recomenda-se a padronização dos ODS como caminhos para a implementação de atitudes sustentáveis nas empresas e, por conseguinte, para a construção de relatórios de sustentabilidade cada vez melhores. Isso pode favorecer análises comparativas entre organizações semelhantes e a efetivação de práticas responsáveis capazes de responder aos desafios do Século XXI.

Palavras-Chave: Desenvolvimento Sustentável; Agenda 2030; Objetivos de Desenvolvimento Sustentável; Indústria; Brasil.

1 INTRODUCTION

The climate changes induced by anthropic action, the disproportionate and sometimes irrational use of non-renewable natural resources and the serious socioeconomic problems arising from this utilitarian conception of the planet are characteristic of the new geological era known as the Anthropocene.

This conception has prompted public administration, civil society organizations and the private sector to drastically rethink its performance. With the COVID-19 pandemic, which was markedly faced by all peoples from 2019 onwards, the aforementioned socio-environmental mismatch proved to be even more explicit.

Focusing on the period between the beginning of the 20th century and the last years, it is observed that business administration has undergone several transformations, added practices and knowledge of other areas and broadened its horizon of operation in a remarkable way, including sustainability. And, with the promulgation of the Sustainable Development Goals (SDGs) by the United Nations (UN), which consist of 17 objectives and 169 goals that should be achieved by the year 2030, as part of the document “Transforming Our World: the 2030 Agenda for Sustainable Development”, integration between governments, non-governmental organizations, companies and civil society, has played a crucial role in the success of all the points that have been proposed.

Reinforcing this scenario, in 2020, the world entered the so-called “Decade of Action”, in order to intensify actions based on the Global Objectives to be met within the given deadline. However, the applicability of the SDGs in this context still lacks academic evaluations (Rosati & Faria, 2019).

In view of the presented situation, a question is raised: do the sustainability practices of large Brazilian companies in the industrial sector meet the SDGs? To answer this question, the study aims to see whether large private companies in the industrial sector operating in Brazil meet the Sustainable Development Goals (SDGs) established by the UN in the 2030 Agenda, in order to provide a return to society about business performance on the agenda of sustainable development.

There are also three specific objectives:



i) to indicate the effective contribution of the companies analyzed in the five dimensions of sustainable development stipulated by the 2030 Agenda, People, Planet, Prosperity, Peace and Partnerships, in the light of the SDGs, in order to list the sustainable practices detected in the studied corporations.

ii) to assess how these business policies contribute to social mobility, reduction of inequalities, care for the environment and the creation of socio-environmental awareness.

iii) investigate whether there are government entities, non-governmental *organizations*, *startups*, academic institutions and/or *other stakeholders committed* to fostering sustainable networking practices with the companies addressed in the study.

This article has, in addition to this introduction: theoretical reference, in which the concepts of sustainability, sustainable development and Agenda 2030 are analyzed, explanation of the research methodology, field analysis, and final considerations.

2 THEORETICAL FRAMEWORK

The word sustainability, from the Latin *sustentare*, is tied to the ability to sustain something or someone. Authors such as Sachs (2015) and Romeiro (2018) argue that sustainability has been a reality for centuries, through historical examples. However, to be temporally situated about the formal discussions on sustainable development, events such as the publication of Rachel Carson's "*Silent Spring*" (1968) are taken as a symbolic starting point, which, in exposing the dangers of the insecticide DDT, was the trigger for the beginning of environmentalism (McNeill, 2001).

Likewise, the United Nations Conference on the Human Environment, which took place in Stockholm in 1972, under the impact of the above-mentioned work and the report commissioned by the Think Tank Club of Rome, "The Limits to Growth", scandalized Orthodox economists (Georgescu-Roegen, 2012), but it gained worldwide repercussion thanks to the warnings contained therein, which pointed out that the growth patterns adopted by rich countries, if extended to all peoples, for the first time in history could compromise the survival of future generations (Meadows et al., 1972).

Consequently, the Stockholm Conference has become, albeit unintentionally, a "forum of debates between different positions of the northern and southern countries" (Dias, 2019, p. 21), being rejected by peripheral countries that enjoyed a full rise in GDP, such as Brazil, which experienced the "miracle" (Romeiro, 2012). Despite the clash, an emerging concern was expressed with the depletion of the environment and the redistribution of income on the planet, as a form of economic development in the countries of the global South.

In this context, as reports and international meetings began to discuss the limits of ecosystems and social relations intrinsic to the exploitation of natural resources, guidelines such as the distribution of wealth among peoples and also between different social classes were incorporated. Thus, ecodevelopment was an alternative (Romeiro, 2012, p. 70). A few years later, it was replaced by sustainable development. Veiga (2010, p. 190) recalls that "the expression was first publicly used in August 1979 at the United Nations Symposium on The Interrelations between Resources, Environment and Development held in Stockholm", although it gained strength only with the publication of the Report "Our Common Future", or "Brundtland Report" in 1987, which expanded the concept to other dimensions, beyond the environmental, in an era marked by neoliberalism (Nascimento, 2012), which "dominated the scene until the end of the 1990s" (Sachs, 2008, p. 29).

With this, sustainable development ceased to be technical exclusivity of those who discussed it and became popularized (Romeiro, 2012), as "one that meets the needs of the present without compromising the possibility of future generations meeting their own needs" (World Commission on Environment and Development [WCED], 1987, p. 43).



In agreement, Veiga (2015, p. 197) warns that this definition “if it did not resolve, at least minimized the confusion that existed until then”, because “it provided an international goal, undoubtedly more precise than the precursor attempts”. Machado & Matos (2020, p. 22) adds that the concept of sustainable development has over-capitalized on environmental crises, “entering the context of the most recent social and economic crises, such as poverty, public health problems and the widening of distances between industrialized economies and emerging economies.”

Returning to the historical context at a world level, it was in the 1990s that “the problems around the environment became a real ‘environmental issue’, as they gained greater dimension, became complex and acquired a global institutionality” (Almeida & Premebida, 2014, p. 24): in 1992, a major conference brought together leaders from around the world to discuss the issue, this time in Rio de Janeiro: the United Nations Conference on Environment and Development. Its repercussion was so great that this event was replicated twice: in Johannesburg in 2002; and back to Rio de Janeiro in 2012. In these meetings, actions to implement Agenda 21 were discussed and the first results were also evaluated.

Another meeting of countries, held in 2000, resulted in the document “Millennium Declaration”. In it, 8 Millennium Development Goals (MDGs) and 21 targets were defined. The deadline for achieving the objectives extended until 2015. While challenges such as poverty, inequalities and infant mortality (Brault et al., 2020) persisted. In view of this, following a mandate emanating from the Rio+20 Conference in 2012, a series of negotiations began in 2013 to discuss a new way of promoting sustainable development involving governments, companies and civil society.

Therefore, in August 2015, negotiations were concluded that culminated, in September, in the document “Transforming Our World: The 2030 Agenda for Sustainable Development”, and in the adoption of the SDGs, also known as the Global Goals, as part of this new “action plan for people, for the planet and for prosperity” (United Nations Brazil, 2015, n. p.). The SDGs, the core of the 2030 Agenda, succeeded and updated the Millennium Development Goals. This set of universal and transformative long-range actions and policies received the mission of guiding national policies and international cooperation activities during the fifteen years following January 1st, 2016, therefore, until December 31, 2030 (United Nations Brazil, 2015).

At first, it is emphasized that the 17 SDGs should not be understood as separated pieces, or as boxes, but as complementary tools, integrated and systematized, aimed at addressing complex problems, which require various perspectives. Each objective functions as something broad and strategic, which indicates what is intended to achieve. And for that to be possible, there are 169 targets to them.

Moreover, just as the literature stipulates dimensions for sustainability and sustainable development (Froehlich, 2014), the 2030 Agenda was based on five areas of crucial importance, in which the SDGs orbit: People, Planet, Prosperity, Peace and Partnerships (United Nations Brazil, 2015), and these axes are inspired by traditional environmental, social and economic pillars.

Although the responsibility for the achievement of the Global Objectives is known to fall on member states, many of the themes contained in them involve local challenges, requiring multilevel governance involving public administration at the subnational level, companies, Civil Society Organizations, Universities, foundations and institutes, social movements and individuals without formal organization, such as volunteers, for example. This includes the need to implement this global agenda not only in public policies headed by government entities, but also in business and civil society actions.

2.1 Sustainable Development Goals in companies

Sustainability in organizations precedes the enactment of the 2030 Agenda and the SDGs. In fact, Moraes et al. (2017) affirm that social responsibility in organizations can be divided into three phases: the first, from 1900 to 1960, marked by concern for personal ethics in the business environ-



ment. The second, between 1960 and 1980, when companies began to be questioned by society about their activities and the obligations they should carry, going beyond the mere maximization of profits. And, finally, the third, from 1980, marked by the worldwide discussions on sustainable development, that improved the role of companies against the planet, in order to encompass environmental, social and educational issues, in addition to economic ones, which were already addressed.

Regarding the first two phases, it is noteworthy that Corporate Social Responsibility was first defined in Bowen's work (1953) as the obligation of entrepreneurs to pursue normative policies, make decisions or follow the desirable lines of action in terms of society's objectives and values. Sharing this vision, a few years later Davis (1960) argued that the social responsibility of organizations is linked to decisions and actions of entrepreneurs that exceed, at least partially, the direct economic or technological interests of their respective businesses, that is, business activity should go beyond its walls.

Along these lines, the 2030 Agenda recognizes that private business activity, investment and innovation are the main drivers of productivity, inclusive economic development and job creation. Companies are fundamental for sustainable development not only for their financing, but also for ensuring the capillarity of actions, given the strong predisposition of the private sector to establish a dialogue with employees and the community (United Nations Brazil, 2015).

Rome (2019, p. 39) endorses this statement by defending that achieving the goals and targets of the 2030 Agenda "requires a coordinated effort not only at the level of the governmental spheres, but also in private initiative, NGOs and the whole of Brazilian society", in order to allow the potential of this global agenda to induce sustainable development to materialize and to bring the desired benefits for society.

Sachs (2015, p. 3) emphasizes the importance of "good governance", on the part of States and large companies, to ensure the achievement of the goals and targets within the estimated time frame. Regarding companies, the author points out that this strategy involves observing laws and regulations, respecting the environment and helping communities around them, especially with regard to the eradication of extreme poverty.

3 METHODOLOGY

Regarding the approach to the problem, the research is characterized as qualitative, since it sought to understand "the logic of social processes and structures, based on in-depth analyses of one or a few particular cases" (Brazilian Center for Analysis and Planning, 2016, p. 8).

In addition, the research is classified as exploratory, characterized by Gil (2019, p. 27) as the one that "has as main purpose to develop, clarify and modify concepts and ideas, in view of the formulation of more accurate problems or researchable hypotheses for further studies". This stage allowed identifying the contribution of the analyzed companies in the dimensions of sustainable development stipulated by the 2030 Agenda: People, Planet, Prosperity, Peace and Partnerships.

It is also a descriptive research, as we sought the "description of the characteristics of a given population or phenomenon, or the establishment of relationships between variables" (Gil, 2019, p. 28). In this case, a description was made of how the 20 largest companies in the industrial sector met the SDGs based on the actions released in the sustainability reports.

As research procedures, initially, the documentary character of the study is highlighted, because "it is used by materials that have not yet received an analytical treatment, or that can still be reelaborated according to the objectives of the research" (Gil, 2019, p. 51).

The choice of variables was based on a non-probabilistic sampling of the intentional type, according to Oliveira's (2001) orientation, as they were chosen in order to privilege all regions of Brazil with at least one company for each region, making the research comprehensive from the point of view



of the geographical distribution of the objects of study, and according to the researcher's access to the reports of the companies best placed in the ranking "Valor1000", of the newspaper *Valor Econômico*, which, based on annual net revenue, published the thousand largest companies in Brazil in 2018.

The industrial sector was chosen due to its notorious environmental impact, corroborated by Annex VIII of Law No. 10,165/2000, which changed the National Environment Policy (Brazil, 2000), and the opportunity to verify whether the large companies in this niche are implementing policies aimed at mitigating their impacts on ecosystems, while implementing actions of socioeconomic responsibility.

In this study, content analysis was chosen as a technique for analyzing the collected data. Its importance for organizational studies is increasing and has evolved due to the concern with scientific rigor and the depth of research (Mozzato & Grzybovski, 2011). Thus, the route followed the phases recommended by Bardin (2009, p. 121): (i) pre-analysis; (ii) exploitation of the material, and (iii) treatment of the results, which involved inference and interpretation. Subsequently, the results were compiled, allowing a confrontation with the theoretical framework, in order to generate contributions to the debate on organizational sustainability.

4 RESULTS AND DISCUSSION

4.1 Selection of companies and overview of sustainability reports

Composing the first stage of content analysis (pre-analysis), initially the 40 largest companies in Brazil were chosen, based on annual revenue in 2018, constituting the first selection, transcribed in Table 1.

Table 1 - 40 largest companies in Brazil in 2018

Position	Enterprise	Company Headquarters	Region
First	Petrobras	RJ	Southeast
Second	JBS	SP	Southeast
Third	Valley	RJ	Southeast
4 th	Raízen	SP	Southeast
5 th	Ultrapar	SP	Southeast
6 th	Cosan	SP	Southeast
7 th	Braskem	BA	Northeast
8 th	Crossroads	SP	Southeast
9 th	Ambev Brewery	SP	Southeast
10 th	GPA	SP	Southeast
11 th	Gerdau	SP	Southeast
12 th	Cargill	SP	Southeast
13 th	ADM	It	Southeast
14 th	Telefonica Brazil	SP	Southeast
15 th	Parliament	SC	On
16 th	Clear Telecom	SP	Southeast
17 th	ArcelorMittal Brazil	MG	Southeast
18 th	BRF	SP	Southeast
19 th	Marfrig	SP	Southeast
20 th	Copersucar	SP	Southeast
21 st	Shell Brazil	RJ	Southeast
22 nd	CPFL Energy	SP	Southeast



23 rd	FCA Automobiles	MG	Southeast
24 th	Enel Brazil	RJ	Southeast
25 th	Via Retail	SP	Southeast
26 th	Neoenergy	RJ	Southeast
27 th	Walmart	SP	Southeast
28 th	Electrobras	DF	Midwest
29 th	Samsung	AM	North
30 th	CSN	SP	Southeast
31 st	Cemig	MG	Southeast
32 nd	Louis Dreyfus Company	SP	Southeast
33 rd	Hi	RJ	Southeast
34 th	Volkswagen	SP	Southeast
35 th	Embraer	SP	Southeast
36 th	Fibra	SP	Southeast
37 th	Post office	DF	Midwest
38 th	Latam Airlines	SP	Southeast
39 th	American Stores	RJ	Southeast
40 th	Amaggi	MT	Midwest

Source: Elaborated by the authors, based on Valor (2018).

In the second selection, companies and public authorities were excluded, as well as those from sectors other than the industrial one. Therefore, the number of companies decreased, from 40 to 25. Table 2 shows an overview of the sustainability reports of these companies, which include: the year of publication of the document, the number of pages and the main particularities of each one.



Table 2 - Overview of the sustainability reports of the 25 companies selected in the second screening.

Position	Enterprise	Headquarters	Year of the Report	Pages	Peculiarities
2 nd	JBS	SP	2018	180	GRI Model
3 rd	Valley	RJ	2018	104	GRI Model
4 th	Raízen	SP	2018/2019	110	GRI Model
5 th	Ultrapar	SP	There is no	-	-
6 th	Cosan	SP	2018	51	GRI Model
7 th	Braskem	Three	2018	109	GRI Model
9 th	Ambev Brewery	SP	2018	84	GRI Model
11 th	Gerdau	SP	There is no	-	-
12 th	Cargill	SP	There is no	-	Information on the site
13 th	ADM	It	2018	44	English / GRI only
15 th	Parliament	SC	2018	53	GRI Model
17 th	ArcelorMittal Brazil	MG	There is no	-	Information on the site
18 th	BRF	SP	2018	126	GRI Model
19 th	Marfrig	SP	2018	47	GRI Model
20 th	Copersucar	SP	2016/2018	46	GRI Model
21 st	Shell Brazil	RJ	2017	71	English only
23 rd	FCA Automobiles	MG	2018	148	English / GRI only
24 th	Enel Brazil	RJ	2018	81	GRI Model
29 th	Samsung	On the	2019	144	English / GRI only
30 th	CSN	SP	2016/2017	142	GRI Model
32 nd	Louis Dreyfus Company	SP	2018	33	English only
34 th	Volkswagen	SP	There is no	-	-
35 th	Embraer	SP	2018	43	GRI Model
36 th	Fibria	SP	There is no	-	Information on the site
40 th	Amaggi	MT	2018	140	GRI Model

Source: Elaborated by the authors, based on the research data.

As evidenced in the theoretical framework, amid the multiple pressures arising from the increased social perception about the need for sustainable actions and also the mistrust of advertisements and the practice of greenwashing, organizations have increasingly trust on the publication of sustainability reports, defined as an annual document voluntarily produced by the company after an effort of “internal audit” to present themselves before stakeholders, map its degree of sustainability and its impacts on society and the planet. This audit seeks to understand the management of the action and evaluate it, according to environmental, social, economic and even governance criteria.

Therefore, there is a considerable list of organizations developing sustainability reports. In this context, we highlight the emergence of the Global Reporting Initiative (GRI), created in 1997 by the American NGO Coalition for Environmentally Responsible Economics (CERES). Its guidelines for the composition of the sustainability report can be used by any and all organizations, regardless of their sector in the economy.

All companies in this research that submitted sustainability reports adopted the GRI model. However, in order to ensure that the comparison was based exclusively on sustainability reports, companies that did not present the document at least three years in advance were not included in the research. Thus, the third and final selection is presented in Table 3, which lists the 20 largest companies in the industrial sector in Brazil that have published sustainability reports in the last three years. This group of companies originated the search results.



Table 3 – 20 largest companies in the industrial sector in Brazil that have published sustainability reports in the last three years

	Enterprise	Dominant subsector	Headquarters
1	JBS	Agribusiness /Food	SP
2	Vale	Mining	RJ
3	Raízen	Energy	SP
4	Cosan	Energy	SP
5	Braskem	Chemistry	BA
6	Ambev Brewery	Feeding	SP
7	ADM	Agribusiness /Food	It
8	Parliament	Agribusiness /Food	SC
9	BRF	Agribusiness /Food	SP
10	Marfrig	Agribusiness/Food	SP
11	Copersucar	Energy	SP
12	Shell Brazil	Energy	RJ
13	FCA Automobiles	Automobile	MG
14	Enel Brazil	Energy	RJ
15	Samsung	Technology	AM
16	CSN	Mining	SP
17	Louis Dreyfus Company	Agribusiness/Food	SP
18	Volkswagen	Automobile	SP
19	Embraer	Aviation	SP
20	Amaggi	Agribusiness/Food	MT

Source: Elaborated by the authors, based on the research data.

After three selections, we reached the companies chosen for the analysis. In relation to its employees in Brazil, the Southeast region comprises 80% of the sample. The North, Northeast, Midwest and South regions have, respectively, only one company in the composition of the sampling. With regard to the preponderant subsectors, agricultural and/or agricultural production, and energy production and distribution, are concerned.

4.2 Overview of companies with area of operation and places where they are present

The second stage of content analysis (exploration of the material) was initiated in this section. Table 4 shows a brief description of each selected company, as well as the enumeration of the SDGs mentioned in their reports.



Table 4 – Brief description of the 20 largest companies in the industrial sector in Brazil that have published sustainability reports in the last three years

	Enterprise	Description	SDGs mentioned
1	JBS	JBS is one of the largest food industries in the world. The company operates in the processing of beef, pork, sheep and chicken and in the processing of leather.	1, 2, 3, 6, 8, 12, 13 and 15
2	Vale	Vale is a Brazilian multinational mining company and one of the largest logistics operators in the country. It is one of the largest mining companies in the world and also the largest producer of iron ore, pellets and nickel.	None
3	Raízen	It is noteworthy that Raízen, a company active in the fields of sugar and ethanol production, fuel distribution and energy generation, is a subsidiary of Cosan (the shareholding is divided into 50% for Cosan and 50% for Royal Dutch Shell). Its report was published for the biennium 2018-2019, having as one of its main themes the company's option for building a low carbon economy.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 and 16
4	Cosan	The Cosan Group consists of five subsidiary companies, namely: Raízen Combustíveis and Raízen Energia, Comgás, Moove and Rumo. Thus, Cosan is a holding company, that is, the "parent company" of a company created with the purpose of managing a group that contains several ventures.	3, 5, 7, 8, 9, 11, 12, 13, 14 and 15
5	Braskem	Braskem is a transnational petrochemical industry that operates in several segments, such as food packaging, civil construction, industrial, retail, automotive, agribusiness, health and hygiene, among others.	All
6	Ambev Brewery	Ambev Brewery's production focuses on beers, soft drinks, energy drinks, juices, teas and water.	
7	ADM	Archer Daniels Midland (ADM) is a conglomerate of companies operating in the grain production and processing sector of cereals and oilseed plants.	2, 6, 8, 13 and 15
8	Bunge	Bunge is a multinational agribusiness and food company, with origin in the Netherlands and robust operations in Brazil, where it is the main company in the agri-food sector and the largest exporter in the country.	6, 8, 9, 12, 13, 15 and 16
9	BRF	BRF is a Brazilian multinational food company, the result of the merger between Sadia and Perdigão, two of the main food companies in Brazil.	1, 2, 5, 6, 7, 8, 10, 11, 12, 13, 16 and 17
10	Marfrig	Marfrig Global Foods is one of the world's largest animal protein-based food companies. Its performance focuses on beef production.	2, 3, 6, 8, 12, 15 and 16
11	Copersucar	Coopersucar is the largest Brazilian sugar and ethanol cooperative and one of the largest global exporters of both products, operating in São Paulo, Paraná and Minas Gerais. Its activities are also intended for logistics.	2, 3, 4, 8, 10, 12, 13
12	Shell Brazil	Royal Dutch Shell, or simply Shell, is an Anglo-Dutch multinational oil company, which has as main activities the refining of oil and the extraction of natural gas.	7, 8, 9, 12, 13 and 17
13	FCA Automobiles	Fiat Chrysler Automobiles is an Italian American industrial conglomerate that brings together the Fiat, Chrysler and Jeep brands, thus being among the founders of the European automotive industry. In Brazil, its operations are concentrated in Betim, a municipality in the Metropolitan Region of Belo Horizonte, and in Goiana, in the state of Pernambuco.	3, 4, 5, 6, 7, 8, 9, 10, 12 and 13
14	Enel Brazil	Enel Brasil, founded in 2005, is a Brazilian company in the field of electricity controlled by the Italian group Enel. In the country, it operates in Ceará, Goiás, Rio de Janeiro and São Paulo.	All
15	Samsung	Samsung Electronics Company Limited, or simply Samsung, is a South Korean transnational corporation that operates in various branches of information technology, with emphasis on the manufacture of sound products, image, storage and data transmission, among others.	1, 4, 5, 6, 7, 8, 9, 10, 12, 13, 15, 16 and 17
16	CSN	Companhia Siderúrgica Nacional (CSN) is the largest steel industry in Brazil and Latin America, and one of the largest in the world in this field. In addition, it operates with mining, processing, processing and distribution, logistics, cement production and energy.	1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 and 16



17	Louis Dreyfus Company	Louis Dreyfus Company is a global trading company engaged in agriculture, food processing, international remittances and finance.	1, 2, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 16 and 17
18	Volkswagen	Volkswagen is a German vehicle manufacturer that belongs to the Volkswagen Group. Considering the number of vehicles sold per year, it is the largest car manufacturer in the world.	None
19	Embraer	Embraer S/A is a Brazilian transnational conglomerate, manufacturer of commercial, executive, agricultural and military aircraft, aerospace parts, services and support in the area.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 16 and 17
20	Amaggi	Amaggi is one of the leading agribusiness companies in Latin America and operates in 7 countries. In addition to trading, the company has branching in the areas of seeds, river transport, soybean processing, power generation and financial area.	1, 2, 3, 4, 8, 9, 10, 12, 13, 15, 16 and 17

Source: Elaborated by the authors, based on the research data.

4.3 Adherence of companies to the 2030 Agenda















The exploration of the material continued with the detailing of each sustainability report to evidence the sustainable actions employed in the year (or period) of publication of the document, as well as its positive and negative points, with special attention to the main problems caused by the dominant activity of each industry.

We tried to establish a comparison between the information presented, the organizational sustainability models of each company and the theoretical framework, analyzing the information contained in the reports in the light of the literature that deals with the subject, and adding new references, when necessary, in order to complement the analyses and sustain them through an updated bibliography.

In order to induce a comparative analysis among the selected companies, all sustainability reports were submitted to the five dimensions of the 2030 Agenda for Sustainable Development: People, Planet, Prosperity, Peace and Partnerships. However, it should be noted that the SDGs are transversal, and many involve more than one category. To solve this problem, the predominant dimension was chosen to define which of the five would characterize the classification of each Global Objective, as shown in Table 5, which also explains the criteria used for this grouping.



Table 5 - Grouping of Sustainable Development Goals in the dimensions of the 2030 Agenda

Dimension	Selected Sustainable Development Goals	Selection criteria
People	    	Goals and targets mostly linked to social
Planet	    	Goals and targets mainly related to the environment
Prosperity	    	Goals and targets mostly linked to the economic
Peace		Goals and targets mainly linked to the institutional
Partnerships		Goals and targets mainly linked to partnerships

Source: Elaborated by the authors.

It is noticed that many contents are repeated in the reports studied, demonstrating an alignment of sustainable actions in large companies in the industrial sector, with small nuances according to the subsector to which they belong.

For the People dimension, two work fronts are reiterated: the first, which brings together business actions to promote health, well-being, equal opportunities and the training of employees, and the proximity of most of the selected companies to the communities in which they are inserted, through the promotion of social projects aimed at increasing human development.

The Planet dimension considers recurring business policies towards climate change mitigation, treatment and correct disposal of waste, protection of biodiversity, energy efficiency and management of water and effluent resources. However, the degrowth of production and the gradual replacement of raw materials that negatively impact the environment for their extraction were not mentioned. It is reiterated that, although it seems a contradiction for capitalism, the transition to sustainability figures as the guarantee of the continuity of business.

In the Prosperity dimension, the promotion of innovation and eco-efficiency, as well as partnerships with startups, including through accelerators, actions to promote local development and Private Social Investment were found in most companies. However, sustainable alternatives for the maintenance of production, such as the generation of green jobs, were identified in only a minority part of the selected organizations. Slowing down a car that is guided toward a cliff can postpone the tragedy, but not stop it. Thus, this axis should be reoriented to mitigate, or even negatively, its pressure on ecosystems, while increasing social well-being.

Regarding the Peace dimension, efforts focus on compliance policies in order to combat illegal activities, corruption, non-conformities in relation to environmental legislation and slave labor or analogous to slavery. The linking of companies to global agreements in favor of human rights and good business conduct has also been observed in most companies.

Finally, for the Partnerships dimension, several forms of multistakeholder and multi-actor activities were verified, ranging from community actions involving public power, the private sector and Civil Society Organizations, to Environmental Education and volunteering. Also, some companies maintain specific institutes, foundations and/or programs to work in partnership with other organi-



zations and with the State, in order to promote the socioeconomic and cultural development of the communities around them, in confluence with the above dimensions.

Then, it was verified, through their reports, the degree of adherence of them to the 2030 Agenda, through a three-level scale: “low”, when the 2030 Agenda was mentioned only nominally or as a complement, without any type of detail (red), “medium”, in the case of companies that explained the 2030 Agenda and mentioned the SDGs at more than one point in the document (yellow), and “high”, for the sustainability reports that, for the most part, were based on this agenda and on the SDGs (green). This is independent, therefore, of the number of mentions of the Global Objectives, configuring a strictly qualitative analysis. The data obtained were compiled in Table 6.

Table 6 - Adherence of the reports of the selected companies to the SDGs

Enterprise	Mention of agenda 2030	Degree of adherence to the 2030 Agenda
JBS	Yes	Low
Vale	Yes	Medium
Raízen	Yes	Medium
Cosan	Yes	Medium
Braskem	Yes	High
Ambev Brewery	No	Low
ADM	Yes	Medium
Bunge	Yes	High
BRF	Yes	Medium
Marfrig	Yes	Medium
Copersucar	Yes	Medium
Shell Brazil	Yes	High
FCA Automobiles	Yes	High
Enel Brazil	Yes	High
Samsung	Yes	High
CSN	Yes	Medium
Louis Dreyfus Company	Yes	High
Volkswagen	No	Low
Embraer	Yes	Low
Amaggi	Yes	Medium

Source: Elaborated by the authors, based on the research data.

The following results are observed: 20% do not mention the 2030 Agenda and the SDGs, or only do so superficially, 40% highlight the existence of the SDGs, but list few actions in which they are applied directly, and the remaining 40% declare adherence to the 2030 Agenda and its goals and targets, highlighting them in the sustainability report and attributing to this tool the character of the beacon of business actions.

The case of Ambev Brewery and other companies that have timidly addressed, or even mentioned the SDGs, sheds light on the possibility of achieving sustainable targets even if there is no formal and declared alignment with the 2030 Agenda. For this organization, actions were detected to foster the circular economy, establish partnerships with startups to foster innovation and mitigate the impacts of climate change, without the respective SDGs being mentioned.

However, when comparing the report of this company with the documents published by the other organizations surveyed, it is evident that the adoption of the SDGs as beacons could considerably increase the quality of the sustainability report, as advocated by the literature and exemplified by companies such as Braskem, FCA Automobiles and Enel Brasil, which address and detail



the Global Objectives. For the latter company, the section “contribution with the SDGs” at the end of each example of sustainable practice was found. In addition to improving the organization’s reputation before its stakeholders, the adherence of a global industry to the 2030 Agenda reinforces that all social actors are committed to achieving sustainable development in a timely manner.

4.4 Analysis of SDGs referencing

To explore the reference to the SDGs, we sought to quantify their specific mentions in the analyzed reports. Some companies mentioned the SDGs in the GRI content summary, such as Vale and Embraer. Others chose to mention the principles of the Global Compact in that matrix or were limited to the guidelines inherent in the GRI report but highlighted the SDGs throughout the document. The results are shown in Table 7, which corresponds to the treatment of the results, the third and final stage of the content analysis.

Table 7 - Punctual mentions of the companies selected to the SDGs.

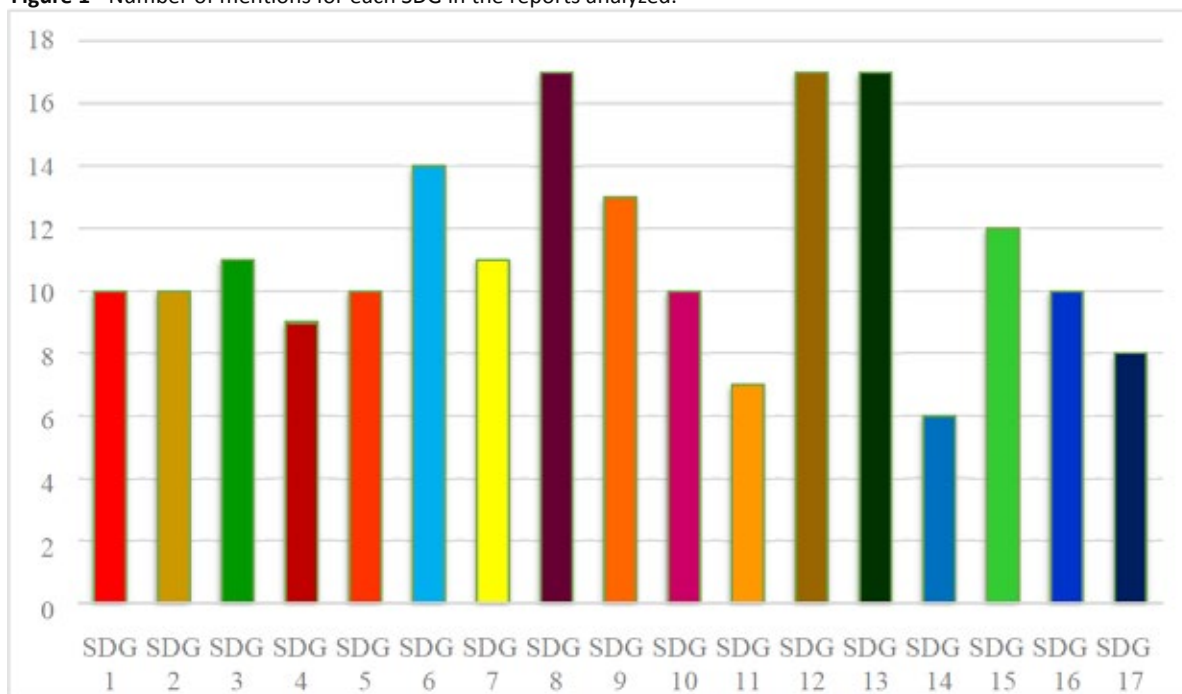
Enterprise	Sustainable Development Goal																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
JBS																	
Vale																	
Raízen																	
Cosan																	
Braskem																	
Ambev Brewery																	
ADM																	
Bunge																	
BRF																	
Marfrig																	
Copersucar																	
Shell Brazil																	
FCA Automobiles																	
Enel Brazil																	
Samsung																	
CSN																	
Louis Dreyfus Company																	
Volkswagen																	
Embraer																	
Amaggi																	

Source: Elaborated by the authors, based on the research data.

Of the twenty reports explored, seventeen presented direct mentions to the SDGs. In Figure 1, the records of each SDG were quantified.



Figure 1 - Number of mentions for each SDG in the reports analyzed.

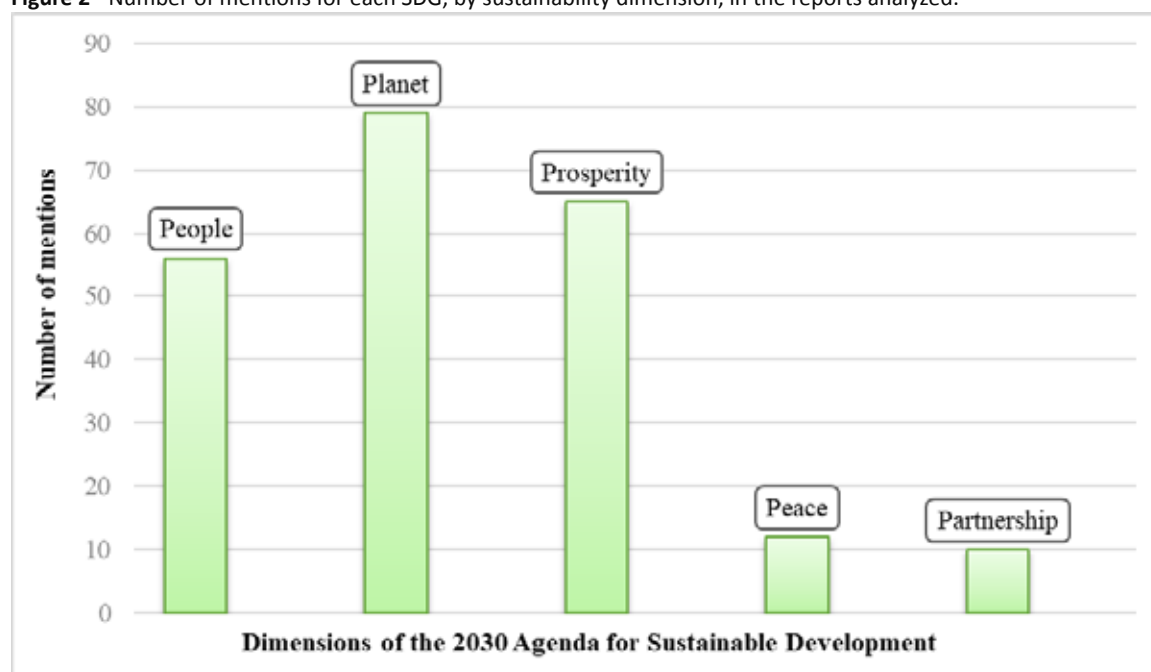


Source: Elaborated by the authors, based on the results of the research.

The SDGs most referenced in sustainability reports were: 8 – “Promoting sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all”. Number 12 – “Ensuring sustainable production and consumption patterns”, stood out in the count, as it received mentions in eight reports. And number 13 – “Taking urgent measures to combat climate change and its impacts”. Both were cited in all reports that directly linked their sustainable actions to one or more SDGs. Also, Objective number 6 – “Ensure the availability and sustainable management of water and sanitation for all”.

Then, a comparison was made between the dimensions of sustainable development present in the 2030 Agenda, based on the number of mentions of the SDGs present in each category. Thus, Figure 2 exposed the tabulation of mentions, allowing a visual conference of the data achieved.

Figure 2 - Number of mentions for each SDG, by sustainability dimension, in the reports analyzed.



Source: Elaborated by the authors, based on the results of the research.

However, in view of the remarkable asymmetry in the number of SDGs per category, a calculation was performed to ensure the parameterization of the results. Thus, the total number of mentions per pillar of organizational sustainability was multiplied by 1/5 of the total of 17 SDGs contemplated, i.e., 3.4, in order to confer the same weight for each dimension.

$$P = \frac{3,4}{nSDG}$$

Where:

P = Weight of each SDG category

nSDG = Number of SDG per category

Then, to determine the weighted result, the number of SDGs in each category was multiplied by their respective weights, obtained by the previous calculation.

$$R = nSDG \times W$$

Where:

R = Result

nSDG = Number of SDG per category

W = Weight of each SDO category

From this, table 8 was developed, which shows the result of the incidence of each dimension of sustainability after parameterization of the number of SDGs per category.

Table 8 - Result of the incidence of each dimension of sustainability after parameterization by number of SDGs.

Dimension	SDG by dimension	Absolute total of mentions	Weight by SDG	Result
People	5	56	0,70	39,20
Planet	5	79	0,70	55,30
Prosperity	5	65	0,70	45,50
Peace	1	12	3,40	40,80
Partnerships	1	10	3,40	34,00

Source: Elaborated by the authors, based on the results of the research.



With the parameterization of the absolute results observed in the counting of Agenda 2030 objectives contemplated by business actions, the SDGs related mostly to the environmental agenda continued to lead the mentions in the analyzed reports, followed by those linked to the economic dimension. The partnership dimension obtained, absolutely and relatively, the lowest number of sustainable actions mentioned in sustainability reports. It is also noteworthy that, after the calculation, the pillars Prosperity and Peace surpassed the set that brought together the SDGs focused on the social dimension (People).

The theoretical framework emphasized that, from the historical point of view, the first notions related to sustainability, that is, the capacity to sustain, or guarantee the perpetuity, of a civilization, were mandatorily based on the preservation of natural capital. This premise is recurrent in the Ecological Economy, because this current admits economic science as a subsystem of ecology, considering that exchanges between families and companies constitute a highly impactful process for nature, through the absorption of natural waste of value in a state of low entropy, which, after the throughput for the manufacture of products or service offerings in the economic system, are discarded in the form of worthless waste in a state of high entropy (Cavalcanti, 2010; Georgescu-Roegen, 2012). From this conception, “indicators are also required to measure biophysical sustainability in a Green New Deal and SDGs scenario” (Melgar-Melgar & Hall, 2020, p. 10).

The results of the research suggest a legitimate predilection of the industrial sector to reduce its impact on the environment, reinforcing the performance of companies to comply with the SDGs related to the environmental theme. Still, the considerable participation of large industries in the agro-industrial, energy, chemical and automotive sectors in the enumeration of selected organizations, i.e., branches marked by significant impacts on ecosystems, shines the warning light for the environmental pillar of sustainability.

It is given that, in the case of companies that produce beef, grains and other foods, it is increasingly urgent to control suppliers, after all, “if exporters wish to prove that they act responsibly from one farm to another, they will need to obtain and share data on the lost links of their chains” (The Economist, 2020, s. p.), noting what is recommended in SDG 15. As for the automotive, aircraft and plastics industries, a reorientation towards responsible production is latent in order to reduce dependence on finite and non-renewable natural resources such as oil, in the light of SDG 12. It applies to the energy subsector, which has the possibility to develop and implement new ways of obtaining energy in the light of SDGs 7 and 13.

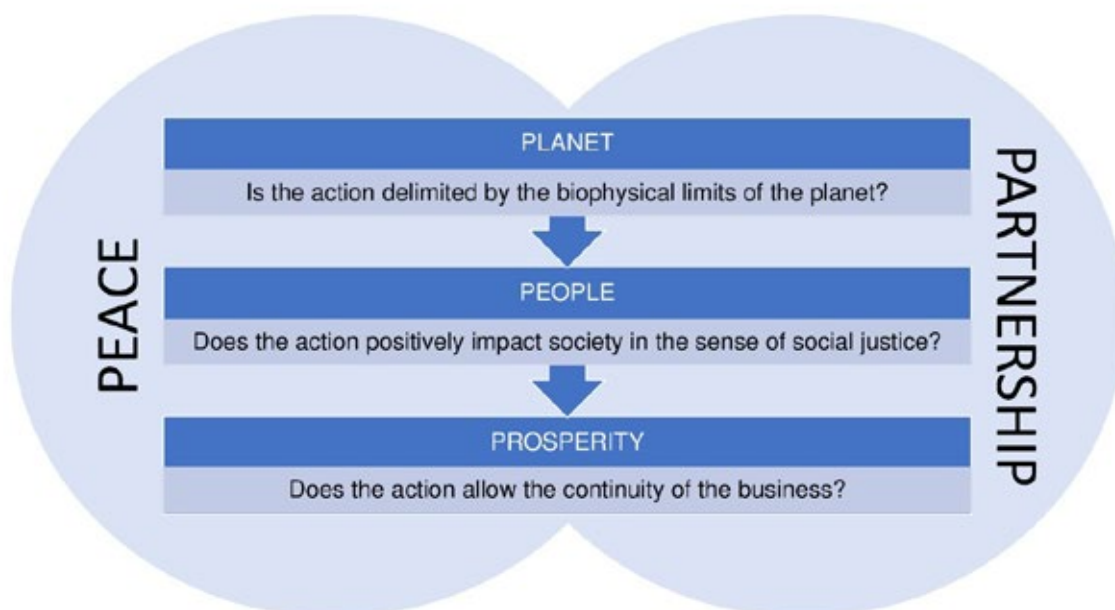
Moreover, considering that the Prosperity dimension was emphasized in most sustainability reports of the companies analyzed, and considering the intrinsic relationship between the good performance of responsible organizations in the market, the very publication of this document may constitute a factor of socioeconomic sustainability. In addition, guidelines such as innovation, generation of rights and indirect jobs and decent work were repeatedly mentioned in the documents, explaining how the economic pillar took the second position after the parameterization of the SDGs.

The People, Peace and Partnerships axes were also contemplated, reinforcing the role of companies as relevant social actors. However, considering the economic and structural potential of large Brazilian industries, this action should be strengthened.

This stated, given the above in the theoretical framework and based on the various models that seek to establish a framework for sustainability and sustainable development, suggest some questions, in the light of ecological-economic premises, which can bring social and environmentally responsible actions closer to the dimensions proposed in the 2030 Agenda, extrapolating the simple mention of the SDGs in their sustainability reports. Attitudes must respect the limits of the Planet, positively impact people’s lives, ensure the prosperity of the organization, be involved by peace and made possible by partnerships, as exemplified in Figure 3.



Figure 3 - Schematics for reorienting the dimensions of sustainable development.



Source: Elaborated by the authors.

In view of this linear set of questions, one can ask: if a company bet on corporate actions that are not necessarily profitable, or financially sustainable, and this eventually compromises the continuity of its business, how could it continue to develop actions for a better world if it were doomed to close its doors?

The answer is too simple, but it requires an understanding of the current situation and the set of “symptoms of environmental unsustainability” (Munda, 1997, p. 213) that surrounds us. If the destruction of the ozone layer, the loss of biodiversity, toxic pollution in the air, in rivers, lakes and soils, and the depletion of non-renewable natural resources continues, the productive and commercial activity itself will be automatically compromised. Otherwise, if humanity is not willing to embrace this new model, “perhaps man’s destiny is to live a brief but exciting and extravagant life rather than a long, vegetative and monotonous existence. If so, that other species devoid of spiritual ambition – the amoebas, for example – inherit an Earth that will bathe for a long time in a fullness of sunlight!” (Georgescu-Roegen, 2012, p. 134-135).

Admitting that, in companies, sustainability can be linked to competitive advantages, even if, in some cases, managers are effectively committed to building “generous and regenerative businesses” that have a “life goal” (Raworth, 2019), or with global agreements for sustainable development, such as the 2030 Agenda, the absence of a strict sense for organizational sustainability can vitiate the possibility of responsible actions from a socio-environmental point of view, in order to meet interests outside of sustainable development.

5 FINAL CONSIDERATIONS

Sustainable development has won hearts and minds in recent decades, considering that this paradigm offers the possibility of an increase in human well-being without extrapolating the biophysical limits of the planet.

A safe path to bring humanity closer to this ideal follows the achievement of the global goals and targets that are part of the 2030 Agenda for Sustainable Development, promulgated by the Member States of the United Nations. However, this proposal is not restricted to national governments, because its success is anchored in multi-agency, multisectoral and multilevel partnerships, including small, medium and large companies, Civil Society Organizations, religious institutions, foundations, institutes, associations, trade unions, social movements, Universities and all individuals.

Thus, this article verified whether the sustainability practices presented by large companies in the industrial sector working in Brazil meet the SDGs. Generally speaking, the results nod positively to the internalization of the SDGs in the practices of the companies selected for the research. Of the 20 sustainability reports analyzed, 17 were linked to the 2030 Agenda, listed sustainable actions nominally related to the Global Goals. The others, although not mentioning the global agenda for sustainable development, also highlighted practices considered sustainable, but with less intensity and depth.

For the three specific objectives, the following developments were found:

i) to indicate the effective contribution of the companies analyzed in the five dimensions of sustainable development stipulated by the 2030 Agenda, People, Planet, Prosperity, Peace and Partnerships, in the light of the SDGs, in order to list the sustainable practices detected in the corporations studied:

It was noticed that many contents are repeated in the reports studied, demonstrating an alignment of sustainable actions in large companies in the industrial sector, with small nuances according to the subsector to which they belong.

For the People dimension, two work fronts are reiterated: the first, which brings together business actions to promote health, well-being, equal opportunities and the training of employees; and the proximity of most of the selected companies to the communities in which they are inserted, through the promotion of social projects aimed at increasing human development.

The Planet dimension observes recurring business policies towards climate change mitigation, treatment and correct disposal of waste, protection of biodiversity, energy efficiency and management of water and effluent resources. However, the degrowth of production and the gradual replacement of raw materials that negatively impact the environment for their extraction were not mentioned. It is reiterated that, although it seems a contradiction for capitalism, the transition to sustainability figures as the guarantee of the continuity of business.

In the Prosperity dimension, the promotion of innovation and eco-efficiency, as well as partnerships with startups, including through accelerators, actions to promote local development and Private Social Investment were found in most companies. However, sustainable alternatives for the maintenance of production, such as the generation of green jobs, were identified in only a minority part of the selected organizations. Slowing down a car that is guided toward a cliff can postpone the tragedy, but it does not prevent it. Thus, this axis should be reoriented to mitigate, or even negatively, its pressure on ecosystems, while increasing social well-being.

Regarding the Peace dimension, efforts focus on compliance policies to combat illegal activities, corruption, non-compliance with environmental legislation, and slave labor or analogous to slavery. The linking of companies to global agreements in favor of human rights and good business conduct has also been observed in most companies.



Finally, for the Partnerships dimension, numerous forms of multistakeholder and multi-actor action were verified, ranging from community actions involving public sector, the private sector and Civil Society Organizations, to Environmental Education and volunteering. Also, some companies maintain specific institutes, foundations and/or programs to work in partnership with other organizations and with the State, in order to promote the socioeconomic and cultural development of the communities around them, in confluence with the above dimensions.

ii) to assess how these business policies contribute to social mobility, reducing inequalities, caring for the environment and creating socio-environmental awareness:

The actions listed in the previous sections, in confluence with the literature addressed in the theoretical framework, demonstrate that companies effectively have much to contribute to the achievement of social justice and so that production and consumption do not exceed the biophysical limits of the planet.

However, this is not an appeal to *laissez-faire*: it is reinforced that, although socioeconomic and socio-environmental demands also fall to the private sector, previous experiences have already shown that the market is incapable of self-regulating, requiring the State to achieve development. This is even more evident in a deeply unequal country such as Brazil, which needs public policies capable of responding to these challenges, which, in specific cases, can count on the help of companies – and also civil society organizations – as exemplified in the reports analyzed.

For this to happen and be measurable, sustainability reports must be used as a management tool, acting intrinsically to indicators. Goals should be established, thus enabling the effective incorporation of the SDGs. After all, the simple publication of the reports, disregarding the progress of the goals year by year, does not guarantee the evolution of the company towards genuinely sustainable development.

iii) investigate whether there are government entities, non-governmental organizations, startups, academic institutions and/or other stakeholders committed to fostering sustainable networking practices with the companies addressed in the study:

Partnerships are so important for achieving sustainable development that they have been considered a dimension of it and, at the same time, an SDG. The companies selected for the research showed an understanding of this indispensable factor, as the vast majority signaled at least one action or policy involving other actors.

It is expected that academic production on organizational sustainability will continue to rise, both in quantity and quality, while the capitalist production and consumption model is put in check and its contradictions are exposed. The impacts of climate change are global and companies, in globalization, can be allied in creating solidarity that borders, oriented towards sustainable development.

As sustainability is also a decisive competitive factor, the focus of these organizations must be reoriented, allowing their activities not to be harmful to people and the planet. The need for a decisive conversion to sustainable development is urgent.

The report is an important part of sustainability in corporations and should address all parts of the company. However, presenting it annually does not transform the company into an automatically sustainable organization. It is necessary to put into practice everything that has been verified, with regard to improvements and changes, seeking to cause the least impact on the environment and greater social and economic impact.

Finally, we advocate the standardization of the SDGs as ways for the implementation of sustainable actions in companies and, consequently, for the construction of increasingly better sustainability reports. This may favor comparative analyses between similar organizations and, in a great way, the implementation of sustainable practices capable of responding to the challenges of the 21st century.



ACKNOWLEDGMENTS

This work was carried out with the support of the Coordination for the Improvement of Higher Education Personnel - Brazil (CAPES) - Financing Code 001.

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1. Definition of research problem	√	√			
2. Development of hypotheses or research questions (empirical studies)	√	√	√	√	√
3. Development of theoretical propositions (theoretical work)	√	√			
4. Theoretical foundation / Literature review	√			√	
5. Definition of methodological procedures	√	√	√		√
6. Data collection	√	√			
7. Statistical analysis	√	√			
8. Analysis and interpretation of data	√	√	√		
9. Critical revision of the manuscript		√	√	√	√
10. Manuscript writing	√	√			
11. Other (please specify)					

Conflict of Interest

The authors have stated that there is no conflict of interest.

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