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Strategic CSR: Framework for Sustainability through Management Systems Standards—Implementing and Disclosing Sustainable Development Goals and Results

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Abstract: This study proposes a framework to integrate sustainability within management systems standards and subsequently implement and disclose sustainable development (SD) goals and results. Moreover, it investigates the SD goals (SDGs) and results (SDRs) that Portuguese organizations with integrated management systems (IMSs) disclose to their interested parties. The study, supported by content analysis, highlights that four most frequently disclosed SDGs are "life on land" (50.0%), "industry, innovation, and infrastructure" (47.1%), "responsible consumption and production" (47.1%), and "partnerships for the goals" (47.1%). The four SDRs most frequently disclosed are "employment" (82.4%), "economic performance" (79.4%), "anticorruption" (64.7%), and "occupational health and safety" (61.8%). Hence, SDG disclosure emphasizes the environmental dimension, while SDR disclosure highlights the social dimension (economic dimension present in both SDGs and SDRs). Finally, the disclosure of SDGs and SDRs in institutional reports presents a positive and strong correlation that is statistically significant. Overall, the contributions of this research are twofold. First, it highlights the awareness of SD goals and results publications within organizations with certified management systems standards, therefore supporting the integration of the SDGs within those organizations, and second, it stimulates the demonstration of their impacts on the SDGs (the SDRs).

Keywords: strategic CSR; sustainable development goals; sustainable development results; integrated management systems standards; sustainability reports; institutional reports; content analysis

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1. Introduction

Reports such as "The Limits to Growth—A Report for The Club of Rome's Project on the Predicament of Mankind" [1] and "Our Common Future—Report of the World Commission on Environment and Development" (World Commission on Environment and Development [2,3]) identified systemic sustainability problems and were essential to support the concept of sustainable development (SD) worldwide.

Holistically, humanity can adopt a global development strategy based on the concept of SD, that is, "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" [2,3]. In this context, the concept of SD implies a focus on the planet and people [4,5]. According to Isaksson [5], "People and Planet could be defined as the primary stakeholders" (p. 489). Hence, the concept of SD is fully aligned with the economic, environmental, and social dimensions (see [6–8]). Furthermore, SD is not only an issue for world nations but also for organizations [9]. Consequently, at the organizational level, the concept of SD is generally approached by several authors as corporate sustainability (CS) and corporate social responsibility (CSR) [10–12]. Strategic

CS (or strategic CSR) requires organization to engage in socially and environmentally responsible activities that are economically sound for their financial performance, usually in response to the businesses' stakeholders' expectations and demands [13,14].

CSR can generate value for shareholders, customers, workers, partners, and society [15]. Amongst the CSR-reported benefits are risk reduction, staff recruitment and retention, cost savings, and good stakeholder relationships [16]. Hence, while supporting the organization's legitimacy, CSR can also foster competitive advantage by facilitating access to capital and support from different stakeholders [17].

The concept of SD holistically evolves from the macro-level (macroscale—planet and its nations) to the micro-level (microscale—organizations and their interested parties) [18,19]). The interested parties (i.e., stakeholders, natural, or legal persons who relate to organizations) represent humanity and society at large and are "any group or individual who can affect or is affected by the achievement of the organization's objectives" [20–22].

In an approach to SD, the term "goals" means "what it seeks to achieve" [23]. In turn, "results" is generally a synonym for metrics, information, measures, indicators, outcomes, and outputs [24]. Thus, effective communication of organizations' sustainable development goals (SDGs) and sustainable development results (SDRs) to interested parties is essential for promoting the concept of SD, as well as for promoting the organizations' achievements [25]. To support these aims, frameworks, guidelines, indices, and standards are fundamental for organizations to achieve their SDGs and communicate the intended SDRs [26]. The relevance of companies disclosing their contributions to SD is also highlighted by Directive 2014/95/EU of the European Parliament and of the Council of 22 October 2014 and it represents one of the main innovations introduced by the European Commission to encourage large companies to disclose their contribution to SD [27].

The level and the content of sustainability information on company reports are increasing worldwide [28]. From a theoretical perspective, stakeholder, resource-based view, and institutional theories support the communication of the SDG and SDRs [29,30]. The success of an organization depends on its collaboration with multiple stakeholders [20], and stakeholder theory integrates business and social issues [31]. Furthermore, the resource-based view theory [32,33] suggests that an organization's resources are essential to superior firm performance, competitive advantage, and strategic success. Hence, the adoption of strategies and actions towards SD can develop rare, valuable, inimitable, and non-substitutable resources and capabilities that can help an organization integrate with stakeholders (a unique resource) and respond to their demands, and ultimately achieve superior performance, as advanced by stakeholder theory.

The institutional theory posits that organizations, to achieve legitimacy and support, align their social values systems with those expected by society and are pursued by the best organizations to increase the likelihood of survival [34]. Academics such as Camilleri [35] consider that "CSR communications and stakeholder engagement may bring shared value to business and society by engaging with key stakeholders to address societal, environmental, governance and economic deficits" and support managers to improve their organizational stewardship and to reinforce their legitimacy with institutions and other stakeholders in society [36].

Hummel and Szekely [37] state that the ambition to achieve the SDGs must be the responsibility of the governments of all the 193 member states (nations) of the UN and the top management of all organizations and "depends on the joint efforts of all individuals, organizations, and governments" [38]. However, barriers such as resource limitation, the COVID-19 pandemic [39], and wars and conflicts, such as the Ukraine war [40], have negatively impacted SDG fulfilment, with adverse outcomes for humankind and the planet. Moreover, the SDGs were developed by and for the government, and some organizations might need help understanding them [41]. Hence, supporting organizations to comprehend, integrate and contribute to the SDGs is critical. Moreover, business leaders must adopt sustainable business models and operate more ethically [42].

The growth of global supply chains fostered the adoption of voluntary management systems standards (MSSs) as regulatory mechanisms to respond to stakeholder concerns [43]. These MSSs can be audited and certified by independent external certification bodies (CBs) that, by performing a third-party audit, assess whether the applicable MSS complies with the international reference and achieves the intended results [12]. Several MSSs, namely, those published by the International Organization for Standardization (ISO), can support organizations addressing several potential issues inherent to SD economic, environmental, and social dimensions. Since MSS-certified organizations should comply with international validated requirements and the corresponding certification bodies are subject to the accreditation schemes, the accredited certification is an assurance that all certified organizations, regardless of the country of origin or company size and industry, comply with the same requirements and achieve the intended standards results, thereby contributing to the generalization of the research results to similar certified organizations worldwide.

Entities such as the Social Accountability International (SAI), the British Standards Institution (BSI), and the Portuguese Institute for Quality (IPQ, Instituto Português da Qualidade) also published MSSs with an SD scope [12,19,21,44–55].

ISO MSSs share common concepts, core text, and high-level structure to facilitate the harmonization and unity of the several MSSs [46], and academic research posits formal standards that are perceived by stakeholders to positively contribute to achieving the SDGs [47]. Moreover, ISO and GRI promote their alignment with the UN SDGs, and CBs work to effectively support that aim [21].

Quality, environment, occupational health and safety (OH&S) and social responsibility are the four main disciplines of MSSs that contribute to an integral approach to SD at the organizational level and support achieving their goals and intended results [48–52].

In the last three decades, the implementation and certification of quality, environmental, occupational health and safety, and social responsibility (QEOH&S&SR) MSs have increased worldwide, specifically in Portugal [56–59], and the strategies for adopting multiple MSs certified are well reported in the literature [60].

The organizations that strategically adopt MSSs in the various disciplines and implement their integration based on the PDCA (plan–do–check–act) cycle promote SD and communication with interested parties [11,18]. Consequently, the integration of MSS integrated management systems (IMSs) allows the development of "conceptual models" that show the mechanism for the disclosure of SD goals and results to interested parties (e.g., [11,18,45,60,61]).

Corporate sustainability (CS) reports have become the instrument of companies to communicate sustainability issues with their stakeholders and move forward to the balance of the "triple bottom line" [62]. However, SDG and SDR reporting still have many issues that deserve research [27,63,64]. Presently, the institutional websites of organizations with certified MSSs are considered an effective communication channel for disclosing institutional reports and information on SD [11,18]. Recent academic research addresses the existing corporate reporting concerning SDGs [9,65]. Moreover, [19] propose an evaluation framework to identify the number of disclosure topics from CSR/sustainability reports regarding SDGs. Izzo et al. [66] investigated information disclosure in European companies integrating reporting (IR) guidance used to cover issues concerning SDGs.

Holistically, this investigation aims to propose a framework to integrate sustainability within management systems standards and subsequently implement and disclose sustainable development goals and results and answer the following three research questions (RQs).

RQ1: What are the main SDGs disclosed in institutional reports by Portuguese organizations with multiple certified MSs (QEOH&S&SR)?

RQ2: What are the main SDRs disclosed in institutional reports by Portuguese organizations with multiple certified MSs (QEOH&S&SR)?

RQ3: How is the disclosure of SDGs and SDRs in institutional reports correlated?

This paper contributes to the literature on SDGs in several ways. First, most of the available academic research has provided theoretical reflections on the SDGs [67]. Further research should address how sustainability can be better understood and managed at an organizational and local level [68]. By integrating GRI and MSs and fostering SDG and SDR communication, this study can support organizations to comprehend, integrate and contribute to the SDGs. Hence, the contributions of this research are twofold. First, it supports the integration of the SDGs within organizations, and second, it stimulates the demonstration of their impacts on the SDGs (the SDRs).

The remaining of the article is organized into the following sections. Section 2 is a literature review; Section 3 presents the materials and methods; Section 4 gives the results; Section 5 discusses the results; and Section 6 reveals and highlights the conclusions of the study and presents the main limitations, restrictions, and recommendations for further research. By integrating GRI and MSs and fostering SDG and SDR communication, this study can support organizations to comprehend, integrate, and contribute to the SDGs.

2. Literature Review

2.1. Communication on Sustainable Development

In 2015, the General Assembly of the United Nations (UN) formally adopted "The 2030 Agenda for Sustainable Development" [69] and agreed upon the 17 Sustainable Development Goals (SDGs). The "SDGs can indicate and measure the progress towards SD and represent a shared expression of global stakeholder needs, balancing economic, social, and environmental development" [70].

SD reports are "public reports by companies to provide internal and external stakeholders with a picture of the corporate position and activities on economic, environmental, and social dimensions" [71]. These reports are also called institutional reports [65,72].

Consequently, at the organizational level, internal and external communication is essential for promoting the concept of SD and the organizations' achievements [25]. According to Heemskerk et al. [71], the communication on SD through SD reports promotes several internal and external benefits at the organizational level, such as: "transparency to stakeholders," "maintaining a license to operate," "creating financial value," "attracting long-term capital and favorable financing conditions," "raising awareness, motivating and aligning staff, and attracting talent," "improving MSs," "risk awareness," "encouraging innovation," "enhancing reputation," and "continuous improvement" (p. 15).

The Global Reporting Initiative (GRI) is one of the most preferred frameworks for SD reporting [73]. In the past two decades, the GRI has published several versions of guidelines and standards that have helped organizations to report the SDRs in three dimensions, that is, economic, environmental, and social [74–76]. The GRI Standards are used to report publicly corporate economic, environmental, and social impacts, including positive or negative contributions of companies to SD, and encompass a set of interrelated standards: GRI 100: Universal Standards, GRI 200: Economic, GRI 300: Environmental, and GRI 400: Social [76]. Moreover, the SDG Compass establishes the interlinkage between GRI disclosures, the 17 SDGs, and their targets [77]. According to Tsalis et al. [19], the "GRI Standards serve as a communication channel for organizations with interested parties providing a holistic picture of the CS management and the organization's contribution to SD."

The various versions of the GRI Guidelines and the current version of the GRI Standards incorporate the theoretical basis of the concepts of "triple bottom line" (TBL) and "triple P" (profit, planet, and people) proposed by Elkington [75,78–80] within an integrated approach to the three dimensions of SD at the organizational level (e.g., [21,75,81]).

Nowadays, a sustainability report can be defined as a global report published by organizations to report the impact of their activities in economic, environmental, and social terms [63,76]. In other words, sustainability reporting can be defined as the practice of disclosing an organization's economic, environmental, and social impacts publicly [9,63,65].

2.2. Sustainable Development Goals

The 17 UN Sustainable Development Goals (SDGs) and 169 targets are integrated and indivisible, and thus demonstrate the holistic vision of this new universal 2030 Agenda for Sustainable Development and align with the three dimensions of SD [9,65,69,70,75,78,82,83]. According to the UN (2015), the SDGs and targets set will stimulate action by 2030 in areas of critical importance for humanity and the planet, that is, "people," "planet," "prosperity," "peace," and "partnership" [69].

In recent years, a growing number of organizations have implemented or are currently implementing reporting on the SDGs [37]. Sustainable Development Goal (SDG) reporting can be defined as "the practice of reporting publicly on how an organization addresses the SDGs" [9,66]. In other words, "SDG reporting is the practice of companies publicly disclosing their commitment to fulfil the 2030 Agenda demands" [84]. However, "the SDGs are not a corporate reporting tool; they do not provide any reporting guidelines or corporate indicators" [85]. Thus, GRI standards can aid organizations in reporting their SDGs [84]. Furthermore, the sustainability reports (e.g., GRI) contribute to the disclosure of the SDGs [86].

Fonseca and Carvalho [65] found that the communication of SDGs is more prominent in Portuguese organizations certified in quality, environment, and occupational health and safety (QEOH&S) that disclose their sustainability reports (GRI) on their website. In recent years, the UN SDGs have been approached together with the main MSs (see, e.g., Fonseca and Carvalho [65]), as well as with the ISO standards and other standards (see, e.g., [21,82,83]). Table 1 shows the relationship between the UN SDGs, the primary ISO MSSs, and others.

Table 1. Linking the SDGs and the ISO standards and other standards.

Sustainable Development Goals (SDGs)	ISO 9001 (2015)	ISO 14001 (2015)	ISO 45001 (2018)	ISO 26000 (2010)	SA 8000 (2014)	NP 4469 (2019)
SDG 01: No poverty	●	●		●		●
SDG 02: Zero hunger		●		●		●
SDG 03: Good health and well-being		●	●	●		●
SDG 04: Quality education		●		●		●
SDG 05: Gender equality			●	●	●	●
SDG 06: Clean water and sanitation		●		●		●
SDG 07: Affordable and clean energy		●		●		●
SDG 08: Decent work and economic growth		●	●	●	●	●
SDG 09: Industry, innovation, and infrastructure	●	●	●	●		●
SDG 10: Reduced inequalities			●	●	●	●
SDG 11: Sustainable cities and communities			●	●		●
SDG 12: Responsible consumption and production	●	●		●		●
SDG 13: Climate action		●		●		●
SDG 14: Life below water	●	●		●		●
SDG 15: Life on land		●		●		●
SDG 16: Peace, justice, and strong institutions			●	●		●
SDG 17: Partnerships for the goals	○	○	○	○		●

Note: ISO, International Organization for Standardization (international standards); SDG, Sustainable Development Goal; ●, explicit contribution; ○, implicit contribution. **Source:** Adapted from [21,49–53,82,83].

2.3. Sustainable Development through Management Systems: A Proposed Framework

Figure 1 shows the holistic process of the evolution of the concept of SD from the macro-level (macroscale—planet and its nations) to the micro-level (microscale—organizations and their interested parties) [18–21].

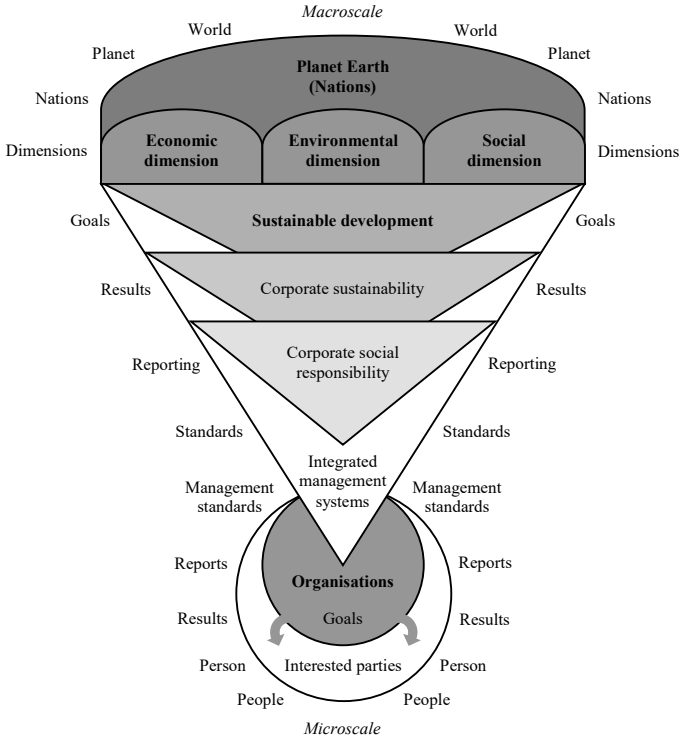


Figure 1. Process of integrating the concept of SD in organizations (Source: Adapted from [10,21,22].

Quality management systems (such as those based on ISO 9001) contribute to the economic dimension of SD, mainly by providing products and services effectively, therefore, aiming to ensure the satisfaction of the customers and other interested parties [12,51,53,87]. In turn, the internalization of quality management (e.g., based on the ISO 9001 standard) also contributes to the performance of the other dimensions of SD [88–90].

Environmental management systems (e.g., based on ISO 14001) contribute to the environmental dimension of SD, mainly by protecting the environment by preventing or mitigating adverse environmental impacts (e.g., operational efficiencies through better utilization of resources and waste management systems) and reinforcing businesses' license to operate and legitimacy with stakeholders [12,21,50,91–94].

Occupational health and safety management systems (OH&SMS), such as those based on ISO 45001 or BS OHSAS 18001, contribute to the social dimension of SD, mainly by preventing work-related injury and ill health to workers and providing safe and healthy workplaces [52,54,95–97].

International Standard SA 8000:2014 Social Accountability [98] is one of the primary worldwide standards to implement and certify an SRMS [99,100]. The Portuguese Standard (NP, Norma Portuguesa) entitled NP 4469:2019 Social Responsibility Management System—Requirements and Guidelines for its Usage [49] is the national reference to implement and certify an SRMS [49]. Overall, the SRMS (SA 8000 or NP 4469) contributes to the social dimension of SD, mainly by providing ethical and transparent behavior towards all the interested parties that structure the global society [49,100,101]. According to Castka et al. [102], the requirements and principles of the SRMS are integrated into the ISO MSs.

Table 2 presents four main MSS disciplines of MSSs that contribute to an integral approach to SD at the organizational level and support achieving their goals and intended results [48–52].

Table 2. Main disciplines of MSSs that contribute to SD.

Discipline	Definition of the Term or Concept	Reference(s)
Quality	Degree to which a set of inherent characteristics of an object fulfils requirements.	ISO [53]
Environment	Surroundings in which an organization operates, including air, water, land, natural resources, flora, fauna, humans, and their interrelationships.	ISO [50]
Occupational health and safety (OH&S)	Conditions and factors that affect, or could affect, the health and safety of employees or other workers (including temporary workers and contractor personnel), visitors, or any other person in the workplace.	BSI [54]
Social responsibility	Responsibility of an organization for the impacts of its decisions and activities on society and the environment, through transparent and ethical behavior that contributes to sustainable development, including health and the welfare of society; considers the expectations of stakeholders; is in compliance with applicable law and consistent with international norms of behavior; and is integrated throughout the organization and practiced in its relationships.	IPQ [49] and ISO [55]

Note: BSI, British Standards Institution; IPQ, Instituto Português da Qualidade (Portuguese Institute for Quality); ISO, International Organization for Standardization.

Table 3 shows the relationship between the three dimensions of SD, the potential issues associated with SD, and the main MSSs currently adopted by Portuguese organizations.

Table 3. Relationship between the dimensions of SD and the main MSSs.

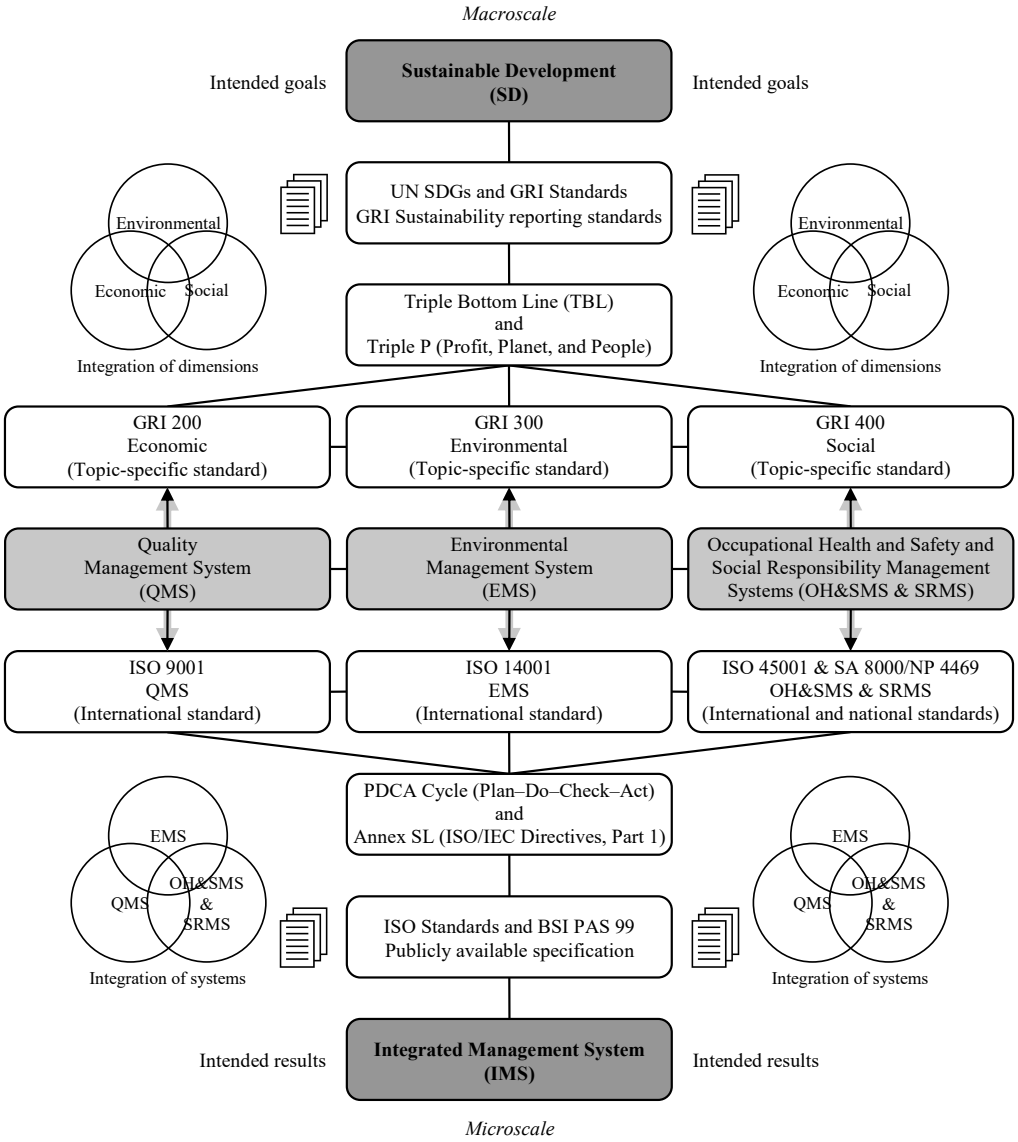
Dimension	Potential Issues	Main Standard(s)
Economic	Economic performance and development Technology and innovation Value and supply chain Employment Business Poverty Income Others	ISO 9001:2015 Quality management systems—Requirements
Environmental	Protection of biodiversity and natural habitats Pollution of land, water, or air Natural resource use Climate change Energy use Others	ISO 14001:2015 Environmental management systems—Requirements with guidance for use
Social	Education, training, and literacy Community involvement Health and safety Labor relations Quality of life Social equity Culture Others	ISO 45001:2018 Occupational health and safety management systems—Requirements with guidance for use ISO 26000:2010 Guidance on social responsibility SA 8000:2014 Social accountability NP 4469:2019 Social responsibility management system—Requirements and guidelines for its usage

Note: ISO, International Organization for Standardization; SA, social accountability; NP, Norma Portuguesa (Portuguese Standard).

The BSI [48] defines the Integrated Management System (IMS) as an "MS that integrates multiple aspects of an organization's systems and processes to one complete framework, enabling an organization to meet the requirements of more than one MSS" (p. 2). Integrated management systems support corporate responses to sustainable development [103].

The IMS (QEOH&S&SR) based in the PDCA cycle and Annex SL of the ISO standards of MSs is aligned with the UN SDGs and the GRI standards and supports the concept and application of SD [44,103,104]. Furthermore, SD positively impacts the IMS [105]. Hence,

UN SDGs, ISO standards, GRI standards, and other standards (e.g., SAI and IPQ) contribute to the global approach to SD and IMS [21,26,57,61,106]. In sum, the concepts of SD (i.e., macroscale view) and IMS (i.e., microscale view) are aligned (see, e.g., [18,65,72]). Figure 2 presents a framework for implementing and disclosing sustainable development goals and results through MSSs. The proposed framework is framed by the relationship between SD and IMS concepts supported by various MSSs.



Note: ISO, International Organization for Standardization; IEC, International Electrotechnical Commission; QMS, Quality Management System; EMS, Environmental Management System; OH&SMS, Occupational Health and Safety Management System; SRMS, Social Responsibility Management System; GRI, Global Reporting Initiative; UN, United Nations; SDGs, Sustainable Development Goals; SA, Social Accountability; NP, Norma Portuguesa (Portuguese Standard); BSI, British Standards Institution; PAS, Publicly Available Specification; SD, Sustainable Development; IMS, Integrated Management System.

Figure 2. Framework for implementing and disclosing sustainable development goals and results through MSSs (Source: Adapted from Carvalho [106], Nunhes et al. [44] and Rebelo et al. [45]).

2.4. Communication through Management Systems and Institutional Reports

According to Derqui [107], "communication is central for the success of any sustainability strategy" (p. 2714). Consequently, organizational communication (internal and external) is relevant and essential for good interaction with all stakeholders [107]. Thus, internal and external communication is present in several requirements of the MSSs (e.g., ISO 9001, ISO 14001, ISO 45001, SA 8000, and NP 4469), as well as in other standards and

specifications relevant to the IMSs (e.g., ISO 26000 and PAS 99) (Table 4). In this context, several frameworks and standards (e.g., GRI, ISO 9001, ISO 14001, ISO 45001, SA 8000, and others) aim to sustain reporting in the SD scope [26,83].

Table 4. Internal and external communication requirements.

Scope	Referential	Communication Requirements	Internal	External
Quality management systems	ISO 9001:2015	5.2.2 Communicating the quality policy		•
		7.4 Communication	•	•
		8.2.1 Customer communication	•	•
		8.4.3 Information for external providers		•
Environmental management systems	ISO 14001:2015	7.4 Communication	•	•
		7.4.1 General	•	•
		7.4.2 Internal communication	•	
		7.4.3 External communication		•
Occupational health and safety management systems	ISO 45001:2018	7.4 Communication	•	•
		7.4.1 General	•	•
		7.4.2 Internal communication	•	
		7.4.3 External communication		•
Social responsibility management systems	ISO 26000:2010	7.5 Communication on social responsibility		
		7.5.1 The role of communication in social responsibility	•	•
		7.5.2 Characteristics of information relating to social responsibility	•	•
		7.5.3 Types of communication on social responsibility	•	•
		7.5.4 Stakeholder dialogue on communication about social responsibility	•	•
	SA 8000:2014	9.5 Internal involvement and communication	•	•
	NP 4469:2019	7.4 Communication	•	•
		7.4.1 General	•	•
		7.4.2 Internal communication	•	
		7.4.3 External communication		•
Integrated management systems	PAS 99:2012	7.4 Communication	•	•

Note: ISO, International Organization for Standardization (international standards); SA, social accountability (international standard); NP, Norma Portuguesa (Portuguese standards); PAS, Publicly Available Specification (British Specification). Source: Adapted from [72,106].

At the organizational level, internal and external communication supported in institutional reports is crucial to disclose to the interested parties the goals and results achieved under SD [106,107]. In this context, the institutional reports published by organizations that disclose information on SD to interested parties can present different types [29,78,84,108–110]. In line with this, "such reports attempt to describe the company's contribution toward SD" [71]. Academic studies addressing the disclosure of SDGs and SDRs comprehend the following types of institutional reports (e.g., see [65,106]): sustainability reports, social responsibility reports, environmental reports, occupational health and safety reports, management reports, accounts reports, accounts and management reports, financial reports, corporate governance reports, and integrated reports.

3. Materials and Methods

3.1. Research Sample

The current study encompasses 34 organizations, all Portuguese organizations with multiple certified MSs (QEOH&S&SR) at the end of 2017, which cumulatively satisfied the following two conditions (Table 5):

- Made an institutional website accessible on the internet on 31 July 2019 (i.e., the final date of the exploratory analysis).
- Disclosed at least one of their institutional reports on the website in the past four years (i.e., published from 2015 to 2018).

Table 5. The number of organizations in the sample with certified MSs by the standard.

Certified Management Systems (Standard)	*n*	%
QMS (ISO 9001)	34	100
EMS (ISO 14001)	34	100
OH&SMS (BS OHSAS 18001)	34	100
SRMS (SA 8000)	23	67.6
SRMS (NP 4469)	11	32.4

Note: QMS, quality management system; EMS, environmental management system; OH&SMS, occupational health and safety management system; SRMS, social responsibility management system; ISO, International Organization for Standardization; BS, British standard; OHSAS, Occupational Health and Safety Assessment Series; SA, social accountability; NP, Norma Portuguesa (Portuguese Standard); n, number; %, percentage in relation to the sample (n = 34).

The research was not extended into 2020 and beyond to avoid the contextual influence of the COVID-19 pandemic.

The organizations in the research sample belong to various sectors of economic activities and represent 69.4% of the total organizations with multiple certified MSs (QEOH&S&SR) at the end of 2017. The sector of economic activity called "water collection, treatment, and supply" is the most representative of the sample, comprising 7 (20.6%) organizations. In turn, three other sectors of economic activity designated as "construction," "other service activities," and "sewerage and waste management" are also commonplace in the sample (11.8%). In addition, the research sample integrates 19 (55.9%) organizations that belong to the private business sector and 15 (44.1%) organizations that belong to the public business sector (i.e., public sector or business sector of the state). Finally, the organizations included in the research sample have headquarters in several Portugal districts, with the district of Lisbon (i.e., Lisboa) accounting for more than half of the organizations included in the sample (52.9%). In turn, the district of Oporto (i.e., Porto) is the second-most representative district of the sample (11.8%).

3.2. Research Method

The content analysis method has been used frequently in many types of research whose object of study is the exploratory analysis of themes on SD that are published and disclosed in institutional reports by organizations around the world [38,78,83,109]. Therefore, the content analysis method supports this research through a systematic and quantitative process of analyzing communication messages by determining the frequency of message characteristics.

The first activity of the content analysis process (i.e., the definition of the objectives and theoretical reference framework) is described and grounded in Sections 1 and 2 (see Introduction and Literature Review). The corpus of analysis (i.e., the set of all the documents for analysis) selected was constituted of institutional reports that are published and disclosed on the institutional website of the organizations under study (e.g., [65,106]). The categories of analysis defined were supported by the economic, environmental, and social dimensions of SD (e.g., Carvalho et al. [65]). In this sense, the categories of analysis that sustain the SDGs (e.g., Fonseca and Carvalho [65]) and the SDRs (e.g., Carvalho [106]) are aligned with the three dimensions of SD. In turn, the categories of analysis are based on the GRI Standards [76], that is, economic (GRI 200), environmental (GRI 300), and social (GRI 400).

The subcategories of analysis defined in the study of the disclosure of SDGs were supported in seventeen items (i.e., UN SDGs items), as used in the past in other research (e.g., [37,65,66,110]). In turn, the subcategories of analysis defined in the study of the disclosure of SDRs were supported by the various reporting items that constitute the GRI Standards, 2016 version [76], as previously used in other studies [73,78,81,106]. In this case, the subcategories of analysis were based on thirty-six items (i.e., GRI items), including universal standards (GRI 103) and topic-specific standards (GRI 200, GRI 300, and GRI 400), as proposed by the GRI Standards [76].

The units of analysis defined were based on concepts (i.e., themes, words, and phrases), as used in previous research (e.g., [18,65,72,83]). Thus, the units of analysis used allowed for quantifying the occurrence of the disclosure of SDGs (e.g., Fonseca and Carvalho [65]; Rashed et al. [83]) and SDRs (Carvalho [106]) in institutional reports.

The quantification activity was based on the analysis of the "presence" or "absence" of specific contents in the communication disclosed (Abbott and Monsen [111]; Carvalho et al. [72]), that is, identifying the "presence" or "absence" of units of analysis related to the various subcategories of analysis in the content of the institutional reports published. For this reason, the content of the institutional reports was analyzed in a dichotomous or binary way (i.e., 0 or 1).

Additionally, the global quantification was based on two disclosure indices (DIs) whose mathematical formulation is based on the literature (e.g., Carvalho [106]; Carvalho et al. [72]; Fonseca and Carvalho [65]; Gerged et al. [108]), that is, the Sustainable Development Goals Disclosure Index (SDGsDI), expressed by Equation (1) (De Iorio et al. [109]; Fonseca and Carvalho [65]), as well as the Sustainable Development Results Disclosure Index (SDRsDI), expressed by Equation (2) (Carvalho [106]).

$$\mathrm{SDGsDI_j} = \frac{\sum_{i=1}^{n_j} \mathrm{SDG_{ij}}}{n_j} \quad (1)$$

In Equation (1), the DI expresses the level of the disclosure of SDGs for an organization (j). Consequently, in the numerator, the sum (i.e., $\sum$ from 1 to nj) of the SDGij represents the SDGs (i.e., UN SDGs items) that an organization discloses; thus, SDG is equal to 1 if the SDG item (ith) is disclosed by the organization (jth), and 0 otherwise. On the other hand, in the denominator, the nj represents the SDGs expected in total, that is, all the SDG items that an organization (j) may disclose (i.e., nj is equal to 17 items). Therefore, if SDGsDI equals 0, the organization (jth) does not disclose any SDG item. In turn, if SDGsDI equals 1, the organization (jth) discloses all the SDG items.

$$\mathrm{SDRsDI_j} = \frac{\sum_{i=1}^{n_j} \mathrm{SDR_{ij}}}{n_j} \quad (2)$$

In Equation (2), the DI expresses the SDRs' disclosure level for an organization (j). Consequently, in the numerator, the sum (i.e., $\sum$ from 1 to nj) of the SDRij represents the SDRs (i.e., GRI items) that an organization discloses; thus, SDR is equal to 1 if the SDR item (ith) is disclosed by the organization (jth), and 0 otherwise. On the other hand, in the denominator, the nj represents the SDRs expected in total, that is, all the SDR items that an organization (j) may disclose (i.e., nj is equal to 36 items). Therefore, if SDRsDI equals 0, the organization (jth) does not disclose any SDR item. In turn, if SDRsDI equals 1, the organization (jth) discloses all the SDR items.

As such, we have two DIs that are both quantitative variables (i.e., continuous) that may take values in the range between 0 and 1 or [0; 1], that is, $0 \leq \mathrm{SDGsDI} \leq 1$ and $0 \leq \mathrm{SDRsDI} \leq 1$. Consequently, the SDGsDI and SDRsDI variables are used to verify whether the disclosure of SDGs and SDRs in institutional reports has a significant statistical correlation. According to Schober et al. [112], correlation "is a measure of an association between variables" (p. 1763). In other words, "correlation is a measure of a monotonic association between 2 variables" (Schober et al. [112]) and a "correlation coefficient" measures the relationship between two variables [112].

Recently, correlational analysis has been used in research as a measure of association to study the relationship between variables in the scope of the SDGs (e.g., [70]) and the SDRs (e.g., [113]). Table 6 shows the correlation level classification according to the literature [65,112].

Table 6. Correlation level classification.

Correlation Coefficient Value	Correlation Level Interpretation
0.00–0.10	Negligible correlation
0.10–0.39	Weak correlation
0.40–0.69	Moderate correlation
0.70–0.89	Strong correlation
0.90–1.00	Very strong correlation

Source: Adapted from Schober et al. [112].

Lastly, the following sections and subsections present the research data collection procedure and the interpretation of the results obtained (i.e., the sixth and last activity of the content analysis process).

3.3. Research Data

This study developed research data collection and analysis in two distinct phases. In the first phase, which occurred between May and June 2019, several computer files in PDF (Portable Document Format) of the institutional reports (the latest available version) were downloaded from the institutional websites of the organizations. Subsequently, the contents of the institutional reports were analyzed and classified based on the content analysis method. In the second phase, which occurred in July 2019, the research data collected and analyzed were all validated in terms of the classification initially assigned.

Consequently, all research data collected and analyzed (in both phases) were recorded in a research database (i.e., a computer application developed in the software Microsoft® Office® Excel® 2019 version). This way, the research database recorded the research data dichotomously (i.e., in binary form). Therefore, whenever the content of the institutional reports in terms of concepts (i.e., themes, words, and phrases) is relevant to demonstrate the disclosure of SDGs (i.e., UN SDGs items) and SDRs (i.e., GRI items) in the scope of the various subcategories of analysis studied, it is assigned to the item (ith) the code or value of "one" (1), that is, the case of presence; otherwise, it is assigned to the item (ith) the code or value of "zero" (0), that is, the case of absence (see, e.g., [65,106]).

Lastly, the research data were treated and analyzed statistically using the software IBM® SPSS® Statistics 26 version (International Business Machines—Statistical Package for the Social Sciences) and the macro KALPHA 3.1 version (Krippendorff's Alpha). Subsequently, the measurement of research data reliability obtained through the content analysis method (by comparing the research data obtained in both phases) was determined based on Krippendorff's alpha (α) coefficient. Krippendorff's alpha reliability estimate obtained for the research data of the disclosure of SDGs and SDRs resulted in alpha (α) values of 0.953 and 0.930, respectively.

According to Krippendorff [114], data reliability is considered acceptable for values of alpha (α) $\geq$ 0.800 when the research data are obtained through the content analysis method.

4. Results

4.1. Descriptive Statistics Analysis

The exploratory analysis of the institutional reports disseminated on the institutional website by the Portuguese organizations with multiple certified MSs (QEOH&S&SR) shows that the accounts report (33.0%) and the sustainability report (32.1%) are the institutional reports most frequently disclosed among the various institutional reports published annually by the organizations. Authors such as Camilleri [91] report an increase in the number of stakeholders, including contractors, nongovernmental organizations (NGOs) and research firms who scrutinize businesses' environmental, social and governance (ESG) behaviors. The application of the content analysis method was based on the latest available version of the institutional reports published and disclosed by each of the 34 organizations (QEOH&S&SR). Table 7 shows the 77 institutional reports classified by the analyzed type.

In sum, 23 (67.6%) and 22 (64.7%) organizations published and disclosed the accounts and sustainability reports, respectively.

Table 7. Number of institutional reports by type analyzed in the research.

Institutional Reports	*n*	%
Sustainability report	22	64.7
Social responsibility report	4	11.8
Environmental report	4	11.8
Occupational health and safety report	0	0.0
Management report	6	17.6
Accounts report	23	67.6
Accounts and management report	1	2.9
Financial report	7	20.6
Corporate governance report	10	29.4
Integrated report	0	0.0

Note: *n*, number; %, percentage in relation to the sample (*n* = 34).

Consequently, the content analysis process adopted in the research allowed for qualifying and quantifying the occurrence of SDGs and SDRs disclosed in institutional reports by the organizations (QEOH&S&SR). Table 8 presents the SDGs disclosed by the organizations under study according to the categories and subcategories of analysis adopted in the research.

Table 8. Number of organizations that disclosed SDGs by subcategories of analysis.

Categories of Analysis	Subcategories of Analysis	*n*	%
Social	SDG 01: No poverty	6	17.6
Social	SDG 02: Zero hunger	7	20.6
Social	SDG 03: Good health and well-being	8	23.5
Social	SDG 04: Quality education	8	23.5
Economic and social	SDG 05: Gender equality	15	44.1
Environmental and social	SDG 06: Clean water and sanitation	15	44.1
Economic and environmental	SDG 07: Affordable and clean energy	6	17.6
Economic and social	SDG 08: Decent work and economic growth	9	26.5
Economic	SDG 09: Industry, innovation, and infrastructure	16	47.1
Economic and social	SDG 10: Reduced inequalities	14	41.2
Environmental and social	SDG 11: Sustainable cities and communities	7	20.6
Economic and social	SDG 12: Responsible consumption and production	16	47.1
Environmental	SDG 13: Climate action	15	44.1
Environmental	SDG 14: Life below water	15	44.1
Environmental	SDG 15: Life on land	17	50.0
Social	SDG 16: Peace, justice, and strong institutions	5	14.7
Economic, environmental, and social	SDG 17: Partnerships for the goals	16	47.1

Note: SDG, Sustainable Development Goal; n, number; %, percentage in relation to the sample (*n* = 34).

The results highlight the occurrence (number and percentage) of the disclosure of SDGs by the organizations (QEOH&S&SR), with four subcategories of analysis (i.e., UN SDGs items) presenting a more significant occurrence in the disclosure of SDGs (in descending order): "life on land" (SDG 15), disclosed by 17 (50.0%) organizations; "industry, innovation, and infrastructure" (SDG 09), disclosed by 16 (47.1%) organizations; "responsible consumption and production" (SDG 12), disclosed by 16 (47.1%) organizations; and "partnerships for the goals" (SDG 17), disclosed by 16 (47.1%) organizations.

Figure 3 shows the relationship of all the SDGs obtained by approaching the several subcategories of analysis (UN SDG items) and Figure 4 presents the relationship of all the SDRs obtained by approaching the several subcategories of analysis (GRI items). In this sense, the results show a large discrepancy between the values of the 36 subcategories

analyzed (the disclosed SDRs) and between the values of the 17 subcategories analyzed (the disclosed SDGs).

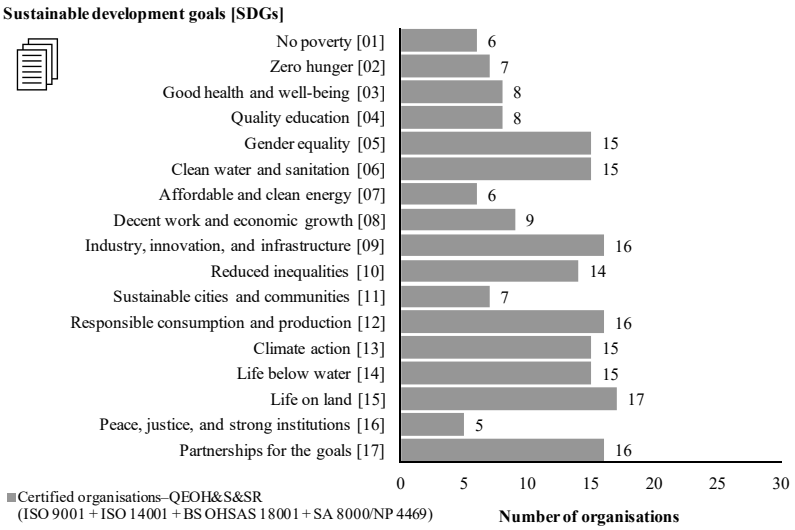


Figure 3. Number of organizations that disclosed SDGs in institutional reports.

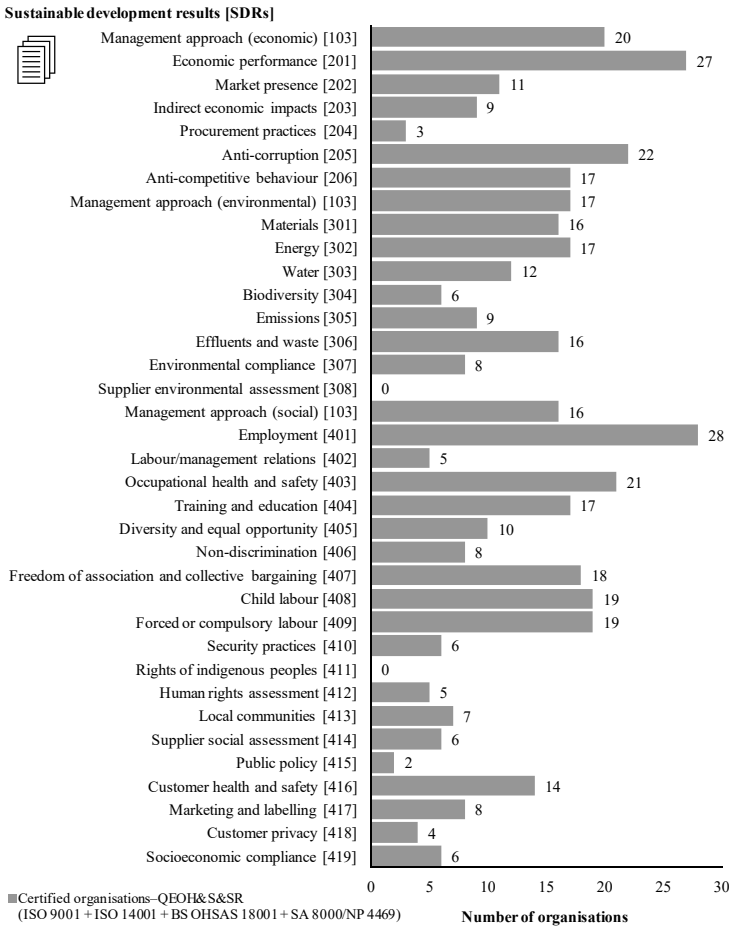


Figure 4. Number of organizations that disclosed SDRs in institutional reports.

Figure 5 summarizes the SDRs' disclosure results by categories of analysis (by all organizations), with 429 SDRs accounted for in the three categories of analysis. The economic dimension (GRI 200) disclosed 109 (25.4%) items, the environmental dimension (GRI 300) disclosed 101 (23.5%) items, and the social dimension (GRI 400) disclosed 219 (51.1%) items.

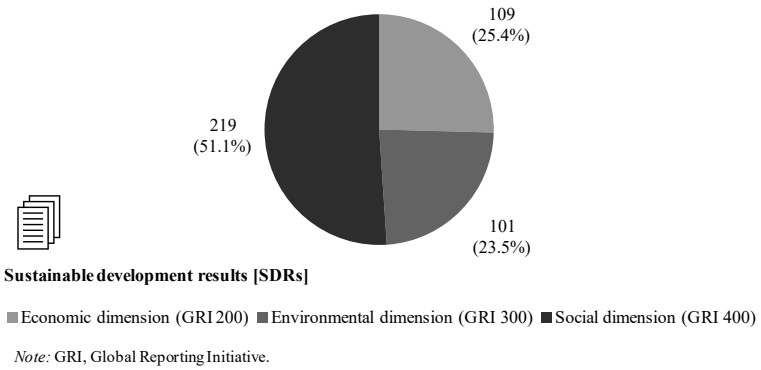


Figure 5. Total number of SDRs disclosed in institutional reports by categories of analysis by all organizations.

4.2. Bivariate Correlation Analysis

The study of the correlation between the disclosure of SDGs and SDRs was based on the relationship between the SDGsDI and SDRsDI variables, both quantitative. Thus, the study of the bivariate correlation aimed to verify the existence of a statistically significant linear association between the SDGsDI and SDRsDI variables. Table 9 shows the results obtained from the SDGsDI and SDRsDI variables for each sample organization and other sample characterization parameters.

Table 9. Results of the SDGsDI and SDRsDI variables by organization.

j	Certification Body	Economic Activity	Business Sector	District	SDGsDI	SDRsDI
01	APCER	TAs	Public	Lisbon	0.529	0.222
02	APCER	TAs	Public	Lisbon	0.529	0.222
03	APCER	OSAs	Public	Lisbon	1.000	0.750
04	APCER	TAs	Public	Lisbon	0.529	0.361
05	APCER	WCTS	Public	Setúbal	0.529	0.500
06	APCER	WCTS	Public	Faro	0.529	0.528
07	APCER	WCTS	Public	Coimbra	0.529	0.500
08	SGS ICS	WCTS	Public	Porto	0.529	0.500
09	SGS ICS	WCTS	Public	Vila Real	0.529	0.528
10	APCER	WRT	Private	Porto	0.000	0.028
11	APCER	E	Public	Lisbon	0.000	0.694
12	SGS ICS	C	Private	Lisbon	0.000	0.111
13	SGS ICS	WCTS	Public	Braga	0.353	0.806
14	BVC	AFSA	Private	Lisbon	0.471	0.778
15	APCER	SWM	Public	Faro	0.000	0.278
16	APCER	AFSA	Private	Lisbon	0.000	0.222
17	EIC	OSAs	Private	Lisbon	0.000	0.000
18	BVC	C	Private	Lisbon	0.000	0.056
19	APCER	AFSA	Private	Lisbon	0.000	0.222
20	APCER	MRPP	Private	Castelo Branco	0.000	0.056
21	APCER	SWM	Public	Porto	0.588	0.528
22	BVC	MFPBTP	Private	Portalegre	0.588	0.306
23	BVC	C	Private	Lisbon	0.000	0.000
24	SGS ICS	MNMMP	Private	Aveiro	0.000	0.056

Table 9. *Cont.*

j	Certification Body	Economic Activity	Business Sector	District	SDGsDI	SDRsDI
25	APCER	EPD	Private	Lisbon	1.000	0.611
26	APCER	OSAs	Private	Lisbon	1.000	0.750
27	APCER	TS	Private	Lisbon	1.000	0.611
28	SGS ICS	OSAs	Private	Lisbon	0.176	0.167
29	APCER	WCTS	Public	Setúbal	0.000	0.278
30	SGS ICS	SWM	Public	Porto	0.529	0.472
31	BVC	C	Private	Lisbon	0.529	0.472
32	APCER	TS	Private	Lisbon	0.000	0.000
33	SGS ICS	SWM	Private	Portalegre	0.000	0.250
34	EIC	WRT	Private	Setúbal	0.000	0.056

Note: j, organization (included in the research sample); SDGsDI, Sustainable Development Goals Disclosure Index; SDRsDI, Sustainable Development Results Disclosure Index; APCER, Associação Portuguesa de Certificação; BVC, Bureau Veritas Certification Portugal, Sociedade Unipessoal, Lda.; EIC, Empresa Internacional de Certificação, S.A.; SGS ICS, Serviços Internacionais de Certificação, Lda.; MFPBTP, manufacturing of food products, beverages, and tobacco products; MRPP, manufacturing of rubber and plastic products; MNMMP, manufacturing of non-metallic mineral products; EPD, electricity production and distribution; WCTS, water collection, treatment, and supply; C, construction; WRT, wholesale and retail trade; AFSA, accommodation and food service activities; TS, transportation and storage; TAs, technical activities; OSAs, other service activities; E, education; SWM, sewerage and waste management.

The results show that disclosing SDGs and SDRs in institutional reports is a reality for 19 (55.9%) and 31 (91.2%) organizations, respectively. In turn, 19 (55.9%) organizations jointly disclose the SDGs and SDRs. In contrast, only 3 (8.8%) organizations do not disclose the SDGs and SDRs.

Additionally, it is essential to remember that both variables (SDGsDI and SDRsDI) are continuous and assume values between 0 and 1. Table 10 shows the results of the descriptive statistics that characterize both variables, such as the obtained values for minimum, maximum, and mean.

Table 10. Results of the descriptive statistics of characterization of the variables.

Variable	*N*	Minimum	Maximum	Sum	Mean	*SD*	Variance
SDGsDI	34	0.000	1.000	11.471	0.337	0.348	0.121
SDRsDI	34	0.000	0.806	11.917	0.350	0.256	0.065

Note: *N*, number; *SD*, standard deviation; SDGsDI, Sustainable Development Goals Disclosure Index; SDRsDI, Sustainable Development Results Disclosure Index.

The correlation (i.e., association) between the variables (SDGsDI and SDRsDI) was statistically tested using the Pearson correlation coefficient (parametric test) and the Spearman correlation coefficient (nonparametric test). Table 11 shows the results of applying Pearson's and Spearman's correlation to SDGsDI and SDRsDI variables. It is essential to recall that the "correlation coefficients describe the strength and direction of an association between variables" (Schober et al., [112]).

Table 11. Results of the correlation between SDGsDI and SDRsDI variables.

		Correlation between SDGsDI and SDRsDI		
Correlation	**Statistical Test**	***N***	**Correlation Coefficient**	***p*-Value (Two-Tailed)**
Pearson's "r" (r)	Parametric	34	0.733	0.000 **
Spearman's "rho" (ρ)	Nonparametric	34	0.697	0.000 **

Note: *N*, number; *p*-value, probability value or significance; SDGsDI, Sustainable Development Goals Disclosure Index; SDRsDI, Sustainable Development Results Disclosure Index. **, Correlation is significant at the 0.01 level (2-tailed).

The value of the Pearson correlation coefficient (r) is 0.733 (p-value ≈ 0.000), and the value of the Spearman correlation coefficient (ρ) is 0.697 (p-value ≈ 0.000), both positive coefficients. In turn, the significance values of the correlation coefficients are lower than 0.05, which shows that both coefficients are statistically significant (p-value < 0.01). A correlation coefficient that takes values from 0.7 to 0.9 is classified as a "strong positive correlation" (Fonseca et al. [70]). Consequently, since the significance level is 0.05 (i.e., a confidence level of 95%), the statistical results obtained by both correlation coefficients demonstrate with significant statistical evidence (p-value < 0.05) that the correlation between the two variables (SDGsDI and SDRsDI) is positive and strong.

Figure 6 shows the association between the two variables (SDGsDI and SDRsDI) at the level of each of the 34 organizations in the research sample graphically. Therefore, a holistic graph view can support the validation of the model for SD implementation through MSSs and shows both variables' correlation (i.e., association). Generally, a high value in the disclosure of SDGs corresponds to a high value in the disclosure of SDRs, and vice versa.

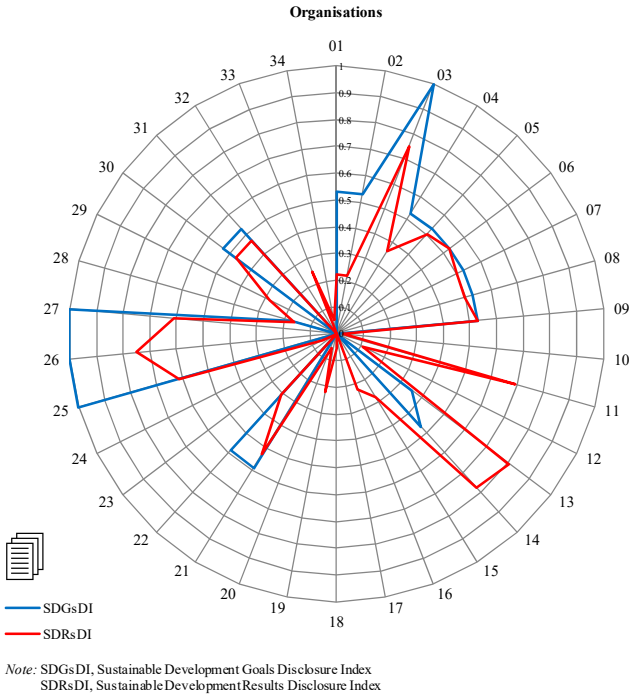


Figure 6. Association between SDGsDI and SDRsDI variables by the organization.

5. Discussion

This research results show that accounts and sustainability reports are the most frequently disclosed among the several institutional reports published and disclosed annually on the institutional website by Portuguese organizations with multiple certified MSs. Thus, our results align with other previously published studies (e.g., [11,72,106]).

Consequently, the four main SDGs (i.e., UN SDGs items) disclosed in institutional reports by certified Portuguese organizations (QEOH&S&SR) are the following (in descending order): "life on land" (SDG 15); "industry, innovation, and infrastructure" (SDG 09); "responsible consumption and production" (SDG 12); and "partnerships for the goals" (SDG 17), these last three ex aequo in terms of ranking. Therefore, in this research, SDG 15 is highlighted as the goal most disclosed of all the SDGs—the main SDG disclosed in institutional reports. However, recent research shows that SDG 15 does not usually occupy a rank among the top five of the SDGs most disclosed in institutional reports (e.g., [37,65,66,86,106,109]). Additionally, some recent studies identify SDG 15 as among the lowest-priority SDGs for organizations (e.g., [28,37,66]). Consequently, in our case, we believe that the result obtained for SDG 15 may be related to the characteristics of the research

sample, that is, Portuguese organizations with multiple certified MSs (QEOH&S&SR) that are aligned with the principles of SD.

Overall, the results obtained for the items SDG 09, SDG 12, and SDG 17 are in line with other research (e.g., Fonseca and Carvalho [65]), that is, the SDG 09, SDG 12, and SDG 17 are among the top five SDGs disclosed in institutional reports by certified Portuguese organizations. However, other recent studies show that only SDG 9 and SDG 12 are among the top five SDGs disclosed in institutional reports (e.g., Hummel and Szekely [37]; Izzo et al. [66]; Manes-Rossi and Nicolò [29]). On the other hand, however, we found in other research that only SDG 12 is among the three, four or five SDGs most disclosed in institutional reports (e.g., Gunawan et al. [110]; Heras-Saizarbitoria et al. [115]; Ionașcu et al. [38]; Ivic et al. [86]; PwC [28]; Silva [59]).

Additionally, the four main SDRs (i.e., GRI items) disclosed in institutional reports by certified Portuguese organizations (QEOH&S&SR) are the following (in descending order): "employment" (GRI 401); "economic performance" (GRI 201); "anticorruption" (GRI 205); and "occupational health and safety" (GRI 403). In our case, GRI 401 is the most disclosed SDR in institutional reports. In turn, Bastas and Liyanage [116] argue that GRI 201, GRI 205, and GRI 403 are all sustainability items (i.e., SDRs) priorities as per the voice of the stakeholder's analysis.

Overall, the results obtained for the items GRI 201, GRI 401, and GRI 403 are in line with other research (e.g., Carvalho [106]), that is, GRI 201, GRI 401, and GRI 403 are among the four main SDRs disclosed in institutional reports by certified Portuguese organizations. In addition, other research shows that the themes of GRI 201, GRI 401, and GRI 403 are in the top 10 SDRs disclosed in institutional reports (e.g., Lambrechts et al. [117]).

According to Pacheco et al. [81], items GRI 201 and GRI 401 are among the most disclosed in institutional reports (a specific case of the universities). On the other hand, Yang et al. (2020) shows that item GRI 201 is the subtopic (i.e., GRI item) most disclosed in the economic dimension for the specific case of the airline industry. Conversely, Saber and Weber [73] argue that items GRI 401 and GRI 403 are among the most disclosed in institutional reports (a specific case of grocery retailing).

Holistically, our results show that more than half of the SDRs (i.e., GRI items) disclosed in institutional reports belong to the social dimension (GRI 400). On the other hand, the SDRs disclosed referring to the economic (GRI 200), and environmental (GRI 300) dimensions are similar. Therefore, this study's results align with other previously published research (e.g., Kolsi et al. [118]).

Recently in the literature, the integrated approach to SDGs (based on UN SDG items) and SDRs (based on GRI standards items) disclosed in the institutional reports of organizations has been dominant (e.g., [63,78,84]). However, Diaz-Sarachaga [63] argue that "the correlation between the SDGs and CS reporting systems has barely been studied" (p. 1299), for example, the correlation between the SDGs and the GRI standards. In this context, our research's results demonstrated statistically that the disclosure of SDGs (i.e., UN SDGs items) and SDRs (i.e., GRI items) in institutional reports present a strong positive correlation.

6. Conclusions

According to the literature, the implementation and certification by organizations of multiple MSs (QEOH&S&SR) allow demonstrating to stakeholders a responsible commitment in favor of SD. In Portugal, the number of organizations with multiple certified MSs (QEOH&S&SR) has grown in recent years. Usually, Portuguese organizations with multiple certified MSs (QEOH&S&SR) publish annually various institutional reports on the institutional website (on the internet) to disclose contents on SD to stakeholders. In turn, the accounts and sustainability reports are the institutional reports most frequently used to disclose the SDGs (i.e., UN SDGs items) and the SDRs (i.e., GRI items) to interested parties. Therefore, holistically, the objective of study of this investigation was achieved with the proposal of a framework to integrate Sustainability within management systems standards,

subsequently implement and disclose sustainable development goals and results, and the answer to the three research questions (RQs) initially proposed.

In answer to RQ1: What are the main SDGs disclosed in institutional reports by Portuguese organizations with multiple certified MSs (QEOH&S&SR)? We found that the four main SDGs disclosed in institutional reports by certified Portuguese organizations (QEOH&S&SR) are the following (in descending order): "life on land" (SDG 15); "industry, innovation, and infrastructure" (SDG 09); "responsible consumption and production" (SDG 12); and "partnerships for the goals" (SDG 17), these last three ex aequo in terms of ranking. Thus, SDG 15 is the goal most disclosed of all the SDGs in institutional reports. Overall, SDG 15 ("life on land") focuses on people and planet.

In response to RQ2: What are the main SDRs disclosed in institutional reports by Portuguese organizations with multiple certified MSs (QEOH&S&SR)? We found that the four main SDRs disclosed in institutional reports by certified Portuguese organizations (QEOH&S&SR) are the following (in descending order): "employment" (GRI 401); "economic performance" (GRI 201); "anticorruption" (GRI 205); and "occupational health and safety" (GRI 403). Consequently, GRI 401 is the result most disclosed of all the SDRs—the main SDR disclosed in institutional reports. Overall, GRI 401 ("employment") focuses on people.

In reply to RQ3: How is the disclosure of SDGs and SDRs in institutional reports correlated? We found that the SDGs and the SDRs disclosed in institutional reports by certified Portuguese organizations (QEOH&S&SR) are statistically significantly correlated. Accordingly, our research statistically demonstrated that the disclosure of SDGs and SDRs in institutional reports has a strong positive correlation. Moreover, there is an emphasis on the environmental dimension within SDG disclosure and on the social dimension for SDR disclosure, with the economic dimension present in both SDGs and SDRs. Overall, the contributions of this research are twofold. First, it supports the integration of the SDGs within organizations and proposes a model for SD implementation through MSSs. Second, it stimulates the demonstration of organizations' impacts on SDGs (SDRs). Hence, these findings contribute to the state of the art of knowledge in this study area, as research on the relationship between the disclosure of SDGs and SDRs is still at an early stage. Moreover, it can support organizations to comprehend, integrate and contribute to SDGs by adopting MSSs.

The sample size, limited number of institutional reports analyzed, and single-country scope are limitations and restrictions that affected the present investigation. However, since MSS-certified organizations should comply with international validated requirements and the corresponding certification bodies are subject to the accreditation schemes, ensuring confidence and compliance with the applicable MSs requirements, the study results can be generalized to similar certified organizations worldwide.

Finally, we propose as possible future developments of this investigation the realization of similar studies with post COVID-19 data and with certified organizations from other countries to assess different countries' patterns and the possible generalization of these research results.

A business model supports organizations in creating, delivering, and capturing value, and business excellence models have been proposed to integrate the SDGs while delivering outstanding results and promoting transformation [119]. Nevertheless, frameworks are needed to support the many certified MSS organizations worldwide to achieve those aims. By integrating sustainability within management systems standards and subsequently implementing and disclosing sustainable development goals and results, the proposed framework can align and integrate sustainability with organizations' strategy, processes and key performance indicators and results. This contribution raises the awareness of SD goals and results in publications within organizations with certified management systems standards. It answers the calls for more emphasis on the SDGs and the support of MSSs for that aim [120–122]. It can support academics and decision-makers (focusing on business

leaders and organization managers) to comprehend, integrate and contribute to the SDGs. Moreover, it can motivate other researchers to replicate this study in different contexts.

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