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SUSTAINABILITY INFORMATION – ANALYSIS OF CURRENT TRENDS IN SUSTAINABILITY MONITORING & REPORTING

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Received 11 December 2022; accepted 14 March 2023; published 30 March 2023

Abstract. Government legislation, investor and stakeholder expectations, as well as international voluntary initiatives have all contributed to the rising demand for high-quality information and reporting on sustainability issues. The scientific community exploring sustainability issues is expanding quickly, and the need for sustainability data has grown significantly in recent years. Sustainability reporting is a fast developing topic with many different monitoring and reporting frameworks, some criteria that overlap, and problems with worldwide consistency. This frequently causes uncertainty on how data and information should be used to produce useful results and science-based resources. The paper ascertains current trends in monitoring and reporting sustainability-related information, including a particular analysis for each relevant level (i.e. country and corporate). The study commences with an updated review of sustainability reporting literature followed by an emphasis on the well-known instruments (i.e. SDGs index and the International Spillover index) used to monitor and report the nations progress toward SDGs. Also, the connections among different international approaches/initiatives for increasing the accountability of companies for sustainability actions were analysed and the improvements were emphasized. Although the worldwide reporting seems to be led by the adoption of the GRI and SASB standards, the range of metrics and disclosure patterns is wide and displays a high variation across industries, sectors, sizes, complexity and location. Through a structured analysis, the paper argued international initiatives (i.e. European Sustainability Reporting Standards and IFRS Sustainability Disclosure Standards) are of valuable importance for counteracting the fragmentation of available sustainability information and assuring the alignment and interoperability between different sustainability information.

Keywords: sustainable development; sustainability disclosure; sustainability information; international initiatives; reporting standards

Reference to this paper should be made as follows: Fleacă, B., Fleacă, E., Corocăescu, M. 2023. Sustainability information – analysis of current trends in sustainability monitoring & reporting. *Entrepreneurship and Sustainability Issues*, 10(3), 274-287. [http://doi.org/10.9770/jesi.2023.10.3\(18\)](http://doi.org/10.9770/jesi.2023.10.3(18))

JEL Classifications: M14, M48, M21

1. Introduction

The notion of sustainable development serves as a vehicle for expressing widespread concerns about the condition and viability of environmental, economic, and social components of the present and future worlds. It gained particular attention from international institutions, political factors, business sectors, civil society, and the academic and scientific community, seeing that prosperity is possible only with the aid of sustained, inclusive and sustainable economic growth of all countries and regions.

The capacity of society to comprehend knowledge pertaining to sustainable development determines its ability to respond to current challenges and opportunities (Chan et al., 2020). This was duly addressed by the 2030 Agenda with its 17 Sustainable Development Goals (SDGs), indivisible and interconnected that defined an ambitious framework to foster peaceful, just and inclusive societies all over the world (United Nations, 2015). As a result, the governments transformed them into national action plans, programs, and initiatives that reflected the various realities and capabilities that their respective countries have. Also, a significant number of policy documents and provisions, legislations and regulatory instruments have been elaborated to promote sustainability practices in businesses that can contribute conjunctively to the progress of countries toward SDGs and transition towards a more sustainable economy.

The paper aims to ascertain current trends in monitoring and reporting sustainability-related information, including a particular analysis for each relevant level (i.e. country and corporate). To this end, the study commences with an updated literature review on sustainability reporting challenges followed by a particular emphasis on the well-known monitoring and reporting instruments (i.e. SDGs index and International Spillover index) used to quantify the progress of the nations toward SDGs. Also, the connections among different international approaches/initiatives for increasing the accountability of companies for sustainability actions and SDGs were drawn up and improvement needs were emphasized to meet the transition to high-quality sustainability information.

2. Theoretical background

The scientific community for sustainability issues is expanding quickly, and the need for sustainability information has significantly increased in recent years (Backes & Traverso, 2022; Szopik-Depczyńska et al., 2021). Through a bibliometric analysis conducted on the literature in the international databases i.e. Scopus and Clarivate Analytics, former Web of Science Core Collection. Pasko et al. (2021) argued that sustainability matters (e.g. sustainability reporting, corporate social responsibility, and sustainable development disclosure) seem to become the major research directions in the near future. They noted the shift from macro to micro level analysis as more and more studies dealt with companies as opposed to regions as well as the increased degree of studies related to financial reports, companies, and industries in multiple fields. In addition, the latest research in the specific field of public entities confirmed the growing attention being paid to reporting on and encouraging sustainable development (Montalbán-Domingo et al., 2021; Fleacă et al., 2018). The findings delineated the most relevant knowledge areas such as sustainability reporting based on GRI standards and Integrated Reporting as a new tool for communication that may present both financial and non-financial data in a single report (Ștefănescu, 2021).

The sustainability reporting provisions (i.e. Directive 2014/95/EU regulating the disclosure of non-financial information) were also analysed. By focusing on the Integrated Reporting (IR) disclosure (i.e. financial and non-financial information) mainly linked to the corporate value, some studies stressed that there are no significant differences between the amounts of integrated reporting disclosure supplied before and after the introduction of

the EU Directive. Despite of the required aspect, certain institutionalized integrated reporting processes exist more as a result of the adoption of integrated reporting as a consolidated practice able to convey legitimacy than the implementation of Directive 2014/95/EU. The IR is also proving to be a powerful tool for accountability and transparency in the public sector, as pressure from stakeholders to be accountable for non-financial information has expanded significantly. IR was previously thought to be primarily focused on for-profit businesses (Nicolò et al., 2020).

Looking at the consequences of mandatory non-financial disclosure (i.e. sustainability information disclosure) in the particular case of companies operating in Italy and Germany, Mion and Loza Adauni (2019) revealed the significant differences in the quality of reporting before and after the entry into force of Directive 2014/95/EU. The selected variables (e.g. credibility, availability, and strategic facets) varied greatly, causing the strategic approach and credibility dimensions of sustainability reporting to shift more dramatically than the availability dimension in both nations. The results stressed the positive effects of the mandatory provisions toward improving the level of quality information concerning sustainability disclosure.

Other inquiries on the benefits of integrated reporting (IR) methods viewed them more as a cost-producing factor than as a corporate advantage in reporting practices. The findings supported previous studies arguing that the negative effect of assured Integrated Reporting (IR) practices is lower than the effect of lacking them on the market valuation of a company. Also, the need for a clearer scoping of Integrated Reporting was emphasised (Landau et al., 2020). Other scholars, focused on Brazilian financial institutions listed on the B3 stock exchange, acknowledged the high degree of adherence of the Integrated Reporting practices to the sustainability assurance practices. In a similar vein, an independent assessment was viewed as the key procedure that increases the security of the data and information made available to shareholders and shareholders, as well as lowers information asymmetry and conflicts resulting from it (Aigner et al., 2022).

The concern for a principle-based sustainability reporting was also addressed and integrated thinking based on outcomes and impact using the SDG Compass Logic model was considered as a useful framework for reporting (Abeysekera, 2022). Furthermore, the adoption of a materiality matrix for information about relevant sustainability measures was analyzed in the particular case of the tourism industry and the findings reinforced the extensive usage of SDGs as focal points for sustainable development, as well as the overarching application of materiality analysis as reporting practice focused on sustainability monitoring and disclosure (Costa et al., 2022). In addition, for a proper materiality analysis, Calabrese et al. (2017) recommended the consistency of judgments when performing the analysis, multi-stakeholder engagement (i.e. different stakeholders' views trade-off), multidimensionality for each sustainability dimension (i.e. economic, environmental and social dimension) by considering both their impacts on the company and influence on stakeholders' decisions and evaluations, the completeness of report content, as well as avoiding subjectivisms.

The issues of comparability among different sustainability disclosure reports were also researched Moses et al. (2020) and studies on the Polish listed companies mentioned certain degrees of variability in both the number and kind of social disclosure due to the high complexity and multidimensionality elements. Comparability of corporate social disclosures revealed gaps in the disclosing practices due to the low experience in reporting mandatory non-financial information (i.e. sustainability information), the limited scope of non-financial disclosures imposed by the accounting regulation as well as the lack of external attestation bodies aimed to verify the declarative information embedded in the non-financial report (Czaja-Cieszyńska et al., 2021). In addition, Sætra (2022) addressed the problems of variability in the sustainability-related data produced by the requirements to collect and report sustainability-related information, which differ between nations, regions, and sectors. Due to

the complexity of the three sustainability dimensions in the financial and reporting settings, these findings highlighted the chaotic nature of the reporting practices and sustainability information.

Although there is rich scientific literature on a wide range of sustainable development contexts, the need for high-quality and reliable sustainability information is still in place. The complexity of monitoring and reporting sustainability matters needs particular attention due to the critical role in decision-making and related consequences on environmental, economic, and social issues at local, national and international levels (Torkayesh, 2022; García-Muiña et al., 2022). The criteria of relevance, accurateness, completeness, and topicality need to be considered when dealing with sustainability information, and the usage of international trustworthy tools, initiatives and standards, generally recognized as good practices in the domain, gain particular relevance for a better understanding of the challenges of quality data and information for country and corporate levels.

3. Sustainability information – country 's monitoring & reporting

The concern for sustainability information at the country level was addressed by the UN Sustainable Development Solutions Network (UN SDSN) which developed the Sustainable Development Goals Index and Dashboards (SDG Index) as well as the International Spillover Index, firstly introduced in 2020, as a measurement of positive and negative effects on another country ability to achieve SDGs (Sachs et al., 2022). As figure 1 depicts, both sustainability information approaches are intended to assist countries in the pursuit to achieve sustainable development by 2030 and beyond, as the only common understanding of the triple bottom line of sustainable development: economic, social and environmental.

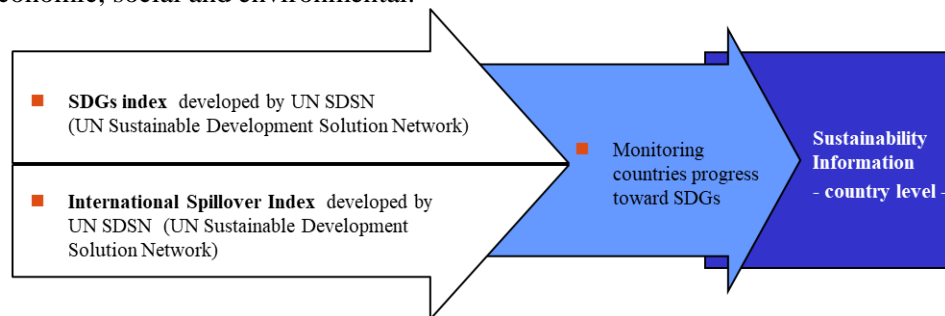


Figure 1. Current approaches for sustainability monitoring & reporting – country level

Source: The authors' own elaboration

The alignment of the SDGs index with the global SDGs framework as outlined in the United Nations 2030 global policy agenda was ensured by aggregating indicators in the 17 goals and thereby assisting countries to measure their baselines and monitor progress in each of the 17 SDGs (United Nations, 2015). Notably, sustainability goals for each criterion were established based on either explicit or implicit SDGs targets, science-based objectives, or the average performance of the best achievers. Additionally, the formulation of the index was not the only factor in its quality and sufficiency; other factors included the acquisition of trustworthy data and sources that was made available to the public by recognized worldwide data providers (e.g. “World Bank”, “World Health Organization”, “International Labour Organization”, etc.) and other international organizations. The SDGs index, which meticulously adheres to the same structure of 17 goals, was recognized by the JRC statistical audit as a significant effort to combine all adopted SDGs into a single figure (European Commission JRC, 2019).

Globally, the SDGs index is no longer being advanced, and in 2021, the average score slightly decreased, in part because of the weak or nonexistent recovery in poor and vulnerable nations. Poorer nations with lower SDG

Index scores advanced more quickly than wealthy nations. Three Nordic countries dominate the 2022 SDG Index: Finland scored 86.51, Denmark scored 85.6, and Sweden scored 85.2. All of the top 10 nations are from Europe, however, even these nations face significant obstacles to reaching several SDGs (e.g. climate action, zero hungry, responsible consumption and production, life below water, life on land) (Sachs et al., 2022).

Having a systemic look, the International Spillover Index considers the complexity of the global value chains which connect production and consumption across countries and continents leading to outsourcing of environmental and social impacts to other countries. It includes four sustainability factors measured through 14 indicators, each of them being included in the total SDG Index score, and also used to generate a stand-alone International Spillover Index. The sustainability concerns that limit other countries' ability to use resources to advance the SDGs include cross-border air and water pollution, unfair tax competition, corruption, banking secrecy, profit shifting, etc., as well as peacekeeping and security effects. They also include international effects related to pollution, the use of natural resources, and social impacts brought on by the consumption of goods and services (Malik et al., 2022).

Notably, wealthy nations tend to provide the greatest adverse spillover effects, impeding efforts made by other nations to fulfil the SDGs. For instance, the consumption of products and services in the European Union accounts for 40% of its carbon footprint; as a result, the EU and wealthy nations must address negative international spillovers, particularly those embodied in unsustainable supply chains. According to Spillover Index, a higher score indicates that a nation has more positive spillover effects and fewer negative ones. For instance, the top three Nordic countries in terms of SDG success obtained lower scores, indicating that they are having more adverse and less beneficial spillover impacts on other nations' capacities to fulfil the SDGs (e.g. Finland is ranked 124th out of 163 countries with an overall score of 73.63, Denmark is 137th with a score of 66.2, and Sweden is 139th with a score of 65.73) (Sustainable Development Report, 2022). As argued by Malik et al. (2022), there is an ethical and practical necessity to take the helm of worldwide initiatives to reduce the negative effects of raw materials, greenhouse gas emissions, workplace accidents, and forced labour that are embodied in global supply chains.

To counteract the negative international spillover effect, the new Directive 2022/0051/EU on Corporate Sustainability Due Diligences is intended to hold businesses accountable for the impacts generated through their whole value chain and put even stricter rules on businesses operating in the EU to identify and overcome environmental, biodiversity, and human rights problems in their worldwide supply chains. Additionally, businesses would have to set up a process for complaints and make available information on how they carry out their due diligence obligations (European Commission, 2022).

4. Sustainability information – corporate 's monitoring & reporting

Recent years have seen a fast expansion of the market for corporate sustainability data, particularly among the financial community. The growth of investment products that specifically aim to meet certain sustainability standards, the changing nature of business risks and investor awareness of the financial ramifications of those risks due to environmental issues, as well as rapidly evolving consumer preferences, market practices, and public awareness all contribute to this rise in demand.

Figure 2 depicts the main approaches and frameworks used at a worldwide level, which may assist the companies in their attempt to integrate sustainability matters into their business strategies. The blueprint is intended to highlight the wide range of sustainability approaches/initiatives which may guide the businesses having a strong commitment to addressing climate change and social inequality alongside financial returns, in close cooperation

with business partners, including customers, and other stakeholders (e.g. investors, civil society actors, non-governmental organisations and social partners, etc.).

The actual trends in corporate sustainability information show that most of the large companies around the world have resonated strongly with the thematic areas of the SDGs, first introduced by the United Nations in 2015. As current studies argued, 74% of the world's 250 largest companies aligned their sustainability initiatives with the 17 SDGs as well as displaying an increasing trend from 43% in 2017 (KPMG, 2022). These findings seem to be conceptually connected with the underlying values supporting sustainability, which require responsible companies to align their core strategy with the universal UN goals (SDGs) and issues by integrating the set of 10 Global Compact Principles that guide to all companies, irrespective of their size, complexity, or location. In light of this, a principled approach to business requires accountability for basic duties in four areas, including human rights, labour, the environment, and anti-corruption (UN Global Compact, 2014).

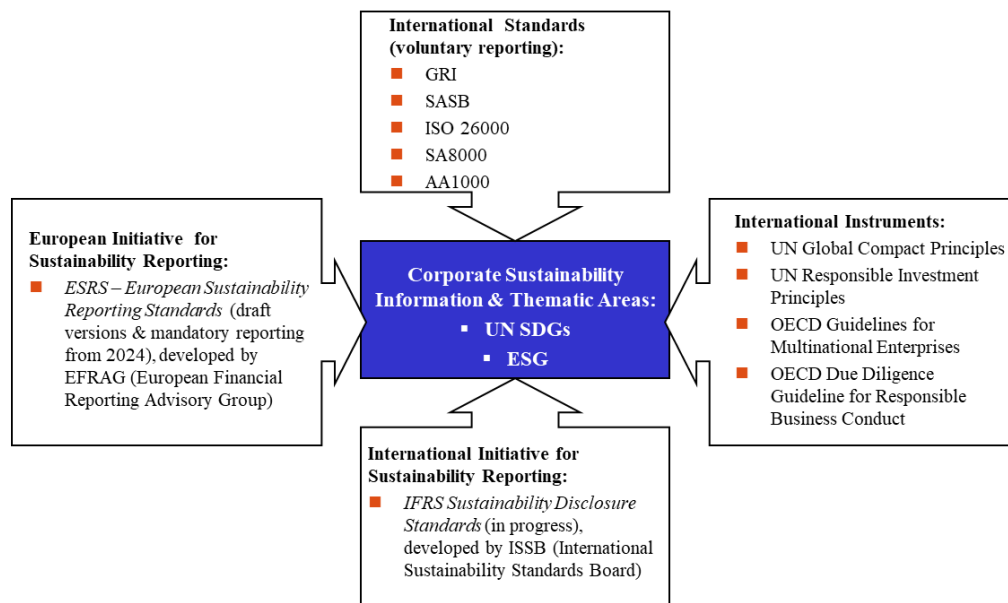


Figure 2. Current approaches for sustainability monitoring & reporting – corporate level

Source: The authors' own elaboration

The need for sustainability data to manage financial risks associated with climate change, resource depletion, environmental degradation, and social challenges, as well as to promote transparency in financial and economic activities, is also growing among investment companies (Bengo et al., 2022; Lingnau et al., 2022). The concept of Environmental, Social, and Governance (ESG) risks has been first introduced in 2006 by the UNEP Finance Initiative and the UN Global Compact which provided a set of 10 voluntary and aspirational responsible investment principles. Developed for institutional investors, these principles promoted the inclusion of ESG factors in investment research and decision-making processes, in ownership policies and practices, in the industry's adoption of the principles, and in ensuring adequate sustainability data disclosure on ESG factors. Worthwhile, these initiatives resulted in the release of the PRI "Principles for Responsible Investments" blueprint in 2017 that outlined future directions and provided a variety of options for incorporating environmental, social, and governance (ESG) issues into investment practice (e.g. making tools available to investors to help them match their investment operations with the SDGs; incorporating the SDGs into the PRI Reporting Framework; reporting

on the contribution towards SDGs as well as engaging policymakers to encourage public policy that supports the SDGs, etc.) (UNEP, 2017).

As the KPMG survey mentioned, there is an increasing global trend in using ESG for sustainability reporting even though there is a significant variation among disclosed information on each E, S, and G factor. For instance, considering the world's 250 largest companies, the disclosure of sustainability information for environmental risks increased from 48% in 2017 to 64% in 2022 and, currently, almost 49% of these companies acknowledge social elements as business risks (e.g. community engagement, safety, and labour issues) whereas only 44% report governance elements as possible risks stemmed from corruption and lobby (KPMG, 2022).

During the last decade, the uptake of corporate sustainability information has continually increased and the concern for sustainability reporting become a rapidly evolving area of interest dealing with a variety of frameworks for monitoring and reporting which varies across sectors, size, complexity and location. In this respect, the most well-known international standards generally recognized as good practices (as presented in figure 2) are led by GRI, SASB, ISO 26000, SA8000, and AA1000.

GRI Sustainability Reporting Standards (GRI Standards) were developed by "Global Sustainability Standards Board" (GSSB) to promote sustainability reporting. The revised 2022 edition of GRI Standards enables companies to publicly disclose the major effects on the economy, environment, and population, as well as how these consequences are addressed. Regarding the company's effects and contribution to sustainable development, the sustainability information provided assists stakeholders in making knowledgeable decisions. Table 1 presents the overall informational structure of the GRI Standards, which support the sustainability reporting process, without taking into consideration goals, targets, thresholds or any other benchmarks for the sustainability performance of the company (GRI, 2022).

Table 1. Sustainability information embedded in the 2022 GRI Standards

The series of standards	Building Blocks & Structure of information
"Universal standards" (valid for all organisations)	GRI 1: Foundation 2021 with - key concepts for sustainability reporting - reporting principles and requirements
	GRI 2: General Disclosures 2021 with - the context for comprehending the organization's impacts; - disclosure obligations regarding reporting and other organizational elements (such as activities, governance, and policies)
	GRI 3: Material Topics 2021 with - advice on how to choose relevant topics (i.e. the most significant impacts on the economy, environment, and people, including human rights) - requirements for disclosure of the organization's methodology for selecting material topics, its list of material issues, and how it manages each topic
"Sector standards" (according to the organisation's operating sector)	- provide the organization with information on the expected material topics - applicable when deciding what information to present for the material themes and what organizational topics are material
"Topic standards" (according to the organisation list with material topics)	- have disclosure requirements that demand the reporting of information concerning organizational impacts related to specific issues

Source: Global Reporting Initiative (GRI, 2022)

The actual and potential negative impact on the economy, the environment and people need to be duly addressed through prevention and/or mitigation. In this regard, the GRI Standards take into full consideration the international instrument's advice (i.e. OECD Guidelines Due Diligence Guidance for Responsible Business Conduct) to identify, prevent, mitigate, and account for real and potential harmful impacts on an organization's operations, supply chain, and other business relationships. This instrument offered businesses useful assistance in their efforts to prevent and manage negative effects that may be connected to their operations, supply chains, and other economic interactions that pertain to employees, human rights, the environment, bribery, customers, and corporate governance (OECD, 2018). Notably, the OECD Guidelines for Multinational Enterprises, the first international document to integrate respect for human rights as a corporate responsibility, first introduced the idea of due diligence. They also recommended integrating risk-based due diligence as an integral part of business decision-making and risk management systems into all areas where business operations intersect with society (OECD, 2011).

Another advanced approach has been introduced by Sustainability Accounting Standards (SASB standards) developed by “the International Sustainability Standards Board” (ISSB) of the IFRS Foundation, aimed to assist companies in disclosing financial materiality, and decision-useful sustainability information to investors. The understanding of sustainability accounting is based on how a firm oversees and manages the environmental and social impacts that result from the creation of its products and services, as well as how it governs the environmental and social capital required to build long-term value. The standards also refer to sustainability as ESG (Environmental, Social, and Governance) issues and depend on the company to decide on the applicable standard, the disclosure topics which are financially material to the business, and the associated metrics to report (SASB, 2018a).

To properly facilitate the sustainability information, the SASB standards offer a unique set of frameworks for a wide range of industries grouped in 11 economic sectors (i.e. consumer goods, food & beverage, resource transformation, extractives & minerals processing, health care, services, etc.) following a fundamental view of their business model, their resource intensity and sustainability impacts, and their sustainability innovation potential. Each industry-specific standard includes a minimum set of disclosure topics specific to that industry, a set of quantitative and/or qualitative accounting performance metrics, instructions on definitions, scope, implementation, and compilation, as well as metrics that measure the size of a company's operations and are intended to be used in conjunction with accounting metrics to normalize data and facilitate analysis (SASB, 2018a; SASB, 2018b).

Worthy, the studies figured out the worldwide adoption of both standards (i.e. GRI Standards and SASB standards) in the practice of reporting sustainability information: 78% of the world's 250 largest companies adopted the GRI Standards for reporting (up from 73% in 2020) while the report against the SASB standards is adopted by more than 50% of companies in the USA and only by 35% from Europe. Also, almost three-quarters of companies surveyed report on the SDGs (KPMG, 2022).

Added to the trustworthy stream of international frameworks that help companies tackle sustainability challenges through their core business, ISO 26000 promotes an integrated view of economic, social and environmental concerns. It complements, but not replaces other existing initiatives and international instruments, promoting a common understanding of social responsibility. The foundation relies on the core subjects of social responsibility such as organizational governance, human rights (e.g. due diligence), labour practices (e.g. employment relationships, health and safety), environment (e.g. pollution and sustainable resource use, climate change), fair operating practices (e.g. anti-corruption, fair competition, social responsibility in the value chain), consumer issues (e.g. fair marketing, factual and unbiased information, sustainable consumption), and community involvement and development (e.g. education and culture, health). The benefits come from incorporating ethical

conduct into the organization's current systems, rules, practices, and procedures in order to evaluate the organization's commitment to sustainability and overall performance (ISO 26000:2010, 2010).

In addition, a narrower approach to sustainability information was brought by the Social Accountability Standard (SA8000), developed by "Social Accountability International" (SAI) which provides an auditable, voluntary standard, universally applicable to any type of organisation, regardless of size, location or industry sector. It encourages businesses to operate in a way that is respectable to employees and demonstrates their devotion to the highest ethical standards (SAI, 2014a). The social subjects are addressed by the introduction of normative elements to which the organization need to comply, and a set of nine social accountability requirements used for auditable third-party verification and certification (i.e. child labour, forced or compulsory labour, health and safety, freedom of association & right to collective bargaining, discrimination, disciplinary practices, working hours, remuneration, the management system). Likewise, the framework defines performance expectations that organizations claiming conformance with the normative requirements of SA8000 have to be compliant with, as a minimum. Each performance indicator provides a quantitative or qualitative measure of the performance directly related to one, or more, of the requirements of the standard (SAI, 2014b).

Global voluntary initiatives, governmental legislation, and the expectations of investors and other stakeholders have all contributed to the rising demand for high-quality information and reporting on sustainability issues. In this respect, the **A1000 Series of Standards** developed by the "AccountAbility Standards Board" (ASB) establish frameworks based on principles that are utilized by international public and private organizations to show leadership and excellence in accountability, responsibility, and sustainability (ASB, 2018). The AA1000 Series consists of one set of Guiding Principles for developing, analyzing, and implementing sustainability initiatives and two Standards (i.e. stakeholder engagement strategies related to sustainability; reliability of progress reports on sustainability performance). Applicable to organisations of all types and sizes, the standards advanced the organizations' commitment towards ESG issues and provide requirements and guidance on how to assess adherence to the accountability principles as the basis for managing sustainability performance such as inclusivity (i.e. the involvement of stakeholders in the decisions that affect them), materiality (i.e. decisional factors need to be clear about the sustainability topics that matter), responsiveness (i.e. the need to act transparently on material sustainability topics) and impact (i.e. the organization accountability for monitoring and measuring the impact on the broader eco-system) (ASB, 2020).

Finally, as the world effort is geared to collectively address the issues of climate change and social inequalities, there is an increasing need to have the same referential framework for sustainability-related information, processes, and systems. In this respect, the new Directive 2022/2464/EU on Corporate Sustainability Reporting underlined the significance of trustworthy, comparable, and pertinent data on sustainability risks, opportunities, and consequences relating to economic, social, and environmental elements (European Union, 2022).

As result, the new series of European Sustainability Reporting Standards (ESRS) standards (draft versions), elaborated by the "EFRAG Sustainability Reporting Board" (EFRAG SRB), took into account the alignment process aimed to monitor and disclose sustainability information in a full, coherent, comprehensive, integrated and effective manner. Through more reliance on the sustainability matters assessment process, the ESRS standards considered the series of international instruments (e.g. UN Sustainable Development Goals, UN Global Compact Principles, UN Responsible Investment Principles, GRI standards, OECD Guidelines for Multinational Enterprises, etc.) and ensured coherence with EU legislation and SDGs through the inclusion of data points with adequate metrics and targets. The set of ESRS standards is composed of two building blocks of sustainability information such as cross-cutting standards (i.e. general requirements and general disclosure) and topical standards (i.e. environment, social, and governance issues). The development process is still in progress and the new standards sets are expected to be released next year and contain more sectors specific standards (e.g.

agriculture, energy production, transportation, etc.) as well as standards for SMEs. In the same vein, big-size companies are expected to mandatory report sustainability information from 2024 and listed SMEs will be compelled to report from 2026 with a further possibility of voluntary opt-out until 2028 (EFRAG, 2022).

Undoubtedly, the concern for alignment within international standards is still valid and a further challenging task is to maximize interoperability between ESRS and the proposed IFRS Sustainability Disclosure Standards, developed by the “International Sustainability Reporting Standards Board” (ISSB), and aimed to become the global standard for sustainability disclosures for financial markets. Tackling the investors’ views, the IFRS standards establish a thorough baseline of sustainability-related financial data by defining the essential elements of a full set of financial disclosures connected to sustainability. The elaboration process is in progress and is intended to cover relevant disclosures requirements about the company’s governance of sustainability-related risks and opportunities, risks strategies, the impact of companies’ actions on reputation and performance, as well as effects and reliance on people, the environment, and the economy when they are pertinent to determining the entity's enterprise value (IFRS, 2022).

By summing, there is a growing interest in holding companies accountable for their actions for sustainability linked to the SDGs. The analysis of existing approaches and trends underlines the range of international initiatives and frameworks for monitoring and reporting vast sustainability information which varies by sector, size and complexity as well as location.

Conclusions

The connections between sustainability performance and the progress towards SDGs led to a growing number and diversity of data and information (e.g. conceptual resources, methodologies, tools, frameworks, standards, etc.) developed and used to identify, analyse, measure, verify and report a wide range of sustainability matters. This often leads to confusion with regard to the proper use of data and information to generate actionable outputs and science-based resources. Reliable and comparable sustainability-related information is a prerequisite for having good readiness within the global plan to finance sustainable growth as well as for the corporate/business level which is expected to strengthen its accountability related to actions towards reduction of carbon emissions, diminishing biodiversity loss, and tackling societal inequalities.

Government legislation, investor and stakeholder expectations, as well as international voluntary initiatives have all contributed to the rising demand for high-quality information and reporting on sustainability issues. Sustainability reporting is a fast developing topic with many different monitoring and reporting frameworks, some criteria that overlap, and problems with worldwide consistency. Although the worldwide reporting of sustainability information seems to be led by the adoption of the GRI and SASB standards, the range of metrics and disclosure patterns is wide and displays a high variation across industries, sectors, size, complexity and location.

Seeing that world attempts to collectively tackle the issues of decoupling economic prosperity as far as possible from environmental degradation a need becomes apparent for harmonized approaches and consistent methodologies to monitor the progress toward sustainable development at macro and micro levels (i.e. country and corporate). In this respect, the adoption of both the SDGs index and the Spillover index would bring certain benefits in shaping national action plans and regional policies in the area of sustainable development. Also, from the corporate side, it is extremely important to have the same referential frameworks for sustainability information to ensure the consistency and coherence of monitoring and reporting. The forthcoming international initiatives driven by the new Directive 2022/2464/EU as well as the ISSB (i.e. European Sustainability Reporting Standards and IFRS Sustainability Disclosure Standards) are of valuable importance for counteracting the fragmentation of

available sustainability information and assuring the alignment and interoperability between sustainability information.

The limitation of our research should be noted in terms of conceptual analysis of monitoring and reporting sustainability-related information as well as the limited number of international tools, initiatives and standards selected to be examined. Also, the boundary of the study excluded information about the huge array of data related to tools, approaches, and methodologies employed for measuring metrics, targets, or any other indicators for sustainability performance in the area of economic, environment and social impact (e.g. Life Cycle Assessment-LCA, Life Cycle Costing-LCC, Social LCA, etc.). Further research is needed for a better alignment of assessment methodologies for sustainability performance with the envisaged sustainability reporting standards. In a broader sense, the outcome of this study contributes to the existing literature on sustainability disclosure and the observations may be particularly relevant to those stakeholders (e.g. decisional factors, business professionals, researchers, academics, and other subject matter experts) who ought to improve their understanding and conceptual connections among monitoring and reporting sustainability information at macro and micro levels.

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Author Contributions: Conceptualization: *B.F, E.F., M.C.*; methodology: *B.F, E.F., M.C.*; data analysis: *B.F, E.F., M.C.*; writing—original draft preparation: *B.F, E.F., M.C.*; writing; review and editing: *B.F, E.F., M.C.*; visualization: *B.F, E.F., M.C.* All authors have read and agreed to the published version of the manuscript.

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