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Key aspects of sustainability reporting quality and the future of GRI

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Abstract

Design/methodology/approach: The authors conduct a review of papers published in leading journals concerning sustainability reporting to analyse the progress in the literature regarding three important reporting topics: materiality, comparability and assurance.

Purpose: To investigate the current state of knowledge in key reporting aspects in relation to sustainability reporting in general, and to reflect on their relevance to GRI in particular. In doing so, the major gaps in that knowledge are identified, and the paper proceeds to suggest further research avenues.

Findings: The review conducted in this study shows that there is still work to be done to ensure high quality and consistent sustainability reporting. Key takeaways from the review of the extant literature include: There is ongoing debate about the nature of sustainability reporting materiality, and single versus double materiality. Clearer guidance and better contextualisation are seen as essential for comparability and, as GRI suggests, there is an important link to materiality that needs to be considered. Finally, assurance has not been mandatory under the GRI, but the current development at EU level might lead to the GRI principles being incorporated in the primary assurance standards.

Practical implications: In this paper, the authors review and synthesise the previous literature on GRI reporting dealing with three key reporting aspects.

Social implications: We extract some takeaways from the literature on materiality, comparability and assurance that will all be key challenges for GRI in the future.

Originality: This paper provides an updated review of the literature on GRI reporting dealing with three key reporting aspects.

Keywords: GRI, sustainability reporting, materiality, comparability, assurance

Paper type Editorial Paper

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1. Introduction

Non-financial disclosure[1] is a regular reporting practice in large companies, which became mandatory for European listed companies due to the European non-financial reporting Directive (NFRD) (European Commission, 2014) amending accounting Directive 2013/34/EU (La Torre et al., 2018), but remains voluntary in many jurisdictions. Further, non-financial disclosure is increasingly important within global initiatives such as the 2030 Agenda (Bebbington and Unerman, 2018). Indeed, this agenda explicitly requires Member States in SDG 12.6 to: "Encourage businesses, especially large and transnational corporations, to adopt sustainable practices and integrate sustainability information into their reporting cycle" (United Nations, 2015).

The use of non-financial disclosure as a corporate reporting practice has been discussed and promoted by regulators and academics for a long time. Thus, as Adams *et al*. (2022, p.26) explain, the "globalisation [that took place] during the latter half of the last century, [made] western companies set up operations in less regulated countries" and consequently, "there was an increasing demand to measure firms' impact on economies, society and the environment". Globalization was an important element in the emergence of standards for sustainability reporting (Adams *et al*., 2022). Global Reporting Initiative (GRI) was the first of the initiatives to come to light and has become the main reporting reference worldwide (KPMG, 2020, 2022).

GRI has worked since its inception to develop a common language to guide companies on sustainability reporting "which enables informed dialogue and decision making around those impacts" (GRI, 2022). In 2000, the first version of GRI guidelines was launched at the turn of the century (GRI G1 Guidelines). Different guidelines succeeded this one (GRI G2, GRI G3, GRI G3.1 and GRI G4 guidelines (GRI, 2022)) until 2016 when GRI developed its first standards (instead of guidelines) (GRI, 2021a). Some years later (2021), GRI made public the revised Universal Standards (GRI, 2022). There are three 'Universal Standards': GRI 1, about the reporting principles; GRI 2, regarding required disclosures; and GRI 3, about defining material topics (GRI, 2021a). The Global Sustainability Standards Board (GSSB) was created "for setting the GRI Standards" and "it works exclusively in the public interest" (Adams *et al*., 2022, p.27).

With the passage of time, other standards that were more financially oriented, such as those endorsed by the International Integrated Reporting Council (IIRC) or the Sustainability Accounting Standards Board (SASB) appeared in the sustainability reporting field (see, for example, Adams and Abhayawansa, 2022; Greenstone, 2014). In this proliferation of different standards, the International Financial Reporting Standards (IFRS) Foundation suggested in

September 2020 the need for a single sustainability standard-setting body to facilitate the harmonisation and comparability of non-financial disclosure (Giner and Luque-Vílchez, 2022). In March 2022, the IFRS/ISSB published exposure drafts IFRS S1 'General Requirements for Disclosure of Sustainability-related Financial Information' and IFRS S2 'Climate-related Global Reporting Initiative Disclosures'. In June 2020, the European Financial Reporting Advisory Group (EFRAG) formed a task force to provide advice to the European sustainability reporting standards (ESRS) (Giner and Luque-Vílchez, 2022). These standards are derived from the Proposal for Corporate Sustainability Reporting Directive (CSRD) launched by the European Commission in April 2021 (European Commission, 2021). This proposal[2] aimed to improve the NFRD, which failed to achieve comparability in part due to the lack of establishment of compulsory standards for non-financial disclosure (La Torre *et al*., 2018).

On 5 January 2023 the CSRD entered into force, stating, among other objectives, that it aims: (i) "to increase the comparability of data and harmonise standards" (p. L 322/18), (ii) to potentiate "the double-materiality perspective, in which the risks to the undertaking and the impacts of the undertaking each represent one materiality perspective" (p. L 322/24), iii) to foster "the gradual approach from limited to reasonable assurance" (p. L 322/35) (European Commission, 2023). EFRAG is working with GRI as the main supporter (Giner and Luque-Vílchez, 2022). In May 2022, because of this co-construction process, the first set of ESRS prepared by EFRAG was published for public consultation[3], and on 15 November 2022, the agreement on the first set of draft ESRS to be submitted to the European Commission was published (EFRAG, 2022). Given this background it is timely to consider what the future holds for sustainability reporting standards, and how this could have an impact on 'the future of GRI'.

Evidence has also shown that, although there has been a marked improvement in sustainability reporting in recent years (KPMG, 2020, 2022), there are particular concerns about key reporting concepts such as the lack of materiality (Archel *et al*., 2008; Boiral, 2013), the low level of the quality of assurance (Larrinaga *et al*., 2020), and the lack of comparability of information (Diouf and Boiral, 2017; Farneti and Guthrie, 2009). These issues together play a pivotal role in improving the quality of reporting according to GRI and are enshrined in GRI's Reporting Principles (Safari and Areeb, 2020). GRI's revised Universal Standards also provide more detailed guidance on materiality to foster the comparability of information.

Given the prominence of these issues in standard setters' objectives, and the concerns raised in academic research, this paper provides a review of the literature on GRI reporting dealing with these three concepts: materiality, comparability and assurance. We focus on these concepts as previous literature underlines their significance in improving the quality of reporting according to GRI, as well as CSRD, which recognizes their key role in the new sustainability reporting framework in Europe. To this extent, the paper aims to investigate the current state of knowledge of materiality, comparability and assurance in addressing GRI standards for corporate reporting practices concerning social and environmental issues. In doing so, we reflect on some of the gaps in that knowledge, and the paper proceeds to suggest both further research avenues, and more broadly, make some reflections about what the future may hold for GRI.

GRI has been recognised and used by many listed companies as well as finding wide diffusion among non-listed companies and organisations (KPMG, 2020, 2022). While throughout the years there have been many diverse expressions referring to this type of reporting, GRI has adopted the term sustainability reporting, defined as "the practice of measuring, disclosing, and being accountable to internal and external stakeholders for organizational performance towards the goal of sustainable development" (GRI, 2011, p.3). Such reporting has also been termed 'ESG reporting', 'non-financial reporting' and 'social and environmental reporting'. This paper will use the term 'sustainability reporting'.

To achieve the aims of the paper, we review articles focusing on the interrelation between GRI and materiality, comparability and assurance in leading journals concerning sustainability reporting from 2000 to 2022. This complements the review by Adams *et al*. (2022, p.26) on GRI implementation that emerged between 2010 and 2021, discussing the applicability; nature of adoption; materiality assessment; understanding; voluntary versus mandatory status of GRI Standards; and the "quality of assurance". This paper contributes to these debates by highlighting some additional issues relevant to the future of GRI reporting standards, and more broadly for the future of standard-setting and regulation process.

In addition, this piece acts as an introduction to the SAMPJ special issue – "The Future of GRI", which aims "to contribute to the literature on the historic and future role of GRI in responding to stakeholder demand for enhanced ESG information" and "the contributions GRI has made to the sustainability reporting space and the practice of sustainability reporting" (Luque-Vílchez *et al*., 2021). The analysis of how GRI is dealing with materiality, comparability and assurance is pivotal to informing GRI on how to develop future policies, particularly considering the current complex and evolving standard-setting process (Abhayawansa *et al*., 2022; De Villiers *et al*., 2022; Giner and Luque-Vílchez, 2022). The pieces included in this special issue can be classified along three main lines. First, we include a set of two papers focusing on the application of GRI in sectoral/ad hoc contexts such as those related to the circular economy and universities. Second, two pieces (one academic viewpoint and one research paper) relate to the debate around the progress and predictions of two "new" institutions in this field (Giner and Luque-Vílchez, 2022), the EFRAG and the IFRS. A further research paper also discusses where GRI stands in this field. Third, the last two academic pieces in the special issue (one viewpoint and one research paper) provide insights on the reporting principles applied in sustainability reporting. Finally, and worthy of particular note, we provide three practitioner viewpoints which draw on the authors' practical experiences, and some of the issues referred to in the academic insights are discussed from the point of view of practice, which allows us to obtain a more comprehensive view of these issues.

The rest of the paper is structured as follows. Section 2 provides some background to sustainability reporting principles and the importance of the three reporting aspects (materiality, comparability, and assurance). Section 3 then presents an overview of the approach taken and the state of the literature on the above-mentioned three key (and timely) reporting aspects in connection with GRI. Section 3 portrays the new insights derived from the papers conforming to this special issue. Section 4 provides some concluding remarks.

2. Background: Reporting Principles

A major reason given for adopting global sustainability standards is to raise non-financial disclosure practices to a level equivalent to financial reporting (Brammer and Pavelin, 2008; Chauvey *et al.*, 2015; Perez and Lopez-Gutierrez, 2017), and this has been a matter of recent debate as discussed in the previous section.

The International Accounting Standards Board (IASB) produces the International Financial Reporting Standards including the International conceptual framework, which was revised in 2018 (IFRS, 2018). The IASB identifies qualitative characteristics of financial disclosure, which include faithful representation, relevance; comparability, understandability, verifiability and timeliness (IFRS, 2018, p. 6). However, submissions to the public consultations on the IFRS Foundation's more recent consultation paper on Sustainability Reporting (IFRS, 2020) standards for investors provided many arguments for why financial reporting principles are not appropriate for the development of sustainability reporting standards, given the existence of comprehensive standards such as the GRI (Adams, 2020).

As noted in the introduction, the GRI Guidelines contain a set of Reporting Principles (previously the Principles for Defining Report Quality and Principles for Defining Report

Content), which aim to facilitate high-quality sustainability reporting (Boiral, 2013; Diouf and Boiral, 2017; Safari and Areeb, 2020). The GRI principles comprise accuracy, balance, clarity, comparability, completeness, context, timeliness and verifiability, which clearly overlap with those in the IASB conceptual framework. Materiality is now covered in a separate standard GRI 3 Material Topics, which are defined as “topics that represent the organization’s most significant impacts on the economy, environment, and people, including impacts on their human rights” (GRI, 2021a).

The GRI principles are broadly reiterated by the IIRC, who provides six guiding principles for preparing an integrated report, including information on what the report should focus on (i.e. a strategic focus, ensure connectivity of information, and include stakeholder responsiveness), and also includes principles of report quality similar to those published by GRI, viz materiality and conciseness, reliability and completeness, and consistency and comparability, and understandability and timeliness (IIRC, 2013). Further, the final text of the renewed EU CSRD includes fostering comparability, the double-materiality perspective, and increased emphasis on assurance (European Commission, 2023).

Thus, the three areas of interest in this review, materiality, comparability and assurance, are distinctly related to GRI’s (2021) Reporting Principles, are arguably key elements of high-quality reporting common to most reporting frameworks (e.g., Safari and Areeb, 2020), and have been the subject of a number of studies (e.g., Kolk and Perego, 2010; Park and Bronson, 2005).

3. A reflection on three key issues

We provide an overview of the extant literature on materiality, comparability, and assurance, and any interrelations between them, reflecting on any links to GRI. Articles published in the Scopus database of peer-reviewed journals with an impact factor were identified using the keywords: ‘assurance’, ‘materiality’ and ‘comparability’, along with combinations of these words with ‘GRI’, ‘ESG’, ‘sustainability’, ‘CSR’ and ‘non-financial’ in the publication title, abstract, and keywords for the 2000-2022 period (given the introduction of GRI guidelines in 1999 marked the growing research interest on sustainability reporting). The abstract of each article was then reviewed to evaluate whether the article was related to sustainability reporting, resulting in 47 initial articles being identified. Each article was then reviewed to determine if it addressed any interrelation between GRI and assurance, materiality, and comparability and therefore included in the review presented below. The review includes journals from business, management, and accounting as well as others engaged in sustainability reporting research. For each of the three concepts reviewed, we provide an overview of the concept, how it currently relates to GRI (and other) reporting standards, challenges in understanding or implementing the concept, and some areas in need of more investigation.

3.1 Materiality and GRI

Materiality is a fundamental concept to determining the importance of a matter in producing financial reports and accounts (Edgley, 2014). Materiality plays an important role in financial reporting; the clarity of financial reports can be reduced with the disclosure of irrelevant information as it might decrease the understandability of material information. Whereas materiality is a fundamentally important accounting concept, materiality has only recently developed to become a prominent concept in sustainability reporting guidelines (Unerman and Zappettini, 2014) such as GRI. Although being a prominent concept in sustainability reporting, there is no specific procedure to assess materiality in the context of sustainability reporting (Machado *et al*., 2020).

Although GRI published the first version of its international framework for comprehensive corporate sustainability reporting the GRI G1 Guidelines in 2000, which developed further to GRI G2 Guidelines in 2002, it was not until 2006 that the GRI G3 Guidelines included detailed consideration of materiality. The GRI G3 Guidelines (GRI, 2006, p.8) noted that materiality is "the threshold at which an issue or indicator becomes sufficiently important that it should be reported" (Unerman and Zappettini, 2014). The G3 Guidelines also contained advice on how to determine whether specific items were material enough to be disclosed in sustainability reports (De Villiers *et al*., 2022). The views of a range of external stakeholders regarding the importance of an issue, as well as internal organizational assessments regarding the significance of that item, should be combined in determining its materiality under G3. Compliance with any G3 application level (A+, A, B, C) required not only the consideration of materiality but also explanations of materiality consideration processes, where descriptions about how the content and disclosures of the sustainability report were decided upon. The 2011 GRI G3.1 Guidelines published in 2011 and the 2013 G4 Guidelines did not vary substantially from the previous G3 definitions and processes for determining materiality, apart from greater emphasis on using materiality criteria to warrant that sustainability reports are more transparent, relevant, credible, and user-friendly (Unerman and Zappettini, 2014). This focus continued in the 2021 GRI Standards update, which brought stronger guidance on materiality to enhance consistency and comparability (Adams *et al*., 2022). This also reflects the necessity of using sector-specific materiality frameworks, in which stakeholders do evaluate sustainability reporting quality (Schiehll and Kolahgar, 2021).

Stakeholders are central to GRI's approach (Leeson & Kuszewski, 2023) and proactive stakeholder engagement is important for materiality disclosure in the sustainability reporting process for both defining materiality and disclosing relevant information (Manetti, 2011; Ngu and Amran, 2018), and GRI is widely adopted by European companies (Moratis and Brandt, 2017). One of the challenges related to the concept of materiality is that it has generally been formed by a market logic (placing shareholders at the centre of decision making) and a professional logic (that emphasises financial audit) (Edgley *et al*., 2015). For sustainability, reporting materiality definitions could be grouped into: financial materiality, social and environmental materiality and double materiality (Abhayawansa, 2022). Adding third logic to the materiality model, one that puts broader stakeholders at the centre of decision making, (Cerbone and Maroun, 2020) would help to identify material sustainability issues that incorporate all stakeholder perceptions and expectations (Calabrese *et al*., 2015), not just shareholders and investors. This would also facilitate better ranking of the most important material sustainability issues for companies and their stakeholders (Calabrese *et al*., 2016) and promote a long-term view (De Villiers *et al*., 2022). However, the evaluation of materiality and disclosure of sustainability is a value-laden decision about what is deemed important in corporate sustainability, and does not completely reflect the complexity of sustainable development (Puroila and Mäkelä, 2019). Assessing materiality is complex, as a great deal of non-financial information cannot be quantified (Lakshan *et al*., 2020). Companies' GRI G4 materiality disclosures do not contain comprehensive descriptions of the underlying processes (Beske *et al*., 2019).

Using GRI Standards *per se* does not lead to good quality reporting or assessment of materiality, but the application of GRI Standards helps to describe the complexity and level of detail at which these are applied (Torelli *et al*., 2020). A multi-stakeholder logic (that considers shareholders and broader stakeholders) incorporates the necessity to comprehend companies' longer-term value drivers, expectations and risks, as well as their impact on the environment and society, which requires changes in corporate reporting (De Villiers *et al*., 2022).

In the EU, for example, sustainability reporting has changed substantially over the past two decades, with a movement towards double materiality (Baumüller and Sopp, 2022). The recent renewed CSRD promotes, among other things, double-materiality (European

Commission, 2021), which proposes that sustainability disclosures should be evaluated by taking an "outside-in" perspective and an "inside-out" perspective (European Commission, 2021). Academic research suggests that double materiality (and impact materiality) has advantages, such as the improvement of the focus on the wider context of sustainable development (Adams *et al*., 2021) and the increment of reporting quality by considering evidence about impacts and dependencies in the short, medium and long-term, which increases reporting quality (Adams *et al*., 2021; Cooper and Michelon, 2022). However, EU sustainability reporting regulatory and standard-setting processes may result in difficulty for all material matters to be disclosed.

Thus, there are two camps in the debate about the best approach to sustainability reporting materiality (Abhayawansa, 2022). In the first camp are those who follow the International Sustainability Standards Board (ISSB) position that sustainability-related financial information should satisfy investors' needs (i.e., the "outside-in" perspective) (Adams *et al*., 2021). The second camp advocates double materiality, applying both the outside-in and inside-out perspectives proposed by the European Commission (2019). That is, reports should provide financially material information to investors, and provide secondary stakeholders with environmentally and socially material information, by adopting impact materiality. One suggestion is that aligning the European and ISSB approaches could be done by reintroducing 'single materiality' where GRI standards can be used as a starting point to identify material topics. Single materiality would align these two camps as it would require information to be material for both investors and stakeholders and not from either or both (Abhayawansa, 2022). Such a single materiality approach would draw up a triple bottom line where organisations could draw on the interrelationships and dependencies between society, environment, and economic well-being of humans, which could then form a strong basis for higher quality sustainability reports that are comparable. More research will be key to furthering this proposal.

3.2 Comparability and GRI

Comparability aims to allow users to analyse the performance of the reporting organization over time. To facilitate comparability, information must be consistent and reliable (IASB, 2008). GRI (2021b) includes comparability as one of its reporting principles and implicitly links it to materiality by advocating the need for consistency when determining material topics (Korca *et al*., 2023). Notwithstanding that the concept of comparability has been receiving increased attention (Christensen *et al*., 2021), particularly from investors (Adams and Abhayawansa, 2022), there is still relatively limited evidence on this topic (Korca and Costa, 2021).

As noted above, recent debates and discussion about harmonization of reporting standards highlight the aspect of comparability, particularly for stakeholders. Dragomir (2012) and Langer (2006) have previously indicated that stakeholders, notably socially responsible investors, use comparative analyses to assess CSR related activities of companies. Such an analysis provides a clear understanding of a company's existing and future position within an industry (Cohen *et al*., 2012). Clear comparability also increases the utility of information, facilitating corporate evaluation (McCahey and McGregor, 2013) and investors are increasingly interested in more comparable sustainability information (Adams and Abhayawansa, 2022). To meet the comparability characteristic of disclosure quality, organisations must include performance against benchmarks, hence the importance of indicators such as those in the GRI standards and allowing users to assess the non-financial performance over time and against others in the same sector (Diouf and Boiral 2017). To facilitate comparability, other factors include consistent methods, reporting layout, and explanations of the assumptions used to prepare information (GRI, 2015) as well as agreement on what constitutes materiality.

However, the issue of comparability is complex (Jeriji *et al*., 2022), and a number of studies have identified difficulties. For example, there is a large amount of social and environmental data available, and multiple sustainability frameworks exist. Cardoni *et al*. (2019, p.1) reveal that the difficulties related to comparability are still relevant "even for companies that are theoretically most inclined to be comparable". Similarly, Boiral and Henri's (2017) comparison of disclosure against 92 GRI indicators illuminates reasons underlying the problems with rigorously measuring and comparing sustainability performance, even of firms in the same sector, and which are following the same reporting guidelines. Boiral *et al*. (2022) also show the difficulties in comparing companies' performance, regardless of how intrinsically reliable the disclosed data are. Their study highlights four main difficulties that prevented a rigorous comparison of the disclosure against GRI indicators on climate performance in sustainability reports of 17 car manufacturers, related to measurement methods and scope, no standardisation of data, and poor contextualisation (Boiral *et al*., 2022). Thus, the outcome of the introduction of standards to enhance comparability is that there is effectively comparability in terms of the standards adopted, but not in terms of how they are applied (Cerioni *et al*., 2021).

Moves towards harmonisation aim to improve comparability of reporting practices and is not a new concept (Nobes, 1991). A more mandatory approach is considered more likely to promote and foster harmonization, standardization and therefore comparability (Christensen *et al*., 2021). Notably, studies show greater comparability between reports that are issued in adherence to global standards, especially GRI standards (Einwiller *et al*., 2016), which include clear reference to the concept of comparability. In Europe, there have been significant attempts to move in this direction, with an explicit aim of improving comparability, with the introduction of NFRD. However, this Directive did not sufficiently achieve its aims in part due to the lack of establishment of mandatory standards for non-financial disclosure (La Torre *et al*., 2018) and consequently, the Directive was revised (European Commission, 2019). Part of the proposal for the revision of the Directive is the development of the ESRS for EU entities, with the aim of enhancing information comparability and fostering "comparability across and within market sectors".

As noted earlier, EFRAG is developing the ESRS in partnership with GRI[4]. The use of GRI standards has been consistently shown to promote comparability (Tshopp and Nastanski, 2014), but, as noted by Jeriji *et al*. (2022), evaluation of the GRI's contribution to comparability is a complex issue, particularly for countries with less sustainable business environments and poorer CSR performance, and it imposes an economic cost on organisations. The additional burden that would be imposed on organisations under mandatory reporting requirements is an important issue and applies to other aspects of ensuring high quality reports, such as assurance. Further research on developing countries is needed to better understand how more comparable reports could be implemented in these contexts (Tilt, 2018).

3.3 Assurance and GRI

Assurance aims to offer accountability to stakeholders (Junior *et al*., 2014) and enhance the credibility and reliability of reporting (Flasher *et al*., 2018). The evolving practice of assurance has not been regulated in many countries, which is why different types of assurance service providers apply different scopes, methodologies and assurance statements (Deegan *et al*., 2006; García-Sánchez, 2020; Moneva *et al*., 2006; O'Dwyer and Owen, 2005).

According to KPMG's survey of reporting practice (2022), 63% of the top 250 of the world's largest companies have used assurance services on their sustainability reporting practice. This reflects the relevance of sustainability reports as well as the transparency demanded by stakeholders. Companies from stakeholder-oriented countries are more likely to have a sustainability report assured (Kolk and Perego, 2010). The practice of external independent assurance of sustainability reports began in 1997-1998 and was mainly on environmental reports (O'Dwyer and Owen, 2005). Although the KPMG surveys (2020, 2022) show an increase, it must be understood that an increase in numbers does not necessarily reflect an increase in quality (Junior *et al.*, 2014; Larrinaga et al., 2020). Companies under greater industry pressure are more likely to issue assured sustainability reports, as stakeholders use their power on the company (Martínez-Ferrero and García-Sánchez, 2017). Media attention that reflects public expectations have also had an influence on the use of sustainability assurance practices (Gillet-Monjarret, 2015).

Sustainability reporting, auditing and assurance is an increasing market for 'Big Four' accounting firms as well as the accounting profession in general (Flasher *et al*., 2018). Non-professional third-party assurance providers in this growing market are associated with significantly lower levels of sustainability assurance quality (Dalla Via and Perego, 2020). However, auditors as sustainability assurance providers are more likely to be chosen when these are more specialized in the industry (Ruiz-Barbadillo and Martínez-Ferrero, 2022).

Though the auditability of information is essential for a 'balanced and reasonable' report, assurance is not mandatory for the application of GRI (O'Dwyer and Owen, 2005). This might be one explanation why GRI principles have not been incorporated in the primary assurance standards. The most prominent two frameworks for assurance services globally are AA1000 Assurance Standard (AA1000AS) and International Standard on Assurance Engagements (ISAE 3000) (Junior *et al*., 2014). Non-accounting firms tend to use the AA1000AS framework, whereas accounting firms tend to rely on ISAE3000 (Deegan *et al*., 2006). A study by Manetti and Becatti (2009) on sustainability reports, which applied GRI guidelines, showed that national recommendations have brought innovative elements to sustainability reports that are not always addressed by the ISAE 3000. This is also reflected by Boiral *et al.* (2019a, b) who stated that auditors use a procedural approach drawing on accounting practices, which is not appropriately tailored to the assurance of sustainability information. So, the benefits of assurance of sustainability reports might be reflected by organizations' activities like improving internal controls or issuing more stringent sustainability reports, which would help them to become more transparent and credible to their stakeholders (Junior *et al*., 2014; Junior and Best, 2017).

However, GRI application levels and an existing sustainability department in a company significantly influence the demand for voluntary external assurance of sustainability reports (Ruhnke and Gabriel, 2013). Hickman and Cote (2018) showed voluntary external assurance of sustainability reports is driven by corporations and assurance providers' commercial and professional interests, not primarily to give accountability to external users. However, Larrinaga *et al*. (2020) pointed out that the different levels of sustainability assurance practice cannot be explained by corporate attributes alone but is also affected by the adoption and sustainability assurance practices in different countries.

Assurance providers seldomly refer to disclosure quality as the objective of sustainability assurance missions (Gillet-Monjarret, 2022). However, Clarkson *et al.* (2019) showed that companies with high sustainability commitment are more likely to obtain assurance from a Big 4 accounting firm and adopt higher assurance scope. Without strong market regulation (e.g., as a mandatory requirement), the lack of regulation and standardization throws doubt on the independence and reliability of sustainability assurance (e.g., Boiral *et al*., 2019b, O'Dwyer and Owen, 2005). In Europe, CSRD was published, stating, among other objectives, its aim to foster the gradual approach from limited to reasonable assurance (European Commission, 2023). This might lead to the GRI principles being incorporated into the primary assurance standards, which is a key area for future investigation and commentary.

4. New insights emerging in this special issue: academic and practitioner insights

The ten pieces published in this special issue comprise a set of five academic research papers, two academic viewpoints and three practitioner viewpoints, which collectively touch on the abovementioned issues. These research contributions point towards the understanding of the future of GRI from different methodological, theoretical, and empirical approaches.

The academic papers and viewpoints collectively offer an original contribution to previous literature, as they outline the problems surrounding GRI application from several perspectives. The first two papers investigate the GRI's application in sectors and contexts that have not been of interest in previous studies. At a broad contextual level, Massari and Giannoccaro (2023) offer an empirical investigation on how effective they found GRI in disclosing circular economy strategies, indicating that the GRI standards validate the disclosure of such strategies. They develop a framework that comprises the relationship between GRI standards and circular economy strategies, which underlines the significant role of GRI standards in disclosing the benefits of implementing circular economy strategies. Examining one industry, Moggi (2023) provides a critical analysis of the debate around the use of GRI standards in the sustainability reporting of universities. Starting from the premises of Habermas' thinking, the paper provides a systematic literature review and a content analysis for investigating the role played by GRI and the related implications from the existing literature of higher education institutions. Results reveal a trend in the employment of GRI in sustainability reporting studies of higher education institutions, highlighting some areas where the application of GRI loses its effectiveness (such as research, teaching, and operations). Further, Moggi provides some suggestions on the future role of GRI for higher education institutions, underlying the potential pivotal role that GRI could play in providing dedicated tools for higher education institutions. These two papers show that despite criticisms of GRI implementation (e.g., Boiral, 2013; Boiral and Henri, 2017), these standards could play a key role in improving reporting according to the GRI in different contexts and sectors. The knowledge derived from these papers provides important insights into implementing GRI Standards in practice (De Villiers *et al*., 2022). Some sectors, such as higher education institutions, seem to be struggling to implement GRI Standards. However, such problems, for example of a sectoral nature, seem to be overcome due to the GRI's GSSB currently developing Sector Standards[5]. In the same vein, EFRAG in addition to the already published first set of ESRS (sector-independent standards) which are divided into cross-cutting standards and topic-specific standards (according to the following areas: environment, social and governance); it plans the publication of sector-specific ESRS standards[6]. These second standards will describe requirements that are specific to each different sector (agriculture, livestock and fishing; energy and utility companies; motor vehicles; road transportation; textiles, accessories, jewellery and footwear, among others).

One academic paper and one academic viewpoint focus on the debate around the progress of the EFRAG and the IFRS Foundation. Based on the arena concept (Georgakopoulos and Thomson, 2008; Renn, 1992), Afolabi *et al.* (2023) analyse the influential role of EFRAG and IASB Foundation in sustainability reporting and its implications for the situation of GRI. They inspect several documents and public releases relative to the activities and output of GRI, EFRAG, and IASB Foundation, considering the most important elements of arena concept: “agenda, claims, network of bodies and group engaged interaction and behaviour with arena issues (audience, materiality, scope and core priorities, purpose of reporting, and relevance to sustainable development)”. Results evidence an increase of GRI’s “influence, relevance, and power” in the sustainability reporting arena, as GRI has “social resources that are significantly lacking” among EFRAG and IASB. Further, the potential partnership of GRI and such institutions may improve the function of GRI in the sustainability reporting arena.

Ali *et al.* (2023) discuss the possible disturbances in the sustainability reporting standard-setting field from prioritizing sustainability accounting standards issued by ISSB over GRI. By using Bourdieu’s concept of field, they underline that the preparation of ““legitimate” sustainability reporting standards is likely to be an outcome of struggles between occupants in the sustainability standard setting field". They are concerned that the set of legitimate standards will be prepared not for reasons of relevance in the standard-setting process, but by those with the most power. To this extent, Ali *et al.* (2023) highlight the need to consider the needs of different stakeholders for accepting and applying standards issued by a standardization body.

These suggestions are in line with the literature that points out that the inclusive and deliberative nature of the standards development process facilitates the proper design of standards and favours the creation of collective understandings and convergent expectations around standards among different stakeholders (Bebbington *et al.,* 2012). Overall, these two pieces give a clear picture of the current and evolving landscape of sustainability standard setting. Every day more actors, with different and sometimes conflicting interests, are emerging in this landscape, which makes the task of standard setting very complex. Pesci *et al*. (2023) investigate the entry of EFRAG and IFRS into the field of sustainability reporting, by addressing where GRI stands in this field. They provide an overview of the evolution of sustainability reporting and the role of GRI through the lens of the social and environmental accounting literature, mainly discussing the need for a substantial "revolution in the standardization of sustainability reporting" to address its complexities. Pesci *et al.* (2023) suggest two distinct but intertwined roles that the GRI should play in the future: political and theoretical/technical, as well as the need to change sustainability reporting in revolutionary versus evolutionary terms. They also analyse the implications of considering how the GRI addresses its future role within the sustainability reporting standardization landscape.

The last two academic pieces in the special issue provide insights into the reporting principles applied in sustainability reporting. Korca *et al.* (2023), following the approach of Abhayawansa (2022), identify three main facets that help the authors to critically analyse the application of the principle of comparability in sustainability reporting. These are: "materiality and comparability; benchmarking/monitoring and comparability; operationalisation and comparability". Korca *et al.* (2023) argue for the need to reconsider the principle of comparability, warning against the effects of short-term repetitive disclosures or comparable metrics that are immaterial from an impact perspective. Regarding the relation between comparability and materiality the authors note that while some standard setters (e.g., SASB, the ISSB) promote a financial materiality approach, other standard setters (e.g., GRI) foster the implementation of an impact materiality approach, and EFRAG standards are based on a double materiality approach. Consequently, companies' approaches to materiality are going to be different, depending on the reporting standards used and this causes difficulty for comparability of the information disclosed. Interestingly Korca *et al.* (2023) explain how GRI is the only standard setter that refers to the interplay between comparability and materiality. Regarding facet 2, Korca *et al.* (2023) discuss that inter-firm comparability "is not company oriented". Concerning intra-firm comparability, the authors argue that GRI is the only reporting standard that "clearly emphasises" it "(i.e., comparison with set goals and targets)". In relation to facet 3, it is interesting to note that Korca *et al.* (2023) discuss that, as the literature in the field had pointed out, there are still problems related to technical aspects of metrics calculation, topic-specific disclosures, and qualitative disclosures.

The paper by Vigneau and Adams (2023) provides insights derived from a firm's sustainability report with a complete case study data containing interviews, meetings, and internal documents for understanding "how the GRI reporting guidelines are applied in practice". They discuss the presence "of a transparency gap between voluntary external sustainability reporting and the internal sustainability performance of an organisation". This transparency gap is related to the "measurement of sustainability performance", "comparability" and "reliability". Vigneau and Adams argue that applying GRI (transparency technique) *gives the impression* of acceptable corporate behaviour (transparency norm), but which does not correspond to actual behaviour or results. Further, they advise on the need for mandatory sustainability reporting requirements to prevent the proliferation of such gaps. Overall, these two articles lead us to reflect on the key role that GRI could play in improving the quality of reporting in accordance with the GRI Reporting Principles such as comparability and materiality. The findings of these pieces, in particular the findings of Vigneau and Adams (2023), reveal the importance of addressing another important reporting topic: assurance. As Vigneau and Adams (2023) argue, both assurance and mandatory requirements are necessary to "facilitate accountability to all key stakeholders" and that "such requirements might take the form of standards that put boundaries on judgement and address material sustainable development impacts and that are accompanied by implementation guidance […and…] assurance practices must be developed to cover adherence to reporting principles and processes".

Finally, some of the issues and insights referred to from an academic perspective are also reported from the point of view of practice, which allows us to gain a more holistic and comprehensive view of these issues. First, Leeson and Kuszewski (2023) provide a good overview of GRI standard setting processes and underline the key role of stakeholder engagement in contributing to sustainable development and public interest, providing insights into "the role of stakeholders and their inclusivity in the standard-setting activities of GRI's GSSB". Leeson and Kuszewski provide four interesting examples that illustrate how stakeholders are directly involved in the development of the GRI Standards. Through these examples, Leeson and Kuszewski show how the interests of stakeholders are included in the process of standard-setting and the link of GRI's multi-stakeholder approach with sustainable development. These examples may also suggest a key role of GRI in "setting standards in the public interest". Leeson and Kuszewski (2023) support the discussion by Vigneau and Adams (2023) regarding the need to push stakeholder engagement in order to progress the quality of sustainability reporting. The difference is that while Vigneau and Adams (2023) refer to stakeholder engagement at the organisational level (e.g., taking stakeholders into account in the design of the materiality matrix and putting the results of this exercise into practice), as discussed above Leeson and Kuszewski (2023) refer to the promotion of stakeholder engagement in relation to stakeholder participation in the process of designing standards. One way or another stakeholder engagement is a key principle in promoting sustainable development because as Leeson and Kuszewski (2023) explain: "Fast forward to 2022 […] this core principle of stakeholder engagement is reflected through the UN Sustainable Development Goals, specifically Goal 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels".

Agreeing with academic insights such as those by Korca *et al.* (2023) and Vigneau and Adams (2023), Perera-Aldama (2023) argues that materiality is a pivotal reporting topic. After providing an overview of the evolution of the GRI Framework and Guidelines/Standards, the paper provides a discussion on the construct of materiality. One of the main strengths of this paper is the author's background on the research topic. The author has a long experience as a practitioner in the accounting and sustainability reporting fields. Moreover, he has participated in GRI working groups. One of the most important implications derived from this study is that the clarification of the construct of "materiality" could reduce confusion and as Perera-Aldama (2023) states: "eventually allow for clear identification and differentiation of the financial and sustainability accounting fields at their interface".

Finally, Ann (2023) focuses on the "trends" of applying GRI and their "benefits and challenges" in sustainability reporting in practice. The piece benefits from the experience of the company's reporting team, particularly from the knowledge of CDL's Chief Sustainability Officer. She argues that "to future-proof businesses against the climate crisis and achieve relevant sustainable development goals, companies need to be committed to goal setting, tracking, and reporting ESG performance for sustained growth". In that respect, she argues the pivotal role that “a robust and rigorous approach to sustainability reporting” plays in helping the organisations “to enhance strategy and practices for long-term resilience and business growth”. Ann (2023) complements the first two academic papers (Massari and Giannoccaro, 2023; Moggi, 2023) that investigate the GRI’s application in sectors and contexts that have not been of interest in previous studies, by discussing the benefits and challenges of using GRI from the perspective of a real estate company. Ann (2023) provides some discerning insights on how to integrate sustainability into daily operations. For example, she argues how, in response to the COVID-19 pandemic, her company conducted “more comprehensive materiality assessments … to be in closer alignment with the shifting priorities and expectations of our stakeholders”. This close engagement with stakeholders allows CDL to clearly define issues such as climate resilience, innovation, stakeholder impact and partnerships, among others. This view from a practical perspective is necessary to overcome problems such as those pointed out by Vigneau and Adams (2023) in relation to the "transparency gap" that can relate to issues around the completeness of reporting ("i.e., limited integration of sustainability into day-to-day operations"). The lack of full integration of sustainability into daily operations (partly explained by the lack of stakeholder engagement) is a manifestation of a non-rigorous approach to materiality. Moreover, in the same line as the studies by Afolabi *et al.* (2023), Ali *et al*. (2023) and Pesci *et al*. (2023), Ann (2023) finishes the piece reflecting on the complexity of the current landscape of sustainability standard setting. Ann (2023) highlights that “the setting of international standards can be complicated, due to the need to address complex technical issues, with good arguments being made for different approaches (Eccles, 2022)”. Ann (2023) explains how, throughout its reporting journey, her company has dealt with different relevant international reporting frameworks and standards such as Carbon Disclosure Project (CDP), International Integrated Reporting Framework (IIRF), Task Force on Climate-related Financial Disclosures (TCFD), Sustainability Accounting Standards Board (SASB) Standards for Real Estate Sector and Climate Disclosure Standards Board (CDSB)), putting GRI Standards at its core.

5. Concluding remarks

From the overview of the literature on GRI reporting dealing with comparability, materiality, and assurance, along with the five research papers, two academic viewpoints and three practitioner viewpoints included in this special issue, some important gaps have been highlighted and new insights gained in relation to the current and future role of GRI, particularly around three key areas.

The review of the literature in Section 3 highlights that there is still work to be done to ensure high quality, consistent sustainability reporting. Materiality is a key concept that continues to be debated in terms of its role and definition for sustainability reporting. There are currently two parties in the debate about sustainability reporting materiality where the first party follows the International Sustainability Standards Board (ISSB) position taking an "outside-in" perspective to satisfy investors' needs; while the second party advocates double materiality, considering the outside-in and inside out angles proposed by the European Commission (2019). Aligning the European and ISSB approaches by reintroducing single materiality, where information needs to be material for both investors and stakeholders, GRI standards could be used as a starting point to identify material topics. Single materiality would require information to be material for both investors and stakeholders (Abhayawansa, 2022). That is, materiality needs to be better established before reports will get close to becoming comparable. More research will be key to furthering this proposal. For example, it would be interesting to hold focus groups with both investors and broader stakeholders (sustainability reporting managers and other non-financial stakeholders) to better understand how a single materiality approach helps them and what challenges they face regarding its implementation.

Comparability also requires clearer guidance on measurement (especially for topic-specific disclosures), better contextualisation of data (especially qualitative disclosures), and mandatory requirements to allow reports to be compared. A key finding for GRI is that they are the only standard setter to discuss the interrelationship between comparability and materiality, they have a key role to play in leading a holistic approach.More research will be key to advancing understanding of this concept. Again, future researchers could hold focus groups with both sustainability reporting managers and non-financial stakeholders to better understand what challenges they face regarding comparability and the specific issue of the interrelationship between comparability and materiality. It would be particularly interesting to develop research that helps to understand how comparable reports could be implemented in contexts with less sustainable business environments and poorer CSR performance, given it imposes an economic cost on organisations. To this end, research applying a multi-method approach could be beneficial (see for example, Luque-Vílchez and Larrinaga, 2016). This methodological approach consists of a content analysis of the reports published by companies in these contexts to analyse how comparable the reports are and qualitative interviews with relevant actors in the field of sustainability reporting to understand the causes of the results.

Independent assurance of sustainability reports is encouraged by GRI (2002, p.18) to increase the credibility and quality of sustainability reports. Sustainability assurance providers significantly consult stakeholders during the assurance services (Manetti and Toccafondi, 2012). In consequence, sustainability assurance relates to the principle of verifiability of sustainability reports and ties it all together, as they cannot be audited without comparability, and the need for a strong definition of materiality. However, assurance engagements do not generally include materiality analysis in their scope (Adams *et al*., 2021). Safari and Areeb (2020, p.344) showed "that under-developed reporting systems, along with time and cost constraints, have served as prominent barriers to the efficient practicalization of…" GRI's Reporting Principles. Another fact worth mentioning that has been discussed in this piece, is the gradual approach from limited to reasonable assurance, promoted by the European Commission. In that respect, it would be valuable to conduct interviews with different actors that are participating in the policy-making process to determine what they think about the process of implementation of the GRI principles into the primary assurance standards.

These will all be key challenges for the use of GRI standards (and those of other standard setters) in the future. Similarly, challenges include how GRI fits into the current reporting environment; and how their reporting principles are perceived and implemented in practice given the changing environment.

The articles and viewpoints in our special issue presented some newness in the application of GRI standards and portrayed the challenges underlined by the previous literature, which provide opportunities for new research on sustainability reporting.

While literature in the last few decades mainly focused on the empirical investigation of contexts and sectors that were mainly polluting or with an interest on improving social and environmental performance for legitimating their corporate activities, our paper revealed that the application of GRI standards has started to be applied to different contexts and sectors. Studies in our special issue underlined an emerging interest in unexplored settings, which encourage more research on the application of GRI standards in wider areas of sustainability reporting. This implies a shift from the dominance of GRI standards in well-known corporate sustainability reporting practices, towards more specific contexts. The development of an *ad hoc* set of GRI standards would support researchers to pay attention to new issues resulting from the implementation of GRI standards in non-traditional areas of sustainability reporting. Further, some viewpoints in our special issue have drawn attention to the importance of implementing *ad hoc* GRI standards to understand and reflect on their impacts on organizations. A key view that arose, is that, in doing so, *ad hoc* GRI standards would offer a better connection between suitability reporting practices and the mission of sustainable development. The entry of EFRAG and the IFRS Foundation may be beneficial to the progress of the current and future development of *ad hoc* GRI standards. Some papers in the special issue indeed underline the role of EFRAG and IFRS Foundation in providing legitimate and evolutionary sustainability reporting standards, and the implications for the current GRI standards, and call for future research on these important issues.

Although previous literature analysed the reporting principles related to sustainability reports, the investigation of how GRI standards can define material issues and evaluate sustainability effects can improve the understanding of their relevance as global standards for sustainability reporting. Some articles in our special issue highlighted critical aspects connected to reporting principles in the sustainability reporting arena and call for future research directed at investigating the use of GRI towards the improvement of sustainability reporting practices. Further, some viewpoints underlined that if GRI standards promoted a common language in sustainability reporting practices then the use of that common language would be useful also for the involvement of stakeholders. To this end, the application of GRI standards allows companies to understand the dialogic mechanism of sustainability reporting and foster a multi-stakeholder accountability in companies. Given the initiative of IFRS/ISSB to set up new sustainability standards which could potentially harm the global position of GRI standards, future research should investigate how the IFRS Foundation could move from investor-focused to societal-focus standards and the effects of the "trade-off between comparability and materiality" (De Villiers *et al*., 2022, p.742) in using this new set of sustainability reporting standards, on GRI standards.

Our reflections for future research are just examples of the many important questions to be addressed. There are many challenges to sustainability reporting, and GRI is facing a challenge in competing with new reporting frameworks and standards as well as collaborating among standards setters. This suggests that there are new significant opportunities for future research, and researchers can provide insights into the questions yet to be answered as they are experts in many areas of sustainability reporting. We hope our paper and the special issue can stimulate future research on sustainability reporting and will help to pave the way for forthcoming studies.

Notes

[1] In the literature there are overlapping and interconnected terms on disclosure/reporting with reference to sustainability, social and environmental, environmental, social, and corporate governance (ESG), corporate social responsibility (CSR), and non-financial issues (Lourenço *et al.*, 2012). We use non-financial disclosure/reporting and sustainability disclosure/reporting in an interchangeable manner, as both terms refer to corporate reporting practices concerning environment, sustainability, and governance (ESG) issues.

[2] The CSRD aims to increase the sustainability information requirements in terms of (1) the scope of obligated firms, (2) the information to be reported, (3) the application of reporting standards, (4) the digitalization of sustainability information, (5) the assurance of the reported disclosures, and (6) the implementation of a sanctioning regimen.

[3] Although there are non-financial disclosure requirements in other jurisdictions, including the US (SEC, 2020, 2021), the European context provides a reference example of these regulatory initiatives.

[4] https://www.efrag.org/Activities/2010051123028442/Sustainability-reporting-standards-roadmap (accessed 15/02/2023)

[5] https://www.globalreporting.org/standards/sector-program/ (accessed 15/02/2023)

[6] https://www.efrag.org/Activities/2205170712504435/ESRS-Sector-Standards (accessed 15/02/2023)

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