

Sustainability reporting assurance: Creating stakeholder accountability through hyperreality?

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Highlights

- The reliability of assurance statements for sustainability reports were analyzed.
- Qualitative content analysis of 337 assured sustainability reports was carried out.
- Statements did not show a material, substantial, and credible verification.
- Assurance appears as a hyperreal practice divorced from crucial issues.
- Credibility and usefulness of sustainability reporting assurance is questioned.

Abstract

Sustainability reporting has become a common practice and is generally considered to be positive. Yet, a growing body of scholarly literature has criticized the transparency and usefulness of this practice. The main objective of this paper is to provide a critical analysis of the reliability of assurance statements for sustainability reports and their contribution to stakeholder accountability. The qualitative content analysis of 337 assured sustainability reports from the mining and energy sectors reveals that assurance statements do not demonstrate a material, substantial, and credible verification process. They tend rather to appear as a hyperreal practice largely divorced from critical sustainability issues and stakeholder concerns. This practice is based on self-referential and procedural accounting rhetoric supported by assurance standards disconnected from the specific requirements of sustainability reporting. The paper questions the mainstream literature's assumptions about the current practice of assurance statements and their improvement over time. The study has also practical implications for assurance practitioners, reporting organizations, and stakeholders.

Keywords: Assurance statements; Sustainability reports; Stakeholder accountability; Hyperreality; Auditing.

1. Introduction

Sustainability reporting has become common practice, particularly for large companies (Contrafatto, 2014, Fonseca et al., 2014, Milne and Gray, 2013, Searcy and Buslovich, 2014). The rapid expansion of this practice in most regions and sectors of activity is largely explained by the search to improve corporate legitimacy and as a response to institutional pressures for corporate

sustainability (e.g. Cho and Patten, 2007, Hahn and Lülfs, 2014, O'Dwyer et al., 2011, Simnett et al., 2009). Nevertheless, the reliability of corporate disclosure in this area has been extensively debated (Boiral, 2013, Cho et al., 2015, Gray, 2006, Gray, 2010). Although the development of sustainability reporting is generally considered to be a positive trend (Deegan, 2002, Gilbert and Rasche, 2008, KPMG, 2017), a growing body of literature has criticized the transparency and usefulness of this practice (Boiral and Gendron, 2011, Cho et al., 2015, Cho et al., 2018, Milne et al., 2006, Unerman et al., 2007). The lack of balanced and material information, managerial capture of the reporting process, the absence of stakeholder involvement, and the marketing objectives of the reports have been highlighted in the critical literature (e.g. Adams, 2004, Boiral and Henri, 2017, Cho et al., 2015, Cho et al., 2018). Generally speaking, the reporting process seems not sufficient, in itself, to increase stakeholder confidence in corporate sustainability and guarantee the reliability of information. According to the Global Reporting Initiative (GRI), reliability can be defined as the disclosure of information that “can be subject to examination and that establishes the quality and materiality of the information” (GRI, 2013a).¹ Nevertheless, information released by companies can be very difficult if not impossible for most stakeholders to verify themselves considering the diversity and complexity of issues covered in sustainability reports (Boiral and Henri, 2017). From this perspective, the assurance process, which is based on the verification of sustainability reports by allegedly independent experts, increasingly appears to be a basic requirement to reduce information asymmetry and strengthen stakeholder confidence in the reliability and credibility of corporate disclosure (Dando and Swift, 2003, Manetti and Becatti, 2009, Moroney et al., 2012, O'Dwyer et al., 2011). In 2017, nearly 70% of sustainability reports released by the largest 250 organizations worldwide were assured by external auditors, which represented an increase of 45% from 2011 (KPMG, 2017). One of the main objectives of the assurance process is to enhance stakeholder accountability, which can be defined, in the context of this research, as a company's duty to provide a reasonable account of its actions and performance in view of improving organizational responsiveness and transparency toward relevant stakeholders (Cooper and Owen, 2007, Dando and Swift, 2003, Rasche and Esser, 2006). Assurance statements are therefore expected to assure stakeholders that, after a rigorous verification process conducted by qualified auditors, the information released in sustainability reports can be considered reliable, material, and complete (Gilbert and Rasche, 2008, IAASB, 2011, Manetti and Toccafondi, 2012).

This paper provides a critical analysis of the reliability of assurance statements for sustainability reports and their contribution to stakeholder accountability. More specifically, this study focuses on the assurance statements to explore whether they can be trusted by stakeholders or, on the contrary, whether they can be considered to be a symbolic process based on rhetorical devices disconnected from substantial sustainability issues and reporting requirements. The concept of hyperreality, which refers to the proliferation of misleading information, symbols, and simulacra disconnected from reality (Baudrillard, 1984, Baudrillard, 1994, Grandy and Mills, 2004, Macintosh et al., 2000), is used to critically explore the meaning of assurance statements and their real contribution to a company's accountability to its stakeholders.

¹ Although improvements in the reliability of information can contribute to its credibility, the latter is essentially shaped by perceptual and communicative aspects. According to Hsueh (2018, p. 549), credibility can be defined “as a value resulting from the information recipient's perception of the expertise, the intention of the information provider, and their trust of the validity of the communication”.

This exploration is essential and adds value to the literature in at least two ways. First, the reliability of information on corporate sustainability is essential to various stakeholders, including financial markets (Boiral and Henri, 2017, Friedman and Miles, 2001, Ioannou and Serafeim, 2014, Willis, 2003). In 2012, sustainable and responsible investments (SRI) represented nearly US\$13.6 trillion worldwide and the equivalent of nearly 22% of total financial assets (GSIA, 2013). Moreover, the proportion of SRI investments has significantly increased over recent years. The verification of the information on corporate sustainability through assurance mechanisms seems increasingly essential to build confidence in financial markets and to sustain the development of SRI (Brown-Liburd and Zamora, 2015, Kolk and Perego, 2010, Wong and Millington, 2014). Third-party assurance can also strengthen confidence in corporate sustainability for other stakeholders, including governments, NGOs, and the general public (Fernandez-Feijoo et al., 2014, Kolk and Perego, 2010, Moroney et al., 2012, O'Dwyer et al., 2011).

Second, although assurance statements are common and quite standardized in accounting, the transfer of this practice to sustainability reporting is relatively recent. This transfer is part of the expansion of auditing into new disciplines and raises questions about the reliability of this practice, which is promoted by accounting and consulting firms (Bebbington, 1997, Boiral and Gendron, 2011, O'Dwyer and Owen, 2005, Power, 1996, Power, 1997a). Although a small number of empirical studies have criticized the reliability of assurance statements, most of these studies were conducted in the early to mid-2000s when this practice was relatively emergent and non-standardized (Ball et al., 2000, Deegan et al., 2006, O'Dwyer and Owen, 2005, O'Dwyer and Owen, 2007). More recent empirical studies have highlighted the main features of assurance statements (Junior et al., 2014, Manetti and Toccafondi, 2012, Moroney et al., 2012, Perego and Kolk, 2012). Nevertheless, they essentially rely on quantitative approaches, which are relevant to measure the recurrence of certain themes but not well suited to analyze the dominant rhetoric, meaning, and the possibly hyperreal nature of these statements. Although the mainstream literature points out the relevance and usefulness of assurance statements (e.g. Adams and Evans, 2004, Fernandez-Feijoo et al., 2014, Hodge et al., 2009, Manetti and Toccafondi, 2012), such a perspective has not been substantiated by in-depth and recent studies.

From this perspective, the development of empirical studies analyzing the hyperreality of third-party assurance statements seems essential to further understand this little-studied practice and its contribution to stakeholder accountability. The remainder of the paper is divided into five sections. First, the literature on assurance statements and stakeholder accountability is described. Second, the method for the qualitative content analysis conducted is detailed. Third, the main findings are structured around three main issues of assurance statements: the professionalism of assurance providers, the verification process, and the main outcomes. Fourth, the discussion of the main outcomes are included. Lastly, the conclusion section summarizes the contributions and practical implications.

2. Literature review

2.1. The assurance process of sustainability reports

According to the International Audit Assurance Standards Board (IAASB), assurance engagement is defined as “an engagement in which a practitioner aims to obtain sufficient appropriate evidence in order to express a conclusion designed to enhance the degree of confidence of the intended users other than the responsible party about the outcome of the measurement or evaluation of an underlying subject matter against criteria” (IAASB, 2011, p. 19). Although the assurance process for sustainability reports is based on principles and institutional arrangements similar to those for financial auditing (Boiral and Gendron, 2011, Jones and Solomon, 2010, Wong and Millington, 2014), specific guidelines and standards have been developed in this area, notably the AA1000 and the ISAE 3000 standards (Adams and Evans, 2004, Fonseca, 2010, Manetti and Becatti, 2009). Launched in 2003 by the British non-profit organization AccountAbility, the AA1000 standard provides principles, definitions, and requirements to ensure the reliability of the sustainability assurance process (Kolk and Perego, 2010, O’Dwyer and Owen, 2005, Smith et al., 2011). The standard focuses on the principle of accountability and its use by assurance providers “is intended to give stakeholders assurance on the way an organization manages sustainability performance, and how it communicates this in its sustainability reporting, without verifying the reliability of the reported information” (AccountAbility, 2008, p. 9). The ISAE 3000 standard was issued in 2005 by the International Audit Assurance Standards Board and also provides general guidelines and procedures for assurance engagements in non-financial contexts (IAASB, 2011, Junior et al., 2014, Smith et al., 2011). Despite their differences, these two standards are complementary and serve similar purposes, aiming to improve the credibility, professionalism, and reliability of the assurance process (Iansen-Rogers and Oelschlaegel, 2005, Junior et al., 2014, Manetti and Becatti, 2009). Other guidelines or standards such as the Assurance Procedure provided by the International Council on Mining & Metals (Fonseca, 2010, ICMM, 2008) have also been developed. Nevertheless, the application of these standards is generally local or sector-based, and they essentially rely on assurance principles similar to those proposed by AA1000 and ISAE 3000.

The principles of assurance statements are also described in the “key qualities for external assurance of reports” of the Global Reporting Initiative framework (GRI, 2006, p. 38). Adopted by close to the 90% of the world’s largest companies (KPMG, 2017), the GRI has become the reference model in the area of sustainability reporting. This standard provides detailed guidance on the principles, content, and specific indicators of sustainability reports. Generally speaking, if the content of the assurance statement guidelines are reviewed it is evident that they revolve around three main issues: the professionalism of assurance practitioners (AccountAbility, 2008, GRI, 2006, IAASB, 2011, Jones and Solomon, 2010), the verification process (AccountAbility, 2008, Iansen-Rogers and Oelschlaegel, 2005, Junior et al., 2014), and the outcomes of the assurance statements (AccountAbility, 2008, Adams and Evans, 2004, Manetti and Toccafondi, 2012, O’Dwyer and Owen, 2005).

First, professionalism can be defined as a combination of the competence, values, and behaviors expected from a professional trained to perform activities requiring specific expertise. In the context of sustainability reporting assurance, such professionalism is based in particular on the competence and independence of auditors (AccountAbility, 2008, GRI, 2006, IAASB, 2011, Jones and Solomon, 2010). Although these aspects are covered in the main assurance statement standards, they are not clearly explained, notably with respect to the expertise of assurance practitioners. For example, the GRI merely indicates that auditors should be “demonstrably competent in both the subject matter and assurance practices” (GRI, 2006, p. 38). Second, the

verification process should be explained by assurance providers, in particular in terms of its scope, methods and verification criteria (Deegan et al., 2006, Hammond and Miles, 2004, Iansen-Rogers and Oelschlaegel, 2005, Junior et al., 2014). The level of assurance is also covered in certain standards such as the AA1000. The concepts used to describe the levels of assurance engagement, such as high, reasonable, moderate, and limited, are quite similar to those used in financial auditing (Manetti and Becatti, 2009, Moroney et al., 2012, O'Dwyer et al., 2011). Third, the outcomes and conclusions of the assurance process should be clarified based on the rigorous assessment of reporting principles such as the reliability, materiality, completeness, and balance of information; stakeholder responsiveness; and the application of the GRI framework (Adams and Evans, 2004, Iansen-Rogers and Oelschlaegel, 2005, Manetti and Toccafondi, 2012, O'Dwyer and Owen, 2005).

The application of these principles in assurance statements should, in theory, improve the reporting organization's accountability to its stakeholders and increase confidence in sustainability reporting, although such improvement is debated in the literature (Deegan et al., 2006, Manetti and Toccafondi, 2012, O'Dwyer and Owen, 2007, Smith et al., 2011).

2.2. Toward increased stakeholder accountability?

The scholarly literature has analyzed the assurance process from multiple theoretical standpoints, such as the agency, stakeholder, legitimacy, signaling, and (neo)institutional theories (for a review, see Hahn and Kühnen, 2013). According to the mainstream literature, the third-party assurance process contributes to stakeholder accountability by improving the reliability and credibility of sustainability reports (e.g. Moroney et al., 2012, Reimsbach et al., 2018, Simnett et al., 2009). The *raison d'être* of external auditing in general is to enhance accountability to stakeholders and increase their trust in the reliability of the information disclosed by organizations through a supposedly independent and impartial assessment of this information (Adams and Evans, 2004, Dando and Swift, 2003, O'Dwyer and Owen, 2007). Various empirical studies have highlighted the relevance of the assurance process to increasing the reliability and credibility of sustainability reports in the eyes of stakeholders (Fuhrmann et al., 2017, Hodge et al., 2009, Manetti and Toccafondi, 2012, Simnett et al., 2009). As recently underlined by Sethi et al. (2017), the stream of research on the reliability of the assurance of environmental and CSR reporting is evolving with the introduction of new methods to assess the reliability of assurance statements (e.g. Perego, 2009, Perego and Kolk, 2012, Zorio et al., 2013).

In their study of 29 Swedish companies, Park and Brorson (2005) showed that third-party assurance is driven by external pressures and has encouraged various internal improvements, including improvements in the reporting process and stakeholder dialogue. Hodge et al. (2009) found that the assurance process tends to increase confidence in sustainability reports, in particular when the verification is conducted by recognized accounting firms. Simnett et al. (2009) also found that the assurance of sustainability reports is associated with the search for credibility and legitimacy, notably in stakeholder-oriented countries. According to Perego (2009) and Kolk and Perego (2010), large accounting firms have a positive impact on the reliability of the assurance process. As a result, this process tends to promote good corporate governance and to play a substitute role in regions where the legal system and other institutions are weak. In their study based on the stakeholder-agency perspective, Moroney et al. (2012) showed that the reliability of environmental disclosure is enhanced when it is assured, though it is not significantly related to

the profession of assurance practitioners (consultants versus accountants). Similarly, Rossi and Tarquinio (2017) found that the presence of a CSR committee and an expert who serves on it is positively related to a higher level of assurance statement disclosure. From this perspective, the assurance process appears to be an effective approach to reducing uncertainty and information asymmetry between managers and stakeholders. Manetti and Toccafondi (2012) found that most assurance practitioners consult stakeholders, though this consultation seems essentially limited to one-to-one interviews with employees. This consultation improves the reliability of statements. Assurance statements increasingly appear to be “a voice for stakeholders” (p. 374). Although the majority of assurance statements are issued by accounting and consulting firms (GRI, 2013b, KPMG, 2017, Perego and Kolk, 2012), Perego and Kolk (2012) found that other stakeholders (academics, NGOs, stakeholder panels) are increasingly involved, which should improve stakeholder accountability and the reliability of sustainability reports. Nevertheless, this involvement seems to be most prevalent in Asian countries (Junior et al., 2014, Perego and Kolk, 2012).

Generally speaking, stakeholder responsiveness is increasingly considered to be a major requirement of sustainability reporting and is expected to be integrated into assurance practices, which should not only focus on reviewing documents (Adams and Evans, 2004, Manetti and Toccafondi, 2012, O’Dwyer and Owen, 2007, Park and Brorson, 2005). As highlighted by the GRI, “the reporting organization should identify its stakeholders and explain in the report how it has responded to their reasonable expectations and interests” (2006, p. 10). In the mainstream perspective, the assurance process reflects the ideal of transparency in sustainability reporting by assuring stakeholders that, based on a rigorous verification process, the information disclosed by organizations is deemed to be reliable, material, and consistent with the realities of their sustainability performance (e.g. Boiral and Henri, 2017, Manetti and Toccafondi, 2012, Martínez-Ferrero and García-Sánchez, 2018, Reimsbach et al., 2018). In any case, the identification of possible misstatements and non-compliance is an essential part of the assurance process and should, in theory, be identified (AccountAbility, 2008, Deegan et al., 2006, IAASB, 2011). These may be identified through site visits and interviews (Deegan et al., 2006, Jones and Solomon, 2010, Manetti and Toccafondi, 2012, O’Dwyer and Owen, 2005, Park and Brorson, 2005). Although the nature and outcomes of this fieldwork remain under-studied, it is generally assumed that it represents an improvement in taking the positions of various stakeholders into account, which is a central focus of the GRI, 2006, GRI, 2013b.

Nevertheless, the dominant scholarly perspective on the benefits of assurance statements is rarely based on their qualitative and in-depth analysis but rather on the quantitative description of their features and presence of certain themes. Although this approach is relevant to give an overall picture of statements, it is not necessarily indicative of their meaning and reliability. For example, although explicit references to the independence and competence of assurance providers can be measured through quantitative content analysis, such measurement does not indicate whether statements are meaningful and convincing on this issue. Generally speaking, the reliability and contribution of assurance statements to stakeholder accountability has been questioned by a limited number of empirical studies (e.g. Bepari and Mollik, 2016, Deegan et al., 2006, Gürtürk and Hahn, 2016, O’Dwyer and Owen, 2007). Interestingly, most of those critical approaches share the perspective of the dominant literature on the positive role of standards on assurance statements and the evolution of assurance practices toward increased stakeholder accountability (Manetti and

Toccafondi, 2012, Moroney et al., 2012, Park and Brorson, 2005). For example, O'Dwyer and Owen, 2005, O'Dwyer and Owen, 2007 question the independence of auditors and showed the failures of assurance statements to address the concerns of specific stakeholders. Nevertheless, they consider the development of assurance standards such as the AA1000 to encourage more holistic and stakeholder-centric approaches to sustainability assurance (O'Dwyer and Owen, 2007). In their critical evaluation of assurance statements, Ball et al. (2000) highlighted the managerial orientation and lack of independence of this practice. However, this study also found that third-party verification tends to be associated with "better reporting" (p. 5) and greater emphasis on external stakeholders. In their study of 161 organizations, Deegan et al. (2006) showed the heterogeneity of the reliability and content of assurance statements, which rarely appear to be consistent with the main GRI requirements. Foncesca's (2010) study of the credibility of mining corporations' sustainability reports echoed the main criticisms formulated in previous studies (Ball et al., 2000, Deegan et al., 2006, O'Dwyer and Owen, 2005, O'Dwyer and Owen, 2007) but argued that the assurance procedure proposed by the International Council on Mining and Metals (ICMM, 2008), which is based on the AA1000 and ISAE 3000 standards, should improve, in the future, the reliability and consistency of external assurance. Finally, in their study of the strategies used by assurance practitioners to build their legitimacy, O'Dwyer et al. (2011) have observed trends toward increased dialogue, debate, and "commitment to more robustly assessing organizational stakeholder accountability" (p. 49).

2.3. Assurance statements as hyperreality?

Debates around the reliability of assurance statements might be explained by their hyperreal nature. Hyperreality implies the production of unsubstantial and misleading information, the reliable and rigorous appearances of which tend to be taken at face value, even in some research. According to Boiral, "sustainability reports and assurance mechanisms could represent a hyperreality conveying signs, data and images without any reference to the real world" (2013, p. 1043). Although this quite radical assumption remains to be verified empirically, it raises the question of the possible disconnection between the reassuring image of the assurance process and organizations' obfuscation of critical sustainability issues.

According to Baudrillard, 1984, Baudrillard, 1994, contemporary postmodern societies are increasingly shaped by signs, symbols, and images without any referent in the real world. The exchange and consumption at a large scale of misleading information through mass media and other means of communication tends to create a hyperreality based on simulation or simulacra disconnected from the direct perception of reality. Hyperreality is characteristic of a postmodern society in which the control of information, images, and symbols wrongly assumed to reflect the real world are used to manage perceptions and behaviors. Although such hyperreality seems "more real than the real" (Baudrillard, 1994, p. 81), it "has no relation to any reality whatsoever: it is its own pure simulacrum" (Baudrillard, 1994, p. 6). The more the information and signs on which hyperreality is based seems real, authentic, and even certified or assured, the more it tends to reflect a sort of falsification or substitute for an elusive reality whose constructed representations are too often taken for granted. Although it has been widely used in social sciences, notably in the areas of communication and sociology, the concept of hyperreality is relatively new to business studies. Various studies in marketing have used this concept to analyze communication practices based on symbolic messages and consumer behaviors (e.g. Fuat Firat et al., 1995, Van Raaij, 1993). Grandy

and Mills (2004) have criticized the hyperreality of most models and theories in strategic management, which are often used to legitimize the discourse of managers and exert their control through reassuring concepts divorced from reality. The hyperreality of financial markets, which are shaped by self-referential information and speculative bubbles largely disconnected from material economic activities, has been highlighted in a limited number of studies (Macintosh et al., 2000, Schinckus, 2008). Sustainability reports have also been compared to a hyperreality based on misleading images and information that project a spectacle divorced from substantial sustainability issues (Boiral, 2013). The hyperreality of sustainability reporting is characterized by “information and images that appear to be authentic and legitimate or that conform to social expectations” but which are “unreliable, misleading or non-transparent” (Boiral, 2013, p. 1042).

From the review of the critical literature, five interdependent factors that could tend to create such hyperreality could be identified: the competences of assurance providers; the professional isomorphism; the managerial capture of the assurance process²; the methods of verification; and the opacity of assurance statements. First, to be grounded in the complex realities of corporate sustainability and reporting, the assurance process requires specific expertise not necessarily shared by assurance providers (Ball et al., 2000, Manetti and Becatti, 2009). Second, the predominance of accounting professionals in sustainability assurance statements tends to encourage a procedural approach based on institutional arrangements and the mimetic transfer of procedures from the accounting profession rather than their effective adaptation to the complex realities of sustainability issues (Boiral and Gendron, 2011, O’Dwyer, 2011, O’Dwyer et al., 2011), which fosters the professional isomorphism. Third, the impartial and substantial verification of sustainability reporting requires independent assurance providers. Unlike expertise in sustainability, the principle of independence is consistent with basic auditing procedures and is therefore repeated throughout assurance standards. Nevertheless, the managerial and professional capture of statements clearly undermines this principle (Ball et al., 2000, Jones and Solomon, 2010, O’Dwyer and Owen, 2005, Perego and Kolk, 2012). This capture is related to the commercial aspects of the assurance practice and the information released in sustainability reports (Ball et al., 2000, Boiral and Gendron, 2011, Perego and Kolk, 2012). Fourth, the methods and outcomes of the assurance process remain under-studied and seem to be conducive to quite superficial statements. Assurance providers tend to consult a limited number of managers and employees during the assurance process (Deegan et al., 2006, Jones and Solomon, 2010, Manetti and Toccafondi, 2012, O’Dwyer and Owen, 2005). As highlighted by the neo-institutional approach of sustainability reporting (e.g. Cho and Patten, 2007, Etzion and Ferraro, 2010, O’Dwyer et al., 2011), this type of symbolic practice is mostly intended to improve organizational legitimacy in the eyes of stakeholders rather than to enhance transparency on critical sustainability issues.

Finally, the opacity of assurance statements, as their reliability and usefulness, has been questioned by the critical literature (Ball et al., 2000, Deegan et al., 2006, O’Dwyer and Owen, 2005, O’Dwyer and Owen, 2007), just as the transparency and reliability of sustainability reports, which have been largely criticized in the literature, whether these reports have been assured or not (e.g. Boiral, 2013, Cho et al., 2015, Gray, 2010, Milne et al., 2006). Nevertheless, the hyperreality of assurance statements has yet to be investigated. Such an investigation would entail an in-depth and qualitative

² This concept is related to the influence of managers on the auditors due to commercial issues and other similar ones, which have been debated in the literature (e.g. Adams and Evans, 2004; Hummel et al., 2019; Michelon et al., 2015).

analysis of assurance statements to shed more light on its professionalism, methods of verification, outcomes, and real contribution to stakeholder accountability.

3. Methods

The main objective of this paper is to analyze the reliability of assurance statements for sustainability reports and their contribution to stakeholder accountability. More specifically, this study analyses to what extent assurance statements demonstrate a material, substantial, and credible verification of reports or whether they can be considered to be a hyperreal practice divorced from critical sustainability issues and stakeholder concerns. The qualitative content analysis method is well suited to undertake a critical analysis of assurance statements. This method can be defined as “an approach of empirical, methodological controlled analysis of texts within their context of communication, following content analytic rules and step by step models, without rash quantification” (Mayring, 2000, p. 2).

3.1. Data collection

The collection of data was based on sustainability reports of organizations in the mining and energy sectors with the highest application level (A+) of the G3 and G3.1 GRI framework for 2006–2015, which cover the entire period of implementation of this version.³ The mining and energy sectors have been chosen because of the magnitude of their sustainability issues and the intensity of related stakeholder pressures (Boiral, 2013, Fonseca, 2010). These pressures require reporting organizations to demonstrate their accountability to stakeholders through the release of reliable and transparent information that has been verified by external auditors. The focus on the GRI A+ application level is explained by the greater completeness and transparency of these reports (GRI, 2006), which should give assurance providers more information to assess organizations’ accountability to their stakeholders. Moreover, the GRI is considered to be the most comprehensive and widely used sustainability reporting guideline (Dando and Swift, 2003, KPMG, 2017, Moneva et al., 2006). In order to facilitate the comparison of assurance statements, all reports in the sample used the G3/G3.1 version of the GRI. This version was launched in 2006 and has been gradually replaced, since 2013, by the G4, which should be used for all GRI reports by the end of 2015 (GRI, 2014). In order to collect sufficient information and facilitate, where necessary, a longitudinal analysis of assurance statements, this study focused on a ten-year period (2006–2015) covering all the GRI G3/G3.1 application period. In the scholarly literature, this type of longitudinal study has been fostered (e.g. Borgstedt et al., 2017, Comyns and Figge, 2015, Gürtürk and Hahn, 2016, Rossi and Tarquinio, 2017) due, among other similar reasons, to its ability to analyze whether companies report consistently over several years or whether significant changes are introduced (Borgstedt et al., 2017). As underlined in a set of works in the field of sustainability reporting — see for example among these recent ones: Borgstedt et al., 2017, Comyns and Figge, 2015, Gürtürk and Hahn, 2016, Rossi and Tarquinio, 2017 — the longitudinal approach might add value to the fieldwork carried out for the mentioned and other similar reasons. Because of the time lag between the year covered by the sustainability report and its publication date, certain reports pertaining to a particular year were released a year later or even more, and

³ With only one report recovered for 2015, which indicates that most companies had switched to the GRI G4 version, mandatory since December 31st, 2015.

some reports cover two consecutive years. The reports were obtained from the online GRI Sustainability Disclosure Database (SDD).⁴ This database was quite extensive and included, in September 2018, 30,768 GRI reports.⁵ It allowed the researchers to search sustainability reports according to various criteria, including sector of activity and publication year. All the A+ reports from the mining and energy sectors available in English⁶ on the GRI SDD for the years 2006–2015 that included an assurance statement were included in the sample.⁷ All in all, 337 reports were used, including 153 from the mining sector and 184 from the energy sector. Annex 1 summarizes the sample of sustainability reports included in this study.

3.2. Data analysis

The data analysis was based on four main steps: development of a categorization framework, extraction of assurance statements, categorization of information according to the framework, and interpretation of the main results or findings.

First, a categorization grid was developed on the qualitative analysis software QDA Miner (Version 4.0.4). The grid was initially based on the main objective of the study. It was then reorganized through the analysis process and adapted to the data collected, in accordance with qualitative content analysis and grounded theory methods (Corbin and Strauss, 2014, Kohlbacher, 2006). New categories were created while others were removed or merged depending on the results of the study. Each category was clearly defined in order to facilitate the use of the categorization grid by the two coders. At the end of the data analysis, the categorization grid was comprised of 78 subcategories grouped into 10 main categories (see Annex 2). These were related to three issues of importance for the reliability and stakeholder accountability of assurance statements:

- Professionalism: competencies of assurance providers and justification of their independence.
- Verification process: level of assurance, assurance standard used, scope of verification, method of verification, responsibilities of assurance providers.
- Outcomes of the audit: evaluation of data reliability, opinion on the reliability of sustainability reports (e.g. materiality, completeness, stakeholder inclusiveness), conclusion of the assurance process

Second, information on assurance statements was extracted from each GRI report in the sample and saved to a specific file. This file was then transferred to QDA Miner. About 10% of statements were impossible to extract from the sustainability reports due to a protected file format and were manually transcribed. All in all, the information on assurance statements analyzed in the study represented the equivalent of about 1100 single-spaced pages.

⁴ <http://database.globalreporting.org/>.

⁵ Consulted in September 2018.

⁶ For practical reasons, only reports available in English were considered.

⁷ The reports available on the GRI SDD database may have changed. Reports are frequently removed from the database while others are added. Our sample is based on reports available at the time of data collection in April 2017. Some A+ reports identified in the GRI SDD did not include an assurance statement. Those reports have not been included in our sample.

Third, the assurance statement of each report was analyzed through the categorization grid. This categorization process was independently conducted by two coders. Although these coders worked independently from each other, several meetings were held to clarify the categorization grid, definitions of categories, and creation of new codes. As suggested in the literature (e.g. Corbin and Strauss, 2014), the data coded in different categories by the two coders were analyzed, compared, and discussed in the light of the objectives of the research. At the end of this process, the interpretation of the categorization framework by the two coders was found to be highly convergent.

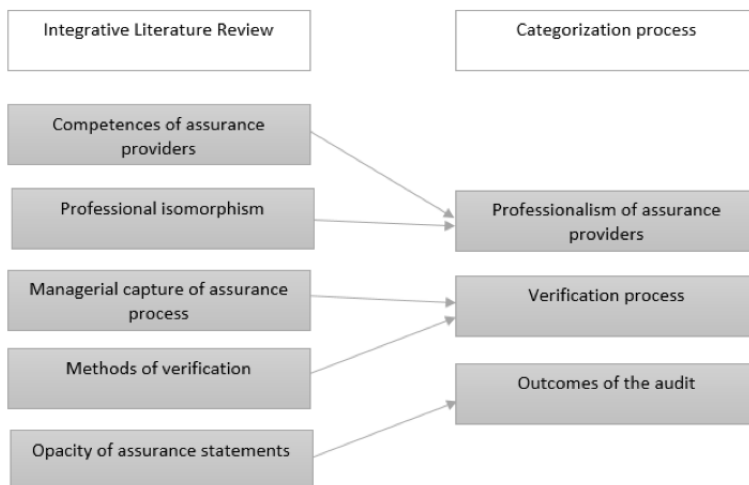
Fourth, the main results of the categorization process were interpreted. The findings for each of the main ten categories were described in a Word file and an Excel file. The Word file consisted of an interpretation of the results related to the main categories and relevant passages representative of the study’s findings. The Excel file described certain quantitative results such as the distribution of assurance standards, profession of assurance providers, and verification methods (interviews, site visits, etc.). When possible and meaningful, comparisons and quantitative measurements were conducted that related to relevant issues such as the influence of sector of activity, profession of assurance provider, or type of standard used (see Annex 3). Nevertheless, data interpretation was essentially focused on a qualitative approach, which is not suited to statistical analysis except for clearly identifiable and measurable information (Gephart, 2004, Pratt, 2009).

Finally, the findings of the study were structured around the three main issues covered by the data analysis:

- professionalism of assurance providers
- verification process
- outcomes of the audit

Fig. 1 summarizes the relationship between the five interdependent factors evidenced in the literature review and the three issues derived from the inductive process of categorization. In the next section, representative passages were selected to illustrate the main findings.

Fig. 1. Relationship among the factors reviewed in the literature and the issues identified in the field work.



4. Results

4.1. Professionalism of assurance providers

Although the competence and independence of assurance practitioners are covered in most assurance statements, they are not substantiated by clear and convincing arguments. Basically, assurance statements are devoid of substantial and clear information on the auditors' ability to analyze in a credible manner the complex realities of sustainability issues and to challenge the hyperreal nature of most reports. With regard to the competence and qualifications of auditors, the main information available is related to the name and professional activity of the assurance provider (see Table 1).

Table 1. Distribution of assurance providers by professional activity and sector.

	Accounting firms	Consulting firms	Other
Mining sector	63%	31%	6%
Energy sector	60%	38%	2%
Overall	61.5%	34.5%	4.0%

Accounting firms represented the main assurance providers, responsible for 61.5% of all statements.⁸ This proportion has not significantly changed over time and is quite similar for the mining and energy sectors. The “Big Four” accounting firms largely dominate the market of sustainability assurance in both sectors of activity.⁹ Consulting firms are far less concentrated. Multidisciplinary and multi-stakeholder approach remains the exception, not the rule. Only 23% of all assurance statements analyzed refer to a multidisciplinary team of professionals. The tendency toward more multidisciplinary teams highlighted in a limited number of studies is ambiguous, but tend to become more frequent in recent reports. Moreover, the composition and expertise of those teams is unclear. Information on the team's composition is given in more than half of statements based on a multidisciplinary approach or 14% of all assurance statements.

This information is rarely detailed and meaningful, whatever the composition of assurance providers. In most reports, the assurance statement is devoid of significant information on the specific competencies of auditors and merely indicates the name and position of the person responsible for the assurance process. Around 10% of all statements indicate the qualification, training, or degree obtained by the auditor who signed the assurance statement.¹⁰ Similarly, around

⁸ This finding is similar to data from KPMG (2013) and the GRI (2013b) which reported that two thirds of assurance statements are provided by accounting firms.

⁹ EY represented 36% of statements provided by accounting firms; KPMG, 28%; PwC, 23%, and Deloitte, 13%.

¹⁰ When possible, we have tried to obtain (from the Internet) more information on the qualifications of the auditors who signed the assurance statements or whose name was indicated. With few exceptions, we have found no conclusive evidence of their expertise in the area of sustainability reporting.

6% of statements specify the expertise and experience in the area of sustainability reporting for the auditors in charge of the assurance process, and, when indicated, this information is very brief. The mentioned information might have been expected to be included in the statements, considering the fact that there seems to be a lack of professionalism and professionalization (Abbott, 2014) of the assurance providers (e.g. Ball et al., 2000, Owen et al., 2000), and the inclusion of the mentioned information would contribute to their legitimation, a crucial issue for the profession (Power, 2003).

The assurance statements of the African Rainbow Minerals reports (2011, 2012, 2013, 2014) were among the most explicit. According to this company's 2012 report (p. 127), "the assurance team comprised primarily of Michael H. Rea, our Lead Certified Sustainability Assurance Practitioner (CSAP), with 13 years' experience in environmental and social performance measurement in over 70 assurance engagements, with support provided by our team of associates." Most reports are much less explicit and only mention generalities and or make self-proclaimed statements on the alleged competences and experience of the firm in charge of the assurance process. The following passages are representative of this type of generality:

"Our assurance team completing the work for Barrick has extensive knowledge of conducting assurance over environmental, social, health, safety and ethical information and systems, and through its combined experience in this field, an excellent understanding of good practice in corporate responsibility reporting and assurance." (Barrick Gold, 2010, p. 10)

"We have the required competencies and experience to conduct this assurance engagement." (MMG, 2012, p. 80)

The absence of clear information on the specific expertise and training of assurance providers might undermine the credibility of the statements without a development of professionalism and professionalization, which implies the integration of a body of knowledge and personal skills to ensure the proper execution of specific activities (Abbott, 2014). In this context, the general recognition of the firm contracted for the assurance statement and possibly references to standards or codes of ethics covering competence issues seem to be the only elements made available to stakeholders trying to assess whether assurance providers are really qualified to verify sustainability reports.

The same type of remark applies to the independence of assurance providers. Although independence is a basic requirement of external audits, it is difficult if not impossible to assess to what extent this requirement has been applied. Not surprisingly, most assurance statements (75% in the mining sector and 64% in the energy sector) claimed they comply with the principle of independence. This principle is generally associated with the adoption of assurance standards, in particular AA1000 and ISAE 3000. Around 22% of all statements – essentially those from the Big Four – also claim that the independence of assurance providers is in accordance with the International Federation of Accountants' (IFAC) code of ethics. Certain in-house codes of ethics and independence policies are also mentioned, in particular in statements provided by EY and Bureau Veritas. The absence of conflict of interest was mentioned in 31% of all documents. Nevertheless, as for the principle of independence, references to this critical ethical issue were not

placed in the specific context of the assurance process or justified through anything other than the adherence to a general standard or code of ethics. The absence of a commercial relationship with the assured company was explicitly mentioned, in rather general terms, in only 5% of statements. Although the assurance process presupposes a commercial relationship between the assurance provider and the reporting organization, this issue was almost never explicitly raised. The assurance statement for Tatneft (2009, p. 108) was one of the few that implicitly suggested that the assurance process actually implies a commercial relationship with the company: “Bureau Veritas Certification Rus does not have any commercial interests in the activity of Tatneft except for the certification services rendered.” Finally, although most reporting companies used the same assurance provider over several years,¹¹ problems related to familiarity issues from previous contracts and personal relationships with managers were not explicitly mentioned in the statements analyzed. On the contrary, certain assurance providers, such as the ERM Group, highlighted familiarity with reporting organizations as a sign of success and confidence: “ERM CVS, responsible for reporting to Hess Corporation on its assurance conclusions, is a member of the ERM Group. This is the tenth year that ERM CVS has been engaged by Hess Corporation in this role” (Hess, 2011, p. 81).

Generally speaking, the professionalism of assurance providers, including ethical aspects related to their independence and the absence of conflict of interests, was not clearly demonstrated and explained. Rather, it was briefly mentioned in relation to pre-existing standards, procedures, and codes of ethics whose application in the real world is unclear. This procedural approach to essential issues is reflected in the repetition of quite stereotyped formulas and virtuous statements, which were reused in a similar way regardless of the context and specificities of reporting organizations:

“Ernst & Young’s independence policies apply to the firm, partners and professional staff. These policies prohibit any financial interests in our clients that would or might be seen to impair independence.” (BP, 2009, p. 34)

“We have complied with the International Federation of Accountants’ Code of Ethics for Professional Accountants, which includes comprehensive independence and other requirements founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior.” (Gold Fields, 2012, p. 163)

4.2. Verification process

The description of the verification process usually represented the longest part of the report and essentially covered five main issues: level of assurance, standards used, responsibility of auditors, the scope of verification, and methods. Although these issues should help to demonstrate the seriousness of the assurance process, the information disclosed was rarely sufficiently detailed and was often used by assurers to lower stakeholder expectations or even to distance themselves from the reliability of the verification process. Overall, the absence of clear information on methodological issues and verification processes in general strengthens the symbolic and hyperreal appearance of most assurance statements which seem disconnected from substantial sustainability

¹¹ Around 78% of companies that published sustainability reports during 3 consecutive years or more used the same assurance providers.

issues and basic reporting requirements, particularly those of the GRI framework which was used in most reports.

First, the level of assurance provided was generally quite limited (see Table 2). Only 8.5% of statements for the mining sector and 6% for the energy sector provided a reasonable or high level of assurance. Moreover, the reasons why these reports deserved the highest level of assurance more than others were difficult to see and not clearly explained in the statements.¹² Around 69% of statements provided a limited/moderate level of assurance (more specifically, 62.1% for Mining and 75.0% for Energy). These proportions are not significantly different in the mining versus energy sectors. Around 16% of statements for the mining sector and around 6% for the energy sector used a combination of different assurance levels – most of the time limited/moderate plus some indicators at reasonable/high level – depending on the aspects verified. The level of assurance was not mentioned in 13% of assurance statements from both sectors. Overall, the level of assurance tended to be used by assurance providers as a tool to distance themselves from sustainability reports as well as the conclusions of their statements. This finding reflects the recognition by assurance providers themselves that the evidence for the reliability of sustainability reports was too limited to conduct an in-depth verification. It may also reflect the lack of clear criteria, internal resources, or support from the reporting organization to undertake a thorough audit. Whatever the reasons, the low level of assurance provided tends to question the usefulness of the assurance process as a tool to enhance confidence in sustainability reporting.

Table 2. Level of assurance provided.^a

Years	<i>Limited/moderate</i>		<i>Reasonable/high</i>		<i>Combination^b</i>		<i>Not specified</i>	
	Mining	Energy	Mining	Energy	Mining	Energy	Mining	Energy
2006	25.0	0.0	0.0	25.0	0.0	0.0	75.0	75.0
2007	63.6	62.5	9.1	0.0	9.1	12.5	18.2	25.0
2008	54.5	76.9	9.1	0.0	9.1	0.0	27.3	23.1
2009	57.1	70.6	9.5	0.0	14.3	11.8	19.0	17.6
2010	72.7	75.0	4.5	5.0	22.7	5.0	0.0	15.0
2011	63.0	71.9	3.7	12.5	14.8	3.1	18.5	12.5
2012	60.9	77.8	8.7	5.6	26.1	8.3	4.3	8.3
2013	59.1	76.9	13.6	7.7	18.2	10.3	9.1	5.1
2014	76.9	100	15.4	0.0	7.7	0.0	0.0	0.0
2015	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0

¹² According to the AA1000 standard (AccountAbility, 2008, p. 11), reports with a high assurance level “will provide users with a high level of confidence in an organization’s disclosures on the subject matter it refers to.”

Overall (2006- 2015)	62.1	75.0	8.5	6.0	16.3	6.5	13.1	12.5
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^a In percentages.

^b A combination of different assurance levels usually means that the majority of the report has been assured at a limited/moderate level while some specific indicators—mainly quantitative indicators—have been assured at a reasonable/high level.

Second, although they are generally mentioned, the assurance standards used were rarely clearly explained though the existence of multiple concurrent standards can be confusing. The predominance of the ISAE 3000 standard (see Table 3) reflects the dominance of accounting firms in the market of assurance statements.

Table 3. Main standards used in assurance statements.^a

	ISAE 3000	AA1000	ICMM	Other
Mining Sector	66%	36%	56%	10%
Energy Sector	73%	42%	-	14%

^a Around three-quarters of the assurance statements from the mining sector and less than half of the ones from the energy sector mentioned two or more standards used. Some assurance providers also use their own in-house standard (see column Other). For example, DNV GL uses a standard called VeriSustain, which is partly based on AA1000 and ISAE 3000. Furthermore, some assurance providers also use standards elaborated at the country-level (see column Other). For example, the King III principles are used in South Africa, while J-SUS is used in Japan.

Although references to the specific standards used seem necessary to better understand the general frame of reference used for the verification, the differences between the standards and their real impact on the assurance process remain unclear. Moreover, the combination of multiple standards and the absence of significant information on how they have been used in practical terms limits the usefulness of this type of information. Most assurance statements simply mentioned the name of one or several standards without releasing information on their meaning, main requirements, and implications for the assurance process. As a result, the information provided tended to be meaningless and disconnected from actual verification practices, notably for the stakeholders unfamiliar with assurance standards' procedures.

Third, around two thirds of all statements highlighted the limitations of the responsibilities of assurance providers with regard to the content of sustainability reports and reliability of information disclosed. Statements on the limitations of responsibilities tended to complement the information on the scope of the verification and the level of assurance by reducing expectations for comprehensive verifications. Overall, these responsibilities seemed limited to the formalistic application of standardized procedures of verification quite disconnected from the substance of sustainability reports as well as stakeholder concerns. For example, 19% of statements denied any responsibility on the part of the assurance provider for the reliability of data contained in the sustainability report, calculation of indicators, application of the GRI framework, or possible errors in the information disclosed by companies. Moreover, 29% of statements denied any responsibility for subsequent use of sustainability reports and assurance statements or decisions made based on

them. Other limitations of responsibilities mentioned relate to the presentation of information, data collection, checking of policies, or identification of material issues. The emphasis on the limits of assurers' liability increases the hyperreal appearance of most assurance statements. These essentially appear as a private contract with a corporation in which assurance providers seem unconcerned by real sustainability issues and stakeholder interests:

“We do not accept or assume responsibility to anyone other than BPCL for our work, for this report, or for the conclusions we have reached. By reading this assurance statement, the stakeholders acknowledge and agree to the limitations and disclaimers mentioned above in this Assurance Statement.” (Bharat Petroleum, 2011, p. 85)

“Our responsibility in performing our assurance activities is to the Management and Directors of BHP Billiton only and in accordance with the terms of reference for this engagement as agreed with them. We do not therefore accept or assume any responsibility for any other purpose or to any other person or organisation. Any reliance any such third party may place on the Report is entirely at its own risk.” (BHP Billiton, 2007, p. 64)

Fourth, the description of the scope of assurance engagement was rarely clear enough to provide stakeholders with a reasonable account of what precisely has been verified in practical terms. Most reports described the period covered by the assurance statement and, in much more general terms, the information or sustainability aspects that have been taken into account. Given the very large spectrum of aspects and indicators covered by most sustainability reports, which are often quite long (more than 100 pages on average in this study), it is virtually impossible to verify all the information contained. This impossibility should lead assurance providers to precisely explain what has or has not been covered in their assessment. Nevertheless, only 40% of statements in the mining sector and 21% in the energy sector specified the sections and pages of the sustainability report or the specific indicators that have been verified. Moreover, how these sections on specific sustainability issues have been verified was very rarely mentioned. The same remark applies to the standards, codes of conduct, and guidelines used by companies such as ISO 14001, ISO 26000, ISO 14064, OHSAS 18001, SA 8000, and the UN Global Compact. Around 20% of all statements indicated that one or more of these standards have been reviewed or considered in the verification process. Considering the complexity, specificity, and technical nature of some of these standards, codes, and guidelines, their use by assurance providers is unclear. Other aspects such as internal procedures, sources of data used, and data collection process were also frequently mentioned, but with the same type of imprecision and vagueness. Finally, 78% of statements in the mining sector and 60% in the energy sector released information – most often in general terms – on what has been excluded from the verification process. Although this information is essential, the reasons why assurance providers have chosen to focus on certain issues over others is almost never clarified. This imprecision is all the more problematic in that, in certain cases, the assurance statement seems not to be based on the most material issues. This raises unanswered questions on the reasons why essential aspects have been excluded:

“We have not sought evidence to support the statements and claims presented within the Sustainability Report. We have not reviewed historical data, or trends described in the Sustainability Report that relate to sustainability performance data.” (MOL Group, 2010, p. 209)

“We were not engaged to assess whether the Review¹³ is aligned with the Global Reporting Initiative’s G3 Sustainability Reporting Guidelines.” (Rio Tinto, 2006, p. 36)

Fifth, the description of the methods used by assurance providers was generally superficial. Not surprisingly, these methods essentially rely on documents shared by the company rather than primary sources of information collected by auditors themselves. Most assurance statements explained that their work has focused on the verification of so called “relevant documents” made available by companies. Around 70% of statements from the mining sector and 47% from the energy sector also mentioned site visits. Nevertheless, in almost half of the cases, the name and nature of those sites were not specified. Moreover, the type of information collected during site visits and, more generally, the methods used in this process, were very rarely explained. According to more than 90% of statements, interviews have been conducted inside the company, including at the site visited. Nevertheless, less than 10% of all statements specified the number of interviews conducted. Moreover, these interviews were essentially conducted with the managers of the company and, to a lesser extent, the staff responsible for the preparation of the report. The reliability of the information collected from these respondents seemed to be taken for granted by assurance providers. The same remark applies to interviews with employees, which were mentioned in only 42% of all reports. More importantly, only 7% of assurance providers have conducted interviews with external stakeholders. A priori, these stakeholders are the most likely to give an independent view on the reliability of sustainability reports and their opinion could help to demonstrate corporate accountability. Nevertheless, the type of stakeholders interviewed and their opinions were very rarely specified. Generally speaking, assurance statements limited themselves to very briefly indicating that interviews have been conducted without explaining the justifications for, characteristics, or outcomes of those interviews:

“Our conclusions are based on (...) interviews with a selection of the company’s senior management, personnel and stakeholders to gain an understanding of their approach to managing social and EHS issues.” (Sesa Goa, 2008, p. 62)

“We interviewed a selection of BP executives and senior managers to understand the current status of safety, social, ethical and environmental activities, and progress made during the reporting period.” (BP, 2012, p. 46)

4.3. Outcomes of the assurance process

The outcomes of the audit are quite predictable and are in line with the type of verification conducted. The predictable and optimistic rhetoric that permeated most assurance statements seemed to be based on hyperreal and predefined formulas divorced from real sustainability or reporting issues that could seriously question the reliability of sustainability reports. Although the issues raised by assurance providers may seem to vary widely, they essentially focused on three interdependent and complementary aspects of the information used: information materiality, completeness, and responsiveness. In most cases the accounts given of these aspects were positive and optimistic.

¹³ The 2006 sustainability report (Sustainable development review).

First, the materiality of reports was explicitly covered in more than two-thirds of statements. This issue is all the more essential to stakeholder accountability as previous empirical studies have shown that sustainability reports tend to focus on success stories and to ignore significant and negative issues (e.g. Boiral, 2013, Cho et al., 2015, Hahn and Lülfs, 2014). In this context, the verification of reports' materiality could give rise to interesting and substantial comments on aspects of importance for stakeholders such as the accidents or major events that need to be covered, absence or lack of data on key issues, balance of information disclosed, future challenges, or adaptation of certain indicators to stakeholder concerns. Moreover, the GRI framework (2006, p. 9) suggests various tests and questions to verify the report's materiality. However, these suggestions seemed to be ignored by assurance providers. In most cases, the materiality of reports was simply mentioned as an important criterion that has been taken into account in the course of the assurance process, but it was not detailed or substantially addressed in relation to the significant sustainability issues of the company. As a result, those issues and how they have been or should be addressed in practical terms in the sustainability report were overlooked, which raises the questions about the substance and hyperreality of materiality checking. One may assume that the interviews conducted with managers, employees, and external stakeholders or the analysis of internal data such as ISO 14001 documentation have shed more light on significant impacts that, in principle, should be covered in a balanced way. Likewise, assurance providers could have easily verified whether sustainability reports have covered certain major events and incidents widely reported by external sources such as the media, environmental protection agencies, or NGOs. Although this counter-accounting approach seems feasible and very relevant to verify the materiality of sustainability reports and stakeholder accountability, it was apparently ignored. As a result, the possible gap between key sustainability issues and what companies report was ignored or obfuscated. For example, Statoil's 2012 sustainability report did not explicitly cover the company's failure to respect regulations or its deficiencies in oil spill prevention in its North Sea oil platforms, which are located in very sensitive ecosystems. These problems have been highlighted during the period covered by the assurance statement in a report from Norway's Climate and Pollution Agency that received substantial attention in the media.¹⁴ Not surprisingly, this materiality gap was not mentioned in the assurance statement for Statoil, which was based on stereotypical formulas very similar to those found in other statements: "Based on our procedures for limited assurance, nothing has come to our attention to indicate that the Report is not fairly presented, in all material respects, in accordance with the reporting criteria" (Statoil, 2012, p. 54).

Second, the principle of completeness was mentioned in around half of statements. This principle was generally associated with the accuracy, reliability, and level of detail of the reported information. In most cases, completeness was simply deemed adequate by assurance providers. Nevertheless, the statements remained silent on how completeness has been verified. Given the quite detailed specifications of the GRI technical protocols¹⁵ and other sources of information on how to measure and report data on different performance indicators, one might have expected that statements refer to them in verifying information compliance and completeness. This type of verification seemed to be absent and the GRI technical protocols – on which the content of GRI

¹⁴ See for example Berglund (2011). Statoil bashed over spill preparedness, News in English, available at (accessed June 2015): <http://www.newsinenglish.no/2011/06/09/statoil-bashed-over-spill-preparedness/>.

¹⁵ See <https://www.globalreporting.org/resourcelibrary/G3-Guidelines-Incl-Technical-Protocol.pdf> (accessed May 2015).

sustainability reports is supposed to rely – were never explicitly mentioned. However, around 15% of statements expressed reservations about the reliability and completeness of information. These reservations were generally associated with the limitations of the assurance process itself, which do not allow auditors to conduct a more in-depth verification. Around 12% of statements went further and explicitly mentioned the existence of errors, inconsistencies, or lack of detail in sustainability reports. Even so, these issues were rarely explained and they were generally considered to be insignificant or to have been satisfactorily corrected by the company:

“For the key performance indicators verified, data in this report is considered to be generally accurate and representative of overall group performance. However, URSVL has identified occurrences where there appear to be minor systematic data quality and definition interpretation issues at a site level, although where identified these did not result in material errors when aggregated to a commodity business or group level.” (Xstrata Australia, 2006, p. 91)

“Certain site-reported data was found to be inaccurate and/or unreliable on a few occasions, although none of the identified errors were deemed significant enough to warrant a statement of qualification, and all errors were adequately addressed prior to the conclusion of this engagement.” (African Rainbow Minerals, 2011, p. 73)

Third, the principle of responsiveness or stakeholder inclusiveness was covered in 48% of all statements. This principle is directly related to stakeholder accountability and is generally associated with the response to identified stakeholder concerns. The 80% of comments on responsiveness essentially stated that the company was really committed to taking stakeholders’ interests and opinions into account or that nothing has come to the attention of assurance providers to lead them to believe that this principle has not properly been applied. Nevertheless, the nature of stakeholder concerns was almost never specified. This raises questions about how assurance providers verify the corporate response to these concerns. Interestingly, the 30% of comments on stakeholder inclusiveness suggested that the company should continue its efforts “to refine the approach” (BG Group, 2012, p. 57), foster “efficient and proactive communication with stakeholders” (Abeinsa, 2011, p. 89) or “further enhance” consultation of stakeholders or the role of consultative committee in this area (Barrick Gold, 2011, p. 95; Gas Natural Fenosa Mexico, 2012, p. 242). Considering the politically correct and successful rhetoric shaping assurance statements, these suggestions to further the measures for stakeholder responsiveness could be interpreted as an implicit recognition that this principle has not been convincingly applied and could be significantly improved. Around 26% of all statements have offered more explicit suggestions to improve company responsiveness. Nonetheless, with a rather limited number of exceptions (BP, 2011; Codelco, 2010; Enagás, 2012; Newmont Mining Corporation, 2009; Norilsk Nickel, 2011) these suggestions remained quite elliptical and were based on generalities applicable to almost all organizations. Most suggestions did not demonstrate a significant analysis of the specific situation of the company in terms of stakeholder responsiveness but rather highlighted the lack of documentation available for the monitoring and verification of this principle:

“The Company demonstrates engagement with stakeholders through various channels, but the documentation of key topics and concerns that have been raised through stakeholder engagement needs to be strengthened.” (Vedanta Resources, 2012, p. 87)

“The Company may further strengthen its stakeholder engagement process and have a management system to seek, record, monitor and address feedback from all identified stakeholders.” (MSPL, 2010, p. 86)

5. Discussion

The findings of this study seriously question assurance statements’ reliability, usefulness, and contribution to stakeholder accountability. These statements do not demonstrate a substantial verification process and appear rather to be based on a procedural and quite perfunctory approach largely disconnected from sustainability issues. From the qualitative analysis that was carried out, no significant signs of improvement in the reliability, rigor, and stakeholder accountability of statements have been observed. On the contrary, the assurance practice seems to be embedded in routines and rhetorical devices that tend to reproduce quite similar statements irrespective of the reliability and content of sustainability reports. This hyperreality of assurance statements is reflected in most aspects investigated, such as in the five interdependent factors identified in the literature review.

First, the interdisciplinary expertise and independence required to seriously verify the complexity of sustainability reports are not clearly demonstrated. In the absence of evidence of their actual expertise and impartiality, assurance providers cannot give stakeholders reasonable assurance on the reliability of reports they are supposed to rigorously and independently verify. The expertise is required to cover complex issues such as environmental and social impacts related to specific activities, technicalities of the reporting framework used by the organization, possible measures to involve stakeholders, and the evaluation of the reliability and comparability of sustainability indicators. There is no expertise required for the verification, although the importance of professional competence is mentioned in standards such as AA1000 and ISAE 3000, they are silent on the nature and requirements of those competencies. As a result, an assurance statement can be provided by virtually unqualified practitioners.

Second, the predominance of the procedural approach based on normative isomorphism (DiMaggio and Powell, 1983) that fosters professional isomorphism has been also indicated. AA1000 and ISAE 3000 in particular, which have been developed, to a large extent, by and for accounting practitioners (AccountAbility, 2008, IAASB, 2011), and as a result, those standards remain essentially based on accounting concepts and tend to ignore the specificities of sustainability reporting and its assurance. The same remark applies to stakeholder accountability and responsiveness, which appears as a virtuous principle whose concrete verification by assurance practitioners is not clearly explained. This silence on key reporting aspects tends to reinforce the normative isomorphism of assurance statements and its hyperreality. It can be assumed that this isomorphism is essentially based on the mimetic transfer of concepts, procedures, and symbols imported from the recognized discipline of accounting, but largely disconnected from specific sustainability issues. From a Baudrillardian perspective, such transfer appears as simulacra of simulation through which symbols and information no longer connected with real things are artificially reproduced, exchanged, and used (Baudrillard, 1984, Baudrillard, 1994).

Third, regarding the managerial capture of the assurance practice and the information released in sustainability reports, although it is asserted in the literature that the capture of assurance statements increases the credibility and expectation gaps between assurance providers and stakeholders (Adams and Evans, 2004, Jones and Solomon, 2010), it has been shown that the reassuring rhetoric of assurance providers on the importance of the assurance process to improve stakeholder accountability is quite unrealistic. This rhetoric is assumed to essentially reproduce the biased discourse of companies and to fuel the hyperreality of assurance statements.

Fourth, explanations of the methods of verification and the proper verification process are elliptical and tend to shed light on the significant limitations of assurance statements rather than their actual scope, methods, and content, as for the case of sustainability reports whose verification tends to be disconnected from critical sustainability issues, which are often deliberately obscured by companies to protect their image, as underlined in the literature (e.g. Boiral, 2013, Cho et al., 2015, Milne et al., 2006, Moneva et al., 2006). Consulting just some members of the company as assurance providers do is insufficient to substantially improve transparency and stakeholder accountability, which would require much more thorough investigations. Although the limited site visits and interviews conducted by most assurance providers seem relevant, they could remain limited, quite symbolic, and biased by politically correct responses, considering the outcomes of several studies that have analyzed the content and outcomes of non-financial third-party audits (e.g. Albersmeier et al., 2009, Boiral, 2012, Heras-Saizarbitoria et al., 2013). These responses are not likely to question the reliability of information on sustainability issues but rather to reflect organizational silence or a tendency to withhold information on problems that could undermine the organization's legitimacy (Bowen and Blackmon, 2003, Morrison and Milliken, 2000). Moreover, in most regions, the involvement of external stakeholders in the assurance process remains the exception rather than the rule (Junior et al., 2014, Perego and Kolk, 2012). The procedural nature of AA1000 and ISAE 3000 does not encourage their involvement, and these standards are almost silent on the specific methods to be used in the verification process. More importantly, these two main assurance standards do not explicitly refer to the GRI requirements, which are used in most sustainability reports. As a result, one may assume that the essential GRI principles for ensuring information quality (balance, clarity, accuracy, timeliness, comparability, and reliability) are overlooked. The same remark applies to the GRI technical protocols that organizations using this framework must follow in releasing information on specific sustainability indicators. In the absence of verification of these key GRI elements, the assurance of GRI reports is likely to resemble a symbolic and arbitrary practice conveying a hyperreal appearance of rigor and accountability on procedural aspects but devoid of real substance on basic reporting requirements and critical sustainability issues.

Fifth, regarding the opacity of assurance statements, the findings are in line with other critical works that have found a gap between the positive assessments included in the assurance statements and the serious deficiencies observed in sustainability reports in studies that have thoroughly examined their quality, reliability, and stakeholder inclusiveness (e.g. Boiral, 2013, Cho et al., 2010, Cho et al., 2015, Milne et al., 2006, Moneva et al., 2006). This gap could also be associated to the hyperreal nature of assurance statements, which tend to camouflage the basic lack of transparency and the managerial capture of the reporting process through a reassuring rhetoric directly derived from the more professionalized field of accounting. It also confirms Power's criticisms (1996, 1997a, 1997b) about the rash transfer of auditing practices into new areas in

which stakeholder accountability and organizational transparency are more complex to demonstrate and establish. Paradoxically, and contrary to the dominant assumption (Fonseca, 2010, Junior et al., 2014, Manetti and Becatti, 2009, O'Dwyer and Owen, 2007), the development of assurance standards, notably AA1000 and ISAE 3000, could have fueled the unsubstantial and hyperreal nature of assurance statements by legitimizing the current state of practice. These standards' lack of clarity on essential issues, such as the expertise of assurance providers, methods of verification, stakeholder inclusiveness, and compliance with reporting frameworks – particularly with the GRI – may have increased the problems they were initially supposed to tackle by fostering virtually non-professional and unsubstantial verification practices. Overall, reference to these standards tends to increase the gap between the rational and reassuring rhetoric conveyed by statements and what they can actually deliver in practical terms. It also increases their autopoietic nature (i.e. their capability for maintaining and reproducing themselves), that is to say the self-referential, self-maintaining, and operative closure of assurance statements that basically reproduce the uncritical rhetoric of sustainability reports themselves without any reference to realities of sustainability issues. This self-referential and self-maintaining rationale is also reflected in the repetition of the same standardized formulas also encountered in accounting audits, such as “nothing has caused us to believe that ...” or “our responsibility is to provide a conclusion on the subject matter based on evidence-gathering procedures”. The use of these formulas reflects the mechanistic transfer of accounting rhetoric and practices into very different areas, notably sustainability reporting (Power, 1996, Power, 1997a, Power, 1997b). These repetitions are indicative of the professional isomorphism and “cut and paste society” (Holder-Webb and Cohen, 2012) of assurance providers. The mimetic proliferation of the same predefined formulas in various assurance statements irrespective of the context and specificities of sustainability reports is also illustrative of their hyperreality. From the Baudrillardian perspective, assurance statements essentially promote “a real without origin or reality” (Baudrillard, 1994, p. 1) through the reproduction of empty formulas largely divorced from reality but expected to artificially inflate confidence in the reliability of sustainability disclosure.

6. Conclusions

This paper contributes to the literature on sustainability reporting by showing the lack of reliability of assurance statements. The main results are in line with critical approaches to this issue. However, these studies have been based on more limited samples and the most critical studies were conducted a relatively long time ago, when the practice of assurance statements was not well established and standardized. Relying on a sample of 337 assured sustainability reports covering the whole GRI G3/G3.1 application period, this qualitative study provides an updated and comprehensive analysis of assurance statements. It also sheds more light on the reasons why assurance statements fail to provide stakeholders with sufficient evidence of the reliability of sustainability reports. Those reasons provide an overall and systematic view of the limitations and superficiality of most assurance statements.

Moreover, most empirical studies in this area have been based on quantitative content analysis only. This study provides a more comprehensive and in-depth exploration of the meaning of assurance statements through a qualitative approach complemented by some quantitative data to clarify certain findings and tendencies. It also provides various examples that illustrate our main

findings and leads to a more critical view than studies focused on quantitative analysis alone. Furthermore, a very limited number of studies have been based on a longitudinal approach. The seven-year period of this study provides a wider perspective and makes it possible to question the dominant assumption that the practice of assurance statements tends to improve sustainability reports, in particular in terms of stakeholder accountability. The multi-sector sample of the study also contributes to a broader perspective. Although certain specificities can be observed in the mining and energy sectors, the main findings on the reliability of assurance statements and their contribution to stakeholder accountability do not appear to differ significantly between the sectors. In fact, the study shows the high degree of isomorphism of assurance statements, which tend to replicate the same uncritical rhetoric and very positive conclusions irrespective of the company or sector of activity. Finally, although at first glance it may seem radical, the concept of hyperreality and Baudrillard's critical theory provide a new and relevant perspective to further analyze the meaning of sustainability report assurance, in particular how allegedly independent and rigorous verification processes can lead to hyperreal statements based on procedural approaches disconnected from real sustainability issues and reporting requirements.

This study also has practical implications for assurance statement providers, organizations, and stakeholders. First, to improve their credibility and usefulness, assurance statement providers need to radically change their practices and professional requirements. The standards most commonly used in this area, in particular AA1000 and ISAE 3000, need to be better adapted to the realities of sustainability reporting and be much more specific in terms of expertise, verification processes, and expected outcomes. Minimal requirements with respect to methods of verification, indicators, and principles to verify should be specified. For example, information on the number and type of interviews conducted or any non-compliance observed should be clearly stated. Likewise, the GRI principles for defining report content and ensuring information quality – in particular the balance of information – should be verified. The same remark applies to the GRI's technical protocols on sustainability indicators, which are surprisingly ignored in assurance statements. Whatever the standard used, given the lack of knowledge of stakeholders on this issue, assurance providers should provide brief information on the main requirements of these standards and how they have contributed to improve the rigorousness of the assurance process. Finally, considering the organizational silence on compromising issues (Bowen and Blackmon, 2003, Morrison and Milliken, 2000) and the managerial capture of sustainability reports, assurance providers should use a counter-accounting approach. Verification of the extent to which significant negative events widely covered by external sources are clearly reported or discussed by organizations would provide stakeholders with relevant information on the transparency and balance of sustainability reports. Second, reporting organizations should require assurance providers to clearly demonstrate their expertise in this area and the usefulness of assurance statements beyond the external legitimacy they can provide. This demonstration is essential if assurance is to be used as a possible means for improving reporting practices and stakeholder accountability rather than as a marketing tool. Third, in the current state of practice, stakeholders should not consider assurance statements to be a meaningful source of information. In their present form, these statements should rather be taken as an indication that the reporting organization has decided to contract consulting or accounting firms to enhance the appearance of rigor and reliability of its sustainability report. Stakeholders interested in the reliability of sustainability reports should also pressure assurance providers and standardization organizations to develop more professional practices. The same remark applies to the governments that could regulate certain aspects of this practice, including

the training of assurance providers and development of standards based clearer and more stringent requirements. Such standards cannot rely on the hyperreal transposition of general accounting principles and procedures but require sound adaptation to the specificities of sustainability reporting.

The limitations of the paper suggest avenues for future research. First, this study is based only on the content analysis of assurance statements and does not investigate the statements through interviews, case studies or direct observations inside organizations. This methodological limit is often highlighted in the literature (e.g. Higgins et al., 2015, Manetti and Toccafondi, 2012, O'Dwyer and Owen, 2007, O'Dwyer et al., 2011) and certainly calls for further empirical studies of assurance providers, companies, and users of sustainability reports. For example, studies based on interviews could investigate the perceptions of assurance providers on the reliability of the assurance process and methods of verification used. O'Dwyer et al.'s (2011) study of the legitimization strategies employed by sustainability assurance practitioners takes a step this direction. Nevertheless, O'Dwyer et al.'s positive perspective about the improvement of dialogue between assurance providers and stakeholders is not apparent in our study and seems above all indicative of the successful rhetoric and self-legitimization that permeate assurance statements. Interviews with members of assured organizations are likely to be shaped by the same type of rhetoric aimed at improving corporate social legitimacy. Interviews with stakeholders such as NGOs and governmental agencies would likely give rise to more straightforward and frank comments on the usefulness of the assurance process, although the identification of knowledgeable respondents could be a challenging task.

Second, the assurance statements available in sustainability reports and analyzed in this study are not necessarily representative of the real outcomes of the verification process. Some statements indicate that a more detailed report on the main findings of the verification process has been released to the reporting organization. The analysis of this type of report and its comparison with official published statements could give rise to interesting research on the obfuscation or enhancement of information. Nevertheless, as highlighted by many assurance practitioners, assurance statements are based on a private contract with a reporting company. Access to potentially compromising information may therefore be difficult due to confidentiality issues.

Third, although a little quantitative data has been provided in this paper, it was not possible to measure some results due to the qualitative approach used. Common criticisms of qualitative research, such as the lack of reproducibility and generalizability, could be also mentioned as a limitation of the study. As underlined in the methodological literature (e.g. Denzin and Lincoln, 2000, Meadows, 2003, Yin, 2003), much of this criticism results from the different approaches of quantitative and qualitative methods. Future studies could delve deeper into these findings. Among other things, the factors that affect the reliability and credibility of assurance statements need to be further investigated through quantitative studies. Those studies could also investigate the normative isomorphism of assurance practitioners and the restatement or paraphrasing of the same passages. For example, future studies could measure the proportion of assurance statements that repeat or paraphrase prepackaged passages by means of quantitative content analysis. The origin of those repetitions, such as the routines of the company in charge of the assurance process and sentences commonly used in the accounting profession or in certain assurance standards, could also be further investigated. It may be assumed that the spread of stereotypical and pre-defined

sentences in assurance statements, notably those carried out by accounting firms, is driven by various factors, including auditors' training, the development of a "cut and paste" corporate culture, the formulaic application of internal procedures, the search for an economy of scale aimed at reducing the cost of customized reports, and the mere transfer of linguistic devices between assurance providers.

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ANNEX 1: Sustainability report sample

Company	Period	Sector	Country of the headquarters
Abeinsa	2011-2013	Energy Sector	Spain
Abengoa Bioenergía	2011	Energy Sector	Spain
Abengoa Solar	2011-2013	Energy Sector	Spain
African Rainbow Minerals	2011-2014	Mining Sector	South Africa
Anglo American	2007-2013	Mining Sector	United Kingdom
Anglo Platinum	2009-2011	Mining Sector	South Africa
AngloGold Ashanti	2007-2010, 2012	Mining Sector	South Africa
AREVA	2014	Mining Sector	France
Bangchak Petroleum	2012	Energy Sector	Thailand
Barrick Gold	2008-2014	Mining Sector	Canada
BG Group	2008, 2011-2013	Energy Sector	United Kingdom
Bharat Petroleum Corporation Limited	2008, 2010-2013	Energy Sector	India
BHP Billiton Ltd.	2007-2014	Mining Sector	Australia
BP	2007-2014	Energy Sector	United Kingdom
CLP	2006-2011, 2013	Energy Sector	Hong Kong
Codelco	2010	Mining Sector	Chile
CPC Corporation, Taiwan	2013-2014	Energy Sector	Taiwan
CPFL Energia	2011	Energy Sector	Brazil
Czech Coal	2008-2009, 2011	Mining Sector	Czech Republic
De Beers	2006-2011	Mining Sector	United Kingdom
Edison	2009, 2011	Energy Sector	Italy
Elcogas	2012	Energy Sector	Spain
Enagás S.A.	2011-2012	Energy Sector	Spain

Endesa Chile	2013	Energy Sector	Chile
Energy Development Corporation	2013	Energy Sector	Philippines
Enersis	2013	Energy Sector	Chile
Eni S.P.A.	2010-2013	Energy Sector	Italy
ENMAX	2011-2012	Energy Sector	Canada
Essar Energy	2012-2014	Energy Sector	United Kingdom
EVN	2007-2010, 2012	Energy Sector	Austria
Freeport-McMoRan Copper & Gold	2009-2014	Mining Sector	USA
Fundación Pacific Rubiales	2012	Energy Sector	Colombia
GAIL (India) Limited	2012-2014	Energy Sector	India
Galp Energia	2012-2013	Energy Sector	Portugal
Gamesa	2012	Energy Sector	Spain
Gas Natural Fenosa Mexico	2011-2012	Energy Sector	Mexico
Gestamp Solar	2014	Energy Sector	Spain
Gestamp Wind	2014	Energy Sector	Spain
Glencore	2011-2012, 2014	Mining Sector	Switzerland
GlencoreXstrata	2013	Mining Sector	Switzerland
GoldCorp	2011-2014	Mining Sector	Canada
Gold Fields Ltd.	2010-2013	Mining Sector	South Africa
Grupa LOTOS S.A.	2011-2013	Energy Sector	Poland
Grupo Unión Fenosa Gas Group	2011, 2013	Energy Sector	Spain
Gruppo ERG	2013-2014	Energy Sector	Italy
GS Caltex	2011-2012	Energy Sector	South Korea
Hellenic Petroleum	2011-2012	Energy Sector	Greece
Hess Corporation	2008-2014	Energy Sector	USA

Hindalco Industries	2012-2013	Mining Sector	India
Hyundai Oilbank	2009	Energy Sector	South Korea
Implats	2012	Mining Sector	South Africa
INA Group	2013	Energy Sector	Croatia
Inmet Mining	2011	Mining Sector	Canada
Itaipu Binacional	2011-2012	Energy Sector	Brazil
Korea Kumho Petrochemical	2009	Energy Sector	South Korea
Korea Midland Power Co., Ltd.	2010	Energy Sector	South Korea
Korea Gas Corporation	2011-2012	Energy Sector	South Korea
Korea National Oil Corporation	2007, 2010, 2014	Energy Sector	South Korea
Korea Southern Power Co., Ltd.	2010	Energy Sector	South Korea
Kumba Iron Ore	2011-2012	Mining Sector	South Africa
Kuwait National Petroleum Company	2013	Energy Sector	Kuwait
Lihir Gold	2009	Mining Sector	Papua New Guinea
Lonmin	2010, 2013	Mining Sector	United Kingdom
Masdar	2012	Energy Sector	United Arab Emirates
Minerals and Metals Group	2011-2013	Mining Sector	Australia
MOESK	2012	Energy Sector	Russia
MOL Group	2010-2011, 2013	Energy Sector	Hungary
MSPL	2008-2010	Mining Sector	India
Newcrest Mining	2012-2014	Mining Sector	Australia
Newmont Mining Corporation	2007, 2009, 2012-2014	Mining Sector	USA
Nippon Mining & Metals	2010-2012	Mining Sector	Japan
Norilsk Nickel	2011	Mining Sector	Russia
Novatek	2009	Energy Sector	Russia

Numaligarh Refinery Limited	2013-2014	Energy Sector	India
Oil and Natural Gas Corporation	2011-2015	Energy Sector	India
OJSC ALROSA	2011-2013	Mining Sector	Russia
OMV	2008-2010, 2013	Energy Sector	Austria
Peñoles	2007, 2009-2010	Mining Sector	Mexico
Petrobras	2006-2011	Energy Sector	Brazil
Petronet LNG	2014	Energy Sector	India
PGN	2012	Energy Sector	Indonesia
Premier Oil	2013	Energy Sector	United Kingdom
Prodeco	2011	Mining Sector	Colombia
PT Kaltim Prima Coal	2007, 2009-2010, 2012-2013	Mining Sector	Indonesia
PT Timah (Persero) Tbk	2009-2010	Mining Sector	Indonesia
PTT Exploration and Production Public Company	2013	Energy Sector	Thailand
PTT Global Chemical Public Company	2011-2012	Energy Sector	Thailand
PTT Public Company	2011-2013	Energy Sector	Thailand
RasGas	2013	Energy Sector	Qatar
REN	2011	Energy Sector	Portugal
Repsol YPF	2007, 2012-2013	Energy Sector	Spain
Rio Tinto	2006-2013	Mining Sector	United Kingdom
RMML	2014	Mining Sector	India
ROSATOM	2012	Energy Sector	Russia
Rosneft	2008-2013	Energy Sector	Russia
Samsung Heavy Industries	2011	Energy Sector	South Korea
Santos	2010-2012	Energy Sector	Australia

Sesa Goa	2008-2009, 2011, 2013	Mining Sector	India
SK Energy	2010	Energy Sector	South Korea
SK Innovation	2011, 2013	Energy Sector	South Korea
S-OIL	2008-2010	Energy Sector	South Korea
SolarWorld	2007-2010	Energy Sector	Germany
Statoil ASA	2009, 2012- 2013	Energy Sector	Norway
Sumitomo Metal Mining	2011-2014	Mining Sector	Japan
Suncor Energy	2006, 2013	Energy Sector	Canada
Talisman Energy	2007-2008, 2010	Energy Sector	Canada
TATNEFT	2009, 2011, 2013	Energy Sector	Russia
Teck Resources	2007, 2009- 2013	Mining Sector	Canada
The Linde Group	2011-2014	Energy Sector	Germany
The Mosaic Company	2013	Mining Sector	USA
TNK-BP	2010	Energy Sector	Russia
TOTAL	2012-2013	Energy Sector	France
TVEL	2013	Energy Sector	Russia
Vale	2009-2014	Mining Sector	Brazil
Vedanta Resources	2009, 2012- 2014	Mining Sector	United Kingdom
VERBUND	2006, 2012- 2013	Energy Sector	Austria
Wärtsilä Corporation	2008-2011, 2013	Energy Sector	Finland
Xstrata	2010-2011	Mining Sector	Switzerland
Xstrata Australia	2006-2009	Mining Sector	Australia
Xstrata Coal	2011	Mining Sector	Australia
Xstrata Coal South Africa	2010-2011	Mining Sector	South Africa
Xstrata Switzerland	2006-2011	Mining Sector	Switzerland

ANNEX 2: Main categories and subcategories used

Main categories (10)	Subcategories (78)
1. Information on the assurance provider	Definition of responsibilities (company, assurance provider), profile of assurance provider (accounting firm, consulting firm, other), name of assurance provider, level of assurance provided (high/reasonable, moderate/limited, combined, not specified)
2. Objectives of the assurance process	General objectives, gain an independent assurance, see evolution over time
3. Assurance team	Multidisciplinary team of professionals, information about the team, information about qualification and training, information about the auditor in charge, competence of the auditors
4. Methodology	Verification period, standard used (ISAE 3000, AA1000, ICM, other), guidelines used, scope of the audit (specify what has been assured and what has been excluded), assurance process, data collection system relevance, site visits, information about site visits, interviews, number of interviews, interviews with employees, interviews with stakeholders, reference to the GRI principles, reference to the GRI checklist, GRI A+ level check, verification of information outside the GRI, verification of the data collection process, verification of standard application, comparison between documentation and information from interviews and site visits, information accuracy
5. Statements on the content of reports	Stakeholder inclusiveness, sustainability context, materiality, completeness
6. Statements on the quality of information	Balance, comparability, accuracy, timeliness, clarity, reliability
7. Reservations and criticisms	Internal practices and reporting process, accuracy and reliability issues, absence or insufficiency of information, auditability and information access
8. Suggestions for improvement	Stakeholder engagement, control and internal verification, data collection, scope of reports, identification of material issues, clarification of objectives and strategy, standard compliance, possible involvement of stakeholders in the assurance process
9. Strategies used to distance the assurance provider	Compliance with the independence principle, code of ethics, absence of conflict of interest, contradiction, limitation of the responsibility of the assurance provider (for the content/quality)

	of the report, for the reliability of the report, for the use of the report by a third party)
10. Conclusion of the assurance process	Positive opinion, negative opinion, quality of disclosed information, report reliability, response to stakeholders' expectations, reliability of some report's items, improvements observed over time

ANNEX 3: Summary of the main findings

Information on the assurance team	
Multidisciplinary team of professionals	23%
Information on the team's composition	14%
Information on the qualification and training	10%
Expertise and experience in sustainability of the auditor in charge	6%
Information on the methodology	
Information on the sections, pages, or indicators assured	29%
Verification of standard and guideline application	20%
information excluded from the verification process	69%
Mention site visits	58%
Information about site visits	50%
Interviews inside the company	91%
Specify the number of interviews conducted	10%
Interviews with employees	42%
Interviews with external stakeholders	7%
Information on the content of reports	
Materiality	72%
Completeness	52%
Stakeholder inclusiveness	48%
Information on the relevant reservations and criticisms	
Reliability and completeness issues	15%
Accuracy issues	12%
Responsiveness issues	80%
Information on the relevant suggestions for improvement	
Should increase stakeholder inclusiveness	30%
Explicit suggestions to improve company responsiveness	26%
Information on the strategies used to distance the assurance provider	
Comply with the principle of independence	69%
Independence in accordance with the IFAC code of ethics	22%
Absence of conflict of interest	31%
Absence of commercial relationship with the auditee	5%
Limitations of the responsibilities of the assurance provider	65%
Not responsible for the reliability of the report	19%
Not responsible for subsequent use of the report by a third-party	29%