

Received: 07/07/2015
Accepted: 08/09/2015

Review
UDC 657.1/658.56

EVOLUTION OF CORPORATE ENVIRONMENTAL REPORTS IN SOUTH AFRICA

Peter Nasiema Kamala, PhD

*Department of Financial Accounting (Doctoral graduate), Unisa
kamalap@cput.ac.za*

Prof Christa Wingard

*Department of Financial Accounting, Unisa
Wingahc@unisa.ac.za*

Prof Christo Cronjé

*Department of Financial Governance, Unisa
Cronjcyj@unisa.ac.za*

ABSTRACT

Using a literature review, we track the evolution of the quality of environmental reports of the Top 100 Listed South African (T100LSA) companies from 1990 to 2015. Furthermore, we attempt to predict the future quality of these reports.

The findings reveal a dramatic improvement in the quality of environmental reports produced by T100LSA companies. Not only did the number of companies disclosing their stakeholder engagement practice increase dramatically, but also there was an increase in number of companies whose environmental report contained an assurance statement. Increasingly, T100LSA companies were quantifying their environmental impacts and comparing the impacts to those of their prior years. Also revealed was a dramatic increase in number of T100LSA companies that provided annually updated summaries of their performance indicators using visual aids, multiple formats and media. However, the companies did not take full advantage of the Internet to enhance the quality of their environmental reports.

Keywords: *relevance; reliability; comparability; understandability; timeliness.*

1. INTRODUCTION

Accounting reporting as a practice cannot be properly understood unless the historical context within which it emerged is recognised (Sangster 2010: 01). Understanding the historical context of accounting also assists in predicting the trajectory of its future (Wiley 2013: 01). While it is well documented that the number and volume of environmental reports produced by T100LSA companies have increased dramatically in the last few decades (KPMG 2013: 20), few papers have addressed the milestones of these developments with regard to the quality of the reports. It is thus unclear whether the increase in volume has occurred in tandem with an improvement of the quality of these reports (Kamala 2015: 05).

By focusing on the quality of environmental reports, this article tracks the key developments and shortfalls of the environmental reporting practice of the T100LSA companies, which constitute over 95% of the market capitalisation of the Johannesburg Securities Exchange (Kamala 2015), and searches for ways to improve the quality of the reports. To date only a few studies have attempted to track the evolution of the quality of environmental reports produced by listed companies (KPMG 2013; KPMG 2011; KPMG 2008; Wheeler & Elkington 2001; Azzone *et al.*, 1996). *However most of these studies are dated, focus mostly on the reporting rates of European companies and do not entirely focus on the quality of environmental reports.*

This article, to the best knowledge of the authors, is the first to entirely study the evolution of the quality of environmental reports of T100LSA companies. It attempts to determine how the quality of environmental reports produced by the T100LSA companies has evolved to the current quality, and predicts how the quality of these reports is likely to evolve in the future. The article does not only fill in the gap on the evolution of the quality of environmental reports in South Africa, it also provides a more recent prediction of the future quality of the reports by factoring in more recent advancements in information technology.

The rest of the paper is structured as follows: Section 2 discusses the evolution of the quality of environmental reports in the period between 1990 and 2015. Section 3 predicts the future quality of environmental reports produced by T100LSA companies. Section 4 provides the conclusion of this study.

2 EVOLUTION OF ENVIRONMENTAL REPORTING OF LISTED COMPANIES IN SOUTH AFRICA

2.1 ENVIRONMENTAL REPORTING IN SOUTH AFRICA FROM 1994 TO 1999

Following the demise of Apartheid era in 1994 and South Africa's re-admission into the international community, the number of T100LSA companies that produced environmental reports increased, though dismally, in the period between 1994 and 1999 (De Villiers 2000: 72). The increase was attributed to the international market pressure that compelled the companies to raise their environmental reporting practices which had fallen far below the international best practice as a result of the country's pro-longed period of political isolation (Visser 2005: 01).

To enhance the quality of their environmental reports, the T100LSA companies increasingly involved their stakeholders in their environmental reporting exercise to make the reports more relevant (Visser 2005: 02). In addition, the companies increasingly adopted international standards and guidelines to improve the reliability of their reports.

Unlike in Europe, only a few studies were conducted between 1994 and 1999 on environmental reports produced by listed South African companies. In one such study, De Villiers & Bernard (2000) examined the environmental disclosures of Financial mail top 100 South African industrial companies. Their study revealed that the percentage of the companies that mentioned their environmental impacts and risks rose from 14% in 1994 to 24% in 1999. The percentage with a policy towards the environment rose from 19% in 1994 to 31% in 1999. By contrast, those with measurable objectives declined from 18% in 1994 to 11% in 1999. Those which indicated whether they had met their objectives rose from 17% to 22%. Those with an accounting policy note regarding environmental disclosures rose from 4% in 1994 to 5% in 1999. In short, the reporting rate and quality of reports only improved marginally.

Given the marginal improvement in environmental reporting rates and quality of reports of T100LSA companies, some authors like De Villiers (1998, 2000) and KPMG (1999) criticised the quality of the reports which they deemed inferior to those of listed companies in the developed countries. In addition, the stakeholder engagement initiatives undertaken by most companies were not genuine thus undermined the relevance of the reports (Visser 2005: 04). Given the absence of assurance standards and universal key performance indicators, most environmental reports lacked an assurance statement (De Villiers 1998: 08). As a result, the reports produced during the period were mostly

incomplete, narrative and devoid of detailed monetary or physical values, an attribute that rendered them incomparable (KPMG 1999). Furthermore, the reports had a bias towards positive information and were rarely updated (De Villiers 2000: 72).

2.2 ENVIRONMENTAL REPORTING IN THE PERIOD BETWEEN 2000 AND 2015

In the period between 2000 and 2015, the environmental reports produced by T100LSA companies did not only dramatically increase in number and volume, they also improved in quality (Kamala 2015; KPMG 2013; IRAS 2012). Indeed the percentage of T100LSA companies that prepared environmental reports increased from 45% in 2008 to 97% in 2011, to 98% in 2013 (KPMG 2008; 2011; 2013).

During the afore-mentioned period, the T100LSA companies increasingly included foreword statements from top management in their reports reassuring readers of their commitment to environmental objectives (Mammatt *et al.*, 2009: 01). Increasingly, the companies, incorporated environmental issues in their mission, vision and objective statements. Similarly, they increasingly established board committees to oversee environmental issues. To further enhance the relevance of their environmental reports, the companies were increasingly tailoring their reports to better suit specific stakeholders' needs (Mammatt *et al.*, 2009: 01).

In a bid to improve the reliability of their environmental reports, an increasing number of the T100LSA companies included an assurance statement in their reports (KPMG 2013: 33). The percentage of the companies that included an assurance statement in their environmental reports rose from 27% in 2002, to 33% in 2005 to 38% in 2013 (KPMG 2002; 2005; 2013). The assurance was increasingly conducted within the context of auditing standards and mostly by major accountancy firms, an aspect meant to enhance the credibility of the reports (Mammatt *et al.*, 2009:01).

To enhance the understandability of their environmental reports, the T100LSA companies were increasingly producing more concise and effective reports with less prolix (Mammatt *et al.*, 2009:01). In addition, the companies were increasingly producing summarised hard copy reports often supported by more detailed on-line resources (Mammatt *et al.*, 2009:01). Furthermore, the companies were increasingly including GRI Index tables in their reports to ease access to information (IRAS 2013; Mammatt *et al.*, 2009:01). With 90% of the companies referring to the GRI guidelines when selecting the content to report on (KPMG 2013), the comparability, credibility and completeness of the resulting reports was enhanced.

Although the companies had prior to 2010, increasing converged their environmental, social, and ethical reports into one sustainability report (Visser 2005: 02). As from 2010, T100LSA companies led their counterparts from the rest of the world by integrating their environmental reports fully into their annual reports (IRAS 2012). Indeed all of these companies stated that their reports were fully integrated (Kamala 2015). The integrated reports provided a more complete picture of the companies' performance by placing their financial performance within the context of their environmental and social performance (Ernst & Young, 2010). In addition, the integrated reports clarified the causal link between their environmental performance and financial performance to enable the stakeholders to better understand and predict the impact of companies' actions on the society (IODSA, 2009). Furthermore the reports provided readers with a one-stop shop for all the information required (Corporate Register.com, 2010).

Given that integrated reporting required a deeper engagement with the stakeholders, the environmental reports in the integrated reports were more attuned and therefore more relevant to diverse stakeholders than the stand-alone reports (HBS, 2010:37; IRC, 2011:02). To integrate reports, the T100LSA companies required robust information management systems to be able to capture, measure, analyse and disseminate accurate environmental data on a more frequent basis (IRC, 2011:21; KPMG, 2011:27). Indeed 12% of the companies had implemented a dedicated information management system to improve the integrity, reliability and timeliness of their environmental data as well as the resulting reports (KPMG 2011; IRC, 2011:17). The integration also subjected the environmental data to the internal controls and rigorous auditing procedures used for the financial information, which further enhanced the reliability and rigor of the data (IRC, 2011:17; KPMG, 2010:08). Furthermore, the integrated reports required a universal level of standardisation of key environmental performance metrics which enhanced the consistency, conciseness and comparability of the reports across time, and to those of other companies in similar industries (HBS, 2010:142; KPMG, 2010:08).

Notwithstanding the above-mentioned developments, the quality of environmental reports of the companies remained questionable for various reasons: Firstly, only a few entered into a meaningful dialogue with their stakeholders to define the issues that should be reported or even asked for specific feedback (KPMG 2013: 69). Accordingly, the stakeholder dialogue was limited, typically unilateral, and almost always employed the lesser effective channels of communication and unrepresentative stakeholder panels. As a result, most of the reports failed to reflect the needs of their targeted audience, lacked credible and or resentful stakeholders' voices (KPMG 2013: 69). Secondly, only

38% of the companies had assured their reports, mostly using limited assurance, by 2013 (KPMG 2013). In addition, the assurance statements themselves varied significantly did not refer to any recommendations for improvement therefore they offered little insight into how the assurance process was useful to a company's environmental reporting and performance (Kamala 2015; Mammatt *et al.*, 2009: 01). Accordingly, the resulting assurance statements did not enhance the reliability of the reports but instead led to a credibility gap that made stakeholders to be dismissive of the assurance process, statements, practical competencies of the assurance providers and the overall institutional legitimacy of the environmental industry (Kamala 2015).

As a result of the above weaknesses in the assurance process, the environmental reports produced by most T100LSA companies tended to be declarative, over-exaggerated with regard to compliance with guidelines such as GRI and focussed on good news even when bad news was known to exist (IRAS 2012; Incite Sustainability 2008: 78). In addition, most of the performance measurement systems were inept and error prone, as they relied on manual or simple spread sheet software that could not guarantee the accuracy of the reports produced (Mammatt *et al.*, 2009:01). In fact 88% of the companies had not implemented a dedicated information management system for capturing and processing the increasingly complex environmental data (KPMG 2011). As a result, 25% of the companies had restated their data in the subsequent reports (KPMG 2013). Worse still, some of the companies undermined the credibility of their own reports by providing cautionary statements about the nature of the information contained therein (KPMG 2013; KPMG 2011). Thirdly, although all T100LSA companies had produced an integrated report by 2015, none had included an integrated assurance statement in these reports (Kamala 2015). Instead the reports had a different assurance statement in each section an indication that the assurance was undertaken in silos. This had the potential of leading to an assurance fatigue, assurance gaps and increased risk exposure, overlaps, competing and even conflicting assurance objectives that escalate the assurance costs (Kamala 2015).

Fourthly, to cater for diverse stakeholder groups, many T100LSA companies simply expanded their integrated reports through the dumping of verbose, unprioritised, generic, repeated and unintelligible environmental information (Kamala 2015). In addition, most companies proliferated these reports in different formats and types, using a varying range of media which did not only lead to multiplication of data and information-overload, but also it diminished the relevance, readability and comparability of the reports to the readers (Kamala 2015). Furthermore, some of the multi-national T100LSA companies, had dis-aggregated their environmental information per country, product or

line of business, in a manner that undermined readers' comprehension of the overall performance of these companies (Mammatt, 2009: 04). By contrast, some companies, over-aggregated information without supporting detail or link between environmental issues and strategy consideration, an approach that impaired the readers' comprehension of the information (Kamala 2015).

Fifthly, although the Internet had altered environmental reporting, only a few T100LSA companies took full advantage of the Internet's technological capabilities to make their reports more relevant, reliable, comparable, understandable, timely and verifiable (Kamala 2015). With regard to relevance, many companies did not tailor their environmental information for the needs of different stakeholders, neither did their websites have software to track and manage the stakeholders' usage of the information on the web (Turk *et al.*, 2013: 01). In addition, analytical tools were hardly utilised to provide users with an option to manipulate environmental information to suit their needs.

Almost all T100LSA companies did not employ advanced reporting software such as eXtensible Business Reporting Language (XBRL), to reduce the risk of manual error entries (Mammatt *et al.*, 2009:01; Kamala 2015; KPMG 2011: 27). Instead they opted for manual and error prone spreadsheet software that could not guarantee accuracy of the reports produced. In addition, most of the companies had proliferated their environmental information on different sections of their websites and made no effort to standardise the information reported (GRI 2012: 32). This together with the duplication of the information across a variety of media, failure to adopt XBRL software (which makes inter-company comparability almost immediate) and the adoption of different reporting structures undermined the comparability of the information reported (Kamala 2015).

With respect to the understandability of the environmental reports, most T100LSA companies did not use their on-line capabilities to enrich the content of their reports, instead they opted for Portable Document Format (PDF), a replica of the printed reports (Turk *et al.*, 2013: 01). Accordingly, their on-line environmental reports were hardly interactive or animated, lacked video and audio features which could captivate readers as well as in-built embedded software to translate the reports to different South African languages (Kamala 2015).

Regarding the timeliness of the environmental reports, most T100LSA companies did not leverage their on-line capabilities to report more frequently using HyperText Markup Language (HTML) format files, instead they increasingly relied on PDF files which were aligned to their annual reporting cycle (Turk *et al.*, 2013: 01). Where the HTML files were used, they duplicated prior years' information and did not always include the dates to enable readers to assess how current the reports were.

3 PREDICTION OF THE FUTURE QUALITY OF ENVIRONMENTAL REPORTS PRODUCED BY TOP 100 LISTED SOUTH AFRICAN COMPANIES

Thus far we have attempted to track the evolution of environmental reports of T100LSA companies from 1994 to 2015. To predict the future of the quality of the reports produced by T100LSA companies, we have to ask whether the benefits of improving the quality of these reports will outweigh the related costs. According to KPMG (2011), the answer to this question is a resounding yes. To further predict the future quality of these reports, we have to consider which stakeholders will influence the quality of the reports (Wheeler & Elkington 2001: 11). In addition we have to acknowledge the fact that the Internet has irreversibly altered environmental reporting practice and the quality of the resulting reports by availing new capabilities that can make the reports more relevant, reliable, comparable, understandable, timely and verifiable (KPMG 2013).

3.1 THE EXPECTED FUTURE NEEDS OF STAKEHOLDERS

The stakeholders with an immediate influence on the quality of environmental reports include investors, customers, employees and local communities (European Commission 2011). Investors who aim to maximise return on their investment will be interested in future-oriented, real-time indicators of environmental risks and opportunities (De Villiers and Van Staden 2010: 442). These stakeholders are likely to reject vague narrative statements about a company's environmental performance and demand numeric raw data and analytical tools to enable them to analyse the data themselves and to compare the numbers against an entity's past similar data and data from peer companies (European Commission 2011: 92). The shareholders may expect to participate in the writing process by adding their views to the reports and sharing the unedited content with their colleagues and friends (Baue & Murningham, 2010:15).

Customers of the future are likely to shop on-line and to be consciousness about the environmental impact of the products they buy (Walker Sands 2014: 03). These customers will expect environmental information to be available instantly alongside other standard product information (European Commission, 2011:97). Such information will preferably be in form of simple precise summaries and presented in a multilingual manner. Most potential employees seek employment via the Internet and try to match their personal values to those of the companies that they intend to work for. It is predicted that the future employees will expect environmental information of their interest as close as possible to the corporate home page of the companies they seek employment in (European Commission, 2011:100). Bearing in mind the unique interest of

employees in their well-being at the work place and work-place environmental hazards, it is predicted that they will expect to be able to tailor environmental information to cater for their unique needs, perhaps using drill down capabilities of the Internet.

From the foregoing, it is clear that the stakeholders' will in the future expect environmental reports that are relevant, reliable, comparable, understandable, timely and verifiable. In addition the users will expect that those reports be made available to them conveniently, on demand and be accessible regardless of their location. Accordingly such reports would have to be disseminated via the internet and preferably on a real-time basis.

3.2 THE EXPECTED IMPACT OF THE INTERNET ON THE FUTURE QUALITY OF ENVIRONMENTAL REPORTS

The proliferation of Internet in South Africa has made on-line publishing, arguably the quickest, easiest and most cost-effective method to keep numerous stakeholders informed about a company's environmental performance (Mlarvizhi & Yadav, 2008:03). As a result, T100LSA companies have embraced the medium for reporting on their environmental issues (Kamala 2015: 313). The internet has not only revolutionised the environmental reporting practice in general, it has availed on-line capabilities that can dramatically improve the quality of environmental reports. The impact of these capabilities is expounded on in the next section.

3.3 THE EXPECTED FUTURE OF THE QUALITY OF ENVIRONMENTAL REPORTS

Bearing in mind that company stakeholders are increasingly demanding relevant, reliable, comparable, understandable, timely and verifiable environmental information, and considering the Internet's capability in providing such information at a low or no extra cost, the future of the quality of environmental reporting practice in South Africa is promising and exciting (Kamala 2015: 89). Regarding the relevance of environmental reports, it is envisaged that T100LSA companies will leverage the Internet to engage their stakeholders meaningfully and effectively, on an on-going basis through interactive surveys, discussion forums, web chats, wikis, blogs and social media (Radley Yeldar & GRI, 2011: 05). In so doing, the companies will not only be able identify stakeholders' concerns, but they will be able to address these issues in a timely manner given the instantaneous feedback that the above on-line tools allow.

It is also envisaged that through the robust capabilities of the web technologies availed by the Internet, T100LSA companies will use the in-built flex-

ibility of the Internet to allow different stakeholder groups to tailor environmental reports to their specific information needs. It is also envisaged that the companies thus facilitating the provision of relevant information in the reports by better targeting of the intended audience (HBS, 2010: viii).

To the enhancement of the reliability of their environmental reports, it is envisaged that the companies will deploy their robust on-line capabilities to provide readers with raw data and analytical tools to enable them to analyse the data themselves (CSR Europe, 2010:23). Similarly, the companies may use the same to allow readers to participate in the writing process by enabling them to add their views to the reports and sharing the unedited content with others via the social media (Baue & Murningham, 2010:15). The companies could also use robust on-line reporting software such as the XBRL to reduce manual error entries (KPMG 2013: 64).

Concerning the enhancement of verifiability of environmental reports, it is envisaged that T100LSA companies will deploy Internet-based web technologies which are embedded with auditing capabilities to facilitate and accelerate continuous monitoring and assurance process (Blundell, 2007:11; Kuhn & Sutton, 2010:91). The same technologies may also be leveraged to leave a seamless audit trail and support thorough documentation of systems, processes and controls, as well as track any related changes (Blundell 2007:40; Kuhn & Sutton, 2010:107). In addition, the web technologies may also be deployed to facilitate the usage of automated and standardised Computer Assisted Audit Techniques (CAAT) that test entire data populations with ease thus effectively reducing detection and audit risk (Blundell, 2007:25). These CAATs should also provide consistent working-paper documentation that lead to accurate assertions about the effectiveness of a company's internal controls (Blundell, 2007:89; 95).

To enhance comparability of environmental reports, it is envisaged that T100LSA companies will adopt web technologies such as XBRL to allow users to standardise the formats and structures of environmental reports of different companies to facilitate inter-company comparison of similar environmental information (CSR Europe, 2010:23). The technologies may also facilitate comparability of a company's performance across time by allowing readers to juxtapose items of a company's most recent report with similar items from the prior periods' reports (HBS, 2010: 243).

Concerning the enhancement of the understandability of environmental reports, it is envisaged that T100LSA companies will adopt Internet-based web technologies to enrich their reports with visually attractive and easily digestible multimedia content, such as videos, pod casts, slide shows, animations, dynamic graphs and charts (CSR Europe, 2010:15; Radley Yeldar & GRI, 2011:03).

Such technologies may also enhance the usability of the websites by providing alternative ways of accessing information such as reading, watching, listening, and touching (via Braille) (CSR Europe, 2010:07). The understandability of the reports may also be enhanced by the user-friendly web toolkits which ease readers' navigation, enable them to create PDF files, send emails, provide feedback, create charts, enlarge existing charts, download tables in Excel, conduct quick search for information, obtain detailed view of data using infinite drill-down capability and so on (CSR Europe, 2010:15; HBS, 2010:174). More importantly, the web technologies could be leveraged to translate environmental reports to any of the nine official South African languages.

To enhance timeliness of environmental reports, it is envisaged that T100LSA companies may will deploy on-line tools to speed up stakeholders' feedback in an uncensored and real-time manner (CSR Europe, 2010:18). This should enable the companies to update their environmental information and news feeds at a faster and more frequent pace, thus ensuring that new environmental information is disseminated as soon as it becomes available (CSR Europe, 2010:18). In addition, the Internet-based web technologies could be deployed to enable the transmission of real-time environmental data to stakeholders (KPMG, 2008:19).

4. CONCLUSION

This article sought to determine how has the quality of environmental reports produced by T100LSA companies have evolved from 1990 to 2015, and to predict the future evolution of the quality of these reports. Although several positive developments in the quality of environmental reports were documented, those developments were marred with a plethora of shortfalls. More precisely, the T100LSA companies appear not to have taken full advantage of the latest available technological capabilities of the Internet to make their reports more relevant, reliable, comparable, understandable, timely and verifiable. Given that company stakeholders are increasingly demanding environmental information that has these characteristics and considering the Internet's capability to provide such information at a low or no extra cost, it is predicted that T100LSA companies will leverage the Internet to produce more relevant, reliable, comparable, understandable, timely and verifiable environmental reports.

The findings of this article have implications for preparers of environmental reports, as they will be made aware that readers expect the reports to be relevant, reliable, comparable, understandable, timely and verifiable, and that the Internet is perfectly suited for producing reports that demonstrate these

qualities at a low or no extra cost. The obvious limitation of this paper is its literature review approach. Future empirical studies could investigate the actual extent to which T100LSA companies leverage the Internet to produce relevant, reliable, comparable, understandable, timely and verifiable environmental reports.

REFERENCES

1. Azzone, G., Manzini, R. and Manzini, R. 1996. Evolutionary trends in environmental reporting. *Business Strategy and the Environment*, 5: 219–230.
2. Baue, B. & Murningham, M. 2010. The accountability web: weaving corporate accountability and interactivetechnology . www.hks.harvard.edu/m.../workingpaper. [25 August 2014].
3. Blundell, A.W. 2007. Continuous auditing technologies and models. Unpublished Master's Dissertation, Port Elizabeth. Nelson Mandela Metropolitan University.
4. CorporateRegister.com. 2010. CRRRA: CR Reporting Awards '10: global winners & reporting trends. www.corporateregister.com/pdf/CRRRA10.pdf. [28 March 2015].
5. CSR Europe. 2010. A CSR Europe contribution to the European Commission ESG workshops 2009/2010. www.ec.europa.eu/corporate-social-responsibility/trends. [19 May 2015].
6. De Villiers, C.J. 1998. South African environmental reporting: what it is, what it should be. www.www3.bus.osaka-cu.ac.jp/apira98/archives/pdfs. [23 March 2015].
7. De Villiers, C.J. 2000. Social responsibility disclosure by South African industrial holding companies: a research note. *South African Journal of Accounting Research*, 14(1):65–73.
8. De Villiers, C.J. & Barnard, P. 2000. Environmental reporting in South Africa from 1994 to 1999: A research note. *Meditari Accountancy Research*, 8:15–23.
9. De Villiers, C.J. & Van Staden, C.J. 2010. Shareholders' corporate environmental disclosure need. *South African Journal of Economic and Management Sciences*, 13(4):436–445.
10. Eilstrup-Sangiovanni, M. & Bondaroff, T.N. 2014. From Advocacy to Confrontation: Direct Enforcement by Environmental NGOs. *International Studies Quarterly*, 58 (2): 348–361.
11. Ernst & Young. 2010. The financial sector from a non-financial perspective: the path forward. www.ey.com/Publication/...path_forward/.../The%20Path%20Forward.pdf. [25 January 2015].
12. European Commission. 2011. The state of play in sustainability reporting in the European Union. www.ec.europa.eu/social. [25 January 2012].
13. Global Reporting Initiative (GRI). 2012. Modernizing sustainability reporting – GRI, G4 and XBRL. *Proceedings of the 24th XBRL International Conference*, Abu Dhabi.
14. Harvard Business School (HBS). 2010. The landscape of integrated reporting reflections and next steps. www.hbs.edu/Reporting.pdf. [10 January 2015].
15. Incite Sustainability. 2008. Carbon disclosure project report 2008: JSE Top 100. www.cdp.roject.net/.../67_329_169_CDP.pdf. [30 January 2015].
16. Institute of Directors in Southern Africa (IODSA). 1994. King Report on Corporate Governance for South Africa. www.iodsa.co.za/products_reports.asp. [30 January 2015].
17. Institute of Directors in Southern Africa (IODSA). 2007. Integrated sustainability reporting in South Africa. www.iodsa.co.za/downloads.pdf. [30 January 2015].
18. Institute of Directors in Southern Africa (IODSA). 2009. King Report on Corporate Governance for South Africa. www.african.ipapercms.dk/IOD/KINGIII/kingiii_report. [30 December 2014].

19. Integrated Reporting and Assurance Services (IRAS). 2012. 2012 review of sustainability reporting in South Africa as per the Global Reporting Initiative (GRI) Guidelines. www.iras.co.za. [19 February 2015].
20. Integrated Reporting Committee (IRC). 2011. Framework for integrated reporting and the integrated report discussion paper. [/www.sustainabilitysa.org](http://www.sustainabilitysa.org). [22 March 2015].
21. Kamala, P.N. 2015. The decision-usefulness of corporate environmental reports in South Africa. Unpublished Doctor of Commerce thesis. Pretoria. University of South Africa.
22. KPMG. 2008. International survey of corporate responsibility reporting. [www.kpmg.com / RutUS_prod/Documents/8/Corporate_Sustainability_Report_US_Final.pdf](http://www.kpmg.com/RutUS_prod/Documents/8/Corporate_Sustainability_Report_US_Final.pdf). [12 July 2014].
23. KPMG. 2011. International survey of corporate responsibility reporting 2011. www.kpmg.com/global/en/issuesandinsights/articlespublications/corporate-responsibility/pages/2011-survey.aspx. [12 January 2015].
24. KPMG. 2013. The KPMG Survey of Corporate responsibility reporting 2013. www.kpmg.com/global/en/issuesandinsights/articlespublications [31 December 2014].
25. Kuhn, J.R. & Sutton, S.G. 2010. Continuous auditing in ERP system environments: the current state and future directions. *Journal of Information Systems*, 24(1):91–112.
26. Mammatt, J., Marx, B. & Van Dyk, V. 2009. Sustainability reporting and assurance: the way of the future. Available at: <http://www.accountancysa.org.za/Article.asp> [12 January 2015].
27. Mlarvizhi, P. & Yadav, S. 2008. Corporate environmental reporting on the internet: an insight into Indian practices. www.iitk.ac.in. [13 April 2015].
28. Moloi, S.T.M. 2008. Assessment of corporate governance reporting in the annual reports of South African listed companies. Unpublished Master's Dissertation, Pretoria. University of South Africa.
29. Morolo, M.Z. 2007. Children's acquisition of computer literacy skills in the Mamelodi digital doorway project. Unpublished Masters Dissertation, Pretoria. University of Pretoria.
30. Radley Yeldar & Global Reporting Initiative (GRI). 2011. Trends in online sustainability reporting. www.globalreporting.org/TrendsInOnlineSustainabilityReporting. [30 May 2015].
31. Sangster, A. 2010. Using accounting history and Luca Pacioli to put relevance back into the teaching of double entry. www.tandfonline.com/doi/abs. [10 May 2015].
32. Turk, B.K., Shackleton, C.M. & Whettington-Jones, K. 2013. Prevalence of sustainability reporting practices of a sample of listed companies on established and emerging stock exchanges. *South African Journal of Economic and Management Sciences*, 16 (1): 75–82.
33. Visser, W. 2005. Business frontiers: social responsibility, sustainable development and economic justice. www.waynevisser.com/book_business_frontiers.html. [05 January 2015].
34. Walker Sands .2014. Future of retail study. [http://www.walkersands.com/Whitepaper\(1\).pdf](http://www.walkersands.com/Whitepaper(1).pdf). [18 January 2015].
35. Wheeler, D & Elkington, J. 2001. The end of the corporate environmental report? Or the advent of cybernetic sustainability reporting and communication. *Business Strategy and the Environment*. 10 (1): 1–14.
36. Wiley, C. 2013. The history of accounting. www.accountingedu.org/history-of-accounting.html. [10 May 2015].

PRIPREMA KORPORATIVNIH IZVJEŠĆA O ZAŠTITI OKOLIŠA U JUŽNOJ AFRICI

SAŽETAK RADA:

U ovom radu prati se, koristeći dostupnu literaturu, razvoj i kvaliteta izvješća o zaštiti okoliša stotinu najvećih južnoafričkih tvrtki u razdoblju od 1990. do 2015. godine. Također se pokušava predvidjeti i kvaliteta navedenih izvješća u budućnosti.

Rezultati istraživanja pokazuju značajno poboljšanje kvalitete izvješća o zaštiti okoliša u promatranim tvrtkama.

Povećao se ne samo broj tvrtki koje redovito izvještavaju o praksi zaštite okoliša već i broj tvrtki koje u izvješće uključuju i izjavu o osiguranju.

Pozitivan pomak u promatranim tvrtkama ustanovljen je i u praksi usporednog izvještavanja i analiziranja izvješća prethodnih godina te godišnjim ažuriranjima sažetaka izvješća pomoću raznih vizualnih pomagala te korištenjem raznih medija. u približavnaju izvješća krajnjim korisnicima. Primijećeno je ipak da promatrane tvrtke premalo koriste internet kao dostupni resurs.

Ključne riječi: relevantnost; pouzdanost; usporedivost; razumljivost; pravovremenost.