

## What is the Accounting Profession's Role in Accountability of Economic, Social, and Environmental Issues?

**Anna L. Lusher**

Associate Professor of Accounting  
Slippery Rock University  
School of Business  
1 Morrow Way  
Slippery Rock, PA 16057  
USA

### Abstract

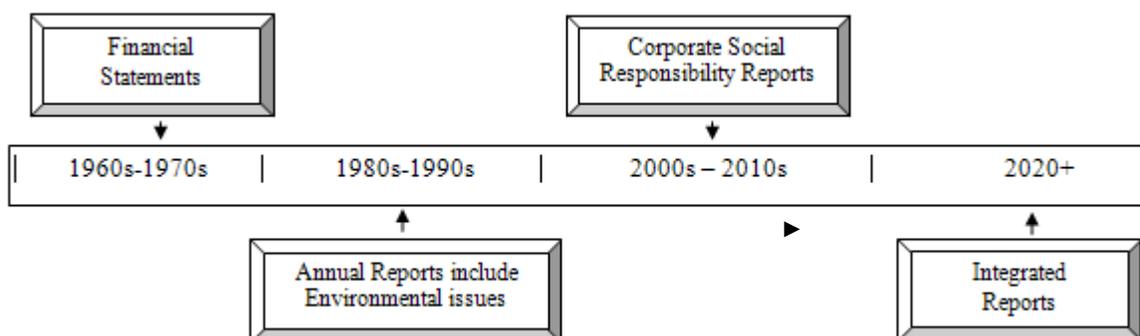
*This paper investigates the accounting profession's role in accountability of economic, social, and environmental issues. It examines the profession's perspective on sustainability, more commonly known in the accounting field as corporate social responsibility. The paper also explores the profession's approach to green accounting. The big four international accounting firms' current accounting practices are researched to determine 1) the merits of corporate social responsibility reporting, 2) how social and environmental issues are measured, and 3) whether these issues are considered sound and practical measures of business costs. A timeline depicts the progress made in the accounting field toward full accountability. The United States Generally Accepted Accounting Principles (U.S. GAAP), International Financial Reporting Standards (IFRS), United Nations Environment Programme (UNEP), the Global Reporting Initiative (GRI) comprehensive sustainability reporting framework, and the International Integrated Reporting Committee (IIRC) guidelines are also reviewed to determine the current status of global green accounting.*

**Key Words:** sustainability accounting, green accounting, environmental costs, social costs, accountability

### 1. Introduction

As figure 1 depicts, in the past fifty years, reporting of accounting information has evolved from a strictly financial statements viewpoint of assets owned, liabilities owed, revenue earned, costs incurred, and cash flows to a model that addresses internal and external issues of governance, executive remuneration, environmental issues, and sustainability in corporate social responsibility reports. An anticipated future Integrated Reporting Model is currently under development that combines the various components of financial reporting into one coherent report that may include quantitative measurement and reporting practices for social and environmental costs that can lead to harmonization of national, regional and global reporting requirements (IIRC, 2011).

**Figure 1. Accounting Reporting Timeline**



This study addresses the following research questions: 1) What are the social and environmental costs that affect a company's bottom line? 2) How are these costs addressed in financial reporting standards? 3) How are these costs measured and valued in corporate reports? 4) What is the accounting profession's role in accountability?

## ***2. Issues that Affect a Company's Bottom Line***

In 1982, the U. K. Business in the Community (BITC) organization, one of Prince Charles of Wales charitable organizations, established a CSR index that comprises 1) Corporate strategy for identifying and addressing risks and opportunities, 2) Integration of corporate responsibility throughout the company, 3) Management of the risks and opportunities in the areas of community, environment, marketplace and workplace, and 4) Reporting on performance in these areas (BITC, 2002; Duff & Guo, 2010).

The World Commission on Environment and Development known as Brundtland Commission introduced the concept of sustainability in 1987 that has changed the world's attitude toward social, environmental, and economic issues. The Brundtland report defined sustainable development as "development which meets the needs of current generations without compromising the ability of future generations to meet their own needs" (UNECE, 2004-2005).

The accounting profession began recognizing the need to account for social and environmental matters in the 1980s when companies began including environmental issues in their annual reports. By 2006, over 200 companies were issuing Corporate Social Responsibility (CSR) reports. In the interim, various types of reports were issued with titles with some of the following terms: environmental, social, climate change, carbon, triple bottom line, and sustainability to account for these social and environmental issues (Cecil, 2010). Terminology in this emerging field has been confusing as the IIRC (2011) comments "sustainability reporting is also known as triple bottom line reporting, environmental, social and governance (ESG) reporting, corporate responsibility reporting and corporate social responsibility reporting" (p. 29).

In the mid-1990s, sustainability was introduced as a viable concern when measuring performance of American firms (Elkington, 1994). The triple bottom line (TBL) introduced by Elkington comprises three elements of performance: financial, social, and environmental; elements that he identified as profit, people, and planet - the three Ps of corporate reporting (The Economist, 2009; Slaper & Hall, 2011). The TBL not only measures a company's traditional profit and loss bottom line, it also reports on its human capital, its economic footprint, and the effects of its actions on the workforce, community, and the planet (Savitz, 2006; Norman & MacDonald, 2004).

The Big Four Accounting Firms<sup>1</sup> have developed CSR frameworks that encompass community, environment, marketplace, and workplace issues for companies that desired to provide more comprehensive reports to their stakeholders (Deloitte, 2011; E&Y, 2011; KPM G, 2011; and PwC, 2011). Voluntarily producing a CSR report benefits a company in a number of ways including 1) Enhancing and/or maintaining its reputation, 2) A need to be seen as legitimate by stakeholders, 3) To recruit the best staff, 4) To create a consistent framework across a global network, and 5) To reduce operating costs (Duff & Guo, 2010).

A recent KPMG International (2011b) survey of 378 senior executives worldwide revealed that "62 percent of the companies surveyed "have a strategy for corporate sustainability, and over a third (36 percent) have issued at least one public report on sustainability with another 19 percent planning to do so soon" (p. 1).

In 2012, Main & Hespenheide observed that KPMG identified ten global sustainability "megaforges" that it believes drive corporate responsibility reporting and will significantly affect corporate growth globally over the next two decades. The 10 global sustainability megaforges include:

- Climate Change
- Energy & Fuel
- Material Resource Scarcity
- Water Scarcity
- Population Growth

---

<sup>1</sup> The current big four accounting firms include Deloitte, PwC, Ernst & Young, and KPMG.

- Wealth
- Urbanization
- Food Security
- Ecosystem Decline
- Deforestation

### **3. Accounting and Reporting Sustainability Standards**

Until recently, few standards existed for reporting on sustainability issues. However, in January 2005, the International Auditing and Assurance Standards Board (IAASB) approved international standards for Corporate Sustainability Reporting. Additionally, International Standard for Assurance Engagements (ISAE) 3000 is used by accounting firms that conduct corporate responsibility assurance engagements if there is a no national alternative (Ballou et. al., 2006). In November 2003, Statement of Position (SOP) 03-2, Attest Engagements on Greenhouse Gas Emissions Information, was developed by the Joint Task Force of the American Institute of Certified Public Accountants (AICPA) and Canadian Institute of Chartered Accountants (CICA) on Sustainability Reporting to provide guidance for the application of assurance standard AT101 to greenhouse gas information (AICPA, 2011).

The Global Reporting Initiative (GRI), a comprehensive sustainability reporting framework that serves as a guide for any organization reporting on its economic, environmental, and social performance, was established in 1997. The Sustainability Reporting Guidelines provide reporting principles, reporting guidance, and standard disclosures (including performance indicators) (2011). The Sustainability Reporting guidelines provide reporting principles and guidance and standard disclosures (including performance indicators) (2011). All of these initiatives contribute to comprehensive reporting and stakeholders' understanding of financial, social and environmental issues, but they do not provide guidance for measuring the social and environmental costs.

A review of International Financial Reporting Standards (IFRS) revealed that, to date, no generally accepted international environmental, social and economic standards have been developed or approved for use in financial reporting. Likewise, there are presently no requirements or generally accepted accounting standards (GAAP) for sustainability in the United States that provide a framework for preparing corporate sustainability reports.

Presently, U.S. GAAP and IFRS require companies to account for some environmental issues such as Asset Retirement and Environmental and Contingency Obligations, but these standards do not fully encompass the current sustainability issues of concern today. U. S. GAAP provides specific models to account for liabilities and obligations in Accounting Standards Codification (ASC) Topic 410, *Asset Retirement and Environmental Obligations*, Topic 420, *Exit or Disposal Cost Obligations*, and Topic 450, *Contingencies*.

### **4. Measuring and Reporting Social and Environmental Costs**

In ASC Topic 410, *Asset Retirement and Environmental Obligations*<sup>2</sup>, when a company determines that an asset retirement liability exists, a reasonable estimate of fair value is made, and the probability of the outflow of economic resources (including timing uncertainty and settlement method) is factored into *measurement* for U.S. GAAP. The probability of outflow is factored into recognition for IFRS in International Accounting Standard (IAS) 37, *Provisions, Contingent Liabilities and Contingent Assets*, and International Financial Reporting Interpretations Committee (IFRIC) 1, *Changes in Existing Decommissioning, Restoration and Similar Liabilities* (SEC, 2011). "A decommissioning (asset retirement) liability is recognized under IFRS when (1) there is a present obligation as a result of a past event, (2) outflow of economic resources is probable, and (3) a reliable estimate of the amount of the obligation can be made" (p. 27).

At its website, the United Nations Environment Programme (UNEP) encourages countries to accurately value and account for environmental and natural resources in an effort to establish suitable economic, trade and sustainability policies.

---

<sup>2</sup> ASC Topic 410, *Asset Retirement and Environmental Obligations* was originally issued in June 2001 as SFAS 143, *Accounting for Asset Retirement Obligations*.

The organization maintains, “Existing systems of national accounts generally do not take into account the impact of economic and trade activity on resource potentials” (2011). Currently, national accounts consider physical capital to be an asset that depreciates over time. Depletion of natural capital is not considered to be a liability; it is treated as income. These national accounts also do not recognize income distribution and poverty reduction social factors. The UNEP’s Division of Technology, Industry, and Economics (UNEP-DTIE) website asserts, “To provide policy makers with more accurate information on progress towards sustainable development and poverty reduction, efforts are required to integrate the environment into national accounts” (2012).

The most recent approach to reporting financial, social, and environmental costs is the Integrated Reporting Model developed by a group of world leaders from the corporate, investment, accounting, securities, regulatory, academic, civil society, and standard-setting sectors (IIRC, 2011). The model proposes combining and consolidating accounting information into one cohesive report that accounts for the organization’s ability to create and sustain value rather than simply adding more data to an already extensive reporting process (KPMG, 2011a).

The Integrated Reporting Model could lead to better methods that would “enable those areas of business impact and interdependence that are currently treated as externalities to be better quantified and integrated into decisions and reporting – whether as risks and opportunities or as part of performance statements” (p.14).

### **5. Accounting Profession’s Role in Accountability**

A number of professional accounting and non-accounting organizations have come together to assure that companies improve their financial, social, and environmental performance. The accounting profession’s role in providing comprehensive accounting information is evolving. It has made strides from the environmental reporting in the early 1980s to its active involvement in developing the future Integrated Reporting Model. In 2013, the Big Four accounting firms will be part of a 10 member Consortium that includes GE, Goldman Sachs, Shell, and other major corporations who will provide support and advisement in the G4 revision of the GRI reporting framework (2012). Additionally, the AICPA (2011) has joined forces with the global Association of Chartered Certified Accountants (ACCA), the big four accounting firms, and other major accounting entities worldwide to support the Accounting for Sustainability Forum (A4S) calling for the development of a universally accepted integrated reporting model (ACCA, 2011).

#### **5.1 Sustainability Accounting**

The International Federation of Accountants (IFAC) developed a Sustainability Framework to provide guidance for professional accountants “working in commerce, industry, financial services, education, and the public and not-for-profit sectors” (2011, P. 6). The Sustainability Framework stresses the importance of the accountants’ role as change agents by influencing companies to integrate sustainability into every facet of the organizations “their mission, goals and objectives, strategies, management and operations, definitions of success, and stakeholder communications” (2011, p. 6).

The IFAC (2011) acknowledges that creating sustainable organizations is a multi-function endeavor; however, the finance function’s role is crucial in providing leadership in sustainability accounting. The accountant’s role in the finance function can influence a firm’s behavior and outcomes by providing insight and analysis to management’s decision making in managing risks and measuring performance (E&Y, 2011a). Capozucca & Sarni (2012) note that to most effectively meet return on investments (ROI), companies must measure the results of key performance indicators against pre-determined targets and set meaningful goals for improvement. Accounting professionals can have an effect on organizations’ decisions to incorporate “sustainability considerations into strategies and plans, business cases, capital expenditure decisions, and performance management and costing systems” (IFAC, 2011, p. 9).

Brendan Leblanc<sup>3</sup> cited a key finding in a survey of billion dollar plus organizations relating to sustainability accounting. The survey revealed that there has been an increase in sustainability reporting, but the tools are still under development. He noted that the tools used to produce the sustainability reports are primitive when compared to the more highly sophisticated reports used for financial measures (Coughlin, 2012).

---

<sup>3</sup> Brendan LeBlanc, Executive Director, Climate Change & Sustainability Services at [Ernst & Young](#)

Sustainability information can have a far-reaching influence on a company's triple bottom line. It not only affects internal governance and operational decisions, and external shareholder and vendor activities; credit-rating agencies now consider sustainability practices in the rating process. For instance, the Dow Jones Sustainability Indexes (DJSI) reports on companies' social, ethical and environmental performance (Ernst & Young, 2011b). PwC (2011) found in a 2011 study of 120 initial public offerings (IPOs) registration statements (SEC S-1) that sustainability disclosures had found their way into more than 84 % of the IPOs. The study also showed that the IPOs contained disclosures on both regulatory issues (32%) and nonregulatory (68%) matters. PwC (2012) also reported that another survey found a positive relationship between environmental, governance, and social matters and financial performance. The report also showed that "sustainability leaders had better stock performance, lower volatility, as well as improved return on assets (ROA) and return on equity (ROE).

Does incorporating sustainability issues into the decision making process go far enough, or should these issues also be quantified? According to the 2012 Ernst & Young's survey of the GreenBiz Intelligence Panel<sup>4</sup>, "CFOs are getting involved in the management, measurement, and reporting of the companies' sustainability activities" (p. 12).

## 5.2 Green Accounting

Another facet of the accountability movement to be addressed is green accounting, which at first appears to be just another term for sustainability accounting. However, the literature review hints at more than just subtle differences between them. Sustainability accounting integrates reporting of financial (profit) and non-financial (social and environmental) information into one comprehensive reporting model (Ballou, et. al., 2006). However, proponents of green accounting call for developing a model to measure the social and environmental expenditures as well as the financial costs (Cairns, 2000; European Commission, 2011; Vincent, 2000).

A study in Indonesia by the World Resources Institute (Repetto, et. al., 1989), examined the "potential divergence between gross and net measures of national income" (Vincent, 2000, p. 13). The study brought global awareness of a need to account for the depletion of natural capital and its impact on a country's wealth. Although it has been a bit obscure until the current focus on social and economic issues in the sustainability movement, green accounting theory emerged in the 1970s, according to Vincent, with pioneers in the field, Martin Weitzman, John Hartwick, Partha Dasgupta, and Geoffrey Heal, leading the way.

Cairns (2000) indicates that there is a fundamental difference between green accounting and sustainability accounting. Cairns describes green accounting as an application of procedures that measure the sustainability of actual consumption paths, whereas sustainability accounting calculates "the prices whose application would cause consumption to match sustainable income" (2000). The European Commission (2011) contends that ideal green financial statements will comprise "all internal and external costs including health problems for workers, emissions and pollution of air, land or water, degradation of the natural environment, and depletion of finite resources" (p. 1). Vincent (2000) asserts, "We seek through green accounting to answer the question - Will a country be as well-off in the future as in the present" (p. 14).

Green accounting will require companies to continue to identify and financially measure the traditional internal direct and indirect costs (materials, labor, and overhead) that affect the bottom line of financial statements. These costs can be readily measured and quantified; however, the social and environmental costs will require the development of viable "consumption-based measures of current and future wellbeing" (Vincent, 2000). A recent article in the *New Accountant* journal reported that environmental accounting is one of the top 5 CPA job opportunities. "An accountant in this field may be hired to work on environmental compliance or may be asked to set up systems to ensure compliance and avoid any disputes or claims in the future" (2012, p. 7).

## 6. Conclusion

The European Commission (2011) explains the essence of green accounting at [www.greenbiz.com](http://www.greenbiz.com), the online journal site.

---

<sup>4</sup> The Intelligence Panel consists of executives and thought leaders in the area of environmental strategy and performance.

Using a framework of green accounting would mean that investment decisions are made by comparing the overall private and social costs against the private and social benefits. Using a lifecycle assessment means that organizations can make decisions based on calculating environmental impacts at every stage of a product's life, from raw materials, through production, distribution, and final disposal or recycling (2011, p. 2).

This search of the literature leads to more questions in this rapidly changing sustainability movement. Is it possible that full accountability will not be achieved in this movement until quantitative measures are created that permit organizations to assign relevant costs to the social and environmental components of the Sustainability Framework and the Integrated Reporting Model?

A review of the big four accounting firms' websites, the AICPA, the IFAC, CICA, and other accounting sites, clearly indicates that the accounting profession has taken an active role in addressing these sustainability issues, and, perhaps, it will be expected to take the lead in developing the standards that will establish a feasible sustainable green accounting process. Accounting professionals are prepared to provide essential guidance to help organizations achieve long-term financial, social, and environmental accountability.

## References

- AICPA, (June 28, 2011). *Sustainability accounting and reporting – FAQ*. April 20, Online: <http://www.aicpa.org/interestareas/businessindustryandgovernment/resources/sustainability/pages/sustainabilityfaqs.aspx>.
- Association of Chartered Certified Accountants (ACCA), (2011). *Accountancy futures: Critical issues for tomorrow's profession*, 3<sup>rd</sup> ed.
- Ballou, B., Heitger, D. L. & Landes, C. E. (December 2006). The future of corporate sustainability reporting: A rapidly growing assurance opportunity. *Journal of Accountancy*, 202 (65-74).
- Bisk Editorial Review Team. (2012). Top 5 (surprise!) CPA job opportunities. *New Accountant*, 749 (6-8).
- Business in the Community (BITC). (2002). *About the CR Index*. May 03, Online: [http://www.bitc.org.uk/cr\\_index/about\\_the\\_cr\\_index/index.html](http://www.bitc.org.uk/cr_index/about_the_cr_index/index.html).
- Cairns, R. D. February 2000). Sustainability accounting and green accounting. *Environment and Development Economics*, 5 (1): (49-54).
- Capozucca, P., & Sarni, W. (2012). Using sustainability to drive business innovation and growth. *Deloitte Review*. April 17, Online: [www.deloitte.com](http://www.deloitte.com).
- Cecil, L. (2008). Corporate social responsibility reporting in the united states, *McNair Scholars Research Journal*: 1(1) (43-52).
- Coughlin, C. (February 2012). There's still no accounting for sustainability (but that'll change). *Greenbiz*. May 08, Online: [www.greenbiz.com](http://www.greenbiz.com).
- Deloitte (2011). *Toward greener pastures: How to leverage sustainability initiatives for finance transformation*. February 18, Online: [www.deloitte.com](http://www.deloitte.com).
- Duff, A. & Guo, X. (2010). Corporate social responsibility and the professional accounting firm: insights from firms' disclosures briefing. *ICAEW Centre for Business Performance*. February 05, Online: [www.icaew.com/centre](http://www.icaew.com/centre).
- The Economist. (May 17, 2009). "Triple Bottom Line." *The Economist*. March 05, Online: <http://www.economist.com/node/14301663>.
- Elkington, J. (1994). Towards the sustainable corporation: Win-win-win business strategies for sustainable development. *California Management Review* 36(2): 90–100.
- Ernst & Young (E&Y) (2011a). Climate change and sustainability How sustainability has expanded the CFO's role. April 23, Online: <http://www.ey.com/US>.
- Ernst & Young (E&Y) (2011b). Climate change and sustainability Five highly charged risk areas for Internal Audit. March 16, Online: <http://www.ey.com/US>.
- Ernst & Young (E&Y) (2012). Can the market economy function without environmental transparency? State of the debate. May 19, Online: <http://www.ey.com/US>.
- European Commission. (April 27, 2011). *Green accounting as the path to a sustainable future*.

- May 08, Online: <http://www.greenbiz.com/blog/2011/04/27/green-accounting-path-sustainable-future>.
- Global Reporting Initiative (GRI). (2011). *Sustainability reporting guidelines*. Author. April 18, Online: [http://theiirc.org/wp-content/uploads/2011/09/IR-Discussion-Paper-2011\\_spreads.pdf](http://theiirc.org/wp-content/uploads/2011/09/IR-Discussion-Paper-2011_spreads.pdf).
- Global Reporting Initiative (GRI). (2012). May 19, Online: <https://www.globalreporting.org/reporting/latest-guidelines/g4-developments/Pages/G4-Consortium.aspx>.
- International Integrated Reporting Committee (IIRC). (September 2011). *Towards integrated reporting: Communicating value in the 21st century*. Author. April 18, Online: [www.theiirc.org](http://www.theiirc.org).
- KPMG. (2011a). *Sustainability reporting –What you should know*. March 12, Online: [www.kpmg.com](http://www.kpmg.com).
- KPMG. (2011b). *Survey of corporate responsibility reporting 2011*. March 12, Online: [www.kpmg.com](http://www.kpmg.com).
- Main, N. & Hespenheide, E. (2012). *Integrated Reporting: The New Big Picture*. *Deloitte Review*. (10). April 25, Online: [www.deloitte.com](http://www.deloitte.com).
- Norman, W. & MacDonald, C. (April 2004). Getting to the bottom of “triple bottom line” *Business Ethics Quarterly*, 14 (2): 243-262.
- PricewaterhouseCoopers. (2011). *Factoring sustainability into IPO planning: Disclosure trends reveal a changing landscape*. May 19, Online: [www.pwc.com](http://www.pwc.com).
- PricewaterhouseCoopers. (2012). *Do investors care about sustainability? Seven trends provide clues*. May 19, Online: [www.pwc.com](http://www.pwc.com).
- Repetto, Robert, Magrath, W., Wells, M., Beer, C., and Rossini, F. *Wasting Assets: Natural Resources in the National Income Accounts*. Washington, D.C.: World Resources Institute, 1989.
- Savitz, A.W. and Weber, K., (2006). *The Triple Bottom Line: How Today’s Best-Run Companies Are Achieving Economic, Social and Environmental Success—and How You Can Too*: Jossey-Bass.
- Securities and Exchange Commission (SEC). (November 2011). *Work Plan for the Consideration of Incorporating International Financial Reporting Standards into the Financial Reporting System for U.S. Issuers. A Comparison of U.S. GAAP and IFRS A Securities and Exchange Commission Staff Paper*. Author.
- Slaper, T. F., & Hall, T. J. (Spring 2011). The Triple Bottom Line: What Is It and How Does It Work? *Indiana Business Review* 86(1): 6-10.
- United Nations Environment Programme (2012). *Environmental and economic accounting*. (UNEP). April 24, Online: [http://www.unep.ch/etb/areas/VRC\\_category.php?category=14](http://www.unep.ch/etb/areas/VRC_category.php?category=14).
- United Nations Environment Programme Division of Technology, Industry, and Economics (UNEP-DTIE). (2012). *Economics and Trade Branch*. April 24, Online: <http://www.unep.ch/etb/areas/valuationEnvAcc.php>.
- United Nations Economic Commission for Europe (UNECE). (2004-2005). *UNECE annual report: Sustainable development - concepts and actions*. May 15, Online: [http://www.unece.org/oes/nutshell/2004-2005/focus\\_sustainable\\_development.html](http://www.unece.org/oes/nutshell/2004-2005/focus_sustainable_development.html).
- Vincent, J. R. (February 2000). Green accounting: from theory to practice. *Environment and Development Economics*, 5 (1): 13-24.