

Chapter 14

Efficient Information Provision for Environmental and Sustainability Reporting

Cigdem Akkaya

Technische Universität München, Germany

Petra Wolf

Technische Universität München, Germany

Helmut Krcmar

Technische Universität München, Germany

ABSTRACT

Environmental concerns have become a key issue for society as well as for individuals and businesses. To cope up with the pressure imposed by their various stakeholders increasingly demanding for “green” production, enterprises are constrained to balance their goals of economic growth, environmental protection and usage of natural resources. Environmental reporting provides a comprehensive and structured approach to inform the target groups about the proper environmental strategies and to present a transparent profile. Recent studies show that environmental reporting is spreading rapidly. To enable consistency and comparability, several organizations provide guidelines, standards and recommendations to guide organizations in their environmental management. Environmental reporting is mainly used by organizations as a medium to demonstrate compliance with applicable national and European level environmental regulations. In the last decades, they are also increasingly being used as a tool to communicate environmental matters to various stakeholders. The purpose of this chapter is to deliver fundamentals of environmental reporting based on a comprehensive literature review and a recent project in Germany. Moreover, the authors suggest two approaches to support data gathering and report generation processes for environmental reporting purposes of organizations.

DOI: 10.4018/978-1-61520-981-1.ch014

INTRODUCTION AND BACKGROUND

Economic growth and development are among the major aims of most countries. Along with their benefits for economic growth, they have also serious impacts on the environment such as air and water pollution, soil degradation and desertification. Environmental problems caused by enterprises have become a big concern for governments and the public. As a result public attention has been constantly increasing and various reporting measures on green production have been introduced, which forces enterprises to take appropriate measures. To satisfy their various stakeholders, they need to implement credible environmental strategies and strengthen environmental management practices to ensure a more efficient use of natural resources and protection of the environment.

According to a recent McKinsey & Company global survey of 7,751 consumers in Brazil, Canada, China, France, Germany, India, the UK, and the USA, 87 percent of consumers are concerned about the environmental and social impacts of the products they buy (Bonini, Hintz & Mendonca, 2008). In another study, 95 percent of consumers state that they would buy “green products” if they had the right information and satisfactory products (Deloitte & Touche LLP & Grocery Manufacturers Association (GMA), Green Shopper Study, p. 13). The European Commission has taken concrete measures in order to raise awareness of organizations about Corporate Social Responsibility (CSR). The commission aims to raise awareness further and promote the exchange of best practices as CSR continues to evolve (Commission of the European Communities, 2007).

As various stakeholders demand greater environmental responsibility, organizations look for ways to minimize adverse environmental impacts of their products and processes and inform the stakeholders via different channels (Biloslavo & Trnavcevic, 2009). An increasing number of customers and suppliers require organizations to

receive an external certification, which demonstrates the reliability and credibility of organizations’ environmental policy. In order to be able to minimize the risks on environment, problems should be recognized very quickly. Tools such as the Life Cycle Assessment (LCA) are commonly used by organizations to track environmental impacts of products and services throughout their life cycle. However, the variety and complexity of environmental data in enterprises are quite high which necessitates more systematic approaches. To deal with various amount of data efficiently organizations set up environmental management systems (EMS) to incorporate environmental considerations into their business operations. In order to identify and manage significant environmental impacts however, more advanced systems of Corporate Environmental Management Information Systems (CEMIS) are being increasingly used. They enable enterprises to record, process and analyze the environmental relevant information systematically.

Environmental reporting is accepted as a generic term that covers various means by which companies disclose information about their operations and their impacts on the environment. More specifically two terms are commonly used in literature: Corporate Environmental Reports (CER) (Kolk, 1999) and more commonly Corporate Social Responsibility (CSR) (Bassen, Jastram, & Meyer, 2005) reports. Organizations utilize these reports to demonstrate how they align their operations with the needs and expectations of stakeholders— including environmental organizations, financial investors, shareholders, employees, auditors, suppliers, contractors, customers, local communities and the public.

Although there are a number of mandatory schemes to be delivered at the European level such as the Pollutant Release and Transfer Registers (PRTR) (The European Commission, 2008), most of the remaining reports are based on national regulations (European Commission; International Organization for Standardization). The differences

21 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:
www.igi-global.com/chapter/efficient-information-provision-environmental-sustainability/44828

Related Content

Sustainable Urbanism Revisited: A Holistic Framework Based on Tradition and Contemporary Orientations

Derya Oktay (2012). *Green and Ecological Technologies for Urban Planning: Creating Smart Cities* (pp. 17-36).

www.irma-international.org/chapter/sustainable-urbanism-revisited/60594/

Freedom, Equality and the Quality of Democracy: Democratic Life in the United States, Australia, Sweden and Germany

Thorsten D. Barth (2013). *International Journal of Social Ecology and Sustainable Development* (pp. 17-43).

www.irma-international.org/article/freedom-equality-quality-democracy/77345/

New Perspectives to Bridge the Gaps in School Education Through Satellite Connectivity

Ashutosh Kumar Pathak and Umesh Chandra Pandey (2018). *Open and Distance Learning Initiatives for Sustainable Development* (pp. 146-162).

www.irma-international.org/chapter/new-perspectives-to-bridge-the-gaps-in-school-education-through-satellite-connectivity/185565/

Option Value Embedded on the Brazilian Flex and Sustainable Vehicles

Alceu S. Camargo, Abraham S. O. Yu, Paulo Tromboni de S. Nascimento, Jose Vidal Belinetti, José J. Marques and Leandro J. Morilhas (2011). *International Journal of Social Ecology and Sustainable Development* (pp. 18-33).

www.irma-international.org/article/option-value-embedded-brazilian-flex/58342/

Neural Predictive Controller Based Diesel Injection Management System for Emission Minimisation

C. N. Arunaa, S. Babu Devasenapati, K. I. Ramachandran, K. Vishnuprasad and C. Surendra (2011). *International Journal of Green Computing* (pp. 63-82).

www.irma-international.org/article/neural-predictive-controller-based-diesel/61376/