

# Quality Reporting of Environmental Information by Saudi Agricultural Companies: Water Information Disclosure

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## Abstract

The objective of the study is to examine the quality of environmental reporting specifically the water information disclosed by food and agriculture Saudi listed companies. The study used qualitative content analysis of the annual reports of 16 food and agriculture companies over four years. The study used GRI standards for measuring the quality reporting of water information. The study found that most of the companies do not provide information total water used, reused or recycled. The study shows that stakeholders have difficulty or impossible to make any assessment or monitoring on the companies' environmental performance (water information) on these types of reports. The study give an implication to Saudi government to make an impose regulation request the companies especially food and agriculture companies to provide sufficient information on water consumption.

*Keywords: Environmental Reporting, Water Information, Food and Agricultural companies, Saudi Arabia*

## 1. INTRODUCTION

The water is become a finite source in the earth due to increasing the population and lack of rational in using the water. The Arab peninsula suffers from water scarcity. Saudi Arabia as the largest country in the peninsula has more suffer of water sources, because, there is not rivers or lakes of water. Alkolibi (2002) stated that Saudi Arabia is one of the direst countries around the world and suffering from scarcity of water resource. The country depend more on groundwater. DeNicola, et, al (2014) stated that Saudi Arabia used the groundwater sources in injudiciously over many years to the point of depletion. Saudi Arabia has seen tremendous changes in the social and economic fields during the past few decades. Government oil revenues have enabled the development of all sectors of the economy were among the major sectors covered by the phenomenal growth is the agricultural sector. This sector has grown rapidly during the last decade, which resulted in the withdrawal of huge amounts of groundwater storage. In addition, extending the cities, increasing the growth of population and rising standard of living all this may have caused doubling several times consumption of water. This consuming has resulted in pressure on water resources and increasing the need for the development of traditional water resources (surface and groundwater) and other non-traditional (desalination and sewage treatment). The Saudi government has been set up around 300 hundred water dam for different purposes to take advantage of surface water available in some parts of the Kingdom (Al-Rashed et, al. 2000).

Despite the considerable efforts made by the government for the development of water supply, the water consumption in the country has reached the rates of alarming. The studies conducted by the Abu- Zaid (1992), and Al-Ibrahim (1990) declared that there is an excessive consumption of water in the agricultural sector. The demand for water used in the agricultural sector has grown at high rates since 1980. The consumption of water is around 2000 million cubic meters in the year of 1980, where as in 1985 the consumption of water rose to (7430) million cubic meters and the average of water consumption growth rate has reached 60% i.e. quadrupled expectations for the third development plan (Hsu, 1989). Recently, Saudi Arabic consumes around 7 billion cubic meters yearly (DeNicola et al. 2014). According to the Monetary Agency of Saudi Arabia, the agricultural sector consumed about 80 percent of total consumption (Chowdhury and Alahrani, 2015). Thus, this study examined the water information in the sector of food and agricultural companies.

The study used the Global Reporting Initiative (GRI) standards in examining the quality of water information. These standards are one of the most international widely used standards (Ernst Young, 2012). The study found that food and agricultural companies have very low of quality reporting of water information.

The reminder of the study is structured as follows: Section 2 discuss the theoretical development and literature review. Section three present the methodology of this study, followed by section four which present the results. Section four present the conclusion.

## 2. THEORETICAL DEVELOPMENT AND LITERATURE REVIEW

Since the mid-1970s, many previous studies investigated the environmental disclosure at different time periods. Hackston and Milne (1996) investigated the social and environmental disclosure practices by conducting study upon a sample of 50 companies listed on the New Zealand Stock Market at 31 December 1992 using content analysis of CSR number of sentences and pages to determine the effect of three variables of companies' characteristics (size, profitability, and industry type). They concluded that like USA, UK and Australia, in New Zealand, 'human resources' is the most social disclosures theme, and that this disclosure has a descriptive nature and is about good news, while environment and community disclosures also have significant attention. Moreover, the amount of social disclosure covered on average about three quarters of an annual report page. Compared with US and UK companies' CSR disclosures, New Zealand companies are lower CSR disclosures on average. They found also that there were relationships between corporate size and type of industry with the CSR disclosure in New Zealand.

In Hong Kong, Ng (2000) conducted an examination to determine the environmental disclosure in 200 HK listed company using content analysis. He found that 18 of the 200 HK listed companies reported environmental information in their annual reports and no company disclosed financial data concerning environmental performance. He also found that the disclosures were in general statements indicating company support for environmental protection and describing projects undertaken. These descriptions were located in either the directors' report or the chairman's statement.

In the UK, Harte and Owen (1991) examined the annual reports of 30 UK companies using content analysis. They found that from year 1989 to 1990 the level of environmental disclosure in UK has increased. Furthermore, they argued that despite the increase in environmental disclosure in annual reports, it was not in detail about one page located in the separate section in the annual reports. The study by Gray et al. (1995) that covered 13 years in UK using content analysis of annul reports indicated that, at a general level, there was a rise in both the proportion of companies disclosing and the range of that disclosure. However, the results of the study demonstrated that social and environmental performance is still a relatively low priority for companies. In

Uganda, Kisenyi and Gray (1998) examined four companies in Uganda and they found that not all of the companies made any environmental disclosure. They concluded that social and environmental disclosure in Uganda is scarce, low grade and of little importance'. Belal (2000) conducted a survey of environmental reporting in Bangladesh. The study covered 30 annual reports of Bangladeshi companies relating the year 1996. Belal found that the quantity and the quality of environmental reporting "is an inadequate and poor".

From the above discussion on environmental disclosure literature, it can be deduced that most environmental studies examine the environmental disclosure in general but not in specific issue. In addition these studies also utilized self-developed index in analyzing the environmental information disclosure. Finally, reviewing the literature further reveals that there is an absent of water information disclosure studies and addition to the scarcity of studies on environmental disclosure especially in the context of Arab world countries and Saudi Arabia in specific. Therefore, this study is meant to extend the prior environmental disclosure literature and water information disclosure in specific through examination the extent of water information disclosures in the annual reports of Saudi agricultural companies from 2010 to 2013.

Legitimacy theory was adopted to critically examine the water disclosure by Saudi agricultural companies and their managers in the corporate environmental disclosure process, in order to legitimize corporate relationships with stakeholders. Legitimacy theory is built upon the concept of "social contract" and it considers that the organisation's continuous existence will be under threat if society becomes aware that the organisation has violated its social contract. If the society does not agree that the organisation is operating in an acceptable or permissible manner, then the society will end the organisation's "contract" to continue its operation. Therefore legitimacy theory was developed to explain the nature and basis of the relationship between a company and its society, which is considered to be an essential resource on which an organization is dependent for survival and this is achieved by showing that organizations' activities are harmonious with social values (Dowling & Pfeffer, 1975).

Legitimacy theory is the most relevant theory to this study. Based on the idea that in order for corporations to continue operating successfully, they must act within the bounds of what society identifies as socially acceptable behaviour' (O'Donovan, 2002) and the disclosures might be made to show that the organization is conforming with community expectations (Deegan, Rankin, & Tobin, 2002).

### 3. METHODOLOGY

#### 3.1. Sampling

The largest 16 food and agriculture companies listed on the Saudi Stock Exchange which are categorized under Food and Agriculture sector of the Saudi Stock Exchange were selected as the sampling frame. These companies were selected because they are more sensitive towards the environment and water consumption in specific. The annual reports for 4 years (2011–2014) were obtained for each company. In total, 64 reports were collected. Annual reports were chosen for several reasons. First, annual reports are widely viewed as major official and legal documents (Gray *et al.*, 1995). Second, the annual report is the only regulated document that is widely accessible to researchers (Buhr, 1998). Third, the annual report is considered as a major source of information about an organization's financial and environmental performance (Deegan & Rankin, 1999). Finally, the annual report has been widely recognized as a regulated document with a high degree of credibility (Tilt, 1994; Neu *et al.*, 1998; Unerman, 2000).

#### 3.2. Water Disclosure

There are two types of measurements the CSR / environmental disclosure. The choice between these two types depends on the objectives of the study. Some studies used the measurement of disclosure to measure the quality of this disclosure such as (Guthrie & Parker, 1990; Cormier & Gordon, 2001; Hasseldine, Salama, & Toms, 2005), while other studies used the measurement of CSR/ environmental disclosure to measure the quantity of CSR/ environmental information disclosure such as (Zeghal & Ahmed, 1990; and Haniffa & Cook, 2005).

The quantity measurement method captures the "quantity" of disclosure, whereas measurement of counting the words, sentences and page for each item of disclosure, captures the "extent" or "level" of disclosure and give a clearer picture of the extent to which the item is disclosed and it gives more emphasis on the particular content category of disclosing the item (Zeghal & Ahmed, 1990; Haniffa & Cook, 2005).

The current study measure the quality of water disclosure in annual reports using Global Reporting Initiatives (GRI) indicator. The GRI index was used in this study for several reasons. Firstly, GRI provides an internationally recognized framework for CSR reporting (Frost *et al.*, 2005), which is relevant in a study that examines CSR reporting practices at international level. Secondly, using an internationally recognized framework to measure CSR disclosure enables replication of the study. Thirdly, GRI is comprehensive; it covers all reporting aspects such as social, environmental and economic performance. Fourthly, GRI is also considered as the latest and innovative measures for CSR reporting. Finally, previous studies that examine CSR issues such as

environmental reporting (e.g. Hasseldine *et al.* 2005; Van Staden and Hooks, 2007), ethical and social reporting (e.g. Adams and Kuasirikun, 2000) and sustainability reporting (e.g. O'Dwyer and Owen, 2005; Frost *et al.*, 2005) utilize GRI as a framework to develop their disclosure indices.

The GRI covers reporting on water withdrawal and discharge explicitly in five environmental indicators namely, EN8, EN9, EN10, EN21 and EN25 which are as follows:

- EN8 Total water withdrawal by source
- EN9 Water sources significantly affected by withdrawal of water
- EN10 Percentage and total volume of water recycled and reused
- EN21 Total water discharge by quality and destination
- EN25 Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the reporting organization's discharges of water and runoff.

The GRI indicators can be 'core indicators' or 'additional indicators', where the former is likely to be deemed material for more organizations and companies can decide the materiality of reporting on additional indicators (GRI, 2000b). Other GRI environmental indicator, namely EN11-15, cover biodiversity (GRI, 2000a) and is indirectly also linked to water.

### 3.3. Content Analysis of Annual Reports

Each company's annual report was analyzed to examine the quality of water disclosure using four levels of disclosure for each item of environmental disclosure which are as follows:

- Level four is given to the items if it is monetary disclosed
- Level three is given to the item if it is numerical disclosed
- Level two is given to the item if it is narrative disclosed.
- Level one is given to the items if it not discloses.

Using four levels of disclosure provide quality of information rather than getting information by words, sentences, or dichotomous methods. The four levels method avoids the lack of the method of counted words or sentences which provides only quantitative data and neglect qualitative data. Using the four levels method also avoids the lack of the dichotomous method which neglects the extent to which the item is disclosed, because, it uses 1 if the item is disclosed and 0 otherwise.

## 4. RESULT

The section describes the result of the study. This study focuses on examine the quality of reporting water information in the food and agriculture sector of Saudi listed companies. Table 1 summarizes the descriptive result of water information in the food and agriculture sector.

TABLE 1: DESCRIPTIVE RESULT OF REPORTING WATER INFORMATION

Items	Score %
EN8 Total water withdrawal by source	0
EN9 Water sources significantly affected by withdrawal of water	8
EN10 Percentage and total volume of water recycled and reused	0
EN21 Total water discharge by quality and destination	0
EN25 Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the reporting organization's discharges of water and runoff.	0

Food and Agriculture manufacturing companies consume millions of cubic water yearly. The result shows that most of the food and agriculture manufacturing companies do not disclose information on the water source and usage. The result shows that companies disclose low level of only narrative information on water sources with average 8 percent of disclosure information. The results also find that all the agriculture companies do not disclose information on the total of water withdrawal and total of water charge. This result indicates that there do not have more concern on consuming water in Saudi Arabia despite the country is placed in the arid region. Thus, it is important for the companies to disclose details information on the water sources and usage. Additionally, it's important for the companies to use modern technology of using water in order to reduce the consumption of water.

Water recycled and reused is a very important point to be applied in manufacturing companies especially the food and agriculture sector. The result shows that food and agriculture manufacturing companies do not disclose information related to using the technique of water recycled and reused.

## 5. CONCLUSION

The objective of the study is to examine the quality reporting of the water information among food and agriculture manufacturing companies in Saudi country. Thus, we analyze the annual report of 16 listed food and agriculture companies for five years. Generally, The study found that the quality reporting of water information is very low with average of 8 percent. This very low level might be due to lack of regulation on consuming water.

This study gives contribution by examining the reporting of water information in the type of the companies that consume large quantity of water in their manufacturing, which have been ignored by previous studies. The study gives implication to the government and policy makers and management companies to improve the practice of reporting water information. Furthermore, It give to the government to make strict regulation on consuming water, because, the country suffer from scarcity of water and increasing the demand of using water.

The study found that all companies do not disclose information on total of water use, recycled and reused. Additionally, The result found that company do not provide any information on the technology that they use in consuming water. Companies do not disclose information on size of water used or technology used in consuming water might be due to lack of regulation required companies to use new technology of consuming water which will result in saving large quantities of water. Thus, it is advisable for companies to provide information on the total of water use, recycled water, reused water and the technology that they use in using water. We suggest future research could use survey to get the perception of managers in food and agriculture manufacturing companies and policy makers on the water information which can help in understanding deeply the reasons behind low level of reporting water information.

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