# The Quantity and Quality of Environmental Disclosure in Annual Reports of National Oil and Gas Companies in Middle East and North Africa

Kamal Mehemed Eljayash<sup>1</sup>, Dr Kieran James<sup>1</sup> & Dr Eric Kong<sup>1</sup>

Correspondence: Kamal Mehemed Eljayash, School of Accounting, Economics and Finance, Faculty of Business and Law, University of Southern Queensland, Australia. Tel: 61-43-419-8744. E-mail: kamal.eljayash@usq.edu.au

Received: August 14, 2012 Accepted: September 14, 2012 Online Published: September 19, 2012

doi:10.5539/ijef.v4n10p201 URL: http://dx.doi.org/10.5539/ijef.v4n10p201

#### **Abstract**

The increased activities of oil companies around the world have contributed to increasing environmental concern over the past few years. The international oil corporations have a significant role in shaping global politics and economics. Therefore, there has been a global trend to increase environmental awareness in the international companies, especially oil companies in order to better manage natural resources and reduce environmental pollution as a result of the exploitation of natural resources. Arab oil exporting countries are not immune from the global calls for the protection of the environment and especially the Arab countries' rich oil and gas resources

This study seeks to examine the quantity and quality of environmental disclosure in the oil companies in the Arab oil exporters. 174 annual reports of 58 national companies were surveyed for the years 2008, 2009, and 2010. Content analysis was applied in this study in order to study the environmental disclosure. The word count was used to measure the amount of environmental disclosure in the annual reports whereas environmental disclosure index was used to measure the quality of disclosure in the oil companies. Results of the study indicate differences in environmental disclosure between the countries of Arab Petroleum Exporting Countries, but overall, environmental disclosure in the Arab oil countries is still low compared with other oil companies in developed countries.

**Keywords:** environmental disclosure, Middle East and North Africa, Countries of Arab Petroleum Exporting, Annual Reports, oil and gas firms, Word Count and Disclosure Index

#### 1. Introduction

Petroleum industry has become the main industry in many economies of countries over the world. However, environment surroundings of the petroleum industry have become threatened by oil pollution. The Land or marine environment faces many the environmental risks as a result oil pollution from petroleum industry. In recent decades, the oil industry has developing included all oil operations in land or seas and oceans alike. Pulsipher et al. (2001) state that there are at least 6,500 oil platforms located in the Gulf of Mexico. In addition, many oil tankers roam the seas and oceans. On the other hand, there are many oil pipelines buried in the ground for the transfer of points and its derivatives. Moreover, the refineries are spread along the coast of many countries, especially in the oil producing countries. All this contributed to the increase in environmental risk as a result of oil incidents which cause environmental Catastrophes. For example, the oil spill resulting from the explosion in one of the oil platforms owned by BP, leading to leakage of large quantities of crude oil caused oil pollution of the marine environment in the Gulf of Mexico in 2010, as well as the oil spill incident in the oil tanker Exxon in 1989. In addition, the oil spill occurred in the Arab Gulf during the Gulf War II.

The occurrence of environmental incidents as a result of activities of companies, including oil companies, have contributed to the increase of environmental awareness in many countries over the world, especially developed countries. In this context, much legislation has been enacted in many developed countries in order to protect the environment. Additionally, environmental organizations have played a significant role in Protection of the environment in many developed countries through the exercise of pressures on firms in order to limit corporations' activities affecting the environment. Moreover, the companies themselves have contributed to the

<sup>&</sup>lt;sup>1</sup> School of Accounting, Economics and Finance, Faculty of Business and Law, University of Southern Queensland, Australia

increase of environmental awareness through increased disclosure of environmental information in annual reports. (Kamal) found that the amount of environmental disclosure has increased in the oil companies after the oil tanker Exxon incident. However, over the past years, attention on the environmental disclosure has been confined to the companies of developed countries such as the USA, the UK, Japan, Australia, Canada, and the countries of the European Union, while the developing countries suffer from environmental disclosure practices in corporations.

Countries in the Arab region are still suffering from few research studies in the field of accounting studies, especially studies addressing environmental disclosure in companies. Although the Arab countries have oil wealth and control approximately 77% of global oil reserves, these countries are classified within developing countries. The oil wealth of many Arab countries contributed to the establishment of the Organization of Arab Petroleum Exporting Countries in 1968, which includes in its membership Saudi Arabia, Libya, Kuwait, Qatar, UAE, Bahrain, Egypt, Algeria, Tunisia, Syria and Iraq. Therefore, this study seeks to examine the quantity and quality of environmental disclosure in domestic oil companies in OAPEC through examining the annual reports of companies for the years 2008, 2009 and 2010.

#### 2. Middle East and North Africa (MENA)

## 2.1 Overview of Arab World

The Arab world contains 2 regions, divided into the continents of Asia and Africa. Arab countries in Asia are 12 namely Saudi Arabia, Kuwait, Yemen, Bahrain, UAE, Iraq, Syria, Lebanon, Palestine, Qatar, Bahrain, Oman and Jordan, while 10 countries are located in Africa namely Egypt, Libya, Tunisia, Algeria, Morocco, Mauritania, Sudan, Djibouti, Somalia and Comoros (Findly 2003). The area of Arab world is estimated at 14,291,469 km² whereas the population of Arab homeland is 338,621,469, according to estimates by 2007 (Agency 2009). The most important natural resources of the Arab world are oil and gas. Therefore, some oil countries established oil Organization named the Organization of Arab Petroleum Exporting Countries, namely Saudi Arabia, Libya, Iraq, Syria, Bahrain, Algeria, Tunisia, Egypt, UAE, Qatar and Kuwait. In addition, the Saudi Arabia, Libya, Algeria, Qatar, UAE, Iraq and Kuwait are members of Organization Petroleum Exporting Countries (OPEC).

## 2.2 Petroleum Industry in Middle East and North Africa (MENA)

The lifeblood of the planet Earth is the energy which assists to expanding the global economy over the world. Since the discovery of oil, the main resource of energy over the world is oil and gas. Therefore, since few last decades, oil and gas industry has become global industry. The operations related to this industry are conducted in every corner of the globe, in addition to many other industries which depend on petroleum products. However, as a result of the conflict on acquisition of natural resources between developed countries and producing countries, international oil companies seek to acquire investment opportunities in oil countries. Nevertheless, it is worth noting that many national firms become have a greater role in the global oil industry especially in Oil-producing countries such as countries of the Middle East and North Africa (Findly 2003; Jahamani 2003).

In recent years, the world has been aware that oil is still the real source of energy in the world. According to (OPEC, 2011), the world has global proven reserves estimated at almost 1,193 billion barrels. The share of national oil companies of these reserves is estimated at 88.33%, while 18.67% of reserves are controlled by international corporations. For this reason, many national companies seek to re-evaluate their strategies in line with the evolution of the global oil industry in order to obtain advanced positions in the oil industry which was under the control of international companies for a long period of time. It should be noted, according to Oil and Gas Journal (2012), that among the 20 largest oil companies in the world there are 14 national companies, including 10 national companies owned by the governments of countries in the Middle East and North Africa.



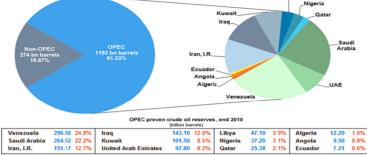


Figure 1.

The Middle East and North Africa (MEAN) is a centre of oil industry in the world. Two-thirds of members in the Organization of Petroleum Exporting Countries (OPEC) are from the Middle East and Africa. Thus, Countries of Arab Petroleum Exporting dominate the 57% of the world's oil reserves (OAPEC, 2011), where proportion is distributed across the Arab countries as follows; Saudi Arabia 22.2%, Iraq 12%, Kuwait 8.5%, UAE 8.2%, Libya 3.9%, Qatar 2.1% and Algeria 1.0%, in addition to Syria 0.18%, Egypt 0.36%, Tunisia 0.03% and Bahrain 0.01% which are not members of OPEC (but they are members of OAPEC). Furthermore, Oil experts estimate that the countries of the Middle East have the highest rate for a reserve to production (R/P) estimated 80 years, while Libya has the highest rate in Africa, 60 years, where R/P means The Reserves-to-production ratio and indicates to the remaining amount of a non-renewable resource.

Table 1. Proven crude oil reserves in OAPEC 2006-2010

country	2006	2007	2008	2009	2010
UAE	97.9	97.9	97.9	97.9	97.9
Bahrain	0.1	0.1	0.1	0.1	0.1
Tunisia	0.4	0.4	0.4	0.4	0.4
Algeria	12.2	12.2	12.2	12.2	12.2
Saudi	264.3	264.2	264.1	264.6	264.5
Syria	3	2.3	2.3	2.3	2.3
Iraq	115	115	115	115	143.1
Qatar	26.2	25.1	25.4	25.4	25.4
Kuwait	101.5	101.5	101.5	101.5	101.5
Libya	41.5	43.7	43.3	46.42	47.1
Egypt	3.7	3.9	4.2	4.4	4.5
OAPEC	665.6	666.1	667.2	670.1	698.9
OPEC	935.8	948.1	950.5	952.5	996.1
Total World	1151.6	1170.8	1169.1	1148.1	1232.3
% OAPEC to OPEC	0.71126	0.70256	0.70195	0.70352	0.70164
% OAPEC to world	0.57798	0.56893	0.5707	0.58366	0.56715

Source: annual report 2011, OAPEC

With respect to the production of oil, the Arab countries exporting oil provides about 27% of global production of oil, which is almost 72 million barrel in 2010 (Table 2). Daily production of crude oil exporting Arab countries for oil is 19.5 million barrels in 2010. Saudi has largest amount of oil production among MENA almost 8 million barrel day (OAPEC, 2011). However, the amount of production in general declined from 21.563 million barrel in 2006 to 19.773 million barrels in 2010.

Table 2. Crude oil production in OAPEC 2006-2010

Country	2006	2007	2008	2009	2010
UAE	2568	2529	2572.2	2241.6	2323.8
Bahrain	183.3	184.3	182.2	182.4	181.1
Tunisia	96.5	70	85	82	81.7
Algeria	1426	1398	1356	1216	1189.8
Saudi	9208	8978.6	8532	8184	8165.6
Syria	377.1	370	390	375.1	387
Iraq	1952.2	2035.2	2280.5	2336.2	2358.1
Qatar	802.9	845.7	842.8	733	733.4
Kuwait	2644.5	2574.5	2676	2261.6	2312.1
Libya	1751.2	1673.9	1721.5	1473.9	1486.6
Egypt	554	562	528.2	564.3	554.3
OAPEC	21563.7	21221.2	21166.4	19650.1	19773.5
OPEC	31841.6	31342.2	31570.3	28927.1	29830
Total World	80651.3	85606.3	84049.2	70908.6	72365.5
% OAPEC to World	0.26737	0.24789	0.25183	0.27712	0.27324
% OAPEC to OPEC	0.67722	0.67708	0.67045	0.6793	0.66287

Source: annual report 2011, OAPEC

In contrast, in respect of natural gas, less than half of world's natural gas reserves exist in MENA and produce about 17 percent of the world gas production. The proven natural gas in OAPEC estimated 53157 billion meter cubic. In 2010, Qatar has largest natural gas reserves which estimated at approximately 47% of total OAPEC reserves. The most important is that the natural gas reserves of Arab Petroleum Exporting Countries have increased by more than 112% for the year 2006 (Table 3). This increase in gas reserves has enabled some countries of the Arab world such as Qatar and Saudi to occupy an advanced position in the world regarding proven natural gas reserves where they are third and fourth respectively after Russia and Iran.

Table 3. Proven natural gas in OAPEC 2006-2010

Country	2006	2007	2008	2009	2010
UAE	6040	6072	6091	6091	6091
Bahrain	92	92	92	92	92
Tunisia	64	55	65	65	65
Algeria	4504	4504	4504	4504	4504
Saudi	7153	7305	7570	7920	8016
Syria	290	290	285	285	285
Iraq	3170	3170	3170	3170	3158
Qatar	25636	25636	25466	25366	25201
Kuwait	1780	1784	1784	1784	1784
Libya	1420	1540	1540	1549	1495
Egypt	1910	2024	2152	2186	2466
OAPEC	25059	52472	52719	53012	53157
OPEC	86747	87140	90290	90669	94292
Total World	178320	172939	176362	188254	191893
% OAPEC to world	0.14053	0.30341	0.29892	0.2816	0.27701
% OAPEC to OPEC	0.28887	0.60216	0.58389	0.58468	0.56375

Source: annual report 2011, OAPEC

In the beginning of the second decade of the third millennium, the Arab world has witnessed popular uprisings against power regimes. These popular uprisings represent a historic turning point in Arab region. Because the Arab world represents economic importance, these events have economic impact on the region first and on the whole world in a second phase (Ratner & Nerurkar 2011). These implications become clear on the oil markets.

Ratner and Nerurkar (2011) state that Arab spring has impact on economies of countries, reflecting in large part on global oil markets. The oil price had witnessed the sharp run-up as well as in the pattern of oil production. For example, oil revenues in countries of Arab Petroleum Exporting except Libya and Yemen have seen growth contrary to oil-importing countries had slower growth. On this basis, the expected growth of some oil-exporting countries increased from 5.1% in 2010 to 6.5% in 2011 accompanied by increase in levels of oil production. On the other hand, the political turmoil has effected on the Arab countries' imported oil where Real GDP growth slumped from an average of 4.4% in 2010 to be -0.5% in 2011.

## 3. Environmental Disclosure in Developed Countries and Developing Countries

Environmental issues and problems arising from the environmental activities of companies have been paid attention to by the societies of the developed countries more than developing communities in the past few decades. The accounting studies that addressed environmental issues have focused on developed countries such as the UK, the USA, Australia, Japan, Canada and European Union. Growing interest in environmental issues by companies in developed countries has contributed to increase in the amount of environmental information in annual reports of companies. Mitchell et al. (2006) state that the amount of environmental information has witnessed increase in annual reports Furthermore, many corporations started to issue voluntary independent environmental reports in the annual report.

In North America, the United States and Canada, attention to environmental accounting has witnessed a boom in growth over recent decades. U.S. companies are given special attention to the environment in terms of showing the environmental impacts on the commercial activities in public and private sectors and try to reverse these effects in the annual reports (Aerts et al. 2008). In addition, governments and professional organizations in North America have played a significant role to encourage companies to increase disclosure. In 1993, a workshop had been organized with the participation of a group of experts, academics, businessmen, professional organizations, and non-profit organizations in order to develop an action plan to encourage and motivate businesses to fully understand the importance of environmental accounting, including environmental costs and how to make decisions according to it (Hopwood 2009; Sawani 2009). Furthermore, Kraft (2011) reported that environmental information disclosure has emerged in the United States since 1980s and environmental performance varies widely among the fifty states in USA

In the UK Campbell (2004) indicated in his study which covered 27 years from 1974 to 2000 that the amount of disclosure in companies has increased over time where all companies have paid attention to the level of disclosure since the late 1980 (See figure 2). Moreover, Hasseldine et al. (2005) concluded in their research on U.K. firms, that disclosure is not directly related to the quality of actual performance in order to disclose environmental information. Further, another study which included firms in the U.K. showed that the rate of environmental information disclosed increased among UK companies (Brammer & Pavelin 2004, 2006, 2008). On the other hand, Brammer and Pavelin (2006) examined the voluntary environmental disclosures made by a sample of large UK companies during 2000. The findings indicated that the quality of disclosures is positively associated with firm size and corporate environmental impact. Furthermore, Salama et al. (2012) proved that U.K firms have paid a large attention to amount of environmental information by his study that included 169 firms in 1999. Findings show that 138 (out of 169) companies disclosed environmental sentences which is 81%.

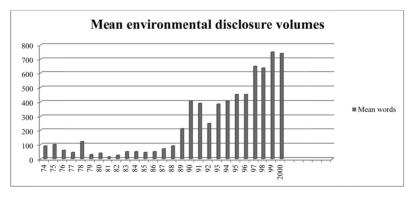


Figure 2. Mean environmental disclosure volumes in U.K firms

#### D. Campbell / The British Accounting Review 36 (2004, p.111)

Similarly with studies conducted in other European countries, Portuguese companies have witnessed an early response to corporate environmental reporting practices since 1990s. da Silva Monteiro and Aibar-Guzmán (2010) concluded that the extent of environmental disclosure has increased as well as the number of Portuguese companies that disclose environmental information, although the level of environmental information disclosed is low in a study of 109 large firms operating in Portugal during the period 2002–04. Moreover, German corporations also have positive environmental and social disclosure where the companies from "polluting industries" tend to have higher levels of environmental disclosure (Gamerschlag et al. 2011). Halme and Huse (1997) studied environmental reporting in Scandinavian countries namely Sweden, Finland, and Norway. In their study, the authors investigated the relationship between corporate environmental reporting in annual reports and corporate governance, industry and country variables in 140 larger corporations. They concluded that corporate environmental reporting is linked with industry.

In an Australian context, the attitudes of all sections of society such as investors, employee, and environmentalists towards the environment, contributes to increases of environmental awareness. Tilt (2001a) states that "Over the past twenty or so years interest in the relationship between business and the environment has grown dramatically, mirroring the increasing importance of the environment to broader society". Interest in environmental disclosure in Australian context has witnessed increase significantly in companies disclosing during the period 1980 to 1991(Deegan & Rankin 2009). In addition, increase in environmental reporting included governments beside corporations, Lynch (2007) found that environmental reporting in Australian state governments departments had increased during a five year period from 200 to 2005. It is relevant to point out that use of separate environmental reports has increased and there is suggestion to change in the direction of environmental disclosure research (Cowan & Gadenne 2005; Tilt 2001b). A recent study by Rao et al. (2012) on 100 Australian firms listed on the Australian Stock Exchange, concluded that environmental reporting in Australia is associated with positive Corporate Governance attributes and 96 firms out of 100 had some level of environmental reporting.

In Japan, Stanwick and Stanwick (2006) examined the environmental disclosure in Japanese corporations during the period 1997 and 2005. This study which covered 30 firms indicated that all companies have increase in environmental disclosure during years of study. In addition, highest level of environmental disclosure was in consumer product firms, whereas heavy manufacturing firms registered lowest level of environmental disclosure. Moreover, Hirayama et al. (2001) said that a foreign environmental guideline contributed to increase environmental disclosure in Japan year by year. In the context, the authors concluded that number of companies which presented environmental reports have increased year by year where companies which published environmental reports increased from 236 companies in 2000 to 297 companies in 2001.

#### 4. Environmental Disclosure in MENA

The social and environmental research in Arab countries is still scarce compared with the rest of the world, including the rest of the developing countries. O'Connor (2006) reported that published studies according to the regions of the world indicated that the Middle East is the lowest among the regions of the world in published studies that deal with environmental issues (see figure 3). However, during current decade some attempts have been conducted in Arab countries to attempt fill a gap in accounting literature in regarding to environmental issues.

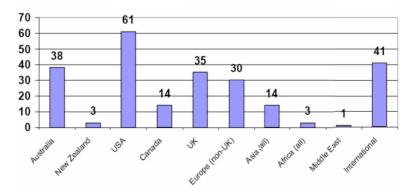


Figure 3. Country of Origin of Published Studies (O'Connor, 2006:16)

In Middle East and North Africa, Jahamani (2003) studied annual reports of Jordanian firms and UAE firms in 1998. The finding indicated the existence of 9 and 11 companies only presenting environmental disclosures in annual reports out of 86 and 94 surveyed firms in Jordan and UAE respectively. In another study conducted in Qatar, Al-Khater and Naser (2003) examine different aspects of corporate social responsibility disclosure by perceptions of various user groups. They concluded that the inclusion of corporate social and environmental disclosure in annual reports would reflect social responsibility to the public as well as companies that seek to justify their existence within the society, by highlighting the social responsibility of the company in their reports. Thereby supporting the results of the low level of disclosure in companies in the developing world, including companies in the Arab region, the results of a study presented on environmental reporting in the UAE companies by Jahamani (2003) showed that only 12 percent of the companies in the UAE issued environmental reports. The results of the low level of disclosure in companies in the developing world include companies in the Arab region. In Libya, Ahmad (2004) provided study on environmental disclosure conducted in 18 companies from major industrial companies in Libya indicated that there was no evidence of environmental disclosure in annual reports of industrial companies in Libya.

Kamla (2007) conducted study in nine of the Arab Middle East countries which examined the volume, quality and nature of social reporting practices in the annual reports of 68 companies from nine Arab Middle East countries. The finding indicated that only 10 companies, 15% of the sample, provided some form of environmental information. In addition, most disclosed information related to employee issues. In other study conducted in Egyptian context, Rizk et al. (2008) studied corporate social and environmental reporting practices of Egyptian corporate entities. Findings of the study indicate a significant variation regarding social and environmental disclosure practices in 60 companies operating in industrial segments. The researchers also mentioned that reviews of disclosure practices in different parts of the world are always welcome and are arguably somewhat limited in developing countries.

Furthermore, Hossain and Hammami (2009) and Naser et al. (2006) conducted studies in Qatar regarding environmental disclosure including companies listed in Doha Securities Market. These studies concluded that there are variations in corporate social disclosure in the sampled Qatari companies. It is also indicated that disclosure is associated with firm size measured by the firm's market capitalization, business risk measured by leverage and corporate growth. In addition, the findings indicate that age, size, complexity, and assets-in-place are significant and other variable (profitability) is insignificant in explaining the level of voluntary disclosure.

During 2010, study conducted by Elsayed and Hoque (2010) found that 55 firms out of 100 Egyptian corporations provided environmental information. In Saudi Arabia, Al-Gamrh (2010) concluded that the level of disclosure in the annual reports of 93 companies surveyed is very low. Results of the study refer to only one company which disclosed all items of disclosure (the study included 25 items of environmental and social disclosure) while there are 13 companies which did not record any disclosure items. In 2011, Al-Janadi et al. (2011) examined annual reports for the available financial years 2006 and 2007 in Saudi Arabia and the UAE. They prove that the level of voluntary disclosure is low with an average of approximately 36 per cent for the whole sample of companies. Voluntary disclosure was found to be lacking for most of the items of social and environmental information. In addition, the results of Ahmad and Mousa (2011) research confirmed the notion that a little improvement in corporate environmental disclosure occurred in Libya between 2001 and 2007 compared with a study conducted during 1998 and 2000.

Furthermore, In Jordan, Islam (2011) examined the level of environmental disclosure in Jordanian firms using a sample of 60 companies in the manufacturing and service sectors. Results find that 85% of the companies disclose some social and environmental information. Islam (2011) commented on the results of his studies as improved as compared to other studies conducted on Jordanian companies such as (Al-Khadash 2003) which concluded that 26% of the companies covered in the study were known to release environmental information. As well the study of Jahamani (2003) who found that 10 percent of out of 86 Jordanian firms presented environmental reports as part of their annual reports in study which examined the extent, awareness and level of environmental responsibility of Jordanian companies.

Two studies were conducted in Tunisian context during 2011, Gana and Dakhlaoui (2011) concluded that the average disclosure score has slightly improved over the years of study. This finding was concluded from study conducted on 36 Tunisian firms over the period 2000 to 2005. Belhaj and Damak-Ayadi (2011) examined environmental disclosure in 31 Tunisian firms and related it to financial performance and environmental performance in 2007. The findings indicated that the mean disclosure score is 9.77 and firms from industries with higher sensitivity to the environment tend to provide more environmental disclosure than firms from less

environmentally sensitive industries. It is worth noting that out of 500 largest Tunisian firms; only 53 have published environmental information in their annual reports or in their websites (Belhaj & Damak-Ayadi 2011).

During 2012, it has been witnessed some attempts of some researchers in order to add some studies dealing with environmental issues. For example, Ismail and Ibrahim (2012) found that 85% of the Jordanian companies disclose some environmental information where the sample included 60 companies in the manufacturing and service sectors. As well, Bayoud et al. (2012) found for annual reports 60% of companies from different sectors disclose four categories "employee disclosure; community involvement disclosure; consumer disclosure; environmental disclosure" of corporate social responsibility (CSR) whereas 5% of companies do not present CSR information in their annual reports. However, the trend towards environmental disclosure for companies in MENA refers to an increase in the number of companies that disclose environmental information.

## 5. Study Method

This study investigates the extent and content of environmental disclosure in annual reports of local oil and gas corporations operating in Arab oil countries. Content analysis used word count in order to measure quantity environmental disclosure and disclosure index in order to measure quality environmental disclosure in corporate annual reports issued in 2008, 2009 and 2010. It is worth noting that these methods have been used by many researchers in their studies to examine environmental disclosure. Along similar lines, Cowan and Gadenne (2005), Mahadeo et al. (2011) and Suttipun (2011, 2012) who have used word as a unit of measurement in content analysis to determine level of environmental disclosure in annual reports. Thereby supporting the study to use word count, Campbell (2004) justified use of words as a unit of measurement, because it provides a greater amount of detailed description. Moreover, the application of words in business research allows the analysis to be more precise and defined upon identification of the subject matter being sought (Ahmad 2004). In next part of measurement, the quality of environmental disclosure has applied the environmental disclosure index. This measurement technique derived from content analysis (Al-Tuwaijri et al. 2004). Many studies have adopted this technique in measuring the quality of disclosure, such as (Ahulu et al. 2010; Al-Khadash 2003; Buniamin et al. 2011).

Based on previous studies by Burritt (1982), (Wiseman 1982), (Deegan & Gordon 1996), and Hackston and Milne (1996), there are 16 items that can be used in this study to categorise environmental information in annual reports. Therefore, in order to measure the quality of environmental disclosure of items, this study assigns the greatest weight (+3) to monetary disclosures related to the environmental items, and assigns the next highest weight (+2) to quantitative. Finally, general disclosure receives the lowest weight (+1). Firms that do not disclose information for a given indicator receive a score of zero for that item. Thus, a total score of each company equal 48 score. In other word, the highest quality of environmental disclosure is 48 while the lowest quality is zero.

The data needed for this study were collected from the annual reports of each of the companies sampled. The sample in present study included 100 oil and gas companies operating within the Group of Arab Petroleum Exporting Countries. This group is composed of 11 Arab countries exporting oil are Saudi Arabia, Kuwait, Qatar, UAE, Bahrain, Iraq, Syria, Egypt, Libya, Tunisia and Algeria. Syrian and Iraqi companies were excluded from the study due to the current security conditions in Syria and the lack of data for Iraqi companies. Oil and gas companies registered in the Oil Ministry in each country have produced their 2008, 2009 and 2010 annual reports, whether in Arabic or English, and were obtained from websites of the companies or from visits to the company's offices.

#### 6. Findings

#### 6.1 Descriptive Analysis

This section provides a brief overview of some of the general facts and characteristics that were identified in respect to this study. Discussion concentrates on two aspects: - response rates, countries breakdown. Based on the details outlined in the following two sections it is worth noting that most of the firms surveyed are representative of the total of oil industry in each country.

## 6.2 Response Rate

This study sought to examine the annual reports for 2008, 2009 and 2010 of 58 oil and gas companies. A table 4 illustrates number of target companies in Arab Petroleum Exporting Countries (APECs). They also present number of companies that meet the conditions of a sample in this study. Table 4 focuses on the national companies operating in APECs. It can be noted that Algeria had the lowest rate of the number of companies that met the requirements of study (28.57%). The number of companies targeted was 5 companies, whereas there

were only two companies which provide annual reports according to the conditions in this study. In contrast, the United Arab Emirates had the highest percentage of companies that met the conditions of the study. The percentage of these companies is 67%. It is interesting to point out that although Arab Emirates has the highest percentage of firms in the sample in this study Saudi Arabia had the largest number sample. The actual number is 9 Saudi companies.

Table 4. Response rate of National oil and gas corporations In Arab Petroleum Exporting Countries

	Number of target companies	number of selected companies	Response rate-precenting (%)
Algeria	7	2	28.57
Bahrain	9	3	33.33
Egypt	8	5	55
Kuwait	12	6	50
Libya	9	5	55.56
Oman	7	3	42.86
Qatar	11	7	63.64
Saudi Arabia	16	9	56.25
Tunisia	6	3	50
United Arab Emirates	12	8	66.67
Total	100	51	51

In general, to derive a final score for percentage of the sample study, it can be said that the percentage of companies that meet the conditions in this study for national companies were 57%. In comparison with other studies which have used the annual reports, it is of paramount importance to point out that response rate of this study is similar to the response rates in other studies. Momin (2006, p. 199) for example responded rate of 27% where his study was in one nation. Although the proportion of the sample in his study were 68%, Cowan considered that sample size of twenty-five was appropriate for an Australian study where Cowan (2007, p. 105) states that "when considered in comparison to other published Australian studies". Zunker (2011, p. 116) examined the annual reports for 649 companies out of 970 targeted company, where the percentage of the sample was 68%.

#### 6.3 General Descriptive Statistics of Environmental Disclosures

Through review of annual reports of organisations surveyed in this research study, it can be noted that companies that disclosed at least one item of environmental information in annual reports had increased during study period 2008, 2009 and 2010. Table 5 summarizes companies surveyed and corporations that disclosed at least one item in their annual report. To regarding national companies, it can be argued that total companies had increased significantly from 2008 to 2010 by almost 50%. In 2008, number of companies was 23 firms whereas it was 43 companies in 2010. Therefore, it can said that percentage of national oil and gas firms that disclosed at least one item has increased over three years from 45.09% in 2008 into 84.31% in 2010. In contrast, international companies witnessed a relative increase in companies that disclosed at least one item. While the number of companies was 89 per 2008 by 90%, the number of companies in 2010 reached 98 companies increased by 100%.

Table 5. Number and percentage of national companies with environmental disclosures

	2008	2009	2010
Total companies	51	51	51
Disclosers	23	33	43
Percent (%)	45.09%	64.70%	84.31%

In general, it can be observed from the following figure that national oil and gas firms have witnessed increase in the number of corporations that disclose at least one item of environmental information in their annual reports. Through a review of corporations and environmental disclosure items referred to in Table 11, it can extract the number of companies; whether national companies that have provided at least one item of environmental disclosure are shown in tables 6. This table contain countries and number of companies surveyed of each country as well as number of companies which provided at least one item for the years 2008, 2009 and 2010, and in addition the percentage for each country. Table 6 focuses on national oil companies in countries of Arab

Petroleum Exporting (CAPE). Overall, it is interesting to point out that number of companies that provided at least one item have increased during 2008 and 2010, where it was 23 in 2008 and 43 in 2010. The percentage of increase from 2008 to 2010 was almost 85%.

In terms of raw numbers, in 2008, companies in Algeria and Tunisia had not disclosed any item in their annual reports. However, in 2010, although they had lowest number of companies surveyed, they had 33% of companies that provided at least one item of environmental disclosure. In contrast, Qatar, Saudi Arabia and UAE had a highest percentage of number of companies that provided at least one item in their annual reports which was 100%. Therefore, it can be said that during 2010 there were 43 companies presented in their annual reports with at least one item of environmental disclosure items of 51 companies surveyed. All Saudi companies that were surveyed provided in their annual reports at least one item whereas there were 7 Saudi corporations which provided at least one item in 2008.

Table 6. National Breakdown of EDPs for NOGCs

Country	Number firms surveyed	No Companies Reporting at least One EDPs 2008	(%) 2008	No Companies Reporting at least One EDPs 2009	(%) 2009	No Companies Reporting at least One EDPs 2010	(%) 2010
Algeria	3	0	0.00%	1	33.33%	1	33.33%
Bahrain	4	1	25.00%	2	50.00%	2	50.00%
Egypt	4	1	25.00%	2	50.00%	3	75.00%
Kuwait	6	3	50.00%	4	66.67%	5	83.33%
Libya	6	1	16.67%	2	33.33%	4	66.67%
Qatar	8	5	62.50%	7	87.50%	7	87.50%
Saudi	9	7	77.78%	9	100.00%	9	100.00%
Tunisia	3	0	0.00%	1	33.33%	1	33.33%
UAE	9	6	66.67%	8	88.89%	8	88.89%
Total	52	22	42.31%	31	59.62%	40	76.92%

Environmental disclosure practices in countries surveyed which provided at least one item in their annual reports shows that percentage of companies was similar to other studies national or international. Differences in the results as a percentage between this study and other studies covering other regions of the world are not substantial. Therefore, review of the results of previous studies on disclosure of environmental in many countries across the world and comparison with the results of this study set out in table 7 shows growth in most countries of the study whether the Arab oil-exporting or developed countries that have companies operating in the oil sector in the Arab oil-exporting.

## 6.4 Quantity and Quality of Environmental Disclosure

With respect to the quantity and quality of disclosure made by companies in their annual reports, it can conclude that the amount of disclosure in general has increased during the study period. As mentioned before, word counting is used to evaluate the quantity of corporate environmental disclosures whereas environmental disclosure index is used to measure the quality of disclosure.

## 6.4.1 The Quantity of Corporate Environmental Disclosures

Table 7. Descriptive Statistics of Environmental Disclosure Word Counts for National Companies

year	Minimum	Maximum	Mean	Standard Deviation
2008	0	182	89.1111	63.8934
2009	0	262	130.3333	88.1377
2010	0	288	154.3333	87.2153

Table 7 shows descriptive statistics of environmental disclosure word counts for national corporations respectively. With respect to national oil and gas during a period study, the amount of environmental disclosures had increased significantly from 0 in 2008 to 288 words in 2010 where the average quantity of environmental disclosure had increased almost 73 percent from 2008 to 2010.

On the other hand, in order to obtain the differences in disclosure between countries, it is important to examine the amount of disclosure in annual reports of organisations for each country. This study was based on word count to examine environmental disclosure contained in the annual reports of oil and gas corporations in order to measure the amount of disclosure. The following table 8 summarizes the information on amount of disclosure word count for NOGCs in Arab oil countries.

Table 8. Amount of disclosure word count in Arab oil countries

	Years	No. Companies	Word count	average of word at each firm *	Percentage of Word Count (%) **
	2008	0	0	0	0
Algeria	2009	1	36	36	3.01
	2010	2	66	33	4.75
	2008	1	32	32	4.55
Bahrain	2009	2	59	29.5	4.92
	2010	2	62	31	4.46
	2008	1	32	32	4.55
Egypt	2009	2	66	33	5.51
	2010	3	115	38.33	8.27
	2008	3	65	21.67	9.25
Kuwait	2009	4	97	24.25	8.1
	2010	5	129	25.8	9.28
	2008	1	22	22	3.13
Libya	2009	2	46	23	3.84
	2010	4	71	17.75	5.11
	2008	5	175	35	24.89
Qatar	2009	7	235	33.57	19.62
	2010	7	238	34	17.12
	2008	7	220	31.43	31.29
Saudi	2009	9	297	33	24.79
	2010	9	326	36.22	23.45
	2008	0	0	0	0
Tunisia	2009	1	26	26	2.17
	2010	1	27	27	1.94
	2008	6	157	26.17	22.33
UAE	2009	8	336	42	28.05
	2010	8	356	44.5	25.61

<sup>\*</sup> Average of word at each firm equals words count divided on number of companies for each year.

As shown in Table 8, it can be concluded that national companies in the OPAEC presented environmental disclosure information in their annual reports. This disclosure varies from year to year and from one country to another. Generally, Arab Emirates and Saudi Arabia had the highest amount of disclosure in annual reports amounting to 356 words and 326 words respectively. This is consistent with study of Al-Janadi et al. (2011) who concluded that the level of disclosure in the UAE companies is larger than Saudi companies. In contrast, the lowest amount of words in the annual reports are 22 and 26 words for Libyan and Tunisian companies respectively, if excluded 2008 for Algerian and Tunisian companies due to there being no companies which disclosed at least one item of the environmental disclosure items. The extracted finding from Libya companies is compatible with Nasr's studies (2004, 2011) who concluded that Libyan firms did not present any information related to environment in their annual report in 2004 whereas the result in 2011 indicted that environmental disclosure had been improved. As for the Tunisian companies, the level of disclosure is similar to the level of disclosure in the study of Belhaj and Damak-Ayadi (2011) which showed that the highest level of disclosure in the 31 Tunisian companies is to 23. Moreover, it also can be noted that the quantity of disclosure has grown in all the national companies in OPAEC. UAE companies have showed biggest increase in the amount of disclosure which was 199 words from 2008 to 2010, while Tunisia recorded a lesser increase in the amount of disclosure which was 27 words. However, the percentage of the number of words shows a substantial difference between

<sup>\*\*</sup> Percentage of Word Count equals words count divided on total words for each year

the Arab countries. Largest proportion was for Saudi Arabia in 2008 at 31.29% of the total number of words disclosed in the annual reports for 2008. In 2009, the largest proportion was 28.05% for the United Arab Emirates. In 2010, although UAE had a largest percentage, it had decreased from 28.05% in 2009 into 25.61% in 2010. On the other hand, countries such as Libya, Tunisia, Algeria, and Bahrain had low rates which did not exceed approximately 5%.

### 6.4.2 The Quality of Corporate Environmental Disclosures

Table 9 shows that the quality of disclosure has increased over the three years of study. The average was 19 in 2008 and it increased in 2010 to 26.66 in national corporations. In relation to international companies, the increase in the average quality of disclosure was very modest during the years of study. However, in spite the modest increase, it was higher than the national companies..

Table 9. Descriptive Statistics of Environmental Disclosure Index for national Companies

Year	Minimum	Maximum	Mean	Standard Deviation
2008	9	34	19	8.7321
2009	15	34	24.1111	7.737
2010	16	37	26.6667	6.6144

Table 10 summarises a quality of environmental disclosure using environmental disclosure index for national. Measuring the quality of disclosure for each country in this study relied on the following: If the disclosure in the annual report disclosure is monetary, item scored as 3, but if the disclosure is quantitative, the score of disclosure to be 2. Finally, the score is 1 in case disclosure of information is qualitative. The final score for each country is a collection of scores of all companies surveyed from that country. Regarding NOGCs, from table 10, the highest score was 37 for Qatar firms in 2010 whereas the lowest score was 8 for Tunisian firms in 2009 if excluded years 2008 and 2009 for Algerian and Tunisian corporations. Overall, in spite of the fact that the quality of environmental disclosure for IOGCs is higher in some countries than others, the quality of environmental disclosure had increased for all countries over three years.

Table 10. Quality of disclosure by EDindex in Arab countries

country	years	No. Companies	Environmental Index	average of Index at each firm	Percentage of Index (%)
	2008	0	0	0	0
Algeria	2009	2	17	8.5	7.56
	2010	2	16	8	6.43
	2008	3	10	3.33	6.17
Bahrain	2009	3	20	6.67	8.89
	2010	3	23	7.67	9.24
	2008	4	14	3.5	8.64
Egypt	2009	4	19	4.75	8.44
	2010	4	26	6.5	10.44
	2008	6	16	2.67	9.88
Kuwait	2009	6	22	3.67	9.78
	2010	6	26	4.33	10.44
	2008	5	14	2.8	8.64
Libya	2009	5	15	3	6.67
	2010	5	21	4.2	8.43
	2008	7	34	4.86	20.99
Qatar	2009	7	34	4.86	15.11
	2010	7	37	5.29	14.86
	2008	9	27	3	16.67
Saudi	2009	9	34	3.78	15.11
	2010	9	33	3.67	13.25
	2008	0	0	0	0
Tunisia	2009	1	8	8	3.56
	2010	1	9	9	3.61
	2008	8	28	3.5	17.28
UAE	2009	8	34	4.25	15.11
	2010	8	33	4.13	13.25

#### 6.5 Items of Environmental Disclosure in Oil and Gas Companies

Previous research that addressed the environmental disclosure sought to examine many of the items. However, this study relied on previous studies in determining the items of disclosure and adopted the items described in the table 12 which would give a broader dimension of environmental disclosure in companies. In particularly, environmentally sensitive companies include companies operating in the petroleum industry. Previous studies have shown that items such as environmental policy, environmental management and environmental spending are among the more common disclosure items in annual reports (Suttipun & Stanton 2012). Table 11 illustrates the disclosure for each item of disclosure items. It can be noted that most companies gave great importance to Education and Training item where it scored the highest disclosure over the three years followed by environmental management and risk management. On the other hand, the items of Environmental Cost Accounting and Environmental awards were not disclosed in the annual reports of any companies covered in this study.

Table 11. Items of environmental disclosures in annual reports

T.	2000	2000	2010	percentage of	percentage of	percentage of
Items	2008	8 2009 2		2008	2009	2010
Education and Training	825	969	1212	14.24	14.58	13.73
Environmental management	768	813	901	13.26	12.24	10.21
Risk management	663	727	830	11.45	10.94	9.4
environmental accidents	501	514	844	8.65	7.74	9.56
Wastes	486	558	754	8.39	8.4	8.54
Environmental Policy	482	622	805	8.32	9.36	9.12
Litigation about Environmental Issues	412	476	599	7.11	7.16	6.79
Land Rehabilitation and Remediation	340	416	494	5.87	6.26	5.6
sustainable development reporting	337	420	491	5.82	6.32	5.56
Air Emission	295	369	480	5.09	5.55	5.44
Spill	245	273	847	4.23	4.11	9.6
<b>Environmental Auditing</b>	180	206	208	3.11	3.1	2.36
Water Effluent	157	173	216	2.71	2.6	2.45
Environmental Spending and Activities	101	108	145	1.74	1.63	1.64
Awards	0	0	0	0	0	0
Environmental Cost Accounting	0	0	0	0	0	0
Total	5792	6644	8826			

The table 11 displayed the important items disclosed in annual reports of oil and gas corporations. It is worth noting that most of firms have paid attention to some of the items without the other. From the table 12, it can be seen that the Education and Training, Environmental management and Spill were disclosed in the annual reports of companies more than other items over three years. Regarding 2010, Education and Training was reported in 1212 words in annual reports of companies included in the study sample followed by both Environmental management and Spill with 901 and 847 words respectively. In 2009 and 2008, the largest number of disclosed words were Education and Training, Environmental management and Risk management which reported 969, 813 and 727 respectively in 2009 whereas they reported 825, 768 and 663 words in 2008. It is relevant to point out that the number of times to disclose item spill increased significantly in 2010. This increase was due to the spill incident which occurred from oil platforms owned by BP in the Gulf of Mexico. In other hand, items such as Awards and Environmental Cost Accounting were not disclosed in annual reports by any corporation over the study period. Quantity vs. quality of environmental disclosure

To derive a final score for each country, table 12 displays comparison of environmental disclosure in accordance with the quantity and quality of disclosure in order to show the picture as complete. Most previous studies in the literature concerning the disclosure of environmental accounting that dealt with the countries in this study did not address a comparison between the amount of disclosure and quality of disclosure. This study is one of the first studies that make this comparison in order to fill gaps in previous studies.

Table 12. Environmental disclosure index and word counts for Arab oil Countries

	2008			2009		2010	
	word	environmental	word	environmental	word	environmental	
	count	disclosure index	count	disclosure index	count	disclosure index	
Algeria	0	0	36	17	66	16	
Bahrain	32	10	59	20	62	23	
Egypt	32	14	66	19	115	26	
Kuwait	65	16	97	22	129	26	
Libya	22	14	46	15	71	21	
Qatar	175	34	235	34	238	37	
Saudi	220	27	297	34	326	33	
Tunisia	0	0	26	8	27	9	
UAE	157	28	336	34	356	33	

#### 7. Conclosion

In conclusion, this study intended to give an overview of variations in the environmental disclosure practices between national oil and gas corporations which are operating in OPAEC. To derive a final score, analysis of environmental disclosure practices across OPAEC was undertaken at three different levels. The initial findings indicate that number of oil and gas surveyed companies which made environmental disclosures in their annual reports has increased over period study. However, this study concludes that environmental reporting practice in Arab oil countries is still low. Furthermore, in spite a general increase in environmental disclosures by oil and gas corporations during the period 2008 to 2010 in terms of both the quantity and the quality of disclosure, differences were noted regarding the number of companies from each country providing at least one environmental disclosure, an addition to the themes being reported and the amount of disclosure in annual reports. Moreover, the analysis shows that the extent of environmental disclosure practices vary between companies according to country. It is interesting to point out that there was a big gap in the level of environmental disclosures across sample companies. It has to be recognized that some national oil and gas corporations (Qatar, Saudi Arabia, and UAE) had provided a quality of environmental disclosure superior to similar corporations in other countries.

This study was conducted under several limitations. Most of the petroleum activities in Arab oil countries are under the control of main national oil company and affiliated to the government. Consequently, many other local companies play a secondary role in the oil industry. In addition, many of the local oil companies do not provide annual reports on their websites. Moreover, only three years of data is considered in the current study. Hence, it would be interesting to conduct a longitudinal study on more than three years which may help to trace the trend of environmental disclosure.

However, this study sets the first step for future research which focuses on the oil sector in Arab countries. These results showed a difference in disclosure between the Arab countries. Therefore, this paper contributes to the literature which examine reasons for the difference of environmental disclosure between oil companies as well as it contributes to the comparisons with international oil companies.

## References

Aerts, W, Cormier, D., & Magnan, M. (2008). Corporate environmental disclosure, financial markets and the media: An international perspective. *Ecological Economics*, 64, 643-59. http://dx.doi.org/10.1016/j.ecolecon.2007.04.012

Agency, C. I. (2009). *The World Factbook 2008*. Central Intelligence Agency, <a href="https://www.cia.gov/library/publications/the-world-factbook/">https://www.cia.gov/library/publications/the-world-factbook/</a>>.

Ahmad, NSM, & Mousa, F. R. (2011). Corporate environmental disclosure in Libya: A little improvement. *World Journal of Entrepreneurship, Management and Sustainable Development*, 6, 149-59. http://dx.doi.org/10.1108/20425961201000012

Ahmad, N. S. M. (2004). Corporate Environmental Disclosure in Libya: Evidence and Environmental Determinism Theory, PhD thesis, Napier University, Edinburgh.

- Ahulu, H, Kotey, B., & Al Farooque, O. (2010). *Advances in Environmental Reporting among Australian MNEs using GRI Guidelines*, Sydney, NSW, Australia, <a href="http://www.une.edu.au/business-school/research/corp-gov-conf/papers/ahulu-kotey-farooque.pdf">http://www.une.edu.au/business-school/research/corp-gov-conf/papers/ahulu-kotey-farooque.pdf</a>.
- Al-Gamrh, B. A. A. (2010). Social and Environmental Disclosure in Saudi Companies, master thesis, Universiti Utara Malaysia.
- Al-Janadi, Y, Rahman, R. A., & Omar, N. H. (2011). The level of voluntary disclosure practices among public listed companies in Saudi Arabia and the UAE: Using a modified voluntary disclosure index. *International Journal of Disclosure and Governance*, *9*, 181-201. http://dx.doi.org/10.1057/jdg.2011.19
- Al-Khadash, H. A. (2003). The Accounting Disclosure of Social and Environmental Activities A Comparative Study for the Industrial Jordanian Shareholding Companies. *Abhath Al-Yarmouk Journal: Humanities and Social Sciences*, 19, 21-39.
- Al-Khater, K., & Naser, K. (2003). Users' perceptions of corporate social responsibility and accountability: evidence from an emerging economy. *Managerial Auditing Journal*, *18*, 538-48. http://dx.doi.org/10.1108/02686900310482678
- Al-Tuwaijri, S, Christensen, T., & Hughes, K. (2004). The relations among environmental disclosure, environmental performance, and economic performance: a simultaneous equations approach. *Accounting, Organizations and Society*, 29, 447-71. http://dx.doi.org/10.1016/S0361-3682(03)00032-1
- Bayoud, N. S, Kavanagh, M., & Slaughter, G. (2012). Corporate Social Responsibility Disclosure and Corporate Reputation in Developing Countries: The Case of Libya. *Journal of Business and Policy Research*, 7, 131-60.
- Belhaj, M., & Damak-Ayadi, S. (2011). Financial performance, environmental performance and environmental disclosure: the case of Tunisian firms. *Afro-Asian Journal of Finance and Accounting*, 2, 248-69. http://dx.doi.org/10.1504/AAJFA.2011.041632
- Brammer, S., & Pavelin, S. (2004). Voluntary social disclosures by large UK companies. *Business Ethics: A European Review, 13*, 86-99. http://dx.doi.org/10.1111/j.1467-8608.2004.00356.x
- Brammer, S., & Pavelin, S. (2006). Voluntary environmental disclosures by large UK companies. *Journal of Business Finance & Accounting*, 33, 1168-88. http://dx.doi.org/10.1111/j.1468-5957.2006.00598.x
- Brammer, S., & Pavelin, S. (2008). Factors influencing the quality of corporate environmental disclosure. Business Strategy and the Environment, 17, 120-36. http://dx.doi.org/10.1002/bse.506
- Buniamin, S, Alrazi, B, Johari, N. H., & Rahman, N. R. A. (2011). Corporate government practices and environmental reporting of companies in Malaysia: finding possibilities of doubles thumbs up. *Jurnal Pengurusan*, 32, 55-71.
- Campbell, D. (2004). A longitudinal and cross-sectional analysis of environmental disclosure in UK companies--a research note. *The British Accounting Review*, 36, 107-17. http://dx.doi.org/10.1016/j.bar.2003.09.001
- Cowan, S. (2007). Environmental reporting and the impacts of mandatory reporting requirements. PhD thesis, RMIT University.
- Cowan, S., & Gadenne, D. (2005). Australian corporate environmental reporting: a comparative analysis of disclosure practices across voluntary and mandatory disclosure systems. *Journal of Accounting & Organizational Change*, 1, 165-79. http://dx.doi.org/10.1108/18325910510635344
- da Silva Monteiro, S. M., & Aibar Guzmán, B. (2010). Determinants of environmental disclosure in the annual reports of large companies operating in Portugal. *Corporate Social Responsibility and Environmental Management*, 17, 185-204. http://dx.doi.org/10.1002/csr.197
- Deegan, C., & Gordon, B. (1996). A study of the environmental disclosure practices of Australian corporations. *Accounting and Business Research*, 26, 187-199.
- Deegan, C., & Rankin, M. (2009). Do Australian companies report environmental news objectively? An analysis of environmental disclosures by firms prosecuted successfully by the environmental protection authority. *Accounting, Auditing & Accountability Journal*, 9, 50-67. http://dx.doi.org/10.1108/09513579610116358

- Elsayed, M. O., & Hoque, Z. (2010). Perceived international environmental factors and corporate voluntary disclosure practices: an empirical study. *The British Accounting Review*, 42, 17-35. http://dx.doi.org/10.1016/j.bar.2010.01.001
- Findly, A. M. (2003). The Arab World. Taylor and francis 2 edn, Simultaneously, USA and Canada.
- Gamerschlag, R, Möller, K., & Verbeeten, F. (2011). Determinants of voluntary CSR disclosure: empirical evidence from Germany. *Review of Managerial Science*, *5*, 233-262. http://dx.doi.org/10.1007/s11846-010-0052-3
- Gana, M. R., & Dakhlaoui, M. (2011). Societal Information Disclosure and The Cost of Equity: The Case of Tunisian Companies. *Global Journal of Management And Business Research*, 11, 1-9.
- Hackston, D., & Milne, M. J. (1996). Some determinants of social and environmental disclosures in New Zealand companies. *Accounting, Auditing & Accountability Journal*, 9, 77-108. http://dx.doi.org/10.1108/09513579610109987
- Hasseldine, J, Salama, A., & Toms, J. (2005). Quantity versus quality: the impact of environmental disclosures on the reputations of UK Plcs. *The British Accounting Review*, *37*, 231-48. http://dx.doi.org/10.1016/j.bar.2004.10.003
- Hirayama, K, Kokubu, K, Kanda, Y, Shinabe, T, Higashida, A, Kawahara, C, Kitamura, M., & Nakaso, Y. (2001). Environmental Reports by Japanese Companies: An analysis of environmental reports of companies listed on the First Section of the Tokyo Stock Exchange.
- Hopwood, A. G. (2009). Accounting and the environment. *Accounting, Organizations and Society*, *34*, 433-9. http://dx.doi.org/10.1016/j.aos.2009.03.002
- Hossain, M., & Hammami, H. (2009). Voluntary disclosure in the annual reports of an emerging country: The case of Qatar. *Advances in International Accounting*, 25, 255-65. http://dx.doi.org/10.1016/j.adiac.2009.08.002
- Islam, M. A. (2011). Environmental incidents in a developing country and corporate environmental disclosures: A study of a multinational gas company. *Society and Business Review*, 6, 229-48. http://dx.doi.org/10.1108/17465681111170984
- Ismail, KNIK, & Ibrahim, A. H. (2012). Social and Environmental Disclosure in the Annual Reports of Jordanian Companies. *Issues in Social and Environmental Accounting*, 2, 198-210.
- Jahamani, Y. F. (2003). Green accounting in developing countries: The case of UAE and Jordan. *Managerial Finance*, 29, 37-45. http://dx.doi.org/10.1108/03074350310768418
- Kamla, R. (2007). Critically appreciating social accounting and reporting in the Arab Middle East: a postcolonial perspective. *Advances in International Accounting*, 20, 105-77. http://dx.doi.org/10.1016/S0897-3660(07)20005-4
- Kraft, M. E. (2011). Environmental Information Disclosure in the United States: Comparing State Policy Actions, Effects, and Needs, the American Political Science Association, USA. http://ssrn.com/abstract=1901840
- Lynch, B. (2007). Environmental reporting in annual reports: an examination of Australian state government departments. *International journal of knowledge, culture and change*, 7, 47-59.
- Mahadeo, J. D, Oogarah-Hanuman, V., & Soobaroyen, T. (2011). A Longitudinal Study of Corporate Social Disclosures in a Developing Economy. *Journal of Business Ethics*, 104, 545-58. http://dx.doi.org/10.1007/s10551-011-0929-3
- Momin, M. A. (2006). Corporate social responsibility and reporting by multinational corporations in Bangladesh: an exploration. PhD thesis, University of Glasgow.
- Naser, K, Al-Hussaini, A, Al-Kwari, D., & Nuseibeh, R. (2006). Determinants of corporate social disclosure in developing countries: the case of Qatar. *Advances in International Accounting*, 19, 1-23. http://dx.doi.org/10.1016/S0897-3660(06)19001-7
- O'Connor, L. (2006). *Empirical research in social and environmental accounting: a metareview*, working paper La Trobe University, Australia, diakses dari http://www. vuw. ac. nz/sacl/about/csr2006/papers/oconnor, larry. pdf.

- Pulsipher, A. G, Iledare, O. O, Mesyanzhinov, D. V, Dupont, A., & Zhu, Q. L. (2001). Forecasting the number of offshore platforms on the Gulf of Mexico OCS to the year 2023. illustrated edn, DIANE Publishing Company, USA.
- Rao, K. K., Tilt, C. A., & Lester, L. H. (2012). Corporate Governance and Environmental Reporting: An Australian Study. *Corporate Governance*, 12, 143-63. http://dx.doi.org/10.1108/14720701211214052
- Ratner, M., & Nerurkar, N. (2011). Middle East and North Africa Unrest: Implications for Oil and Natural Gas Markets, Congressional Research Service (CRS) Report: March 10, 2011 (R41683), available at: http://www.fas.org/sgp/crs/mideast/R41683.pdf.
- Rizk, R, Dixon, R., & Woodhead, A. (2008). Corporate social and environmental reporting: a survey of disclosure practices in Egypt. *Social Responsibility Journal*, 4, 306-23. http://dx.doi.org/10.1108/17471110810892839
- Salama, A, Dixon, R., & Habbash, M. (2012). An Examination of Environmental Disclosures in UK Corporate Annual Reports. *Accounting Business & Management*, 19, 19-42.
- Sawani, A. (2009). The Changing Accounting Environment: International Accounting Standards and US implementation. *Journal of Finance and Accountancy*, 1, 1-9.
- Stanwick, P., & Stanwick, S. (2006). Corporate environmental disclosures: A longitudinal study of Japanese firms. *Journal of American Academy of Business*, 9, 1-7.
- Suttipun, M. (2011). Disclosure of Environmental Information on Annual Reports of Listed Companies in the Stock Exchange of Thailand., PhD thesis. University of Newcastle. Faculty of Business and Law, Newcastle Business School. http://hdl.handle.net/1959.13/930391
- Suttipun, M., & Stanton, P. (2012). Determinants of Environmental Disclosure in Thai Corporate Annual Reports. *International Journal of Accounting and Financial Reporting*, 2, 99-115. http://dx.doi.org/10.5296/ijafr.v2i1.1458
- Tilt, C. A. (2001a). The content and disclosure of Australian corporate environmental policies. *Accounting, Auditing & Accountability Journal*, 14, 190-212. http://dx.doi.org/10.1108/09513570110389314
- Tilt, C. A. (2001b). Environmental disclosure by Australian companies: what is happening outside the annual report? paper presented to the Asia Pacific Interdisciplinary Research in Accounting (APIRA), Adelaide South Australia.
- Wiseman, J. (1982). An evaluation of environmental disclosures made in corporate annual reports. *Accounting, Organizations and Society*, 7, 53-63. http://dx.doi.org/10.1016/0361-3682(82)90025-3
- Zunker, T. (2011). Determinants of the Voluntary Disclosure of Employee Information in Annual Reports: An Application of Stakeholder Theory. PhD thesis, Bond University.