

# OWNERSHIP STRUCTURE AND ENVIRONMENTAL DISCLOSURE IN MENA EMERGING COUNTRIES

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## Abstract

This study examines the association of ownership structure with the environmental disclosure of listed companies in the Middle Eastern and North African (MENA) emerging markets. A self-constructed environmental disclosure score based on the framework of the Global Reporting Initiative (GRI) was used. Investigating a sample of 347 annual reports, we calculate the score for listed companies pertaining to 10 MENA countries. Our results revealed that the majority of companies in our study provide a separate section for environmental issues on their annual reports. In addition, multivariate analysis shows that there is a negative association between family ownership and environmental disclosures. However, the presence of the government ownership is likely to improve corporate environmental reporting practice. This paper is of value in that it enlarges the scope of previous studies on environmental disclosure through its inclusion of other regions of the world.

**Keywords:** Environmental Disclosure; MENA Countries; Family-Ownership; Government Ownership

## 1. INTRODUCTION

The past two decades have witnessed an increasing global concern for the environment. This concern emerges mainly from the threat caused by the harmful effects and environmental problems resulting from the impact of economic growth.

As a result of the consideration given to the social responsibility and compliance with laws and regulations, various steps have been taken toward the protection of the environment from pollution and the conservation of natural resources.

In this regard, the role of environmental accounting and reporting has emerged as a result of a concern for the relationship between the organization and the natural environment. Companies are paying more attention to corporate environmental responsibility and environmental disclosures. Managers are confronted with environmental issues in their decisions, not only to take into account ethics and social values that should be promoted by companies, but also to ensure sustainable economic success.

Studies on corporate environmental reporting have proliferated and a growing body of studies has investigated factors that impact the extent of firm's environmental disclosure in developed countries (e.g. Coween et al., 1987; Patten 1992 in the United States; Huse et al., 1997, and Cormier and Magnan, 2004 in Europe). More recently, the literature has given growing attention to exploring environmental disclosure in Asian emerging markets over the last few years (Wong et al., 2001; Xiao et al., 2005 in Hong Kong; Haniffa and Cooke, 2005 in Malaysia; Zengal et al., 2010 in China). However, a few studies have focused on corporate environmental disclosure in Arab countries (Al-Bastiki 1997 in Bahrain; Abu-Baker 2000 in Jordan; Naser et al., 2006 in Qatar; Rizk et al., 2008 in Egypt).

The literature is relatively silent regarding corporate environmental reporting in Middle Eastern

and North African (henceforth MENA) emerging markets. Moreover, in this context, we observe a large number of firms operating in polluting sectors, such as petrochemical, energy, mining, etc. These companies have an important role in national economies but can also have significant environmental impacts.

MENA countries are taking major steps in enhancing the private sector's role in the economy, developing foreign business and economic liberation. However, unlike developed countries where ownership is widely spread among different shareholders, ownership is highly concentrated in the MENA companies. The concentration of ownership is characterized by the presence of "Family and Government Ownership" as specific features in the MENA emerging markets. Accordingly, this study examines whether ownership structure is associated with the environmental disclosure practices and influence the environmental reporting decision.

This paper is of value in that it enlarges the scope of previous studies through its inclusion of other regions of the world. It contributes to the environmental accounting literature by bringing insights from the MENA region, where little is known about its environmental accounting features, despite the fact that, this region forms an important part of the current and future global economy. Moreover, while previous studies test for company characteristics such as company size, leverage and profitability, we try in our research, to investigate specific variables to the MENA region, namely family ownership and state ownership. Finally, this study helps to explain MENA corporate behavior in terms of environmental disclosure and has significant practical implications for a number of decision makers especially regulators in the MENA region.

Using a sample of 143 listed companies from MENA emerging market countries. Our results indicate that environmental disclosure levels in

annual reports are quite low. The environmental disclosures were found to be general statements indicating company support for environmental protection. In addition, multivariate analysis shows that family ownership presents a significant negative association with the environmental disclosure levels. However, the presence of government ownership improves corporate environmental reporting practice.

The remainder of this paper is organized as follows: Section 2 presents prior literature and develops the hypotheses for the study. The research design is described in Section 3. In Section 4, we present the results and discussion. Section 5 concludes this paper.

## 2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Corporate social responsibility reporting, of which environmental reporting is a part, is not a new disclosure practice. In addition, environmental reporting within corporate annual reports has attracted increased interest since the early 1990s. Unlike other aspects of corporate social responsibility, environmental reporting is a relatively recent feature of corporate financial reporting. A considerable body of literature from a wide range of theoretical backgrounds concluded that environmental disclosure is an important disclosure practice employed by companies (Gray *et al.*, 2001) and is influenced by a variety of explanatory factors. Prior research has been primarily concerned with the extent and nature of corporate environmental reporting within annual reports and its trend over time, as well as the effect of certain corporate characteristics on the environmental information practices. However, the environmental disclosure of firms is significantly influenced by the cultural environment in which they operate (Gray, 1988; Radebaugh and Gray, 1997). The cultural environment in MENA region do not encourage voluntary disclosure of environmental information. Middle Eastern societies are characterized by a large hierarchical authority, collectivism and low future orientation (Hofstede, 1984; Beard and Al-Rai, 1999; Kabasakal and Bodur, 2002). These factors may suggest that people in these countries are relatively more conservative and, based on statutory audits, have less professional judgment in relation to their counterparts in developed countries, indicating a lower level of voluntary disclosure (eg. Hadded *et al.*, 2009, Gray *et al.*, 1995; Zarsekei, 1996; Askary, 2006). Moreover, the disclosure orientation of firms in these countries is also greatly influenced by the form of their ownership (Ahmed, 2007; Lakhel *et al.*, 2011).

Privatization in the MENA region has been progressing more slowly than other developing countries in Latin America and Asia. This might be due to the fact that privatization in Asia is a relatively old phenomenon compared to the MENA region where privatization on a large scale is relatively recent. Hence, the progress of privatization to date is not yet considered by investors as a credible signal of government commitment, especially in institutionally weaker environments, such as the MENA region. (Ben Naceur *et al.*, 2009).

More specifically, ownership in MENA companies is strongly concentrated with a

significant proportion held by the state and families (Omran, 2007). Also family-controlled firms and state-owned enterprises both play a crucial role in MENA economies. Kuwait, Egypt and Qatar show the highest institutional investor participation in the region, which is estimated to be closer to 30% (Koldertsova, 2012). This figure is still remarkable when compared with developed and even some emerging markets (e.g. China).

Using a sample of more than 300 representatives MENA firms (Oman, Egypt, Jordan and Tunisia), Omran (2008) demonstrated that Egypt remains the country with the largest presence of government ownership at 34%. On the other hand, Jordan and Oman emerge as the countries with the highest private ownership. These countries have more than 80% of firm ownership in the hands of private institutions and individuals. Tunisia comes is as the country with the largest foreign participation in firm ownership at 18% - surely facilitated by the free trade agreement with the EU - and also appears to be the one with the least participation by local individuals. The low foreign ownership in MENA emerging markets is attributable to the existing investment restrictions in some markets despite the privatization process over the past decade. For example, Tadawul, the biggest market in the region, has the highest investment restrictions: non-GCC nationals can currently invest through swaps only. In the UAE, foreign investment is limited to 49% of equity and in Qatar to 25% (Koldertsova, 2012).

Indeed, Al-Moatez and Lakhel (2008), investigate a sample of 48 Saudi companies including manufacturing firms with a percentage of 47.9%, followed by the service industry with 25%. Descriptive statistics show that the Saudi firms are mostly held by families (the mean percentage of family ownership in Saudi Arabia is 22.2%) and the government (state ownership is present on average at about 10%).

Finally, family-owned companies are the dominant characteristic of the MENA capital markets. A single family may be among the top five shareholders and have controlling stakes in a number of companies, whether directly or indirectly (Ben Othman and Zéghal, 2010).

Agency theory (Jensen and Meckling, 1976; Watts, 1977) suggests that where there is a separation of ownership and control of a firm, the potential for agency costs arises because of conflicts of interest between contracting parties. Fama and Jensen (1983) propose that where share ownership is widely held, the potential for conflicts between principal and agent is greater than in more closely held companies. As a result, information disclosure is likely to be greater in widely held firms.

Empirical results of the relationship between ownership concentration and corporate disclosure are mixed. Using a sample of Malaysian listed companies, Hossain *et al.*, (1994) found a negative relationship, whereas Haniffa and Cooke (2002) noted a positive relationship.

Family-owned companies prevail on the MENA capital markets and the predominance of family members or close relatives suggests an important role in the executive position within the company (Miteva, 2007). These stakeholders can use their power by requesting information directly from company management.

Therefore, the hypothesis is as follows:

**H1:** There is a negative association between family ownership and environmental disclosure.

Furthermore, government ownership is a main feature in the MENA region. The government is expected to show that it acts for the benefit of society. A company with high government ownership is expected to observe environmental protection principals in order to be seen as a good example for other companies totally owned by the private sector. Naser et al., (2006) reported a positive but insignificant association between the extent of environmental disclosure and government ownership in Qatar.

Accordingly, we hypothesize:

**H2:** Firms with government ownership are more likely to disclose environmental information.

### 3. METHODOLOGY

#### 3.1. Data and Sample Selection

We collected listed companies from the MENA region that operate in polluting sectors. These companies were selected because they are more sensitive towards environmental issues and they normally invest much more in environment protection than those from other industries (Salomone et al., 2001; Moneva et al., 2000; Gamble et al., 1995; Barth et al., 1994). KPMG (2002) found that sectors showing the most activity in environmental reporting were those in high risk areas such as chemicals, pharmaceuticals and automotive. Based on prior research. The polluting sectors selected in this study are: pharmaceutical (Adams et al., 2000), energy (Tilt, 2001; Anderson et al., 1998; Barth et al., 1994), chemical (Adams et al., 2000; Anderson et al., 1998; Barth et al., 1994), mining (Anderson et al., 1998), transportation (Bartoloméo, 2000; Barth et al., 1994), and food (Barth et al., 1994).

Disclosure literature has found that annual reports are considered to be the most important means for the company to disseminate information to the public (Hines, 1982). Therefore, the companies' annual reports are examined in this study to decide whether environmental information is disclosed by the company. These reports were collected through both the web sites of financial markets in the MENA region and the web sites of these companies over the 2010-2012 periods.

Additionally, following Doidge et al., (2007), we eliminate Lebanon, for which only three companies operating in the selected polluting sectors are listed. This left us with a final sample of 143 companies (347 observations) from ten emerging markets and six sectors.

#### 3.2. Environmental Disclosure Measurement: SCORE

Researchers have extensively used disclosure indices to evaluate, compare and explain differences in the amount of information disclosed in corporate annual reports. Among them, Banghoj et al (2008) and Hossain et al (2006) who examine the economic consequences of corporate voluntary disclosure.

Similar to prior studies, content analysis is used to measure a firm's environmental disclosure across different countries in the annual reports. For example, Gray et al 1995b; Wallace and Naser, 1995; Naser, 1998; and Abu Baker and Naser, 2000, defined such a method as a technique employed to

measure objectively, systematically, and qualitatively the content of communication. Krippendorff (2004) believes that content analysis ensures replicability and appropriate inference about data in its contexts.

Although companies tend to make public disclosure in the annual reports and other channels of distribution such as advertising and promotional leaflets, in developing countries, the annual report is viewed as the main channel of disclosure. Drawing from the majority of studies used to assess corporate environmental disclosure practices (e.g Ernst and Ernst, 1978; Beresford and Cowen, 1979; Krippendorff, 1980; Guthrie, 1983; Guthrie and Mathews, 1985; Guthrie and Parker, 1989, 1990; Zeghal and Ahmed, 1990; Roberts, 1992; Kirkman and Hope, 1992; Gray, Kouhy, and Lavers, 1995a, 1995b; Abu Baker and Naser, 2000), this study utilised the annual report as a principal focus of the firm's reporting and thus defined the bounds of the analysis. Marston and Shrives (1991) argue that the annual report is the "main disclosure vehicle," and it is the most comprehensive financial report available to the public.

A further requirement from a content analyst is the selection and development of categories into which content units can be classified. Categorical distinctions cluster units "by their membership in a class or category - by their having something in common". In the present study, the categories and items were drawn from the Environmental Indicators developed within the framework of the Global Reporting Initiative (GRI) (the last version entitled "G3.1"). The GRI's mission is to 'develop and disseminate globally applicable Sustainability Reporting Guidelines. The voluntary nature of the Guidelines means that organisations have flexibility in deciding what non-financial information to disclose. The Guidelines are designed to be suitable for reporting organisations with varying degrees of complexity. Acceptance of the GRI as a guide for sustainability reporting is now quite widespread. This list is used by many researchers as Plumlee et al (2009); Moroney et al (2009) and Rupley et al (2011). Through comparison of the items in the GRI, as well as from the investigation of annual reports of the sample, a list of items was developed, which is closer to the context of emerging MENA markets (see Appendix A). The GRI seeks to elevate sustainability reporting to the same level of rigour, comparability, credibility and verifiability expected of financial reporting (GRI, 2002:1).

Some previous studies measured corporate environmental disclosure on the dichotomous basis of disclosure/non-disclosure (Lynn, 1992). This method, however, fails to indicate the degree or extent of the reporting entity's involvement in corporate environmental responsibility reporting. According to Cormier et al (2005), the approach to scoring items is as follows:

- A score of (0) is awarded if an item is not disclosed.
- A score of (1) is awarded if an item is generally described.
- A score of (2) is awarded if an item is described in detail (not quantitative)
- A score of (3) is awarded if an item is described quantitatively (numerical)

The score for each company  $j$  is calculated as follows:

$$SCORE_{it} = \frac{\sum_{j=1}^N X_{ij}}{N}$$

Where, N is the total number of items expected to be disclosed for firm *i*.

The following steps were adopted in this study, as suggested by Gray et al. (1995) and adopted by Abu Baker and Naser (2000):

1. Annual reports were read carefully, individually and relevant data were collected manually.

2. Each annual report was allocated a scoring sheet and the resulting data on the scoring sheets was entered into a database. The sheets were retained for further query and replication.

3. The accumulated data was then transferred to the relevant computer program for further data analysis.

### 3.3. Ownership structure variable

$$SCORE = \alpha_0 + \alpha_1 \text{FAM-OWN}_i + \alpha_2 \text{GOV-OWN}_i + \alpha_3 \text{SIZE}_i + \alpha_4 \text{LEV}_i + \alpha_5 \text{PROF}_i + e_i \quad \text{Model (1)}$$

$$SCORE = \alpha_0 + \alpha_1 \text{FAM-OWN}_i + \alpha_2 \text{GOV-OWN}_i + \alpha_3 \text{SIZE}_i + \alpha_4 \text{LEV}_i + \alpha_5 \text{PROF}_i + \text{COUNTRY DUMMIES} + e_i \quad \text{Model (2)}$$

$$SCORE = \alpha_0 + \alpha_1 \text{FAM-OWN}_i + \alpha_2 \text{GOV-OWN}_i + \alpha_3 \text{SIZE}_i + \alpha_4 \text{LEV}_i + \alpha_5 \text{PROF}_i + \text{INDUSTRY DUMMIES} + e_i \quad \text{Model (3)}$$

Where,

SCORE: the environmental disclosure rating of firm *i*.

FAM-OWN: family ownership of firm *i*, measured by the percentage of capital held by family.

GOV-OWN: government ownership of firm *i*, measured by the percentage of capital held by the state.

SIZE: size of firm *i*, measured by the "log total assets".

In the annual reports of MENA companies, there is information about the proportion of shares owned by dominant shareholders. The ownership variable in this study was calculated initially by adding together the proportions of equity owned by family members for family ownership and the firm's equity owned by state for government ownership.

### 3.4. Regression model

A linear multiple regression analysis was used to test the association between the dependent variable of environmental disclosure and the independent variable of ownership structure. In addition, a number of control variables are included in the model. These control variables have been commonly used in prior disclosure research studies (Cooke, 1991; Hossain et al., 1995; Zarzeski, 1996; etc.).

LEV<sub>*i*</sub>: leverage of firm *i*, measured by "debt to assets ratio".

PROF: profitability of firm *i*. we use the ROA as a measure of the profitability.

## 4. RESULTS

### 4.1. Descriptive Statistics

**Table 1.** Distribution of Environmental Disclosure Score for MENA Emerging Markets

Country	N	Mean	St .dev	Min	Max
Bahrain	8	0.026	0.063	0	0.182
Egypt	23	0.166	0.173	0	0.451
Jordan	33	0.146	0.106	0	0.363
Kuwait	26	0.051	0.061	0	0.161
Morocco	17	0.138	0.176	0	0.647
Oman	43	0.032	0.048	0	0.193
Qatar	15	0.130	0.106	0	0.258
SaudiArabia	103	0.132	0.163	0	0.700
Tunisia	21	0.043	0.060	0	0.240
UAE	58	0.172	0.173	0	0.758

Table 1 exhibits scores of environmental disclosure above 0.15 for Egypt, Morocco, the UAE, Qatar, Jordan and Saudi Arabia, whereas, scores below 0.1 are obtained in Bahrain, Tunisia, Kuwait and Oman. This analysis indicates also that environmental information provided in annual reports is relatively low for all countries investigated. This result may be explained by the fact that environmental disclosure in these countries is still done as voluntary communication. Moreover, Middle Eastern societies are characterized by a large hierarchical authority, collectivism and low future orientation (Hofstede, 1984; Beard and Al-Rai, 1999; Kabasakal and Bodur, 2002). These factors may suggest that people in these countries are relatively more secretive, conservative and, based on statutory audits, have less professional judgment in relation

to their counterparts in developed countries, indicating a lower level of voluntary disclosure (eg. Hadded et al., 2009, Gray et al., 1995; Zarseki, 1996; Askary, 2006). These findings are in line with results obtained in previous studies and suggest that developed countries provide more environmental information than developing countries (Yossof et al., 2005).

### 4.2. Multivariate analysis

Before we run the multiple regressions based on panel data, we perform several specification tests in order to ensure that the regression specification fits the data. We address the tests for Multi-collinearity,

the heteroscedasticity and the serial correlation of error terms.

In our study, all VIF factors are less than 5 indicating that there is no serious problem of collinearity (mean 1.07). The next step is to examine the potential heteroscedasticity problem using the *hettest* stata command after conducting an OLS regression analysis. This command provides the Breusch-Pagan/ Cook-Weisberg test under the null hypothesis that the variance of residuals is homogenous. The Breusch-Pagan heteroscedasticity test is significant for our model indicating the presence of a heteroscedasticity problem.

The contemporaneous and the serial correlation among panel data is another issue that

we should deal with. According to Baltagi (2005), contemporaneous correlation is a problem in macro panels with long time series (over 20-30 years). This is not much of a problem in micro panels (a few years and a large number of cases) like the present study.

To sum off, in order to correct for heteroscedasticity, we use the appropriate statistical treatment by estimating models using the method of Generalized Least Squares (GLS). GLS technique has the advantage of the correction for heteroscedasticity and serial correlations and produces efficient and consistent parameter estimates.

**Table 2.** Regression of environmental score on test and control variables based on the sample of MENA companies

<i>Dependent variable : SCORE</i>			
<i>Independent variables</i>	<i>Panel A: Model 1</i>	<i>Panel B: Model 2</i>	<i>Panel C: Model 2</i>
	<i>Coefficient estimate</i>	<i>Coefficient estimate</i>	<i>Coefficient estimate</i>
	<i>(p-value)</i>	<i>(p-value)</i>	<i>(p-value)</i>
INTERCEPT	-0.197 (0.000)***	-0.064 (0.109)	-0.093 (0.000)***
FAM-OWN	-0.039 (0.047)**	-0.043 (0.011)**	-0.094 (0.000)***
GOV-OWN	0.060 (0.000)***	0.064 (0.000)***	0.039 (0.042)**
SIZE	0.035 (0.000)***	0.016 (0.000)***	0.023 (0.000)***
LEV	-0.008 (0.000)***	0.028 (0.027)**	0.011 (0.245)
PROF	0.001 (0.837)	0.001 (0.576)	0.000 (0.195)
UAE		0.062 (0.000)***	
Qatar		0.050 (0.022)**	
kuwait		-0.059 (0.000)***	
Bahrain		-0.067 (0.000)***	
Oman		-0.055 (0.000)***	
Tunisia		-0.045 (0.000)***	
Egypt		0.051 (0.092)*	
Morocco		0.058 (0.020)***	
Jordan		0.052 (0.000)***	
Energy			0.037 (0.000)***
Pharmaceutical			-0.046 (0.000)***
Mining			0.008 (0.194)
Transportation			-0.011 (0.502)
Food			-0.063 (0.000)***
N	143	143	143
Chi 2	228.83	437.20	450.34
Prob> Chi 2	(0.000)***	(0.000)***	(0.000)***

**Notes:** SCORE: environmental disclosure rating of firm *i*; FAM-OWN family ownership; GOV-OWN: government ownership; SIZE: firm size = log total assets; LEV: leverage = debt to assets ratio; PROF: profitability = ROA. *N* is the number of MENA companies. In model 2, the Arabia Saudi was considered as a country reference due to the large number of Saudi companies. In Model 3, the chemical industry was considered as a sector reference due to the large number of chemical firms.

\*\*\*, \*\*, \* Indicate two-tailed statistical significance at 1%, 5% and 10% levels.

Table 2 presents regression results of the three regression models (Panels A, B and C) we tested over the sample of MENA companies.

The three regression models are globally significant. The Chi 2 test statistic is significant at a level of 1% for Model 1, Model 2 and Model 3.

Consistent with our predictions, Panels A, B and C exhibit a substantial influence of the family ownership on the environmental disclosure for MENA emerging market companies. The family ownership variable shows a negative and significant coefficient. This indicates that while concentrated

ownership in general reduces disclosure, that effect is particularly pronounced when the firm is family-controlled. Gray's (1988) argues that where a firm's shares are held by family-controlled firms, there is a preference for confidentiality and restriction of disclosure of information only to those who are closely involved with its management and financing. Thus, the findings of this study support our first hypothesis that there is a negative association between family ownership and environmental disclosures.

In addition, as shown in table 2, the coefficients for government ownership were positive and highly significant ( $p < 0.001$  for Model 1 and Model 2). These results are consistent with Hypothesis 2 indicating that the presence of the state is likely to improve corporate environmental reporting practice. This result can be explained by the fact that government acts more for the protection of environment and the benefit of society, in order to be seen as a good example for other companies totally owned by the private sector.

Moreover, consistent with the prior researches, the coefficient of the variable size is positive and statistically significant at a level of 1 %, which indicate that company size affects positively and substantially the level of environmental disclosure for the MENA emerging markets. However, we find no substantial influence between environmental reporting and profitability.

Consistent with descriptive statistics, Panel B outlines that companies from Egypt, Jordan, Morocco and UAE have higher environmental scores than those from Saudi Arabia. Furthermore, Panel C indicates that environmental scores are lower in MENA companies from pharmaceutical and food industries than chemical companies. This finding can be explained by the fact that, these companies are less sensitive towards environmental issues and they normally communicate less environmental information than those from other industries.

## 5. CONCLUSIONS

The objective of this study is to examine the association between environmental disclosures and ownership structure of MENA companies. In this regard, we test the impact of "State ownership" and "Family ownership" on corporate environmental disclosure practices. We collected 147 annual reports of companies operating in polluting sectors from seven MENA countries over the 2010-2012 period (347 observations).

Through the application of a self-constructed environmental disclosure score based on the framework of the Global Reporting Initiative (GRI) to their annual reports, we calculated the score for each MENA company. The results revealed that the majority of companies in our study provides a separate section for environmental issues on their annual reports. However, disclosure is found to be general statements indicating company support for environmental protection and the environmental scores are quite low. This result may be explained, as we have already mentioned, by the fact that environmental disclosure in these countries is still performed through voluntary communication.

In addition, the results of this study environmental reporting behavior by MENA listed companies provide support for the agency theory-based hypothesis that there is a positive association

between wider ownership and the extend of voluntary disclosure. The empirical findings also highlight the importance of the contextual characteristics of the MENA region. The prevalence of family-ownership is likely to be associated with lower levels of corporate disclosure.

This article is subject to the following limitations. First, regarding internal validity, the list of items on environmental activities used to compute the environmental disclosure index might not be exhaustive. Furthermore, the sample in this study was taken from polluting sectors. Consequently, the results may have limited external validity beyond the industry settings of the study.

Despite these limitations, this study is potentially useful for reformers, policy makers and regulators in less developed countries allowing market regulators to better understand disclosures in their countries.

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## APPENDIX

### Appendix A. Environmental Disclosure items List

#### Aspect: Materials

- Consumption of raw materials
- Recycling

#### Aspect: Energy

- Direct energy consumption by primary energysource.
- Indirect energy consumption by primary source.
- Energy saved due to conservation and efficiencyimprovements.
- Initiatives to provide energy-efficient orrenewable energy-based products and service
- Initiatives to reduce energy consumption

#### Aspect: Water

- Consumption of water (total water consumption)
- Water sources significantly affected by withdrawal of water.
- Total volume of water recycled and reused

#### Aspect: Biodiversity

- Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity
- Description of significant impacts of activities, products, and services on biodiversity
- Habitats protected or restored.
- Strategies, current actions, and future plans for managing impacts on biodiversity and environment.
- Number of IUCN Red List species in areas affected by operations,

#### Aspect: Emissions, Effluents, and Waste

- Total direct and indirect greenhouse gasemissions
- Other relevant indirect greenhouse gasemissions by weight.
- Initiatives to reduce greenhouse gas emissions
- Emissions of ozone-depleting substances by weight.
- NOx, SOx, and other significant air emissions
- Reduction of water, air and desert discharges
- Reduction of total weight of waste
- Total number and volume of significant spills.
- Secure management of waste
- 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.

#### Aspect: Products and Services

- Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation.
- Percentage of products sold and their packaging materials that are reclaimed by category.

#### Aspect: Compliance

- Monetary value of significant for noncompliance with environmental laws and regulations.

#### Aspect: Transport

- Reduction environmental impacts of transporting products and other goods and materials used for the organization's operations, and transporting members of the workforce.

#### Aspect: Overall

- Total environmental protection expenditures and investments by type.
- Develop structures with respect to the environment
- Pollution control due to the company's business
- Compliance of the company with the standards for pollution.