EXTENT OF ENVIRONMENTAL DISCLOSURES -A CASE OF SENSITIVE INDUSTRIES IN SINGAPORE AND MALAYSIA

Payal Harshad Bhatt*, Jayalakshmy Ramachandran**

Abstract

The purpose of this comparative study is to examine the extent to which information is available to stakeholders on the environmental issues from the annual reports of listed companies in Singapore and Malaysia focusing on Sectors (Construction and manufacturing) that are environmentally sensitive. Many studies in the past had tried to capture the relationship between environmental reporting against financial performances, management motives and effects on share prices of the companies operating in respective countries. This study is striving to capture the extent of information on environmental aspects available to stakeholders in Malaysia and Singapore focusing only on Sectors (Construction and manufacturing) that are environmentally sensitive. The researchers used cross sectional content analysis based on the annual reports of companies listed in the Construction and manufacturing/ industrial sector for the year 2007. The companies were selected from Stock Exchange of Singapore (SGX) and Bursa Malaysia (KLSE). A framework developed by Adams & Frost (2007) identified seven parameters to perform content analysis and observed performance related disclosure among organizations in Australia against organizations in the U.K. This study also used similar framework with addition of just one more parameter. It was found that the extent of information disclosed by organizations in Singapore for both construction and Manufacturing /Industrial sector is lower compared to organizations in Malaysia in both the sectors. This alerts the analysts that while talking about green accounting, one could walk the talk better by disclosing more information and making environmental issues or concerns more transparent.

Keywords: stakeholders, annual reports, Malaysia, Singapore

**Associate Lecturer Accounting, School of Business, Monash University, Sunway campus, Jalan Lagoon Selatan, 46150 Bandar Sunway, Selangor, Malaysia*
Tel: + 6-03- 55146293
Email: payal.bhatt@buseco.monash.edu.my
*** Lecturer in Accounting, School of Business, Monash University, Sunway campus, Jalan Lagoon Selatan, 46150 Bandar Sunway, Selangor, Malaysia*
Tel: + 6-03- 55144935
E.mail: jayalakshmy@buseco.monash.edu.my

Introduction

The publication of Rachel Carson's *"The Silent Spring"* in 1962, triggered greater concerns on issues related to environmental protection among the general public and businesses across the globe. The heightened awareness and concern over environmental protection especially in the U.S. and Europe were the direct result of this emerging issue. In late 1980s, environmental concern and awareness had multiple impacts in many parts of the world. Green political parties attracted more support that is public, environmental activists groups enlarged their membership base, green and ethical companies began to appeal more to the investing community (Peattie, 1995). This created a new environmental perspective and thinking among the business communities in many parts of the world by 1990s. These new guiding business philosophies crystallized into different environment-friendly practices, prominently in the area of environmental management and environmental accounting.

Voluntary environmental reporting and disclosure practices are becoming standard norms in companies around the world. Major stakeholder groups such as the governments, non-governmental organizations, financial institutions, and investors are emphasizing companies to engage in environmental reporting and disclosure practices. Companies in the Southeast Asian region are also being pressured to increase environmental disclosure practices. However, organizations involved in environmentally vulnerable industries like chemical processing, construction and manufacturing are worst affected due to their suspected environmental degradation performances.

Review of literature

Adams (2002) notes that very few studies on Environmental accounting and disclosure practices

have been undertaken in developing economies. Environmental accounting and disclosure practices are relatively a new concept for developing countries in South East Asia (SEA). A number of SEA countries are yet to formulate a sustainable development strategy and action plan while others are still establishing the basic legal framework for the environmental protection and management. For example, Singapore has a Green Plan; Thailand has a National Economic and Social Development Plan and Malaysia has the Vision 2020 (Shafii *et al*, 2005).

Some studies have documented the impact of corporate characteristics on social and environmental reporting (Deegan and Gordon, 1996; Gray *et.al*., 1995). Yusoff *et.al*., (2006) captured the management motives behind environmental disclosures and did not document the extent to which the information is available or disclosed. Smith *et al., (2007)* examined whether more disclosures on environment led to better financial performance. Thus the study has only focussed on quantity of disclosures rather than quality of disclosures. In this study the researchers intend to capture the factors influencing evironmental discosures which is likely to close the gaps in study conducted by Smith et. al.

Other related studies analysed in this paper had witnessed most research on environmental performance sonfined to a single country (Teoh and Thong, 1984; Andrews *et al*., 1989; Williams, 1999; Thompson 2002; Smith *et.al., 2007*). Since very little eidence was gathered on comparitive studies, this study is ambitious to do a comparitive study between a developed country, and a developing country, namely Malaysia and Singapore. However the research intends to focus only on sectors (Construction and manufacturing) that are environmentally sensitive. Envronmentally sensitive industries are available in the North American Industry Classification System (NAICS) list. In Malaysia, Environmentally sensitive industries are involved in operations such as mining, chemicals, oil and gas, construction, properties and manufacturing (Department of Environment Malaysia, 2002). In order to gather a decent sample, only two comparitive industries that could be taken included construction and manufacturing. Frost and Wilmshurst (2000) believe that the disclosure level would be higher for companies considered the prime suspects of environmental damage. This was contradicted by Yusoff et.al (2006). However, the author failed to contribute any further and thus his work seemed to be inconclusive with respect to evironmental damage.

There are studies capturing the disclosure level of companies in Malaysia. Williams (1999), Thompson (2002), and Yusoff *et al*., (2006) claimed that the environmental reporting was primitive in Malaysia. A number of other studies (Blacconiere and Patten, 1994; Murray *et al*., 2006; Smith, 2007) investigated the association between environmental disclosure and financial performance. In contrast to the other studies on environmental reporting and firm's performance in Thailand, the researchers documented mixed views (Connelly, 2004). Yusoff *et al.,* (2006) reported that there is no link between environmental disclosure and economic benefit. Extended studies on environmental disclosures have also linked its effect on share price fluctuations (Blacconiere and Patten, 1994). Studies on environmental disclosure comparing western experience with companies in Singapore revealed that, organizations in Singapore have a low commitment to environmental disclosure (Perry & Sheng, 1999).

Adams & Frost (2007) looked into the extent of environmental information or environmental performance available to the stakeholders of the organizations. The authors primarily looked into the annual reports for content analysis. The use of annual reports is considered more desirable as the primary disclosures through the statutory and mandatory reports are consistent and widely accepted. There are many other studies which used annual reports to perform content analysis to identify environmental disclosure practices (Gray *et al.,* 1995; Smith *et al.,* 2007; Ernst & Ernst, 1978, Ferreira, 2004). Sónia Monteiro and Beatriz Aibar-Guzmán (2009) conducted an empirical study to assess the presence of the environmental disclosures in annual reports of large Portuguese companies using content analysis. The findings suggested that the extent of environmental disclosure and the the number of Portuguese companies that disclose environmental information had increased. The authors added that firm size and the fact that a company is listed on the stock market are positively related to the extent of environmental disclosures. Yet another study by Farid, Azlan and Yusserrie (2009) also revealed similar results for companies listed in Dhaka stock exchange and Chittagong stock exchange of Bangladesh.

Geng & Jiao (2002) studied the environmental disclosure of 30 listed companies in various industries in China. These companies contribute to higher environmental impact in China. The authors documented that many listed companies disclosed general environmental information in their prospectus and few of them disclosed an Environmental Expenditure budget. Another study by Xiao & Li (2002) documented empirical evidence that companies in China under disclosed environmental issues which were incomplete and not comparable as there were no accounting standards in place for such disclosures. Literature on environmental disclosure practices and the extent to which stakeholders have sufficient information on such practices is limited in SEA countries. In wake of the above where, there are no sectors wise comparative evaluations on the extent of environmental disclosures, this paper attempts to analyze the same among companies listed in the Construction and Manufacturing/ Industrial sector in Singapore and Malaysia.

Objectives of the study

This study aims to achieve the following:

- To identify to what extent companies listed in the Construction and manufacturing/ industrial sector in Singapore and Malaysia involve in environmental disclosure practices. (extent to which organizations are disclosing at a broader range and at least one specific environmental issue)
- To demonstrate comparative evaluations sector wise (Construction and manufacturing/ industries) on environmental disclosures practices in Singapore and Malaysia.
- To identify the differences in the level of environmental disclosures and make recommendations based on the analysis.

Methodology of the study

This study conducts a cross sectional content analysis based on the annual reports of companies listed in the Construction and manufacturing/ industrial sector for the year 2007. The companies are selected from Stock Exchange of Singapore (SGX) and Bursa Malaysia (KLSE). Annual reports of 30 Construction and 100 manufacturing/ industrial companies listed in the main board of KLSE and SGX main board and CATALIST - NS are analyzed.

Initial analysis sought to identify all corporate social and environment related disclosures, which were further scrutinized to ascertain extent of disclosures. Companies were selected as samples using random sampling method. In construction sector out of 46 companies listed in KLSE and 33 companies listed in Singapore, annual reports of 30 companies were selected. At the same time in manufacturing/ Industrial sector out of 146 companies listed in KLSE and 165 companies listed in SGX, annual reports of 100 companies were chosen as samples.

A framework developed by Adams & Frost (2007) had identified seven parameters to perform a content analysis and observe performance related disclosure among organizations in Australia against organizations in the U.K. (Details of the framework are given in Appendix A). The current study uses a similar framework with an addition of a new parameter. Cross sectional content analysis is used for the purpose. This framework is useful in analyzing the extent to which organizations disclose environmental information, which most of the other studies fail to capture.

The Eight parameters used in the framework are as follows:

(i) Commitment to environmental performance measurement or improvement
(ii) Quantified measures of performance
(iii) Identification of specified targets
(iv) Performance against targets
(v) Future performance targets
(vi) Acknowledgement of measures used within a management system
(vii) Identification of social and environmental performance factors affecting decision making or change processes.

Additional Parameter

(viii) Commitment to environmental protection in company's Vision/ Mission statements or as part of core values

ANALYSIS OF ENVIRORNMENTAL REPORTING PRACTICES

The annual reports of various companies listed in Malysian stock exchange as well as Singapore stock exchange were analysed to perform content analysis for the eight parameters identified earlier. A summary of the results from the analysis is provided in Table 1 &2.

Table 1. Results on environmental disclosure practices- Construction Sector

Number of companies providing performance related disclosures								
Country & Parameter	Commitment to performance	Quantified measures	Identification of targets	Performance against targets	Future performance targets	Measures used in management system	Performance factors influencing decision making	Commitment Vision/ Mission statements or as part of core values
Malaysia (30)	19 (63%)	5(17%)	6(20%)	6(20%)	6(20%)	7(23%)	5(17%)	7 (23%)
Singapore (30)	9 (30%)	2((7%)	3(10%)	3(10%)	3(10%)	3(10%)	2(7%)	7(20%)

Table 2. Results on environmental disclosure practices - Manufacturing/ Industrial Sector

Number of companies providing performance related disclosures								
Country & Parameter	Commitment to performance	Quantified measures	Identification of targets	Performance against targets	Future performance targets	Measures used in management system	Performance factors influencing decision making	Commitment Vision/ Mission statements or as part of core values
Malaysia (100)	80 (80%)	25 (25%)	23 (23%)	22 (22%)	20 (20%)	18 (18%)	16 (16%)	25 (25%)
Singapore (100)	50 (50%)	16(16%)	13 (13%)	11(11%)	9(9%)	9 (9%)	9 (9%)	16(16%)

Complied by the Author

Findings and discussion based on content analysis

1. Commitment to environmental performance measurement or improvement

This parameter analyzes the general commitment of companies on environmental disclosure. Financial data was not used in analyzing the sample. In this part, the researcher tried to identify the commitment of the Board towards disclosure of social and environmental issues. For Example in case of *Yangzijiang Shipbuilding (Holdings) Ltd listed in the SGX, the following was one of the disclosure made* "Other than delivering an impressive set of financial results to shareholders, we also demonstrated responsible corporate citizenship in the community where we operate. For example we have been reducing greenhouse gas emissions and other pollutants, recycling water, using renewable energy, implementing workplace safety measures and have provided extensively for workforce development. As a major national enterprise, we will be even more conscious of playing an exemplary role in corporate social responsibility in the years to come." (*Yangzijiang Shipbuilding Holdings Ltd Annual report, 2007 - 2008).* Similarly it was claimed by CRESBLD (Crest Builder Holdings Berhad) listed in KLSE that "The CBHB Group has always been mindful of its Corporate Social Responsibilities ("CSR") towards the community, environment, its employees and shareholders". (CRESBLD Annual Report, 2007 p.16).

The Rotary company's disclosure, listed in KLSE, include "Safety above all, to protect our equipment, the environment and ourselves" as a part of their core values. (Core values, Rotary Annual Report, 2007). At the same time, disclosure from DKLS listed in KLSE include disclosures like "The Board of Directors of DKLS recognizes and values the importance of environmental safety and health issues and is thereby committed in undertaking projects in a safe and environmentally sustainable manner" (DKLS, Environment, Health and Safety Statement, Annual Report, 2007, p.2)

The analysis of reports found that in Malaysia 63 percent of companies in construction sector and 80 percent of Manufacturing/ Industrial companies made at least one statement of commitment that recognized environmental practices. As against that only 30 percent of construction companies and 50 percent of manufacturing/ Industrial companies in Singapore made statement of commitment environmental practices. It is thus seen that companies make statements of commitment which cannot be construed to be a disclosure and cannot be classified as disclosure practices.

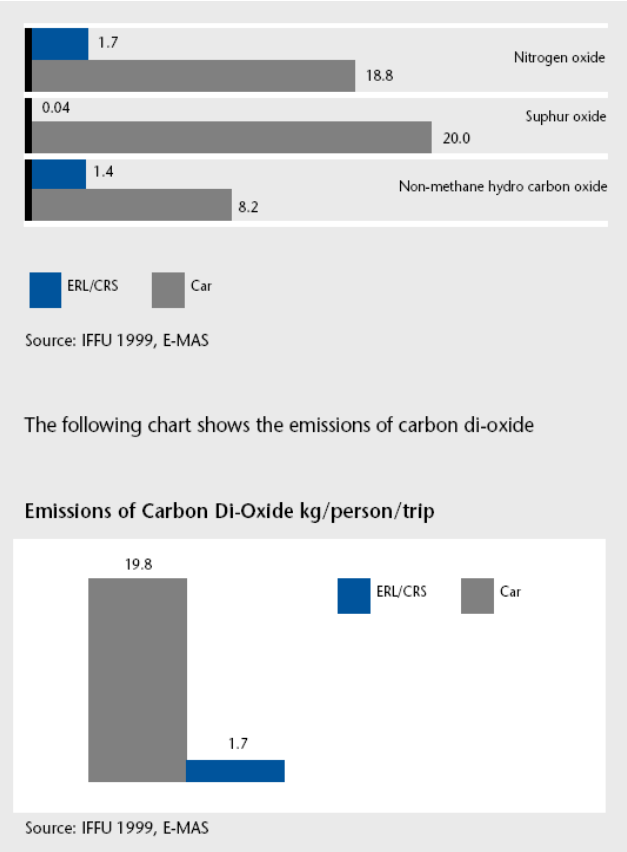
2. Quantified outcome on performance

This parameter looks at a step further, to document the quantitative disclosure measures made by companies. Disclosures quantified could be in dollars and cents or kilos of waste or even amount of emissions. For instance Sunway Holdings listed in the KLSE declares that "The Sunway recycling campaign has resulted in a significant increase of about 459% in the collection of recyclable items from all areas within the Group since its inception until end of 2006. The total collection has risen from 56,056kg in 2003 to over 300,000kg in 2006. The recycling collection for the year 2007 until the month of August was about 165,000kg. The Sunway Group has pledged RM10,000 annually for a period of 3 years to help maintain and upkeep the seminar hall at Malaysian Nature Society in Kuala Selangor Nature Park" (Sunway Annual Report, 2007).

Rotary listed in KLSE states that "The year also saw the completion of two interesting eco-friendly projects. We finished building the biodiesel storage and related facilities for Oil- tanking Singapore, a S$17 million contract, as well as a S$24 million job for Nexsol (Singapore) "(Rotary Annual Report, 2007) and one more quantified measure "In June and in conjunction with the World Environment Day, Ranhill initiated an energy conservation exercise by shutting down power throughout our office floors in

Empire Tower. Based on a survey carried out on the power consumption throughout all office floors, Ranhill saved roughly RM666 per floor which translates into savings of more than RM7, 000 per month for all floors" (Ranhill Annual Report, 2007)

and a true example would be The chart in Figure 1 which shows the emissions for: • Nitrogen Oxide, • Sulphur Oxide, • Non-Methane Hydro Carbon Oxides reported by YTL listed in the KLSE.



(YTL, Sustainability Report, Pg 35, 2007)

Figure 1. Emissions levels

Disclosures of quantified outcome for Construction and Manufacturing/ Industrial companies in both these countries are relatively very low compared to the first parameter. 17 percent of construction companies and 25 percent of Manufacturing/ Industrial companies in Malaysia reported the outcome on environmental activities in quantified terms compared to just 17 and 16 percent of Construction and Manufacturing/ Industrial companies in Singapore. This also means that the companies in Construction and Manufacturing/ Industrial industry were not keen on disseminating further information or data to stakeholders of the company.

3. Recognition of specified targets

This parameter discusses qualified targets/objectives identified by the Construction and Manufacturing/ Industrial companies in Singapore and Malaysia. Examples of such disclosure include: "*Since 2005, the Group has been expanding its presence in the renewable energy business, particularly in China. Its energy division is divided into three segments, Namely biomass power, waste to-energy power and coal-fired power"* the company listed in the SGX (China Enersave Annual report 2007). Another example of such disclosure is by Koon Holdings listed in the KLSE*"To Provide Quality Services and Products to our Clients and to Minimize Environmental Impacts and Health & Safety Hazards through Continual Reviews and Improvements of our Integrated Management System"* (Koon Holdings Limited Annual Report 2007, p23) and AZRB listed in the KLSE identified the following objectives on safety and health policy statement

• *To achieve zero occupational injury and illness.*
• *To develop an effective and efficient emergency response system.*
• *To improve plant and machinery system.*
• *To enhance site safety and health management (AZRB Annual report 2007).*

Ranhill from KLSE also reported the following. *"In the Oil & Gas sector, we are committed to ensuring that our projects fully comply with the environmental requirements of the domestic jurisdictions that we operate in. For example, in our drilling exploration operations at the Citarum Oil Block in Indonesia, we comply with regulatory environmental impact studies by ensuring that sand obtained from oil drilling is separated for testing and is stored in environmental friendly retention ponds"* (RANHILL, Annual Report 2007) and MRCB of KLSE *reported "The focus of our environment CSR program in 2007 is based on activities relating to our core environmental projects, namely the beach and river rehabilitation projects in Pahang. One of them is our Pulau Tioman coastal erosion and river conservation project which aims to improve the badly eroded beaches in Teluk Tekek and other areas on the island"* (MRCB, Annual Report 2007).

Overall from the content analysis is was observed that 20 percent of construction companies and 23 percent of Manufacturing/ Industrial companies in Malaysia disclosed under this parameter as compared to 10 percent of construction companies and 13 percent of Industrial companies listed in Singapore provided qualified targets rather than superficial statements as noted in parameter 1, for improved environmental disclosures.

4. Performance against specific targets

This parameter measures disclosures of those companies that showed performance against the identified targets earlier. It is interesting to observe the initiatives taken by few companies to identify targets and achievements and disclose it in a tabular form. The following are some examples of such measurement of performance against specific targets. *"We have significantly reduced our GHG gas emission by 20 percent since 2000"* (ESSO Malaysia Berhad, Annual report 2007).

Figure 2

WASTE MANAGEMENT

The main sources of solid waste arising from refinery operations are:

- Spent Catalysts;
- Spent Caustic.

Quantity (MT)	2007	2006	2005	2004
Spent Catalysts	2,741	2,661	1,655	2,568
Spent Caustic	2,879	2,743	655	833

EFFLUENTS

	2007	2006	2005	2004
Oil in Effluent Water (mg/L)	8.8	7.4	6.6	1.2

Global Warming Potential

	2007	2006	2005	2004
GWP (kT CO_2 Equivalent)	1,148	1,287	1,093	1,178

FLARING

	2007	2006	2005	2004
Total Flared Gas (Complex 1& 2, LRCC)	23,976 MT	42,370 MT	29,763 MT	17,247 MT

EMISSIONS

	2007	2006	2005	2004
CO_2 kT/100kT intake	22.00	23.8	19.9	20.2
SO T/100T intake	0.11	0.15	0.11	0.11

Another disclosure under this parameter is *"The Group's power stations continued to operate under optimal conditions, registering an overall average station availability of 92.29% for the year under review, decreasing marginally compared to 92.93% last year, due to scheduled maintenance. Paka Power Station recorded overall availability of 96.72% compared to 95.83% last year, with lower availability last year being due to the overhaul of one steam turbine and generator."*(YTL, Annual Report 2007).

Disclosure by Ranhill of KLSE was *"A specialized waste disposal company was engaged to dispose waste oil and used batteries in accordance with the Department of the Environment's waste disposal regulations and acts. With regard to waste such as effluent discharge as well as noise and exhaust emissions, we have outsourced a company to monitor the impact of these elements. Such effort will go a long way in ensuring our continuous sustainable presence in the state of Sabah and the protection of the natural environment"* (Ranhill, Annual Report 2007). Another interesting disclosure by ANN JOO RESOURCES BERHAD of KLSE was one of most descriptive one under this parameter.

Figure 4. Disclosures by AJSB

In the manufacturing operations of AJSB, a series of control measures, as listed herein, have been implemented to preserve the environment through the effective control of dust and waste gas emission, water consumption, noise emission and waste material disposal to address the environmental aspects.

Environmental Aspects	Environmental Control Measures
Dust Emission	Installation of a second state-of-the-art De-dusting System to improve on dust suction capability & reduce dust emission in the Steel Making plant.
Waste Gases Emission	Conversion of fuel usage from diesel/light fuel oil to natural gas in the production plants to minimize emission of waste gases.
Water Consumption	Installation of water treatment and re-circulation plants to recycle water and reduce water consumption.
Noise Emission	Installation of new compressors in Rolling Mill plants to reduce noise emission during operations.
Waste Material Disposal -Scrap & Skull-	Recycling and usage of internally generated steel scrap and skull waste material as feed material for the Steel Making plant.
Waste Material Disposal -Mill Scale-	Recycling of mill scale, a steel based waste material by exporting the mill scale as a feed material for industries manufacturing cement, sinter ore, etc.
Waste Material Disposal -Slag-	Slag which is an inert waste material is used for internal landfill, for laying of internal pathways. Slag can also be used as a feed material to produce atomized slag which is an abrasive material commonly used by engineering fabricators and shipbuilders as a blasting medium.

Source: by ANN JOO RESOURCES BERHAD Annual Report 2007

`Similarly, YTL also had many achieved targets mentioned in their sustainability report for the year 2007. One of them states *"E-MAS was able to reduce the energy cost per trip from RM65.59 in 2003 to RM62.11 in 2005, translating into a total saving of approximately RM300, 000 for the year 2005. In 2006, E-MAS's target is to reach an energy cost per trip of RM67, despite the 12% increase of electricity cost in June 2006. EMAS also launched a Building Facilities Energy Saving Programme, with targets to achieve savings of energy costs of RM100, 000 per year by modifying the existing installations. The objective for this project was to reduce building facilities power supply consumption"* (YTL, Sustainability report, 2007). Refer to Appendix B for the green house gas emission disclosure of YTL. Ranhill provided one of the most detailed report presenting in a table form the targets and performance against the targets for the year.

Table 3. List of Objectives identified and achievements by Ranhill

Environmental Performance (Fye 2007)

Item	Environmental Policy Statement Objectives	Achievements
1.	To document, implement and maintain an Environmental Management System	Preparation of Environmental Management System procedures for ISO 14001 certification is 90% completed.
2.	To improve environmental performance	No serious environmental incidences were recorded as the direct results of our activities. **Project Environmental Monitoring Performance** (a) Teluk Salut Project 1 • 100% compliance for air quality • More than 80% compliance for water and effluent discharge quality • More than 80% compliance for noise level (b) Senai Desaru Expressway project • More than 90% compliance for air quality • Minimising impact to natural surroundings – mangrove protection related to works near the Sg. Johor Forest Reserve • Installation of a Pollution Removal & Retention System
3.	To review and communicate environmental objectives and targets to improve environmental performance	Awareness among the head of departments as well as the project management team has improved tremendously as measured from the inclusion/integration of environmental input in our business processes.
4.	To comply with relevant environmental legislation, regulations and requirements	Zero prosecutions or convictions for environmental violations within this period (FYE 2007).

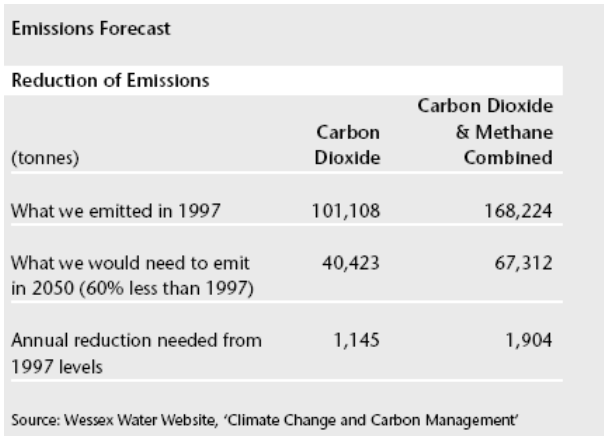
Source: Ranhill, Annual Report 2007

It was, thus observed that, in Malaysia 20 percent of companies under the construction sector and 22 percent of manufacturing / Industrial companies disclosed under this parameter compared to 7 percent of construction companies and 11 percent Industrial companies in Singapore. Malaysian companies disclosed performance against targets rather than superficial statements for improved environmental disclosure compared to Singapore. As this paper only looks at the voluntary set of targets by the companies, there has been an extensive disclosure by companies identified in this parameter. A sustainable report produced by YTL/ Shell/ Ranhill/ Ann Joo could be used a benchmark in terms of detailed disclosure considering that they operate in the same sector.

5. Future Performance targets

This parameter discusses disclosures by Construction and Manufacturing/ Industrial companies in terms of identifying future goals or targets for environmental improvement and details of such targets. Some companies have gone beyond identifying targets for the coming years extending up to 2050. It was an interesting section to observe as few companies like YTL, Ranhill had targets extending to 40 years from now. For example shell listed in the KLSE disclosed saying "*the refinery has been free of Halon and CFC since April 2000. However, the refinery does have Hydrochlorofl uorocarbons ("HCFC")* in its inventory that will be eliminated by 2015-2020 in accordance with the Montreal Protocol" (Annual report Shell Refining Company, 2007).

Figure 5. Emissions forecast



Emissions Forecast

Reduction of Emissions

(tonnes)	Carbon Dioxide	Carbon Dioxide & Methane Combined
What we emitted in 1997	101,108	168,224
What we would need to emit in 2050 (60% less than 1997)	40,423	67,312
Annual reduction needed from 1997 levels	1,145	1,904

Source: Wessex Water Website, 'Climate Change and Carbon Management'

Source: YTL, Sustainability Report Pg31, 2007

The analysis notes 20 percent of companies listed under Construction and Manufacturing/ Industrial sectors in Malaysia while 7 and 9 percent respectively listed in the SGX have disclosed under this parameter. Six Malaysian Construction and twenty Manufacturing/ Industrial companies as compared to three Singaporean Construction and nine Manufacturing/ Industrial companies disclosed with a considerable depth under this parameter. Majority of the companies linked current performance to identifiable future objectives.

6. Recognition of measures used in a management system

This parameter describes disclosures of companies that highlighted their environmental performance incorporated within the management systems. No limit was set to what is considered as management system as long as the companies were able to identify one within. Some of the samples are listed below on such reporting. "*In line with the Group's policy of not only becoming a leader in the industry locally but also venturing internationally, the need for the company to obtain the certification of ISO 14001:2004 Environmental Management Systems as a value-add services is very critical. The securing of international contracts is also largely depending on the proven records of accomplishment of the company in implementing projects while minimizing significant environmental impacts effectively"*.

"*In view of the importance of having the certification of ISO 14001:2004 Environmental Management Systems, beginning July 2007, the company has started working with an independent consultant in formulating and documenting a system, which suits well with the current business activities of the Group. The fully certified ISO 14001: 2004 of the company is targeted to be obtained in July 2008*" (AZRB, Annual Report 2007).

"*Koon is registered under the A1 parameter in civil engineering with the Building and Construction and Manufacturing/ Industrial Authority (BCA). It is also certified in integrated management system which covers Quality (ISO 9001), Environmental (ISO 14000) and Occupational Health and Safety (OHSAS 18001)*" (Koon, Annual report, 2007). Another report by Gamuda listed with KLSE states that "*The Quality, Safety & Health and Environment Policy (QSHEP) were put in place with a committee to steer its implementation. There is active participation from every department and proper processes, systems, procedures and materials have been developed to ensure its successful enforcement. QSHEP is a big leap forward in integrating three certifications for Safety & Health and Environment into one policy through the Integrated Management System (IMS). Since its introduction, QSHEP is already being implemented in all Gamuda offices around the world, and once it is well entrenched, it will underscore the fact that Gamuda is a company that highly values quality, safety and health, and the environment*". (GAMUDA, Annual report, 2007). "*PECD recognizes that its business has direct and indirect impact on communities as well as the surrounding environment in which it operates. The Board and Management team require that all its practices give due consideration to the interests of the Group's stakeholders, ensuring all business objectives are pursued with integrity and full compliance with the law. Furthermore, PECD's operating policies strictly adhere to the Group's Quality Management System (ISO 9001:2000) and Environmental Quality Management (ISO 14001:2004). Environment, staff welfare, youth and sports development and philanthropy remain key CSR platforms for the Group moving forward*" (PECD, Annual Report 2007). Finally, "*Safety is our priority. Sunway management is committed to forge a safe working environment promoting healthy work practices for all levels of staff. Since achieving the OHSAS 18001:1999 certification in 2001, the Company has successfully maintained the*

certification through a structured system aimed at continuous improvement of safety and health practices" (Sunway, Annual Report, 2007).

Out of the sample analyzed about 23 and 18 percent of Construction and Manufacturing/ Industrial companies respectively in Malaysia adhered to this parameter and have a formal system in place. Few of the companies in this section were targeting to set up environmental management system in the future. 10 and 9 percent of Singaporean Construction and Manufacturing/ Industrial companies respectively had a companywide environmental management system in place which actively managed environmental issues and set detailed targets relating to environment. Few of these companies such as YTL and Ranhill also had an external audit in place to identify areas of improvement.

7. Recognition of performance influencing decision making or changes in process

The last parameter seeks to observe the process adopted or change in the current process that influences environmental performance. Freedom to observe any change in the business practices is considered as disclosure under this parameter. The following are few examples of disclosures.

"*The implementation of environmental management systems throughout all projects was satisfactorily being carried out with major improvements need to be emphasized on the understanding and effective control of mitigation measures to minimize significant impacts on the environment. Strict monitoring with dedicated personnel to oversee the effectiveness of the mitigation measures is always given top priority. AZRB took great care in ensuring a systematic Traffic Management and Safety Precautions Systems which help eased the traffic congestion and ensured accident-free environment at project sites respectively*" (AZRB, Annual Report, 2007). Another company reported to health and safety performance for example "*We constantly evaluate and develop work processes and management systems conforming to ISO 9001:2000 standards. The Group has internalized culture which emphasizes on quality occupational health and safety in our business activities. In 2007, we obtained the DOSH 100% Accident Free Award. In addition, rigorous independent audits are being conducted regularly to ensure high standards of quality, safety and health are maintained*." (CBHB, Annual report, 2007) where as Chinaenserve reports "*We are presently involved in three segments of the power industry in China, namely biomass-to energy, waste-to-energy, and coal-fired power. We now have a total of nine renewable energy projects in China in operation, design/ Construction and Manufacturing/ Industrial or development. In mid 2007, we announced the streamlining of our renewable energy business structure in which all our renewable energy projects would be placed under the umbrella of Renewable Energy Holdings Biomass-to-Energy accelerating the development of our biomass to-energy ("BTE") projects by concentrating on the Changyi biomass power plant to be completed by 4Q 2008. The completion of the Changyi BTE Plant will open a significant chapter in our renewable energy business*" (Chinaenserve, Annual report, 2007).

Thus in this parameter 17 and 16 percent of Malaysian Construction and Manufacturing/ Industrial companies respectively as compared to 7and 9 percent respectively of Singaporean Construction and Manufacturing/ Industrial companies provided at least one disclosure in this parameter.

Parameter 8. Commitment to environment in company's Vision/ Mission statements or as part of core values

This parameter identifies disclosures from organizations that have linked their commitment in to their vision/ mission statements or disclosed as part of their core values. In the mission statements of shell includes "*Conducting our business in a safe, environmentally sustainable and economically optimum manner*" and one of their objective includes "*Deliver continuous sustainable Health, Safety, Security and Environmental excellence*" (Shell Annual report, 2007). For example YTL disclosed specifically group's environmental **vision** stating "*We are fully committed to being a responsible corporate citizen. Energy plays an essential role in ensuring quality of life for people everywhere, for us and for future generations. Supplying energy efficiently is critical to helping people maintain and improve their standard of living. However, this brings with it significant challenges – for example, the very real threat of climate change means that we need to continue to provide and deliver energy in a way that minimizes the impact our emissions have on the environment. We recognize the importance of sustainable development, setting targets to reduce the carbon footprint of our operations on society and understanding the dire consequences of global warming*". (YTL, Sustainability Report 2007) and "*We aim to be a corporate SOCIALRESPONSIBLE citizen by REDUCING, RECYCLING and RE-USING relevant resources in order to be accountable to the environment*" (HLN Technologies Limited, Annual report 2007). It was noted that many companies imbibed environmental aspects as part of their vision/mission statements or even among their core value system but it is a concern to see that nowhere else there is a mention about quantified measures, any targets identified for improvement or any other environmental management policies or system.

The findings under this parameter are similar to the previous section where 23 and 25 percent of Malaysian Construction and Manufacturing/

Industrial companies compared to 20 and 16 percent of Singaporean Construction and Manufacturing/ Industrial companies provided Commitment to environmental in company's Vision/ Mission statements or as part of core values**.** It was surprising to see such disclosures as well. "*There were no corporate social responsibility activities or practices undertaken by the Group for the financial year*" (Englotechs Holding Bhd, Annual Report 2007). "*The Company has initiated plans and has allocated a budget to carry out its corporate responsibilities and these are expected to be carried out from 2008*" (Gopeng Berhad, Annual report 2007). "*There were no corporate social responsibility activities or practices undertaken by the Company and its subsidiaries*" (Versatile Creative Berhad, Annual Report 2007).

Findings in this paper are also seen contradicting earlier studies. Williams (1999) who noted environmental reporting practices in Malaysia lagged behind those of other countries in the South East Asian region, notably Singapore. My finding suggest that the disclosures by the companies in manufacturing and construction sector in Malaysia are better than the disclosures made by companies listed in Singapore, both qualitatively as well as quantitatively.

Other Findings

On an average many organizations, in Singapore as well as in Malaysia, recognized their social obligation to the society and are striving for a balanced approach in fulfilling its key business objectives and initiatives in the areas of staff welfare and environment care. This includes any unforeseen mishaps in the environment taking due care to provide the employees with adequate coverage during such calamities. Most of the organizations in both the sectors have acknowledged the responsibility to care for the environment. However, the analysis conducted in this research did not witness a continued commitment. A continued commitment would include performance evaluation through targets and measuring variations in targets and processes for improved environmental and social responsibility.

Authors like Wiseman, 1982; Hughes *et al.*, 2001 emphasize that voluntary disclosure of environmental practice does not necessarily imply excellence in actual environmental performance. While this might be true, the only way of keeping the stakeholders continuously informed and adhering to one's own commitment would be to have some criteria on place, like what is suggested in this study. Most of the Construction companies failed to look at the following common environmental damages from construction sites.

1) Amount of noise or disturbance from erection or dismantling of formwork or scaffolding, rubble disposal and hammering works, Discharge of muddy and waste water/ Blockage of sewers/ drains which may or have cause hygiene problems

2) Black smoke / fume from construction equipment such as diesel hammer, dust / odor nuisance from demolition, operation of vehicles and concrete batching, any accumulation of water or disposal of refuse, blockage or damage to public drains/ public storm water drains.

3) Accumulation and Securing and covering loads on the vehicle, dropping of materials/ mud.

RECOMMENDATIONS AND SUGGESTIONS

The above evidences acknowledge that there is a great need for an extensive disclosure practices among construction and industrial/manufacturing companies both in Malaysia and Singapore. Companies could also disclose few of the below listed activities which would give a greater hedge to the stakeholders.

- Harmonize with international trends of environmental disclosure and reporting , work with external auditors in the development and implementation of environmental auditing in identifying future environmental goals.
- Develop Corporate environmental management accounting systems to improve the credibility of corporate environmental disclosing activities by formalizing the process.
- Develop a committee which will work on the identification of targets, which would be able to quantify environmental performance. Measures should also be incorporated into the management system of the companies to observe factors influencing amendment of measures under environmental disclosure practices.
- Create and adapt to strategies which focus on environmental management activities which leads to efficiency improvements. Eg.Pollution prevention based strategies
- Companies could also improve their disclosure by building in six different categories as adopted in Canada (Sustainable sites, Water efficiency, Materials and resources, Energy and atmosphere, indoor environmental quality and innovation and design process)
- Adapt to "Green Building movement" and "Green manufacturing" which can significantly contribute to sustainability practices such as lower energy consumption, reduced waste and means of waste disposal, water costs, lower environmental and emissions cost which will result in adequate temperature, humidity, lighting and ventilation. Green buildings are designed to save energy and resources, recycle materials and minimize the emission of toxic substances throughout its life cycle. Green manufacturing emphasizes the use of processes that do not pollute the environment or harm consumers, employees, or other members of the community. Green manufacturing addresses a number of manufacturing matters, including recycling, conservation, waste management, water supply,

environmental protection, regulatory compliance, pollution control, and a variety of other related issues.

- Companies can also adapt to the Green Mark Scheme which currently exist in Singapore whereas not many companies are seen adhering. Companies are thus losing many benefits like tax which are purely allotted for adhering to such schemes. Similarly in Malaysia scheme such as the Green Building index is made available for the companies.
- Green manufacturing is promising for the government, manufacturers, and industry across the world inclusive of SEA. Moving away from traditional and wasteful manufacturing practices will give green manufacturing a significant boost. Furthermore, by engaging in green manufacturing practices, manufacturers will set an example for industries around other nations in SEA to promote such developments.

Many of these companies could be practicing the above mentioned movement but relatively failed to disclose such facts.

Conclusion

Many Construction and manufacturing companies have embarked on initiatives such as recycling, waste and emission management. However, these efforts are today more driven by compliance rather than passion or conviction. However, pathetically since these disclosures are not enshrined into the legal system or accounting standards, the formalities pertaining to environment remain a passion rather than compliance. However, if the companies argue that they do comply, the disclosures are not adequate to project the compliance to the stakeholders.

This study has thus made an attempt to enlighten the extent of environmental disclosures in the construction and manufacturing/ Industrial sectors and the extent to which information is available to the stakeholders of the company in two of the countries in SEA. The study assumes that the environmental practices in these countries are complex due to the conflicting priorities of environmental protection and industrialization. Attempts of the government to intervene in the affairs of the businesses, which are accused of causing air pollution, ground water contamination, ocean contamination, greenhouse effect, etc makes the relevance of environmental reporting and accounting even more serious and important. The development of strong corporate environmental policy would be a preliminary action in the development of environmental management. It is only when improved efficiency disclosures are practiced among these companies there can be a further move to think beyond and for the sustainable development of these nations as a whole. All said there are certain limitations in this study like using secondary data for arriving at conclusions rather than drawing conclusions from empirical studies. The study, therefore, does not consider the view of the stakeholders on the perceived importance of environmental disclosures for decision making purposes. Secondly only two sectors in the two countries are analysed. Findings could have been different if all the sectors in the two countries were considered.

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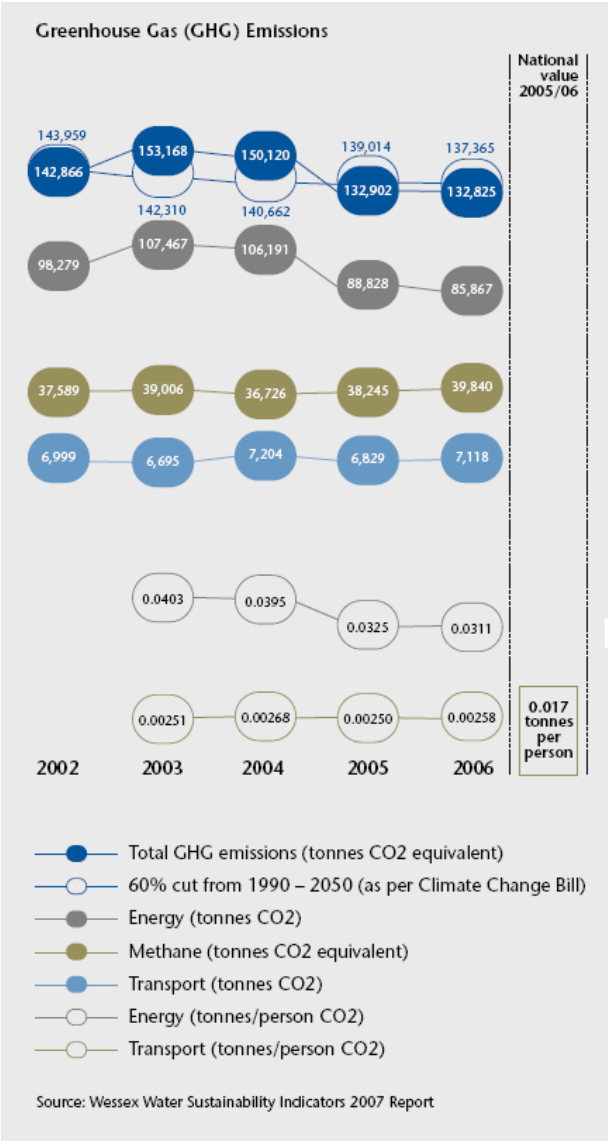
Appendix A

1. ***Commitment to performance measurement or improvement:*** disclosures that expressed a commitment by the organisation to measure or improve overall social or environmental performance. Policy statements which did not specifically refer to improving performance were not included.
2. ***Quantified measures of performance (eg, tonnes of CO_2 emitted):*** disclosures that provided quantified measures of performance. For example, a disclosure in category 1 could have provided a statement with respect to a commitment to improve processes that affected greenhouse gas emissions, whereas a category 2 disclosure would record the level of emissions.
3. ***Identification of specified targets:*** disclosures that identified targets for social and environmental performance. This category documented quantified targets rather than general statements for improved performance.
4. ***Performance against targets:*** disclosures of quantified data on performance against targets.
5. ***Future performance targets:*** disclosures that provided details of performance targets beyond the current year.
6. ***Acknowledgement of measures used within a management system:*** observation or acknowledgement that measures were incorporated within the management systems.
7. ***Identification of social and environmental performance factors affecting decision-making or change processes:*** disclosures that highlighted where social and environmental performance was influential in decision-making processes, or where they resulted in changes in business practices.

Source: Adams & Frost, 2007

Appendix B



Source: YTL, Sustainability Report 2007

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