

# Green Commitment For Sustainability: Environmental Disclosure In A Malaysian Public Listed Construction Firm

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**Abstract:** Malaysia aspires to become a sustainable and fully developed country in near future, thus, the contribution by its construction industry may not be taken lightly. However, besides its significant contribution towards Malaysian development, construction industry also contributes to substantial impact on environmental degradation as soil erosion and sedimentation, flash floods, destruction of vegetation and dust pollution and many more. Due to these environmental impact, which may detriment government's aspiration towards preserving environmental sustainability, it is fundamental to investigate how firms in construction industry mitigate or compensate the negative environmental impact caused by their activities. The objective of this study is to observe the environmental commitment and disclosure by a Malaysian public listed construction firm. Specifically, this study tries to investigate if such commitment is being mentioned in firm's vision and mission statements, in its management's statement and its stand-alone sustainability reports. The study apply qualitative approach using content analysis technique in extracting data. A single Malaysian construction public listed company has been selected for examination. The findings reveal environmental concerns have been addressed in firm's long term vision and mission, in its Group Managing Director's statement and in its stand-alone sustainability report. Environmental sustainability has been put as priority by the firm which mainly addresses on biodiversity and conservation efforts including constructing green buildings, protecting endangered species, environmental collaboration, green spaces and tree planting activities. The findings from this study may shed some light on the commitment of construction industry in preserving the environment consistent to Malaysian government's aspirations in becoming a fully developed country and at the same time putting forward the importance of green growth and sustainability.

**Keywords:** environment, sustainability, construction, Malaysia

## 1. INTRODUCTION

The World Commission on Environment and Development (1987) defines sustainable development as "meeting the needs of our present without compromising the ability of future generations to meet their own needs". This definition brings the notion that whatever we are doing right now will give impact to our future generation; thus, something needs to be done now to ensure that our future generation will not be deprived from what they should have in future. Among the issues focused in sustainable development is on the environmental degradation. The issue has obtained great interest worldwide as it not only affects the fauna and flora, but the significant impact also goes to the human quality of life, making it a grave threat to global sustainability.

The responsibility towards environmental sustainability is not something that should only be carried by the government, but the citizens should play their role as well. Business organizations are among the nation's members that significantly contribute to environmental degradation. For instance, industrialization and mass production for economic well-being, construction and development for fulfilling the needs of the population and extraction of raw materials and resources are among the activities performed by business organizations. These activities, which main purpose is to generate wealth besides fulfilling the needs of human beings, have directly and indirectly inflicted negative effect to the environment.

This paper addresses the green or environmental commitment by one of the public listed firms in Malaysia. The Malaysian government has put emphasis on the commitment towards environmental sustainability. The commitment may be seen in one of the thrusts of Eleventh Malaysian Plan, which is

“Pursuing Green Growth for Sustainability and Resilience” (Economic Planning Unit, 2015). According to this thrust, nation needs to shift from costly conventional model of “Grow first, clean-up later” to a more resilient, resource-efficient model that supports environmental sustainability. This can be achieved by strengthening the enabling environment for green growth, adopting the sustainable consumption and production concept, conserving natural resources for present and future generations and strengthening resilience against climate change and natural disasters (Economic Planning Unit, 2015).

Although the Malaysian government’s commitment towards environmental sustainability can be seen as engaging, environmental degradation issues still exist and the impact can be seen particularly from the activities of firms that are environmentally-sensitive (Buniamin, 2010), or in other words, firms that operate in the industries with higher impact on environment. Among the industries that is environmentally-sensitive is the construction industry (Buniamin, 2010). By year 2020, Malaysia is aspired to achieve the status of developed country, thus, the role played by construction industry should not be taken lightly. Construction industry contributed 4 per cent to the Malaysian GDP in 2014, and is expected to contribute 5.5 per cent to the Malaysian GDP up to 2020 (Economic Planning Unit, 2015). However, besides its contribution to the nation development and its support to nation’s GDP (Rosman, Ahmad Suffian, Najihah Marha, Sakinah, & Raja Mariam, 2018), the activities of construction industry also contributes to negative impacts on the environment such as soil erosion and sedimentation, flash floods, destruction of vegetation and dust pollution, depletion of natural resources and the use of building materials harmful to human health (CIDB, 2007). Research shows that the activities of the construction industry contributes 67.5% impact on ecosystem, 21.0% on natural resources and 11.5% on the public (Zolfagharian, Nourbakhsh, Irizarry, Ressang, & Gheisari, 2012). Therefore, studies on environmental disclosure by construction industry is worthwhile in determining the the extent of environmental practice occur in the industry, what has been implemented by this environmentally-sensitive industry, and the factors contributing to such disclosure.

Studies on environmental disclosure among Malaysian firms can be considered as good and still growing, however, studies which are industry-focused, for instance in construction industry, is still scarce. Literature survey found that the topic addressing problems in construction industry is only circulated on the perception towards environmental management (Yusof & Iranmanesh, 2017), level of awareness (Zainul Abidin, 2010) and waste management (Begum, Siwar, Pereira, & Jaafar, 2007; Nagapan, Abdul Rahman, & Asmi, 2012). With regard to environmental disclosure studies, a number of research have been found (Buniamin, 2010; Abd-Mutalib, Muhammad Jamil, & Wan Hussin, 2014; Zainal, 2017), however, some research focused on corporate social responsibility (Zainal, 2017), thus environmental engagement has not been emphasized, others have focused on environmental disclosure (Buniamin, 2010; Abd-Mutalib et al., 2014), but the results reveal that environmental disclosure by construction industry is far lacking behind other environmentally sensitive industries such as plantation (Buniamin, 2010; Abd-Mutalib et al., 2014), industrial product (Buniamin, 2010) and infrastructure (Abd-Mutalib et al., 2014). Therefore, there is a need of exploring environmental disclosure for firm specific industry such as environmentally sensitive construction industry, and it is the intention of this study to examine in depth the environmental disclosure of a firm in construction industry, and whether the environmental commitment is mentioned in the firm’s vision and mission statement, as well as regarded as important strategy to be fulfilled by the firm’s management.

The activities of construction industry contributes to negative impacts on the environment (CIDB, 2007). Since many harmful impacts have been notified, the community and other stakeholders will need to know to what extent does construction industry make environmental issue as priority, and what has been done in mitigating such problems. Firm’s annual report is one of the mediums of communication between firms and their stakeholders. Therefore, this study intends to go in depth on environmental disclosure by a Malaysian public listed construction firm. Specifically, the objectives of this study are (1) to investigate if environmental concerns are being mentioned in the selected firm’s vision and mission statements; (2) to understand the commitment of the selected firm’s board of directors towards

the environment; and (3) to investigate the focus of environmental sustainability being disclosed in the firm's annual report.

The topic of sustainability has been mentioned in Malaysia's long-term plan since Vision 2020, and now, with the forthcoming 12<sup>th</sup> Malaysia Plan, sustainability development is still at the top of priority in Malaysian aspirations. According to the Minister of Economic Affairs, the 12<sup>th</sup> Malaysia Plan, which aims to realizing the government's new development model of "Shared Prosperity", will revolve around three main dimensions: economic empowerment, environmental sustainability, and social reengineering (Choong, 2019). 11<sup>th</sup> Malaysian Plan indicate in Thrust 4 indicate that Malaysia is "pursuing green growth for sustainability and reliance". To achieve Thrust 4, one of the strategy isto adopt sustainable consumption and production concept, which contains in Focua Area B of the thrust. As this research proposal concerns on environmental management programs by firms in construction industry, the results from this study will provide information on construction industry's commitment towards fulfilling the government's aspirations in keeping the country environmentally sustainable, as stated in Thrust 4 of the 11<sup>th</sup> Malaysian Plan, and to determine whether the strategies in Focus Area B is worthwhile in promoting green growth. Furthermore, one of the key outcome in the Construction Industry Transformation Program 2016-2020 (CITP) is for Malaysia to be the "Sustainable Infrastructure Model" for the emerging world, and this is to be achieved through Thrust 2 "environmental sustainability". Based on the above discussions, the results from this study may benefit the government in making sure that environmental sustainability aspirations proposed in the above pillars and thrust is moving appropriately and effectively on track.

The rest of the study progresses as follows. The next section reviews related literature on environmental research in Malaysian construction industry, legitimacy theory and research propositions. This is followed by a consideration of the methodology and findings. The concluding remarks summarize the main results, highlight the study limitations and suggest avenues for future research.

## **2. LITERATURE REVIEW**

Discussed below is the literature review of environmental disclosure.

### **2.1 The Extent of Environmental Disclosure among Malaysian Construction Firms**

Research on environmental disclosure by Malaysian firms continue to grow (Othman & Ameer, 2009; Buniamin, 2010; Darus, Yusoff, & Mohd Azhari, 2013; Latridis, 2013; Sulaiman, Abdullah, & Fatima, 2014; Kalu, Buang, & Aliaga, 2016), and this scenario proves that environmental issue has become one of the priority to be addressed among business firms. Not only emphasizing on the extent of environmental disclosure (Buniamin, 2010; Darus et al., 2013), past studies also tried to gauge the reasons of environmental disclosure, and it was found that factors such as firm size (Latridis, 2013; Sulaiman et al., 2014), profitability (Latridis, 2013) and leverage (Sulaiman et al., 2014) exert significant impact on the extent of environmental disclosure.

Although environmental disclosure research shows continuous in term of number of study, the examination usually was not done on industry specific. Only a few research has focused on specific industries such as plantation (Othman & Ameer, 2009), finance (Darus et al., 2013), and real estate (Kalu et al., 2016). However, up to this date, limited evidence has been found with regard to environmental disclosure by construction related firms. The limited evidence was found in a number of research (Buniamin, 2010; Abd-Mutalib et al., 2014), however, the findings was only focused on the extent of environmental disclosure, but not in depth of what has been done by a contruction firm with regard to their environmental commitments. Furthermore, construction industry was found to disclose less environmental commitment as compared to other environmentally-sensitive industries such as plantation, industrial product and insfrastructure (Buniamin, 2010; Abd-Mutalib et al., 2014). This

scenario has motivated the current study to conduct an in-depth investigation in a selected Malaysian public listed construction firm with regard to its commitment and disclosure for environmental sustainability.

## 2.2 Environmental research in Malaysian Construction Industry

Due to the emphasis on environmental sustainability, many research have been conducted in Malaysia with regards to environmental awareness and protection among Malaysian environmentally-sensitive industries such as construction industry (Begum et al., 2007; Zainul Abidin, 2010; Nagapan et al., 2012; Samari, Godrati, Esmaeilifar, Olfat, & Mohd Shafiei, 2013). Among environmental-related studies focused on the awareness of contractors with regards to environmental management and sustainability (Zainul Abidin, 2010), waste management (Begum et al., 2007; Nagapan et al., 2012) and green building (Samari et al., 2013).

Zainul Abidin (2010) conducted a study to investigate the level of awareness, knowledge and implementation of sustainable practices based on the perceptions of the project developers in Malaysia. The study found out that many developers are still reluctant and uncertain to pursue sustainable implementation in their projects. This is due to the limited understanding and the concern about the cost involved in engaging to sustainability activities. Consistent findings has been found by another researcher (Samari et al., 2013), where lack of credit resources to cover up front cost, risk of investment, lack of demand as well as higher final price are the factors found hindering contractors and developers to engage in environmental management programs. As a result, only large developers are beginning to take heed towards sustainable implementation in their projects (Zainul Abidin, 2010).

Literature on environmental management practices in Malaysian construction firms also recognize waste management as the focused issue (Begum et al., 2007; Nagapan et al., 2012). The waste, which can be categorized into physical and non-physical waste (Nagapan et al., 2012) occurs as a result from several factors, among others, the frequent change in design, wrong material storage and poor material handling (Nagapan et al., 2012). Environmental management program that is mostly implemented to manage waste involves using materials that are repairable, reusable, durable and packed in recyclable packaging (Begum et al., 2007).

Another focused subject is on green building (Samari et al., 2013), and it is found that there is a low level of implementation of green building concept. This is due to lack of credit resources to cover up front cost, risk of investment, lack of demand as well as higher final price. Therefore, government roles especially in term of providing incentive instruments such as structural incentives, subsidy and rebate program, tax incentive scheme, low interest mortgage loan, voluntary rating system and market and technology assistance are the significant drivers for eliminating barriers to green building development (Samari et al., 2013).

From the literature review, it is found that contractors and developers in the construction industry do have awareness on environmental sustainability, however, reluctance can still be seen in converting their awareness into practice. This is due to the lack of knowledge on environmental management, fearing that the additional cost in conducting environmental management programs would result in extra cost, which in the end will add up to the cost of product. This situation points to the importance of environmental education and knowledge sharing among the players in construction industry. As proposed by Nagapan et al., (2012) contractors should have proper environmental training, material handling, and proper planning in their activities to reduce waste generation in their construction project. This way, environmental sustainability which leads to the quality of life would be preserved not only for today's generation, but also to the future generation.

## 2.3 Legitimacy Theory

Legitimacy theory stresses that business firms will always make effort to show that their existence is according to the norms of the society in which they operate, or being legitimate (Deegan, 2002). The theory implies that a "social contract" exists between a business organisation and its respective societies (Fernando & Lawrence, 2014). It suggests that organizations do not live in isolation, but need to have continuous relationship with society at large. For example, business firms obtain human resources and materials from society and they also provide their products and services to society (Mathews, 1993). In order to legitimize their role to the society, business firms will try to communicate their legitimacy, and firms' annual report and websites are among the popular medium in communicating their legitimacy. A number of past studies have confirmed the legitimacy practice of firms in reporting their sustainability practices (Abdullah & Aziz, 2013; Ahmed Haji, 2013; Abdulrazak & Amran, 2018).

Annual report contains a lot of information, including social and environmental disclosures are not left behind compared to financial information. These social and environmental disclosures not only being communicated in stand-alone sections of sustainability or CSR, but in many cases, also being highlighted in corporate vision and mission statements and the statements of board of directors (Elijido-Ten, 2007; Trierweiler, Severo Peixe, Tezza, Bornia, & Campos, 2013). A vision is generally defined as a picture of the future (Papulova, 2014). In relation to business entities, a vision statement of a firm is the statement that spells out on what is the intention of a business firm, or in other words, what will the firm become in future. On the other hand, a mission statement is a strategic tool for a company, which aims to foster a shared value system, a focus on common objectives, teamwork, behavioral guidelines, and emotional commitment to the company (Mullane, 2002). A properly designed mission statement will lead the business firms towards achieving its vision. Previous literature justify vision and mission as a part of strategic management process (Wheelen & Hunger, 1989). A company's mission and vision statement has long been regarded as a way to express a company's corporate character (Campbell & Tawaday, 1990) and personality (Want, 1986). Therefore, it is not surprising that environmental and CSR related research found the act of incorporating environmental sustainability in strategic statements such as vision statement (Elijido-Ten, 2007; Trierweiler et al., 2013) and mission statement (Antonites & de Villiers, 2003; Elijido-Ten, 2007; Trierweiler et al., 2013) and also in Chairman's Statement and Managing Director's Statement (Othman & Ameer, 2009; Sobhani, Amran, & Zainuddin, 2009). The disclosure of environmental and social commitments of business firms in their vision and mission statements, as well as management's communication such as chairman statement or managing director statement, shows firms' commitment towards fulfilling the expectations of stakeholders, which is consistent to the legitimacy theory.

## 3. METHODOLOGY

The study is conducted on a single business firm, using qualitative content analysis approach. Qualitative approach focus on expressing assumptions of a phenomena (Krippendorff, 1980; Firestone, 1987), where the researcher is immersed in the setting, describing and quantifying, therefore, enable to give the reader enough detail to "make sense" of the phenomena (Krippendorff, 1980; Firestone, 1987). Content analysis also refers to the method of analysing written, verbal or visual communication messages (Cole, 1988). It enables the researcher to make replicable and valid inferences from data to their context, with the purpose of providing knowledge, new insights, a representation of facts and a practical guide to action (Krippendorff, 1980).

Qualitative content analysis additionally, is one of numerous research methods used to analyze text data (Hsieh & Shannon, 2005). This technique is regarded as a flexible method for analyzing text data (Cavanagh, 1997), where researchers focuses on the characteristics of language as communication with attention to the content or contextual meaning of the text (Hsieh & Shannon, 2005). Furthermore,



content analysis technique has been widely used in previous environmental disclosure and CSR disclosure research (Buniamin, 2010; Abd-Mutalib et al., 2014; Zainal, 2017).

In achieving the objective of the study, content analysis was carried out in the annual report of a single case construction firm listed on Bursa Malaysia in year 2018. The firm selected is among the top 10 largest public listed construction firms based on total assets. The firm selected is named as Firm A. Year 2018 is chosen since the Sustainability Reporting Guidelines 2<sup>nd</sup> Edition has been issued in this year and listed firms are required to report their green commitments according to this guideline starting from the respective year.

To answer research question (1), the content analysis technique was done on the vision and mission statements of Firm A. This is to investigate whether environmental sustainability is being mentioned in Firm A's long-term plan. Next, to answer research question (2), content analysis was carried out on Firm A's management's statement section (Managing Director's statement). This is to probe how environmental engagement is being put forward by the firm's management. Meanwhile, for answering research question (3), the content analysis technique was applied on firms' environmental information contained in its Sustainability Report sections. This is done to investigate the environmental concerns emphasized by the firm with regards to its environmental sustainability and engagement.

#### 4. FINDINGS

The objectives of this study are (1) to investigate if environmental concerns are being mentioned in the selected firm's vision and mission statements; (2) to understand the commitment of the selected firm's board of directors towards the environment; and (3) to investigate the focus of environmental sustainability being disclosed in the firm's annual report. Discussed below are the findings with regard to the objectives of the study.

##### 4.1 Firm's vision and mission towards environmental sustainability

The first objective is to investigate if environmental concerns are being mentioned in Malaysian public listed construction firms' vision and mission statements. The findings in Table 1 indicate the vision and mission statements of Firm A found in the firms' annual report of year 2018. The findings are spelled out in Table 1.

**Table 1: Vision and Mission Statements – Firm A**

|         |                                                                                                                                                                                                                                                          |
|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Vision  | We aim to lead the region in innovative breakthrough solutions for large scale public infrastructure and property development.                                                                                                                           |
| Mission | We reliably deliver innovative worldclass infrastructure and premier lifestyle properties for our customers through our core businesses in infrastructure development and construction, operation of infrastructure facilities and property development. |

The activities of construction industry is highly related to environmental concerns such as soil erosion and sedimentation, flash floods, destruction of vegetation and dust pollution, depletion of natural resources and the use of building materials harmful to human health (CIDB, 2007). Although the terms related to environment were not found in firm's vision and mission, the firm however put forward their intention in becoming world-class innovative infrastructure provider, thus may explain their commitment for environmental sustainability in order to be parallel with world expectation on preserving the environment. These vision and mission statements are also supported by Environmental Sustainability Pillar of "Incorporating green mindset across our value chain", thus signifying firm's long-term strategic planning in achieving environmental sustainability.

## 4.2 Management's commitment towards the environment

The second objective is to understand the commitment of the board of directors in Malaysian public listed construction firms towards the environment. Indicate below are the findings with regard to the Firm A's management's commitment towards environmental sustainability.

From the Statement from the Group Managing Director's section in the annual report of Firm A, the study extracted the below statements.

The findings in Table 2 further sheds new hope for environmental conservation by construction industry. The findings below reveal that the management of Firm A is seriously taking environmental issues as priority. This may be observed in the activities such as environmental preservation, working with other stakeholders and developing smart buildings within its township. All these activities points out to biodiversity enhancement in creating sustainable ecosystems in its development projects.

**Table 2: Environmental concerns mentioned in Firm A's Group Managing Director's Statement**

|                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>"By listening to what the land has to tell us, we focus on the preservation of the natural topography and incorporate well-planned, multi-functional natural features to ensure the sustainability of the natural environment".</i>                                                                                                                                                        |
| <i>"To this end, we have launched Firm A Parks, a pledge to biodiversity enhancement and to strengthen our commitment to creating sustainable ecosystems for our townships".</i>                                                                                                                                                                                                              |
| <i>"We are working in partnership with Wetlands International Malaysia, Forest Research Institute Malaysia (FRIM) and an environmental consultant to ensure a holistic approach to this initiative, including a formulation of a Biodiversity Policy and conducting a biodiversity audit as a scientific measurement to ensure sustainability of flora and fauna in our developments".</i>    |
| <i>"We are particularly excited with the launch of the first phase of Firm A Cove in August 2018. This 1,530-acre township is dubbed 'Nature Sanctuary, Future City' and has been master-planned as a nature-inspired sanctuary with 250-acre of green area and a sustainable smart city. Intelligent mobility, waste and security solutions will be introduced within this development".</i> |

## 4.3 Environmental disclosures by Malaysian public listed construction firms

The third objective of this study is to investigate the focus of environmental sustainability being disclosed in the annual reports of Malaysian public listed construction firms. Itemized below are the environmental disclosures found in the "Sustainability" section in Firm A's annual report.

**Table 3: Firm A's Environmental Disclosures**

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Environmental Sustainability Highlights of Firm A:</b></p> <ul style="list-style-type: none"> <li>• 5,847 trees, 676,438 shrubs planted across our development</li> <li>• 5,181 of advanced tree planting</li> <li>• Smart Cities and Green Building</li> <li>• Biodiversity conservation efforts</li> </ul>                                                                                                                                                                                                                   |
| <p><b>Sustainability Pillars and Material Matters:</b></p> <p>The sustainability agenda of Firm A is based on 3 sustainability pillars, which are "Economic Growth", "Environmental Management" and "Social Contribution". These pillars are supported by 18 material matters, where 7 out of 18 material matters are related to "Environmental Management" pillar, which are:</p> <ul style="list-style-type: none"> <li>• Biodiversity</li> <li>• Effluents and waste</li> <li>• Emissions</li> <li>• Energy management</li> </ul> |

- Water management
- Materials, land remediation
- Contamination or degradation

Figure below specifies the material matters of Firm A in a matrix. The materiality matrix indicates the material matters which are being given priority by Firm A with regard to addressing their sustainability disclosure.

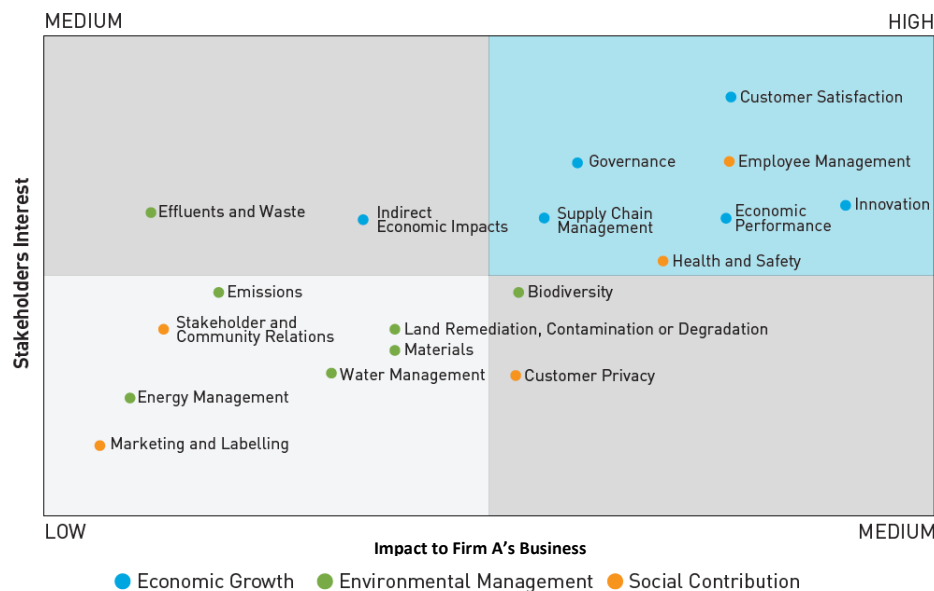


Figure 1: Firm A's Materiality Matrix

From the above figure, it is observed that the material matters related to "Environmental Management" pillar is explained in medium and low priority quadrants. In the high priority quadrants (the far right quadrant), Firm A lists material matters related to "Economic Growth" pillar and "Social Contribution" pillar. No material matters related to "Environmental Management" is found in this high priority quadrant.

Biodiversity and effluents and waste matters are categorized in medium priority for disclosure. However, other environmental materiality matters are considered as having low priority. Firm A however, explains that this matter will be addressed in future.

*"Moving forward, we will enhance our sustainability reporting disclosures to include the remaining medium and low priority matters progressively".*

The focus on "Biodiversity" material matter consists of the identification, assessment and management of risk associated with natural systems.

#### Green building for sustainable cities:

Firm A defines green buildings as *"efficient buildings in terms of energy, water and materials usage, with reduced impact on human health and the environment"*.

Green Building Index (GBI) is a recognised industry standard for sustainable built environment in Malaysia. Firm A's developments have obtained GBI certification as illustrated in Figure 2 below.



| Development                           | Award level | Key features                                                                                                                                                                                   |
|---------------------------------------|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The Robertson                         | Gold        | <ul style="list-style-type: none"> <li>• Energy efficient materials to reduce heat absorption</li> <li>• Rainwater harvesting</li> <li>• Material reuse</li> <li>• Recycling points</li> </ul> |
| HighPark Suites                       | Gold        | <ul style="list-style-type: none"> <li>• Rainwater harvesting</li> <li>• Landscape waste composting</li> <li>• Herb garden</li> </ul>                                                          |
| Firm A Cove Central Business District | Gold        | <ul style="list-style-type: none"> <li>• Sustainable biodiversity planning and design</li> <li>• Sustainable stormwater design and management</li> <li>• Green transport</li> </ul>            |
| Firm A Gardens                        | Silver      | <ul style="list-style-type: none"> <li>• Sustainable biodiversity planning and design</li> <li>• Sustainable stormwater design and management</li> </ul>                                       |

Figure 2: GBI Certification obtained by Firm A's Projects

**Firm's philosophy for biodiversity:**

The commitment of Firm A towards conserving biodiversity is grounded by the below philosophy:

*"We have always sought to protect the natural environment of areas that we develop and are committed to creating more liveable environments for our communities. We listen to the land to be able to preserve the hills, wetlands, water rolling terrain and water quality".*

*"Guided by this philosophy, our developments have matured over the years to encompass healthy green lungs that not only support the existence of plant and animal life but also create a sense of well-being for residents".*

**Biodiversity conservation efforts:**

The effort of Firm A in conserving the environment may be seen in all construction (pre-construction, during construction and post-construction) stages.

In the pre-construction stage, which involve the planning stage, Firm A conducts Environmental Impact Assessment (EIA) and identify the management approach for biodiversity conservation.

*"The EIA serves as an environmental management tool to evaluate and minimise environmental damage resulting from our developments through timely, adequate, corrective and protective mitigation measures".*

In the during-construction stage, which involve the design and construction, Firm A carries out biodiversity conservation efforts.

In the post-construction stage, which involve the operations and hand-over, Firm A committed to long-term maintenance of its new parks through its township management team and advocacy of biodiversity conservation to the customers and general public.

**Protecting endangered species:**

During the EIA conduct, Firm A identified a number of endangered species which are listed in the International Union for Conservation of Nature (IUCN) Red List, within its developments. Below is Figure 3 that specifies the species detected and Firm A's conservation initiative for the endangered species.

| Class                   | Types of species                                                                                                                                                                                                                    | Our conservation initiatives                                                                                                                                                                                                                       |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mammals                 | • Tree shrew                                                                                                                                                                                                                        | <ul style="list-style-type: none"> <li>Established a biodiversity manual that will be adhered to during construction</li> <li>We will monitor the natural ecosystem during construction and for a minimum of two years after completion</li> </ul> |
| Birds                   | <ul style="list-style-type: none"> <li>Pink-necked pigeon</li> <li>White-rumped munia</li> <li>Magpie robin</li> </ul>                                                                                                              |                                                                                                                                                                                                                                                    |
| Reptiles and Amphibians | <ul style="list-style-type: none"> <li>Common flying lizard</li> <li>Paradise tree snake</li> <li>Grass whip snake</li> <li>Common rat snake</li> <li>Malayan pond frog</li> <li>Green tree frog</li> <li>Monitor lizard</li> </ul> |                                                                                                                                                                                                                                                    |

Figure 3: Firm A's Initiative Towards Conservation of Endangered Species

**Enhancing biodiversity through collaboration:**

To enhance its commitment towards biodiversity, Firm A collaborate with a Non-Profit Organization (NGO) and a government body in establishing Firm A Parks.

*"In 2018 we established Firm A Parks in collaboration with Wetland International Malaysia and Forest Research Institute Malaysia (FRIM). Its main role is to monitor and coordinate measures to protect the biodiversity within a development while implementing design and maintenance standards to enhance the quality of living".*

*"In carrying out its function, Gamuda Parks takes into consideration three ecosystems which is softscape, waterscape, materials and resources".*

**Enhancing biodiversity through green spaces:**

In designing its landscapes, Firm A makes sure that the green coverage exceeds the minimum requirement of 10%.

| Project         | % of Green Spaces | Trees Planted | Shrubs Planted |
|-----------------|-------------------|---------------|----------------|
| HighPark Suites | 15%               | 512           | 168,138        |
| Jade Hills      | 14%               | 1,907         | 343,023        |
| twentyfive.7    | 19%               | 1,180         | 82,938         |
| Firm A Gardens  | 17%               | 997           | 45,178         |
| Kundang Estates | 15%               | 1,251         | 37,161         |
| <b>Total:</b>   | <b>-</b>          | <b>5,847</b>  | <b>676,438</b> |

Figure 4: Green Spaces Coverage in Firm A's Projects

**Enhancing biodiversity through Advanced Tree Planting (ATR):**

Firm A puts emphasis on environmental conservation through its tree planting initiative. The activity, which has started in 2016, aims to enhance the local ecosystem.

*"ATR involves the procurement of standard-sized young trees measuring 50mm to 75mm in diameter, nurturing them in an in-house nursery for at least two years before planting on site. We ensure an optimum mix of different plant species, including those that are native to the particular environment, in order to enhance the local ecosystem. ATR has been carried out in Firm A Gardens, Firm A Cove and Kundang Estates. Since 2016, we planted nearly 5,000 trees".*

#### **Enhancing biodiversity through retention lakes and ponds design:**

Firm A also strives to be recognized for projects that puts forward biodiversity as priority.

*“Firm A Land townships are well known for their parks and lakescapes. While these form part of planning compliance and play an important role in flood mitigation that is part of the Urban Stormwater Management Manual (MSMA), we sought to creatively transform this utilitarian necessity into unique landscape features that will be integral to the community”.*

*“Jade Hills, Kota Kemuning and Valencia are testaments of good masterplan designs which won numerous awards such as the Gold Award in Infrastructure Planning by the Singapore Institute of Planners”.*

#### **Environmental awards and achievements:**

For its environmental and social commitments, Firm A was granted with a number of environmental and CSR related awards. Among them are:

- *Best Corporate Responsibility (CR), Initiatives Award in the Big Cap Companies category at The Edge, Billion Ringgit Club (BRC) Corporate Awards 2016*
- *International Achievement Award, Yen So Sewage Treatment Plant, Malaysian Construction Industry Excellence Awards (MCIEA) 2015*
- *Kaohsiung KVMRT, Air Quality Protection Model Award, The Environmental Bureau of Kaohsiung Country Government, Republic of China*
- *Yen So Sewage Treatment, Gamuda City, Vietnam – World Gold Award for Environmental (Rehabilitation/Conservation), FIABCI World Prix d'Excellence Awards 2018*

## **5. DISCUSSION AND CONCLUSION**

The objectives of this study are (1) to investigate if environmental concerns are being mentioned in the selected firm's vision and mission statements; (2) to understand the commitment of the selected firm's board of directors towards the environment; and (3) to investigate the focus of environmental sustainability being disclosed in the firm's annual report.

While the aim of a vision is to set what a firm want to achive in future, the role of a mission is to foster a shared value among every level of an organization. A shared vision and mission among the levels in a business organizations may create a focus on common objectives, teamwork, behavioral guidelines, and emotional commitment to the company. With regard to the objective of this study, it was found that the terms related to environmental concerns have not being put forward in Firm A's vision and mission statements. However, the firm under study has mentioned about becoming “innovative world-class” infrastructure provider and property developer, thus signaling their intention to meet world expectation in preserving the environment. Besides these statements, firm also spelled out its environmental sustainability pillar, which stresses on “incorporating green mindset across our value chain”, which clearly explaining their seriousness in committing towards environmental protection not only inside the organization, but also throughout its value chain.

The emphasis in environmental engagement is further found in the management's statement. The statement from Group Managing Director consists in the annual report of firm A suggests that environmental concerns in term of environmental preservation, biodiversity, stakeholders engagement and developing environmentally smart buildings within its township have been put forward as important agendas to be achieved by the firm. This finding has further shed some light on the commitments set forth by Malaysian construction firm, thus the CITP model for Malaysia to become the “Sustainable Infrastructure Model” for the emerging world, may work into practice.

In term of environmental disclosure in stand-alone sustainability report of Firm A, it was found that the disclosure is comprehensive, detailing out clearly on what has been done to preserve the environment. Firm A highlights shrubs planting, advanced tree planting, constructing smart cities and green building and biodiversity conservation efforts as their main environmental commitments.

Although Firm A lists seven environmental material matters in its “Environmental Management” pillar, namely biodiversity, effluents and waste, emissions, energy management, water management, materials, land remediation, contamination or degradation, it was found that environmental disclosure has only been focused on biodiversity. It was also found that none of the seven environmental material matters has been made high priority, compared to other sustainability pillars of Firm A, which are the “Economic Growth” and “Social Contribution”. Furthermore, only two environmental material matters are regarded to be given medium priority (biodiversity and effluents and waste), while the other five material matters are considered as low priority to the company. These findings are quite devastating, as construction industry has always been associated with negative impact on the environment, therefore, addressing environmental matters as only low to medium priority brings the image that environmental is being put as less concerned by the company compared to its commitment towards firm’s economic development and social contribution. Nevertheless, it is quite a relief that Firm A is actually aware about this matter and will progressively address other medium and low priority sustainability material matters (including all the seven environmental material matters) in its future disclosures.

The biodiversity efforts put forward by Firm A include constructing green buildings, conservations efforts, protecting endangered species, environmental collaboration, providing more green spaces in its townships and tree planting activities. All these efforts have resulted in environmental awards and achievements, which are good for the firm’s corporate image.

The findings above indicate that firm in construction industry do have in depth commitment towards environmental sustainability. Although this type of industry always being associated to environmental degradation, its efforts in mitigating and compensating its negative impact by providing and installing other environmental commitments proves that construction industry does have the awareness and responsibility in preserving environmental sustainability. The findings thus support legitimacy theory, which stresses that business firms will always make effort to show that their existence is according to the norms of the society in which they operate, or in other words, being legitimate. The theory implies that organizations do not live in isolation, but need to have continuous relationship with society at large.

This study is conducted on a single case, which involves a Malaysian public listed firm. The firm under study is among the ten largest listed firms, thus explains its comprehensive commitments and disclosure on environmental sustainability. Further studies might want to research on medium to small size public listed firms or sustainability engagement by small and medium enterprises, to gauge different avenue in environmental sustainability disclosure research.

## References

- Abd-Mutalib, H., Muhammad Jamil, C. Z., & Wan Hussin, W. N. (2014). The Availability, Extent and Quality of Sustainability Reporting by Malaysian Listed Firms: Subsequent to Mandatory Disclosure. *Asian Journal of Finance and Accounting*, 6(2), 239-257. doi:10.5296/ajfa.v6i2.6108
- Abdullah, Z., & Aziz, Y. A. (2013). Institutionalizing corporate social responsibility: effects on corporate reputation, culture, and legitimacy in Malaysia. *Social Responsibility Journal*., 9(3), 344-361. doi:10.1108/SRJ-05-2011-0110

- Abdulrazak, S., & Amran, A. (2018). Exploring consumer support for CSR from the perspective of moral legitimacy. *Journal of Global Responsibility*, 9(1), 41-57. doi:10.1108/JGR-04-2017-0023
- Ahmed Haji, A. (2013). Corporate Social Responsibility Disclosures Over Time: Evidence from Malaysia. *Managerial Auditing Journal*, 28(7), 647-676. doi:10.1108/MAJ-07-2012-0729
- Antonites, E., & de Villiers, C. J. (2003). Trends in South African Corporate Environmental Reporting: A Research Note *Meditari Accountancy Research*, 11, 1-10.
- Begum, R. A., Siwar, C., Pereira, J. J., & Jaafar, A. H. (2007). Implementation of Waste Management and Minimisation in the Construction Industry of Malaysia. *Resources, Conservation and Recycling*, 51, 190-202. doi:10.1016/j.resconrec.2006.09.004
- Buniamin, S. (2010). The Quantity and Quality of Environmental Reporting in Annual Report of Public Listed Companies in Malaysia *Issues in Social and Environmental Accounting*, 4(2), 115-135.
- Campbell, A., & Tawaday, K. (1990). *Mission and Business Philosophy*. Oxford: Heinemann.
- Cavanagh, S. (1997). Content Analysis: Concepts, Methods and Applications. *Nurse Researcher*, 4(3), 5-16.
- Choong, J. (2019, 1 July 2019). Azmin: Upcoming Malaysia Plan to Emphasise Economic Empowerment, Environmental Sustainability, Social Revamp. *Malay Mail*. Retrieved from <https://www.malaymail.com/news/malaysia/2019/07/01/azmin-upcoming-malaysia-plan-to-emphasise-economic-empowerment-environmenta/1767025>
- CIDB. (2007). *Guidelines for Implementing Environmental Management System in the Construction Industry*. Kuala Lumpur, Malaysia.
- Cole, F. L. (1988). Content Analysis: Process and Application. *Nurse Specialist*, 2(1), 53-57.
- Darus, F., Yusoff, H., & Mohd Azhari, N. K. (2013). Environmental Disclosure of Islamic Financial Institutions (IFIs): Preliminary Evidence from Malaysia. *Journal of Energy Technologies and Policy*, 3(11), 433-440.
- Deegan, C. (2002). The Legitimising Effect of Social and Environmental Disclosures: A Theoretical Foundation'. *Accounting, Auditing & Accountability Journal*, 15(3), 282.
- Economic Planning Unit. (2015). *Eleventh Malaysia Plan 2016-2020*. Putrajaya Retrieved from <https://www.pmo.gov.my/dokumenattached/RMK/RMKe-11Book.pdf>.
- Elijido-Ten, E. (2007). Applying Stakeholder Theory to Analyze Corporate Environmental Performance. *Asian Review of Accounting*, 15(2), 164-184. doi:10.1108/13217340710823378
- Fernando, S., & Lawrence, S. (2014). A Theoretical Framework for CSR Practices: Integrating Legitimacy Theory, Stakeholder Theory and Institutional Theory. *The Journal of Theoretical Accounting*, 10(1), 149-178.
- Firestone, W. (1987). Meaning in Method: The Rhetoric of Quantitative and Qualitative Research. *Educational Researcher*, 16(7), 16-21.



- Hsieh, H.-F., & Shannon, S. E. (2005). Three Approaches to Qualitative Content Analysis. *Qualitative Health Research*, 15(9). doi:10.1177/1049732305276687
- Kalu, J. U., Buang, A., & Aliaga, G. U. (2016). Determinants of Voluntary Carbon Disclosure in the Corporate Real Estate Sector of Malaysia. *Journal of Environmental Management*, 182, 519-524.
- Krippendorff, K. (1980). *Content Analysis: An Introduction to its Methodology*. Newbury Park: Sage Publications.
- Latridis, G. E. (2013). Environmental Disclosure Quality: Evidence on Environmental Performance, Corporate Governance and Value Relevance. *Emerging Markets Review*, 14, 55-75.
- Mathews, M. R. (1993). *Socially Responsible Accounting*. London: Chapman and Hall.
- Mullane, J. V. (2002). The Mission Statement is a Strategic Tool: When Used Properly. *Management Decision*, 40(5), 448-455. doi:10.1108/00251740210430461
- Nagapan, S., Abdul Rahman, I., & Asmi, A. (2012). Factors Contributing to Physical and Non-Physical Waste Generation in Construction Industry. *International Journal of Advances in Applied Sciences*, 1(1), 1-10.
- Othman, R., & Ameer, R. (2009). Environmental Disclosures of Palm Oil Plantation Companies in Malaysia: a Tool for Stakeholder Engagement. *Corporate Social Responsibility and Environmental Management*, 17(52-62). doi:10.1002/csr.218
- Papulova, Z. (2014). The Significance of Vision and Mission Development for Enterprises in Slovak Republic. *Journal of Economics, Business and Management*, 2(1).
- Rosman, M., Ahmad Suffian, M. Z., Najihah Marha, Y., Sakinah, M. Z., & Raja Mariam, R. B. (2018). Moderating Effect of Innovation on Human Capital and Small Firm Performance in Construction Industry: The Malaysia Case *Journal of Fundamental and Applied Sciences*, 10, 772-792. doi:dx.doi.org/10.4314/jfas.v10i1s.57
- Samari, M., Godrati, N., Esmailifar, R., Olfat, P., & Mohd Shafiei, M. W. (2013). The Investigation of the Barriers in Developing Green Building in Malaysia. *Modern Applied Sciences*, 7(2), 1-10. doi:10.5539/mas.v7n2p1
- Sobhani, F. A., Amran, A., & Zainuddin, Y. (2009). Revisiting the Practices of Corporate Social and Environmental Disclosure in Bangladesh. *Corporate Social Responsibility and Environmental Management*, 16(3), 167-183. doi:10.1002/csr.193
- Sulaiman, M., Abdullah, N., & Fatima, A. H. (2014). Determinants of Environmental Reporting Quality in Malaysia. *International Journal of Economics, Management and Accounting*, 22(1), 63-90.
- Trierweiler, A. C., Severo Peixe, B. C., Tezza, R., Bornia, A. C., & Campos, L. M. S. (2013). Measuring Environmental Management Disclosure in Industries in Brazil with Item Response Theory. *Journal of Cleaner Production*, 47, 298-305. doi:10.1016/j.jclepro.2012.10.025
- Want, J. H. (1986). Corporate Mission. *Management Review*, August, 46-50.
- Wheelen, T. L., & Hunger, J. D. (1989). *Strategic Management and Business Policy* (3rd ed.). Massachusetts: Addison-Wesley Publishing Company.



World Commission on Environment and Development. (1987). *Our Common Future*. Retrieved from <http://upload.wikimedia.org/wikisource/en/d/d7/Our-common-future.pdf>

Yusof, N. A., & Iranmanesh, M. (2017). The Impacts of Environmental Practice Characteristics on Its Implementation in Construction Project. *Procedia - Environmental Sciences*, 37, 549-555.

Zainal, D. (2017). Quality of Corporate Social Responsibility Reporting (CSSR): the Influence of Ownership Structure and Company Characteristics. *Asian Journal of Accounting Perspectives*, 10, 16-35.

Zainul Abidin, N. (2010). Investigating the Awareness and Application of Sustainable Construction Concept by Malaysian Developers. *Habitat International*, 34, 421-426.  
doi:10.1016/j.habitatint.2009.11.011

Zolfagharian, S., Nourbakhsh, M., Irizarry, J., Ressang, A., & Gheisari, M. (2012). *Environmental Impacts Assessment on Construction Sites* Paper presented at the Construction Research Congress, Indiana, United States.