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# Environmental Risk Disclosure Practice in Malaysia: An Emphasis on the Plantation Industry

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## ABSTRACT

*This study aimed to investigate the environmental-related risk management practices via disclosures of publicly listed companies in Malaysia. A content analysis of annual and sustainability reports from 2012 to 2014 of all companies in the plantation industry was carried out. Using a disclosure rating index, the quantity and quality of the environmental-related risks disclosures was examined. The results reveal that the quantity and quality of disclosures are rather low and minimal; being in the form of short statements and a brief explanation of information. “Pollution and abatement-commitment” is found to be the most disclosed category and information, followed by “environmental conservation-energy”, while, “pollution and abatement-noise outdoor” is the least disclosed one. Generally, a majority of the disclosures showed a decreasing trend. These findings indicate that typically the plantation companies in Malaysia gave minimal attention to environmental risk reporting henceforth signifying that disclosure practice is not viewed as critical to their sustainability agenda and value creation.*

**Keywords:** *Environmental Risk, Disclosure, Plantation, Content Analysis, Malaysia*

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## INTRODUCTION

Business corporations today are expected to integrate sustainability risk management into their overall risk management strategy to minimize potential losses and to explore new business opportunities. Sustainability risks management which embeds the concept of sustainable development has to a certain extent put pressure on companies to change the way they do business. Anderson and Anderson (2009) urge the importance of environmental and social responsibility risks, which is in line with the growing pressures to address company's related environmental and social responsibility performance, in addition to the traditional bottom line.

Corporations are consistently being pressured into changing the way they do business to address social and environmental responsibility performance in addition to the mere business focus on profit and economic performance (Delai & Takahasi, 2011). Risk information particularly social and environmental risks in the annual reports are perceived to be very important to investors in making equity and debt investment decisions. In developed countries, various sustainability indicators and measures at the business scale have been developed including the Global Reporting Initiative, Sustainability Metrics, Jones Sustainability Index and few others. Nonetheless, Delai and Takahasi (2011) point out that nowadays there is little evidence of progress in the integration of social and environmental impacts into management decisions. Also, Stern report (2006) states that business management and most business models do not consider environmental issues as part of their long-term perspective. Empirical evidence on the benefits of integrating sustainability risk management concerning value creation remains inadequate. Besides, theoretical frameworks explaining institutional influence on sustainability risk management (SRM) practices have yet to emerge. At the global level, the issue of sustainability risk which concerns social and environmental risk is a newly emerging risk-related area. Pragmatic proof in this area is somewhat inadequate especially in the context of emerging economies.

The Malaysian government, a developing country, views sustainability as a national agenda in its effort to transform the country into a competitive nation, with a moral and ethical society. It is timely that Malaysia is at the forefront in practicing sustainably for the emerging economies. Generally,

sustainability-related practices may include environmental, social, economic and governance management exercises. At the very least, companies in Malaysia should begin by reporting how the sustainability-environment-social risks are being managed and accordingly disclose their ability in creating or sustaining the business values if the dangers eventuate. These notions put forward some initial idea to the need for an investigation on companies' actual environmental-related risk disclosure (ERD) practice. Notably, this research intends to focus on companies in the plantation industry; as this industry operates in environmentally-sensitive areas as well as receives pressure from various stakeholders to act environmentally. Hence, this research aims to examine the environmental-related risk management practices via disclosures of publicly listed companies in Malaysia. In summary, this paper seeks to answer the following research questions:

1. To what extent do plantation companies in Malaysia practice ERD?
2. What is the trend of ERD quantity and quality amongst plantation companies in Malaysia?

## LITERATURE REVIEW

### Sustainability and its Meanings

*“If you want to continue to succeed as an energy company in the coming decades, you need to understand and meet people’s expectations for environmental and social performance, as well as delivering good technical and financial performance. That means putting solid business principles, including sustainable development, at the heart of how you do your business.”*

(Jeroen Van Der Veer, former CEO of Shell, in Maimone & Schrank, 2016, p.613).

The concept of sustainability has been debated as early as the 1970s covering economic growth and preservation of the environment and social aspects in developing countries. This is evidenced by many landmark environmental laws that acknowledged the damage caused by industrial operations in the United States at that time. Some of the organizations have

developed sophisticated sustainability programs, which are supported not only by adequate funding but also from the highest level of management (AON Sustainability Industry Update Report (AON), 2007). Currently, sustainability has become an integral part of operations of many world largest business corporations. The report of the World Commission on Environment and Development (WCED) through the Brundtland Commission Report defines the term ‘sustainability development’ as “development that meets the needs of the present without compromising the ability of the future generations to meet their own needs” (p.54).

The concept of sustainability relates to a business approach that creates long-term shareholder value by embracing opportunities and managing risks deriving from economic, environmental, and social developments<sup>1</sup>.

Globally, the awareness and engagement on sustainability strategies and management have significantly increased amongst business corporations. Companies have begun to acknowledge the potentials of sustainable products and services while at the same time are assured on the need to reduce and avoid related costs and risks. Investors are more interested in companies that are committed with the sustainability agenda (see Knoepfel, 2001), which include environmental, social and economic matters. Knoepfel (2001) discusses that sustainability opportunity and risks are directly connected with business’ commitment to these sustainability performance principles; namely, innovation, governance, shareholders, leadership and society.

## **Environmental Risks, Meanings and Potentials**

There has been significant growth in public concern for the wellbeing of the natural environment. This concern has stimulated environmental-related initiatives including regulations, policies, stakeholder engagement programs as well as recognition and awards. For businesses, the environment may pose threats to them when not taken care; in which lenders and investors may refuse to establish links as the companies fail to uphold sustainable development. Importantly, what is the meaning of environmental risk? Environmental risk relates to the “actual or potential threat of adverse effects on living organisms and the environment by effluents, emissions, wastes, resource depletion, arising out of an organization’s activities”

<sup>1</sup> See [www.sustainabilityindexes.com](http://www.sustainabilityindexes.com)

(Crawford Global Technical Services, 2017). Carnegie Department of Global Ecology defines ‘environmental risk’ as any possible value of an undesirable occurrence and its consequences that may arise from a natural being or human action that is transmitted through the natural environment. Accordingly, from a business perspective, environmental risk relates to any risks which may have the environmentally-driven impact on the business. Carnegie Department of Global Ecology (2017) states that among the potential company’s environmental risks include:

1. Damage to brand reputation
2. Penalties for violation
3. Damages resulting from faulty or defective construction or materials
4. Losses from first- and third-party property and material liability
5. Expenses for clean-up of emissions
6. Business interruption losses during contamination removal
7. Costs associated with premiums, litigation, investigation, and compliance
8. Expenses for remediation measures
9. Historical (pre-existing) coverage for past events or operations
10. Financial assurance to satisfy regulatory requirements in a contamination/environmental destruction site/event

Successful implementation of risk management may lead to an increase in earnings growth and reduction in expenses (Walker et al., 2002), reduction in the cost of capital and proper allocation of resources within an organization (Simkins, 2008). A study by Anderson and Anderson (2009) involving 896 companies reveals that effective risk management improves an organization’s ability to reduce adverse effects of risk events and eventually leads to higher financial performance, i.e., retained earnings, return on assets and growth in market value. Lin et al. (2005) also found that proper risk management via diversification could heighten the performance (ROA and ROE) of the banking industry. Recent studies also found evidence of a relationship between social and environmental disclosure and the risk management strategy of firms (e.g., Arora & Lodhia, 2017; Abdelrehim, Linsley, & Verma 2017). The studies highlight that social and environmental disclosure has the potential to function as a strategy for managing reputation risk.

## **Theoretical Perspective: Stakeholder Theory**

From the ERM perspective, Smith (1995) reveals that it can improve performance predictability and thus provide comfort to important stakeholder groups. The Stakeholder Theory proposes that companies should be concerned environmentally and inform stakeholders about their management and practice. Such an effort will demonstrate companies' accountability, particularly in relation to business' environmental stewardship (Gary et al., 1993). Any development in environmental practices will be reflected positively in the company's profitability. This is derived from the inverse relationship that exists between the explicit and implicit costs of the business (Wahba, 2007). For instance, if an organization decides to bring down its implicit cost by acting in an environmentally irresponsible manner by reducing costs of pollution prevention and protection, it will experience higher explicit costs, and its competitive edge will be exhausted (Waddock & Graves, 1997). Qualitatively, ERM may improve stakeholders' confidence via steady earnings projection which eventually will encourage investment in value-creating firm-specific relationships (Korosec & Horvat, 2005; Anderson & Anderson, 2009).

## **Environmental Risks and Disclosure Practice**

Traditional public reporting which involves financial and accounting data is no longer relevant and sufficient in the current era. Demands for a company's information have grown to include non-financial data as well as risks and management approach. Stakeholders currently are getting more interested in obtaining additional information concerning a company's future efficiency, effectiveness and ultimately its sustainability growth. The management team, existing and potential investors, creditors, suppliers, consumers, government authority and employees are amongst the key stakeholder groups of companies (see Mathur & Mathur, 2000); and they have different interests and needs for information about environmental risks of the specific company. Korosec and Horvat (2005) deliberate the various form of stakeholders' interest in ERD. For instance, management seek information concerning company's future gains from an investment, creditors require information about company's risk management in assessing company's ability in settling liabilities, consumers demand information about risks in quality products and services, and employees seek related



information about the security of their employment. Hussainey and Salama (2010) argue that investors are more concerned with environmental issues including disclosures, as it will facilitate them in forecasting future economic decisions.

These notes signify the importance of disclosures amongst companies in practicing ERD through proper reporting mechanisms such as annual reports and other stand-alone reports. This business reporting initiative functions as a platform for the company to demonstrate accountability for environmental stewardship. Companies have the opportunity to describe and justify their risk management; involving related programs, activities and other initiatives in eliminating, reducing and controlling potential threats to their business. Previous studies have conducted research on ERD practices amongst companies in various countries. Mitali et al. (2011), for instance, investigated ERD of India's main core sector companies and discovered that the level of ERD varies across industries as well as companies and is highly qualitative and not quantitative. Welbeck (2017) used the Global Reporting Initiative (GRI) index to study ERD over a 10-year period (2003 to 2012) and found that listed firms in Ghana disclose a 'low' amount of environmentally-related information. Similarly, Akrouf and Othman's (2016) study has shown that companies in all 10 Middle Eastern and North African (MENA) emerging markets generally practice low ERD. Eljayash (2015) also found a similar result about ERD practice amongst countries of the Arab Spring, i.e. Egypt, Libya, and Tunisia.

This review poses a stimulating idea to investigate the ERM practices via ERD amongst companies in Malaysia. Being a fast-growing developing economy, is the industry market reacting positively to ERD? What is the current practice in ERD? To what extent is ERD being practiced?

## RESEARCH METHODOLOGY

This study primarily used secondary data obtained from both annual and sustainability reports of companies, from the year 2012 to 2014. This period was deemed relevant as it provides a proper understanding relating to ERD practices in companies in Malaysia after the introduction of the CSR Framework and Silver Book in 2006, and before the introduction of

the Sustainability Framework by Bursa Malaysia in 2015. Information concerning the disclosures was gathered from the companies' respective websites as well as the website of Bursa Malaysia. The time duration studied was deemed relevant in understanding the ERD practice of among public-listed companies in Malaysia, following the introduction of various regulatory provisions relating to environmental issues. The regulatory provisions include the CSR Framework, Sustainability Reporting Framework and Disclosure Listing Requirements by Bursa Malaysia.

A content analysis of the ERD was conducted on all 40 publicly listed companies in the plantation industry (as at 31 December 2012). Thus, the total cases for this study was 120. Krippendorff (1980) states that content analysis is "a research technique for making replicable and valid inferences from data according to their context" (p.21). Additionally, the extended definition of content analysis from a statistical point of view according to Neuman (2003) represents:

a technique for gathering and analyzing the context of text... content covers words, meanings, pictures, symbols, ideas, themes, or any message that can be communicated while text means anything written, visual, or spoken that serves as a communication medium... (p. 310).

The plantation industry was specifically chosen as a case in this study; and that such an industry has a high impact on the natural environment thus it is deemed as one of the sensitive industries (see Patten, 1991; 1992; Jaffar & Buniamin, 2004). Prior studies suggest that companies in environmentally-sensitive industries tend to report a higher level of environmental information. These companies also receive more pressure to act environmentally (see, e.g., Patten, 1992; Joshi & AlModhahki, 2003). Hence, a focus on this industry sector will offer a more important finding towards achieving the objective of the study.

The two main approaches to measuring ERD in this study are 'quantity' and 'quality' factors. "Quantity" relates to the particular frequency of the information disclosed based on the number of sentences. Whilst, "Quality" relates to the narrative form of disclosures made to the public and measured based on scales using a disclosure rating index. These approaches are

consistent with previous studies such as Sumiani et al. (2007), Darus et al. (2016) and Norwazli et al. (2017). Previous literature has established disclosure rating index in measuring CSR-related disclosures; for instance, Wiseman (1982), Cormier and Gordon (2001) and Cormier et al. (2005). The rating scale used by these studies are deemed relevant in measuring the extent of ERD used by the plantation companies (also, Sumiani et al., 2007; Yusoff & Lehman, 2008).

**Table 1: Measurement of Environmental-related Risks Disclosures (Quality)**

Rating Scale	Form of Disclosures	Disclosure Indicators
5	Combination	Great detailed explanation of activities over the year Include photos of activities Include cost incurred or estimated Include KPI / achievement/awards etc.
4	Quantitative	A brief explanation of activities Include photos of activities Include cost incurred and/or future estimate and/or target
3	Qualitative	Narrative explanation described in great detail (3-10 sentences) Include activities during the year (including photo/graphs) Include KPI / achievement (awards) / ISO certification etc.
2	Narrative	Item described in great details (less than 10 sentences in total) Briefly explain (what and how) Include a statement on companies' commitment
1	General	The item mentioned in general statement (one or two sentences)
0	None	No disclosure

This study modified the available rating index from the literature in examining the quantity and quality of ERD. Table 1 describes the detail measurements of the disclosures examined, ranging from “0” for non-disclosure to “5” for extensive descriptions relating environmental information of the company. In ensuring the reliability of the content analysis, an inter-rater approach was used (also Nik Ahmad et al., 2003); as the following steps:

1. Researcher 1 conducted the content analysis of disclosures for company A

2. Researcher 2 also did the content analysis of disclosures for company A
3. The detailed scoring of the two researchers was compared
4. Any inconsistencies were discussed and solved

Such a research approach is crucial in ensuring the consistency of the content analysis process as well as to assist in obtaining a right representative data of the plantation industry. Accordingly, descriptive and graphical analyses were used to interpret the research findings.

## RESULTS AND DISCUSSION

### Quantity Form of Environmental Risk Disclosures

As discussed in the earlier section, Malaysian ERDs have been examined from the year 2012 to 2014. The total quantity of the disclosures made by the 40 plantation companies studied were 741 sentences in 2012, 636 sentences in 2013 and 677 sentences in 2014. Thus, there was a drop in ERD between 2012 and 2013, and a slight increase in the disclosure behavior in 2014. Based on the three years of study, it was found that the 'quantity' forms of disclosures amongst the plantation companies were rather very minimal (also Nik Ahmad et al., 2003; Eljayash, 2015; Darus et al. 2016; Akrouf & Othman, 2016). Table 2 indicates the location of the information disclosed in the companies' annual and sustainability reports. A majority of the ERDs were reported in the Chairman's Statement, Corporate Governance, and Sustainability/CSR sections. The plantation companies studied had highly disclosed environment-related risk information in the Sustainability/CSR section, as compared to the other two principal sections. Over the three years, the mean scores of the disclosures in the Chairman Statement showed a slight decrease, i.e., approximately 1.8 sentences in 2012 then, a reduction to 1.58 both in 2013 and 2014. On the other hand, the disclosures made in 2012 are about 1.23 sentences, followed by an increase to 1.38 and 1.3 in 2013 and 2014 respectively. These findings indicate a shift in the location of ERDs when compared to previous Malaysian studies (e.g., Muhammad Jamil et al., 2003; Nik Ahmad et al., 2003). The findings signal the compliance efforts of companies in disclosing more information consistent with the disclosure policy imposed by Bursa Malaysia on CSR

related information. The Sustainability/CSR section provides greater space for ERD compared to the Chairman Statement and Corporate Governance sections. Nevertheless, the trend of disclosures in this section was instead a downward one (mean scores of 15.45 to 11.23 sentences) both in 2013 and 2014.

**Table 2: Environment Risk Disclosure (Quantity)**

Location of Environment Risk Disclosure (Quantity)	Mean scores		
	2012	2013	2014
Chairman Statement	1.8	1.58	1.58
Corporate Governance	1.23	1.38	1.3
Sustainability / CSR	15.45	11.23	11.23

### Quality Form of Environmental Risk Disclosures

Table 3 shows that generally, the trend in ‘quality’ reporting of environmental-related risks information is somewhat of a similar trend with the ‘quantity’ results. A high disclosure is evident in the Sustainability/CSR section as compared to the Chairman Statement and Corporate Governance sections.

**Table 3: Environment Risk Disclosure (Quality)**

Location of Environment Risk Disclosure (Quality)	Mean		
	2012	2013	2014
Chairman Statement	0.35	0.3	0.3
Corporate Governance	0.25	0.35	0.35
Sustainability / CSR	1.25	0.98	0.93

Generally, the ‘quality’ of disclosures amongst the plantation companies was rather low, with mean scores ranging between 0.3-0.35, 0.25-0.35 and 0.93-1.25 in the three sections studied, respectively. Such a result indicates that the risk disclosures of the plantation companies in Malaysia during these three years were only a ‘general’ form of disclosure rank (0 to 5); in which, only brief and general information was disclosed – i.e., in one to two sentences long.

## Environmental Risk Disclosures by Categories

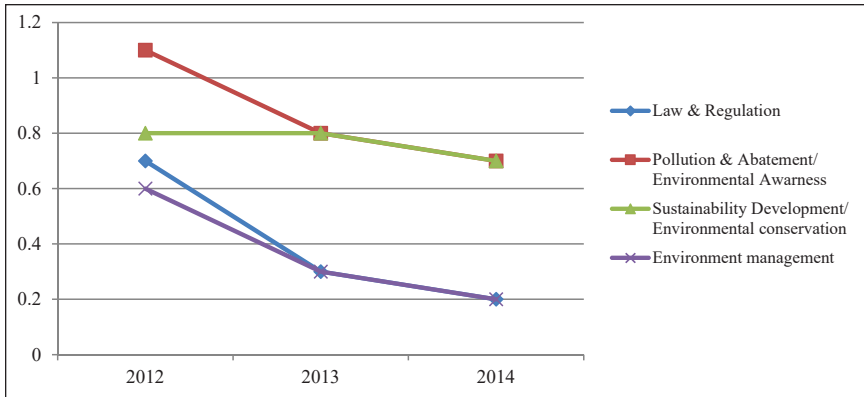
Further examination on the practice of ERDs of the plantation companies was carried out, and Table 4 provides the mean scores of the disclosure forms and patterns according to four categories; namely, Law and Regulation, Pollution and Abatement / Environmental Awareness, Sustainability Development / Environmental Conservation, and Environment Management. The results from Table 4 reveals that the disclosures were very minimal, with a majority of the mean scores of less than 1 (over 5 – maximum). Moreover, the disclosure trends was a decreasing one, over the three years. All categories of environmental-related risk disclosures were less than 1. Pollution and abatement / environmental awareness category of information was found to be the most reported one, followed by sustainability development / environmental conservation. The least disclosed information was environmental management (average mean score of 0.37). These findings indicate that the companies are committed to contain the potential effect of environmental pollution and to protect the natural environment (also Yusoff et al., 2015).

**Table 4: Environment Risk Disclosure by Categories (Quality)**

Categories of Environment Risk Disclosure	Mean			Average Mean for three consecutive years	Ranking
	2012	2013	2014		
Law and Regulation	0.7	0.3	0.2	0.40	3
Pollution and Abatement / Environmental Awareness	1.1	0.8	0.7	0.87	1
Sustainability Development / Environmental Conservation	0.8	0.8	0.7	0.77	2
Environment Management	0.6	0.3	0.2	0.37	4

Regardless of the ranking, it is somewhat perplexing that on average the disclosures were very low. The plantation companies reported minimal information concerning all studied categories thus implying that communicating environmental-related risks matters publicly is somewhat immaterial to the companies. This discovery makes one wonder why there is such a low disclosure from plantation companies, being one of the sensitive industries. The prevailing literature states that disclosing environmental information to the public at large represents part of the

corporate legitimization and strategic act (Zeithaml & Zeithmal, 1984; Zinkhan & Carlson, 1995), enhances corporate image (Buniamin et al., 2008), increases accountability (Yusoff & Darus, 2012) and many others.



**Figure 1: Environment Risk Disclosure by Categories (Mean Quality)**

The charted practice of environmental-related risk disclosures, as shown in Figure 1, demonstrates the decreasing trend. The steepest fall of disclosures relates to the *law and regulation category*, followed by *pollution and abatement / environmental awareness*.

#### Environmental Risk Disclosures by Items

The ERDs were sub-divided into four key categories comprised of 18 items; as presented in Table 5. Overall, it can be seen that the extent of the disclosures had ranged between 0.4 and 1.5 in 2012, 0.15 and 1.2 in 2013 and 0.13 and 1.08 in 2014. This result indicates a decreasing trend for the majority of the items studied. The diminishing level of the extensiveness of disclosures by the plantation companies was evident between 2012 and 2013, as compared to 2013 and 2014 (also see Figure 2).

For the three consecutive years, commitment on *pollution and abatement / environmental awareness* was the item most extensively disclosed, while, the least reported items were *noise outdoor*; *ISO 14001 certification* and *litigation* for 2012-2014 respectively. On average, based on the mean scores, commitment on *pollution abatement / environmental awareness* was ranked first while *noise outdoor* was the lowest.

The findings of the study as discussed above generally provide little explanation on the support of the stakeholder theory used as the underpinning theoretical foundation. The plantation companies may provide ERD to fulfill the information needs and demands of their various stakeholders; however, the minimal practices imply a weak connection to the theory’s applicability.

**Table 5: Environment Risk Disclosure by Items (Mean Quality)**

Category	Items	Level of Extensiveness (Mean)			Average Mean for three consecutive years	Rank
		2012	2013	2014		
Law and Regulation	Compliance	0.8	0.4	0.33	0.51	10
	Litigation	0.63	0.61	0.13	0.46	11
Pollution and Abatement / Environmental Awareness	Air	1.1	0.81	0.8	0.90	7
	CO <sup>2</sup>	1.15	0.89	0.88	0.97	5
	Waste	1.13	0.93	0.93	1.00	3
	Commitment	1.5	1.2	1.08	1.26	1
	Chemical Management	1.03	0.6	0.6	0.74	8
	Noise Outdoor	0.4	0.18	0.18	0.25	18
Sustainability Development/ Environmental Conservation	Recycling	1.18	0.86	0.85	0.96	6
	Energy	1.15	0.95	1	1.03	2
	WWF	0.4	0.18	0.18	0.25	17
	Green Initiative	1.1	0.93	0.93	0.99	4
Environment Management	Policies	0.94	0.48	0.4	0.61	9
	EMS	0.45	0.28	0.28	0.34	14
	Auditing	0.43	0.23	0.2	0.29	15
	Awards	0.48	0.33	0.3	0.37	13
	ISO14001	0.55	0.15	0.15	0.28	16
	Other	0.75	0.21	0.15	0.37	12



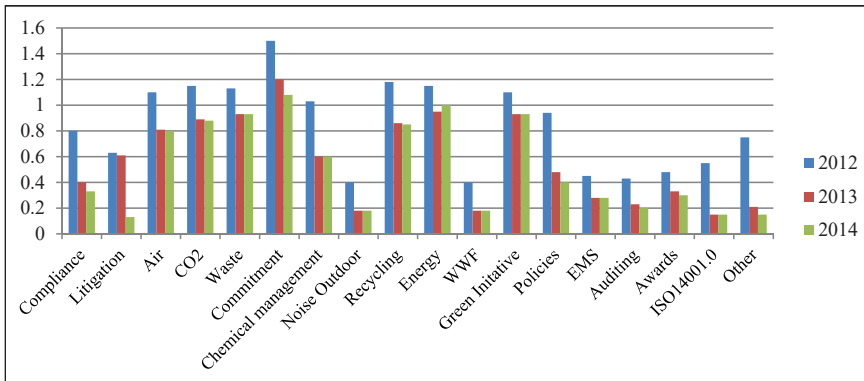


Figure 2: Environment Risk Disclosure by Items

## CONCLUSIONS AND FUTURE RESEARCH

This study examined the ERDs of plantation companies in Malaysia over a three-year period, i.e., 2012-2014. Data was gathered from both annual and sustainability reports via content analysis. The plantation industry formed the prime focus of this study as this industry has a direct link with the natural environment, thus known as one of the sensitive industry sectors.

The main conclusion to be gleaned from this study is that the plantation industry in Malaysia appears to give minimal attention to disclosing environmentally-related risk information to the public. Generally, the ERD practices of the plantation companies have been found to be low. Both the quantity and quality of the disclosures had resulted in minimal evidence. The number of sentences of the information disclosed was rather marginal, and that the rating scales discovered indicate that the information was in the form of just general and brief description about companies' environmental-related risk matters and practices. Such findings contribute to the existing literature on ERD practices amongst plantation companies in Malaysia. These findings also generally put forward an initial idea that the plantation companies in Malaysia gave minimal attention to environmental risk reporting henceforth signify that disclosure practice is not critical to their business sustainability agenda and value creation. The study results, therefore, suggest that more efforts and initiatives need to be made by the plantation companies in Malaysia. Respective regulators and

professional bodies should seek strategies to ensure greater awareness as well as engagement amongst companies. It is hoped that this paper, to a certain extent, offers preliminary indication concerning companies' greater role in recognizing that ERDs are vital.

The minimal 'quantity' and 'quality' ERDs also suggest that plantation companies do not recognize such disclosures as crucial for their sustained growth. Hence, it would be interesting to extend the research investigation and seek the reasons behind the increase and decrease in disclosures over these years. Was it due to leadership management, stakeholders' pressures or lack in regulatory control? Also, future research may include investigations on ERDs, both in Malaysia and other countries in the region, as well as the impact of the disclosures on business performance – financial and social.

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