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An Appraisal of Environmental Management Strategies in Malaysia's towards Achieving Sustainable Development Goals

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Abstract

Malaysia is a rich developing country with numerous natural resources concerns, particularly those relating to the management of their surrounding environment. Like other developing countries, Malaysia has also established strategies to ensure her natural beauty remains sustainable and rehabilitated. To achieve these aims as part of the milestones in becoming a developed country, the strategies need to be set by the government through appropriate mechanisms. The objective of this paper is to examine how the Malaysian government appraises its environmental management strategies. There are a number of methods that can be applied to appraise some of the programs or activities done. In this study, appropriate instruments were chosen to achieve this objective, namely survey and interviews involving an expert group in this field. The questions were limited to certain aspects like management and government efforts. Besides, government report which is related to this area was also used to fulfill the objective. In addition, SWOC analysis for this study is also included in the discussion. The raw data were analysed using

frequency analysis technique to examine the percentage of reliability of the data measuring. To sum up, the results are presented in the several tables.

Keywords: Environmental Management, Sustainable Development, Policy Assessments, SWOC Analysis, Malaysia,

1.0 INTRODUCTION

As a rich developing country with various natural resources, Malaysia places significant concerns about the management of their surrounding environment. Like other developing countries, Malaysia has set up strategies to ensure that her natural beauty is sustained and rehabilitated. Malaysia's seriousness in the management of environment is evident with the establishment of the environmental act that was announced by government in 1974. Some of the major issues that are covered in the act are the matters of environmental resources and environmental degradation. In this regard, the country has moved forward towards achieving sustainable development, whereby all developments in the country are always carried out by abiding to regulations and fundamental assessments criteria set by the government. Historically, in 1970 there were only 10 ministerial departments of environment around the world (Ausubel et.al., 1995), which shows that Malaysia was one of the earlier countries to set up environmental policies compared to other developing countries. Tremendous attempts were put to ensure that the development would not give huge damaging impacts to environment directly.

On the other hand, Malaysia has also established strategies to ensure that the environmental resources that are used for development are rehabilitated and revived. Malaysia is gifted with natural resources in areas such as agriculture, forestry and minerals. Malaysia is one of the top exporters of natural rubber and palm oil globally in the agriculture sector. Tin was once a major contributor to Malaysia's economy until the collapse of the tin market in the early 1980s. Since then, petroleum and natural gas took over as the stronghold contributor to the economy. In 2004, Malaysia was ranked 24th in terms of world oil reserves and 13th for natural gas. 56% of the oil reserves exist in Peninsular Malaysia while 19% in East Malaysia (Chua & Oh, 2010). Moreover, concerns for developing countries can be clearly seen in the most oft-cited definition of sustainable development by the World Commission on Environment and Development (WCED or the Brundtland Commission) as 'the development that meets the needs of the present without compromising the ability of future generations to meet their own needs' (WCED, 1987, p. 43).

2.0 STUDY FRAMEWORK

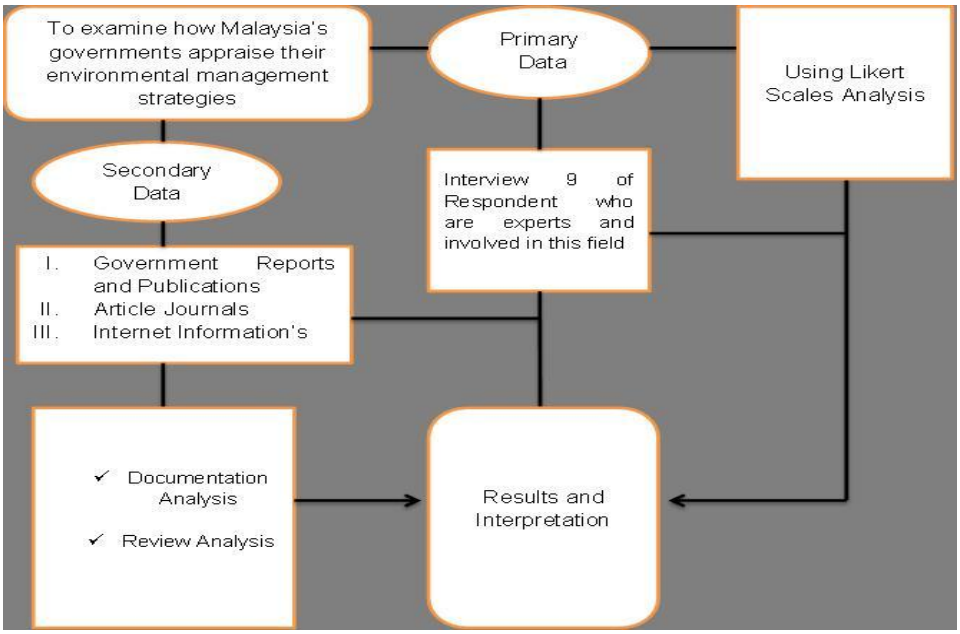

Figure 2.0: Study Framework for Malaysia's Environmental Management Strategies Appraisal

3.0 STUDY REGION

As one of the developing countries in Asia, Malaysia has begun to be concerned about environmental issues since colonial times. Malaysia actively participates in for example the Association of South-East Asian Nation (ASEAN) and in Asia-Pacific Economic Cooperation (APEC). In addition, Malaysia has also participated in partnerships for the implementation of economic strategies, such as regional growth triangles (UNDP, 2005). Malaysia is an independent nation state, a parliamentary constitutional monarchy with a federal government structure. The country, one of 10 nations in South-East Asia, comprises thirteen states spread across two major regions separated by the South China Sea (Peninsular Malaysia and East Malaysia on the Island of Borneo, and three Federal Territories). The three Federal Territories, Kuala Lumpur, Labuan and Putrajaya were established in 1974, 1984 and 2001 respectively. Peninsular Malaysia and East Malaysia have a common background of being under British colonial administration in the past, though this administration began at different times in different states. Since her independence, Malaysia also represents one of the success stories of a developing economy. Malaysia succeeded in reducing its incidence of poverty from 49.3 percent in 1970 to 6.3 percent in 2002 (Anuar, 2003).

Subsequent development policies such as the National Development Policy (NDP), National Vision Policy (NVP) and Vision 2020 had continued to incorporate elements of poverty eradication strategies in their implementation. With effective implementation of these policies, Malaysia's poverty index has declined further and now stands at less than five per cent. The program of poverty eradication has continued and the development policies focused on the objective of reducing the incidence of hardcore poverty to zero per cent by 2009 (Muda, 2005).

The total land area for Malaysia is about 33 million hectares of which 19.5 million hectares or 59.1 percent of the total area are covered by forest. Out of the 19.5 million hectares, 14.3 million hectares are gazetted as Permanent Reserve Forest (PRF) or Forest Reserves (Sabah and Sarawak) and are managed under the Forestry Department of each state. The forest reserves are managed with the objective of maintaining the forest ecosystem in perpetuity, while allowing for the use of the forest products and services. Within these areas, there are classifications for different categories of use, such as for timber production, water catchment, soil protection, recreation, research and wildlife protection. In addition to these areas, Malaysia has also gazette a total of about 3.3 million hectares as protected areas under the network of Wildlife Sanctuaries, National Parks, State Parks and Wildlife Reserves that are scattered throughout the country (Pereira, 2005).

Due to its rich natural geography, Malaysia has been recognised as one of the twelve mega biologically diverse countries in the world. It is estimated that there could be over 15,000 known species of flowering plants, 286 species of mammals, 150,000 species of invertebrates, over 1,000 species of butterflies, 12,000 species of moths and over 4,000 species of marine fish in the country. To ensure the protection and conservation of its biodiversity, Malaysia has created a network of protected areas that are representative of the ecosystems found in Malaysia. As previously noted, the network of protected areas for forest is covered under Wildlife Sanctuaries, National Park, State Park, and Wildlife Reserves that totals up to 3.3 million hectares.

The quality of air and water directly affect the socio-economic condition of society. As a result of the rapid economic growth in Malaysia over the past two decades, air and water pollution are generally expected to become more prominent. Rapid urbanisation and industrial growth account for the continued increase in air pollution. The sources of air pollution are from the transportation and industrial sector through the burning of fossil fuel. The increasing number of vehicle remains to be the main cause of the deterioration of air quality, particularly in major cities such as Kuala Lumpur (Pereira, 2005).

4.0 METHODS AND TECHNIQUES

The data gathered for this study are made up of by primary and secondary. Primary data were collected by interviewing respondents. The respondents were selected based on the criteria shown below:

i. Those who are expert in environmental management fields in Malaysia;
ii. Those who are involved directly in researches or projects that deal with environmental fields;
iii. Those who manage projects dealing with government and private sectors;
iv. Those who participate in academic activities, research and publication project, NGOs, project implement and policy making, particularly relating to environmental concerns with ten years experience and above.

Meanwhile, the secondary data were collected from documents which are related to this study. Among these documents were Economic Planning Unit reports, Malaysia Plan Reports, Department of Environment Reports, research and publications, journals, NGOs' annual reports, government and private project reports and newspaper cuttings. Besides, observation approaches were also applied for certain assessments.

For the primary data, the method used was Likert scale analysis. Likert scale is a psychometric response scale primarily used in questionnaires to obtain participant's preferences or degree of agreement with a statement or set of statements. Likert scales are a non-comparative scaling technique and are unidimensional (only measure a single trait) in nature. Respondents are asked to indicate their level of agreement with a given statement by way of an ordinal scale (Dane Bertram, n.d).

5.0 RESULTS AND INTERPRETATIONS

5.1 Road to Vision 2020 and Sustainable Development

Table 5.1: Road to Vision 2020 and Sustainable Development in Malaysia

Outline Perspective Plans	**Malaysia Plan**	**Main Focus**
OPP1 (1971-1990) National Economic Plan	Second, Third, Fourth & Fifth Malaysia Plans	To improve Malaysia's socio-economy, especially in poverty alleviation and the restructuring of society
OPP2 (1991-2000) National Development Plan	Sixth & Seventh Malaysia Plans	To provide balanced and equitable development for Malaysia.
OPP3 (2001-2010) National Vision Plan	Eighth & Ninth Malaysia Plans	Striving to build a resilient and competitive nation to withstand domestic and global challenges.
OPP4(2011-2020) National Sustainable Development Plan	Tenth & Eleventh Malaysia Plans	Achieving sustainable development through sound economic, social and environmental principles and integrated practices.

5.2 Environmental Strategies in Malaysia's Planning

An environmental policy is carried by the means of the strategies underlined by governments to ensure their planning would become the pillars that support the main objectives set. Like other developing countries, Malaysia has also placed efforts to make achieve her aims within the targeted time period. Table 5.1 above displays some of the efforts undertaken by the Malaysian government to reach her real objective towards achieving as sustainable development as accomplished by developed country. Malaysia has applied different approaches on the focused prior environmental perspectives especially after Malaysia was announced as an independent country.

Malaysia looked seriously into environmental management perspective since 1970's. The government realised the importance of protecting and preserving the natural resources before it is too late. In addition to coming up with policy blueprints, it also encouraged continuous efforts to reach these aims. Each of the planning was arranged and managed using well studied guidelines. The results gathered through the interviews of people from the different cohorts indicated the success of the environmental management strategies in Malaysia towards achieving sustainable development goals.

5.3 Timeline of Environmental Strategies in Malaysia

There are significant attempts made by Malaysian government to ensure that environment is managed appropriately since Malaysia was announced as an independent country. Independence in Malaysia was gained in 1957. At that time, Malaysia has put in her own effort to increase economic activities. In order to develop the country during this era, exploration of natural resources was one of the important avenue to generate these economic activities. Beginning 1970, Malaysia had started to consider environmental protection seriously, leading to the proposal of Environmental Act in 1974. The regulations and rules was complete with enactments and acts in terms of enforcement by federal governments, state governments and local authority. After a certain period, these rules and regulations were upgraded through the proposed Environmental Policy in 2002. Under these policies, miscellaneous topic and approaches about environment are upgraded to enhance its monitoring and implementation methods.

5.4 The Appraisal of Environmental Management Strategies in Malaysia

The theme of appraisal in this study is referred to two, namely Theme A and Theme B. Theme A is the appraisal for management, assessment, monitoring, implementation and enforcement part. On the other hand, Theme B focused on Environmental Resources Development (ERD), Environmental Degradation Issues (EDI), Environmental Effects (EE), Environmental Impacts (EI) and Environmental Management (EM). Both themes were chosen based on their appropriateness to the related research questions formed to achieve the objectives of this study.

The summary of the results obtained from the interviews of selected respondents is shown below:

Table 1: Theme A

Theme	Academicians	Researchers	Policy Makers	NGO's	Public Persons
Management	M	W	G	W	G
Assessment	W	W	G	D	M
Monitoring	M	W	G	W	G
Implementation	M	M	E	W	G
Enforcement	M	W	G	D	G

The table shows the results of opinions given by 9 selected respondents about Malaysia's environmental management. Based on the Likert scales analysis, the results indicated differences in opinions of the respondents interviewed. Likert scales analysis represented several variables, namely E= Excellent, G= Good, M= Moderately, W= Weak, D= Disable. The different roles that the respondents assumed lead to the differences in opinion based on their experience and also due their involvement in certain activities or projects. The questions in the questionnaires required them to rank Malaysia government's efforts towards achieving its goals towards achieving sustainable development. The questions were chosen based on the objective of the environmental aspects. The results on the table displays the summary of findings of the selected answer of the respondents. The raw data were processes on the statistical analysis application to obtain the final results. It was found that ultimately, each of respondents gave different opinion based on their perspectives.

Table 2: Theme B

Theme/ Timeline	Academicians	Researchers	Policy Makers	NGO's	Public Persons
ERD	E	E	E	E	E
EDI	M	M	G	W	G
EE	M	M	G	W	M
EI	M	W	G	W	G
EM	M	W	G	W	G

Table 2 above shows the findings of the responses obtained by interviewing 9 different of respondents based on their experience and opinions relating to Theme B. The scales are similar to the ones applied in Theme A, except that there were made up of questions on different approaches. The questions in Theme B were more concerned with the timeline analysis of environmental management in Malaysia, namely concerns about Environmental Resources Development (ERD), Environmental Degradation Issues (EDI), Environmental Effects (EE), Environmental Impacts (EI) and Environmental Management (EM). The scale variable used for measuring which is a Likert scale was the same as Theme A. The table shows the findings based on the different answers given by the respondents.

6.0 SWOC ANALYSIS

6.1 Strength

As this study investigates environmental management strategies, the appraisal of strategies would give good impact to the policies set up by the country. Regardless of the roles and positions that participants hold, they need to give full support towards all the programs and activities set up by the government in achieving the environmental goals aspired by the government. The strength of this appraisal are seen in Malaysia as it has rich natural resources in four main components of environment, namely land, water, air and ecology. Based on these variety of natural resources, Malaysia should preserve and ensure that all these components of environment are always monitored by them. Malaysia also has proposed and underlined the rules and regulations pertaining to environmental law. Based on the previous research and observation, it is recognised that Malaysia has taken serious actions to ensure that the country's environment is always in check.

6.2 Weaknesses

Nevertheless, there are some weaknesses in this studies. Among them is the compliance to the regulations that are in place; these policies should be obeyed by the parties involved in environment preservation and protection directly or indirectly. However, many of them did not follow through these policies with good implementation and monitoring process, instead much of these regulations are taken for granted Some of the parties including industries place priorities on profit-making compared to the the negative repercussions that would come along with serious environmental pollution. Moreover, the lack of good experts in certain fields is also another significant weakness noted in this study. A number of government ministries and departments that are attached with environmental tasks do not have enough expertise and capabilities to handle all the problems that cropped up in relation to environmental care, hence they could not achieve these targets wisely. Besides, some do not take their role and responsibility towards environmental protection.

6.3 Opportunity

However, in spite of the weaknesses, the result of the appraisal in terms of environmental management strategies also indicated some opportunities. A management strategy is the best attempt to achieve the goals. In the past, as a developing country, Malaysia executed development efforts without taking serious considerations about their effects towards the environment in the future. When eventually environmental implications started to effect economic and social wellbeing of the nation and its people, then only the country has stepped up by taking actions that demonstrated more concern about this matters. Although it is still not too late for Malaysia to preserve their environment, they should enhance the enforcement so that polluted are could be recovered and further cases in the future would not occur, thus applying more consistent and wise conservation and preservation strategies. On the other hand, these environmental management strategies could also be collaborated with others developing countries, particularly to discuss about the same problems and find ways to overcome environmental problems facing the countries.

6.4 Constrain

Constrain here refers to some problems that hinders the plans and objectives in the process of achieving goals. In the context of this study, the constrains identified were concerned with the environmental management strategies, that they are still not yielding to the aimed effects in the certain parts. This was found to be due to the lack of budget allocations to implement the targeted project objectives. If allocations are sufficient, they could do more research towards sustainable environment; they could also buy the right equipment to overcome the arising environmental problems. Besides that, research and past experiences have shown that environmental complications do not bear entirely isolated consequences. Environmental problems do not occur in only the country that is affected by it, but the aftermath would affect others nearby countries too. For instance, if a neighbouring country experience a particular air pollution phenomenon, its effects would be felt by other nearby countries because air constantly moves and shifts and does stay static at the same place or area.

7.0 CONCLUSION

To sum up, the environmental management strategies employed in Malaysia still need to be improved in some part. Based on data captured from documents, reports and recent events relating to environmental management in Malaysia, it can be concluded that a good structure in terms of management should be jointly established various parties, namely the government, private sector and NGOs. When they unite to manage the environment without putting all the responsibilities upon only one sector, the environmental goals can be achieved and would yield results with the best qualities.

Another action that can taken is to educate all members of the society to practice the right attitude towards environment. Also, environmental education should be exposed to students starting at the pre-school level up until the higher level of education. When these measures are taken in preserving and protecting as one unit, the environment would be saved from pollution and existing issues can gradually be resolved. Education is the main gateway to improve all the problems stemmed from the neglect of environmental protection and sustainability. If we prioritise the environmental education at the very beginning, it would result to good quality people and societies who would always take the right measures to prevent problems rather than correcting them.

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