

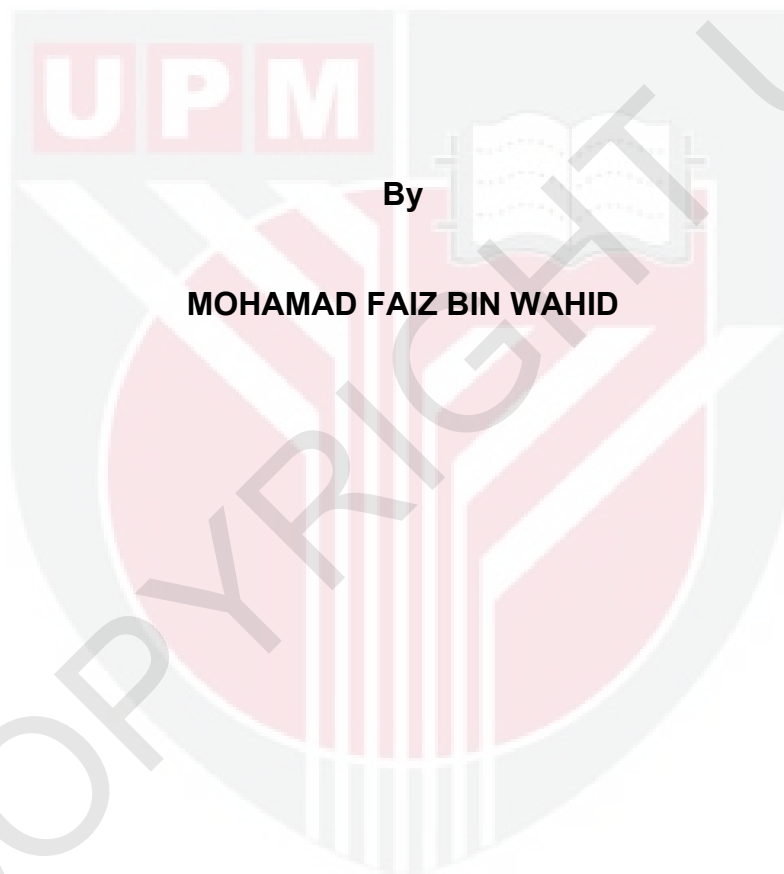


***PERCEPTIONS ON CONSERVATION MEASURES FOR SUSTAINABLE
ENVIRONMENTAL RESOURCE USE IN LANGKAWI ISLAND***

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**Perceptions On Conservation Measures For Sustainable Environmental
Resource Use In Langkawi Island**



By

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DEDICATION

For my beloved family :

Wahid bin Ngah.

Maznah binti Jusoh.

Also my siblings.

To all my friends,

Mohd Shafiq bin Shamsuddin.

Mohamad Ameerul bin Ishak.

Muhammad Alif bin Yaacob.

Faizulnizam Malim bin Sharifmalim.

Mohd Firdaus bin Yazid.

Luqman Nul Hakim bin Md Isa.

Mohammad Hafizul bin Yusran.

Villages people in Langkawi Island, Kedah.

Langkawi Development Authority (LADA).

Kilim Karst Geoforest Park (KKGPP).

Staff Air Traffic Control, Langkawi International Airport.

Thank you for your encouragement supports

And the sacrifices that you have given

Thank you for everything. May Allah Bless All of us.

ABSTRACT

The development of sustainable tourism is very important in preserving the ecotourism area in order for it to survive from the one generation to another. Langkawi Island, Kedah is rich with its biodiversity make this area as one of the popular tourism attractions among the locals and foreigners. As a result, the perception on conservation measure will affect local residents who were in the vicinity. The objective of this research was to understand perceptions on conservation measures that ensure sustainability of environmental resources in Langkawi. It will included the examination on issues including (i) litter pollution, (ii) sea water quality, (iii) control of eagle feeding and (iv) removal of fossil & endangered plants and animal. Non-parametric tests of correlation analysis were used in this study to identify the strength of the relationship between socio-demographic variables of the respondents (i.e. local community and tourists) with their perceptions on environmental conservation measures. Four socio-demographic variables were identified statistically significant with environmental challenges. It includes the age of the respondents, number of children, education level and their monthly income. In this study, to control litter pollution the respondents considered that the concept of recycling should be fully practiced in Langkawi Island. They also observed that fossil and endangered plants and animals' removal by tourists has a negative impact on the natural ecosystem of Kilim Geoforest Park (KGP). Apart from that, the respondents also recognize that conservation measure is important to control water quality while the enforcement measures should be fully practiced in Langkawi Island to control eagle feeding activity and stop fossil and endangered plants and animals' removal in KGP. The results of this study provide current information that could be used by the management agencies in Langkawi Island including local authorities such as LADA and KGP, and other non-governmental agencies (NGOs) to sustainably develop tourism activities and to conserve environmental resource in Langkawi Island.

ABSTRAK

Pembangunan pelancongan mampan adalah sangat penting dalam pemeliharaan kawasan ekopelancongan agar ia dapat bertahan dari satu generasi ke generasi yang lain. Pulau Langkawi, Kedah kaya dengan kepelbagaian biodiversiti menjadikan kawasan ini sebagai salah satu tarikan pelancongan popular di kalangan penduduk tempatan dan warga asing. Akibatnya, tanggapan mengenai langkah pemuliharaan akan memberi kesan kepada penduduk tempatan yang berada di kawasan sekitar. Objektif penyelidikan ini adalah untuk memahami persepsi mengenai langkah-langkah pemuliharaan yang memastikan kelestarian sumber alam sekitar di Langkawi. Ia termasuk pemeriksaan isu termasuk (i) pencemaran sampah, (ii) kualiti air laut, (iii) kawalan pemberian makanan burung helang dan (iv) pengeluaran fosil dan tumbuhan serta haiwan terancam. Ujian bukan parametrik Analisa korelasi telah digunakan dalam kajian ini untuk mengenal pasti kekuatan perhubungan antara pembolehubah sosio-demografi responden (iaitu masyarakat setempat dan pelancong) dengan langkah pemuliharaan alam sekitar. Empat pembolehubah sosio-demografi telah dikenal pasti berkait secara statistik dan mempunyai kesan yang signifikan dalam jangka masa cabaran alam sekitar. Pembolehubah ini ialah usia responden, bilangan anak, tahap pendidikan dan pendapatan bulanan mereka. Dalam kajian ini, untuk mengawal pencemaran sampah, responden mempertimbangkan bahawa konsep kitar semula perlu diamalkan sepenuhnya di Pulau Langkawi. Responden juga berpendapat bahawa pengeluaran fosil dan tumbuhan serta haiwan terancam oleh pelancong mempunyai kesan negatif keatas ekosistem semulajadi *Kilim Geoforest Park* (KGP). Selain itu, responden juga mengenalpasti bahawa langkah pemuliharaan penting dalam mengawal kualiti air, sementara itu langkah penguatkuasaan haruslah dikuatkuasa sepenuhnya di Pulau Langkawi untuk mengawal aktiviti pemberian makanan kepada burung helang dan menghentikan pengeluaran fosil dan tumbuhan serta haiwan terancam dari KGP. Hasil kajian ini boleh digunakan oleh pihak pengurusan Pulau Langkawi termasuklah pihak berkuasa tempatan seperti LADA dan KGP serta agensi bukan kerajaan (NGO) dalam membangunkan aktiviti pelancongan secara berkekalan dan untuk memulihara sumber alam sekitar di Pulau Langkawi.

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LIST OF ABBREVIATIONS

CR	Critically Endangered
EN	Endangered
IUCN	International Union for Conservation of Nature
KKGP	Kilim Karst Geoforest Park
LADA	Langkawi Development Authority
NGO	Non-profit organization
UNWCED	The United Nations World Commission on Environment and Development
UNCED	UN Conference on Environment and Development
UNESCO	The United Nations Educational, Scientific and Cultural Organisation
UN	United Nations
UNWTO	United Nations World Tourism Organization

CHAPTER 1

INTRODUCTION

1.1 Sustainability Concept of Nature-Based Tourism

The word “sustainability” is a keyword for the potential solution for environmental problems facing by society today. As developing nations struggle with issues of overpopulation, disease, and political conflict, developed countries also have to deal with problems such as infrastructure deterioration, pollution and unlimited urban expansion with limited resources. The United Nations World Commission on Environment and Development (UNWCED) define sustainability as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (WECD, 1987). As such, the concept of sustainability often associated with studies of environment, particularly on awareness through people perceptions as these studies help to understand the environment. Most studies make environmentalism as the main idea to evoke the necessity and responsibility of human to respect and protect the natural world from its anthropogenic (caused by humans) afflictions, thus preserve the sustainability of the environment.

Among many environment benefits, nature-based tourism (or tourism) is considered the most significant as it contributes to human well-being. By definition, nature-based tourism is “tourism that consists of travelling to relatively undisturbed or uncontaminated natural areas with the specific

objective of studying, admiring, and enjoying the scenery and its wild plants and animals, as well as any existing cultural manifestation found in these area” (Boo, 1990). In most cases, travellers are passive, non-consumptive observes rather than active resource users. Nature-based tourism promotes more culturally and ecologically sensitive travel which ideally profits all involved. In addition, nature-based tourism can also be effective in promoting conservation and management of natural resources for long-term, sustainable economic development (Kutay, 1988; Edwards, 1988). Tourism is a highly complex activity and thus requires tools to assist in effective decision making to come to terms with the competing economic, social and environmental demands of sustainable development (Fadahunsi, 2011).

1.2 Nature-Based Tourism in Malaysia

Malaysia is a Southeast Asian located in the Malay Peninsular and the island of Borneo (i.e. East Malaysia of Sabah and Sarawak) that comprise a total area of 329 758km². Malaysia is known as one of the most important botanically diverse countries in the world. It has many natural environment captivations including beaches, islands, diverse flora and fauna, tropical forest and mountains (Daud, 2002). Due to the natural environment abundances, the tourism industry is one of major profitable industries in Malaysia. Nature-based tourism is the most active developing sector of tourism business and various efforts to safeguard natural environment areas are being progressively developed and marketed (Normala and Sofiah, 2010). Nature-based tourism has been seen as a driving force for regional growth, while

ensuring that the actualization of sustainable tourism requires prudent tourism management of tourist to avoid detrimental effects on that place.

In general, nature-based tourism in Malaysia is associated to both sustainable development and environment conservation. Within this aspect, the local community participation also viewed in the tourism development process and it has become apparent and been refined in the context of development countries (Cevat, 2000). Particularly, local community may assemblage together beyond their municipal boundaries based on their assessment of the value in working together. The lifestyle of the community may influence the structural changes within the tourism industry occurring as result of the on-going changes, cultural changes and environment changes (Lee, 2012). The role of community in sustainable development has led to enthusiasm and perplexity in almost equal measure amongst practitioners and policy makers over recent years and particularly since the UN Conference on Environment and Development (UNCED) (Diane, 2002). She stated that sustainable tourism development need community participation in practice as well as principle. The local community involved is the residents who live around tourism development areas.

The sustainable tourism is the tourism product which is friendly to the nature and the focus of the tourism product is to sustain the tourism area for a long time. These include various forms of alternative or sustainable tourism such

as: nature-based tourism, ecotourism and cultural tourism. Sustainable tourism is popular but like other forms of development, tourism can also cause its share of problem. All tourism activities of whatever motivation – holiday, business travel, conference, adventure travel and ecotourism – need to be in a sustainable form. The term “sustainable tourism” has come to represent and encompass a set of principles, policy prescriptions, and management methods which chart a path for tourism development. It includes that the environment resources of the destination area including natural built, and cultural features is protected for future development (Cold, 1997).

1.3 Environmental Resource Use in Nature-Based Tourism

The nature-based tourism nowadays is experiencing a tremendous growth, especially in the emerging countries like Malaysia. The existing natural environment areas serve as the main attractions, revealing in the same time its power of change – both with positive and negative impacts on the destination areas and on tourism in general (Clifton and Benson, 2006; Goodwin, 1996; Newsome et al., 2013; Buckley, 2003; Briassoulis and Van der Straaten, 1992; Christ et al., 2003; Wight, 1993). In this context, it is important to delineate them, especially in the environmental and socio-economic fields, in order to channel the nature-based tourism effects in the right direction. Since the symbiosis of the environmental elements such as: geographic location; climate and weather, topography and landforms; surface materials; water, vegetation and fauna area key elements for nature-based tourism, their protection and conservation turn into an imperative requisite

(Fennel, 1999). Positive impacts of ecotourism include the rise of environmental awareness; environmental preservation (decrease of deforestation, expansion of protected areas, biodiversity conservation, wildlife protection), employment and educational opportunities for local communities, empowerment of the communities, economic development as well as cultural viability and heritage maintenance, although it can turn into negative impact if poorly managed (Dodds, 2009; Farrell and Marion, 2001; Horton, 2009).

As regarding the negative socio-cultural impacts of ecotourism, (Wearing and Larsen, 1996, pg. 122) have summarized them into a comprehensive list: high financial leakages because of foreign ownership of tourist developments and employment of non-locals; tourists bring their own social values and behaviour, which can distort social habits and customs; the seasonal nature of tourism can be more disruptive than year round activities and can create unstable unemployment; traditional activities such as farming may decline through lack of labour and competition for space from tourism; increased prostitution and crime; an increase in the cost of living for the local community; community members may perceive that the area has been developed for foreigners only and feel resentment towards them; discontent among communities who find it difficult to co-exist with tourists because the tourists are on holiday whilst the community members must continue their work.

Ceballos-Lascuráin (1993) has identified numerous negative impacts of nature-related tourism activities on: Geological exposures, minerals and fossils: fossil depletion, abrasion of rock faces, wearing away of surface travertine deposits erosion; Soils: soil removal, erosion, creep, compression and break-up, and as result decline in ground vegetation, soil organisms and difficulty in drainage; Water resources: pollution.

Newsome and Rodger (2013) have investigated the interaction between humans and wildlife – represented by both flora and fauna, and elucidated that despite the promotion of ecotourism concept as entirely sustainable, in reality it is not so inoffensive. Among the negative effects were identified the following aspects: disturbance at resting and refuge sites of birds and animals; the initiation of frequent flights with the aim to escape from danger, under the influence of human presence; stress and disruption from other normal activities, especially egg laying; disruption of feeding patterns/hunting behaviours (Newsome and Rodger, 2013: 355). Further, in order to avoid the negative impacts of tourists on wildlife, the authors highlight the visitor's expectations, behaviour and overall satisfaction, that can be detected through an adequate management approach.

1.4 Problem Statement

Nature-based tourism in Malaysia is abundance and one of the most popular sites to experience it is located in the west coast of Malaysia, a site called the Langkawi Island. Langkawi is not a single island but rather a cluster of 99 islands on the Andaman Sea. Around Langkawi, there are five more small islands that remain submerged and can sometimes be seen during the low tide. And most of these islands are tiny and uninhabited. Langkawi Island is also known with its biodiversity richness. There are many species of flora where some of it is endemic to Malaysia and lot of fauna that can be found in its jungle. There are also several of outdoor activities such as jungle trekking and water activity (e.g. swimming, snorkelling and scuba diving). Due to its biodiversity richness and tourism activities, Langkawi is a strong ecotourism product of Malaysia and became one of the most popular attraction sites for tourists. In June 2007, Langkawi was awarded the World Heritage Geopark status by UNESCO because of its stunning geological landscapes including caves, stacks, sea-arches, limestone rocks and millions of year old fossils. Over the past few years, the tourism management in Langkawi has become increasingly more complex as the numbers of visitors increased the constrained tourism facilities and the changes in natural environment. In addition, tourism development in Langkawi happens near to the local residence areas, which indirectly could affect the sustainability of livelihood of local community. Local community plays an important role in tourism industry as they able to maintain tourist arrival by providing hospitality such as accommodation, local food and culture of community surrounding (Mansour and Mahin, 2013).

1.5 Objectives

This research aims to understand perceptions on conservation measures that ensure sustainability of environmental resources in Langkawi. It will include the examination of issues including (i) litter pollution, (ii) sea water quality, (iii) control of eagle feeding and (iv) removal of fossil & endangered plants and animal. This research will examine what are the conservation measures that are suitable to apply in Langkawi in order to maintain its status of World Geopark by the UNECSO based on perceptions from visitors and locals.

This study could help relevant agencies especially Langkawi Development Authority (LADA) to design appropriate conservation measures to make sure the sustainability of natural environmental resources in Langkawi. Within this context, the study also aims to understand attitudes and perceptions both from visitors and locals toward nature-based tourism and development, as these are the important indicators for sustainable tourism development (Choi and Sirakaya, 2006).

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