



CENTRE OF STUDIES FOR LANDSCAPE ARCHITECTURE
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MANAGING ENVIRONMENTAL SENSITIVITY: OPTIMIZING RESOURCES &
EMBRACING CLEAN ENERGY DESIGN PRACTICE AT PERHENTIAN KECIL
ISLAND, TERENGGANU.

This academic project is submitted in partial fulfilment of the
requirement for the Bachelor of Landscape Architecture (Hons.)

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JULY 2017

Acknowledgement

Foremost, thanks to Allah S.W.T and may the peace and blessings be upon prophet Muhammad S.A.W for granting me the chance and the ability to successfully complete this study.

I wish to thank my beloved parents Mansor Bin Nasir and Nooraishikin Goh Binti Abdullah for the continuous support of my study and for this research. I would like to express the deepest appreciation to my advisor Dr. Raziah Ahmad who has the attitude and the substance of a genius: she continually and convincingly conveyed a spirit of adventure in regard to research and an excitement in regard to teaching. In addition, a sincere gratitude for studio masters LAr. En Abu Hassan Wahab, LAr. Dr Nurhayati Abd Malek, LAr. Pn Zalina Jaal and LAr. Sallehuddin Mohamad for their patience, motivation, enthusiasm, and immense knowledge throughout assisting the final project.

Besides my advisor, I would like to thank the coordinator of LAS620 – Topical Study, LAr. Dr. Nurhayati Abd Malek for her encouragement and tolerance during the submission process. My sincere thanks also go to all of the lecturers of Centre Studies of Landscape Architecture as I came across a saying:

“A good teacher is like a candle, it consumes itself to light the way for others”.

Last but not least, sincere gratitude for the cooperation given by the staffs of Majlis Daerah Besut, Tenaga Nasional Berhad, local villagers of Kampung Nelayan, chalets operators (Wan Chalet & D’Rock Garden Chalets) for their support and sharing of experiences for this study to be completed. Thank You.

Abstract

Today, the increase of population also means that the demand for resources is on the rise. Human activity is overloading the atmosphere with carbon dioxide and other global warming emissions, which create significant and harmful impacts on our planet. As the natural resources such as fossil fuels, minerals and metal ores are becoming scarce, green technologies are introduced. Perhentian Kecil Island is the jewel of Terengganu and has become one of the greatest attraction to the tourism industry. The island which is located at the South China Sea is enjoying the richness of biodiversity, virgin forest and plenty of resources from wind and sunlight. Therefore, this is seen as an opportunity for a landscape architect to fully utilize the marriage of nature and technology on the island. Clean energy design practice refers to the designs that using renewable energy approach to produce electricity and at the same time has very minimum or zero impact towards the environment. That what makes it as 'clean' and this leads to the bigger picture of 'sustainable development'. Being a marine park island of Malaysia, Perhentian Kecil Island is not only unique but also facing the issue of energy inefficiency and poor environmental and physical management. The status as marine park is due to its sensitiveness and importance to be protected as it carries values to the land based and water based wildlife habitats. Therefore, it is crucial to manage the environmental sensitive area but at the same time being able to function and serve the community and economy so that both of the target users are able to enjoy the God's creation. This study is believed to be able to introduce the technology in respect to the natural environment.

LIST OF CONTENTS

CHAPTER 1 : INTRODUCTION TO TOPIC

| | | |
|-----|---------------------------------|----|
| 1.1 | Introduction | 1 |
| 1.2 | Prevalent Studies | 3 |
| | 1.2.1 Environmental Issues | 4 |
| | 1.2.3 Physical Issues | 5 |
| 1.3 | Aim and Objectives | 7 |
| 1.4 | Definition of Terminology | 8 |
| | 1.4.1 Environmental Sensitivity | 9 |
| | 1.4.2 Resources | 9 |
| | 1.4.3 Clean Energy | 10 |
| 1.5 | Significance of Study | 11 |
| | 1.5.1 Scope of Study | 12 |
| 1.6 | Research Methodology | 13 |
| 1.7 | Chapter Summary | 14 |

CHAPTER 2 : LITERATURE REVIEW AND RELATED REFERENCE CASE

| | | |
|-----|---|----|
| 2.1 | Introduction | 15 |
| 2.2 | Terminology | 16 |
| 2.3 | Roles and Importance of Island's Ecology & Biodiversity | 17 |
| | 2.3.1 Environmental | 18 |

CHAPTER 1 : INTRODUCTION TO TOPIC

1.1 Introduction

Managing the environment is a delicate and complex process. In definition, environment carries diverse perspectives and disciplines of our surrounding that we live in today. According to McHarg (1992), he comprehensively described on the various scenarios of environment in the 90's. This included the city condition, sea ecology, and natural resources in metropolitan city and deeply explained on the natural processes that takes place along the increase of intensification in the urban area. He remarked the importance of environmental values and how it thoroughly has been affected by the urbanization. He later on forecasted on its consequences and responses to these environmental values. 25 years later, his predictions are starting to come true.

Today, the increase of population also means that the demand for resources is on the rise. Human activity is overloading the atmosphere with carbon dioxide and other global warming emissions, which create significant and harmful impacts on our planet. As the natural resources such as fossil fuels, minerals and metal ores are becoming scarce, green technologies are introduced.

One of the green technologies is the use of clean energy through harnessing the power from natural processes of the Earth. This includes wind, solar, tidal, geothermal, biomass and many more. In most developed countries, the R&D works for renewable energy has started since the early 2000. The increasing supply of renewable energy would allow us to replace carbon-intensive energy sources.

Perhentian Kecil Island is the best example of the relationship between environment and impacts on the human activities that take place. Due its richness of biodiversity and ecological values, the island is famous for tourism activities for both international and local people. The significant increase of tourism industry in Perhentian Kecil Island has starting to show adverse impacts on the environmental, cultural and economic sectors.

Currently, tourism is Malaysia's 3rd largest source of foreign exchange income and 1st in South East Asia when ranked by tourist arrivals, remaining 9th in the world. According to