# PUBLIC PARTICIPATION ON SUSTAINABLE DEVELOPMENT - Investigation of the Level of Sustainable Environmental Development Understanding and Awareness

# SAMSULKAMAL BIN SUMIRI

A project report submitted in partial fulfilment of the requirements for the award of the degree of Master of Science ( Construction Management )

Faculty of Civil Engineering Universiti Teknologi Malaysia

#### **ABSTRACT**

Sustainable development is not a new concept in the scenario of our life as it has been discussed widely in United Nation conferences such as Agenda 21 and Habitat Agenda before been introduced in Malaysia. These development policies encompass three general policy areas: economic; environmental; and social. Malaysia has affirmed its policy on sustainable development in the 7th Malaysia Plan in response to the Agenda 21. This 7th Malaysia Plan describes Malaysia's ability to develop in sustainable manner. Although there are many policies and campaigns being introduced and implemented, environmental problems still persist and a healthy environment is still continuing detrimental. This research, therefore, deliberated a focus on public participation in sustainable development. The objectives of this research were to identify the level of sustainable environmental understanding and awareness among Malaysian citizens and to identify the barriers that caused the lack of public participation in contributing to development sustainability. The communities of formal education institutions in the state of Johor were approached to get their responses towards the persistence of the sustainable understanding and awareness problems by questionnaires survey. The findings of this research identified the causes of the problems and the proposed solutions from the level of awareness and understanding of the respondents. The recommendation listed provides further enhancement in sustaining Malaysia urbanisation problems. Thus, it would help the concerned parties to take matters into consideration.

## ABSTRAK

Pembangunan mapan bukanlah suatu konsep yang baru dalam senario kehidupan kita seperti yang telah dibincangkan dengan panjang lebar di persidanganpersidangan Bangsa-bangsa Bersatu seperti Agenda 21 dan Habitat Agenda sebelum diperkenalkan di Malaysia. Polisi-polisi pembangunan ini merangkumi tiga ruang polisi yang umum: ekonomi; alam sekitar; dan kemasyarakatan. Negara kita, Malaysia, telah mengesahkan penggunaan polisi-polisi ini dalam Rancangan Malaysia ke 7 sebagai tindakbalas kepada saranan Pertubuhan Bangsa-bangsa Bersatu dalam Agenda 21. Rancangan Malaysia ke 7 menerangkan keupayaan Malaysia untuk membangun secara mapan. Walaupun terdapat banyak polisi dan kempen diperkenal dan dilaksanakan, masalah-masalah alam sekitar masih berlaku dan persekitaran yang sihat semakin merosot. Oleh itu, penyelidikan ini dikhususkan kepada penglibatan masyarakat dalam pembangunan mapan. Penyelidikan ini mempunyai objektif untuk mengenalpasti aras kefahaman dan kesedaran warganegara Malaysia terhadap pembangunan mapan, dan juga untuk mengenalpasti kekangan atau halangan yang menyebabkan kurangnya penglibatan masyarakat dalam melaksanakan pembangunan Warga-warga institusi pendidikan formal dihampiri untuk mendapatkan maklumbalas terhadap kefahaman dan kesedaran pembangunan mapan menggunakan soal selidik. Dari dapatan penyelidikan ini, sebab-sebab permasalahan dan cadangancadangan penyelesaian telah dikenalpasti tentang tahap kesedaran dan kefahaman pembangunan mapan. Saranan yang disenaraikan memberikan panduan permurnian lanjut dalam memapankan bandar di Malaysia. Ini secara tidak langsung membantu pihak-pihak terlibat mengambil kira pembangunan mapan dalam soal pembangunan.

# **TABLE OF CONTENTS**

CHAPTER	TITLE	PAGE
	DECLARATION OF THE STATUS OF THESIS	i
	SUPERVISOR'S DECLARATION	ii
	TITLE PAGE	iii
	DECLARATION OF ORIGINALITY AND EXCLUSIVENESS	iv
	DEDICATION	v
	ACKNOWLEDGEMENTS	vi
	ABSTRACT (ENGLISH)	vii
	ABSTRAK (BAHASA MELAYU)	viii
	TABLE OF CONTENTS	ix
	LIST OF TABLES	xii
	LIST OF FIGURES	xiii
	LIST OF APPENDICES	xv
1	INTRODUCTION	
	<b>1.1</b> Background of the Research	1
	1.2 Problem Statement	3
	<b>1.3</b> Aim of the Research	4
	<b>1.4</b> Objectives of the Research	4
	<b>1.5</b> Brief Research Methodology	5
	<b>1.6</b> Scope of Study	6
	<b>1.7</b> Outline of the Thesis	6
	1.8 Summary	7

2	LITERATURE REVIEW PART I  2.1 Sustainable Development				
					2.2.1
		2.2.2	Social Aspects	14	
	2.2.3	Environmental Aspects	17		
3	LITERATUR	E REVIEW PART II			
	3.1 Environmental Sustainable Development (ESD)				
	3.1.1	"Love Our Rivers" Campaign	20		
	3.1.2	"Open Burning Ban" Campaign	22		
	3.1.3	"Recycle" Campaign	23		
	3.2 Collab	orative Environmental Planning (CEP)	26		
	3.2.1	Elements Relevant to Collaborative Planning	28		
	<b>3.3</b> The St	akeholders Involves in Development Sustainability	28		
	3.4 Capacity-Building through Education, Training and Public				
	Aware	ness	29		
	<b>3.5</b> Summ	ary	31		
4	METHODOLOGY				
	4.1 Introdu	action	32		
	<b>4.2</b> Literature Review				
	<b>4.3</b> Questionnaire Survey				
	4.3.1	The Profile of Respondents	35		
	<b>4.4</b> Analys	sis of Data	42		
	4.4.1	Average Index	43		

5	ANALYSIS AND RESULT FINDINGS	
	<b>5.1</b> Introduction	45
	<b>5.2</b> Demographic Information	46
	<b>5.3</b> The Level of Awareness of Sustainable Environmental	
	Development	48
	<b>5.4</b> The Level of Understanding of Sustainable Environmental	
	Development	49
	5.5 The Barriers That Caused Lack of Public Participation in	
	Sustainable Environment	52
	<b>5.6</b> Suggestions to Improve Public Sustainable Environmental	
	Development Understanding and Awareness	54
6	CONCLUSIONS AND RECOMMENDATIONS	
	<b>6.1</b> Conclusion	57
	<b>6.2</b> Recommendations for Future Studies	59
REFERENCES		61
APPENDICES		
Appendix A – E (ii)		

## **CHAPTER 1**

## INTRODUCTION

# 1.1 Background of the Research

The concept of sustainable development has been introduced by the government since 1996 in Malaysia after realising that problems with pollution have spread all over the country. The developments impact in the country appears are not adhering the guidelines imposed by the authorities as the air, water and land quality were left in poor state. This detrimental of natural resources in long run impacts to the socio-economy and quality of life for Malaysian. Few campaigns have been introduced like 'Love Our Rivers' (Cintailah Sungai Kita) and 'Recycle' (Kempen Kitar Semula). Most of the campaigns are focusing on the natural resources such as rivers, forests and air quality that regarded to environmental sustainability. Environmental problems still persist in Malaysia, although having environmental policies and campaigns introduced and implemented to the public. The doubt arising at how far the above campaigns effectively affects to Malaysian positive attitude to response into this issues. The implementation of the policies has to be queried as whether which the human activities consumption and production patterns were not considered in a proper manner or ineffective ways.

Environmental problems are caused directly or indirectly by the patterns of production by industries, patterns of consumption and behaviour of the consumers. Mat Said A. et. al. (2003) identified that shaping of attitude and values, commitment and skills are needed to preserve and protect the environment begins at an early age. In ensuring the nation implies with sustainable environmental development, Malaysia is facing tremendous challenge which urban air quality, river water quality, deforestation, household wastes and hazardous wastes are some of the examples of environmental issues faced by the nation (Mat Said A. et. al., 2003). Various policies and strategies are currently developed and implemented by the government in accordance to ensure the sustainable development of the nation.

Shamsudin (2000) has argued the planning processes in Malaysia are largely a one-way communication process. No way could participants know how their views are being interpreted and evaluated, less still being informed of their outcome. This argument reinforces the need for a belief of the importance of public participation in the development of shared visions. Public ideas are needed to direct the political and economic debate, so that it will result in the new initiatives to conceives and promote sustainable living solutions (Zakaria, 2006). Malaysia needs to work towards sustainable planning by evolving development guidelines and policies with two-ways roles of attention i.e. from government and community.

The City of Sydney (City of Sydney, 2005) in Australia for example, implemented its development control plan to ensure that public participation with regards of development application and related matter is facilitated in orderly and transparent manner. This development control plan outline procedures for the notification and advertisement of the development applications, applications to modify development consent and the review of development consent; provide an opportunity for public participation in the development application process and invite comments; establish a communication process in relation to the assessment of development applications and related matters; increase public awareness of the development application process, specify circumstances when notification of the development application is not required; identify development applications that will be notified and those persons who will be notified; ensure there is consistency in the

notification of similar applications; and facilitate the efficient processing of applications without compromising the opportunity for public participation.

These examples above provide an indication of how appropriate planning can facilitate sustainable development, and furthermore, how public participation might be encouraged in order to influence the planning process itself. This paper, therefore, was inspired by the questions include: The level of understanding and awareness of Malaysian citizens in response to sustainable environmental development and barriers to get positive attitude citizens that responsible for sustainable development.

#### 1.2 Problem Statement

The research will endeavour to focus on Malaysian readiness to participate in Malaysia's sustainable planning and development. The following questions arise in inspiring the research problem:

- 1. What are the level of understanding and awareness of Malaysian citizens in response to sustainable environmental development?
- 2. What are the barriers to get positive attitude citizens that responsible for sustainable environmental development?
- 3. What are the measures should be put in place to improve Malaysian education and awareness on sustainable environmental development?

# 1.3 Aim of the Research

The aim of this study is to investigate the level of sustainable environmental development understanding and awareness among Malaysian citizens.

# 1.4 Objectives of the Research

The research objectives essentially three areas of sustainable development in order to answer the problems as stated above. The objectives of this study are listed as follows:

- To identify the level of understanding of sustainable environmental development among Malaysian citizens
- ii) To identify the level of awareness of sustainable environmental development among Malaysian citizens
- iii) To identify the barriers that caused lack of public participation in sustainable planning and development.

# 1.5 Brief Research Methodology

This study will be conducted through several phases that will include literature review, data collection, data analysis, findings, and recommendations. After having the literature review determined as a framework for the research questions or hypotheses, a type of conclusive research is selected to get information that is useful in decision-making process or reaching conclusion.

Method of collecting data will be conducted by questionnaire survey. This method of questionnaire survey will be targeted public respondents.

The questionnaire form will be structured in five sections:

i) Section A: Demographic Information

ii) Section B: The Level of Public Awareness of Sustainable

Environmental Development

iii) Section C: The Level of Public Understanding of Sustainable

Environmental Development

iv) Section D: The Barriers or Constraints that Causes Lack of Public

Participation in Sustainable Planning and Development

v) Section E: Students and Teachers' Views in Improving Public

Sustainable Development Understanding and

Awareness

The analysis of the result will be applied by using the Statistical Packages for Social Science (SPSS), version 11.0 and a descriptive analysis.

## 1.6 Scope of Study

Students and teachers will be approached to take their views, perceptions and suggestions towards the problems. The targeted respondents in the area of Kota Tinggi, Johor are chosen due to close proximity for researcher and limited study time and budget. Method to be used in data collection is questionnaire survey.

#### 1.7 Outline of the Thesis

This report consists of six Chapters. A brief summary of each is outlined below:

Chapter 1 comprises the introductory section which develops the reason for the direction of this investigation. It also states the background of the research, the research problems, the aim of the research, the objectives of the research, a brief discussion on research methodology, the scope of the research study, and the outline of the thesis in each chapter.

Chapter 2 describes the key terms used in this research. In the first part of the literature review, this chapter defines the words used in 'sustainable development'. Various means have been used to get the suitable, acceptable and nearest meanings of the terms used in this research. Also, the three key elements of sustainable development; social, economic and environmental, are explained elaborately in order to get the total understanding in doing the research.

**Chapter 3** explains the situation and condition of sustainable development in Malaysia. There are a few examples of the environmental sustainable development campaigns conducted by the Malaysian government in order to follow the directives and guidelines provided by the United Nation as stated and described in Agenda 21.

Also, the stakeholders involved in the sustainable development programmes are stated in this chapter.

**Chapter 4** presents the research design and methodology, including the research plan, the method of data collection, the participants involved in this research, the reliability and validity of the data collected from the survey, and the methods of data analysis to be employed.

Chapter 5 comprises the results of the questionnaire survey and the analysis of the results. It explains the outcomes of the survey in obtaining the feedback from the respondents regarding the level of sustainable development awareness and understanding of the public and the barriers or constraints that causes lack of public participation in sustainable planning and development. Also, the suggestions and views from the students and teachers to improve the sustainable development understanding and awareness are taken, accepted and to be considered.

**Chapter 6** presents the conclusions and recommendations for the future study of this research.

# 1.8 Summary

This chapter has just started the beginning of the research thesis. It has introduced the research problem and the research questions. The background of the Malaysian conditions has been described, the methodological approach has been introduced, the scope of study has been identified, and the format of the report has been outlined. With this foundation, the thesis can proceed with a detailed description of the research.

## **REFERENCES**

- Abd. Majid, M.Z., & McCaffer, R., (1997), Assessment of Work Performance of Maintenance Contractors in Saudi Arabia, Journal of Management in Engineering, September and October, 1997, pg 91.
- Agenda 21, (1997), Economic and Social Aspects of Sustainable Development in Malaysia, Retrieved from <a href="http://www.un.org/esa/agenda21/natlinfo/country/malaysia/eco.htm">http://www.un.org/esa/agenda21/natlinfo/country/malaysia/eco.htm</a>
- Al-Hammad, A-Mohsen, and Assaf, S., (1996). Assessment of Work Performance of Maintenance Contractor in Saudi Arabia, Journal of Management in Engineering, ASCE, Vol. 16, No.1.
- American Heritage® Dictionary (2007), *Definition of Environment*, Retrieved from <a href="http://education.yahoo.com/reference/dictionary/entry/environment">http://education.yahoo.com/reference/dictionary/entry/environment</a>
- Ann Dale & Lenore Newman, (2005), Sustainable Development, Education and Literacy, International Journal of Sustainability in Higher Education, Bradford: 2005. Vol.6, Iss. 4; pg. 351.
- Answers.com, (2007) *Definition of Sustainable Development*, Retrieved from <a href="http://www.answers.com/">http://www.answers.com/</a>
- Associated Press, (2001), *Malaysia Bans Open Burning as Haze Worsens*, Retrieved from http://www.enn.com/ecosystems/article/2265

- Business Council for Sustainable Development in Malaysia (BCSDM), (2007), Retrieved from <a href="http://www.bcsdm.com.my/">http://www.bcsdm.com.my/</a>
- City of Sydney (2005), City of Sydney Notification of Planning and Development

  Application Control Plan 2005, Retrieved from:

  <a href="http://www.cityofsydney.nsw.gov.au">http://www.cityofsydney.nsw.gov.au</a>
- Department of Irrigation and Drainage (JPS): 2004 Annual Report (2004), *Love Our Rivers Campaign*, Retrieved from <a href="http://www.water.gov.my/papers">http://www.water.gov.my/papers</a>
- Dietz, T., Fitzgerald, A., and Shwom, R., (2005), *Environmental Values*, Annual Review of Environment and Resources, Vol. 30: Issue November 2005, pg 335-372
- Fisher, I., (1965), *The Nature of Capital and Income*, Augustus M. Kelly, New York NY, USA.
- Fred, Leavitt, (2001). Evaluating Scientific Research, Separating Fact from Friction, New Jersey, Prentice Hall.
- Government of Malaysia (GOM), Malaysia & Economic Planning, (1996), *Seventh Malaysia Plan 1996-2000*: Percetakan National
- Harper & Row, (1984), Funk & Wagnalls Standard Desk Dictionary, Volume 2 N-Z, Harper & Row, Publishers, Inc.
- Hicks, J., (1946), *Value and Capital*, 2nd edition, Oxford University Press, Oxford, UK.
- Holmberg, J., (Ed.) (1992), *Making Development Sustainable: Redefining Institutions*, *Policy, and Economics*. Washington, DC: Island Press.
- Judith, Bell, (1999), Doing Your Research Project, a Guide for First-Time Researchers in Education and Social Science, Third Edition, Buckingham and Philadelphia, Open University Press.

- Longman, (2001), Longman Active Study Dictionary CD ROM © Pearson Education Limited, Longman and Prentice Hall, Edinburgh Gate, Harlow, Essex, UK
- M. Zaki, N., Mohamed Daud, Mohd Zohdie, & Mohd Soom, A., (2001), *Environmental Planning Model for Sustainable Rural Development*, Retrieved from <a href="http://www.journaloftheoretics.com/Articles/2-1/zaki-fp.htm">http://www.journaloftheoretics.com/Articles/2-1/zaki-fp.htm</a>
- Mat Said, A., Ahmadun, F.R., Paim, L., & Masud, J., (2003), *Environmental Concerns, Knowledge and Practices Gap among Malaysian Teachers*, International Journal of Sustainability in Higher Education. Bradford: 2003. Vol.4, Iss. 4; pg. 305
- McGranahan, G., and Satterthwaite, D., (2003), *Urban Centres: An Assessment of Sustainability*, Annual Review of Environment and Resources, Vol. 28: Issue November 2003, pg 243-274
- McGraw-Hill, (2003), McGraw-Hill Dictionary of Scientific and Technical Terms, Retrieved from <a href="http://www.answers.com/library">http://www.answers.com/library</a>
- Miller, S.E., Shinn, C.W., & Bentley, W.R., (1994), *Rural Resource Management: Problem Solving for the Long Term.* Ames, IA: University of Iowa Press.
- Ministry of Housing and Local Government (KPKT), (1992), *Recycle in Malaysia*, Retrieved from http://www.kpkt.gov.my/kitarsemula/WorkTips.asp
- Munasinghe, M., & Adil Najam, (2007), *Sustainomics and Sustainable Development*, Encyclopaedia of Earth, Eds., Retrieved from http://www.eoearth.org/
- Munasinghe, M., (1992), *Environmental Economics and Sustainable Development*, Paper presented at the UN Earth Summit, Rio de Janeiro, Environment Paper No.3, World Bank, Wash. DC, USA.
- Munasinghe, M., (2004), Sustainomics: A Trans-disciplinary Framework for Making Development More Sustainable, International Society for Ecological Economics, Colombo, Sri Lanka.

- Munasinghe, M., (2007), *Basic Concepts and Principles of Sustainomics*, Encyclopaedia of Earth, Eds., Retrieved from <a href="http://www.eoearth.org/">http://www.eoearth.org/</a>
- Munasinghe, M., (2007), *Sustainable Development Triangle*, Encyclopaedia of Earth, Eds., Retrieved from <a href="http://www.eoearth.org/">http://www.eoearth.org/</a>
- Nemetz, Peter N., (2003), *Basic Concepts of Sustainable Development for Business Students*, Journal of International Business Education, University of British Columbia, Washington D.C.
- Oxford, (1998), *Dictionary of Current English*, New Revised Edition, Oxford University Press Inc., New York
- Parris, T. M., and Kates, R. W., (2003), *Characterizing and Measuring Sustainable Development*, Annual Review of Environment and Resources, Vol. 28: Issue November 2003, pg 559-586
- Regional Roundtable for East Asia and the Pacific Region Report, (2001), 2002

  World Summit on Sustainable Development, Retrieved from <a href="http://www.un.org/jsummit/html/prep\_process/asiapacific\_prep1/malaysia\_roundtable\_report.htm">http://www.un.org/jsummit/html/prep\_process/asiapacific\_prep1/malaysia\_roundtable\_report.htm</a>
- Schultz, (1990), Psychology and Industry Today An Introduction to Industrial and Organizational Psychology, Macmillan Publishing Company, New York
- Shamsudin, K., (2000), *Public Participation within a Representative Democracy:*\*Repackaging a Commodified Approach in Structure Planning. Habitat Malaysia Human Settlements Journal of Malaysia (3) Fisher, I. 1906 (reprinted 1965). The Nature of Capital and Income, Augustus M. Kelly, New York NY, USA.
- The Gale Group, (2002), *Encyclopaedia of Public Health*, Retrieved from <a href="http://www.answers.com/library">http://www.answers.com/library</a>

- The Natural Resources and Environment Ministry, (2008), *Passage through Time: A Chronology*, Retrieved from <a href="http://www.nre.gov.my/NRE/jps.html">http://www.nre.gov.my/NRE/jps.html</a>
- The Star, (2007), New Love-Our-River Campaign, Retrieved from <a href="http://thestar.com.my/news/story.asp?file=/2007/4/25/nation/17541919">http://thestar.com.my/news/story.asp?file=/2007/4/25/nation/17541919</a>
- UNCED, (1993), Agenda 21: Programme of Action for Sustainable Development: Rio Declaration on Environment and Development, Paper presented at the United Nation Conference Environmental Development, New York, N.Y.
- UN-HABITAT, (1996), the Habitat Agenda Istanbul Declaration on Human Settlement, Retrieved from http://www.unchs/english/hagenda/ist-dec.htm
- Wikipedia, (2007), the free encyclopaedia, *Education for Sustainable Development*, Retrieved from http://en.wikipedia.org/
- World Commission on Environment and Development (WCED) (1987), Our Common Future, Oxford University Press, Oxford, UK.
- WWF Malaysia, (2001), *Prosecute those who ignore The 'No-Burning' Ban*, Retrieved from http://www.panda.org/about\_wwf/where\_we\_work/asia\_pacific/news/
- Xinhua News Agency, (2000), *Malaysia Launches National Recycling Campaign*. Retrieved from <a href="http://www.highbeam.com/doc/1G1-67510921.html">http://www.highbeam.com/doc/1G1-67510921.html</a>
- Zakaria, R., (2007), Sustainable Housing for Residential-Industrial Neighbourhoods in Malaysia A Study on the Elements of Indoor Environmental Quality Improvements, Queensland University of Technology, Australia