

Waterfront Development in Malaysia: Examining Laws and Regulation

Dr. Azlina Md. Yassin

Department of Real Estate Management, Faculty of Technology Management and Business,
University Tun Hussein Onn Malaysia, Batu Pahat, Johor, MALAYSIA.

E-mail: azlina@uthm.edu.my

&

Dr. Mohd. Asrul Nasid Bin Masrom

Department of Construction Management, Faculty of Technology Management and Business,
University Tun Hussein Onn Malaysia, Batu Pahat, Johor, MALAYSIA.

E-mail: asruln@uthm.edu.my

Abstract: Waterfront redevelopment emerged in the 1970s; with numerous waterfront areas undergoing a transition from abandoned spaces to commercial, residential and recreational areas. This transformation symbolizes the independent city states' efforts to remake themselves for the 21st century. However, due to constraints such as ineffective governance as well as inadequate federal, state and municipal planning guidelines, the waterfronts have problems such as environmental degradation, crime and flooding. Although some waterfront development projects continue to remain profitable, with good public access, many do not. The focus of this paper was to identify and evaluate the current regulations and guidelines related to waterfront development in Malaysia. The findings of this paper were based on the questionnaires mailed and e-mailed to ninety-one property development companies listed under Bursa Malaysia in 2009. The findings identified ten laws and regulations that related to waterfront development in Malaysia such as; the National Land Code 1965, the Town and Country Planning Act 1976, and the Environment Quality Act 1974. In term of the sufficiency of those regulations and guidelines for controlling waterfront development, more than half of respondents determined that Malaysia did not have sufficient regulations to control waterfront development as well as Malaysian government moderately enforced the regulations for waterfront development in Malaysia. This indicates that perhaps the government and the policy makers might need to improve regulations for waterfront development.

Keywords: *Enforcement, Laws and regulation, Waterfront, Waterfront development*

1.0 INTRODUCTION

Rivers and water are valuable natural resources for human life, the environment and national development. Water plays an essential role in people's lives and has long been recognized as one of humanity's most important natural resources. Indeed, the allure of water is powerful and universal.

The unique location of rivers at the interface between water and the land initiated the evolution of human society along the riverfront (Dong, 2004). History shows that many early human settlements owe their origin and prosperity to water and waterfronts, and including riverfronts, generally represent the focal point of settlements as a whole (Hoyle & Pinder, 1992). For example, Babylon was developed and grew along the Tigris and Euphrates Rivers, recognised as very fertile valleys (Macionis & Parrillo, 2001). Therefore, the strong relationship between the waterfront and human society was established very early, and has been discussed extensively in the literature (see for example: Herzog, Herbert, Kaplan, & Crooks, 2000; Hoyle & Pinder, 1992; Wrenn, 1983).

In Malaysia, the extended growth of urban areas is also a sign of the healthy Malaysian economy. The rapid development and urbanization over decades caused the Malaysian government to start including many waterfront areas in future development with the focus on more recreational use, while private property developers concentrated more on mixed-use development. To date, interest in waterfront property is booming even when offered at high prices, as people want to live close to the water for recreation and aesthetic reasons (Yassin, 2012).

However, in many cases, the implementation of these waterfront projects is driven more by investment needs rather than by community and environmental needs, and subsequently having a negative impact environmentally and socially such as water pollution and crime (Ali & Nawawi, 2009; Latip, Heath, Shamsuddin, Liew, & Vallyutham, 2010).

Therefore, this paper aims to examine the current regulations and guidelines related to waterfront development in Malaysia. A quantitative research strategy with survey questionnaire approach was adopted in this research. The findings were then recommended to be use while planning waterfront development, and subsequently to improve waterfront development practices in Malaysia in the future.

2.0 LITERATURE REVIEW

2.1 The River and Its Economic Importance

Rivers make a huge contribution of social importance, to global transportation, as an element in cultures and traditions, as a resource for primary and secondary production and for biodiversity; while the contribution of the river to energy cycles is now beginning to be better appreciated (Costanza, 1999; Weng, 2005).

In Malaysia, rivers have been used for multiple purposes such as, for food, as a defensive barrier and for human settlement (Malaysian Department of Irrigation and Drainage, 2009c). History

shows that many towns and cities in Malaysia were established near water areas including examining areas. For example, the city of Kuala Lumpur which is located at the confluence of the Sungai Gombak and the Sungai Klang, was developed from the village of a tin ore mine (Shaziman, et al., 2010).

Thus, rivers are living entities that play a huge role in people's lives, in the environment and in natural developments and their functions will remain unchanged in the future (Malaysian Department of Irrigation and Drainage, 2009b). **TABLE 1** below summarises the economic importance of rivers to Malaysia.

TABLE1: Economic Value of Rivers in Malaysia

Economic Value	Description
Source of drinking water	In Malaysia, rivers provide 97% of the water supply. Among the 189 river basins, 30 function as reservoirs supplying the 28 million people in Malaysia with clean water.
Agricultural	Rivers are used to irrigate crops and plantations.
Industry	Industries need water to manufacture products.
Livelihood	Many local communities depend on the resources provided by the river for food (fish) and income.
Transportation	Rivers were the main form of transportation before other forms of transportation were invented.
Biodiversity	Rivers are home to a wide range of plants and animals that live both in and around the river. Forty percent of all fish species are freshwater varieties.
Domestic use	Without rivers, the only other source of freshwater is rainwater.
Recreational	Rivers are widely used for recreational purposes. Left in their natural state, rivers and surrounding forest areas are ideal for picnics, camping and canoeing.
Religion	Rivers are used in numerous religious ceremonies and festivals because water is considered the purest resource on earth.
Human settlement	Malaysia's rivers shape the life of the communities along their banks. Many towns and cities in Malaysia are located close to rivers.
Renewable energy	In recent years, rivers have become increasingly important for hydroelectric power and for industry.

(Source: Abdullah & Mahmood, 1999; Keong, 2006; Malaysian Department of Irrigation and Drainage, 2009c; Yassin, Eves, & McDonagh, 2009).

2.2 Waterfront and Waterfront Development

Waterfront and waterfront developments have several expressive and varying interpretations due to characteristics of sites and cities. In common use, waterfront refers to a land fronting on to water (Dong, 2004). Even the word waterfront itself is clear; some researchers prefer to use several different words replacing the term waterfront with those such as city port, harbor front, riverside and river edge and riverfront (Hoyle, 2002; Hussein, 2006; Roy Mann, 1973; Watson, 1986).

Moreover, Breen & Rigby (1994, p. 10) sees waterfront as the water's edge in cities and towns of all sizes and the water body may be a river, lake, ocean, bay, creek, or canal. Zhang (2002) characterized waterfront as a place integrating land with water and having a natural attraction to people. In fact, the seashore and riverfront were the most attractive water features for human settlement. In most countries, the land in front of water was developed earlier than the inland areas. Hussein (2006) define an urban riverfront as a dynamic area where cities engage their shorelines.

A more detailed definition by Guo (1998) as cited in Dong (2004, p. 7) described the waterfront as the interface point where land and water meet, between approximately 200 to 300 meters from the water line and 1 to 2 km to the land site and also takes in land within 20 minutes walking distance. Wu & Gao, 2002, as cited in Dong (2004, p. 7) added the waterfront area should have multiple features which incorporate each other and surrounded by structural and non structural objects to form a focal point.

In the development context, Butuner (2006) sees waterfronts as land to be reclaimed from water in order to create an extension of existing city centres. In addition, Breen and Rigby (1994, 1996) considered that waterfront development may not necessarily need to directly front water but may need only to look as if it is attached to the water. They believed that a property with a commanding view of water, can be considered as a waterfront property. Therefore, waterfront development is best represented as a development directly fronting water for any purpose and the water components can include river deltas, coastal plains, wetlands, beach and dunes, lagoons and other water features (Yassin, 2012).

2.3 Stakeholders in Waterfront Development

Similar to other developments, waterfront development requires the involvement of many parties that include the government, developers, private investors, community groups, tourists and recreationalists (Goodwin, 1999; Hoyle, 2000; Wrenn, 1983; Yarnell, 1999). Each of them has a varying influence in the development project. In most cases, the government is responsible for initiating and facilitating the waterfront development process and that requires government involvement at every level; federal, state and the local authority. For example, the government is responsible for providing a proposal that includes an establishment concept or theme, and a setting of the scale and sequence for the project. Additionally, proper planning and good documentation is important for raising investors' confidence to invest in the waterfront project (Yarnell, 1999). The variety of stakeholders involved in the waterfront development process is summarised in **TABLE 2**.

TABLE 2: Stakeholders in the waterfront development process

Stakeholder	Role
-------------	------

Governments, institutions and agencies	<p>Higher level government may be involved to play important leadership, policy-setting and regulatory roles.</p> <p>The role of government is critical during the planning and design process.</p> <p>The government's role includes; to establish a development theme for the waterfront, set the scale, quality, and sequence of projects, and to ensure that a long-range perspective remains over the development decisions.</p>
Private investors	<p>Private investors include private sector and non-governmental organizations.</p> <p>Public-private partnerships and private-non-governmental organization partnerships are important for initiating waterfront development and for moving along the development process.</p> <p>The private sector is important for stimulating property development and investment. The more extensive the scale of the development, the greater the dependence on private investment.</p>
Communities, ¹ tourists and recreationalists	<p>Communities, tourists and recreationalists are users of waterfront development.</p> <p>Communities have multi-directional relationships with governments and in some cases are involved in decision making processes.</p> <p>Relationships can be top-down or bottom-up approaches. Inclusions of these groups into government agendas are important in achieving the fundamental objective of the waterfront development – to enhance the quality of life.</p>

(Source: Craig-Smith & Fagence, 1995; Dong, 2004)

2.4 Governance for Waterfront Development in Malaysia

Governance is about local change and reform and solving certain issues. In practice, the governance and administration of natural resources in Malaysia involves several department and agencies that operate dependently or independently of one another, according to the specific responsibilities assigned to them. Thus, this requires participation and involvement from stakeholders within a larger context of shared understanding, resulting in effective governance (Mokhtar & Elfithri, 2005). In addition, Elfithri et al. (2008) noted that successful governance could be achieved by considering moving decision making power, resources and capacity to lower levels of management.

Water and land are the two main resources directly associated with waterfront development. In Malaysia, natural resources – land, water, rivers and forest – are under the jurisdiction of the State government (Federal Constitution, 2006). In addition, the State government also has full responsibility for water management including gazetted and preserving water catchments, development along the river corridors, urban development and logging for forest timber. In turn, those natural resources provide revenue to the State government through their uses – timber logging, industry, township development and water supply (Abidin, 2004). Nevertheless, with regard to natural resource development matters, both governments (federal and state) are involved. In fact in Malaysia, involvement from both parties is required in the management and administration activities, where each of them have their own specific tasks in planning, land-use

¹ A “community group” refers to an unofficial association established by a number of people (normally many) which has opinions that are not necessarily similar to those of the government (Hoyle, 2000).

control and management (Welch & Keat, 1987). The specific tasks assigned to them concern a wide range of aspects including political, social, economic and administrative systems.

2.5 Regulations Related to Waterfront Development in Malaysia

The importance of law, policies and guidelines towards waterfronts has been recognised in Malaysia as it has been in many countries (Riley & Shurmer-Smith, 1988). In Malaysia, legislative systems were implemented within a broader framework and supervised by the federal government. Laws also were used as a form of management in response to environmental problems in Malaysia (Daud, 2009). According to Latip et al. (2010), the earliest law in Malaysia which included the urban river aspect was introduced in 1907 and was known as the Sanitary Board Enactment. The Sanitary Board Enactment was focused on health and sanitation including drainage as part of the law. This enactment was later reviewed and renamed as the Municipal Ordinance Cap 133/1913, and the Town Improvement Enactment 1917, and focused more on health and the habitation of houses (the setting of back lanes and open spaces for sanitary conveniences) (Norris, 1980). However, these new regulations did not specifically discuss rivers or the importance of them.

The specific law in relation to rivers was established in the 1920s and was known as the Water Act 1920. The Water Act 1920 provided a detailed definition of rivers, the responsible authority for the rivers and the riverbanks, and those involved in the appeal board (Water Act, 1920). This law remains current and is used by the Department of Drainage and Irrigation of Malaysia (Malaysian Department of Irrigation and Drainage, 2009b).

The first policy that stated the importance of waterfronts for public use was established in 1984 and was known as the Kuala Lumpur Structure Plan 1984 (Dewan Bandaraya Kuala Lumpur, 1984). The Kuala Lumpur Structure Plan provided specific concerns on developments around the natural features and including rivers. After that, several other initiatives directly and/or indirectly in relation to rivers and waterfronts were announced including the Malaysia Plan and the amendment of the Town and Country Planning Act 1976 in 1994. Despite the laws, various guidelines in relation to waterfronts were drafted by several department including guidelines for development related to rivers and river reserves by the Malaysian Department of Irrigation and Drainage (2006), and waterfronts as recreational areas by the National Landscape Department (2005).

Up to the present, many laws, policies and guidelines that directly and/or indirectly related to waterfronts were put in place. However, most of the laws established concentrated on penalties for the pollution of rivers rather than specifically mentioning the importance of waterfronts including the Fishery Act (Act 317) (1985), the Environmental Quality Act (Act 127) (1974) and the Local Government Act (Act 171) (1976). The policies and guidelines introduced were very general and mostly done based on zoning rather than specific plots, for example the National Urbanisation Policy by the Town and Country Planning Department and, this resulted in difficulty monitoring and controlling development (Latip, et al., 2010). Moreover, some of the guidelines were not gazetted and were only used in isolation within the department which produced them, such as the waterfront as recreational area by the National Landscape Department, the planning guidelines for river reserves as public open space by the Town and Country Planning Department and facing the river concept guidelines by the Drainage and Irrigation Department. This made difficulties for implementing the guidelines and discouraged achieving more sustainable waterfront development (Latip, et al., 2010).

3.0 RESEARCH METHODOLOGY

In this study, a quantitative research strategy was adopted as a strategy for the data collection. The survey was carried out within Malaysia and the respondents were property development companies listed under Bursa Malaysia.

3.1 Sampling

A stratified sampling procedure was used as part of probabilistic sampling (Sapsford & Jupp, 2006; Sekaran, 2003). The sample data comprised firms listed under the property counter that traded at Bursa Malaysia during 2009. Considering that a waterfront development project requires strong financial records and sufficient and efficient management teams as well as excellent experience in the past, the selection of property development companies who were listed in Bursa Malaysia was therefore appropriate. As stated by Bursa Malaysia, only 91 property development companies were listed in 2009 (Bursa Malaysia, 2009).

4.0 RESULTS AND DISCUSSION

4.1 Response Rate and Respondents' Profile

Of the 91 questionnaires mailed and e-mailed to the respondents, 61 were returned and this resulted in a total of 67% useable response rate. The profiles of the property development companies participated are presented in **TABLE 3**.

TABLE 3: Profile of Respondents

Variables	Details	n = 61	Percent (%)
Location of operations	National (within Malaysia)	49	80.3
	International (outside Malaysia)	0	0
	Both national and international	12	19.7
Year of operating	Below 1 year	0	0
	2 - 5 years	0	0
	6 – 10 years	4	6.6
	Over 10 years	57	93.4
	Not sure	0	0
Number of employees	0 – 10 people	0	0
	11 – 50 people	6	9.8
	51 – 100 people	10	16.4
	Over 100 people	42	68.9
	Do not know / Not sure	3	4.9

Variables	Details	n = 61	Percent (%)
Type of development projects	Residential: Yes	61	100
	Commercial: Yes	53	86.9
	No	8	13.1
	Industrial: Yes	25	41
	No	36	59
	Others: Yes	7	11.5
	No	54	88.5

From the results, it appears that the range of the respondents represented in the sample are similar; that is, they are property development companies that have been actively practising property developments for many years and were listed in Bursa Malaysia in 2009.

4.2 Waterfront Development Practice in Malaysia

TABLE 4 below summarises waterfront development practice in Malaysia.

TABLE 4: Waterfront development in Malaysia

Variable	n=61	Percent (%)
Undertake waterfront development projects:		
Yes	20	32.8
No	41	67.2
Undertake waterfront development projects in future:		
Yes	24	58.6
No	6	14.6
Not sure	11	26.8
Percentage of waterfront development projects:		
1-20%	12	60
21-40%	5	25
41-60%	3	15
Type of waterfront development projects:		
Residential	15	75
Commercial	8	40
Mixed-use	14	70
Industrial	0	0
Recreational	5	25
Other	1	5

From the results, nearly a third (32.8%) of the property development companies undertook waterfront development projects in Malaysia, while the rest (67.2%) were not involved in waterfront development in Malaysia or internationally.

From the results, more than half (58.6%) of the respondents are motivated to undertake waterfront development in the future, while the rest decided not to undertake waterfront development in the future and are still not, depending on the financial support and demand for waterfront property at the time.

Moreover, from the 32.8% of respondents who undertake waterfront development, 75% of them had undertaken waterfront development for residential use, 70% were developed for mixed-use and 25% were developed for recreational purposes. However, the results indicated that no companies developed waterfront projects for industrial use, while only five percent developed them for ‘other’ uses.

This finding was supported by the literature that indicated that in the past, many waterfront redevelopment areas underwent a transition from abandoned spaces to commercial, residential and recreational areas (Bruttomesso, 1993; Butuner, 2006; Sairinen & Kumpulainen, 2006). Moreover, research conducted by Tumbde (2005) also found that the riverfront redevelopment with emphasis on mixed-use developments helps enhance the economic feasibility of the redevelopment projects. In short, waterfront redevelopment projects can be economically viable with implementation of mixed land use development during the redevelopment processes (Bruttomesso, 2006; Torre, 1989; Tumbde, 2005).

4.3 Regulation for Waterfront Development in Malaysia

4.3.1 Regulations and guidelines for waterfront development – respondents’ levels of awareness

The findings from the results indicate that overall, property development companies are somewhat familiar with regulations and guidelines related to waterfront development in Malaysia such as the National Land Code 1965 (*mean score=3.59*), the Town and Country Planning Act 1976 (*mean score=3.57*), the Building By-Law 1984 (*mean score=3.56*), the Land Acquisition 1960 (*mean score=3.52*) and guidelines for riverfront development (*mean score=3.05*) (just to name a few of the regulations and guidelines). The findings from the interviews show that 84% of interviewees were aware of the guidelines for riverfront development designed by the Department of Drainage and Irrigation Malaysia. The mean scores for each regulation are presented in **TABLE 5** below.

TABLE 5: Regulations and guidelines for waterfront development – respondents’ levels of awareness

Regulation	Mean scores		
	Group 1 Mean score	Group 2 Mean score	Group 3 Mean score
National Land Code 1965.	3.59	3.65	3.56
Town and Country Planning Act 1976.	3.57	3.70	3.51
Uniform Building By-Law 1984.	3.56	3.85	3.41
Land Acquisition Act 1960.	3.52	3.65	3.46
Local Government Act 1976.	3.51	3.70	3.41
Environment Quality Act 1974.	3.48	3.65	3.39
Street, Drainage and Building Act 1974.	3.38	3.65	3.24
Coastal Zone Development Guidelines.	3.16	3.50	3.00
National Landscape Guidelines.	3.16	3.55	2.98
Guidelines for Riverfront Development Concept	3.05	3.45	2.85

Average mean score = 3.40

* Scale: From Never heard of it = 1 to Very familiar = 4

** **Group 1** = All respondents; **Group 2** = Respondents who undertook waterfront development; **Group 3** = Respondents who did not undertake waterfront development

4.3.2 Sufficiency of Regulations and Guidelines for Waterfront Development

The findings from the results indicate that almost half (44.3%) of the property development companies disagreed that Malaysia had sufficient regulations for waterfront development. These findings, are consistent with previous studies conducted by Latip et al. (2010) that showed that several reasons contributed to the loss of integration between cities and their water bodies in Malaysia such as an absence of policies and guidelines for waterfront development and the lack of policies and guidelines suitable for waterfront development, policies and guidelines developed and implemented in isolation by different government agencies, and some guidelines that are not gazetted. Subsequently, insufficient regulations and guidelines to control waterfront development in Malaysia and poor enforcement by the policy makers, has possibly caused unsustainable waterfront development in Malaysia. These findings are supported by the literature that indicate that various forms of regulations are important for successful waterfront development (Riley & Shurmer-Smith, 1988). In addition, adequate regulations and guidelines formulated for waterfront regeneration could have a significant impact upon waterfronts and subsequently considerably enhance waterfront areas (Breen & Rigby, 1996; West, 1989).

TABLE 6: Sufficient regulations and guidelines for waterfront development

Concern	G1 N=61 (%)	G2 n=20 (%)	G3 n=41 (%)
Too many regulations.	4 (6.5)	4 (20)	0 (0)
Insufficient regulations.	27 (44.3)	5 (25)	22 (53.7)
Moderately sufficient regulations – could do more.	23 (37.7)	9 (45)	14 (34.1)
Sufficient regulations – no change needed.	7 (11.5)	2 (10)	5 (12.2)

** **Group 1** = All respondents; **Group 2** = Respondents who undertook waterfront development; **Group 3** = Respondents who did not undertake waterfront development

4.3.4 Enforcement of Regulations for Waterfront Development

From the results, only a quarter (24.6%) of property development companies agreed that Malaysia has enforced the regulations and guidelines developed for waterfront development, sufficiently, while the rest were moderately enforce and were not. This findings, are consistent with previous studies conducted by Latip et al. (2010) that showed that policies and guidelines developed and implemented in isolation by different government agencies, and some guidelines that are not gazette were contributed to the loss integration between cities and their water bodies in Malaysia.

This indicates that perhaps the Malaysian government and the responsible agencies might need to enforce strictly the regulations to improve the sustainable waterfront development in Malaysia in the future. **TABLE 7** summarises the responses about the enforcement of waterfront regulations in Malaysia.

TABLE 7: Enforcement of Regulations for Waterfront Development

Concern	G1 N=61 (%)	G2 n=20 (%)	G3 n=41 (%)
Strictly enforced.	2 (3.3)	2 (10)	0 (0)
Moderately enforced.	32 (52.4)	13 (65)	19 (46.3)
Not enforced.	15 (24.6)	5 (25)	10 (24.4)
Unsure.	12 (19.7)	0 (0)	12 (29.3)

** **Group 1** = All respondents; **Group 2** = Respondents who undertook waterfront development; **Group 3** = Respondents who did not undertake waterfront development

5.0 CONCLUSION

This paper examined the law and regulations for waterfront development in Malaysia. From the results, it can be concluded that Malaysia has insufficient number of regulations for controlling waterfront development. Moreover, the results also indicated that Malaysia has moderately enforced the regulations and guidelines developed for waterfront development. Surprisingly, some of the policies and guidelines developed and implemented in isolation by different government agencies, and some guidelines that are not gazette. Therefore, sufficient number of regulation for controlling waterfront development, as well as clear and coherent principles and/or policy are important in order to maximise the positive effects of waterfront development (Riley & Shurmer-Smith, 1988; Yossi & Sajor, 2006) and subsequently are highly required in order to control waterfront development in Malaysia.

6.0 REFERENCES

- Abdullah, K., & Mahmood, M. F. (1999). *River management – The way forward*. Paper presented at the Workshop on River Management (30th-31st March 1999), Kuala Selangor, Malaysia, retrieved 16th July, 2008, from www.water.gov.my.
- Abidin, R. Z. R. Z. (2004). *Water resources management in Malaysia: The way forward*. Paper presented at the Asia Water 2004 (30th March-02nd April 2004), retrieved 24th July, 2008, from <http://www.epu.gov.my/html/themes/epu/images/common/pdf/.../txtspeech.pdf>.
- Breen, A., & Rigby, D. (1994). *Waterfronts: Cities reclaim their edge*. United State: McGraw-Hill.
- Breen, A., & Rigby, D. (1996). *The new waterfront: A worldwide urban success story*. New York: McGraw-Hill.
- Bruttomesso, R. (1993). Working on the water's edge. In R. Bruttomesso (Ed.), *Waterfronts – A new frontier for cities on water* (pp. 10-11). Venice: International Center Cities on Water.
- Bruttomesso, R. (2006). *Waterfront development: A strategic choice for cities on water*. Paper presented at the Waterfront Development Forum: China Maritime (02nd March 2006), Hong Kong, retrieved 24th January, 2009, from www.harbourbusinessforum.com/download/060303_transcript.pdf.
- Bursa Malaysia. (2009). Products and services. Retrieved 20th January, 2009, from <http://www.bursamalaysia.com/website/bm/>.
- Butuner, B. (2006). *Waterfront revitalisation as a challenging urban issue in Istanbul*. Paper presented at the 42nd ISoCaRP Congress: Waterfront Revitalisation as a Challenging Urban Issue, retrieved 17th May, 2010, from www.isocarp.net/Data/case_studies/792.pdf.

- Costanza, R. (1999). The ecological, economic, and social importance of the oceans. *Ecological Economics* 31, 199-213.
- Craig-Smith, S. J., & Fagence, M. (1995). *Recreation and tourism as a catalyst for urban waterfront redevelopment : An international survey*. Westport: Praeger Publisher.
- Daud, H. (2009). *Legislative approach to water quality management in Malaysia: success and challenges*. Kuala Lumpur, Malaysia: Department of Environment, Ministry of Natural Resources and Environment, retrieved 16th November, 2010, from www.doe.gov.my.
- Dewan Bandaraya Kuala Lumpur. (1984). *Kuala Lumpur Structure Plan*. Kuala Lumpur: Kuala Lumpur City Hall.
- Dong, L. (2004). *Waterfront development : A case study of Dalian, China*. Unpublished master thesis, University of Waterloo, Canada, retrieved 2nd June, 2008, from uwspace.uwaterloo.ca/bitstream/10012/988/1/I2dong2004.pdf.
- Elfithri, R., Mokhtar, M., Shah, A. H. H., & Idrus, S. (2008). *Collaborative decision making within the context of integrated water resources management in Langat River Basin, Malaysia*. Paper presented at the 7th World Wide Workshop for Young Environmental Scientist 2008 (13th-16th May 2008), Créteil – France, retrieved 8th October, 2008, from www.inweb.gr/twm4/abs/ELFITHRI%20Rahmad.pdf.
- Federal Constitution. (2006). *Laws of Malaysia*. Kuala Lumpur, Malaysia: Percetakan Nasional Berhad.
- Goodwin, R. F. (1999). Redeveloping deteriorated urban waterfronts: The effectiveness of U.S. coastal management programs. *Coastal Management*, 27, 239-269.
- Herzog, T. R., Herbert, E. J., Kaplan, R., & Crooks, C. L. (2000). Cultural and developmental comparisons of landscape perceptions and preferences. *Environment and Behavior*, 32(3), 323-346.
- Hoyle, B. (2000). Confrontation, consultation, cooperation? Community groups and urban change in Canadian port-city waterfronts. *The Canadian Geographer*, 44(3), 228-243.
- Hoyle, B. (2002). Urban waterfront revitalisation in developing countries: The example of Zanzibar's Stone town. *The Geographical Journal*, 168(2), 141-162.
- Hoyle, B., & Pinder, D. (Eds.). (1992). *European port cities in transition* (1st ed.). London: Belhaven Press.
- Hussein, H. (2006). Urban recreational riverfronts: Successful revitalisation elements. *Journal of Design and the Built Environment*, 2 (1).
- Keong, C. W. (2006). *River restoration in Malaysia*. Kuala Lumpur, Malaysia: Department of Irrigation and Drainage, Ministry of Natural Resources and Environment Malaysia, retrieved 15th March, 2009, from www.water.gov.my.
- Latip, N. S. A., Heath, T., Shamsuddin, S., Liew, M. S., & Vallyutham, K. (2010). *The contextual integration and sustainable development of Kuala Lumpur's city centre waterfront: An evaluation of the policies, law and guidelines*. Paper presented at the The World, Engineering, Science and Technology Congress (ESTCON 2010) (15th-17th June 2010), Kuala Lumpur Convention Centre, Malaysia, retrieved 29th January, 2011, from eprints.utp.edu.my/2811/1/SBI-06-CI-07.pdf.
- Macionis, J. J., & Parrillo, V. N. (2001). *Cities and urban life* (2nd ed.). Upper Saddle River, New Jersey: Prentice Hall.
- Malaysian Department of Irrigation and Drainage (2006). *Guidelines for riverfront development concept*. Kuala Lumpur, Malaysia: Department of Irrigation and Drainage, Ministry of

- Natural Resources and Environment Malaysia, retrieved 29th November, 2008, from www.water.gov.my.
- Malaysian Department of Irrigation and Drainage. (2009b). *Manual and guidelines for water management*. Kuala Lumpur, Malaysia: Department of Irrigation and Drainage, Ministry of Natural Resource and Environment Malaysia, retrieved 11st November, 2009, from www.water.gov.my.
- Malaysian Department of Irrigation and Drainage. (2009c). *River management activities*. Kuala Lumpur, Malaysia: Department of Irrigation and Drainage, Ministry of Natural Resources and Environment Malaysia, retrieved 4th November, 2009, from www.water.gov.my.
- Mann, R. (Ed.). (1973). *Rivers in the city*. Newton Abbot: David & Charles.
- Mokhtar, M., & Elfithri, R. (2005). *Participatory management for integrated water resources management through collaborative decision making*. Paper presented at the IWRM consultation for senior executive in the public sector, retrieved 22nd May, 2009, from www.inweb.gr/twm4/abs/ELFITHRI%20Rahmad.pdf.
- National Landscape Department. (2005). *Waterfront as recreational area*. Kuala Lumpur, Malaysia: National Landscape Department, Ministry of Housing and Local Government Malaysia, retrieved 24th September, 2009, from www.mhlg.gov.my.
- Norris, M. (1980). *Local government in Peninsular Malaysia*. England: Gower Pub Co.
- Riley, R., & Shurmer-Smith, L. (1988). Global imperatives, local forces and waterfront redevelopment. In B. Hoyle, D. Pinder & M. S. Husain (Eds.), *Revitalising the waterfront: International dimensions of dockland redevelopment*. London: Architectural Press Belhaven.
- Sairinen, R., & Kumpulainen, S. (2006). Assessing social impacts in urban waterfront regeneration. *Environmental Impact Assessment Review*, 26(1), 120-135.
- Sapsford, R., & Jupp, V. (2006). *Data collection and analysis* (2nd ed.). London: SAGE Publications.
- Sekaran, U. (2003). *Research methods for business: A skill building approach* (4th ed.). New York: John Wiley & Sons.
- Shaziman, S., Usman, I. M. S., & Tahir, M. (2010). *Waterfront as public space: Case study Klang River between Masjid Jamek and Central Market, Kuala Lumpur*. Paper presented at the 6th WSEAS International Conference on Energy, Environment, Ecosystems and Sustainable Development (EEESD' 2010) and 3rd WSEAS International Conference on Landscape Architecture (LA' 2010), 21st-23rd October, Politehnica University of Timisoara, Romania, retrieved 6th January, 2011, from www.wseas.us/e-library/conferences/2010/TimisoaraP/...EELA-56.pdf.
- Torre, L. A. (1989). *Waterfront development*. New York: Van Nostrand Reinhold.
- Tumbde, D. (2005). *Conceptual model for economically viable urban riverfront revitalization in United States*. Unpublished master thesis, University of Cincinnati, retrieved 18th August, 2010, from rave.ohiolink.edu/etdc/view?acc_num=ucin1123542011.
- Watson, J. S. (1986). *Ross's landing: A river edge park opportunity*. Paper presented at the 2nd International Conference on Making Cities Liable, retrieved 10th June, 2008, from www.livablecities.org/documentationsets/15-waterfront-design.
- Welch, D. N., & Keat, L. T. (1987). *Water Resources Development and Management in Malaysia Water Resources Policy for Asia*. Rotterdam, Netherlands: A. A. Balkema.

- West, N. (1989). Urban-waterfront developments: a geographic problem in search of a model *Geoforum*, 20(4), 459-468.
- Yarnell, P. (1999). Port administration and integrated coastal management under the Canada Marine Act in Vancouver, British Columbia, Canada *Coastal Management* 27(4), 12.
- Yassin, M. A., Eves, C., & McDonagh, J. (2009). *Waterfront development for residential in Malaysia*. Paper presented at the 15th Pacific Rim Real Estate Society Conference (24th-27th January 2009), University Technology of Sydney, Sydney, Australia.
- Yassin, M. A., (2012). *Developing Guidelines For Riverfront Development In Malaysia*. Unpublished Doctoral thesis, Lincoln University, New Zealand.
- Yassin, M. A., Bond, S., & McDonagh, J. (2012), Waterfront development in Malaysia: Practice and Motivation, Proceeding in International Real Estate Symposium, 24th – 25th April 2012, Bangi, Selangor.
- Yossi, B., & Sajor, E. E. (2006). *Development of riverside kampung and management of rivers in Yogyakarta Indonesia: Issue of policy coherence and relevance of socio economic characteristics of river bank communities* Paper presented at the Regional Conference on Urban Water and Sanitation in Southeast Asean Cities, Vientiane, Lao PDR, retrieved 5th Jun, 2008, from uemlaopdr.wordpress.com/publications/conference_uws_laos_06/.
- Zhang, L. (2002). *An evaluation an urban riverfront park, Riverfront Park, Spokane, Washington – Experience and lessons for designer*. Unpublished master thesis, Washington State University, United States.