

An Evolution of Waterfront Development in Malaysia: From History to Modernization

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Abstract

River has long been recognized as one of humanity's most important natural resources. It is one of the most important of all the natural resources necessary to ensure human health and civilization. A close association between cities and water is inherent since the history of civilization and in fact, many urban cities in Malaysia are located close to river areas. The last two decades shown Malaysia has shifted development strategy from agricultural based to industrialization, and manufacturing industries have become the economy's main source for the country until now. This transformation in 18th century is clearly shown that rapid urbanization, industrial and intensive agricultural activities, as well as wide-spread land development, have contributed to extensive changing of river functions for economy, national development and environment. In particular, river roles are become less significance for human life and river function limited only for transportation purposes only. So, viewed historically, waterfront development in Malaysia have undergone cycles of change over the decades and the latest in this pattern to more public purposes such as recreational and mixed used development. This paper aims to identify a transition of waterfront development in Malaysia from history time to modernization era and it would give a significance contribution for the research is currently on going.

Keywords: Waterfront development, Riverfront development, Urbanization

1.0 Introduction

River means a copious stream of water flowing in channel to sea or lake or another river (Hussein, 2006). According to Costanza (1999) almost 71 percent of the earth's surface was covered by water and rivers provide almost 99 percent of the living space on the planet (Lalli & Parsons, 1993) which determines a significant part of its climate and ecology (Costanza et al., 1997). The river has long been recognized as one of humanity's most important natural resources. The river indicates huge contribution to human welfare and United States reported river generated about 21 trillion US dollar per year from their functions and appears to be limitless sources of food, transportation, recreation and others (Costanza, 1999). In addition, Lalli and Parsons (1993) indicate more than 35 percent of the primary production of the earth has provided by the rivers. Instead of social importance for the global transportation, as an element of cultures and traditional importance as a source for primary and secondary production and biodiversity, the essential of river as an energy cycles is now beginning to be better appreciated (Costanza, 1999).

A close association between cities and water is inherent since the history of civilization whereby most cities are located on or near a water body of some type. For an example, in the history of human civilization Uruk, Eridu and Ur (to name a few) emerged as an early settlement about 6000 years ago (400 SM) at Mesopotamia. Moreover, Babylon also developed and grew up along the Tigris and Euphrates River which recognized as very fertile valley (Maclonis & Parrillo, 1998).

In Malaysia, from earliest time, civilisations have been established upon the banks of rivers, in fact many urban cities in Malaysia (such as Kuala Lumpur, Terengganu, Malacca, Kuantan, Kota Bharu, and Kuching) and cities grew up along the river or river valley (Andaya & Andaya, 2001). As a consequence, some of the villages are named after the rivers that run through, namely "Sungai Rengit, Sungai mati and Sungai Kapal in Johor.

After abundance for many years, Malaysia begins to redevelop waterfront area (along the riverbank) and Kuching city which located in Sarawak has been selected to initiate this project. The project proposed by Chief Minister of Sarawak mainly for recreational purpose in year 1989 and proceeds for development in year September 1993. The project is fully funded by state government of Sarawak and managed by Sarawak Economic Development Corporation (SEDC) (Sarawak subsidiary) (Sarawak Economic Development Corporation (SEDC), 1990). After completed in year 2003, Kuching riverfront becomes a benchmark for waterfront development project in Malaysia. The next phase (which expands from the existing waterfront) will be continued in year 2008 mainly focusing on river upgrading and beautification. Up to date, there are many waterfront developments has been developed in Malaysia, such as Malacca waterfront and Kuantan waterfront and forecasted to be continued for the future.

2.0 Waterfront and Waterfront Development

In general view, waterfront is the zone of interaction between urban development and the water. It is here that the needs of the water, the city, and its inhabitants come together. Breen & Rigby (1994) sees waterfront as the water's edge in cities and towns of all sizes and 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 fact, in most countries, the land in front of water is developed earlier than the inland area. Hussein (2006) define an urban riverfront as a dynamic area where cities engage their shorelines

In common word, Dong (2004) referring waterfront as a land fronting on to water. Even the word waterfront itself is clear, some researcher prefer to use several different words replacing the term

waterfront such as city port, harbor front, riverside and river edge and riverfront (Hoyle, 2002; Hussein, 2006; Roy Mann, 1973; Tunbridge & Ashworth, 1992; Watson, 1986).

An official definition by US Federal Coastal Zone Management Act, Office of Ocean and Coastal Resources (OOCR) (1972) defines the term urban waterfront or port as, “any developed area that is densely populated and is being used for, or has been used for, urban residential, recreational, commercial, shipping, or industrial purposes”.

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

The waterfront zone is a special area which holding special characteristics as discuss in Table 1 below;

Table1: Special characteristics of Waterfront area.

Characteristic	Description
Dynamic area	Waterfront zone is a dynamic area with frequently changing biological, chemical and geological attributes.
Habitat	Waterfront zone include highly productive and biologically diverse ecosystems that offer crucial nursery habitats for many marine species.
Natural defense	Waterfront zone features such as mangrove forests serves a critical natural defense against natural hazards (flooding, erosion and storms).
Pollution moderator	Water ecosystems may act to reduce the impacts of pollution originating from land such as, wetlands absorbing excess nutrient sediments, human waste.

In the development area, Breen & Rigby (1996, 1994) considered waterfront development may not necessarily need to be directly fronting but may only need to look attached to the water. They believe that commanding view of water can be considered waterfront property. However, Goodwin (1999) argued where waterfront boundaries are difficult to determine because they are contained between relatively homogeneous land uses (such as housing, large-scale industrial plants or waterfront parks) and in some cases the boundaries may be indistinct, especially when industrial waterfronts have been abandoned and only a small part remaining, which might form the nucleus for revitalization planning efforts.

Dong (2004) agreed that waterfront developments have several expressive and varying interpretations due to characteristics of sites and cities. Ryckbost (2005) seen the waterfronts are any property that has a strong visual or physical connection to water and water itself have a variety perspective, whereby it can be lake, ocean, river or stream. As a conclusion, the best definition for waterfront development is development directly fronting on water for any purposes and the water components can include river delta, coastal plains, wetlands, beached and dunes, lagoon, and other water features not excluded watershed area. However, for the planning purposes, watershed is impractical goes under this definition because waterfront zone is a special area endowed with special characteristics. Clearly, the boundary of when the

water and land are met is difficult to determined depending on jurisdictional limits and administrative by the country.

3.0 An evolution of waterfront development

Waterfronts began as commerce centers, transportation hubs, manufacturing centers and commercial areas. Therefore, Waterfronts are seen as the focal point in many cities. But, due to various reasons including changing in transportation, containerization shipping and manufacturing this has lead to a significant decline in waterfronts.

The urban waterfront development is widely regarded as a frontier on contemporary urban development, attracting investment and publicity (Malone, 1996). Sydney, London, Amsterdam, Hong Kong, Tokyo, Toronto, Osaka, Kobe and Dublin are examples of cities developed through the waterfront development process. Therefore, understanding the historical milestone of waterfront development is important because these are the stimulates to modern development in the city (Wrenn, 1983). In the book Urban Waterfront Development, Wrenn (1983) divided the historical evolution of waterfront into four periods are as follows:-

(1) Emergence of Waterfront Cities

At this period, the early American settlement was closely tied to the water edge. Waters plays an important role for needs, trade activity and water transportation. Settlements were established after immigrants arrived and the colonial waterfronts were the doors to opportunity. A settlement's waterfront served to link the necessities of people with a familiar and predictable environment.

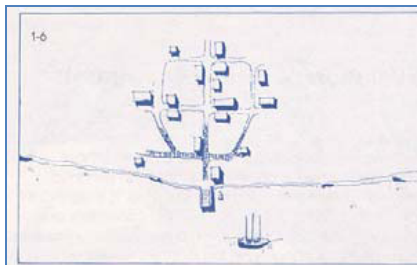


Figure 1: Typical Pattern of Port Development (Phase 1)

At that point in its development, the waterfront was nothing more than a few trails converging at a jetty. Rapid growth of waterfront community initiates a building development. However, the waterfront community still relies on waterway transportation due to limited transportation capability at that time.

(2) Growth of Waterfronts

At these periods, waterfront settlement increased and became a city. The area turned into a busy area to cater for trading activity. Building and warehouse was developed along the waterfront and typically, rows of warehouses blocked the water's edge from the street. By spilling out into the water to expand docking and storage areas, the distance from the city's centre to its shoreline was significantly extended. To make it easy, alternative transportation methods were introduced other than waterways. However, waterfronts become more congested due to more space required to accommodate the need for the railroads. As a result, the central city was further detached from the shoreline. Since 1930s, elevated highways and interstate freeways have appeared near the

shoreline. As a consequence, original offices and stores along the old shoreline were converted to warehouses and resulted in decreased number waterfront workers.

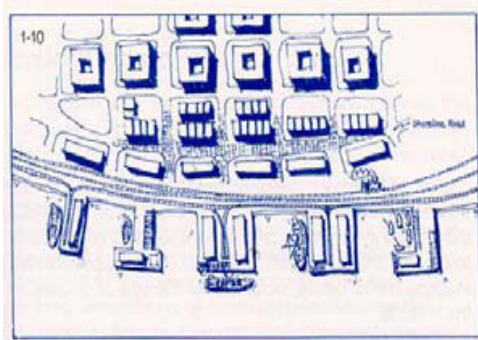


Figure 2: Typical Pattern of Port Development (Phase two)

In the meantime, the waterfront environment deteriorated due to the industrial pollution. The water became dirty and the waterfront began to lose its natural attraction to many urban residents.

(3) *Deterioration of Waterfronts*

Technologies changed in containerization and shipping, improvements of transportation patterns (highways) and with new ports developed outside the city; the old ports lost the role as the transportation and industry centre. People preferred the highways to railroads because of their freedom of choice and more accessibility. As a result, the waterfront became even more deteriorated. Besides those factors, increase awareness among public to environmental issue and introduced air and water pollution controls to manufacturers also contributed to ports becoming obsolete and waterfront become neglected. The waterfront virtually becomes a dead, inaccessible and unsafe area, further separating the urban core from the water.

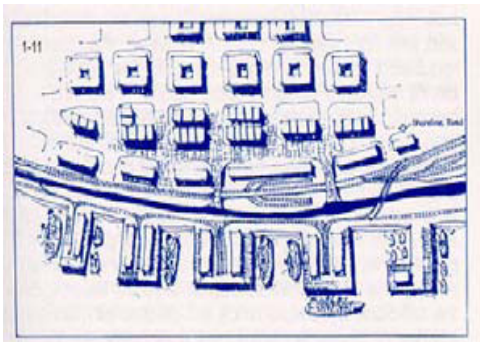


Figure 3: Typical Pattern of Port Development (Phase 3)

(4) *Rediscovery of Waterfronts*

Over time waterfront became a dead due to the commercial failure of many ports, in the 1960s, governments wanted to recover the aesthetic scenery of the waterfront which had become polluted over the years. There came a chance to reconnect waterfront to the downtown area for public use. Blends of recreational, residential and commercial uses were developed. As a consequence, much more land has been returned to public use. In the meanwhile new container ports were established outside the city where space was plentiful.

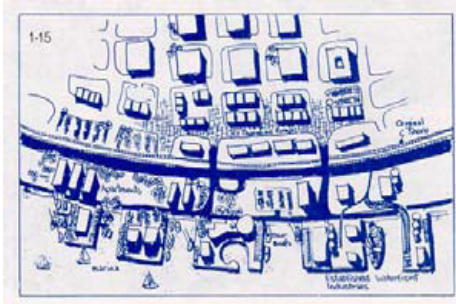


Figure 4: Typical Pattern of Port Development (Phase four)

It is apparent that each city has a different waterfront character, scale and pace, of course experienced variation in the typical waterfront evolution pattern. One fact is common though, urban waterfronts dramatically changed due to the influence of social and technology factors.

On the other hand, Mann (1973) indicates the historic milestone of urban riverfront development can be divided into six eras, are as follows;

1. *First Riverfront Settlement (2000BC-100AD)*

The process started with the river as the main source of transportation for travelers and goods. The growth of society continued along the river edge but the riverfront at the time was not one of the perquisites for the city's birth. This phase of history shows the significance of initial association between rivers and people.

2. *Middle Ages (100AD – 1600AD)*

During the time, travelers sailed along the river started to settle down along the river edge. Colonizing along the riverbank may also have been for a safety factor because the rest of the zone was still filled with dense forest. The river provided water resource for daily uses and trading operations. Rivers became a primary criterion for city's development.

3. *Renaissance (1600AD – 1800AD)*

Through the time, the colony started to grow. Trees were cut down and land cleared for expansion. Business related to the river activity expanded and the river transformed into a focal point. When the city began to develop, the river became a necessity.

4. *Industrialization (1800AD – 1975)*

The small settlement developed to towns and buildings were erected along the river to cater trading activities. Structures, such as warehouses were built facing the river. Continuous development established in the perception of rivers as public open space corridors. The area was turning into a busy business district.

5. *Decline of Riverfront (1975 – 1990)*

As time progressed, better means of transportation were introduced. Roadways and rail networks were built for a more practical mode of transportation. Better transportation has provided easier access resulting in the river's decline as a form of communication.

6. *Renewal of Riverfront (1990 – present day)*

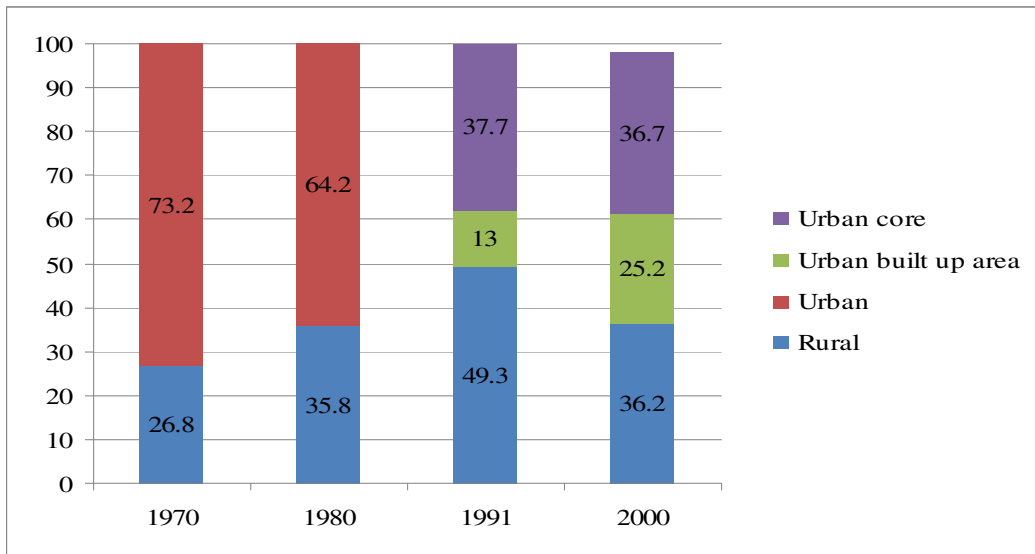
The new buildings erection and communities started to approach the technology. New development was based on the accessibility factor. The city began to turn their backs from the river and the river in turn was beginning to be neglected. It was regarded as the back alley of the growing city. Earlier buildings and traditional settlements remain along the riverfront together with the polluted river. This is a starting point in the abandonment of riverfronts.

4.0 Emerging of urbanization in Malaysia

During the past decades, both the scale and pattern of urban growth in Malaysia has increased continuously. Instead of positive economic growth, the gradually increase in population growth was the main attribute to urbanization process in Malaysia. For example, over the 1970 to 1980 census periods, the Malaysian urban population increased about 1.5 million people. From the number, around 56.1 percent was due to natural increase and another 38.7 percent from net boundary adjustments and the rest 5.2 percent from net migration. Statistic shows from the total urban population change about 3.4 million, 52.3 percent was due to natural increase, 37.4 percent from net urban boundary adjustments and 10.3 percent from net migration (Department of Statistics, 2000). In other words, despite of redefinition of urban area to include adjacent of built up areas, migration factor is also important.

Clearly, in Malaysia, urban population growth largely depends on natural growth means. Specifically, higher contribution from natural increase in the urban population growth partly attributed to the higher fertility of the earlier migrant households which have become urbanites during the observation periods. This scenario appears different from other developed world experience which is urban population growth usually depend on major rural to urban population migration. It seems that natural increases, however, rather than migration, are the main demographic process behind urban rates of growth in Peninsular Malaysia and perhaps elsewhere in Asia (Hirschman, 1976) .

Similar to many other countries, the increase of population size in urban areas is faster than in rural areas. The number of urban population growth in urban areas during third period (1970 to 2000) rose rapidly, from 26.8 percent to 61.8 percent. However, after introduction of Local Government Act, 1976 (Act 171) in Peninsular Malaysia which called for restructuring of local authorities, major increased of urbanization seen during 1980 to 2000 between 35.8 percent and 61.8 percent. This Act resulted in redefining and the extension boundaries of urban areas. Consequently, boundaries restructuring were created by Local Government Ordinance, 1961 for Sabah and the Local Authority Ordinance, 1977 for Sarawak in order to reflect more realistic urbanization in Malaysia (Jaafar, 2004). As a result, after the year 1991, a new definition of urban area with their characteristics was implemented accordingly. Urban area refers to gazette areas and their adjoining built up areas with a combination population of 10,000 people or more. Figure 5 shows the distribution of Malaysian population by stratum between 1970 and 2000.



(Source from: Jaafar, 2004)

Figure 5: Distribution of population by stratum in Malaysia

As a consequence from population growth, a range in the level of urbanization in Malaysia also changed throughout the time. Tempo of urbanization is the common term indicated to this phenomenon. Tempo of urbanization calculates the ratio of urban population growth rate over the total population. Table 2 shows the level of urbanization in Malaysia during intercensal periods.

Table 2: Urbanization levels, urban population growth and tempo of urbanization in Malaysia

Year	Proportion of Population in Urban area (%)	Average annual intercensal population growth rate (%)	Tempo of urbanization (%)
1970	26.8	-	-
1980	35.8 (34.2)	5.2 (3.0)	2.9 (2.4)
1991	50.7	5.8 (6.2)	3.2 (3.6)
2000	61.8	4.8	2.2

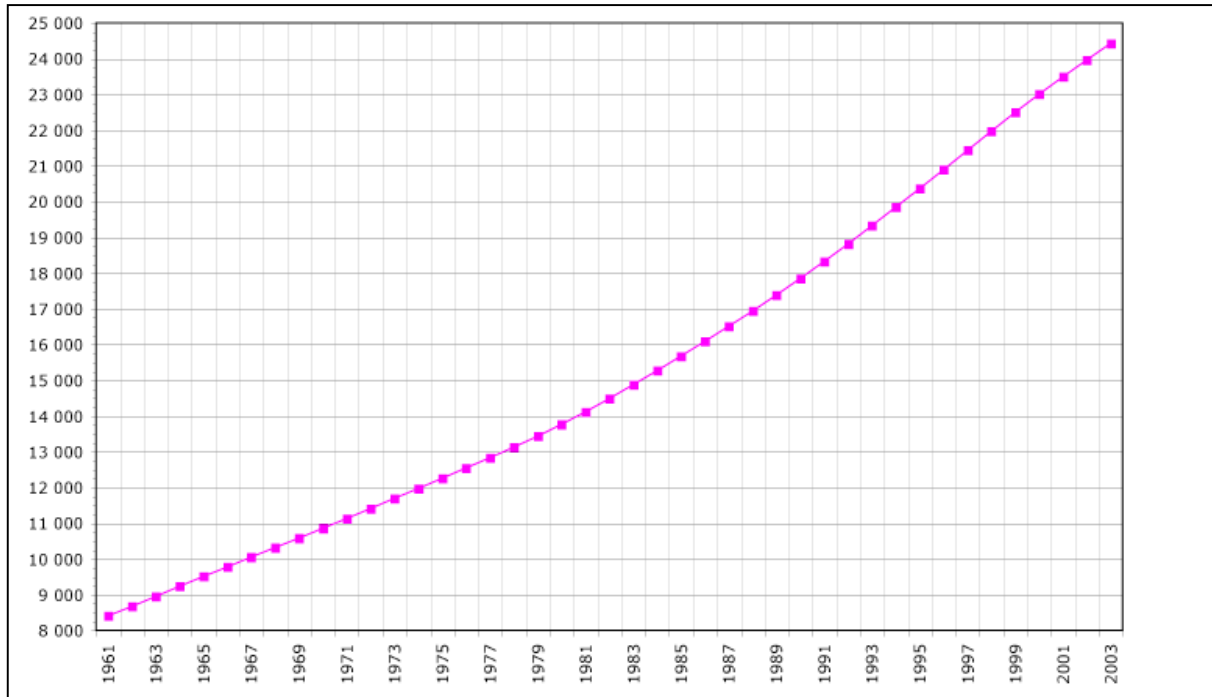
(Source from: Rahman, 2001)

The table clearly indicates after 1990s, there are significant changes in a proportion of population in urban area compared in the 1980s. This was contributed by redefining urban area boundaries by Local Authority.

5.0 Population growth and demographics changing in Malaysia

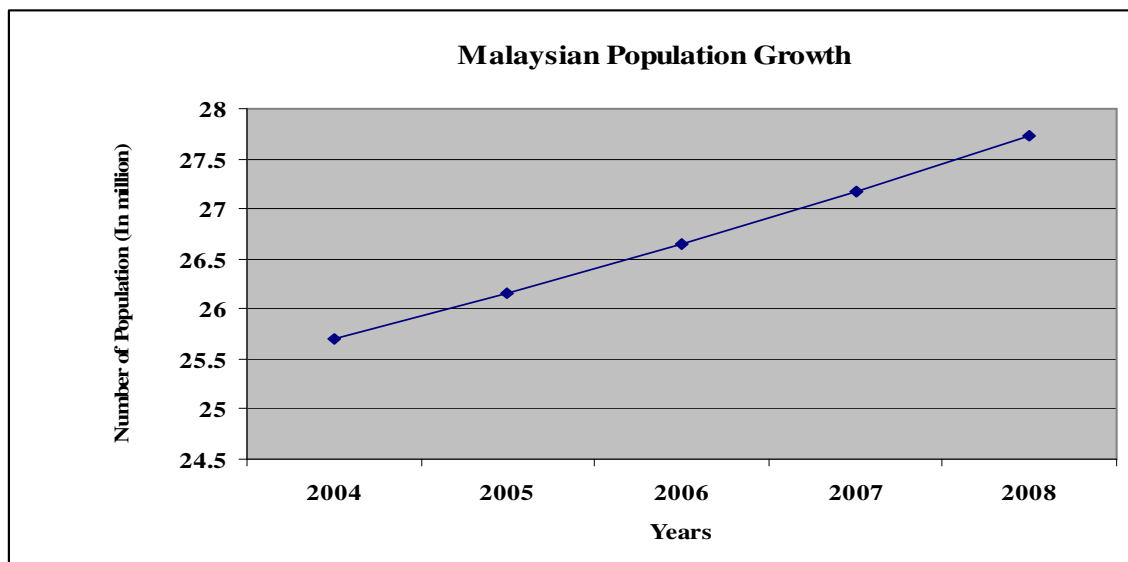
Population growth and economy stability are two major factor derived from urbanization. In many countries not exclude Malaysia, urbanization is influenced by both factors. From pre independence time until present, Malaysian population increased gradually with growth rate 2.0 to 3.0 percent ever year. The demographics of Malaysia are represented by the multiple ethnic groups that exist in this country. Malaysian population, is estimated about 27.7 million (Department of Statistics, 2008). Of these numbers, about 5.77 million Malaysians live in East Malaysia and 21.4 million live in Peninsular Malaysia (Department of Statistics, 2006). Moreover, among of Malaysian population, Malays and other Bumiputra

groups make up 65.0 % of the population, Chinese 26 percent, and Indian 8 percent (Department of Statistics, 2001). The population continues to grow at a rate of 2.4 percent per annum and approximately 34.0 % of the population is under the age of 15 years old. Figure 6(a) & (b) shows the pattern of population growth in Malaysia for the past 40 years.



(Source from: Department of Statistics, 2008)

Figure 6 (a): Malaysia Population Growth between Year 1961 and 2003



(Source from: Department of Statistics, 2008)

Figure 6(b): Malaysia Population Growth from year 2004 to 2007

Research conducted by Hasan & Kasim (2007) indicates the population of Peninsular Malaysia from year 1817 has been growing at rates higher than 2.0 percent per year for 150 years. A complete census for Peninsular Malaysia in 1911 recorded a population of 2,339,051 and the last census in 2000 recorded a population of 18,523,642 for Peninsular Malaysia (Department of Statistics, 2001), which translates to a growth of 2.3 percent per annum within a period of 89 years. The 1970 census recorded the population of Malaysia as 10,436,276 and for the year 2000 as 23,274,690, a growth of about 2.7 percent per annum within a period of 30 years. This growth was mainly due to natural increase. Until half year of 2008, Malaysia population increased up to 27.5 million and represents an additional growth rate about 1.9 percent a year since 2005 (Department of Statistics, 2008). This figure forecasted to increase for the future but in small number of percentage.

6.0 An Evolution of Waterfront development in Malaysia

Water is one of the most important of all the natural resources necessary to ensure human health and civilization. Rivers were a home to vital communities and initiate an emergence of city around them Malaysia is lucky to be able to call itself a water rich nation and a number of rivers with great potential for wealthy recreation. The important of the rivers as a physical centre of the city and site of trading for a long time ago remains as a history among Malaysian (Hussein, 2006).

Population growth, economic growth, urbanization and increased in technology have been transformed many Malaysia river system from water industry to non water industry. It is also contributed by movement of shipping industries to new port facilities elsewhere on the island. This transformation symbolises the independent city state effort to remake itself for the 21st century. After experiencing urbanization and modernization, the current pattern of waterfront development in Malaysia has been change and focusing more on mixed use development and recreational with incorporating Malaysia cultural and historical value. So, it is interesting to understand urban waterfront for the past two centuries. The history milestone of waterfront development in Malaysia can be divided into three (4) periods which is in line during urbanization periods:-

(1) First phase –During colonial rule (1887 – 1956)

During period, the river was the most important means domestic and trade of transportation. Growth of society along the river edge initiated the emergence of port towns and several other urban forms. Business related to the river activity expanded and the river transformed into a focal point. Later in this period, shows the relocation of people, especially Chinese, into “new village” during the emergency period (1948 to 1960).

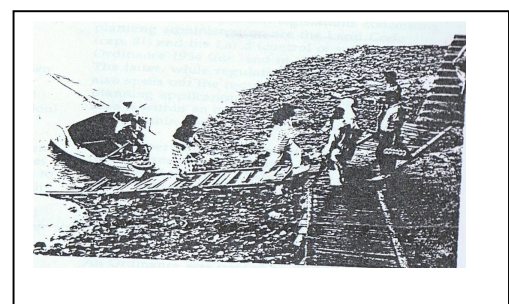
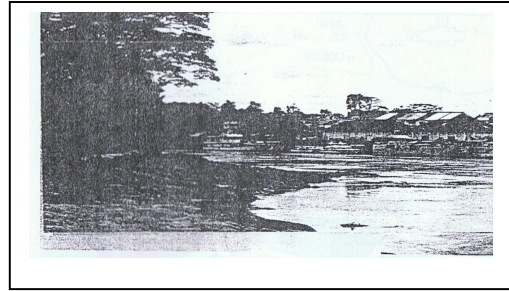


Figure 7 (a) & (b): River was the most important means for transportation and trading

Figure 7 (c): Settlement developed along the riverbanks



(2) *Second phase –After independence & early urbanization (1957 – 1969)*

In this period, development continued along the river edge and the establishment of the perception of rivers as public open space corridors. However, the government started to separate Malaysians from different groups (Malays group in rural area, Chinese in urban area and Indian in estate area). Land settlement is one of the major approaches in agricultural and socioeconomic development (Manshard & Morgan, 1985). Another strategy to support rural sector transformation in Malaysia is “Agrarian reform” (Arshad & Shamsudin, 1997). The strategy of agrarian reform affects a wider range of inputs and institutions and aims at the transformation of rural life and activities in all their economic, social, cultural, institutional, environmental and human aspects (Food Agricultural Organization, 1978). The major agrarian reforms implemented in Malaysia were land development and settlement and in situ development. For an example, second Malaysia’s prime minister, late Tun Razak arise an idea of FELDA to reallocate rural communities. FELDA was formed on 1st July 1956 , after enforcement of Land Development Ordinance 1956 mainly to support poor and landless community especially Malays group (Federal Land Development Authority (FELDA), 2009). FELDA focus mainly on peninsular Malaysia. To date FELDA has developed approximately 317 new areas totally 853,313 ha which became plantation and settlement area and benefiting more than 530,000 settlers. After 50 years developed, FELDA scheme was the most successful scheme and becomes the world leader of oil palm industry and settler being a part of the middle income groups by year 2010. As a result, more river populations moved to urban areas under relocation scheme programs. During this time Malaysian population began to adapt urbanization and starting migrates to urban areas.



Figure 8: Land development (oil palm plantation) and housing allocation under FELDA Scheme

(3) *Third phase – Urban explosion of industrialization period (1970-1997)*

Cities reshaping and rural reconstruction, urbanization and the upgrading of transportation system to cater trading and traveler resulted on declining of riverfronts. An introduction of New

Economy Policy by government has encouraged the industrial production movement in Malaysia. Less reliability on river function for many reasons caused buildings and traditional settlements remain along the riverfront together with the polluted river.



Figure 9(a): Better transportation has provided easier access form of communication.



Figure 9(b): A starting point of River's functions declined and river abundant

(4) *Forth phase – Technology, modernisation and vision 2020 (2000 – present)*

Starting from late 1990s, Malaysia begun to approach the technology and expansion of manufacturing and industry in urban area. Increasing job opportunity and facilities provided in urban area caused Increasing population in urban area up to 62 percent. Urban sprawl and city reshaping causing government initiate urban waterfront and urban riverfront development with two main reasons, redevelopment and revitalisation. After a few years, waterfront area became popular as recreational centre. However, congestion in urban area causing an urban people starting moved to sub urban area (urban boundary) including river area for privacy. It is initiated a new pattern of waterfront development in Malaysia. To date, waterfront development becomes a new trend of development all over the country and popular amongst the developer with emphasis on housing and mix use development projects.



Figure 10 (a) & (b): Current approaches of waterfront development in Malaysia – for recreational and housing development

To date, waterfront development in Malaysia forecasted to expand in future. As a country wealth assets, government struggle to redevelop waterfront area and river upgrading. On the other hand, private developer also takes an opportunity to transform water into gold with initiated housing waterfront development projects. With incorporating various aspects, our mission is to enhancing waterfront development and maintaining our natural resources.

7.0 Mission and vision of waterfront development in Malaysia

Waterfront development projects in Malaysia of all kinds will be continuing successes that far outweigh the failure. Some project will proceed the next phase, some will upgrading the existing one (redeveloping) while other are starting new projects. For an example of a new evolution of waterfront development in Malaysia are the Glenn Marie Cove housing development project and Kingfisher Cove. This development projects specifically focusing on waterfront development for mix use purposes. Housing development will continue to be one of the major new uses representing the most fundamental shift of all from previous uses. It is considering a new evolution of waterfront development in Malaysia, whereby previous pattern more familiar with recreational purpose.

8.0 Conclusion

Rivers is country's valuable assets and serves an important role for thousand of communities since of early human history. In Malaysia, the history of waterfront development emerged in line with urbanization evolution. Urbanization and modernization has transformed Malaysia from significantly reliable to river to a modern and fast developing country. Increasing population in urban area due to job opportunity and other factors caused people starting moved from high density populated to outer limit of urban boundaries. It was initiated waterfront housing projects. On the other hand, increasing on environmental awareness caused government and respective NGO's bodies put an effort on river rehabilitation and revitalization. Kuching riverfront, Malacca riverfront and Kuantan waterfront indicate a few example of successful waterfront redevelopment project has been done in Malaysia. However, behind of the successful story of waterfront development project in Malaysia, this kind of project has increasing stress on river water quality (environmental problem) and social issues. These issues will be discussing later in the next section of this research. So, cooperation between government and implementation agency significantly needed to ensure sustainable waterfront development implementation in Malaysia for the future.

9.0 References

- Coastal Zone Management Act, Section 306A (a) (2) C.F.R. (1972).
- Andaya, B. W., & Andaya, L. Y. (2001). *A history of Malaysia* (2nd edition ed.). London: Palgrave Macmillan.
- Arshad, F. m., & Shamsudin, M. N. (1997). *Rural development model in Malaysia*. Paper presented at the Paper presented to the Hon. President of Peru.
- Breen, A., & Rigby, D. (1996). *The new waterfront: A worldwide urban success story*. New York: McGraw-Hill.
- Breen, A., & Rigby, D. (Eds.). (1994). *waterfronts:cities reclaim their edge*. United State: McGraw-Hill,Inc.
- Costanza, R. (1999). The ecological, economic, and social importance of the oceans. *Ecological Economics* 31, 199-213.
- Costanza, R., d'Arge, R., Groot, R. d., Farber, S., Grasso, M., Hannon, B., et al. (1997). The value of the world's ecosystems services and natural capital. *NATURE*, 387, 253-260.
- Department of Statistics. (2000). *Population and Housing Census Statistics*. Kuala Lumpur: Department of Statistic,Malaysia. (M. Department Of Statistic o. Document Number)
- Department of Statistics. (2001). *Census of Population and Housing Malaysia 2000*. Malaysia: Department of Statisticso. Document Number)
- Department of Statistics. (2006). *Key data 2006*. Malaysia: Department of Statistics,Malaysiaio. Document Number)
- Department of Statistics. (2008). Key statistics [Electronic Version], from www.statistics.gov.my

- Dong, L. (2004). *Waterfront development : A case study of Dalian, China*. University of Waterloo, Canada.
- Federal Land Development Authority (FELDA). (2009). FELDA establishment and goals. Retrieved 1 October 2008, 2009, from www.felda.net.my
- Food Agricultural Organization. (1978). *Integrated rural development: Core element of the rural system*. Romeo. Document Number)
- Goodwin, R. F. (1999). Redeveloping deteriorated urban waterfronts: the effectiveness of U.S. Coastal Management Programs. *Coastal Management*, 27, 239-269.
- Hasan, A. R., & Kasim, N. H. (2007). Malaysia Population Census: Review of Enumeration Strategies and Topics. *JOURNAL OF THE DEPARTMENT OF STATISTICS, MALAYSIA, Volume 1*, 51-60.
- Hirschman, C. (1976). Recent urbanization trends in Peninsular Malaysia. *Demography*, 13(4), 445-461.
- Hoyle, B. (2002). Urban waterfront revitalization in developing countries: the example of Zanzibar's Stone Town. *The Geographical Journal*, 168(2), 141-162.
- Hussein, H. (2006). Urban recreational riverfronts: Successful revitalisation elements. *Journal of Design and the Built Environment*, 1(2).
- Jaafar, J. (2004). Emerging Trends of Urbanisation in Malaysia. *Journal Of The Department Of Statistics, Volume 1*, 43-60.
- Lalli, C., & Parsons, T. (1993). *Biological Oceanography: An Introduction* (1st edition ed.). Oxford: Elsevier Butterworth - Heinemann.
- Maclonis, J. J., & Parrillo, V. N. (1998). *Cities and Urban Life*. New Jersey: Prentice Hall.
- Malone, P. (1996). *City, Capital, and Water*. London and New York: Routledge.
- Mann, R. (1973). *Rivers in the city*: David & Charles, Newton Abbot.
- Manshard, W., & Morgan, W. B. (1985). *Agricultural Expansion and Pioneer Settlements in the Humid Tropics, 17-21 September 1985*. Paper presented at the Resource Use of Frontiers and Pioneer Settlements in the Humid Tropics.
- Rahman, S. A. (2001). *Preliminary count report for urban and rural areas*. Kuala Lumpur: Department of Statistico. Document Number)
- Ryckbost, P. (2005). *Redeveloping urban waterfront property*. Retrieved 19 June 2008, Sarawak Economic Development Corporation (SEDC). (1990). *Kuching Riverfront Master Plan*. Sarawak, Malaysia: Sarawak Economic Development Corporation (SEDC)o. Document Number)
- Tunbridge, J., & Ashworth, G. (1992). Leisure resource development in cityport revitalisation: the tourist-historic dimension. In B. Hoyle & D. Pinder (Eds.), *European port cities in transition* (pp. 177-199). London: Belhaven Press.
- Watson, J. S. (1986). *Ross's landing : A river edge park opportunity*. Paper presented at the 2nd International Conference on Making Cities Liable.
- Wrenn, D. M. (1983). *Urban Waterfront Development*. Washington, D.C: The Urban Land Institute.
- Zhang, L. (2002). *An evaluation an urban riverfront park, Riverfront park, Spokane, Washington experience and lessons for designer.*, WASHINGTON STATE UNIVERSITY, US.