

# Waterfront regeneration as a sustainable approach to city development in Malaysia

S. Shamsuddin<sup>1</sup>, N. S. Abdul Latip<sup>2</sup> & A. B. Sulaiman<sup>1</sup>

<sup>1</sup>*Universiti Teknologi, Malaysia City Campus, Kuala Lumpur, Malaysia*

<sup>2</sup>*International Islamic University of Malaysia, Malaysia*

## Abstract

The morphological development of the towns and cities in Malaysia was influenced by the river, where it functioned as the main transportation system. Many of these rivers flow right through the town centres and are influential in giving character to the townscapes of the cities through the quality of views. Nevertheless, many of these rivers are in a poor state of health in terms of the water quality and have not been fully exploited in terms of their recreational potential as well as their heritage value. Of the thirteen state capital cities studied, there are three cities that have already embarked on a regeneration program to revitalize their riverfronts. However, some of the recent developments on the riverfront are considered unsustainable and insensitive to the river as a valuable asset of the city, such as the covering of the river with an open plaza and changing the natural embankment of the river to concrete banks, hence turning its image into that of a large open culvert running across the city. Many of the buildings along the river are still backing the waterfront where access both visually and physically is rather limited. This paper is going to discuss the issue of rivers as one of the significant elements that contribute to the sense of place of the city and the plight of the rivers as the city progresses into the future. The discussion is based on an urban design study of all the state capital cities in Malaysia as well as a doctoral research that looks at the issue of waterfront regeneration in the Federal Capital City of Kuala Lumpur. The paper concludes by highlighting the impact of these rivers to the sense of place of Malaysian cities and their roles in creating sustainable cities in the future.

*Keywords: waterfront, regeneration, sustainable, urban design, sense of place, city development.*



## 1 Introduction

Waterfront areas have been an issue worldwide due to the significant contribution that they play in the historical development of the cities and as the main transportation routes during the pre industrial revolution era until the invention of automobiles. Many cities were developed along the waterfront as a result of this to facilitate communications and transportation between cities. Factories and port related buildings were built along the waterfront, which makes the waterfront one of the liveliest and busiest places in the city. The waterfront also became very significant in giving the sense of place of the city through the quality of views, urban form, activity setting and townscape effects generated by the river. The issue of the waterfront became more prominent when the rivers or canals ceased to be the major lifeline of the city as well as its most important transportation mode. From being one of the major nodes of the city, the riverfront became a derelict area where many buildings were dilapidated and vacant when the water transportation related activities and factories ceased functioning. This paper is going to discuss the current scenario of waterfront development in Malaysia and its potential as one of the elements that could contribute to the sustainable approach to city development in the future. This paper is divided into seven parts where the second part will discuss the issues of the waterfront globally and in the Malaysian context. The third part discusses waterfront regeneration in creating the sense of place for a sustainable city in the future. The fourth part examines the morphological development of a Malaysian city and the influence of the waterfront in shaping the city. This is followed by a discussion of the role of the waterfront in influencing the character and sense of place of Malaysian cities. The sixth part will discuss the current scenario of waterfront development in the Federal Territory of Kuala Lumpur, Malaysia. The final part concludes the paper.

## 2 Issues facing the waterfront in urban areas

Most of the cities around the world started at waterfront areas due to the mode of transportation that depends very much on water. The waterfront grew from settlements to trading areas and some developed into ports. It became a very important area to the morphological development of a city. May [1] opined that in the early phase of city development waterfronts take not only commercial significance but important cultural roles as well. The importance of the waterfront as a core area to a city is obvious as Rafferty and Holst [2] accorded during that time those who did not go to the sea, set up shops, warehouses, hotels, and offices along the waterfront. In Tokyo for example, the city was known as the 'city of water' during the Edo era when most of their life lingered around the waterfront. Jinnai [3] argued that they love to watch the cycle of nature and the waterfront was a very important place for socialising and central events. During the industrial revolution these scenarios changed in most of western cities and some Asian cities. Many industrial buildings and warehouses were built along the banks as they were closer to transport the production of



goods through the water transportation. It has in turn transformed the waterfront into a hazardous area and unsafe place for the public to visit. Hoyle et al. [4] stated that the technological changes in the shipping industry had worsened the situation when many of the ports had to be shifted to a deeper area and most of the waterfront areas ended up becoming obsolete and were later abandoned. Mass production industries that require larger factories were also relocated away from the city centre due to the cheaper land cost. In return, many workers lost their jobs and started to move out to find jobs in the new factories in the suburban area. Railway lines and motorways were built to connect these places to one another and to the ports. These scenarios created a massive decentralisation of people from the city centre and the waterfront further lost its significance in the perception of the public and its vitality to the city life. The place the public had cherished became a place that the public avoided and it was a great loss to one of the main assets of a city.

The same situation was experienced in many cities in the Malaysian context. Though the country did not go through the industrial revolution era, the rapid urbanisation and the introduction of railways and automobiles have minimized the importance of the waterways as the main transportation system. This phenomenon had affected the waterfront area which was once a very important place for trading as well as being the birth place of the city.

### **3 Waterfront regeneration in creating the sense of place for a sustainable city in the future**

West [5] highlighted that the potential of the waterfronts was realised in parallel with the massive urban regeneration efforts that were undertaken in numerous cities throughout US as an after effect of the deindustrialisation in the central part of the cities. According to Jones [6] one of the earliest efforts started in San Francisco in 1950s but the real potential of waterfront regeneration had only gained recognition with the efforts done in Boston and Baltimore.

The awareness of the importance of waterfront regeneration was further increased with the introduction of the environmental regulation and policy in the 1970s and 1980s in the US such as the Clean Water Act (US Public Law 91-190) and the National Environmental Policy Act (US Public 92-500). West [5] mentioned that with the implementation of the policies there were high demands on water clean up which improved the water quality and makes the waterfront more attractive. This eventually invited new investments at the waterfront by developers and users alike. Hagerman [7] accorded that the significance of environmental quality in assisting to influence demand by creating or reinforcing occupiers' taste for certain working or living environments was pointed out by the study done for US Department of the Environment in 1995.

Different social impulses and public policies have been at work since the beginning of the 1970s. These trends were spreading in response to the assumed desires of the people for a livelier and more participatory activity in public places, especially places like the urban waterfront which had taken off with the concept of the market-place, inventively brought forward by architect Jim Rouse



in Boston and Baltimore. Mann [8] stated that the design approach which embodies the market-place with a good public place for social interaction and aesthetically pleasing for public to experience, had transformed the waterfront as the major node for the cities. Falk [9] argued that many other cities had since replicated the example but soon it was realised that the success of the template was not suitable to be copied to all cities. Many had succeeded with the same approach for example like Darling Harbour in Sydney which has become one of the most visited location in Australia but many also which used the same template had failed in the attempt. Therefore, identifying the distinctiveness of character and environmental situation in terms of its political, economics and social aspects in every city are recognised as an important factor to be considered in creating a good sense of place Hoyle [4]. The sense of belonging of the locals towards the place is vital in ensuring a sustainable regeneration of the waterfront areas. This was portrayed by the local communities of Newcastle in the UK and Kuching, Malaysia where the regeneration effort had managed to gain the public's trust and bring them back to the waterfront and instigate their own efforts and willingness to take care and clean up their waterfront voluntarily.

The trend to regenerate the waterfront has spread from North America to the rest of the world including the UK, Europe, Africa and Asian countries. In Malaysian context, there have been some attempts in the past in some of the cities to adopt a more positive approach to the waterfront by turning the waterfront into a recreational place for the city dwellers. The most prominent of this is the Kuching waterfront which turned the former port activities along the waterfront into a recreational promenade. This is followed recently by Melaka, which spent quite a significant amount of money to clean up the river and to increase access to the riverfront by the construction of pedestrian walkways along the river. These efforts have now witnessed some monetary returns where the thriving tourism industry in the city has now also focused to its river boat cruise.

#### **4 The role of the waterfront in the morphological development of cities in Malaysia**

Almost all the capital cities of Malaysia are located by the river or the open seas. This is due to the important role of the river as the main transportation mode prior to the introduction of the automobiles. During the British colonial government era, many of these cities function as ports to export the tin and rubber products and therefore access to waters is the most important criterion for the building of a town. Shamsuddin and Sulaiman [10] stated that the morphological studies of some of these cities have shown that the earlier beginnings of these cities occur along the riverfront and the first street built was parallel to the river. The other important buildings built by the water edge were warehouses, markets and shop houses. Jetties were also quite predominant then as they served as the node that link the water transport to the land. The other trend observed is that the spread of the city inland was made possible by the construction of the roads perpendicular to the earliest roads. The market place



was originally built close to the water edge to enable easy transferring of farm products transported via the river from the countryside. Today, some of the traditional way of market places by the river or sea can still be observed in Kuala Terengganu, Kuching and Kota Kinabalu. In all the other cities, the markets were relocated away from the river in the city centre to the urban fringe to solve the traffic congestion problem associated with the market activities. This is one of the most unsustainable decision made by the city fathers because it deprived the city from one of its most important node that give the sense of place to the city as well as providing basic services to the city inhabitants.

The other important city building that used to be built along the waterfront is the mosque. The most prominent example is the Jamek Mosque which was built at the confluence of the two rivers that run through the heart of the city centre of Kuala Lumpur. The other example can be seen in Alor Setar where the mosque and the royal buildings were built within close proximity to the riverfront. The same can be observed in Kota Bharu where the royal jetty was built by the river to provide access from the river to the royal palace complex nearby. Today, the river ceased to play an important role to the city development and that many of the new commercial development are now concentrating away from the river. The river now is no longer located in the main commercial parts of the city but rather as one of the recreational place in the city as clearly displayed in the case of Kuantan city.

## **5 Influence of the waterfront on the character of Malaysian cities**

Since many of the cities were built adjacent to the waterfront, the river becomes one of the major features that influenced the quality of views into and within the city. There are three types of character that developed as a result of this namely:

- i) A city where the river flows through its centre and becomes an edge that separates the city into two parts.
- ii) The city that was built on one side of the river where it acted as an edge that defines the city limits.
- iii) A city that was built with the river mouth running through the city centre and fronting the open sea. In the first case, it was observed that the river becomes the element that divides the city into two distinctive parts either by virtue of its character or its dominant use.

In the case of Kuala Lumpur, Alor Setar, Ipoh, Johor Bahru, Kangar and Melaka, the river's presence is quite dominant as it becomes the feature that distinguishes between the old and historical parts of the city centre and the new commercial parts of the city. The other type of city is distinguished by the river being one of the elements that define the city limits and acting as a strong edge to the urban form. Examples of this type of city are Kuala Terengganu, Kota Bharu, Kuantan and Kuching. The unique character of these cities is that on the other side of the river is usually the rural environment comprising of fishing villages or mangrove swamps. This creates a strong sense of place to these cities due to the contrasting character between the two sides of the river. There appear



to be a symbiotic relationship between both the rural parts and the urban parts of the riverfront where jetties were built to link the two sides together and passenger boats ferry the people from one side of the river to the other.

The third type of character is cities that are fronting the open sea such as Kota Kinabalu, Melaka, Georgetown and Johor Bharu. Of the four, Georgetown is the most unique because it is a town that was built on the island of Penang and was a former port and ruled by the British for quite a significant number of years. Due to this, the city had a more active waterfront where the port related buildings lined its waterfront. Prior to the construction of the Penang Bridge that links the island to the mainland, the major transportation mode is the ferry. The townscape of the city then is similar to many other harbour or port towns in the world. There was also a fort called the Fort Cornwallis which was built by the British adjacent to its waterfront for defence purposes then. The other city i.e. Kota Kinabalu was also a former port city built fronting the South China Sea. The waterfront gives a unique character to the city with its market place by the water edge contributing to its sense of place. A promenade with some recreational and leisure facilities built along the waterfront gives direct access to the waterfront as well as providing some of the most picturesque view of the city. In fact, the waterfront became the most distinctive feature of the city due to the mediocre architecture of the city centre and its mundane street pattern and urban blocks.

Johor Bharu is considered to be the most unique due to the presence of the river as well as the Straits of Tebrau which fronts the city. The view of Singapore across the causeway from the city centre makes the city quite distinctive from other cities in Malaysia. The river that runs right through the city centre parallel to its major streets that houses its most important shopping complexes used to be very dominant in the city centre. It also divides the city centre into two where the old parts of the city with its traditional old shop houses and organic pattern is located on one side of the street whereas the newer commercial district with its more contemporary retail architecture and gridiron street pattern characterized the other side of the river. Despite its polluted conditions and foul smell, the river appears quite prominent in the mental maps and perceptual survey of the residents. However, the presence of the river is now minimized due to the recent development of Legaran Segget, an open plaza built on top of the river covering a large portion of the river. This is a sad example of the insensitive treatment of the river by the local authorities that is not sustainable in terms of its use of the natural resources.

In the other cities where the river runs through the city centre, Melaka had some of the most interesting buildings lining the riverfront. The river used to be the main life line to Melaka in the past and some of these buildings can be traced back to the Dutch era where the old Melaka was a legacy of the Dutch colonial government. Some of these buildings used to have double frontages where the river used to be its main transportation system before the construction of the roads parallel to the river. Shamsuddin et al. [11] found that the location of Melaka by the river mouth that flows into the Straits of Melaka makes the river one of its most important feature to the sense of place of this city. One of the cities where the river defines the city limits, Kuala Terengganu, is also unique



because the city was built with its main high street in the past following the river curve. The market place that was built by the water edge next to its jetty and at the end of the high street is the most important element that gives the sense of place to this city. Many of these buildings used to have double frontages to the riverfront and the street and glimpses of the river can be seen through the gaps in the terraced shop houses that line the waterfront. Nevertheless, the reclamation of the riverfront with its new commercial buildings at the back of the original waterfront buildings has narrowed the river and changed the character of the heritage riverfront and the townscape. Again, an unsustainable measure that affects the waterfront was adopted.

## **6 A case of the waterfront development in the Federal Territory of Kuala Lumpur**

The current scenario on the potential of waterfront development in the Kuala Lumpur city centre is reported based on a preliminary survey done early this year. As mentioned earlier Kuala Lumpur is blessed with a river running through the city centre. The river had once played a very important role in the birth of Kuala Lumpur when the new tin mining area was explored through the river. In 1857, at the confluence of the Klang and Gombak river is where the first settlement of Kuala Lumpur started as a trading post for tin. The morphological development of the city grew from there. The east banks at the confluence slowly filled up with more houses, shops and market area along the riverfront as more people came in to work at the new tin mining areas. During the British colonization the administration was moved from Taiping to Kuala Lumpur in 1880. They had settled their administration buildings on the west bank of the river. In 1881 when the city was on fire, most of the shops and houses on the east bank were burnt down. Since then, a proper town planning legislation was introduced and the materials used to build buildings were also changed from timber to bricks. The river was the main life line of the city as it was the main transportation system till early 1900s. Based on the archival maps available the buildings built before the 1950s still fronted and respect the existence of the river as the main life line for the city. The photos of old Kuala Lumpur show that the buildings either have their façade that addressed the importance of the view of the river (as can be seen at the Sultan Abdul Samad building) or having the entrances facing the river as can be seen of Jamek Mosque (which sits in the middle of the confluence of the river) and the market which has its frontage facing the river. The shops lining the rivers were also facing the river. The existence of promenades which are visible along the river enhanced the river further for activities and trading to take place, fig 1. Streets were terminated at riverfront area to allow direct access to the river edge. Sadly, the introduction of the railway and motorcar as the main mode of transportation in the 1900s had decreased the importance of the river significantly. Most work relating to the river since then was focused on engineering work to mitigate flood. One of the major changes that occurred was when the river was straightened in 1930s. The natural sloping bank of the river was turned into concrete wall and some parts of



the river were turned into culverts as part of the flood mitigation purposes. This had drastically changed the character of the waterfront which in turn looks more like a monsoon drain rather than a river, fig 2.



Figure 1: Waterfront of Kuala Lumpur in the early 1900.



Figure 2: Waterfront of Kuala in 2008.

The city grew rapidly and the new developments move further away from the riverfront area. The road and rail system becomes more complex to connect all the areas. Decentralization started to happen when satellite cities with more comfortable housing areas were introduced away from the city centre in the late 1970s. The purpose was to reduce the congestion in the city centre without realizing that the moment people start to leave the city centre, declining of the city centre will start to occur with the lack of major activities to generate economies. Some of the deteriorated heritage shop houses along the riverbank were replaced by new developments that were built insensitively to the river. New buildings built along the river were backing the river and flowed their waste and rubbish from the building straight into the river. The river is treated like a sewer line for quite some time and producing a foul smell which many want to stay away from. The condition of the river had turned from bad to worse and in the 1980s it was listed as one of the most polluted river in the nation.

The awareness of the importance of the river started to change slowly in the early 1990s when it was highlighted in the category of 'High National Priority' in Chapter 18, Agenda 21. In 1992, 'Love Our River' campaign was launched which include a 10 year program to clean the Klang river. Sadly, till last year in which the 10 years duration was supposed to past, RM5million is still spent each



year to clean the river. Some of the developers of the new developments recently interviewed were saying why should they face their new buildings to a river that gave a bad view and foul smell? The 15 year old 'love our river' campaign was declared to be a failure by the Natural Resources and Environment Minister Datuk Seri Azmi Khalid last year and it was said that a new 10mil campaign to educate the public about protecting the rivers will soon be launched. In the Kuala Lumpur Structure Plan 2020 which was launched in 2004, highlighted the importance of attracting people back to live in the city centre and the riverfront area was identified as part of the potential public area that can contribute to the enhancement of the living environment in the city centre. Further acknowledgement was highlighted in the National Urbanization Policy that was drawn up by the Ministry of Housing and Local Government and approved by the cabinet in 2006. It specifically focused on the conservation of historical buildings and natural heritage sites as part of the quest to achieve sustainability and improve the quality of urban life. These policies complemented the conservation of natural and built heritage act in the National Heritage Act 2005 under the jurisdiction of Ministry of Culture, Arts and Heritage. Furthermore, in the 9<sup>th</sup> Malaysia Plan 2006-2010 stressed the responsibility of the government in ensuring the balance between development and environmental sustainability. An amount of RM510mil was allocated for the purpose of cleaning, preserving and beautifying rivers. Finally in the most recent Draft Local Plan of Kuala Lumpur which is still on display for public comment highlighted the master plan and guideline for the waterfront development. The increase in awareness on the potential and importance of the riverfront through the policies and guidelines available is a positive move towards a more sustainable environment of the future.

Findings from the initial reconnaissance in the context of waterfront development in Kuala Lumpur city centre shows that many of the acts related were not fully enforced. This gives an impact in the continuance of water pollution and insensitive waterfront development. The lack of policy and detail guidelines on waterfront development in between 1984 to 2004 may also contribute to the existing situation of the waterfront area. The inconsistency in the decision making of the various units involved in the development of the waterfront area was also an area of concern in the success of future development of the waterfront of Kuala Lumpur

## 7 Conclusion

This paper discusses the issue of the waterfront development in Malaysian cities in the light of the current thinking about the potential of the waterfront in contributing to a more sustainable city development in the future. Although in the past, the river was not given due considerations in the planning and design of the cities, there has been some interesting development undertaken recently that has changed this scenario. But the question on the thoroughness of its implementation is still in question. In view of the significant contribution of the waterfront in the morphological development of the city as well as its role in



creating the sense of place of these cities, it is of utmost important that the waterfront be given due considerations in the future development of the city. This is to enable a more sustainable approach to city development in terms of its urban heritage and natural resources to be adopted in Malaysia in the future.

## References

- [1] May, R., Connectivity in urban rivers: Conflict and convergence between ecology and design. Design technology in society. Online doi.101016/j.techsoc.2006.09.004 Elsevier Ltd.
- [2] Rafferty, L & Holst, L., An introduction to urban waterfront development. *Remaking the Urban Waterfront*, Urban Land Institute: Washington, 2004
- [3] Jinnai, H., The Waterfront as a public place in Tokyo (Chapter 1). *Public Places in Asia Pacific Cities*, ed Miao, P, Kluwer Academic Publisher: Netherlands, pp. 49–70, 2001.
- [4] Hoyle B.S, Pinder D.A & Husain M.A., (eds) *Revitalising the Waterfront: International Dimension of Dockland Redevelopment*. John Wiley & Sons Inc: Great Britain, 1988.
- [5] West, N., Urban-waterfront developments: A geographical problem in search of a model. *Geoforum*. **20(4)**, pp. 459–468, 1989.
- [6] Jones, A., Issues in waterfront regeneration: More sobering thoughts –A UK perspective. *Planning Practice and Research*, **13(4)**, pp. 433–442, 1998.
- [7] Hagerman, C., Shaping Neighbourhoods and nature: Urban political ecologies of urban waterfront transformations in Portland, Oregon. *Cities*, 2007. Online doi.10.1016/j.cities.2006.12.003
- [8] Mann, R., Ten trends in the continuing renaissance of urban waterfronts. *Landscape and Urban Planning*. **(16)**, pp.177–199, 1988.
- [9] Falk, N., Turning the tide: British experience in regenerating urban docklands in Hoyle B.S and Pinder D.A (eds). *European port cities in transition*, Belhaven press: London, pp116–135, 1992.
- [10] Shamsuddin, S. and Sulaiman A. B., Typology of urban form of old town centres in Malaysia, unpublished research report, UTM, Johor Bahru, 1992.
- [11] Shamsuddin, S. et al, Designing Urban Intervention for Places of Historical and Cultural Significance in Malaysia, unpublished research report, UTM, Johor Bharu, 2002.

