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ASSESSING THE SOCIAL VALUES OF HISTORICAL WATERFRONT: A CASE STUDY OF SUNGAI PETANI, KEDAH, MALAYSIA

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Abstract

Waterfronts are vibrant areas that are heavily utilised by people with activities in pre-industrial cities. Riverfronts and towns have a tight association during this time frame. As a result, industrial plants were shut down and modes of transportation were altered. In the face of rapid urbanisation and industrialisation in Sungai Petani, Kedah, there is a growing concern that the economic and environmental changes may negatively affect the social values among the community. Overall, this research aims to identify several key areas for the historical waterfront regeneration of Sungai Petani. A social impact assessment was conducted to analyse the social values of the existing waterfront to expand the aspects of social and culture to the planning of urban waterfront regeneration in Sungai Petani. Results of the questionnaire revealed that respondents showed their satisfaction and opinion upon the waterfront element. There are 61.6% proportion of the respondents who consider that the community cohesiveness is the greatest strength of the Sungai Petani's waterfront. This is followed by cultural vibrancy (47.2%), beautiful streets (40.8%), streets in harmony with nature (28.8%), and beautiful river (12%). At the end of the study, solutions were suggested for the regeneration of historical waterfront and correcting mistakes in existing spaces in light of these determinations.

Keywords: Historical Waterfront, Social Values, Urban Waterfront Rehabilitation, Culture Context

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INTRODUCTION

Urban natural water resources are crucial to the establishment of the harmony between nature and social life necessary for the sustainable growth of cities. The comfort of humans, both physically and psychologically, makes water the most crucial planning component. In addition, it helps to bring the surroundings a range of attributes in terms of aesthetic and functional (Önen, 2007). According to a study by Mohd Shafiq Mohd Sazili et al. (2020), there is a growing trend towards revitalising urban waterfronts as part of broader urban regeneration efforts in Malaysia. However, the majority of the research in this area has focused on large cities. The authors suggest that there is a need for more research into the regeneration of waterfronts in smaller towns, particularly those with historical significance.

Meanwhile, Sungai Petani is a town located in Kuala Muda District, Kedah, Malaysia, that is also not exempted from the impacts of pre-industrial activities. It is currently the largest and most populated town in the state of Kedah, at about 120 years old. The town derives its name from the river along which it is located. Long before 1900, the territory that is now Sungai Petani town was primarily covered in dense jungle, swamps, and a few rice farms, and it was part of Kuala Muda's wealthy hinterland. It was sparsely occupied by inhabitants of previous settlements. Rice cultivation, fishing, hunting, and gathering forest products provided food for the inhabitants and the river serves as a link between these communities (Nadaraja, 2016).

In the face of rapid urbanisation and industrialisation in Sungai Petani, the relationship between the human and natural urban elements may receive negative impacts, which results in: i) weak natural surveillance; ii) corrupted waterfront biodiversity; and iii) a missing sense of place at the waterfront. Waterfront redevelopment in small cities can be an excellent catalyst for small community revitalisation (Breen, 1994). The opportunity to utilise waterfront redevelopment as a tool for enhancing downtowns has never been better. Waterfronts, if properly pursued, can serve to bring communities together, enhance sociability, increase activity, and improve community image and pride. However, urbanisation has displaced place-based communities and their fragile cultural ecologies. Neighbourhoods are constantly being erased and replaced with generic built landscapes. The production of homes, food, domestic items, and leisure activities has been transformed into a goods and services industry for urban consumption. This loss of connectivity to source materials and the collective practice of placemaking has dehumanised the urban environment (Pillai, 2020). The aim is to identify several key areas for the historical waterfront regeneration of Sungai Petani. A social impact assessment was conducted to analyse the social values of the existing waterfront to expand the aspects of social and culture to the planning of urban waterfront regeneration in Sungai Petani.

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Figure 1 and Figure 2 show the maps portraying the location of Sungai Petani town.

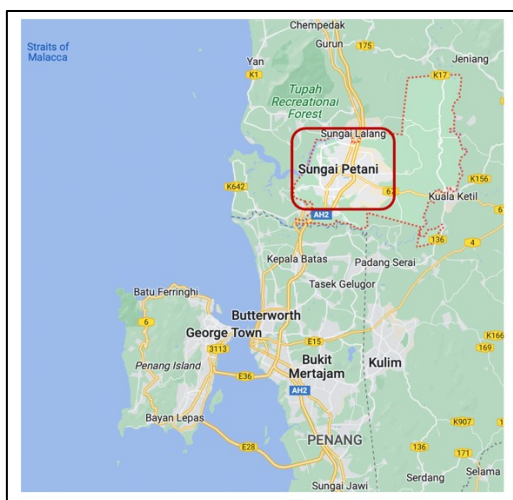


Figure 1: The key plan of Sungai Petani town.
Source: www.google.com/maps (2023).

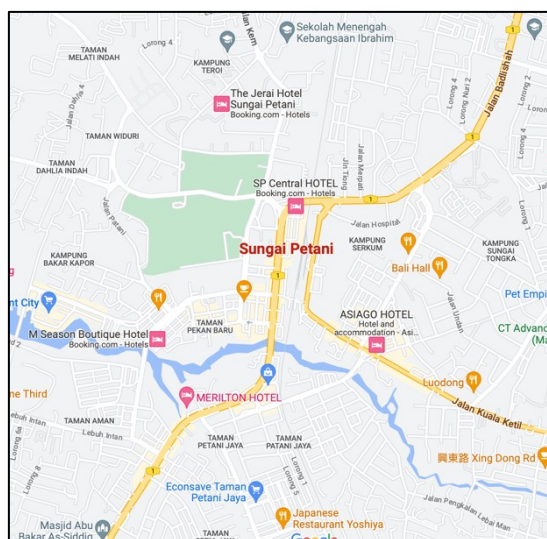


Figure 2: The location plan of Sungai Petani town.
Source: www.google.com/maps (2023).

RESEARCH METHODOLOGY

An online structured questionnaire survey was constructed to gather information from the general public, such as residents and visitors in Sungai Petani's old town. The data collection was performed online using Google Forms and face-to-face interviews. The survey questions were designed in four (4) sections: a) Basic Information of the respondents; b) Past- Personal History on Sungai Petani River; c) Present - Level of Satisfaction of Existing Conditions at Sungai Petani Waterfront; and d) Future - Respondents' Opinions. A total of 128 numbers of questionnaire results were obtained. After filtration, 120 were selected based on the location and qualification of the respondents in order to achieve a valid and reliable result.

The findings from the data set derived from the data collection process were then analysed, summarised, and presented. The results collected presented in the form of image, table, and Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis followed thereafter.

RESULT

Basic Information of the Respondents

The study collected data from 125 residents in the Sungai Petani waterfront area, encompassing various age groups ranging from 12 to 80 years old. The largest proportion of the respondents belonged to the age group of 18–24 (48%), followed by those aged 60 and above (24%). The majority of the respondents lived within a distance of 1–5km from the site (39.2%), indicating good accessibility. Most visitors frequented the site 1–3 times per week (32%) and primarily visited in the afternoon (37.6%). The main reasons for visiting the site were local food (88%), followed by local businesses (31.2%) and the market (30.4%). Fishing was a less common activity due to river pollution. Overall, the study aimed to gather perspectives from various age groups to develop a comprehensive guideline for future urban waterfront regeneration.

Past - Personal History of the respondents with the Sungai Petani River

According to the respondents, there was a close relationship between the river and daily life in the past, as stated by 34.4% of them, particularly the older generations who have witnessed the original waterfront. However, the majority (53.6%) felt that there was no such relationship. In terms of the purposes of the river in the past, visiting for local food was the most common reason (52.8%), followed by local business (44%), the market (39.2%), pier and jetty (37.6%), fishing (36.8%), walking by the river (32.8%), religious activities (32%), and playing with water (18.4%). The respondents' perception of the Sungai Petani River in the past varied, with many considering it dangerous (87 respondents) and dirty (107 respondents). Additionally, a majority felt the river had an unpleasant smell (111 respondents) and presented an urban scene (57 respondents), although

some respondents viewed it positively in terms of safety, cleanliness, and providing a country scene. Overall, the study highlighted the diverse perceptions and experiences related to the river in the past.

Present - Level of Satisfaction of Existing Conditions at Sungai Petani
Satisfaction Level in Environmental Aspect

The satisfaction level of the respondents regarding various environmental aspects of the waterfront was measured. These aspects include maintenance, urban furniture, greenery, accessibility, pedestrian and cycling facilities, traffic conditions, and parking. The respondents assigned scores to each aspect based on their observed performance. Among these aspects, accessibility received the highest score of 4.603 out of 5.000, indicating a high level of satisfaction. Greenery was the next highest-rated aspect with a score of 3.890, followed by traffic and parking (3.650), pedestrian and cycling facilities (3.500), urban furniture (3.334), and maintenance (3.264). These findings highlight the need for improvements in the maintenance of the waterfront to enhance overall satisfaction. Additionally, attention should be given to the other components to further increase satisfaction levels.

Aspect	Maintenance	Urban Furniture	Greenery	Accessibility	Pedestrian, Cycling	Traffic, Parking
Score (Full=5.000)	3.264	3.334	3.890	4.603	3.500	3.650

1—poor, 2—fair, 3—average, 4—good, 5—excellent

Figure 3: Satisfaction Level in Environment Aspect
Source: Author's

Satisfaction Level in Social Aspect

The satisfaction level of the respondents regarding the social aspects of the waterfront was assessed. These aspects include the attractiveness of the waterfront, its suitability in providing services to individuals of different education levels, age groups, ethnicities, and income levels, and the presence of a sense of pride towards the waterfront. The data indicate that the respondents perceived the waterfront as a friendly area that provides services to users from diverse backgrounds and with different needs, receiving a rating of 3.665. However, the majority of the respondents consider the waterfront to be unattractive and in need of upgrades to improve satisfaction levels, with a rating of 3.130. Notably, the highest score was given to the sense of pride, indicating that despite the waterfront's current condition, most respondents feel a strong sense of pride towards it, scoring it at 4.239. This pride may stem from the preservation of heritage values at the waterfront, evoking a sense of nostalgia among the respondents.

Aspect	Attractiveness	User Friendly	Sense of Pride
Score (Full=5.000)	3.130	3.665	4.239

1—poor, 2—fair, 3—average, 4—good, 5—excellent

Figure 4: Satisfaction Level in Social Aspect

Source: Author's

Satisfaction Level in Economic Aspect

The respondents' satisfaction levels regarding the economic aspect of the waterfront were assessed. This includes the variety of services provided and the provision of water-based activities. The majority of the respondents believe that a wide range of services is available to all user groups, scoring it at 4.005. However, the provision of water-based activities received a lower score of 3.452. Given that the river is a valuable resource, it is important for planning regulations to leverage its potential. The regeneration of the waterfront area could be driven by prioritising water-based activities. Reintroducing activities from the past, such as riverside markets, waterfront dining, water transportation, and cultural events along the water promenade, can help reconnect all the values and contribute to a more sustainable waterfront.

Aspect	Variety of Services	Provision of Water-based Activities
Score (Full=5.000)	4.005	3.452

1—poor, 2—fair, 3—average, 4—good, 5—excellent

Figure 5: Satisfaction Level in Economic Aspect

Source: Author's

Satisfaction Level in Cultural Aspect

The respondents' satisfaction level to the economic aspect were assessed. These such as the respectful attitudes to the historical evidence and cultural-oriented placemaking. Most of the respondents were of the view that the placemaking process is in average which it accounted for 3.756 score. While the respectful attitudes to the historical evidence could not be seen by the respondents which it only accounted for 3.204 score. It is important to upgrade the later for better satisfaction level.

Aspect	Respectful to Historical Evidence	Cultural-Oriented
Score (Full=5.000)	3.204	3.756

1—poor, 2—fair, 3—average, 4—good, 5—excellent

Figure 6: Satisfaction Level in Cultural Aspect

Source: Author's

Future - Respondents' Opinion

Strength of Sungai Petani River and the Old Town

A proportion of 61.6% of the respondents consider that the community cohesiveness is the greatest strength of Sungai Petani waterfront. This is followed by the cultural vibrancy (47.2%), beautiful streets (40.8%), streets in harmony with nature (28.8%), and beautiful river (12%). Meanwhile, a proportion of 20% of the respondents believe that there is nothing in particular about the waterfront that is attractive to them.

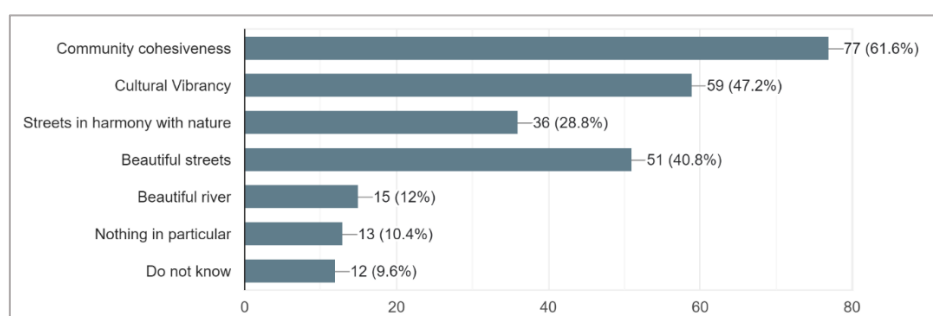


Figure 7: Strength of Sungai Petani River and the Old Town

Awareness of Local Planning of the River

This question intends to clarify the awareness of the respondents to the local planning of the waterfront. Based on the survey, only 0.8% of the respondents are aware of the local planning while 77.6% of the respondents got no idea to the local planning while 21.6% respondents are somehow aware of the news but do not understand the details about it. This shows a low awareness of the respondents to their own environment. To ensure the success of urban waterfront regeneration, the effort and participation of the local community is vital.

Knows well	0.8%
Knows somehow	21.6%
Do not know	77.6%

Figure 8: Awareness of Local Planning River

Ideal Image of Waterfront Development Compared to Existing One

This question is asked to test the difference of the respondents' ideal image of the waterfront compared to the existing one. It is found that majority of the respondents deem that there is a little different comparing the ideal and the existing one, accounting for 38.4% of overall. This is followed by 30.4% of the respondents who views that it is greatly different, whereas 10.4% of the respondents believe it is somehow similar, and 1.6% is of the opinion that it is mostly similar. There are 19.2% of the respondents who voted for 'do not know,'

which shows that they have no idea on the waterfront regeneration and no awareness in improving their own natural assets and resources.

Mostly similar	1.6%	Greatly Different	30.4%
Somehow similar	10.4%	Do not know	38.4%
A little different	38.4%		

Figure 9: Ideal Image of Waterfront Development Compared to Existing One

Desire for Involvement in Future Planning

This question intends to clarify the desire of the respondents to involve in the future waterfront regeneration project. 32% of the respondents are fine to answer a questionnaire in assisting the respective authority or researchers to fine line the planning process. 25.6% of the respondents think that a flier or brochure is sufficient for them which they are not interested in actively involved in the process of development. This is follows by a proportion of 17.6% of the respondents who have no intention to be involved in any form of engagement, while 14.4% of the respondents would like to participate and expressed their opinions in the explanatory meetings of the development. Lastly, 10.4% of the respondents would like to be actively involved in any workshops to contribute their ideas and efforts to creating a more socially driven regeneration of the waterfront.

Active Involvement in workshops	10.4%
Participating and expressing opinions in exploratory meetings	14.4%
A flier or brochure is sufficient	25.6%
Answering a questionnaire	32.0%
No intention of involvement	17.6%

Figure 10: Desire of Involvement in the Future Waterfront Regeneration Project

DISCUSSIONS

The waterfront area under study has been recognised as a site of significant historical and cultural importance, characterised by a rich tapestry of heritage buildings, social interactions, and economic activities. To comprehensively understand the social impact and potential of this waterfront, a thorough assessment was conducted using a social impact assessment approach and field observations (Petrtylová, 2022). This assessment aimed to examine the social values embedded within the waterfront and identify the strengths, weaknesses, opportunities, and threats present in the environment, urban development, social dynamics, and economic dimensions. The findings of this assessment were then analysed through a SWOT analysis, allowing for a deeper understanding of the site’s potential and the challenges it faces. This paper presents the results of the

SWOT analysis, focusing on the environmental, urban, social, and economic dimensions, along with corresponding recommendations to guide future planning and decision-making processes. By considering these findings, stakeholders can develop strategies that can help to preserve the historical and cultural significance, enhance accessibility and connectivity, revitalise the community, and leverage the economic potential of the waterfront, ensuring its sustainable development and continued vibrancy (Xu, 2021).

Regarding the environmental dimension, the waterfront showcases a diverse range of historically significant buildings. However, a significant number of these buildings, both private and public, are in a state of disrepair due to economic constraints or neglect by absentee owners. To address this issue, it is recommended that planning authorities or the local government explore options for providing financial support, such as small grants or loans, to incentivise restoration and refurbishment efforts. Additionally, site planning should take into account the presence of mobile vendors, who form part of the informal retail/market sector and contribute to the unique character of the site (Byun & Kim, 2022).

In the urban dimension analysis, accessibility emerges as a critical factor in the regeneration of the waterfront. Enhancing accessibility ensures that the community, including individuals with disabilities, can readily access and enjoy the waterfront, fostering inclusivity and a sense of community (Pedrycz, 2021). Improved accessibility also has the potential to attract a wider range of visitors, revitalise the area, and create new economic opportunities. Furthermore, connectivity plays a crucial role in linking the waterfront with the surrounding community and city, facilitating easier access for individuals with limited mobility or transportation options. By promoting connectivity, foot traffic to the waterfront can increase, enhancing its vibrancy and livability. Lastly, incorporating green spaces is emphasised as an important aspect of waterfront regeneration, as it offers multiple benefits, such as air quality improvement, biodiversity promotion, and a healthier and more pleasant environment for residents and visitors (Nikezić & Milovanović, 2021).

The analysis of the social dimension highlights the significance of the long-standing trading community and their expertise in revitalising the economy and fostering community identity and pride in the waterfront. Deepening research, documentation, and cultural interpretation are recommended to fully leverage the cultural capital of the site (Andersen Cirera, 2022). It is also crucial to involve younger entrepreneurs to ensure the long-term sustainability of the area, considering the ageing population of the current community. Strengthening and revitalising the trader's association, as well as enhancing social meeting places like sidewalks, eating stalls, and restaurants, are suggested to create more attractive and engaging spaces (Abed, 2022).

In terms of the economic dimension, the waterfront area presents economic potential through the sale of local products in shophouses, encompassing a wide range of fresh produce and dry goods. To maximise the appeal of these products to both local and foreign visitors, repackaging, and promotion within the context of local trades are recommended. It is essential for authorities to have better control over changes in building use to prevent insensitive alterations by new investors that disregard the site’s character (Zhihao, 2021). Restricting building use to trades or economic activities that align with the existing ones, such as restaurants, cafes, or traditional sundry stores, is advised. Furthermore, encouraging afternoon and evening operations of businesses can maintain a bustling and lively waterfront throughout the day (Setiadi & Kusliansjah, 2021)

The findings from the SWOT analysis of the environmental, urban, social, and economic dimensions provide valuable insights into the strengths, weaknesses, opportunities, and threats associated with the waterfront site. These analyses offer guidance for future planning and decision-making processes, emphasising the preservation of historical and cultural elements, improvement of accessibility and connectivity, revitalisation of the community, and optimisation of the economic potential of the waterfront.

Table 1: Summary of Social Values Assessment Using SWOT Analysis

Source: Author’s

SWOT Analysis - Environmental Dimension				
Environmental Elements	Strengths	Weaknesses	Opportunities	Threats
Site - Natural Environment	Site has a natural asset, which is the waterfront city.	Low awareness of historical and cultural values of site.	Promotion of site for cultural tourism.	Lack of attraction for newer residents or tourists.
Building, Monuments and Artefacts	Good range of building typologies and styles reflective of settlement history.	Poor condition and poor maintenance and insensitive upgrading of buildings.	Guided interpretation for tourists.	Buy-up and insensitive restoration by new businesses.
Space Use	Temporary street stalls and active shophouses enjoy a complementary and interdependent relationship.	Low occupancy of shophouses and timber houses results in decline in vitality.	Introduce new, complementary use, particularly food or cultural-related.	Illegal and temporary structures overshadow heritage buildings.
SWOT Analysis - Urban Dimension				
Urban Elements	Strengths	Weaknesses	Opportunities	Threats
Accessibility	Convenient and accessible location.	Poor traffic and waste management.	Introduction of new management systems.	
Connectivity	Convenient transportation	Poor maintenance, non-human	Human-oriented connectivity enhancement,	Hardscapes overshadow the natural townscape.

	infrastructure and facilities.	oriented connectivity.	such as a 30-foot setback.	
Greenery	Rich in greenfield near waterfront area.	Landscape left abandoned without proper planning.	Regenerating the waterfront and bring back the natural ecology with proper plan of landscaping.	Weak natural surveillance.
SWOT Analysis - Social Dimension				
Social Elements	Strengths	Weaknesses	Opportunities	Threats
Community	Source of intangible knowledge and skills.	Ageing population.	Build community by strengthening commercial opportunities and mapping shared history.	New players with only economic interests.
Values and Belief System/Organisational Structure	Hungry Ghost, Nine Emperor festival activities, marketing and eating.	Absence of social facilities.	Provide incentives to boost local leisure and social activities.	New elements introduced into festival unrelated to tradition.
Skill and Knowledge	Good range of cultural skills and knowledge.	Traders reluctant to interact with visitors due to language limitations.	Living knowledge available to be transmitted to younger generation.	No documentation.
SWOT Analysis - Economic Dimension				
Economic Elements	Strengths	Weaknesses	Opportunities	Threats
Cultural Product and Artefact	Contribute to the sustainability of the local food industry and local household needs.	Chinese predominated products.	Local partnership to enhance display and packaging of cultural products.	Lack of preparation can lead to industrial style packaging with no local identity.
Livelihood, Industrial and Commercial Use	Trades and services are closely related to local culture.	New population demanding ready-made goods.	Introduce evening trade.	Competition from new retails, which have greater variety of products.

CONCLUSION

In conclusion, this research paper has explored the strategies for future urban riverfront development in Sungai Petani, Kedah, with a focus on the old town area. The study aimed to rediscover and analyse the social values of the waterfront area in order to enhance the social and cultural aspects of urban waterfront regeneration in Sungai Petani. The findings from the field observation and questionnaire survey provided valuable insights into the past and present conditions of Sungai Petani waterfront, as well as the perceptions and satisfaction levels of the local community and visitors. The study highlighted the transformation of the waterfront from a natural river settlement to a modern concrete town, resulting in weak natural surveillance, degraded waterfront biodiversity, and a loss of sense of place. However, it was evident that the Sungai

Petani waterfront has held a strong historical significance and was once a vibrant hub for trade and transportation.

The research identified several key areas for improvement in the urban waterfront regeneration process. These included enhancing the maintenance of the waterfront area, improving urban furniture and greenery, addressing accessibility issues, and providing better pedestrian and cycling facilities. Furthermore, attention should be given to the social aspect of the waterfront, making it more attractive and inclusive for individuals of different backgrounds and needs. Despite the current challenges, the study revealed a sense of pride and attachment among the respondents towards the waterfront, indicating its potential as a catalyst for community revitalisation. Overall, this research contributes to the broader understanding of waterfront regeneration in smaller towns with historical significance. It emphasises the importance of considering the social values and cultural aspects in the planning and implementation of urban waterfront redevelopment projects. By integrating these elements, the future development of Sungai Petani waterfront can not only enhance the physical environment but also promote social interaction, cultural preservation, and economic growth. It is hoped that the findings of this study will serve as a valuable reference for urban planners, policymakers, and stakeholders involved in the regeneration of Sungai Petani waterfront and similar contexts.

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