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Social Impact Analysis of Urban Riverfront Regeneration;

River of Life (RoL), Kuala Lumpur City Hall (KLCH)

INTRODUCTION

The River of Life (RoL) project

is the fifth Entry Point Project (EPP) identified in the Greater Kuala Lumpur/Klang Valley National Key Economic Area (NKEA) under the Economic Transformation Program (ETP).

River Cleaning

River Beautification

River Masterplanning

The project aims to convert the Klang River into a vibrant and livable waterfront with high economic value.

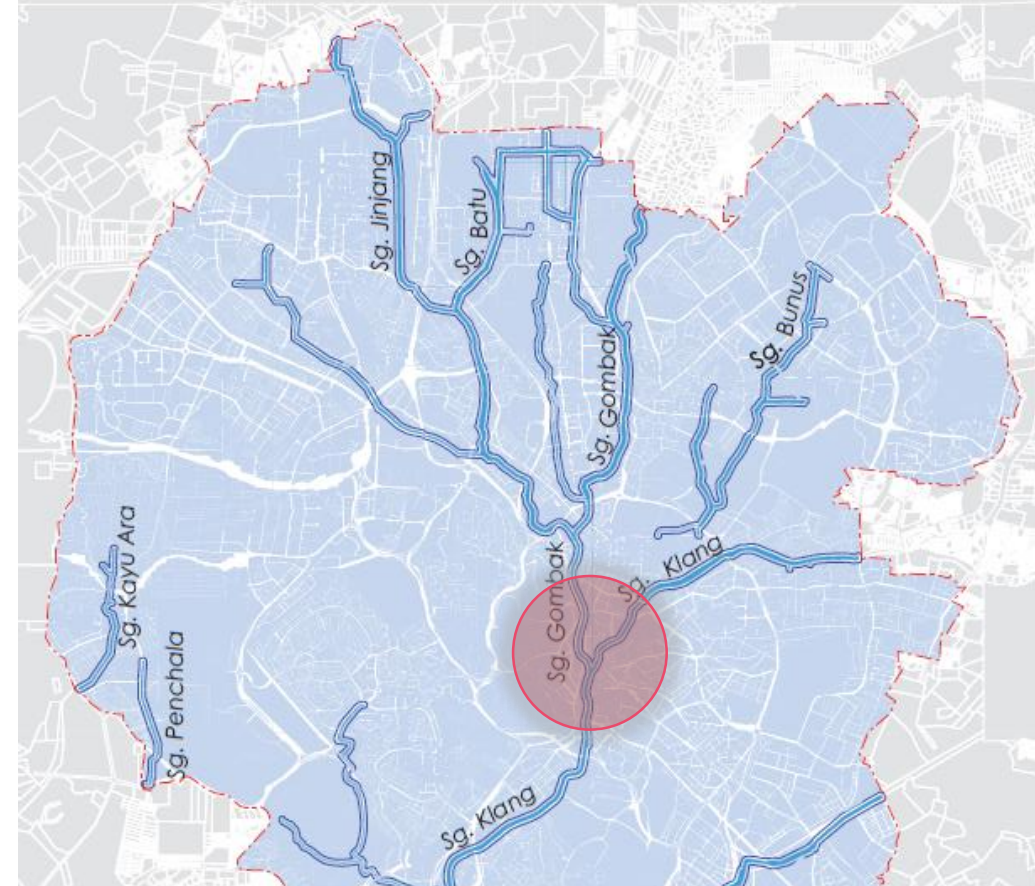### Objectives of RoL

1. Transform the river from barrier to connector
2. Promote transit nodes
3. Establish new identity for the river
4. River beautification
5. Increase the economic value of the river
6. Revitalise social and cultural heritage of the river
7. Rehabilitate the river's ecology
8. Promote environmental awareness

2011 Start

2020 Schedule for completion

Klang River is the **main river** that flows across the Kuala Lumpur city areas. The water quality of Klang River has been **moderately polluted ever since 2004**, hence there is **a need to upgrade the environmental quality**.

There is a **hidden potential** for economic growth and a better Quality Of Life (QoL) beneath the underutilized urban landscape of the city.

INTRODUCTION (cont.)

PURPOSE OF THE STUDY:

The study **analyzes the perception of the community** towards the **implementation of the RoL** riverfront regeneration program.

Objectives of RoL

Transform the river from barrier to connector **1**

Promote transit nodes **2**

Establish new identity for the river **3**

River beautification **4**

Increase the economic value of the river **5**

Revitalise social and cultural heritage of the river **6**

Rehabilitate the river's ecology **7**

Promote environmental awareness **8**

OECD Better Life Index (2011) **indicators to quality of life and well-being**:

Housing	Income	Jobs
Community	Education	**Environment**
Civic engagement	**Health**	Life Satisfaction
	Safety	**Work-life balance**

The result will be used **to determine the successfulness** of the program from the social aspect to create a highly **sustainable future** for Kuala Lumpur and future efforts.

INTRODUCTION (cont.)

OBJECTIVES OF THE STUDY:

1

To **analyze the impacts** of waterfront regeneration on **aesthetic, Quality of Life, and socio-cultural elements** in the municipality of Kuala Lumpur City Hall

2

To **give suggestions** and recommendations towards approaches for the **betterment of waterfront regeneration program**

LITERATURE REVIEW

Aesthetic Values

Place-making processes could have a significant influence on **social inclusion** in communities.

(Palermo, 2014)

Categories to measure aesthetic values are **visual, audial, and tactual effects.**

(Timur, 2013)

Total image of a landscape does not only limited to physical and structural aspects but also the **visual** and **cultural aesthetic** expression of the view.

(Krause, 2011)

Quality of Life (QoL)

QoL in an urban quality can be measured accordingly through these indicators; **use and fruition, health and well-being, and appearance.**

(Garau & Pavan, 2018; Rabe, 2018).

The provision of **facilities and amenities** is significant to the success of a river restoration project.

(Streimikiene, 2015)

Continuous pedestrian and bicycle lanes could invite more **physical activities** to a particular area.

(Glasson & Wood, 2009)

Socio-cultural Impacts

The eco-system services and culture relationship had become a rising trend that focuses on the relationship between **society and nature.**

(Wu, Huang & Yu, 2013)

One of the successful river restoration projects; Cheonggyecheon River, incorporated promoting **historical and cultural tourism** as one of their objectives
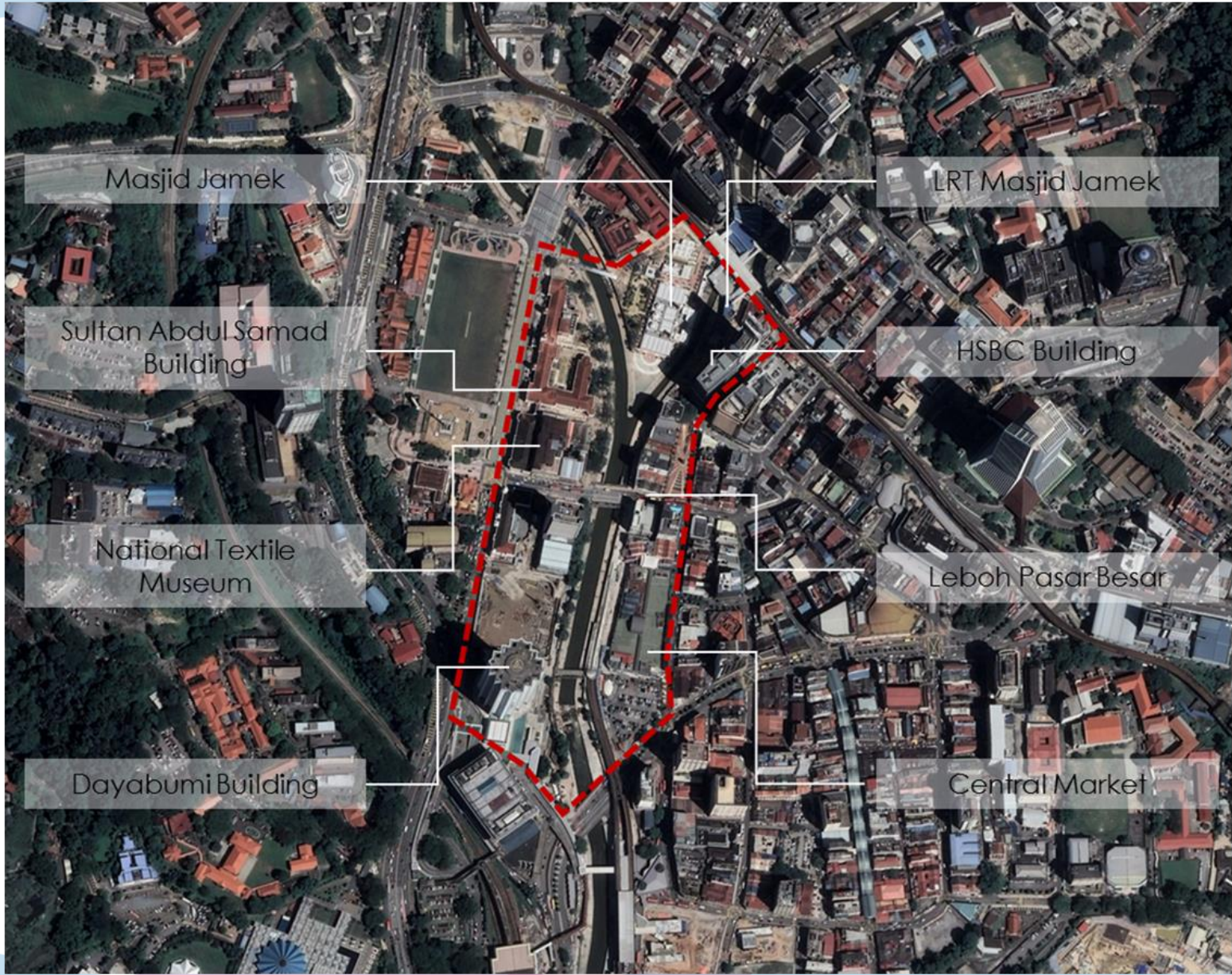
(Jun & Kim, 2011)

STUDY AREA

Leboh Pasar Besar

Sultan Abdul Samad Building

Central Market

Masjid Jamek

Sultan Abdul Samad Building

National Textile Museum

Dayabumi Building

LRT Masjid Jamek

HSBC Building

Leboh Pasar Besar

Central Market

N

Scale: Not to scale

Map of site location with the surrounding landmarks.

Source: Googel Earth Pro, 2018

– –	Site boundary

Key Plan

METHODOLOGY

DATA COLLECTION

Primary Data Collection:
1. Photo-taking
2. On-site observation
3. Questionnaire survey

Part A: Respondent background

Part B: Awareness regarding the RoL program

Part C: Social Impacts; Aesthetic Values

Part D: Social Impacts; Quality of Life

Part E: Social Impacts; Socio-cultural Elements

Part F: Opinions and Recommendations

DATA ANALYSIS

Descriptive method | **Inferential method**

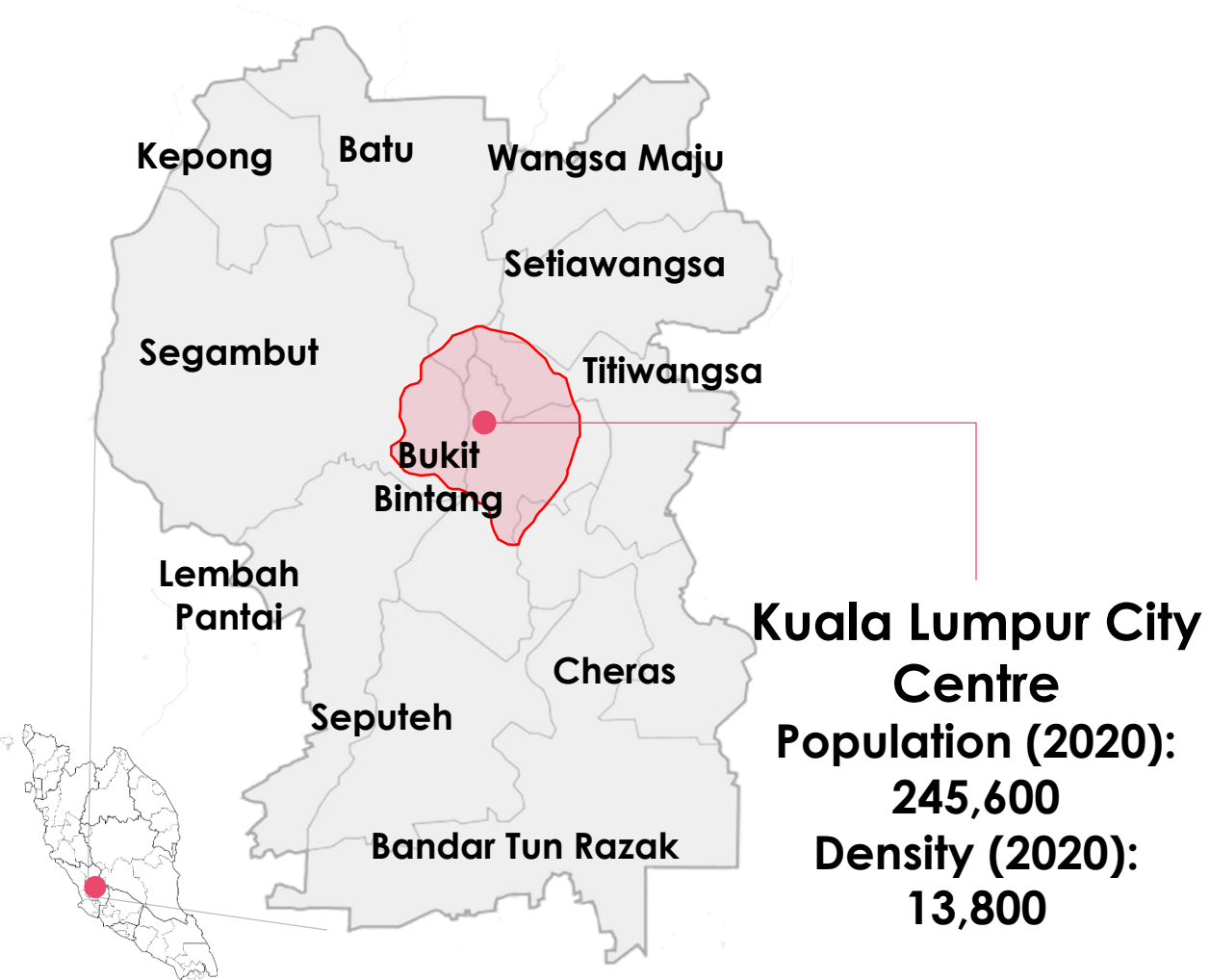- **Univariate analysis**; summarization of data and findings in the graphical forms of tables, charts and graphs.

- **Chi-square analysis**; To test the goodness of fit. df value > chi square

- **Mean comparison**; comparing the mean score of each of the variables.

- **Content analysis**; Interpreting and evaluating textual material. To support the analysis from the responses of the questionnaire survey.

METHODOLOGY (cont.)

POPULATION AND SAMPLING

Kepong

Batu

Wangsa Maju

Setiawangsa

Segambut

Titiwangsa

Bukit Bintang

Lembah Pantai

Cheras

Seputeh

Bandar Tun Razak

Kuala Lumpur City Centre
Population (2020): 245,600
Density (2020): 13,800

	Variance of the Population P=50%	
Population Size	**Confidence level = 95% Margin of error (5)**	
100,000	383	
250,000	**384**	
500,000	384	

Source: Gill and Johnson (2002)

Sampling method: Simple random

Assumptions:

1. Everyone who **works or visits the area, both local and international**, and does not own properties in the area.

2. The distribution of the population for each square kilometer is equal and **does not take plot ratio into considerations.**

RESULTS AND DISCUSSION

1 **Relationship between the Respondents'Profile and Program Awareness**

Respondents' Demographic Profile			
Variables	**Category**	**Frequency (n)**	**Percentage (%)**
Age	18-29 years old	70	46.7
	30-39 years old	45	30.0
	40-49 years old	21	14.0
	50-59 years old	12	8.0
	60 years and above	2	1.3
Ethnicity	Malay	67	44.7
	Chinese	34	22.0
	Indian	27	17.3
	Others	22	16.0
Educational Level	High school	23	15.3
	College or university	118	78.7
	Vocational training	9	6.0
Employment	Students	53	35.3
	Government sector	50	33.3
	Self-employed	38	25.3
	Pensioner	6	4.0
	Unemployed	3	2.0
Origin of visitors	International visitor	22	14.7
	Local visitor	128	85.3
Visitor's status	First Time Visitor (FTV)	91	60.7
	Repeat Visitor (RV)	59	39.3

RESULTS AND DISCUSSION (cont.)

1 **Relationship between the Respondents'Profile and Program Awareness** (cont.)

The Relationship between Program Awareness and Respondent's Profile

Test	Variables	P-value	Interpretation
Pearson Chi-square	Age group	0.178	Not significant
	Ethnicity	0.218	Not significant
	Education level	0.326	Not significant
	Employment	0.538	Not significant
	Origin	0.152	Not significant
	Frequency of visits	**0.000**	**Significant**

*0.05 level of significance   (Source: Questionnaire survey)

Cross-tabulation of Program Awareness and Visitor's Status

Program Awareness		Visitor's status		
		First Time Visitor	**Repeat Visitor**	**Total**
Yes	Count	44	**47**	91
	Percentage (%)	29.3	**31.3**	60.7
No	Count	35	5	**40**
	Percentage (%)	23.3	3.3	**26.7**
Not sure	Count	12	7	**19**
	Percentage (%)	8.0	4.7	**12.7**
Total	Count	91	59	150
	Percentage (%)	60.7	39.3	100.0

- The respondents' program awareness is **the same** regardless of their age group, ethnicity, education level, employment, and origin.
- The **rate of visits influences their knowledge regarding the program.**

- The **more frequent** the visit to the RoL site, the **more awareness** it brings to the people.
- **40% of the respondents were not aware**, and **12% were not sure** about the program.

RESULTS AND DISCUSSION (cont.)

2 **Social Impacts of RoL Riverfront Regeneration Program based on three elements; Aesthetic Values, QoL and Socio-Cultural**

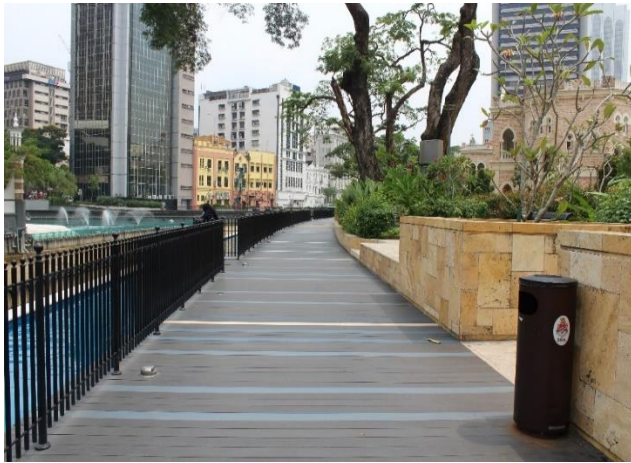| Respondents answers on the social impacts of RoL; Aesthetic Values						
Elements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean score
Positive impact on visual	4	6	21	65	54	**4.06**
Better paths connection and proper viewing platform	4	5	26	69	46	3.99
Vibrancy to space and music effect	2	13	39	61	35	3.76
Pleasant smell coming out from the river	55	52	10	22	11	**2.21**

- The mean value of **4.06** indicates that the **program has proven to improve the visual** of the surrounding landscape.

- Silva, Saraiva, Ramos, & Bernado (2005) were right regarding the **evaluation of the aesthetic from the viewpoint of people where nature and spaces can influence the preference of an individual.**

- The pleasantness of smell from the river scored a **low mean; 2.21** indicates that the **program did not manage to eliminate the odor** from the river.

2 **Social Impacts of RoL Riverfront Regeneration Program based on three elements; Aesthetic Values, QoL and Socio-Cultural** (cont.)

Visual, paths connection, proper viewing platform and water element

Physical condition of the river

Source: Author

2 **Social Impacts of RoL Riverfront Regeneration Program based on three elements; Aesthetic Values, QoL and Socio-Cultural** (cont.)

Respondents answers on the social impacts of RoL; Quality of Life						
Elements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean score
Provides encouragement for new users and activities	2	5	33	65	45	**3.97**
Improves mood, subjective vitality, and creativity.	2	5	32	76	35	3.91
Improves human to water interaction	4	6	39	68	33	3.80

- Keles (2012) stated that one of the factors contributing to the improvement or worsening of QoL is the **ability to access environmental infrastructure and services.**

- The **physical improvement** of the area has **open higher opportunities for leisure activities** which leads to the fulfillment of psychological needs (Brajsa-Zganec, Merkas, & Sverko, 2011; Rosli et al. 2018).

- Sairinen & Kumpulainen (2006) agreed that the interaction of humans to water gives out the **therapeutic experiences, visual messages, physical touch, tastes, voices, moving in the space, sense of transition.**

2 **Social Impacts of RoL Riverfront Regeneration Program based on three elements; Aesthetic Values, QoL and Socio-Cultural** (cont.)

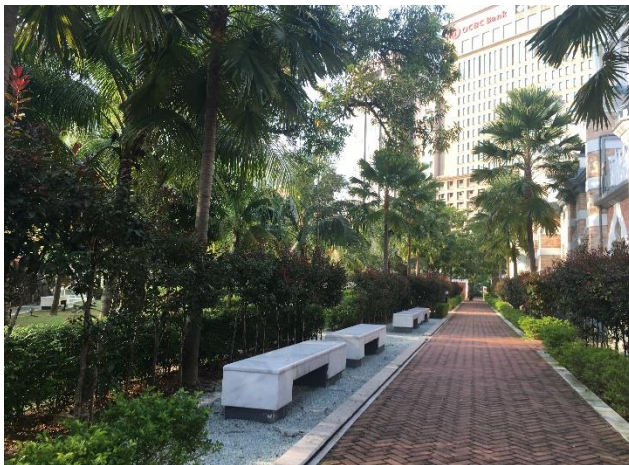| Respondents answers on the social impacts of RoL; Socio-Cultural Elements						
Elements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean score
Revitalize natural and cultural elements	0	8	25	71	45	**4.03**
Influence distinct image of Kuala Lumpur	2	4	32	69	43	3.98
Increase engagement with historical building	2	7	36	68	37	3.87

- The respondents agreed that RoL has **successfully revitalized the natural and cultural** aspects of the area.

- **The integration** of Klang River and the mosque of Masjid India Riverfront create a more **distinct concept of an area.**

- The site is a historic core of Kuala Lumpur, which is a valuable tourist spot and has encompassed most of the early commercial, residential, and administrative buildings.

RESULTS AND DISCUSSION (cont.)

2 **Social Impacts of RoL Riverfront Regeneration Program based on three elements; Aesthetic Values, QoL and Socio-Cultural** (cont.)

Natural and cultural elements, increasing engagement with historical buildings

Distinct image of Kuala Lumpur

Source: Author

3 **Public's Opinion and Recommendations**

Opinions and Recommendations from Respondents						
Elements of the socio-cultural	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean score
The program is a success.	4	7	45	69	25	3.69
Interested in participating in current and future efforts of river restoration.	4	15	37	61	33	3.69
Likely to recommend the river restoration efforts and programs to friends and family.	2	6	43	59	40	3.86

- The programme was a success
- The respondents are likely to support future efforts for riverfront restoration

Suggestions:

1. Strengthening the **integration and cooperation between stakeholders** which includes local authority, property developers and local people.

2. Night time event can be done to **promote the nightscape** created by the blue pond in RoL.

3. **Volunteering program among the students** can benefit from educating and raising awareness among the students.

RESULTS AND DISCUSSION (cont.)

Relationship between the Respondents'Profile and Program Awareness

Repeat Visitors (RV) were more aware of the programme in comparison to First Time Visitor (FTV). Hence, the **more frequent** the visit to the RoL site, the **more awareness** it brings to the people.

40%
Respondents were still not aware of the RoL programme

12%
Respondents were not sure about the programme

Social Impacts of RoL Riverfront Regeneration Program based on three elements; Aesthetic Values, QoL and Socio-Cultural

Respondents **responded positively** towards the social impacts of RoL. This is proven through the **above average mean values** scored for each variables.

However,

2.21 Mean value for pleasantness of smell from the river

This indicates that the **program did not manage to eliminate the odor** from the river.

Public's Opinion and Recommendations

The findings from the survey indicates that the **people agreed that the programme was a success**, they were **interested to join** and **recommended to friends and families** regarding the current and future efforts of river restoration.

Suggestions:
1. Integration between stakeholders
2. Night time event
3. Volunteering program among youths

CONCLUSION AND RECOMMENDATIONS (cont.)

1 The local government has to **identify both point and non-point source pollution**. It is crucial to ensure the septic tanks in the residential areas do not discharge the water directly and untreated to the river.

2 Increasing the number of **regulations for waterfront development** is one of the measures in the aspect of management and planning.

3 **Gazetting the guidelines** to ensure an efficient implementation of enforcement towards a sustainable waterfront.

4 Early and appropriate **environmental education is vital** to improve the community's sensitivity towards the environment and its allied problems.