

Figure 4.14: Distribution of Fishermen Village in Study Area within 5km Radius

Source: Persatuan Nelayan Kuala Terengganu Selatan ,2019.



Figure 4.15: Distribution of Fishermen Jetty in Study Area within 5km Radius

Source: Persatuan Nelayan Kuala Terengganu Selatan ,2019

4.3.12.1 Working Experience

Based on the **Figure 4.16**, 32 respondents (57%) are fishermen who have been in more than 20 years of their working experience as fishermen. 13 respondents (23%) have been working as fishermen from 6 to 10 years followed by 10 respondents (18%) from 1 to 5 years and the remaining one respondents (1%) 11 to 15 years' worth of experience.

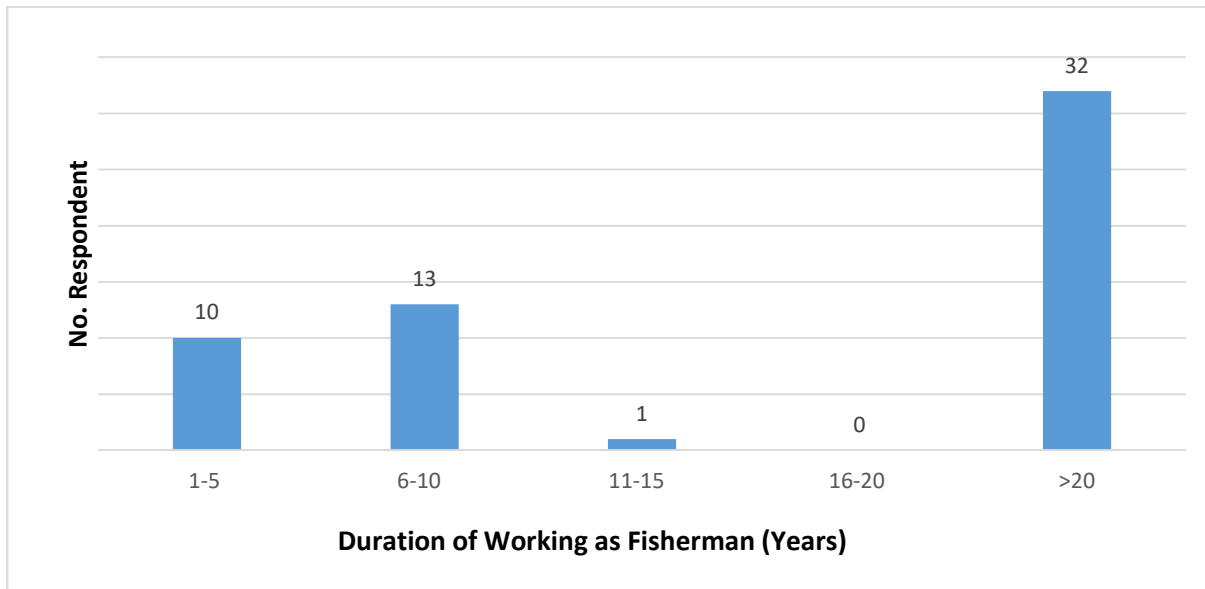


Figure 4.16: Respondent Duration of Working as Fisherman

Source: Social Survey, 2019.

This suggests that the average fisherman is a long-established fisherman and has a much longer experience in the industry. Therefore, development proposals should ensure that existing infrastructure is not affected and improve the quality of the existing infrastructure to be better than the previous one.

4.3.12.2 Level of Education

Table 4.30 shows the level of education received by fishermen community in the area. It can be seen that all the fishermen received basic education, at least in primary school. 23 (36%) out of the total respondent working as fisherman have SPM education background. It makes for the majority education background of the fishermen community in the study area. The highest level of education received by the community is **STPM**, in which encompasses by 3(4.7%) of the respondent.

Table 4.30: Level of Education Received by Fishermen

Level of Education Received	No. Respondent	Percentage (%)
None	0	0
Primary School	20	31.3
PMR/LCE	18	28.1
SPM/SPMV/MCE	23	35.9
STP/STPM/HSC	3	4.7
Diploma	0	0
Degree	0	0
TOTAL	64	100

Source: Social Survey, 2019.

4.3.12.3 Monthly Income

Based on the **Table 4.31**, the highest range of income per month received by the community from fishing activities is between RM600 - RM1,000, which 32 respondent (57%) of the fishermen community surveyed are included in this category. 42% of the respondent are divided equally into 2 range of income, under RM400-RM500 and RM1,600-RM2,000 – the second highest income earned by fishermen from fishing activities. There are no indication of respondent earning more than RM2,100, survey find. Thus it can be concluded that all the fisherman community in the study area are classified under **B40** income group.

Table 4.31: Fishermen Income per Month

Income per Month from Fishing Activities	No. of Respondent	Percentage (%)
RM10 - RM300	0	0.0
RM400 - RM500	12	21.4
RM600 - RM1,000	32	57.1
RM1,100 - RM1,500	0	0.0
RM1,600 - RM2,000	12	21.4
> RM2,100	0	0.0

Source: Social Survey, 2019.

4.4.12.4 Fishing Equipment Used

In general, these fishermen use various methods to catch fish. Among the most commonly used is rod, 53 respondents (41%), followed by 27 respondents (19%) using trawlers, 12 respondents (10.2%) using fishing net, 11 respondents (9.3%) using Tukun, (4%) and 5 respondents (4.2%) using fishing cage as their main equipment (refer **Table 4.32**).

Table 4.32: Types of Equipment Used by Fishermen

Types of Equipment Used	No. Respondent	Percentage (%)
Rod	53	44.9
Trawlers	27	22.9
Bumbu	10	8.5
Rawai	0	0.0
Fishing Net	12	10.2
Fishing Cage	5	4.2
Tukun	11	9.3

Source: Social Survey, 2019.

4.3.12.5 Fishing Ground and Distance of Fishing

Based on the **Table 4.33**, sandy ground is the most dominant area of fishing activity for the community of fishermen in the surrounding area, whereby 38 (51.4%) respondents choose to fish there. It was then followed with coral ground, in which 21 respondents (28.4%) select it as their fishing area. Seaweed ground is chose as the least selected fishing ground for the community where only 3 respondent (4.1%) fish in the area.

Table 4.33: Fishing Ground and Fishing Area Distance

Fishing Ground			Fishing Area Distance		
Fishing Area	No. Respondent	%	Distance	No. Respondent	%
FAD	5	6.8	Less than 1km	5	8.9
Muddy Area	7	9.5	1-3km	3	5.4
Sandy Area	38	51.4	4-6km	12	21.4
Seaweed Ground	3	4.1	7-9km	0	0.0
Coral Area	21	28.4	More than 10km	36	64.3

Source: Social Survey, 2019.

Majority of the fishermen fishing more than 10km from the shoreline. This as reflected in the survey finding where 36 respondent (64.3%) from fishermen belong in this category. It is then followed by 12 respondent (21.4%) in 4-6km, 3 respondent (5.4%) in 1-3km and the least, which less than 1km where only 5 respondent (8.9%) fish there.

In addition of gathering more understanding of the fishermen trend of fishing distance and its frequency , the respondent was given a map to point the location where they usual spot for fishing. It is divided into 3 category in gradual manner, from not frequent, somewhat frequent and most frequent. From the **Figure 4.17**, it can be seen that the fishermen tend to visit area location in between 2-5KM from shoreline. There is instances of fishing spot on more than 10 km radius, however not as frequently as 2-5km radius area.

4.3.11.6 Fishing product

Table 4.34 shows the four main fishing product from the fishermen in Kuala Terengganu based on the multiple response by respondent surveyed. Fish was is admittedly caught the most by these fishermen while squid comes second most caught product by the fishermen.

Table 4.34: Types of Fishing Products Captured

Sea Product	Frequency	Percentage (%)
Prawns	17	19
Squids	31	35
Clam	11	12
Fish	30	34

Source: Field data March 2018

4.3.11.7 Fishing Seasons

Study findings have identified that the high season is in March to April and low season was between Decembers to February. As survey data gathered majority of the fishermen which is 90% out of total fishermen surveyed go out to fish in high season period. As such in low season there are 46.7% of total respondent admittedly go out to fish. **Table 4.35** shows the summary of the fishermen respondents of time of fishing.

Table 4.35: Fishing Seasons

Month of The Year	Frequency	%	
High Season	March- November	15	20
	April – September	12	16
	November – April	5	7
	April – October	12	16
	March – June	6	8
Low Season	December – February	14	19
	November - December	11	14

Source: Field data March 2018.

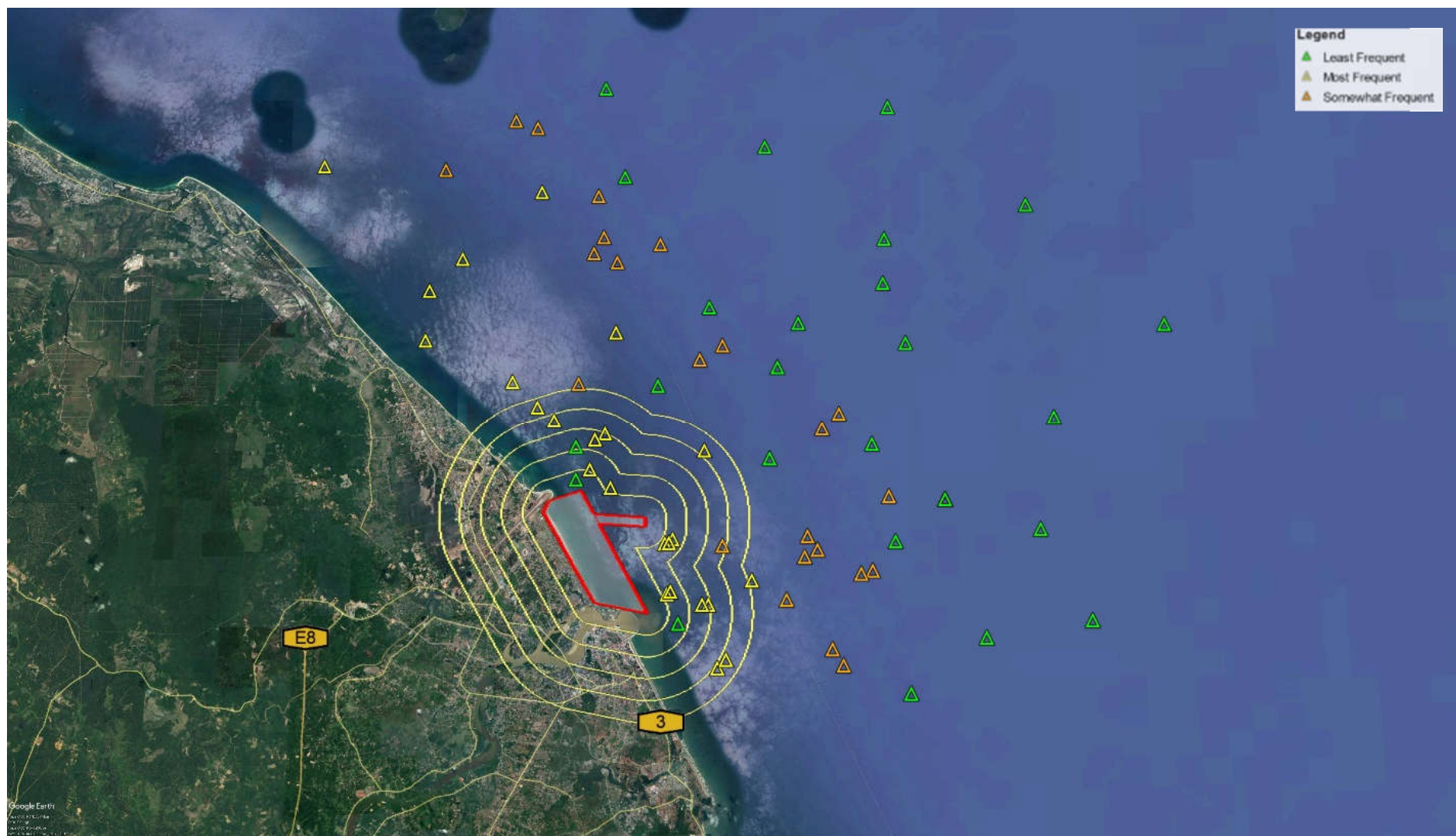


Figure 4.17: Fishermen Fishing Spot

Source: Field data, March 2018.

Season Sea Products Catch

Table 4.36 shows the fishermen respondents' estimation per season catch that were recorded during survey.

Table 4.36: Sea Products Catch according to the season

Types of Season	Frequency	Percentage (100%)
High Season		
Less than 5kg	5	9
5-50kg	47	84
51-100kg	0	0
101kg-150kg	4	7
More than 150kg	0	0
Total	56	100
Low Season		
Less than 5kg	23	58
5-50kg	13	33
51-100kg	4	10
101kg-150kg	0	0
More than 150kg	0	0
Total	36	100

Source: Field data, March 2018.

4.3.13 Community Perception Analysis towards Proposed Project

A total of 343 respondent including fishermen were interviewed in this study. 45 villages were involved and samples were taken from homes and places of activity of villagers such as mosques, food stalls, beachside and community halls. A survey was conducted to obtain background information and residents' overall perception of the proposed reclamation project which was developed in the immediate vicinity, potential benefits derived from project development, environmental impacts and resident reactions to this activity. Analysis was done using the SPSS (Statistical Package Social Sciences) method. The purpose of this questionnaire was to obtain detailed and thorough information on the issue scenarios and problems in the study area.

4.3.13.1 Awareness of Project Development

From the survey and data tabulated in **Table 4.37**, only 46.9% of the respondents are aware of this proposed project while majority of the respondents (47.5%) are either not aware of it or Not sure (5.5%). Most of them are only acknowledged about the ECER project near the study area.

Table 4.37: Awareness of the Proposed Reclamation Project

Awareness of the Project Development	No. Respondent	%
Yes	161	46.9
No	163	47.5
Not Sure	19	5.5
Total	343	100.0

Source: Social Survey, 2019.

As for respondents living 0-1KM from site boundary, 47(43%) of 109 respondents did know of the proposed project. 56 (51.4%) respondents are not aware of the project (refer **Table 4.38**).

Table 4.38: Awareness of the Proposed Reclamation Project in 1km radius

Awareness of the Project Development	0-1km	
	No. Respondent	%
Yes	47	43.1
No	56	51.4
Not Sure	6	5.5
Total	109	100

Source: Social Survey, 2019.

4.3.13.2 Overall perception towards the project Development

The majority of respondents did not oppose the proposed project, with 82.2% of the respondents having no objection (refer **Table 4.39**). This has been also the same for respondents in 0-1KM radius (90 respondents or 82.6%) (Refer **Table 4.40**). It is due to reason as it would add more land area and reduces chances of flooding happening at the residential near sea area, according to some of the respondent. Among those who disagreed (13.4%) stated that the reasons for their disagreement are mainly due to their perception or concern of possible negative environment impact towards the ecosystem, which would potentially affect their daily life, loss of recreational spot which is mainly along Pantai Teluk Ketapang and decrease of fishermen income.

Table 4.39: Perception towards the Proposed Reclamation Project

Respondents' Response	Respondents	
	Numbers	Percentage (%)
Agree	282	82.2
Disagree	46	13.4
Not Sure	15	7.2
Total	343	100.0

Source: Social Survey, 2019.

Table 4.40: Perception towards the Proposed Reclamation Project in 1km radius

Respondents' Response	Respondents	
	Numbers	Percentage (%)
Agree	90	82.6
Disagree	16	14.7
Not Sure	3	2.8
Total	109	100

Source: Social Survey, 2019.

4.3.13.3 Perceived adverse impact from the project

From **Table 4.41**, 209 respondents (60.9%) interviewed considered the proposed development project would not make any direct effect towards the respondent and family. 96 respondent (27.9%) felt the other way, where they express concern on the health aspect and loss of marine life as well as fisherman income. The rest of respondent have no opinion/ not sure what to expect on the proposed development. Thus it can be conclude that majority of the residents does not in oppose of the proposed development.

Table 4.41: Perceived Adverse Impact from Project

Respondents' Response	Respondents	
	Numbers	Percentage (%)
Affect the residents' life	96	27.9
Not affect the residents' life	209	60.9
Not Sure/No Opinion	38	11.7
Total	343	100.00

Source: Social Survey, 2019.

Table 4.42 shows the composition of concerned aspect that brought up during the survey. It is identified that the aspect where the resident more concern of is the water/ river pollution, resident's health aspect as well as wellbeing of marine life (fish habitat) and fishermen income. It is as reflected in the table where the percentage of respondent agree (Yes) on these aspect that it will affect them are higher than that of No and Not Sure.

On contrary, Majority of respondent does not feel that the project would bring negative impact towards culture and scenic drive as well as view and scenery, as depicted in table below. This might due to their experience of the previous reclamation project in the same area, in which to respondents opinion does not affect them in those aspects.

Table 4.42: Perceived Negative Impacts

Affected Life Aspects	Respondents (Number/Percentage)			Total
	Yes	No	Not Sure	
Residents' health	42/46.6	44/48.8	4/4.2	90
Water/River Pollution	39/49.4	36/45.6	4/5.1	79
Flood	17/19.8	65/75.6	4/4.7	86
Noise pollution	39/43.8	46/51.7	4/4.5	89
Air pollution	28/32.6	43/50	15/17.4	86
Traffic congestion	24/31.6	37/48.7	15/19.7	76
Daily life activities - livestock	3/2	71/74.7	21/22.1	95
Daily life activities - agriculture	1/1.1	63/67.7	29/31.2	93
Daily life activities – eco-tourism	7/9.1	62/80.5	8/10.4	77
City and Cultural Image – Diminishing of social cultural character	22/29.3	44/58.7	9/12	75
City and Cultural Image – Difficulty to use scenic road to the attraction areas	20/28.2	44/62	7/9.9	71
City and Cultural Image – View and scenery will be affected	15/22.1	40/58.8	13/19.1	68
Reduce the sea products catch	37/52.1	22/31	12/16.9	71
Cause difficulty for the fishermen to go to the sea	24/42.1	20/35.1	13/22.8	57
Loss of marine biodiversity	35/46.7	29/38.7	11/14.7	75

Source: Social Survey, 2019.

Despite being concerned of the negative impact that might come to, a large majority of respondent does believe it would bring benefit to the surrounding community in all aspect of employment opportunities, development growth of local economy, increase facilities, planned development, as well as improved residents socio economy which has the highest ratio of 377 (94.5%) respondent agreeing to it (refer **Table 4.43**).

Table 4.43: Perceived Positive Impact

Benefits	Respondents (Number/Percentage)		
	Yes	No	Not Sure
Increase employment opportunities	291/85.1	35/10.2	16/4.7
Development and growth of the local economy	306/89.5	23/6.72	13/3.8
Improve the residents' socio economy	324/94.8	4/1.2	14/4.09
Increase the facilities and infrastructure	317/92.7	13/3.8	12/3.5
Planned development and urbanization	309/90	21/6.1	12/3.6

Source: Social Survey, 2019.

4.3.13.4 Fishermen perception towards the project Development

The majority of fishermen's respondents did not oppose the proposed project, with 62% of the respondents having no objection (refer **Table 4.44**). Among those who disagreed (12.5%)

stated that the reasons for their disagreement are mainly due to their perception or concern of possible negative environment impact towards their source of income.

Table 4.44: Fishermen Perception towards the Proposed Reclamation Project

Respondents' Response	Respondents	
	Numbers	Percentage (%)
Agree	40	62
Disagree	19	30
Not Sure	5	8
Total	64	100.0

Source: Social Survey, 2019.

4.3.13.5 Fishermen Perceived adverse impact from the project

From **Table 4.45**, majority of the fishermen's (34 respondents-53%) interviewed considered the proposed development project would not make any direct effect towards the respondent and family. 25 fishermen respondents (39%) felt the other way, where they express concern on the health aspect and loss of marine life as well as fisherman income. The rest of respondent have no opinion/ not sure what to expect on the proposed development.

Table 4.45: Perceived Adverse Impact from Project

Respondents' Response	Respondents	
	Numbers	Percentage (%)
Affect the residents' life	25	39
Not affect the residents' life	34	53
Not Sure/No Opinion	5	8
Total	64	100.00

Source: Social Survey, 2019.

Figure 4.18 shows the composition of concerned aspect that brought up during the survey. It is identified that the aspect where fishermen community most concern of reduced sea product catch, loss of marine biodiversity (fish habitat and squid) as well as pollution.

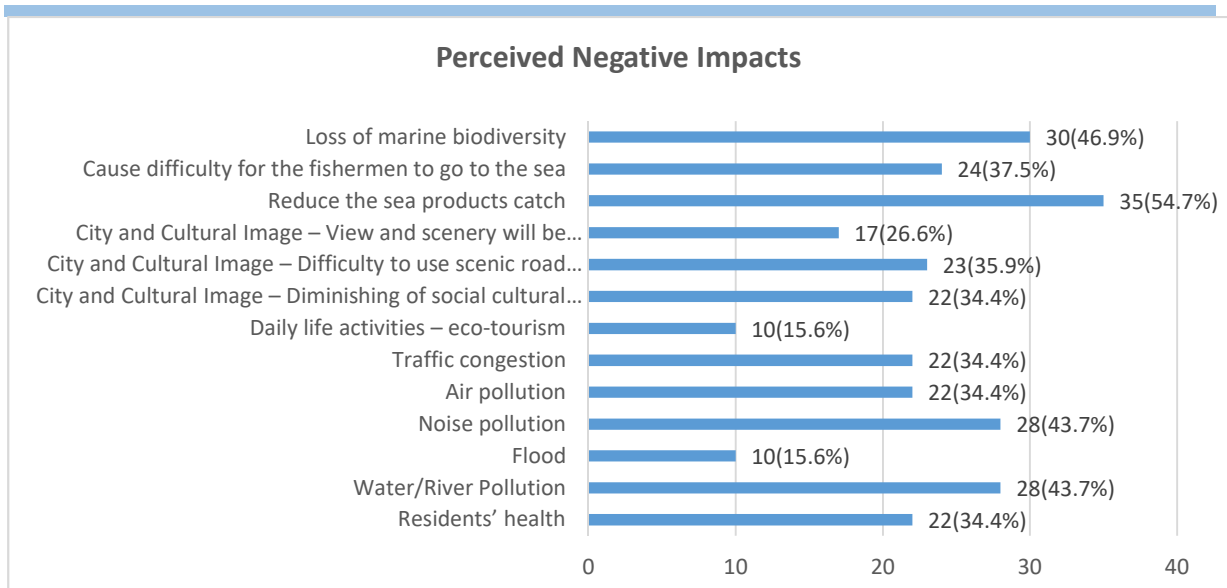


Figure 4.18: Perceived Negative Impacts (Fishermen)

Source: Social Survey, 2019.

Large majority of fishermen does believe it would bring benefit to the surrounding community in all aspect of employment opportunities, development growth of local economy, increase facilities, planned development, as well as improved residents socio economy (refer **Figure 4.19**).

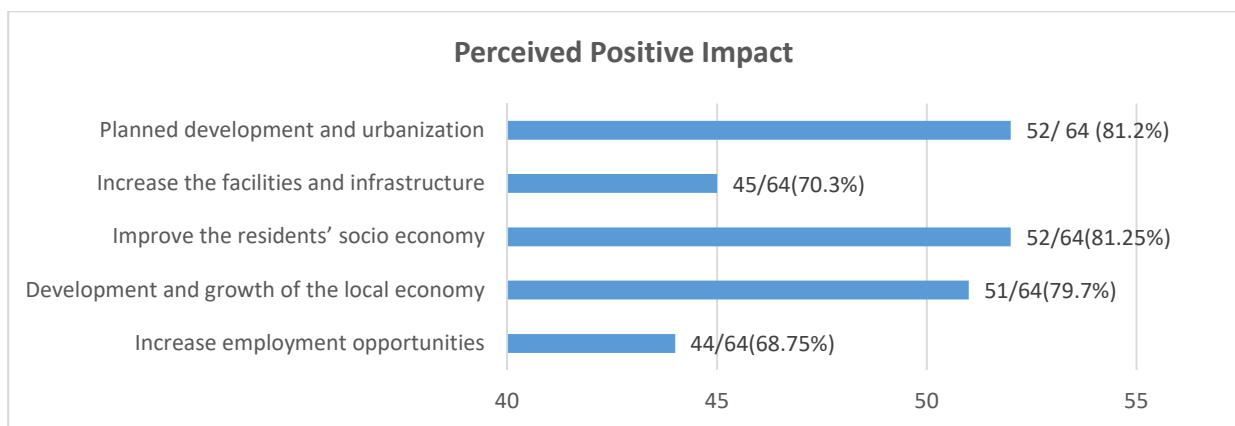


Figure 4.19: Perceived Positive Impact (Fishermen)

Source: Social Survey, 2019.

4.3.13.6 Tourist perception towards the project Development

The majority of respondent respondents did agree to the proposed project, with 75.4% of the respondents having no objection (refer **Table 4.46**) of the project development. Only 7% of the total tourist respondent disapproved the said project. Among those who disagreed stated that the reasons for their disagreement are mainly due to their perception or concern of possible negative environment impact towards the surrounding area.

Table 4.46: Tourist Perception towards the Proposed Reclamation Project

Respondents' Response	Respondents	
	Numbers	Percentage (%)
Agree	43	75.4
Disagree	4	7
Not Sure	10	17.5
Total	57	100.0

Source: Social Survey, 2019.

4.3.13.7 Tourist Perceived adverse impact from the project

From **Table 4.47**, majority of the tourist interviewed considered the proposed development project would not make any direct effect towards themselves. While others 16 have no opinion on the matter.

Table 4.47: Perceived Adverse Impact from Project

Respondents' Response	Respondents	
	Numbers	Percentage (%)
Affect the respondent life	0	0
Not affect the respondent life	41	71.9
Not Sure/No Opinion	16	28.1
Total	57	100.00

Source: Social Survey, 2019.

Figure 4.20 shows the composition of concerned aspect that brought up during the survey. It is identified that the aspect tourist most concern of view and scenery, loss of marine biodiversity (fish habitat and squid) as well as pollution.

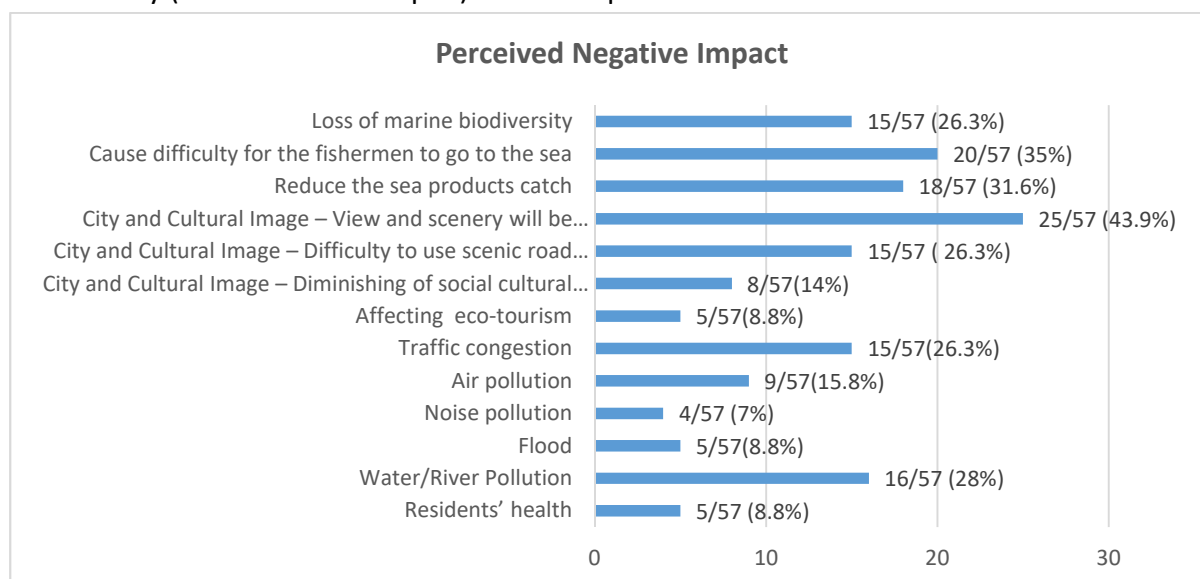


Figure 4.20: Perceived Negative Impacts (Tourist)

Source: Social Survey, 2019.

Overall perception of the tourist visiting the study area are positive. The respondents believe the project development would bring benefit to the surrounding community in all aspect of employment opportunities, development growth of local economy, increase facilities, planned development, as well as improved residents socio economy (refer **Figure 4.21**).

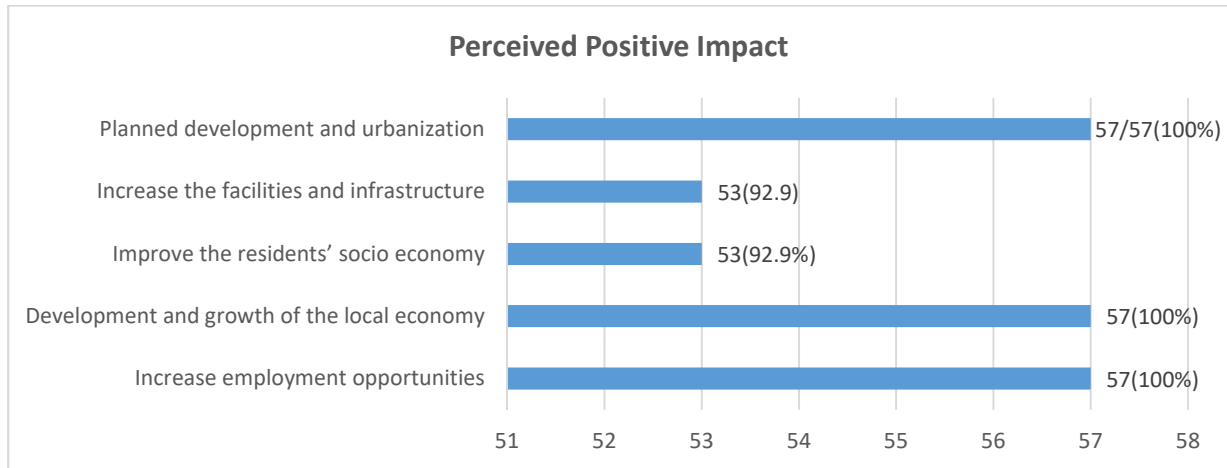


Figure 4.21: Perceived Positive Impact (Tourist)

Source: Social Survey, 2019.

4.4 TOURISM ATTRACTION

4.4.1 TOURIST PROFILE

A survey that had been done around the area Pantai Telok Ketapang, Pantai Tok Jembal and Pantai Batu Burok was able to derived 57 respondent from tourist background as well as 47 local respondents visiting the attraction. The percentage of the visitors is shown as **Figure 4.22** below.

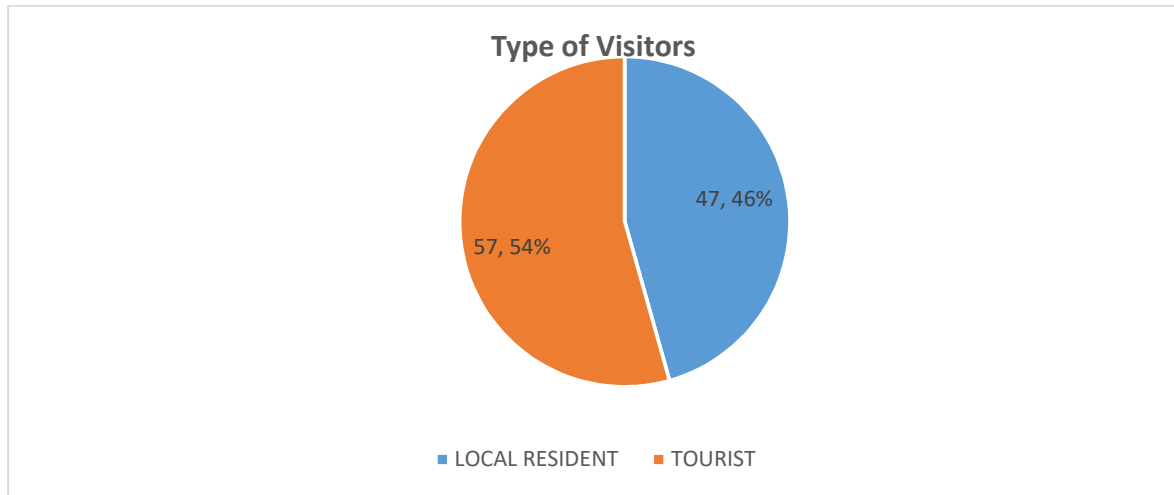


Figure 4.22: Type of visitors

Source: Social Survey, 2019.

The respondents were ask about the reason of visitors visiting Kuala Terengganu .Due to place of respondent taken (beach area) at some extent the respondent were more incline to admittedly chose scenic view as reason of visiting the area. This can be seen as 42% of the tourist background respondent belongs in this category, while others chose several other reason such as attraction of activity (23%), affordable/low cost place for vacation (16%), cultural uniqueness (8%) as well as historical attraction (1%)(refer **Figure 4.23**).

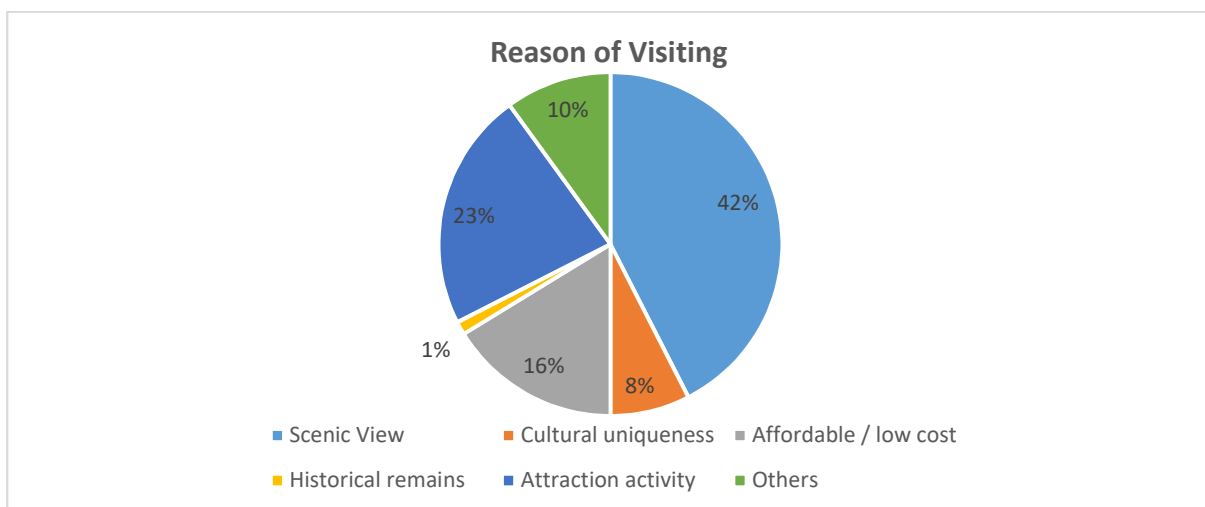


Figure 4.23: Reason of visiting

Source: Social Survey, 2019.

The respondents were asked about the season in a year where tourist happens to most visit Kuala Terengganu. Based on **Figure 4.24** below 68% of the respondents claimed to visit Kuala Terengganu during school holiday whereas 11% of the respondents visits during weekends which believed to be the local visitors. Others believed that the tourist are coming to Kuala Terengganu all year long.

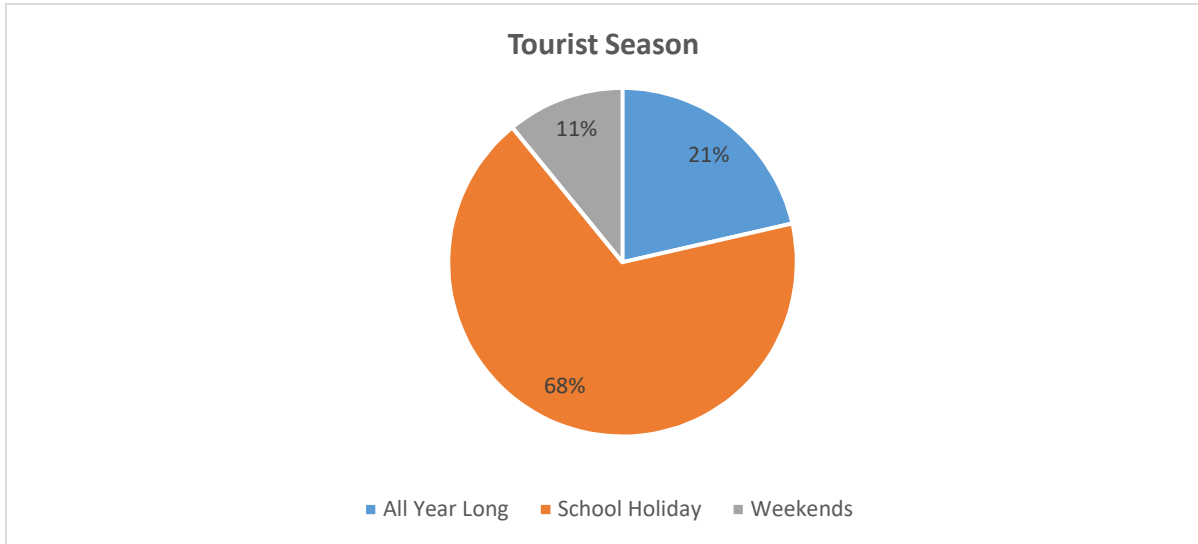


Figure 4.24: Tourist season of visiting

Source: Social Survey, 2019.

Figure 4.25 shows the period of staying for each of tourist respondent. Majority (68%) of the tourist visitors are staying for about 3 to 5 days. While 17% the second highest distribution admitted to stay only for 1 day. The lowest percentage is in category of 5 to ten days or longer which 15% of the respondents belong to. As to accommodate the flow of in tourist, there are many hotels, homestay and chalet that were located close to the river and beach area. The distribution of these operators are shown in **Figure 4.26**.

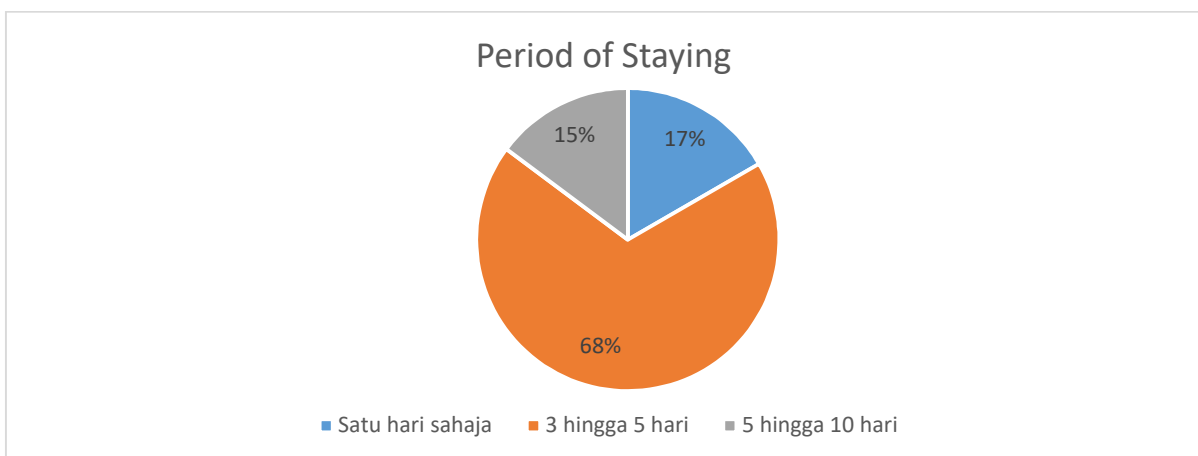


Figure 4.25: Period of Staying

Source: Social Survey, 2019.

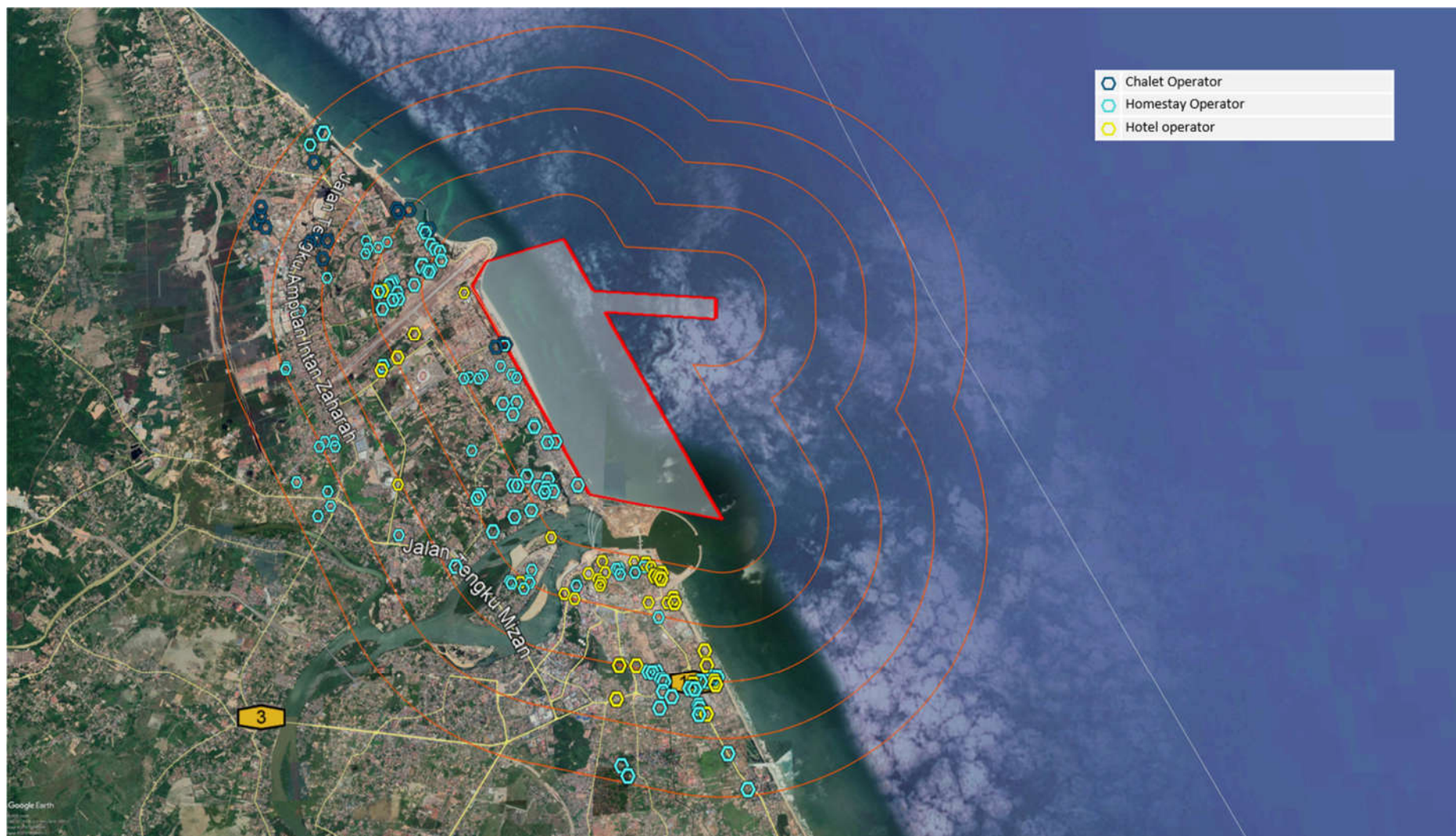


Figure 4.26: Distribution of hotel, chalet, and homestay operator within 5Km radius

Source: Social Survey, 2019.

4.4.2 Tourism Attraction within Study Area

As for tourism sector, the main assets for Kuala Terengganu district are Historical Heritage, Cultural and Nature. In line with the recognition of the Terengganu State as the East Coast Tourism Hub in the East Coast Economic Region Development Documents (ECER) together with the declaration of Kuala Terengganu as the '*Bandaraya Warisan Pesisir Air*' has made tourism as one of the major economic drivers. List and location of tourism attractions that recommended for people to pay a visit can be referred in **Figure 4.35**. All the tourism attractions have been classified according to its tourism type, which area;

- i. Beach Recreation
- ii. Historical Heritage
- iii. Cultural
- iv. Recreation and Sport
- v. Food

As been mention before, the proposed project is located at the Pantai Teluk Ketapang. Pantai Teluk Ketapang is one of tourism attractions in Kuala Terengganu, which can be classified as recreational tourism attraction. **Figure 4.27** shows the aerial view of Pantai Teluk Ketapang and the proposed reclamation site.

Pantai Teluk Ketapang is located next to the Sultan Mahmud International Airport, approximately 4 kilometer from Kampung Wakaf Tembesu and 22 kilometer from the Kuala Terengganu City Centre. From Kuala Terengganu city centre, the Project site can be reach by accessing via Federal Road 65 (FT65) and State Road 143 (T143) and pass along Jalan Pantai Teluk Ketapang, Jalan Ketapang Pantai and Jalan Melati Ulung.



Figure 4.27: Aerial view of Pantai Teluk Ketapang

Source: Drone Footage, 2019.

Pantai Teluk Ketapang is known by local as a recreational area and one of the coastal attraction in Kuala Terengganu. There are many activities that visitors can do at the Pantai Teluk Ketapang such as fishing, jogging and horse riding. It is also a nice place to have picnic together with family and friends in the evening as in **Figure 4.28**. Pantai Teluk Ketapang is well equipped with public toilets and *musolla*, playground and *gazebo* for visitor's convenience. In the evening, there are many hawkers selling variety of food and beverages along Jalan Pantai Teluk Ketapang. The hawkers start their business in the evening and closed at the late 8.00 pm. The usage of the area varies from morning to evening, where a lot of recreational activities can be seen during evening period. Even so visitors also come during morning to midday just to wind up and take a look on the scenery there.



Visitors at Pantai Teluk Ketapang



Hawkers along Jalan Pantai Teluk Ketapang



Figure 4.28: Pantai Teluk Ketapang

4.4.2.1 Beach Recreation Tourism

Three beaches have been identified as tourism attraction in ZOI radius, which are Pantai Teluk Ketapang, Pantai Tok Jembal and Pantai Batu Buruk. This beaches have visitors, including locals, and domestic and international tourists visiting all the time especially in the evening.

A lot of activities can be found along these coastal areas such as horsing, picnic, recreational activities, fishing and flying kite. These beaches also been provided facilities such as playground, gazebo, Surau and public toilet for visitors' convenience (**Figure 4.29**). Visitors can also find a variety of traditional food delights from the food hawkers along Jalan Pantai Teluk Ketapang. Usually, for Pantai Teluk Ketapang, visitors start their activities in the evening and end at the latest by 8.00 p.m.

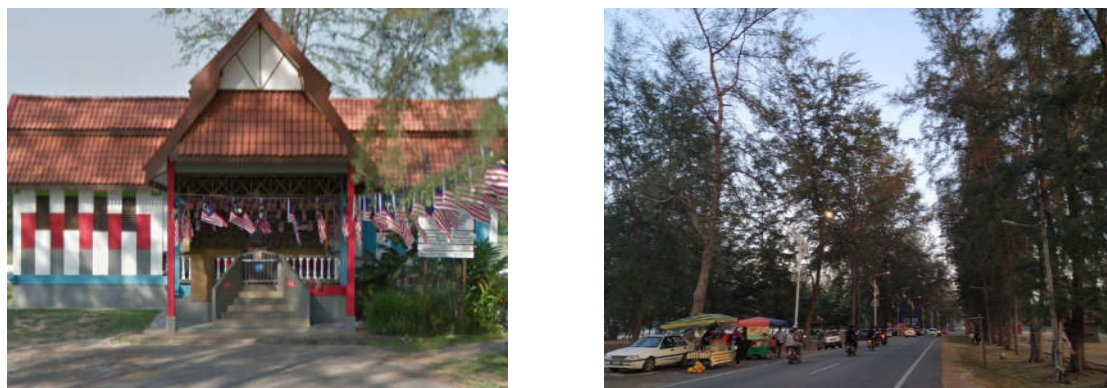


Figure 4.29: Public Facilities and Food Hawkers along Jalan Pantai Teluk Ketapang

4.4.2.2 Historical Heritage Tourism

Historical heritage is defined as pieces of political, military, cultural or social history that have been preserved due to their heritage value to the area. In tourism, these places have attraction value due to its representation of specific history of the past. As for the locals, the site possesses value that adds to their sense of belonging.

Historic sites are usually protected by law, and many have been recognized with the official national historic site status. A historic site may be any building, landscape, site or structure that is of local, regional, or national significance. Historic sites and heritage sites are often maintained for members of the public to be able to visit. Visitors may come out of a sense of nostalgia for bygone eras, out of wishing to learn about their cultural heritage, or general interest in learning about the historical context of the site.

Kuala Terengganu has variety of products and attractions that offer the unique tradition of local heritage and its rich culture. 7 historical heritage sites can be found in the study area. Most of the historical sites are open for free to public visit. A good maintenance of the historical sites can attract people especially the tourists, either domestic or international to visit them. The historical sites within study area can be referred in **Figure 4.30**.



Istana Maziah



Makam DiRaja Bukit Keledang



Masjid Zainal Abidin



Bukit Puteri

Figure 4.30: Historical Heritage Sites in Study Areas

4.4.2.3 Cultural Tourism

Cultural tourism is the subset of tourism concerned with a country or region's culture, specifically the lifestyle of the people in those geographical areas, the history of those people, their art, architecture, religion, and other elements that helped shape their way of life. The main difference between culture and heritage is that the culture is based on what the people create whereas the heritage is what the people inherit by nature, by history, by culture.

Cultural tourism includes tourism in urban areas, particularly historic or large cities and their cultural facilities such as museums and theatres. It can also include tourism in rural areas showcasing the traditions of indigenous cultural communities, and their values and lifestyle.

By referring to the **Figure 4.35**, most of cultural tourism attractions in the study area are related to the religion and race.

4.4.2.4 Recreation and Sport Tourism

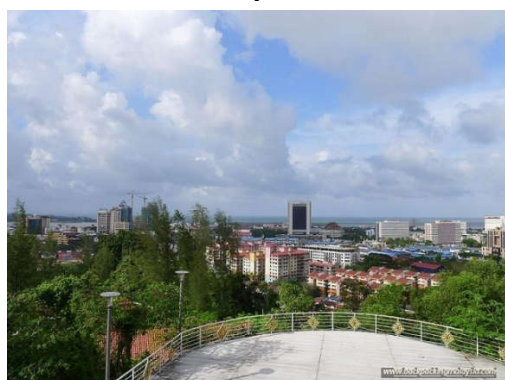
In a broad sense, sports tourism is any traveling that is done to participate in a sporting event, which including just watching. As long as a sport (soccer, baseball, golf, football, cricket, volleyball) is the primary reason for one's travels, it can be considered sports tourism. This particular category within sports tourism is where a person or persons travels to a select recreation centre, or sports complex, to actively participate in a sporting event. **Figure 4.31** below shows the recreation and sport tourism that been identified in the study area.



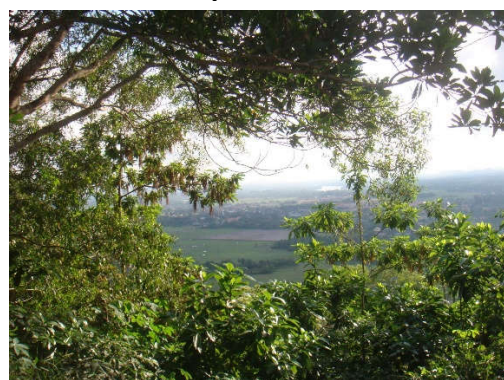
Dataran Syahbandar



Kompleks Akuatik



Taman Panorama



Bukit Besar

Figure 4.31: Recreation and Sport Tourism

4.4.2.5 Food Tourism

Food tourism simple means the act of people visiting a particular place for the purpose of partaking in food festivals, or trying out of different food and restaurants in that particular country. Malaysia, being a country that is rich and diverse in its culture and heritage, has become an ideal place for tourist not only to experience the lifestyle and culture but to also partake with the local lifestyle and one example of doing so is by experiencing the food.

Terengganu also rich with their local food such as *Keropok Lekor*, *Losong*, *Nasi Dagang*, *Otak-Otak*, *Sata*, *Lok Ching*, *Udang* and *Sotong Celup Tepung* (**Figure 4.32**). Kampung Losong, which along Jalan Kuala Hiliran is famous with Losong. People can get frozen, boiled and fried Losong easily from Kampung Losong. There also stalls that provide for people to dine in.

People also can easily get the other traditional food at Pantai Teluk Ketapang, Pantai Tok Jembal and Pantai Batu Burok as food hawkers usually do their business along the coastal areas.



Losong



Sotong Celup Tepung



Nasi Dagang



Lok Ching

Figure 4.32: Variety Food attraction in Terengganu

4.4.2.6 Coastal Attraction - Scenic Drive

Terengganu has its own attraction as *Negeri Pesisiran Pantai*. People especially tourists can drive along coastal road, such as Jalan Pantai Teluk Ketapang and Jalan Pantai Tok Jembal to enjoy the scenic drive view of both beaches as can be seen in **Figure 4.33**.

Both road not only have their own scenic drive, but also have their own beautiful landscape, which is surrounded by pine tree that also known as Casuarina Equisetifolia that make both roads shadowy, cozy and comfortable to walk through and do activities. **Figure 4.34** and **Figure 4.34** show the landscape surround Jalan Pantai Teluk Ketapang and Jalan Pantai Tok Jembal.



Figure 4.33: Jalan Pantai Teluk Ketapang surrounded by Pine Trees



Figure 4.34: Jalan Pantai Tok Jembal surrounded by Coconut and Pine Trees

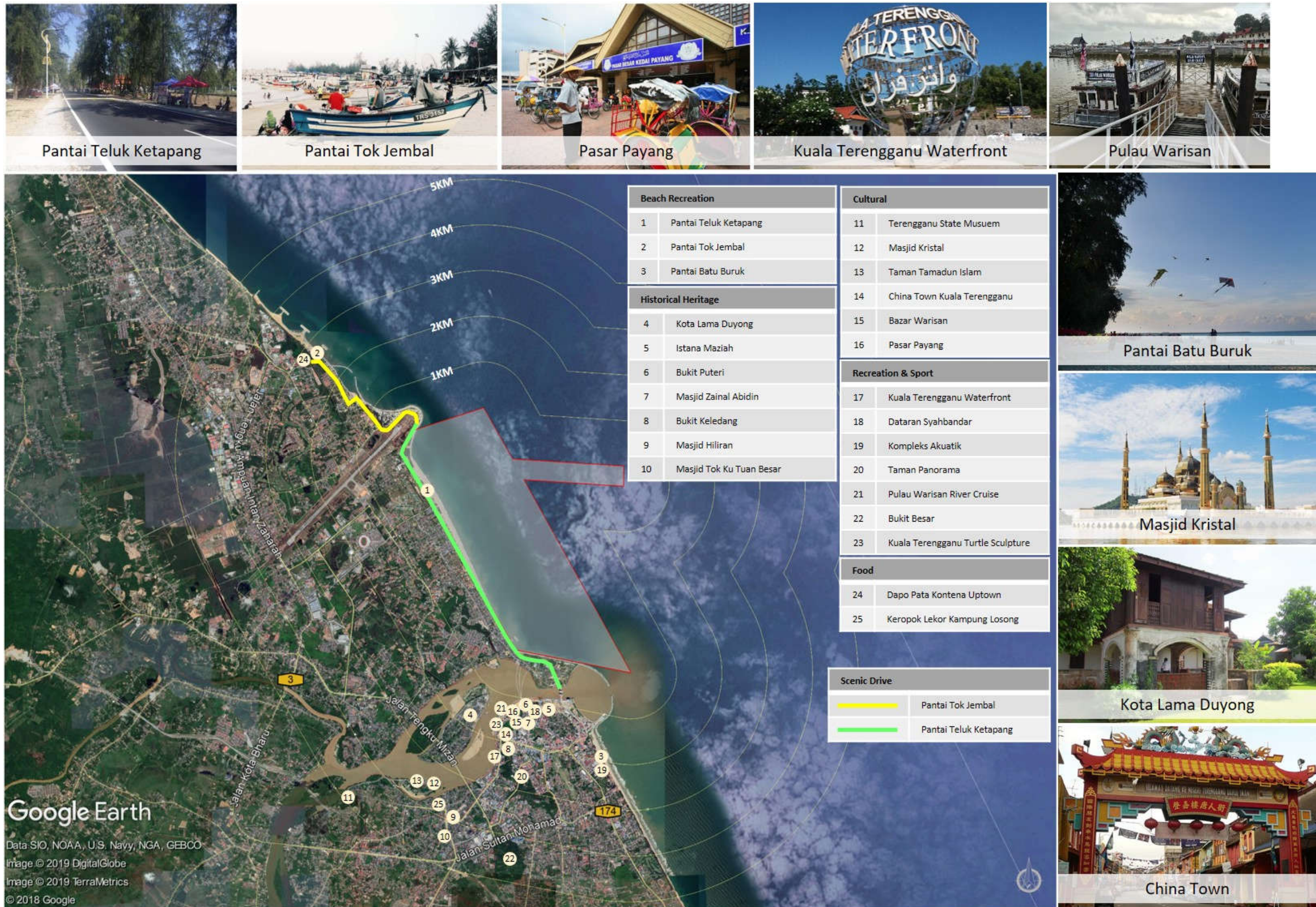


Figure 4.35: Tourism Attractions and Scenic Drive in the Study Area

CHAPTER 5: SOCIAL IMPACTS AND MITIGATION MEASURES

5.1 INTRODUCTION

As coastal area is a very sensitive area, any development needs to be highly evaluated for its possible disturbances. It is because the coastal reclamation and its topside development comes with its adverse impacts to the land. This chapter will be examining the potential social impacts that may arise with this proposed reclamation project during the pre-construction phase, construction phase and operational phase. Information from **Chapter 4: Baseline Study** will be extract to examine those potential impacts and proposed the suitable mitigation measures to address them.

5.2 EXISTING COMMUNITY ISSUES

Referring to the survey that been conducted before among villagers and fishermen, some of existing community issues that occurred among them are;

- i. The residents of Seberang Takir claimed that their settlements are lacking with basic commercial facilities such as banking, waste pick-up service, and traffic congestion incurred by the heavy vehicles that passes through.
- ii. The community encountered few minor health problems such as air and water pollution caused by the ongoing construction nearby their settlements area.
- iii. Rapid beach erosion in Mengabang Telipot and Seberang Takir that causes land owner to lose their land to the sea.
- iv. Residents in Seberang Takir, Teluk Ketapang, Tok Jembal areas are still under the low-income group with the survey results of RM500-RM2000 per month.
- v. The inadequacy of fishermen's boat landing areas caused by the beach erosion.

5.3 MAIN IMPACTS

It is important to identify the impacts on social for different phases of the project activities, before the project construction starts, during construction, and after construction phase. After processing primary and secondary data obtained, the expected impacts that will incur from the proposed project are predicted by using the Cause-Effect Matrix.

The Cause-Effect Matrix is one of the social assessment methods used to identify the relevant issues as it is correlated with the different types of land use along the proposed projects. **Table 5.1** shows the quintessential Cause-Effect Matrix during the three phases of development within and outside the radius boundary of study area for the Project. The first

column shows the project activities and followed by the primary impacts/causes pertaining with the communities or types of land use. Secondary impacts results to the change of a person's internal wellbeing from the proposed projects, it has profound effects and intangible due to the impacts are experienced by individuals. These were utilized to suit physical and environmental issues against various mitigation measures recommended.

As an exemplary actual scenario to clarify the statement, during the pre-construction phase of the project development, the project proponent have acquired the local perception toward proposed project.

Table 5.1: Cause-Effect Matrix of Impact Identification and Assessment

Project Activity	Primary Impacts	Secondary Impacts
Pre-Construction Phase <ul style="list-style-type: none"> Initial studies such as EIA and social study 	Health and Social Wellbeing	
	<ul style="list-style-type: none"> Negative and positive perceptions from local people and community 	<ul style="list-style-type: none"> No impact
Construction Phase <ul style="list-style-type: none"> Reclamation progress Construction of the topside development 	Health and Social Wellbeing	
	-	<ul style="list-style-type: none"> Residents' health affected
	Environmental Quality	
	<ul style="list-style-type: none"> Dust Noise disturbance Change in coastal landscape Loss of flora and fauna Coastal erosion Risk public safety Loss of beach sand 	<ul style="list-style-type: none"> Road accidents Stress Tension
	Economic and Material Wellbeing	
	<ul style="list-style-type: none"> Fishermen's activities affected as the declining of the fishing product 	<ul style="list-style-type: none"> Fishermen's monthly income affected
	Demographic Process	
	<ul style="list-style-type: none"> In-migration of foreign workers 	<ul style="list-style-type: none"> Social tension due to cultural differences
Economic Process		
<ul style="list-style-type: none"> Job opportunities Economic activities affected 	<ul style="list-style-type: none"> Change in living standard 	
Operational Phase	Environmental Quality	
	<ul style="list-style-type: none"> Change in scenic drive along Pantai Teluk Ketapang Beach loss at Pantai Teluk Ketapang 	<ul style="list-style-type: none"> Feeling of loss of control over community future (caused by outsider development)
	Economic and Material Wellbeing	
<ul style="list-style-type: none"> Increase property value-new township Increase rental rate 	<ul style="list-style-type: none"> Local residents feel burden as cost of living increase Loss self-reliance 	

Project Activity	Primary Impacts	Secondary Impacts
		<ul style="list-style-type: none"> Loss off potential earnings from tourism attraction
	Family and Community	
	<ul style="list-style-type: none"> Two social income groups in one area which can cause differences and social inequality 	<ul style="list-style-type: none"> Loss opportunity for social engagement and recreational activities Social tension between two communities Loss of sense of belonging Existing community feeling excluded and alienated over new development
	Demographic Process	
	<ul style="list-style-type: none"> Population increase 	<ul style="list-style-type: none"> Necessity for new facilities and infrastructures Overwhelmed by increase of traffic volume
	Economic Process	
	<ul style="list-style-type: none"> Creation of jobs Change and diversification of economic activities Pantai Teluk Ketapang loss its own attraction 	<ul style="list-style-type: none"> Positive shift in standard of living Increase a person's socio-economic Declined of the food hawkers' daily income
	Geographic Process	
<ul style="list-style-type: none"> Change in land use status Increased transportation and rural accessibility Urbanisation 	<ul style="list-style-type: none"> No impact 	
Socio-Culture Process		
<ul style="list-style-type: none"> Culture differences as people in-migrate Traditional hawker convert to restaurant food Discrepancy of identity between existing and new township. 	<ul style="list-style-type: none"> Loss cultural identity and replacement of different tourism attraction Loss of sense of belonging 	

A straightforward evaluation of these impacts is not easy to achieve, mostly because effects are wide ranging, heterogeneous and difficult to measure in the long term. A comprehensive assessment of different welfare effects can however be fostered based on specific appraisal techniques.

Following a cost-effect analysis approach, the table illustrates the framework for the Project. It addresses the most important elements to consider in project appraisal, offers an overview of the different types of effects generally recognizable.

This Project may cause relevant impacts also outside the sector for which they are specifically implemented. In many cases, economic, strategic, environmental and other social effects directly or indirectly related to reclamation projects are substantial. Comprehensive and consistent evaluation of the impacts on society can contribute to better consideration of reclamation and sand source project as an urban solution and an investment opportunity for both private and public stakeholders.

5.4 IMPACT ASSESSMENT

5.4.1 Severity and Probability of Social Impact

This Chapter expands this using risk matrix to assess the significance, severity and probability of occurrence of the impacts during the pre-construction, construction and operational phase of the Project.

The severity of an impact is a measure of how serious the identified impact will affect the stakeholder. This can be quantified using a scale of 1 to 4, as shown in **Table 5.2**. The frequency of occurrence of an impact is measured by using probability. **Table 5.3** shows the numerical scale of 1 to 4 of the impact occurrences. Later, based on the severity and probability scales, a significance score can be attached for each impact, using the formula;

$$\text{Significance Score} = \text{Severity} \times \text{Probability}$$

Table 5.2: Severity Impacts

Severity Scale	Severity of Social Impacts	
1	Minor	<ul style="list-style-type: none"> Limited to the local area, short/long term but bring significant impact to the community Number of affected community is small Expected impact duration is 3 months
2	Moderate	<ul style="list-style-type: none"> Limited to the local area, short/long term but bring significant impact to the community Affecting the community in primary and secondary zones, which causing tensions Expected impact duration is 1 year
3	High	<ul style="list-style-type: none"> Great damage, bring impact on medium or long term Possible project do not comply with legislation Affecting the community outside ZOI Expected impact duration is 2 year

Severity Scale	Severity of Social Impacts
4	Very High <ul style="list-style-type: none"> • Great damage, bring long term impact to the community • Resulting in legal intervention • Affecting the community outside ZOI • Expected impact duration is exceeding 2 year, and will be partly cumulative or multiplied.

Source: PLANMalaysia, 2018.

Table 5.3: Probability of Occurrence of an Impact

Probability Scale	Impact Occurrence
1	One-off Occurrence
2	Rare Occurrence
3	Frequent Occurrence
4	Continuous Occurrence

Source: PLANMalaysia, 2018.

By using the social issues identified in **Section 3.2 (Table 3.1)**, as variables anticipated in a future scenario, the numerical significance scores for each impact ascertained, as shown in **Table 5.4, Table 5.5 and Table 5.6.**

Table 5.4: Severity, Probability and Significant Score of Identified Impacts in Matrix for Pre-Construction Stage

Social Impact Issue	Potential Impact	Probability	Qualitative Risk Impact Matrix		Significance Score
			Severity Level	Probability Level	
Health and Social Wellbeing					
Perceptions of Affected Local People and Community	Local people feel the development will disturb their daily and fishery activities	Will happen one-off during the social survey been conducted	1	2	2
	Local people feel that the development will bring no positive impact to them		1	2	2
	Local people has no object toward reclamation as its not affecting to them and can help the mitigate the exist beach erosion		1	2	2

Table 5.5: Severity, Probability and Significant Score of Identified Impacts in Matrix for Construction Stage

Social Impact Issue	Potential Impact	Probability	Qualitative Risk Impact Matrix		Significance Score
			Severity Level	Probability Level	
Health and Social Wellbeing					
Perceptions of Affected Local People and Community	Local people feel the development will disturb their daily and fishery activities	Will happen continuously as local residents fully exposed during the project construction	1	2	2
	Local people feel that the development will bring no positive impact to them		1	1	1
	Local people has no object toward reclamation as its not affecting to them and can help the mitigate the exist beach erosion		1	1	1
Residents' health affected	Local residents are exposed to the air, water and dust pollution.	Will often happens as the pollution occur continuously during construction	1	3	3
Environmental Quality					
Dust and Noise Disturbance	Noise disturbance from the heavy machineries during the ground levelling work.	Will often happens due to high flow of heavy vehicles and machineries	2	2	4
	Dust emission during the reclamation process undergo.		2	2	4
Loss of Flora and Fauna	Nearest mangrove forest may affect	Very rare to happens as the location of the mangrove is not totally at the project site	1	1	1
Aesthetic Value	Decreasing tourism attraction value	Will happens for one-off	3	1	3
	Change in coastal landscape				

Social Impact Issue	Potential Impact	Probability	Qualitative Risk Impact Matrix		Significance Score
			Severity Level	Probability Level	
	Loss of beach sand				
Coastal Erosion	Proposed reclamation can mitigate the current erosion problem		1	1	1
Public Safety	Accessibility and movement of heavy vehicles and machineries	Will often happens due to increase heavy vehicles in traffic volume and increase of foreign workers stay in Seberang Takir	1	3	3
	People feel unsafe when number of foreign workers increase		1	3	3
Economic and Material Wellbeing					
Fishermen's activities affected	Due to declining fishing product, the fishermen's activities are affected	Will happens continuously as the project to be construct at the coastal	2	2	4
	Fishermen's monthly income will be affected				
Demographic Process					
In-migration	In-migration of foreign workers	Will happens continuously as long as the project is under construction	1	3	3
Economic Process					
Creation of job	Project construction require a lot of manpower which can be job opportunity for the local people	Will often happens but the job opportunity also may open to foreign worker	3	3	9
Economic Attraction	Pantai Teluk Ketapang loss its own attraction, which may affect the main economic activity to operate and affect hawkers' daily income	Will happens continuously as the number of visitors decrease when there is no attraction to visit anymore	3	1	3

Table 5.6: Severity, Probability and Significant Score of Identified Impacts in Matrix for Operational Stage

Social Impact Issue	Potential Impact	Probability	Qualitative Risk Impact Matrix		Significance Score
			Severity Level	Probability Level	
Environmental Quality					
Aesthetic Value	Change in coastal landscape	Will happens one-off	4	1	4
	Beach loss at Pantai Teluk Ketapang				
Economic and Material Wellbeing					
Property Value and Existing businesses	Increase property value due to new township	Will often happens as Seberang Takir's attraction and function has increased	3	3	9
	Increase rental rate in surrounding area				
	Loss of beach area affect existing business that relying on tourism attraction (hawkers, chalet/hotel/homestay)	A long term impact as the loss of Pantai Seberang Takir is permanent	3	1	3
Family and Community					
Social Differences and Disparities	Two social income groups in one area which can cause differences and social inequality	A long term impact as both social income group settle down in the same area	3	1	3
Social Network	Loss of lifestyle connected to loss of beach area that provide locals with sense of belonging	A long term impact as the loss of Pantai Seberang Takir is permanent	3	1	3
	Loss opportunity for social engagement and recreational activities	Will happens one-off	1	1	1
Demographic Process					
In-migration	New township attract people to migrate in Seberang Takir	A long term impact due to new economic activities and residential areas	3	3	9
Economic Process					

Social Impact Issue	Potential Impact	Probability	Qualitative Risk Impact Matrix		Significance Score
			Severity Level	Probability Level	
Job Opportunity	Creation of jobs from diversification of economic activities at the new township	Will happens continuously	3	3	9
	Job opportunity help people to enhance their own living standard				
Geographic Process					
Change in land use status	Increase the land area for potential future development such as mix development, light industry and town centre.	A long term impact when Pantai Teluk Ketapang loss to new township	3	3	9
Increased transportation and rural accessibility	Higher number of population and attraction increase the transportation facility	A long term impact, when transportation facility in Seberang Takir been upgraded, it attract more people to migrate in.	3	2	6
Urbanisation	Development of new township in Seberang Takir	A long term impact, Seberang Takir may upgrade from village to urban area	3	2	6
Socio-Culture Process					
Culture Differences	Culture differences occur when people in-migrate to Seberang Takir such as higher income group and foreign worker	A long term impact as Seberang Takir will be having two identity, which are fishermen village and new township	3	1	3
	Traditional hawker convert to restaurant food		3	1	3
	Discrepancy of identity between existing and new township development.		2	1	2

5.4.2 Level of Impact Significance

Results from the Matrix Scoring will help in determining the level of significance for each potential impact listed. The significance level is determined based on the scale set in **Table 5.7**.

Table 5.7: Significance Level of Impact and Actions

Score	Impact	Action
1 – 2	No Priority	No Mitigation Needed
3 – 4	Low Priority	Continuous Improvement or Mitigation Measures and Controls
6	Medium Priority	Preventive Measures
8 – 9	High Priority	Immediate Preventive and Mitigation Measures
12 - 16	Very High Priority	Project cannot be Approved unless site been relocated or redesign

The significance score for every potential impact then compared to the significance level and been tabulated in **Table 5.8**.

Table 5.8: Severity, Probability and Significant Score of Identified Impacts in Matrix

Project Phase	Social Impact Issue	Potential Impact	Significance Score		Impact Assessment
			Positive	Negative	
Pre-Construction Stage	Health and Social Wellbeing				
	Perceptions of Affected Local People and Community	Local people feel the development will disturb their daily and fishery activities		2	No Priority
		Local people feel that the development will bring no positive impact to them		2	No Priority
		Local people has no object toward reclamation as its not affecting to them and can help the mitigate the exist beach erosion		2	No Priority
	Health and Social Wellbeing				
	Perceptions of Affected Local People and Community	Local people feel the development will disturb their daily and fishery activities		3	Low Priority
Local people feel that the development will bring no positive impact to them			1	No Priority	

Project Phase	Social Impact Issue	Potential Impact	Significance Score		Impact Assessment
			Positive	Negative	
Construction Stage		Local people has no object toward reclamation as its not affecting to them and can help the mitigate the exist beach erosion		1	No Priority
	Residents' health affected	Local residents are exposed to the air, water and dust pollution.		3	Low Priority
	Environmental Quality				
	Dust and Noise Disturbance	Noise disturbance from the heavy machineries during the ground levelling work.		4	Low Priority
		Dust emission during the reclamation process is undergo.		2	No Priority
	Aesthetic Value	Decreasing tourism attraction value		4	Low Priority
		Change in coastal landscape			
		Loss of beach sand			
	Coastal Erosion	Proposed reclamation can mitigate the current erosion problem	3		Low Priority
	Public Safety	Accessibility and movement of heavy vehicles and machineries		3	Low Priority
		People feel unsafe when number of foreign workers increase		3	Low Priority
	Economic and Material Wellbeing				
	Fishermen's activities affected	Due to declining fishing product, the fishermen's activities are affected		4	Low Priority
		Fishermen's monthly income will be affected			
	Demographic Process				
	In-migration	In-migration of foreign workers		3	Low Priority
	Economic Process				
	Creation of job	Project construction require a lot of manpower which can		9	High Priority

Project Phase	Social Impact Issue	Potential Impact	Significance Score		Impact Assessment
			Positive	Negative	
		be job opportunity for the local people			
	Economic Attraction	Pantai Teluk Ketapang loss its own attraction, which may affect the main economic activity to operate and affect hawkers' daily income		3	Low Priority
Operational Stage	Environmental Quality				
	Aesthetic Value	Change in coastal landscape		4	Low Priority
		Loss of Teluk Ketapang beach.			
	Economic and Material Wellbeing				
	Property Value and existing businesses	Increase property value due to new township		9	High Priority
		Increase rental rate in surrounding area			
		Loss of lifestyle connected to loss of beach area that provide locals with sense of belonging	3		Low Priority
	Family and Community				
	Social Differences and Disparities	Two social income groups in one area which can cause differences and social inequality		3	Low Priority
	Social Network	Loss opportunity for social engagement and recreational activities		1	No Priority
		Loss of lifestyle connected to loss of beach area that provide locals with sense of belonging	3		Low Priority
	Demographic Process				
In-migration	New township attract people to migrate in Seberang Takir		9	High Priority	

Project Phase	Social Impact Issue	Potential Impact	Significance Score		Impact Assessment	
			Positive	Negative		
Operational Stage	Economic Process					
	Job Opportunity	Creation of jobs from diversification of economic activities at the new township			9	High Priority
		Job opportunity help people to enhance their own living standard				
	Geographic Process					
	Change in land use status	Increase the land area for potential future development such as mix development, light industry and town centre.			9	High Priority
	Increased transportation and rural accessibility	Higher number of population and attraction increase the transportation facility	6			Medium Priority
	Urbanisation	Development of new township in Seberang Takir	6			Medium Priority
	Socio-Culture Process					
	Culture Differences	Culture differences occur when people in-migrate to Seberang Takir such as higher income group and foreign worker			3	Low Priority
		Traditional hawker convert to restaurant food		3		Low Priority
Discrepancy of identity between existing and new township development.				2	No Priority	

5.5 IMPACTS AND MITIGATION MEASURES

5.5.1 Pre-Construction Phase

The activities take place during this pre-construction stage is initial study before the actual construction begin. Examples of the initial studies such as Environmental Impact Assessment (EIA) and socio-economic study. These studies bring no harm and social impacts toward local communities and tourists. For socio-economic study, a social survey has been conducted and it is a method that help in informing the local residents within 5km ZOI radius regarding to the proposed project (**Table 5.9**).

Table 5.9: Potential Impacts during the Pre-Construction Phase

Issues	Potential Impacts
Health and Social Wellbeing	
Perceptions from Affected Local People and Community	Local people feel the development will disturb their daily and fishery activities
	Local people feel that the development will bring no positive impact to them
	Local people has no object toward reclamation as its not affecting to them and can help the mitigate the exist beach erosion

5.5.1.1 Perceptions from Local People and Community

Potential Positive Impact

Positive perception towards project development

Based on the social survey, most of the locals have no objection toward the proposed project as the project may not bring any harm to them, plus the reclamation in their perspective would help to overcome the current erosion problem at Pantai Teluk Ketapang.

Moreover, some residents believe that this project, including the topside development will be able to help generate new employment and business opportunities for locals. They also believe that this project will improve the standard of living and property value. There are also assumptions that this project will not have much impact on environmental pollution and health problems.

Potential Negative Impact

Negative perception towards project development

Some locals, and community of fishermen's mostly feels that the project may not bring any benefits to them as the project is specific only to reclamation only, which may not require

much workforce during the construction phase. It is percept that it would bring harm to the existing fishing activities in term of environmental effect and fishermen’s fishing ground.

Moreover, there is a perception among locals that job opportunities created through this project and topside development is would not cater for locals, that it will require high skills or will be given to foreign workers. Followings the migration of foreign workers, in which not welcomed by the community as it is percept would lead to the increase social and criminal problems

Mitigation Measure:

Engagement with community- The project proponent should continuously provide accurate information during the pre-construction phase through Focus Group Discussion (FGD) and Public Dialogue as to know what it is to be expected by the existing community. Follow through on the next phases of the development until operation phase by establishing community representative committee. The role of this committee as channel in which the community could express dissatisfaction misconduct happening during the development period.

This is to make sure there is no discomfort and unfair feeling resulting during the project construction and operation. A respond committee is suggested to be established for this matter. Project Proponent also should plan any support programs in order to manage the perception impact from the local peoples.

5.5.2 Construction Phase

As been mention before, during the construction phase, there are several potential impacts may occur from the activities that been done when the reclamation project in progress. **Table 5.10** summarize the overall anticipated social impacts during the construction phase.

Table 5.10: Potential Impacts during the Construction Phase

Issues	Potential Impacts
Health and Social Wellbeing	
Perceptions from Affected Local People and Community	Local people feel the development will disturb their daily and fishery activities
	Local people feel that the development will bring no positive impact to them
	Local people has no objection towards reclamation as its not affecting them and can help mitigate the existing beach erosion
Residents’ health affected	Local residents are exposed to the air, water and dust pollution
Environmental Quality	
Dust and Noise Disturbance	Noise disturbance from the heavy machineries during the ground levelling work

Issues	Potential Impacts
	Dust emission during the reclamation process is undergo
Loss of Flora and Fauna	Nearest mangrove forest may affect
	Declining of fishing products
Aesthetic Value	Decreasing tourism attraction value
	Change in coastal landscape
	Loss of beach sand
Coastal Erosion	Proposed reclamation can mitigate the current erosion problem
Public Safety	Accessibility and movement of heavy vehicles and machineries
	People feel unsafe when number of foreign workers increase
Economic and Material Wellbeing	
Fishermen's activities affected	Due to declining fishing product, the fishermen's activities are affected
	Fishermen's monthly income will be affected
Demographic Process	
In-migration	In-migration of foreign workers
Economic Process	
Creation of job	Project construction require a lot of manpower which can be job opportunity for the local people
Concentration of economic activity	Pantai Teluk Ketapang loss its own attraction, which may affect the main economic activity to operate such as chalets and homestays and affect hawkers' daily income

5.5.2.1 Residents' Health

Potential Negative Impact

For environmental aspect, this proposed project may cause various impacts toward surrounding and sensitive receptors such as local residents and fishermen community.

During construction phase of reclamation, the potential impact would be the dust generated in the air as well as water pollution from sedimentation that may happen if it's not well controlled. The dust may be blown away by the occurring wind, towards the land, effecting the health

Mitigation Measure:

Standard Operation Procedures- EIA study is used to evaluate the possible impacts and proposed mitigation measure to reduce and prevent the possible impacts. Project Proponent need to ensure that every construction works follow the Standard Operating Procedure (SOP). Conduct dust and sedimentation management procedures and mitigation during construction to minimize and avoid air and water pollution from happening.

Health Monitoring- Proponent should work hand in hand with the local health agency to monitor public health among the local residents if any issues due to the development of the proposed project.

5.5.2.2 Dust and Noise Disturbance

Potential Negative Impact

When the reclamation work is in progress, dust from the sand may be caused and may affected the air quality at the site surrounding temporarily while the operational of sand dredging ship also may produce noise disturbance to the visitors at the Pantai Teluk Ketapang, nearby the site location. Moreover, the dust and noise disturbance can also be emit from the movement of heavy vehicles into the project reclamation site. Both dust and noise disturbance impacts are expected to only occur during the construction in progress. **Figure 5.1** shows the example of reclamation works in progress.



Figure 5.1: Reclamation Work in Progress

Mitigation Measures:

Environmental Management at construction site

- Monitor the dust emissions during the reclamation work especially within the 500-meter radius from the site boundary.

- Air pollution emission should be observed periodically Air sampling should be taken before, during and after the reclamation progress to observe the changes of air quality at the reclamation site
- Project proponent should provide water browser and wash through for heavy vehicles before exiting onto the main road, so that the dust from the construction can be reduced and reduce the dust impact to the nearby places, especially Pantai Teluk Ketapang.
- Control the number of construction vehicles and equipment used at any one time at any one location

5.5.2.3 Loss of Flora and Fauna

Potential Negative Impact

Mangrove contribute significantly to the biodiversity of the ecosystem. It serves as a feeding area for birds, especially migratory birds. Various species of fish and plants also reside amongst the swamps surrounding the mangroves.

Mangroves also trap sediment in the water bed that is a result of erosion at the coastlines. Roots of the mangrove slow down water flow and, in that process, trap sedimentation. As mentioned in the issues faced as a result of land reclamation, sedimentation clouds the water and does not allow the passing through of sunlight. This causes aquatic plants to not obtain enough sunlight to photosynthesize. Thus, the presence of mangroves is beneficial to aquatic life that resides nearby. Mangroves not only provide shelter, food and nesting area for organisms, but they also improve water quality to allow aquatic life to prosper. As such, mangroves play an important role in biodiversity. Clearing of mangroves could potentially cause damage to the ecosystem.

For this case, mangrove areas occur inside Sungai Terengganu, with the nearest mangrove to the Project site occurring along a small tributary running parallel to the shoreline approximately 500 m inland of the coastline (refer **Figure 5.2**). However, due to its location that not totally located at the Project site, the probability of occurrence of the impact is rare.

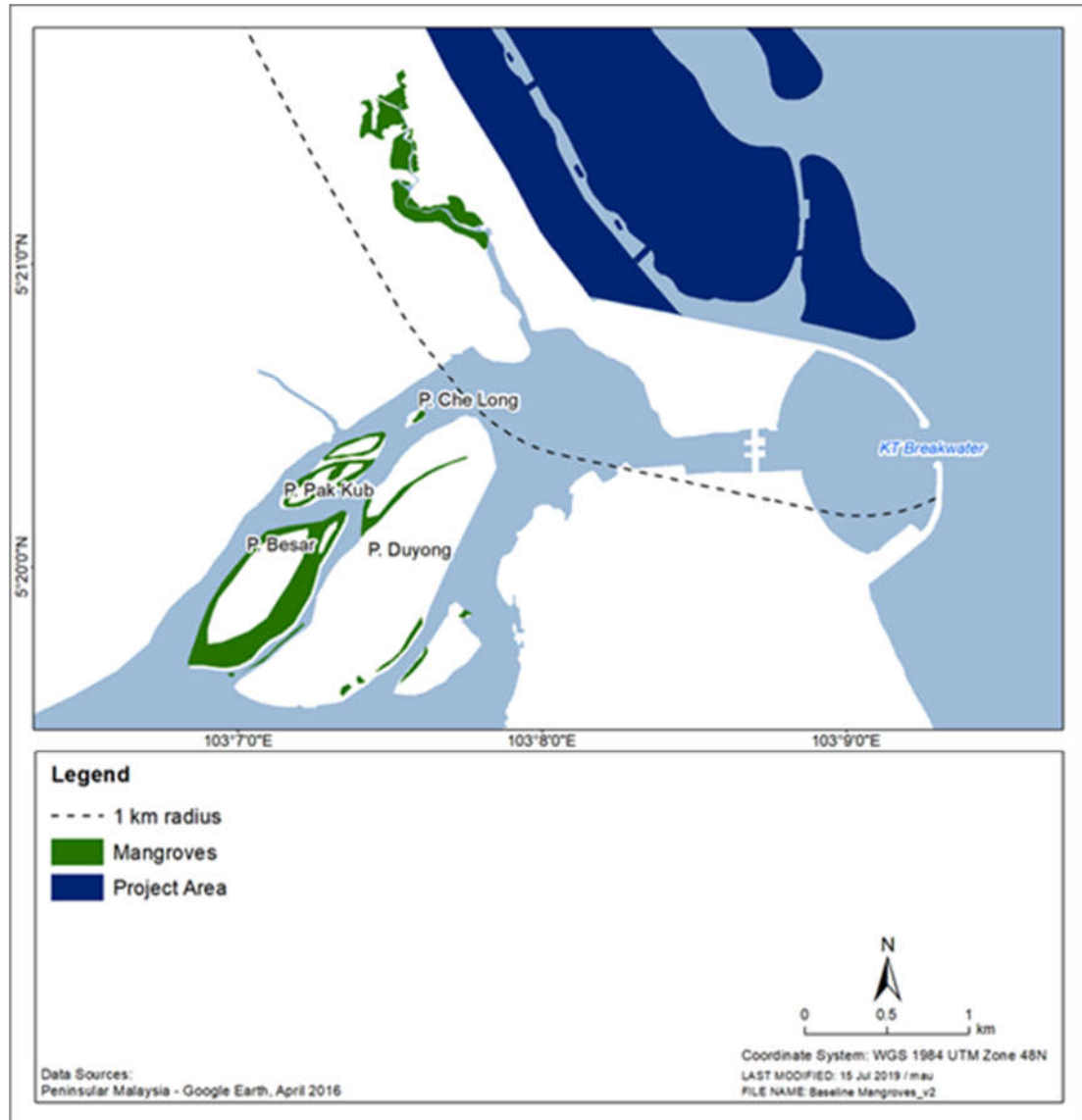


Figure 5.2: Nearest Mangrove to the Project Site

There also *Casuarina equisetifolia* (woodland) along the coastal area, which embellish the landscape of Pantai Teluk Ketapang as can be seen in **Figure 5.3**. The proposed project will not affect the woodland, therefore there will be no loss of any *Casuarina equisetifolia* along the project boundaries. The terrestrial vegetation will be retained.



Figure 5.3: Casuarina Equisetifolia along the Project Boundaries

Source: Drone Footage, 2019.

Mitigation Measures:

No mitigation measure is needed as the potential impact has no priority.

5.5.2.4 Aesthetic Value

Potential Negative Impact

As been mention before in **Chapter 2: Project Description**, Pantai Teluk Ketapang where the project site located is one of Terengganu's tourism attraction as recreational tourism. Local people and tourists tend to do recreational activities and walk along the coastal line to admire the scenery of the seafront of Pantai Teluk Ketapang. This is evidently true based on the baseline that were gathered on tourist profile, 42% which account for majority of the tourist/visitors stated the reason of visiting the area due to experience the scenic view (**Refer Figure 5.4**). The construction of the proposed project may affect the seafront scenic drive and the image of the vista will be less appealing and recreational loss of sandy beach at Pantai Teluk Ketapang.

Mitigation Measure:

The project proponent must establish a mutual understanding with the locals to avoid any problem generated by a poor understanding of local culture and values. The architectural design must take into consideration the cultural identity, image and the social cohesion between the newly developed projects with the existing setting. The layout of the development need to retain some of the beach features, to preserve the name Pantai Teluk Ketapang that is synonym with the local community.

The project proponent should ensure that the development plan adhere with the planning policies and urban design guidelines to avoid any unwanted events to be aroused latterly.

Project Proponent must ensure the implementation of the development according to the layout plan and the conditions that have been approved.



Figure 5.4: Proposed project may affect the scenic drive along Jalan Pantai Teluk Ketapang

Source: Drone Footage, 2019.

5.5.2.5 Coastal Erosion

Potential Positive Impact

Coastal erosion is the draining away of land or the removal of beach or dune sediments by the wave action, currents and tide. It is a dynamic and often complex process it can be cyclical with periodic episodes of coastal retreat and rebuilding. Beaches are eroded when they lose more sediment along shore, offshore than they receive from various sources.

The erosion problem has been detected more than 10 years ago and has been getting worse recently in Tok Jembal, Teluk Ketapang, Tanjung Gelam in Kuala Nerus in year 2016 (**Figure 5.5**). Pantai Teluk Ketapang already been reclaimed several years before as can be refer in **Figure 5.6** to overcome the past erosion problem.

In order to prevent more coastal erosion, this reclaimed activity can be used to mitigate the current coastal erosion at the south of Pantai Teluk Ketapang. Moreover, based on the social survey been conducted, most of the local residents approve the reclaimed activity as it may help in mitigate the existing beach erosion at Pantai Teluk Ketapang.



Figure 5.5: Coastal Erosion at Kampung Tanjung Gelam, Mengebang Telipot

Source: Berita Harian, 2016.



Figure 5.6: Reclaimed Area at Pantai Teluk Ketapang

Source: Drone Footage, 2019.

Mitigation Measure:

No mitigation measure is needed as the potential impact bring positive impact to local people.

5.5.2.6 Public Safety

Potential Negative Impact

Given that the Project site is located near the tourist and recreation area, it is expected that the area will be occupied by tourists and locals, during peak hours such as weekends and evenings for leisure purposes. The possible flow of in and out machineries/heavy vehicles during construction period would likely affecting the safety of people visiting the area. Not to mention the area is spot for business stall operating.

Mitigation Measure

During the construction phase, Project Proponent need to take concern of the accessibility and movement of heavy vehicles and machineries if the use of this equipment needed. It is to ensure the safety of the visitor and business owner not compromise by the ongoing construction. A proper Traffic Management Plan or Traffic Impact Assessment should be established prior to that.

5.5.2.7 Decline of Sea Products Catch

Potential Negative Impact

Fishermen are concerned about the difficulty to anchor to the landing area. The movement of the fishing activities will be restricted resulting from the project construction stage. Hence, their products caught from the sea banks may be contaminated with harmful chemicals or residues. The disruption on the marine ecosystem may cause the downgrading of the sea products in terms of number of kilograms gained and the size and health of the sea products itself as well as fish stocks. Furthermore, as can be seen in previous **Figure 4.17**, the Project site is within the fishing ground area. These possible impacts will totally effect the income source of the fishermen.

Moreover, there are two Fish Aggregating Device (FAD) located in the Project site, which totally will be affected during the construction stage (**Figure 5.7**). This man-made device is used to attract ocean going pelagic fish by the local fishermen. The affected FAD can bring impact to the fisherman's income source.

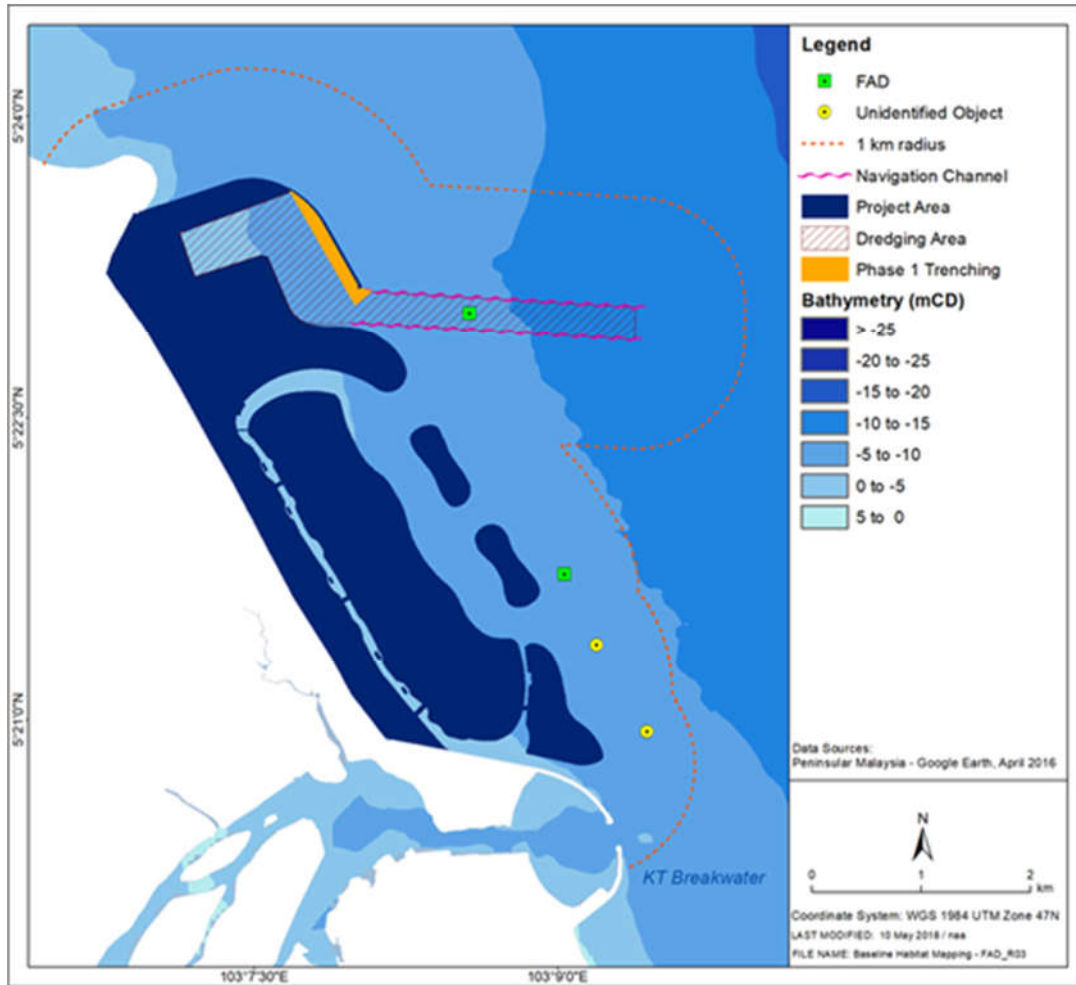


Figure 5.7: Fish Aggregating Device located in Project Site

Mitigation Measure:

Negotiation with Fishermen's community- It is expected Fishermen will not have any difficulty to anchor to the landing areas such as jetty because there are no jetty located along the Project site. Jetties are located mostly at the Sungai Terengganu's estuary as can be seen in **Figure 5.8**. The existing jetties are not directly impact from the Project.

However, Project Proponent is advised to follow any regulations especially related to the environment, so that the impacts towards sea product catch can be minimize. Moreover, Project Proponent is suggested to discuss and negotiate regard of possible compensation for possible affected income source of the fishermen.

For the FAD, the LKIM has advised Project Proponent during the FGD, which to compensate the affected FAD by replacing a new FAD in other suitable locations. The decision of the FAD should be decided with the help of LKIM. Project Proponent need to alert on the exact location, type, material and cost of the FAD.



Figure 5.8: Location of Fishermen Jetty

Source: Persatuan Nelayan Kawasan Kuala Terengganu Utara, 2019.

Enhance Fishermen’s traditional activities through other fishing industries- Due to the loss of fishing ground, it is expected that the fishermen would feel displaced and isolated from development. It would also cause uncertainty in their future if they continue with fishermen activity, which later see declining numbers of active fishermen in the area. Project proponent should plan in providing alternative job for the fishermen. Nevertheless, the job alternative should be something that would not alienate these community even more. Among the suitable industries suggested are aquaculture entrepreneurship and ventures

Thus, project proponent should provide necessary training to ease fishermen venture into the aquaculture sector. This could be done by recruiting interested fishermen or adopting several settlements as kampung angkat, and make it as the settlement community project.

5.5.2.8 In-Migration

Potential Negative Impact

The tendency of in-migration of foreign work during the construction period is very high due to requirement of large scale of manpower. The demographic in Seberang Takir may affected as the percentage of Non-Malaysian will increase. The increase number of foreign workers may bring impacts towards locals such as the unsafe feeling, differences and social inequality among the local residents. These can lead to social tension between two groups of

community. Due to the different value and culture, the influx of the workers could be possibly cause apprehension and uneasiness between local communities and foreign workers.

Mitigation Measure:

Facilitate and monitor flow of foreign workers- The background of the migrant foreign workers should be closely checked by the contractor before being approve to work at site as a preventive measure to avoid spreading of disease and crime. It is suggested that the migrant worker to be house at the base camp where all the liveable facilities provided with. Foreign workers should be briefed on local sensitivities and practices to avoid social conflict with the local communities. Other than that community watch programme could be set to monitor potential social problem.

Furthermore, project proponent/ contractor should come out with a feasible labour management plan to supervise the activity of foreign workers throughout construction phase and to make sure the influx of the foreign workers In the area are not permanent long after construction phase end.

Provision of Facilities- It is recommended that information related to population growth be shared between relevant partied (government agencies, service providers, etc.) In the future, so that measures could be taken to accommodate the demand for housing and public facilities to cater for future community.

5.5.2.9 Job Opportunities

Potential Positive Impact

Given that the proposed project' construction may need a lot of manpower, this can create job opportunity to the local residents during the phase. Labour needs may be skilled or unskilled, but it is anticipated that most of the local personnel will be hired as skilled labour or semi-skilled worker. It is expected that many locals would be in favour of seeking the employment opportunities. This will indirectly help improve the community socio economic status.

However, most of the locals are not equipped with the required skills for the job and there is a high likelihood that these positions will be filed by employees hired from outside of mukim Seberang Takir. Moreover, due to foreign workers lower wage rate, the locals might find themselves less preferable to be employed by employers. This will indirectly result to community disappointment towards development. It may also elevate the tension and conflict between two communities that probably existed from construction phase.

Mitigation Measure:

Provision of training specifically for the project need- The project proponent could provide trainings to the local community to equip them and make them more employable for the job opportunities required in the construction work of the proposed project.

Prioritize locals in employments- The increase in employment opportunity of the locals could increase community approval of the development. It is recommended that the employment opportunities be given consideration to the locals. By providing them with jobs and business, their standard of living will improve. The impact will be beneficial to the local economic growth and surrounding communities.

Limit ratio of foreign workers to cater increase of local employment- Project proponent should liaise with the employers in regards of inflow of migrant worker. Project proponent is recommended to limit the use of foreign workers in ratio lower than local labour. This would benefit the surrounding communities in term of employment opportunities that may improve their socioeconomic status.

5.5.2.9 Concentration of Economic Activity

Potential Negative Impact

As been mention before in **Subchapter 5.5.2.4**, the construction of proposed project may lead to the loss of Teluk Ketapang beach in permanence, of which considered as Teluk Ketapang tourism attraction and recreational area. The loss of attraction may affect the number of daily visitors visit the area. The decreasing of the visitors' number could disturb the main economic activities that operate daily concentrated along the beach such as chalets, homestays and food hawkers.

The effect to these operators would be in form of declining income. It would mean less of visitors passing the area which will lead to less potential customers for hawkers along Jalan Pantai Teluk Ketapang and homestay /chalet /Hotel business. The hawkers popularizing Terengganu's tradition food will lose their added value which is the sea view and natural air breeze since these factors are one of the main attractions in the area (**Figure 5.9**).



Figure 5.9: Landscape and food hawkers along Jalan Pantai Teluk Ketapang that may affect during the construction and operational phase of the Project

Source: Field Study, 2019.

Mitigation Measure:

Relocation of hawker's operation area. Project Proponent to discuss with local authority to provide and facilitate for a new hawker's area along beaches nearby (Pantai Tok Jembal and Pantai Baru Buruk). It is to ease the continuance of these hawker's business as part of Teluk Ketapang attraction as well to avoid the loss of these particular activities along the beach. Project proponent should also market the existing food hawkers along the beach area as one of attraction for future buyers staying in the future development.

Revitalization of surrounding beaches- Even though the project development could cause the permanent loss of Pantai Teluk Ketapang, there are close by beaches along Seberang Takir which hotel and business owner can depend on as attraction to the area. Project proponent could initiate collaboration between local authorities, to conserve and liven up the beach area. This could be done as form of Corporate Social Responsibility (CSR) to give back to the community affected in the area as well as serving for the new population from the future development.

5.5.3 Operational Phase

Most of the impacts from the proposed project are expected to take place right from the beginning at the construction phase, where many of which continue to be relevant in the operation phase.

There are several potential impacts may occur from the activities that been done, following the development of the mixed development. The impact was assessed based on the conceptual layout. **Table 5.11** summarize the overall anticipated social impacts during the operational phase.

Table 5.11: Potential Impacts during the Construction Phase

Issues	Potential Impacts
Environmental Quality	
Aesthetic Value	Change in coastal landscape
	Beach loss at Pantai Teluk Ketapang
Economic and Material Wellbeing	
Property Value	Increase property value due to new township
	Increase rental rate in surrounding area
	Loss of beach area could affect existing business that relying on tourism attraction (hawkers, chalet/hotel/homestay)
Family and Community	
Social Differences and Disparities	Two social income groups in one area which can cause differences and social inequality
Social Network	Loss of lifestyle connected to loss of beach area that provide locals with sense of belonging Loss opportunity for social engagement and recreational activities
Demographic Process	
In-migration	New township attract people to migrate in Seberang Takir
Economic Process	
Job Opportunity	Creation of jobs from diversification of economic activities at the new township
	Job opportunity help people to enhance their own living standard
Geographic Process	
Change in land use status	Increase the land area for potential future development such as mix development, light industry and town centre.
Increased transportation and rural accessibility	Higher number of population and attraction increase the transportation facility
Urbanisation	Higher density of population in Seberang Takir
Socio-Culture Process	
Culture Differences	Culture differences occur caused by migration of new community to Seberang Takir from higher income group and foreign worker
	Discrepancy of identity between existing and new township development.
	Traditional hawker convert to restaurant food

5.5.3.1 Aesthetic Value

Potential Negative Impact

After the construction of development is done, the landscape and scenic drive view from the Pantai Teluk Ketapang will totally change as the ocean view is replaced by the vista of new township. The area will also totally loss its beach and its attraction as tourist spot as well as recreational be shifted away. This is based on the nature of the development which not only compose of reclamation but also new township. The change is undeniable irreversible.

As new township starts commencing the design of the development could alienate the existing space due to different aesthetics settings particularly the existing villages near the development proposed

Mitigation Measure:

Layout Design- The layout placement could provide space to retain some of the beach area possibly as a common recreational area for both new and existing community. This in line with the request from YB Dato Dr. Mohd Khairuddin bin Aman Razali during the townhall meeting on 28th June 2019, in order to preserve community sense of belonging as well to avoid disappointment from community. The design of the layout should make use of the existing scenic view as its sell points thus improving the marketability of future topside development.

Township/ building design- Project Proponent must establish a mutual understanding with the locals to avoid any problem generated by a poor understanding of local culture and values. The architectural design must take into consideration the cultural identity, image and the social cohesion between the newly developed projects with the existing setting. The project proponent should ensure that the development plan adhere with the planning policies and urban design guidelines to avoid any unwanted events to arise.

5.5.3.2 Property Value and Existing Businesses

Potential Negative Impact

During the operational stage, the demand for housing are expected to increase accordingly due to the variety of economic activities offered inside future topside development that attract people to immigrate. This will lead to an increase in property and housing values.

However, the existing businesses would likely suffer as new topside development will shift the concentration of economic activities in new commercial area and town centre.

Mitigation Measure:

Provision of affordable housing -It is noted that housing development is also part of topside development. It is proposed that project proponent gives provision of affordable housing, which available for all, accommodating diverse social status. Project proponent should make sure the locals get access to the future housing development following the UPEN stated composition for the Bumiputera, Non-Bumiputera and Non-Malaysian. This helps the local residents to have their own properties, which can be one of added benefits of the project to the local residents.

Provision of new business area and training for local entrepreneurs- For hawkers and small traders, it is suggested that the proponent give access for these business operators to operate in the development area. With cooperation from Yayasan Pembangunan Usahawan Terengganu (YPU) and local authorities, a training platform could be established to equipped small traders with sufficient skills and knowledge to expand their business.

Revitalization of surrounding beaches- Even though the project development could cause the permanent loss of Pantai Teluk Ketapang, there are close by beaches along Seberang Takir which hotel and business owner can depend on as attraction to the area. Project proponent could initiate collaboration between local authorities, to conserve and liven up the beach area. This could be done as form of Corporate Social Responsibility (CSR) to give back to the community affected in the area as well as serving for the new population from the future development.

5.5.3.3 Social Differences and Social Network

Potential Negative Impact

The future proposed development (topside) would mostly attract higher income group to settle down in Seberang Takir. This would likely create gaps between two different socioeconomic status in Seberang Takir. This can cause social inequality for existing community towards the new topside community. Poor integration between the newcomers and the existing local communities also lead to possible social tensions for both parties.

Moreover, the loss of sandy beach of Pantai Teluk Ketapang also has lessen the opportunity of social engagement and recreational activities. Hence contributing towards social tension of the current community. The loss of Pantai Teluk Ketapang would be hard for the community as it is place that is dear to them that it creates sense of belonging to the area. The beach area is also deemed by the locals as part of what makes community identity. This could be a disadvantage to the Seberang Takir itself as it reduces the tourism attraction at the place, in which Pantai Teluk Ketapang considered as recreational tourism attraction (**Figure**

5.10). Based on the tourism profile 46% of the visitors of the beach is from locals. Moreover, the construction works of the reclamation and future construction work for mixed development will have a medium temporary visual impact towards visitors at Pantai Teluk Ketapang.



Figure 5.10: Proposed project may affect the scenic drive along Jalan Pantai Teluk Ketapang

Source: Drone Footage, 2019.

Mitigation Measure:

Community participation-Tensions can be resolved by conducting outreach programmes to allow better integration between the local communities and the newcomers. This is by means knowing what is the need and cause of the existing community to feel disadvantaged by the development, and to provide help and encourage in intend to reduce the social gaps between the two communities.

Outreach program could address different aspects ranging from health and facilities accessibility, education, economic activities, common spaces and others, in purpose of reducing social gaps. As such, different lifestyle and social disparities would be a common cause, hindering for a smooth integration. Thus, examples of an outreach program could be:

- **Host local events**- Events and festivals where community actively participate could further ease the integration of the two communities. Identify ways to assimilate different lifestyle without changing both through event and activities that celebrate both community differences.
- **Encourage Conversation**-Conducting appropriate community consultation and engagement dialogues in which will help to reduce tensions and conflict between the two communities. Through the conversation, both communities can voice out their

issues among each other, which may arise during the operational of the Project. Example of the issue that may rise is robbery issue.

- **Organize community seminars and trainings/ access to facilities-** invest in long term to reduce social disparities between two community through education and accessibilities towards of all infrastructures and facilities.
- **Create community support-** Project proponent could identify along the shoreline such Kg. Teluk Ketapang, Kg. Telaga Daing, Perumahan Telaga Daing, Kg. Seberang Takir and Kg. Tanjung Seberang Takir as “Kampung Angkat” to facilitate their social needs. These settlements are considered as “Kampung Angkat” as they are the closest kampungs to the Project Site. “Kampung Angkat” is one of the programs used to help empower the disadvantaged community.

The empowerment of community could not be achieved by extraterrestrial force, however it can help stir the community towards it. Thus, project proponent could act as the outside force that helps these community’s empowerment through improvements of social status. This program can offer the villagers several events such as training i.e. aquaculture business and professional skill so that income of these kampungs’ villagers can be increased.

Under this program, the several could be done in the course of 1 to 5 years of construction following the operational of the Project. The structure of socioeconomic status of the existing villages can be improve after this program is conducted.

Instil Heritage factors in development - Project proponent should consider to instil heritage area in the development to promote sense of belonging towards the area as well as adapting the vision of Ministry of Tourism, Arts and Culture, *One District One Heritage*. The new development must have a tourism attraction value added to replace the natural tourism attraction. The project proponent must establish a mutual understanding with the locals to avoid any problem generated by a poor understanding of local culture and values. The layout of the development needs to retain some of the beach features, to preserve the name Pantai Teluk Ketapang that is synonym with the local community.

5.5.3.4 Demographic Process

Potential Positive Impact

During the operational phase, job and business opportunities are expected but they will be of different types. There may be an influx of the skilled, managerial and technical foreign workers and migration of locals from other states, to take up the jobs created by the new develop development. This will bring a substantial shift in the size of the working population, and in tandem, the age composition of the population in Seberang Takir area may also change.

There will likely be an increase of the working age group which may have beneficial impact on the local economy.

Mitigation Measure:

Provision of Facilities and accommodation- The Project’s operational phase would initiate a new inflow of migrants, both local and foreign, into Seberang Takir to take advantage of the new employment and business opportunities provided by the Project. The jobs are likely to be managerial, technical and others such retail. This will eventually increase the productivity of the local communities. Thus, the population growth rates in Kuala Nerus will increase due to the in-migration. It is recommended that information related to population growth be shared between relevant parties (government agencies, service providers, etc.) In the future, so that measures could be taken to accommodate the demand for housing and public facilities to cater demand of future community.

5.5.3.5 Job Opportunities

Potential Positive Impact

As been mention in previous potential impact, this new development is definitely creating a lot of job opportunities through the light industries, transportation hub, hotels and resorts, mixed development, public facilities and town centre. **Table 5.12** shows that such impact is perceived by the respondents through the social survey that been done during the pre-construction stage. About 87.2% agree that this proposed project will increase the employment opportunities among local residents and others.

Table 5.12: Perceived Positive Impact

Benefits	Respondents (Number/Percentage)		
	Yes	No	Not Sure
Increase employment opportunities	348 (87.2)	34 (8.5)	17 (4.3)
Development and growth of the local economy	363 (87.1)	23 (5.8)	13 (3.3)
Improve the residents’ socio economy	377 (94.5)	10(3.0)	12 (3.0)
Increase the facilities and infrastructure	370 (92.7)	35(10.6)	163 (49.4)
Planned development and urbanization	366 (91.7)	17 (97.0)	12 (3.0)

Source: Social Survey, 2019.

The issues of job opportunities in operation phase is expected in continuity of construction phase. Thus, the mitigation in operation phase is carried forward from the previous stage.

Mitigation Measure:

Provision of training specifically for the project need- The creation of various employment may help in improving the household incomes and the livelihood of the local communities if they can position themselves through training and experienced to take up these job opportunities. The project proponent could provide trainings to the local community to equip them and make them more employable for the job opportunities required in the construction work of the proposed project.

Prioritize locals in employments- The increase in employment opportunity of the locals could increase community approval of the development. It is recommended that the employment opportunities be given consideration to the locals. By providing them with jobs and business, their standard of living will improve. The impact will be beneficial to the local economic growth and surrounding communities.

In addition, the hawkers and owner of restaurants along Pantai Teluk Ketapang and other can take this advantage to upgrade their business as the Project will be one of focused area in Seberang Takir in future.

5.5.3.6 Change in Land Use

Potential Positive Impact

Impacts on the land use during the operational phase of the proposed project is expected to be positive as the project is offering new residential, town centre, light industries and others. The onshore development is expected to bring job opportunities and enhance the quality of life of the local people.

Mitigation Measure:

Funding for skill development – The project proponent could provide funding to maximise employment of the local population through community outreach programme, training, education and human capital development.

5.5.3.7 Transportation and Rural Accessibility

Potential Positive Impact

The Project promotes growth and draws new workers, comers and their families into the areas, especially Seberang Takir. The incoming population affects the physical environment in various ways, including increased demand for housing, public amenities and services. With the Project development, it is expected that such public facility such as public transportation

will be enhanced in corresponding with the population growth. As shown in **Table 5.13**, the impact of increase facilities and infrastructures are perceived by the 92.7% respondents towards the Project.

Table 5.13: Perceived Positive Impact

Benefits	Respondents (Number/Percentage)		
	Yes	No	Not Sure
Increase employment opportunities	348 (87.2)	34 (8.5)	17 (4.3)
Development and growth of the local economy	363 (87.1)	23 (5.8)	13 (3.3)
Improve the residents' socio economy	377 (94.5)	10(3.0)	12 (3.0)
Increase the facilities and infrastructure	370 (92.7)	35(10.6)	163 (49.4)
Planned development and urbanization	366 (91.7)	17 (97.0)	12 (3.0)

Source: Social Survey, 2019

Mitigation Measure:

Accessible facilities for all- The operational phase of the Project will connect the public transportation in Kuala Terengganu City Centre to the Project area. New routes should be introduces covering more area connecting Kuala Terengganu and Seberang Takir as well as Kuala Nerus. This should be done through engagement with local authorities. Other than this Project proponent should make facilities and infrastructure inside the future development area accessible for all. This as to cater for the demand among the local and future communities.

5.5.3.8 Urbanisation

Potential Positive Impact

This Project may help the urbanisation of the Seberang Takir as this Project lead the in-migration into the Project area. This urbanisation help the small town such as Seberang Takir change to urban area with higher density of population. The urbanisation of Seberang Takir can upgrade the socio-economic of the local community and enhance the local economic activities.

Mitigation Measure:

Provision of facilities and infrastructure- The urbanisation bring positive impacts to the local communities, which any mitigation measures are not necessary. The process of urbanisation may cause the demand for facilities and amenities increase, therefore, the supply of these facilities and amenities need to be increase to meet the demand.

Potential Negative Impact

Culture difference occur when newcomers with different social background in-migrate to the Seberang Takir area such as higher income group from other states and foreign workers. The entrance of both social groups may affect the culture, tradition, dialect language and traditional expertise. Terengganu has its own deep dialect that it even can be recognize outside than its own state. As the origin population in Seberang Takir may mix with the other states newcomers and the tradition and culture will be affected as the Project is planned to be a modern township development.

This culture difference also can be seen through the urban design and identity of Seberang Takir. The new township with new and modern design while Seberang Takir is known as small fishermen village are example of differences in urban design and identity.

Mitigation Measure:

Engagement between two communities-The social differences can be resolved by conducting outreach programmes to allow better integration between the local communities and the others social groups. Conducting appropriate community consultation and engagement dialogues will also help to reduce tensions and conflict.

Building Design portraying original identity -In order to minimize the gap in urban design and identity of the new township and Seberang Takir, Project Proponent should design the façade of the buildings in the project area adapting the culture setting of the area, so that the urban design and identity of the new development of township can adapt the origin urban design and identity of Seberang Takir.

5.6 SOCIAL ENGAGEMENT

Three social engagements have been done during this social study, which are Focus Group Discussion (FGD) and public meeting that also been known as Town Hall. The details of the three social engagements can be referred in **Table 5.14** while photos during the social engagement can be referred in **Figure 5.11** and **Figure 5.12**.

Table 5.14: Details of the Social Engagement

Item	Time	Venue	Participants	Remarks
FGD with Majlis Pengurusan Komuniti Kampung (MPKK)	12 th June 2019 08:30 a.m. – 11:00 a.m.	Dewan Sivik Seberang Takir	38 MPPKs as community representatives including Penghulu Mukim Seberang Takir from Pejabat Tanah dan Daerah	<ul style="list-style-type: none"> Project briefed by consultant. Discussion from both communities

Item	Time	Venue	Participants	Remarks
FGD with Fishermen Communities	12 th June 2019 02:30 p.m. – 5:00 p.m.		8 representatives including Vice Director of Lembaga Kemajuan Ikan Malaysia (LKIM) Terengganu	and consultant.
Town Hall	28 th June 2019 08:30 a.m. – 12:00 p.m.	TH Hotel & Convention Centre Terengganu	<ul style="list-style-type: none"> • MB Kuala Nerus • Public agencies • PNK Kuala Terengganu Utara & Selatan • LKIM • UMT • PDT • MPKK; • others 	<ul style="list-style-type: none"> • Project briefed by architect. • Issues raise by participants. • Panel answered the raised issues.



Figure 5.11: FGD with MPKK and Fishermen Communities