

Faculty of Engineering

The Impact of Urbanization and Natural Calamity to the Demise of Malay Settlement Along the River Fringe: Case Study of Malay Settlement Near Budor River in Kelantan

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The Impact of Urbanization and Natural Calamity to the Demise of Malay Settlement Along the River Fringe:

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DECLARATION

I declare that the work in this thesis was carried out in accordance with the regulations of Universiti Malaysia Sarawak. Except where due acknowledgements have been made, the work is that of the author alone. The thesis has not been accepted for any degree and is not concurrently submitted in candidature of any other degree.



……

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ABSTRACT

Human settlement issues are among the never-ending topics being debated. The studies on human settlements include multidisciplinary scopes including geography, sociocultural, economy, politics, and technology, making this field even wider in its study scope. Although various studies have been conducted on the issues of human settlements, the studies on Malay settlements are quite neglected. Initially, the Malay settlements existed within the vicinity of rivers as these were the main sources of living among Malay communities, including their transportation system. When Malaya achieved its independence, the development processes took place even more rapidly. The development at that time was more emerging and focused more on the urban areas. Owing to the infrastructure and facilities left by the British colonials, the urban population started to increase and thus escalated the demand for more urban settlements. Consequently, there was urban sprawl that targeted the Malay settlements at the river fringe. The situation was a threat to the settlements and the Malay communities due to the urbanisation processes, physically and mentally. From another perspective, natural calamity such as floods frequently happened and threatened the Malay communities. Without proper infrastructure, they were continuously hit with challenges in their lives and at their place of living. This study focused on the Malay settlements in Kota Bharu, Kelantan. This study aimed (i) to explore the impacts of the Malay settlements along the river fringe, (ii) to examine the pressures of urbanization and natural calamity on Malay settlements destruction, and (iii) to analyse the impacts of settlement destruction on architectural values and the future Malay settlements in the area. Eight Malay settlements in Kelantan River and Budor River were specifically selected as the case studies using a mixed method. Besides, a modern anthropology approach such as participant observation technique was combined with the observation techniques, visual analyses,

mapping, photo tracking, land survey, journal and historical documents, and random interviews with 35 respondents who had been living for almost three generations at the study areas. Other than that, a total of 350 respondents who were also the locals were randomly selected to answer a questionnaire. All data were analysed using SPSS V21 software and cross-examnine with AutoCad 2020, Google Earth, Google Maps, Doxiadis' Theory of Five Principle in Human Settlements, and literature review. The study found that the Malay settlements that based their living on the river-based activities had totally been destructed. Rivers were not the pride of the Malay communities anymore in developing themselves and their family economy. Moreover, the factors including natural calamity and urbanisation, plus the absence of the efforts from the government to preserve the Malay communities and their settlements in Kota Bharu, contributed to the destruction of Malay settlements that at the same time retarded the culture and identity of the Malays from enjoying the urban experiences. As a consequence, they were continuously living in challenges and found it difficult to compete with other races especially in terms of urban economies. Finally, they had to choose to either adapt with the urban development or move to other places. Although the approach of preservation of Malay communities has never been considered in Malaysia, this method is seen as an approach that could preserve the Malay settlements and communities to improve their neighbourhood quality and modern living, especially those living in the urban areas located in a rapidly developing country like Malaysia.

Keywords: Architecture, Malay settlement, natural calamity, urbanization, Kota Bharu

Kesan Urbanisasi dan Bencana Alam Terhadap Kemusnahan Petempatan Melayu di Sepanjang Tebing Sungai: Kajian Kes di Petempatan Melayu Berdekatan Sungai Budor di Kelantan

ABSTRAK

Isu petempatan manusia merupakan satu topik yang tidak pernah selesai untuk diperdebatkan. Kajian petempatan manusia mempunyai skop yang merentasi pelbagai disiplin termasuk geografi, sosiobudaya, ekonomi, politik dan teknologi, lalu menjadikan bidang ini semakin luas untuk dikaji. Walaupun pelbagai kajian yang menyentuh isu petempatan manusia telah dijalankan, kajian mengenai petempatan orang Melayu agak terpinggir. Awalnya, petempatan orang Melayu wujud di sekitar sungai kerana ia merupakan sumber utama dalam kehidupan masyarakat Melayu termasuk dalam sistem pengangkutan. Setelah Tanah Melayu mencapai kemerdekaan, proses pembangunan semakin rancak dijalankan. Pembangunan pada ketika itu menjadi lebih pesat dan lebih tertumpu di kawasan bandar. Dengan adanya kemudahan infrastruktur yang ditinggalkan oleh penjajah British, populasi bandar mula meningkat dan menambahkan lagi permintaan petempatan di bandar. Akhirnya, rebakan bandar berlaku dan mengarah kepada kawasan petempatan orang Melayu yang terletak di tepi sungai. Situasi ini menjadikan petempatan dan masyarakat Melayu mula terancam dengan proses pembandaran, sama ada secara fizikal atau mental. Dari sudut lain pula, fenomena bencana alam seperti banjir kerap menjadi ancaman kepada masyarakat Melayu. Tanpa infrastruktur yang baik, mereka seolah-olah dihimpit oleh masalah yang terus membelenggu kehidupan dan tempat tinggal mereka. Kajian ini memberikan fokus kepada petempatan orang Melayu di Kota Bharu, Kelantan. Objektif kajian ini adalah (i) untuk menerokai kesan-kesan daripada petempatan orang Melayu di sepanjang pinggir sungai, (ii) untuk meneliti tekanan akibat pembandaran dan bencana alam terhadap petempatan orang Melayu, dan (iii) untuk menganalisis kesan

kehancuran petempatan terhadap nilai-nilai seni bina dan masa depan petempatan orang Melayu di kawasan berkenaan. Lapan buah petempatan orang Melayu yang terletak di tepi Sungai Kelantan dan Sungai Budor khasnya telah dipilih sebagai kajian kes dengan menggunakan kaedah campuran. Selain itu, pendekatan antropologi moden seperti tinjauan peserta telah dirangkum bersama teknik pemerhatian, analisis visual, pemetaan, jejakan foto, lukisan terukur, dokumen jurnal dan sejarah serta temubual secara rawak bersama 35 orang responden yang telah tinggal hampir tiga generasi di kawasan kajian. Selain itu, seramai 350 orang responden yang juga merupakan penduduk tempatan telah dipilih secara rawak untuk menjayakan kajian soal selidik. Kesemua data telah dianalisis dengan menggunakan perisian SPSS V21 dan disilangkan bersama perisian AutoCad 2020, Google Earth, Google Maps, Lima Prinsip Petempatan Manusia oleh Doxiadis dan tinjauan literatur. Hasil kajian mendapati petempatan orang Melayu dan kehidupan mereka yang berteraskan aktiviti sungai telah musnah sama sekali. Sungai tidak lagi menjadi sumber kebanggaan masyarakat Melayu untuk memajukan diri dan ekonomi keluarga. Tambahan pula, faktor bencana alam dan proses pembangunan serta tiadanya usaha pihak kerajaan untuk memulihara masyarakat dan petempatan orang Melayu di Kota Bharu menjadi penyumbang kepada kemusnahan petempatan orang Melayu sekali gus mematikan budaya dan jati diri Melayu untuk terus menikmati pengalaman bandar. Kesannya, mereka terus dihimpit dan sukar untuk bersaing dengan kaum lain terutamanya dari segi ekonomi bandar. Akhirnya, mereka perlu memilih sama ada untuk terus menyesuaikan diri dengan pembangunan bandar atau berhijrah ke tempat lain. Walaupun pendekatan pemuliharaan komuniti Melayu belum pernah dijalankan di Malaysia, kaedah ini dilihat merupakan satu pendekatan yang mampu memulihara petempatan dan masyarakat Melayu bagi

meningkatkan kualiti kejiranan dan kehidupan moden mereka, terutamanya bagi mereka yang tinggal di bandar di dalam sebuah negara yang rancak membangun seperti Malaysia.

Kata kunci: *Senibina, Petempatan Melayu, bencana alam, urbanisasi, Kota Bharu*

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LIST OF ABBREVIATIONS

ACP	Assistant Commissioner of Police
AKSB	Air Kelantan Sendirian Berhad
ANN	Artificial Neutral Networks
B40	Bottom 40%
CCC	Certificate of Completion Compliance
DAP	Democratic Action Party
DPN	National Development Policy
IR 4.0	Industrial Revolution 4.0
IPCC	Intergovernmental Panel on Climate Change
JPS	Jabatan Pengairan dan Saliran
KIP	Kampung Improvement Plan
M40	Middle 40%
MAIK	Majlis Agama Islam Kelantan
MCO	Movement Control Order
MCA	Malaysian Chinese Association
MIC	Malaysian Indian Congress
MPKB	Majlis Perbandaran Kota Bharu/ Kota Bahru Municipal Council
NEP	New Economic Policy
NEP	National Economic Plan
ORS	Open Registration System
OSC 3.0	One Stop Centre 3.0
PPR	Projek Perumahan Rakyat
PPRT	Projek Perumahan Rakyat Termiskin

PKINK	Perbandanan Kemajuan Iktisad Negeri Kelantan
PMBK	Perbadanan Menteri Besar Kelantan
RPS	Rancangan Penempatan Semula
RTA	Ready-To-Assemble
SUDS	Sustainable Urban Drainage System
SPSS	Statistical Package for Social Sciene
TOL	Temporary Occupational Licence
TNB	Tenaga Nasional Berhad
TOD	Transit Oriented Development
T20	Top 20%
UN	United Nation
UNESCO	United Nations Educational, Scientific and Cultural Organization
UMNO	United Malays National Organisation
3D	Three Dimensional
4G	Fourth Generation (cellular network technology)
5G	Fifth Generation (cellular network technology)

CHAPTER 1

INTRODUCTION

1.1 Introduction

Usually, people will become more creative and think outside the box after the occurrence of challenges in life. After a natural disaster, people take action and change their lifestyles or residence to face the catastrophe (Wahid, 2020). Likewise, in Malay community life, most houses are built by raising the floor level to protect the home from natural disasters. This study does not examine the conservation of buildings. This study examines the threat of Malay settlements on the river fringe area. Previous studies on Malay settlements (refer to Table 2.1) and studies on the destruction of Malay settlements on the banks of the Kota Bharu River have yet to be carried out. This chapter will explain conservation issues in Malaysia that touch a lot on the physical aspect without considering the neighbourhood context. Most colonial buildings are given attention to building conservation. This situation does not benefit the Malay community, who struggle to adapt to life in the city, especially the Malay population living in the riverside area. As a result of urban sprawl caused by the problem of increasing population and the process of urbanization, Malay settlement areas have become a threat to the process of Malay destruction. Therefore, the idea of conservation of the Malay community needs to be applied to guarantee the future and survival of the Malay community living by the river. Most studies of Malay architecture in Malaysia study a lot about the physical characteristics of architecture. This study is seen as overly defending the 'sentimental value of a home' over the surrounding neighbourhood. Few studies touch on the issue of Malay settlement in terms of empowering the Malay community and settlement. This study reviews the impetus and direction of future Malay settlement, mainly on its

destruction along the river fringe. This study will contribute to the Malay community conservation approach. Nowadays, Malay neighbourhood issues in urban areas are considered critically endangered.

The term Malay settlement itself is a broad topic. Too many Research by previous scholars on Malay architecture in Malaysia to the point that it is considered an 'icon topic' in the context of the study of architecture in Malaysia. On the other hand, most of the studies conducted discussed the physical condition of the building and building conservation (Hanafi, 1986, 2007), aesthetic value (Ariffin, 2001, 2013; Raja Shahminan, 1999), construction techniques (Ahmad, 1999; Haron, 2011), and carving motifs (Said, 2005). In other words, most studies covered the inventory research that revolves around the architectural scope (Wahid, 2020). The question here is, what is the purpose of building conservation? Most building conservation projects in Malaysia only preserve heritage buildings abandoned by colonials who have exploited Malaya's wealth (McGee, 1975; Shari, 1993; Wahid, 2020). Numerous colonial architecture such as ports, warehouses and godowns, mansions, and administration offices found in Kota Bharu, Kuala Lumpur, Kuala Kangsar, Ipoh, Penang, Malacca, and other regions. These physical artefacts affect ideology and society (Wahid, 2020). The current trend is that the field of conservation is more focused on buildings only, without thinking of methods to conserve the community, especially in urban areas. What are the input benefits to the community from the conservation project? Will the project reduce rural-urban migration and benefit the Malay community? All these questions motivate this investigation.

The colonial influence can not only be in terms of architecture. Even the colonialists have influenced development in Malaysia through construction laws such as Uniform Building by Law 1984, National Land Code 1965, Street, Drainage Building Act 1974, Town

and Country Planning Act 197, and various other acts to control construction methods in Malaysia. This situation makes Architects, Town Planners, and Urban Designers bound by the laws and regulations left by the colonials (Evers, 1975; Dahlan, 1997), which introduced various acts to develop new buildings and maintain old buildings. Over time, these acts will eliminate the morphology of Malay settlement through various guidelines, thus eliminating the authenticity of the Malay settlement pattern.

These laws and regulations brought significant changes to the Malay community. Through regulations and acts that were introduced, the relationship between communities is increasingly separated because the settlement pattern will change, and it is necessary to follow the guidelines given. In the past, Malay settlements were built according to the organic structure and had a hierarchy according to the customs of the Malays. For them, that is the urban layout pattern considered a Malay city (Hassan, 2020). However, the colonialists introduced a planning and housing act that, over time, changed the layout of Malay settlements because, at that time, they introduced a 'divide and rule policy to speed up urban development (Hassan, 2020; Dahlan, 1997; McGee, 1975). An act should focus on the settlement and the Malay community so that it is conserved in the same way that building conservation is carried out.

The majority of Malays remain in rural areas and estates. After the colonists developed the city, Chinese immigrants were brought into Malaya and settled in urban areas. They are allowed to advance the economic sector. While at that time, the Malays still lived in the rural and riverside areas without good basic infrastructure. The acts introduced by the colonialists did not allow the Malays to experience a complete infrastructure like in the city. They are also far behind economically due to being separated from development in the city (Sendut, 1966; Shari, 1993; McGee, 1975; Evers, 1975; Samat, 2023). The community

conservation approach should have taken place to protect the Malay settlement and community during that time. Over time, urban sprawl threatened the Malay settlements on the banks of the river. Simultaneously, early settlements along the river fringe are increasingly disappearing due to the several factor. One of them is, transportation change and regulations introduced by the British.

Significantly, due to the urbanization pace forcing Malays migration to urban, their settlements recede identity and meaning. After a long process, 'meaning' and community spirit in the Malay settlement gradually vanished. Most current research do not cover future heritage, especially Malay community conservation in Malaysia (Wahid, 2020). The question of how to sustain the settlements and Malay community in the city in the Industrial Revolution 4.0 is out of sight. The research on delving into the investigation of Malay settlement issues is almost forgotten after a number of decades. Thus study attempts to observe the destruction of Malay settlements phenomena in facing the urbanization challenges in Malaysia.

Nowadays, the Malay community faces challenges in the pace of urbanization (Abdullah et al., 2020). When a community migrates, the area loses its meaning in terms of function and use (Wahid, 2014; Seamon, 2012). For example, the migration of rural communities to the city erodes the identity value in their original place. Over time, a village that used to sustain with various activities is losing its activities and moved elsewhere. Previous studies have established that opportunities in urban areas motivate them to migrate for a more comfortable life (Wahid, 2020, 1996; McGee, 1975; Sendut, 1966; Hadi, 1996, 2003; Shari, 1993).

Urbanization can happen in various ways, either tangible or intangible. For example, urbanization has changed the environment and the lives of the Malays without them realizing

it (Abu Kaslan & Jusoh, 2020). This situation occurs when the Malay community has a 'take for granted' attitude regarding the phenomenology of the environment and daily life. Therefore, it is not surprising that we see many Malays living in the city still practising the *'kampung'* way of life, as explained by Wahid (2014). This phenomenon is evidently shown by the Malay community by the river fringe. The approach to conservation has also undergone many changes. It is more than just maintaining the building structure (Wahid, 2020). Preservation of the environment and culture is an essential aspect the mainstay of cultural sustainability and resilience. Malay communities do not have to migrate to find jobs. Reviewing the planning approach is compulsory to ensure their continued relevance in cities. It is necessary to maintain Malay communities without shifting the existing activity. For example, the destruction of the current cultural market area altered their original activities, thus harming the conservation community approach. Malay communities can generate income and have employment opportunities in the cultural market, and it creates a 'place ballet' without migrating to cities (Seamon, 2014). The study carried out by Sitohang et al. (2020), showed that the traditional village is a living museum of how the people live and carry out their daily living according to the tenets at their culture and activities.

The task of Architects and Urban designers in the future will be more complicated, facing various career-changing global issues (Wahid, 2020). Besides, the circumstance of the human settlement involved is also due to natural calamities factors impacting the global phenomenon. For example, Indonesia will relocate its capital from Jakarta to Kalimantan due to the higher sea level in the present location (Simarmata & Surtiari, 2020; Azhar et al., 2020).

This situation will significantly affect both architects' and scholar's' careers in facing global problems and issues in the future (Wahid, 2020). Although the discussion on a

sustainable and green architectural approach is ongoing, never forget the fate of the city-living of the Malay communities.

To elaborate further on the study, this chapter is the opening of the thesis. It starts with the Introduction, Research Perspective, Research Issues and Problems, the Human Settlements Issues, the Objective of the Study, Scope of the Study, Research Method, Thesis Structure and Research Framework. The comprehensive alignment of the thesis attempts to connect the storyline more meaningful. To elaborate further on the study, the next subtopic will elaborate on Research Issues and Problems, The Objective of the Study, Scope of the Research, Research Methodology, Significance of the Study, Organization of the Research, Research Framework and Conclusion. The comprehensive alignment of the thesis attempts to connect the storyline more meaningful.

1.2 Research Issues and Problems

This topic on human settlement explains the issues and problems involved in the process of how humans dwell in search for comfort and security according to the global and local context, providing continuity to the study.

1.3 The Objective of the Study

The population growth rate in Malaysia is 2.4%, and the existing settlement cannot sustain the next generation if there is no new opening of lands nearby the city centre. Finally, due to urbanization, the Malay settlements had to be demolished to develop the area to accommodate the demand for settlements in the city (Tobi et al., 2020).

This pressure due to ever-increasing urbanization led the Malay settlements located along the river fringe face the demand of housing (Najmuddin et al, 2019). The Malay has to adapt to such changes, along with natural disaster and urban challenge. Adherent to this,

they will continue to practice the 'kampung' lifestyle and create problems in the urban area and environment. In general, these settlement areas, mostly non-structured squatter areas, impact the residents' health. Most of the service and drainage systems are also in impractical condition (Hisham, 2019). These conditions also raise issues when natural disasters such as floods occur. Most of the riverside settlements encounter drainage problems during the monsoon season (Hanafi, 2023). In addition, global phenomenon such as rising water levels exacerbates the situation. The impact of natural disasters and floods gradually destroys traditional settlements. However, the government also helped considerably to sustain the Malay settlements. For instance, the construction of floodwalls by the riverbank facilitates the residents to survive during floods (Shahrulnizam, 2020). However, it raises other issues. How long can these settlements last? Can the construction of floodwalls help the Malay settlements? Or does it have hidden agendas to help other ethnicities, such as the Chinese expanding their populations in strategic locations in cities?

Settlement's destruction indirectly affects the Malay culture on the river fringe. Carpenters and craftsmen that traditionally produced by the settlements will eventually disappear (Tokiran et al, 2022). The skills loss also erodes the identity of Malay communities living near the river fringe. Nowadays, they can no longer afford to build boats and settlements. Eventually, this expertise is acquired by foreign workers and causes difficulty for Malays to sustain their economy (Indrahti, 2022). All of these impacts are interrelated to each other. Settlement destruction on the river fringe becomes an increasingly fragile identity of the Malays (Jaffar & Harun, 2019). Regardless, their fate within that area requires more attention. A revolutionary settlement planning should be the main agenda to empower the Malay communities in the urban area. Malays should no longer be a tool of museumification. They must be allowed to compete equally in socio-economic areas. Therefore, proposing a

design guideline created according to the community is compulsory to prevent the Malays from missing all aspects of the city.

The main objective is to examine the demise of the Malay settlements along the river fringe in Kelantan regarding the natural calamity and urbanization pace in the Malay neighbourhood. Therefore, the study proposes (Table 1.1):

1. To explore the consequences of urbanization and natural calamity on the Malay settlements along the river fringe.
2. To examine the pressures of urbanization and natural calamity on Malay settlements destruction.
3. To analyze the impact of urbanization and natural calamity on the settlements destruction on architectural values in the area.

Table 1.1: The relationship between Research Question and Research Objective

No	Research Question	Research Objective
1	What are the consequences of the existence of Malay settlements?	To explore the consequences of urbanization and natural calamity on the Malay settlements along the river fringe.
2	How do urbanization and natural calamity pose a threat to Malay settlements?	To examine the pressures of urbanization and natural calamity on Malay settlements destruction.
3	How did the destruction of Malay settlements and architectural values affect cultural resilience?	To analyze the impact of urbanization and natural calamity on the settlements destruction on architectural values in the area.

1.4 Scope of the Research

The scope of the study focuses on human settlement in the Malay community area along the Kelantan River fringe (Figure 1.1). The Malays were the original settlers in the area, arriving in the early century before the Chinese traders arrived. Although there are several Chinese shops and houses in the area, this study only examines the Malay settlement and their neighbourhood. Chinese shophouses and settlements are not included in the scope of the study. This study aims to identify the destruction of Malay settlements along the river fringe and make recommendations on the situation. The research is based by the five principles in the formation of human settlement, namely (i) Contextual Potential, (ii) Minimize Energy, (iii) Privacy, (iv) Optimize the Relationship Between Human and Nature, and (v) Successful of Human Settlement which were introduced by Doxiadis in 1968 with the term of ekistics. Researchers believe there are several causes for Malay settlements destruction. Concomitantly, two reasons need special attention since they are the actual causes of the current destruction. Urbanization is one of the factors that contributed to that phenomenon. Wahid (1996) clearly showed that the relationship between urbanization and human settlement significantly impacts the built environment. At the same time, studies conducted by Dahlan (1981), Hadi (1993), McGee (1975), and Shari (1993) showed urbanization trends had changed various human aspects, motivations, urban image, and culture. Again, Wahid (1996) compounded that all of these associations are interconnected and change the physical of Malay settlements.

The second factor is the impact of natural disasters such as floods and contributing factors that destroy Malay settlements (Abdul Rahim, 2021; Azhar, 2014). As such, the influence of urbanization and disaster as the scope of the study will be assessed with regards to the destruction of Malay settlements. According to Wahid (1996), urbanization is not only

having a physical impact on Malay settlements. It also affected their culture, thought, place, identity changes, and human acceptance of urbanization pressures (Wahid, 2014; Wahid & Hadi, 2012). Doxiadis (1975, 1968, 1977) supported this by claiming that urbanization changes and influences human settlement patterns in the future. Thus, closer to the study area urbanization conquers the Malay traditional settlements in Kelantan River, forcing them to either reject and leave their home or accept and adapt to it and change their way of life.

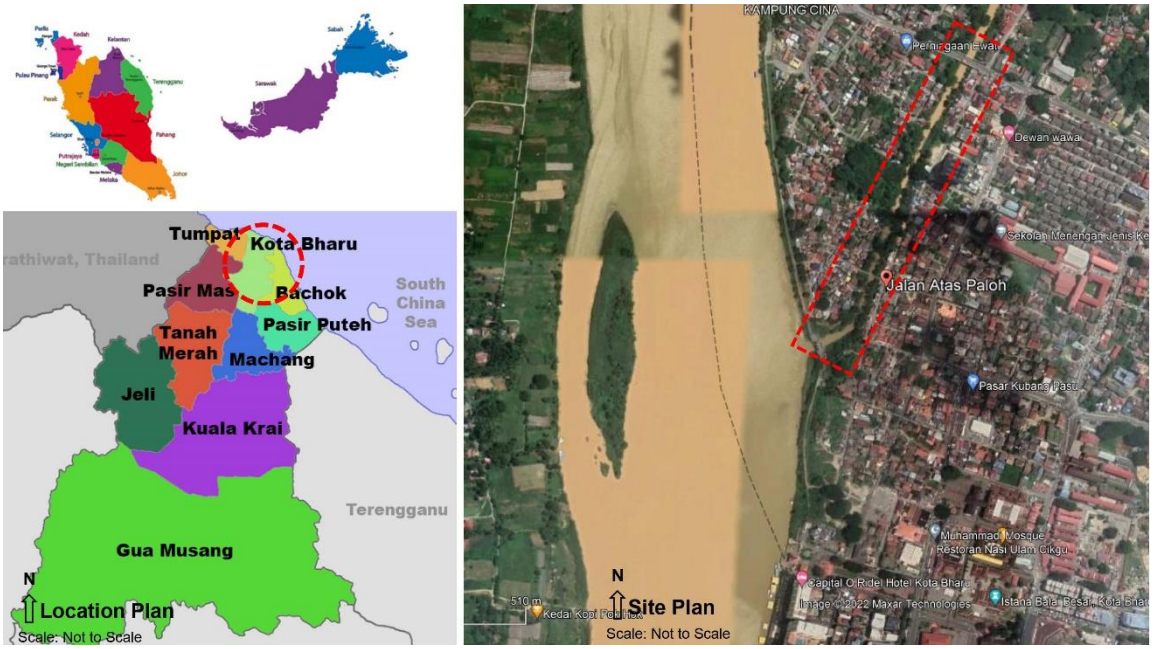


Figure 1.1: Map of Budor River in Kelantan indicated on the red area

1.4 Research Methodology

The techniques for extracting primary and secondary data cannot be obtained from a single source. Thus, this study employs mixed methods of qualitative and quantitative, believing it could provide a spectrum of information related to the study. Both theories from architecture and urban design disciplines were combined, similar to a previous study conducted by Wahid (1996), Loebis (2019), Malik (2014) and to name a few. To support the scenario in the study area, the researcher applies a case study. Yin (2018) compounded that

a case study helps to view the research in depth especially with the help of other techniques. It will enrich the analysis and discover the investigation.

A case study is engaged to extract the actual settlement situation and ensure the information and data obtained from the site can enhance the research process exclusively. Therefore, the fieldwork utilized various techniques and methods to extract information and fulfil the study objectives. This study traces the phenomenon of human settlement that existed since the early 19th century and has gone through several adaptation processes. This approach is applied to delineate the phenomenon and changes.

The qualitative method incorporates questionnaire techniques. Conversely, the primary data was gathered by using the land survey drawing, mapping, observation technique, visual analysis, interviews, repertory grid, and photo-tracking. To complement the data, IBM SPSS V26 software gathers was used to produce a technical analysis of the questionnaire (Figure 1.2). A detailed description of the research methodology and approach will appear in Chapter 3.

1.5 Significance of the Study

Various importance of rivers for life considerably encourages the existence of human settlements. Rivers are considered a transportation and economic centre while also creating a settlement culture. Most of the early settlements existing along the river in Malaysia outreached to Malays. However, the high urbanization rate eliminates the glory of Malay settlements. Challenging natural calamities such as floods further affected the Malay settlements. Eventually, the destruction of these settlements caused various impacts on the resilience of the culture, identity, and Malay neighbourhood (Wahid et al., 2021). This study contributes to the theory of Malay settlements along the river fringe. It combines previous knowledge of Malay settlements and the fast pace of urbanization in developing countries.

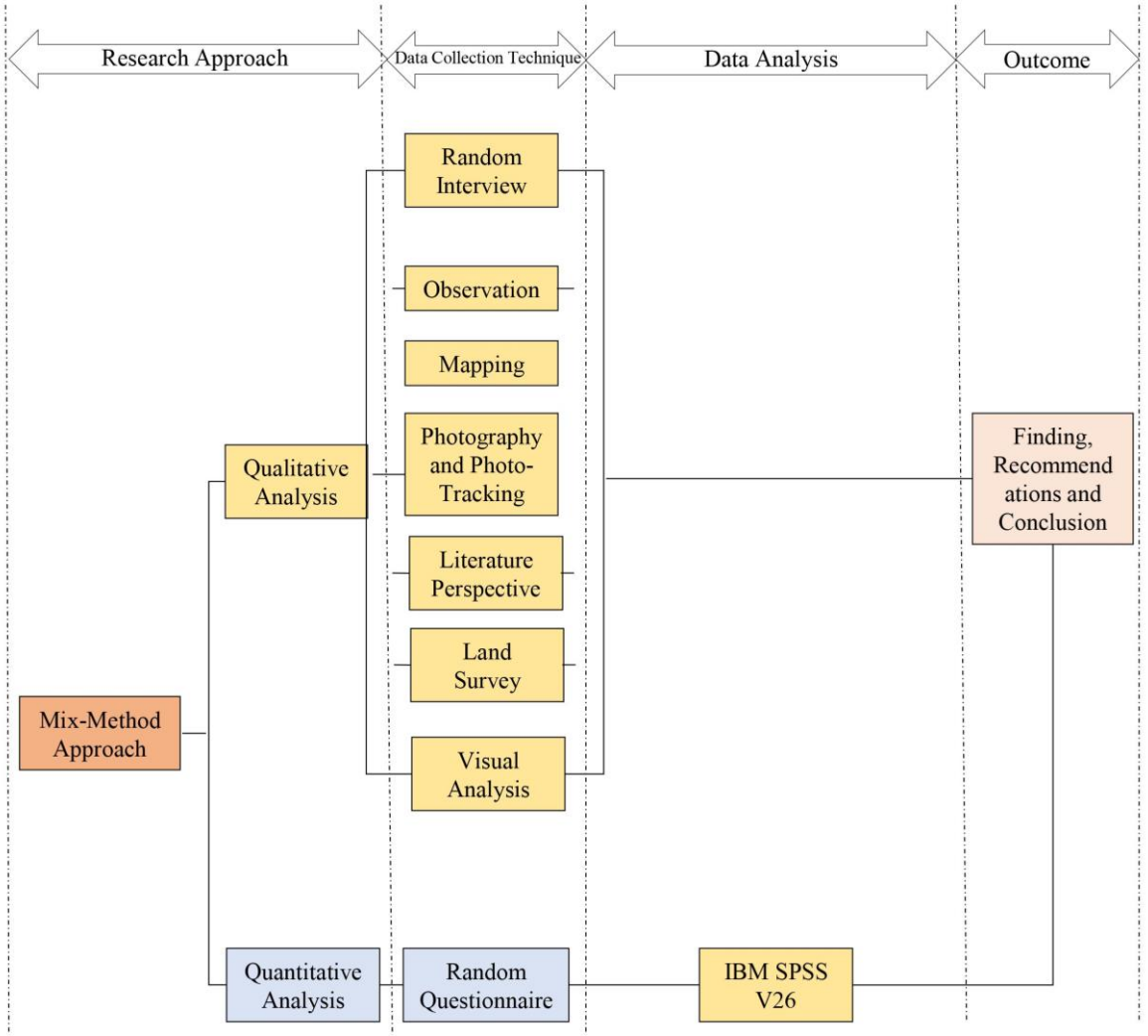


Figure 1.2: The summary of research methodology (Source: Abdullah, 2021)

So far there is insufficient literature on Malay settlements and urbanization in Malaysia. Most of the previous studies that touch on Malay settlements, particularly on architecture showed the traditional architecture of the Malay house, the conservation of mosques, or the inventories of Malay relics. However, the writings on the Malay settlement are missing in academia. Therefore, this study attempts to contribute to the Malay settlement that exposes to the physical part of architecture and urban design. Urbanization started to hit all new development in Malaysia.

Even though urbanization cannot be described in a single word, the researcher believed that the factors derived from the five principles of human settlement from Doxiadis (1974) and the evidence of architecture and urban design in the study area, enrich in the development of human settlement. The application of social and anthropological technique in studying architecture and its context in the human settlement in Kelantan in the case study also explains the current issues at the area that may be of the same story shared by other states in Malaysia. Contributions of studies in architecture are significant since various disasters and destruction constantly threaten the Malay settlements in Malaysia. The research approach used will be referred to other Malay settlements in Malaysia has a significant impact on the Malay community. The study also benefits several agencies to propose future planning for the Malay settlement. The concept of Malay community conservation should be planned correctly to conserve the community and their activities.

1.6 Organisation of the Research

The proposal of this study contains six chapters. A summary of the proposed structure is as follows:

i. Chapter 1

This chapter outlines the background of the study, research problems, issues, objectives of the study, case study, summary of the study methodology, and importance of the study. It also discusses the research motivation to propose Malay Community Conservation Neighbourhood in the Malay settlement. The structure of the thesis is also described in this chapter.

ii. Chapter 2

This chapter explores the theory of human settlement, urbanization, and natural calamity by reviewing previous literature dialectically. The discussion also includes the

research gap found in the literature on human settlements. The primary focus of this chapter is to delve into the existence of human settlements, phenomenology theory, the urbanization process, and subjects leading to the demise of Malay settlements. This chapter also develops a theoretical perspective to deepen the understanding and build a theoretical framework for further explanation of various concepts related to the study.

iii. Chapter 3

This chapter comprehensively describes the research approach and methodology, including those has been applied by the previous scholars on human settlement study. Most of the discussion delves into research preparation, approaches, strategies, and implementing qualitative and quantitative techniques. The analysis techniques utilize IBM SPSS V26 software to ensure the selected study approach is appropriate. The respondents' frequency and validity are also discussed to comprehend research questions and objectives.

iv. Chapter 4

This chapter elaborates on the background of the case study. The case study selected was Malay settlements along Budor River, Kota Bharu. This chapter touches on the history, economy and society, and the arrival of the Chinese to Kota Bharu. This chapter also discusses the pace of urbanization in Kota Bharu, the relationship between the Malay community and the pattern of Malay settlement, the activities of the people, the identity of early settlement, the development of villages that developed the typology in the case study area. It also discusses the catastrophic events that occurred in the study area and the efforts carried out by the government to the annual incident.

v. Chapter 5

This chapter provides the analysis of the study based on research objectives consisting of several sub-topics discussing the Five Principles of Human Settlement by

Doxiadis. It is developed comprehensively based on the research approach established in the research framework. The discussion includes the impact of urbanization and natural calamity, that destroy the Malay settlement.

vi. Chapter 6

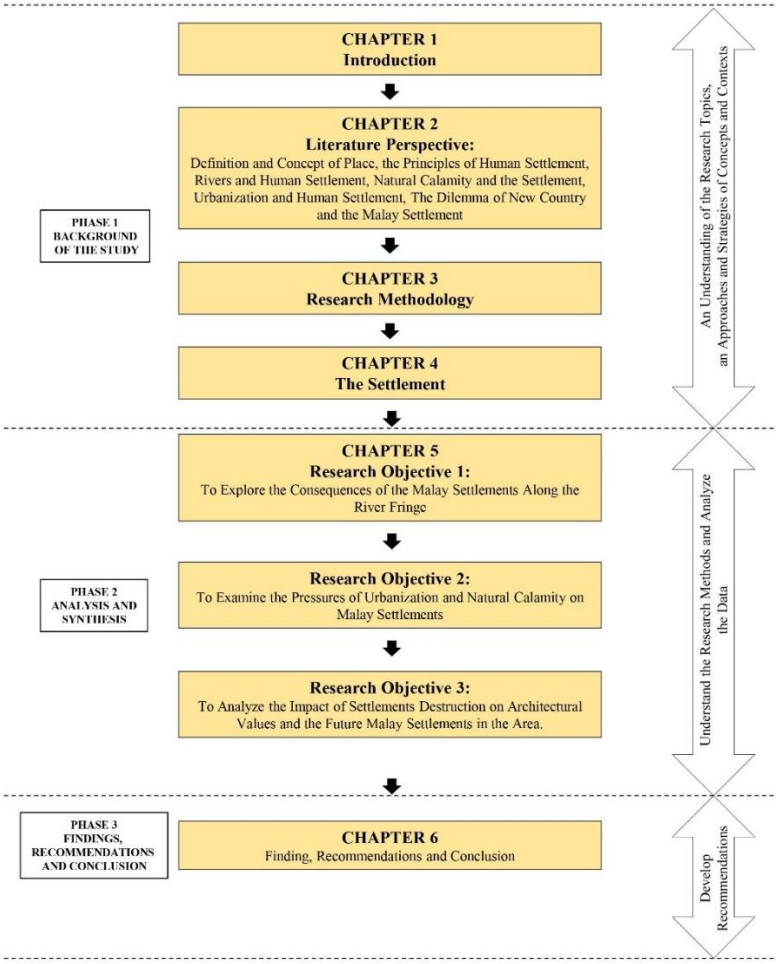


Figure 1.3: The thesis structure

This chapter concludes the study and allows the contemplation of the overall coverage of the research. The research agenda posed in the research questions and main findings based on research objectives were discussed. Then, the third part gives recommendations on the Malay settlement issues along the river fringe. Later, it discusses

the contribution of the theoretical, community, and policy aspects. The final part recapitulates on the Malay settlements. Figure 1.3 shows an overview of the thesis structure.

1.7 Research Framework

A research framework for this study has been developed to obtain an overview of the study (Figure 1.4). It explains the objective of the study and how the research is conducted. More explanation narratively will appear in Chapter 3- Research Methodology.

1.8 Conclusion

This section summarizes the introduction of the study in Malay settlements along the river fringe in Kota Bharu. It gives an overview of the statement of the intent and main objective of the study. This chapter also introduce the research methodology briefly. The research methodology will be compounded in detail in Chapter 3. The significance of the study is elaborated to give an idea of the importance of the study of Malay settlement in Kota Bharu, and finally, the chapter on the organization of the research is elaborated to give an overview of the structure of the thesis.

The next chapter will be elaborated on the Literature Perspective, which postulates the theory of human settlement to support the study.

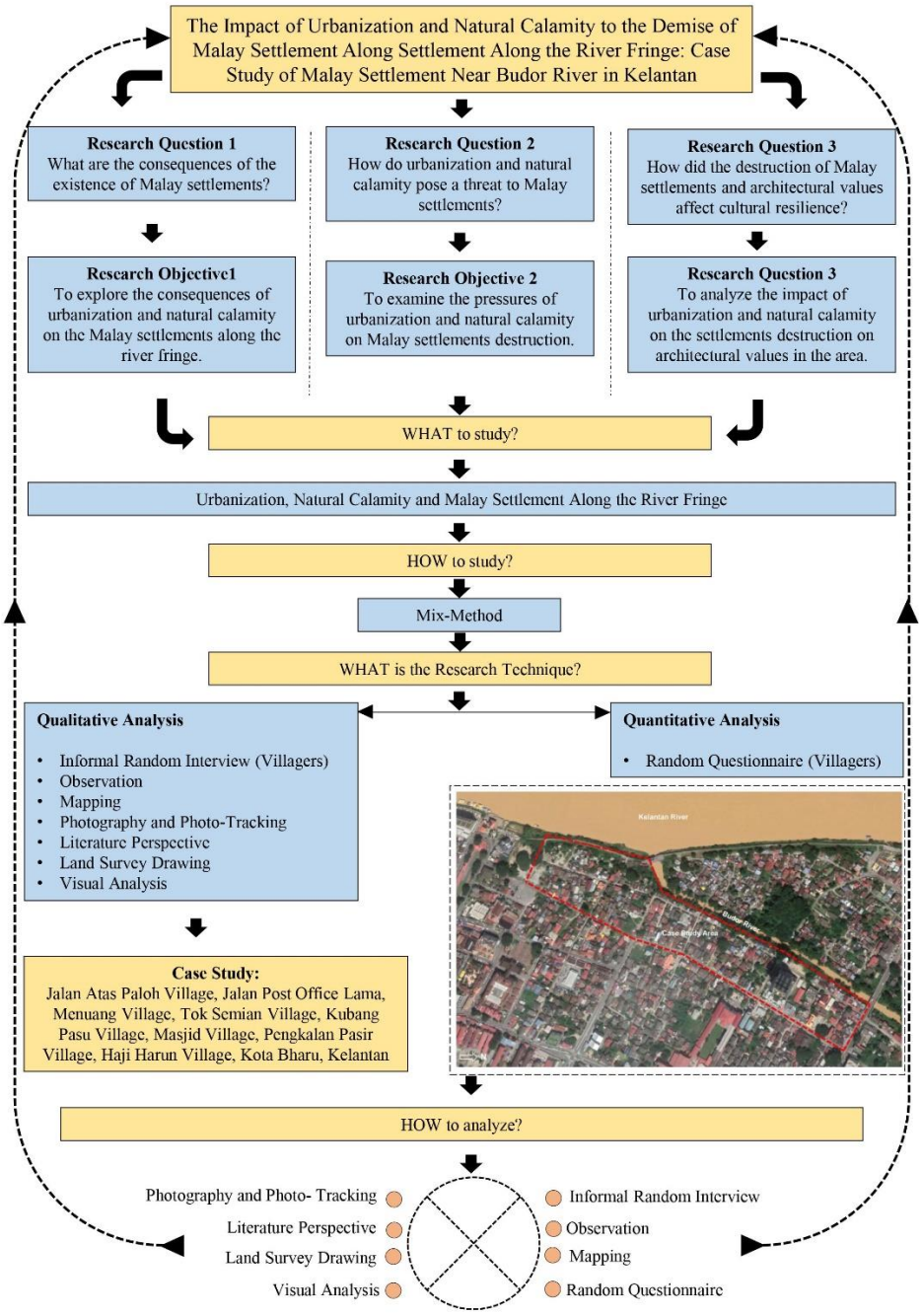


Figure 1.4: The research framework

CHAPTER 2

LITERATURE PERSPECTIVE

2.1 Background of Literature Perspective

The previous chapter illustrates the intentions of the research. This chapter will elaborate on the literature to extract the perspective on the theory related to human settlement. Malay settlement is an extrusive process developed by the origin of culture and human**s**. It is difficult to identify the item found in human settlement**s** one by one. People did not just build structures in empty spaces, it emerged from human aspirations. Humans began to struggle in life from individual, nomadic, and group, they started to think about the future (Bronowski, 2002). The subject of the study derived from the available western and eastern theories of physical development influenced by the site, culture and available resources. The human settlement covers a broad attribute, both tangible and intangible. The theories are then related to the case study in Kota Bharu, Kelantan, and illustrate the story of the Malay settlement along the river fringe. Since the dawn of the century, the river is the nerve of the settlement, providing water, transportation, and livelihood to the settlers. Many important cities also developed along or near the main river for example Tokyo, London, and Paris to name a few.

This chapter discusses the prevailing theory of human settlement. It provides a comprehensive understanding of the human settlement perspective through the Malay community civilization. The study of Malay settlements is believed to encompass stories and the history of Malays. Therefore, the current investigation traces the Malay settlement, supported by various theories. As supported by Wahid (2014) quote by Confucius, if a man wants to move a mountain, he starts by picking a stone. Is the identity fragility of the Malay

community related to their settlement? This chapter also describes the Malay community's fate in the pace rapid of urbanization in Malaysia. Realistically, the spirit, hopes, and aspirations of the Malays have to compete in the urbanization process as that of the contemporary situation. Although it is challenging for the Malays, the truth has to be revealed. Either the Malay settlement can survive, or will it be the object of museumification in the future? This crucial question led to the investigation of the significance of the settlements.

2.2 The Beginning of the Human Settlement

Human life is inevitable, independent in a broader sense to settle in a settlement. As long as humans exist, the settlement also needs to exist in line with the advancement of social progression. It is a common perception that human settlements involve solely physical conditions. Generally, human settlement is a science of inhabiting the earth. Doxiadis (1974) and Wu (2001) claimed it did not involve static objects and physically built-up areas only. It covers a process and system that evolved from various perspectives such as geography, topography, growing populations, changing technologies, changing conditions of the natural environment, and successive social, political, and cultural attributes. It encompasses all aspects of human beings on earth. What, how, and why they exist is moulded by the natural environment, social, political, and cultural phenomena.

The human settlement subject is a dynamic, metamorphic entity and hard to understand in different fractions. Human beings are not capable of living alone but rather related to living things inspired by ideas, feelings, or environmental elements (Seamon, 2018). They need to review its wholesome formation as it involves the related aspects discussed earlier. Thus, the research on human settlement should include human relations and its environment. Doxiadis (1974) established three-dimensional (3D) observing the

human social systems such as sleeping, interacting, producing, loving, and growing need to be explored in depth. The researcher also refers to the Ekistics theory introduced by Doxiadis, which comprehensively explains the issue of human settlement. According to Fookes (1987), Doxiadis (1962, 1972), Mitarachi (1973), Gottman (1976), and Farizkha et al. (2019), ekistics gathers multidisciplinary knowledge obtained from other disciplines such as science, methodology or philosophy as a science to understand the existence of human settlements. Humans need to deal with the crisis experienced by modern civilization in the future. Heywood (1969), Middleton (2009), and Silva (2019) compounded those ekistics is also a discipline that focuses on metamorphic processes and requires an analytical scale set based on dynamic morphology. It also requires a study that responds to the evolutionary nature of settlements and the natural stages of their growth.

2.3 The Human Settlement Issues in a Global Context

The experience of surveying human settlements provides various perspectives on the community. Previously, settlements located on a hilltop symbolized a symbol of wealth. Nevertheless, human settlements do not represent by walls and foundations. Their location in rural areas provides a different point of view. Human settlements are often associated with rivers, carrying out various activities such as farming and trading. In other words, rivers have become a life-sustaining area (Leakey & Lewin, 1979; Karsono, 2013). Most of the early human settlements started from the river fringe, which was also a medium for water transportation (Doxiadis, 1968, 1975, 1978). Humans ultimately chose river fringes to either live nomadically or permanently (Mumford, 1961). More importantly, rivers are a medium for survival. Previous scholars had claimed that settlements on river fringes provided a chance for a better life and also the site of early human settlements (Doxiadis, 1968, 1975, 1977; Kostof, 1992; Mumford, 1961; Tyrwhitt, 1975: Moughtin, 2003). It is recorded that

the ancient settlements such as Euphrates River, Nile River, Hwang Ho River, Tigris River, and Indus River were the beginning of the early cities.

After the Industrial Revolution, rivers were no longer utilized as water transportation system (Doxiadis, 1975; Mumford, 1961). Most settlement areas along the river were transformed into 'commercial cities' or port cities (Mumford, 1961; Konvitz, 2020). These ports link other industrial centres carrying various essential goods and provide employment opportunities. The migration between rural areas increased the population rapidly (Wahid, 2020; Doxiadis, 1968, 1972, 1975). Eventually, this phenomenon changed the global human pattern of settlement (Doxiadis, 1975; Wahid, 2014). As the process of global urbanization is increasing due to migration from rural areas, it greatly impacts developing countries (McGee, 1974, 1975; Wahid, 2012, 2014, 2020).

The growth in towards the urban sprawl resulted in the planning of new settlement at the periphery of urban areas, however the infrastructure remains as it is (Hadi, 1993). The mass migrations led to high urban housing (UN-Habitat, 2010). The new settlement encroaches into the farmland, as a result the farmers who are also stressed by the living cost have to give in when they receive an offer to buy their land at the city's market price (McGee, 1975; Wahid, 2014). The money obtained was used to start a new life in the city. However, they still could not afford the high living cost in the city. Eventually, migrants to the city met with failure (Wahid, 2014).

In addition, global issues such as rising water levels threaten settlements along the river. Water levels worldwide are rising and affecting human settlements along rivers and coastal area. Some countries have taken drastic actions to move their capitals to safer places. For example, the relocation of Jakarta City to Kalimantan is due to the rising water level (Simarmata & Surtiari, 2020; Azhar et al., 2020). It is also concerned that it will happen in

other locations such as Kuala Lumpur, Bangkok, and Vietnam. Ultimately, this impact will affect human settlements exposed to river and coastal areas. Suddenly, this issue is becoming a continuous concerned and discussed in several forums in many countries. The government is trying to ensure the safety of the communities in those areas with respect to their livelihood. In Indonesia, the government has run a program known as the Kampung Improvement Plan (KIP) in Yogjakarta (Damanik, 2020; Maharika, 2021). It is one step leading to a conservation of community approach to ensure the preservation of social culture and the environment. Community conservation is now seen as an effective planning strategy to form safer neighbourhoods in urban areas. The philosophy of New Urbanism is not promoting the physical horizon of the city, however, it promotes a complete, compact and connected to the communities. It acts as a guide for city planning. The movement provides the macro scale (metropolitan districts) and the micro-level involving streets and buildings. This principle also incorporates various environmental protections, sustainable development, historical preservation, smart growth, pedestrian, and bicycle planning that is the agenda of modern living (Bohl, 2000).

Currently, New Urbanism is seen as an architectural renaissance that is forgotten the placemaking concept (Wahid, 2014, 2020). This concept attempts to reshape the built environment entirely, based on the world community's way of life. New Urbanism, also known as Neo-Traditional, involves design, Transit Oriented Development (TOD), and traditional environmental development (Wahid, 2014). It also focuses on the strength and ability of the traditional environment to preserve the community is considered the appropriate approach to prosper the community. An approach that emphasizes aspects of the community's needs through a combination of modern and traditional design is an idea that should be focused on to develop the community. New Urbanism does not mean imitating the

way of life of traditional culture but creating a community geared towards the principles of a traditional society with the provision of modern facilities (Wahid, 2014, 2020).

2.4 Human Settlement Issues in Local Contexts

Human settlements were not focussed on the beginning of the urbanization process. The urbanization directed towards relevance; industrialization that provides employment opportunities and aesthetic of cities. According to Wahid (2014), before the 20th century, urban settlements only provided the basic structure for working class working in the factory. The bourgeoisie settlement is separated from the public. The aristocrats (those who worked in the government sectors) were driving cars and living in mansion and town house, while the working class lives in the "barrack type" accommodation.

There are several significant urbanization processes in Malaysia (McGee, 1975). The three phases during the urbanization process in Malaysia are the nascent phase, pseudo urban phase, and urban expansion phase to form the mega city's expansion. Urban nascent phases began by the colonial administration in the 18th century, although the Malacca sultanate with its trade city was renowned earlier. The urban life pattern is unfamiliar to Malays in the rural area, and their involvement at that time was only on the peri-urban fringe (McGee, 1975; Evers, 1975). After World War II, the urbanization process changed to pseudo urbanization. Urbanization in the developing world rose rapidly over 50 years, leading to urban sprawl rather than urban services, causing urban poor (Wahid, 2014). In 1970, the Malaysian government introduced the New Economic Policy and open market economy system to support national economic growth. As a result, industrialization for export and expansion of urban areas led to city building (Hadi, 1993, 2011). On the other hand, the rapid urbanization pace impacts riverside areas (Wahid & Karsono, 2015; Karsono, 2013; Karsono et al., 2015).

In Malaysia, the definition of 'city' is an area with a minimum population of 10,000 (Jabatan Perangkaan Malaysia, 2020). Census reports in 1970 and 1980 interpreted cities into three categories: (a) metropolitans with populations over 75,000, (b) large cities with populations over 10,000, and (c) small towns with populations between 1,000 and 9,999. However, small towns are not considered urban areas. The changes caused by the urbanization pace affects the definition of the city. Several primary places are considered cities, such as Kuching, Ipoh, Alor Setar, Johor Bharu and to name a few. Indirectly, it affects food, housing, security, and quality of life (Wahid, 2014; Wahid et al., 2010). The urbanization pace has affected Malaysians for the last five decades (Dahlan, 1989; Shari, 1993; Abdullah et al., 2022; Tey, 2022). Urbanization affects humans' physical, mental, thinking, perception, and adaptation to the environment (Dahlan, 1989; Wahid & Hadi, 1993). Through urbanization, the minds of Malays have become more open to accepting changes. The acceptance of Malays in modernization includes physical aspects, and their thinking patterns have changed and adapted according to urbanization (Hadi et al., 2013). However, they often do not notice these changes even though the surrounding situation has changed. For example, there are still Malays practising a 'kampung' life in the city. These changes are visible for urban Malays. Their attitudes and behaviours are unchanged since they do not feel the 'presence' of urbanization. Therefore, their settlement area is still used as a chicken farm, protecting livestock and maintaining 'kampung' lifestyle causing problems to other residents (Wahid, 2014). Most urban dwellers still have a 'rustic' mindset for example those who built settlements by the river and practising the 'kampung' life although their settlements is totally in urban areas. Hence, this community still practices the old way of life while their surrounding area has developed rapidly. This is part of the study focus by the researcher.

Some people in the community migrate for more opportunities in the city, seeking to improve socio-economic and educational standards (McGee, 1975). However, the image and character of the city are different from what they envisioned. Most colonial cities in Malaysia were developed to exploit the wealth of the areas (Evers, 1975). So, unlike the Chinese, the Malays could not portray the city's actual image. In the end, they were trapped in a room of 'security gates' (Loebis, 2019). They only work in service sectors such as gardeners, maids, and office boys. So, they failed to experience living in the city. After living there for so long, they returned to their village to 'recharge humanity' that has been extinguished (Loebis, 2019). Due to the migration, the Malays attained the worldview. Rapoport (1977) says architecture is the community's expression of culture, religion, social structure and community relationships. How they organize their place is related to their beliefs, aspirations, and worldview. As worldviews vary, so does architecture, on a personal level, on a social and cultural level, and between different subcultures within a society. It is more than clear that buildings and the entire built environment are fundamentally social and cultural products. Buildings result from social needs and accommodate various functions: social, political, economic, religious and cultural. In this study, some people live in the city but still have a rural mindset. On the other hand, a worldview that is influenced by education and experiences of travelling to different places or through the media can change people's thinking.

At the same time, migration to the city has resulted in the loss of the meaning in place. Youngsters who left their villages and traditional life trying a new life in cities also faced the risk. Some survive to bring happiness to their community back home, but many could not withstand city-living challenges (McGee, 1975; Wahid, 2014, 2020). Traditionally, the Malays worked as farmers, fishermen, and traders along the riverbank.

From boat makers, they transfer the skill in building settlements (Wahid, 1996). Gradually, these skills are lost due to migration. Settlements built on riverbanks slowly lost the bond between human and the river due to the construction of roads. Eventually, the river is not a cultural medium anymore (Rapoport, 1981), resulting in a loss of place for the Malays. These circumstances ultimately resulted in the disappearance of carpentry skills, boat making, traditional art skills**,** craft skills**,** and definitely the loss of heritage.

For years the Malay settlements along the river fringes suffers from floods. The erosion of the river eventually changed the geography pattern and creating a sense of insecurity. In 1962, severe floods hit Malaysia. From the known record of the year 1967, frequent floods hit Kelantan, Terengganu, and Perak. In December 2006 and 2007, the flood hit Johor, badly and became the primary concern of the government of Johor. Later, the flood occurrence in Kelantan in 2014 became a catastrophic phenomenon for urbanites (Shakirah et al., 2016). The floods in Pahang in 2021 (Berita Harian; New Straits Times, 2021) and the landslide in Pasir Mas, Kelantan on 17 February 2021 (Berita Harian; New Straits Times, 2021) destroyed the Malay settlement near the river. These are the catastrophic tragedy that has demolished buildings, infrastructures, sewage systems failure, shortage of daily resources such as food, drinking water, electricity, to name a few. Meanwhile, other effects indirectly impact the community, as people may become homeless, lose family members, suffer from an increase in the cost of daily resources, spread infectious diseases, and so on. As a result, flood disasters are inevitable, however they should be 'avoided' to reduce the exposure and experience of negative impacts on residents (Roosli et al., 2016).

Table 2.1 shows the previous studies related to Malay settlement. From 1985 to 2022, there were 18 studies that touched on Malay settlement. The researcher has reviewed to summarize the importance of topics and trends of past studies in the context of Malay

settlements in Malaysia. The studies allow the researcher to encapsulate the significance of the topic that encompasses human settlement.

In this study, the researcher enlightens the focus on:

i. Case study on Malay settlement in Kota Bharu, Kelantan that is different from previous studies.
ii. The urbanization pace in Kelantan, leading to the demise of Malay settlements.
iii. To explore the consequences of urbanization and natural calamity on the Malay settlements along the river fringe.
iv. To examine the pressures of urbanization and natural calamity on Malay settlements destruction.
v. To analyze the impact of urbanization and natural calamity on the settlements destruction on architectural values in the area.

Table 2.1: Previous Studies on Housing and Human Settlements in Malaysia

No	Title	Author, Year	Thesis/ Journal	Field of Research	Findings
1	Politics of Accomodation- A Case Study of Malays Squatter in Kuala Lumpur	Azizah Binti Kassim/1985	PhD	Squatter, Politic Among Urban Poor	Urban poor depends on the direction of government policy.
2	Peranan Pemerintah Terhadap Perumahan dan Persetingganan: Khususnya ke atas Golongan Miskin di Empat Buah Komuniti di Kuala Lumpur dan Seremban	Nurizan Yahaya./ 1989	PhD	Housing Poor, Public Housing, Squatter	Government policies have greatly helped slum communities to improve their quality of life.
3	Physical Changes and Their Relationship to the Socio-Cultural Factors in Urban Housing: The Case of Petrajaya, Kuching, Sarawak.	Julaihi Wahid/ 1996	PhD	Housing, Community, Transformation of Housing, Policy	The transformation of space depends on the socio-economic and cultural aspects of the residents' lives.
4	The Social and Spatial Impact of Settlement Policies in Kuala Lumpur, Malaysia**.**	Ahmad, Nobaya/ 2000	PhD	Bumiputera, Chinese, Integration; Malays; Ethnic	Racial integration that exists among settlement residents depends on the policy and direction of the housing.
5	Lembangan Sungai Dalam Peradaban Melayu.	Nasir (2005)	Siri Seni & Budaya Alam dan Tamadun Melayu. Penerbit Universiti Kebangsaan Malaysia, Bangi. ISBN 9789679427134	History, Malay Settlement	Malay settlements and villages are also located on the banks of the river and the history of its existence.

Table 2.1 continued

6	Fenomena penempatan komuniti Melayu bandar di tanah wakaf: kajian di Georgetown, Pulau Pinang.	Yahaya (2005)	Jurnal Pengajian Melayu (Journal of Malay Studies), 15. pp. 1-18. ISSN 1823-7622	Slum settlement in the city, foreigner	The influx of foreigners in the elite development area in Kuala Lumpur City
7	Resettlement Areas of Tsunami Victims in Malaysia: An Analysis of Neighbourhood Quality and Wellbeing.	Rostam, Herman & Asmah Bee (2009).	Geografia, 5(1)	Resettlement program, tsunami.	Home repair and resettlement programs for tsunami victims need to think about ways to improve their socioeconomic status and social well-being.
8	Riverbank Squater Community Attitudes: Environmental Pollution and its Management	Ismail, Syed Hussain & Mariyappan (2011).	Perspektif Jurnal Sains Sosial dan Kemanusiaan, *3*(1), 1–12.	riverbank squatter communities, pollution	Failures in existing management system which only emphasizes the role of government in managing the development in order to change the paradigm of environmental change management design towards good management practice by serious involvement or cooperation by all parties in the government and to be fully supported by the communities, private sectors and non-governmental organizations (NGOs).
9	Impak Pembangunan Bandar Baru Nusajaya Wilayah Iskandar Malaysia Terhadap Kesejahteraan Hidup Penduduk Asal Setempat.	Katiman (2011)	GEOGRAFIA OnlineTM Malaysian Journal of Society and Space 7 Special Issue: Social and Spatial Challenges of Malaysian Development (14 - 28) 15 © 2011, ISSN 2180-2491	Religious practices, New Town Nusa Jaya, neighborhood, regional development, resettlement,	Security issues have yet to become a threat to neighbourhood relations. Even though so many feel that the level of religious practice, especially among teenagers is decreasing. The majority practice religion at a moderate level, and many are indifferent. This phenomenon, although common for a society undergoing rapid change, requires a specific policy to deal with it.

Table 2.1 continued

10	Village in the City: The Redevelopment Challenge	Sharifah Mariam Alhabshi (2012)	Akademika 82(2) 2012: 69-80	Inner-city villages, urban renewal, urban settlement,	Failed planning because it was obscured by external elements such as the luxury of high land values.
11	Urbanization in Malaysia: Transition from Heirarchical Function to Network-based Function.	Idrus, Hadi, Harman Shah & Rainis. (2013).	Perspektif Jurnal Sains Sosial Dan Kemanusiaan, 5(2), 44–59.	Urbanization from from the Bernam Basin to the Linggi Basin	Any action taken will lead to the uncertainty, and it will be getting worst as the urbanization process moves on. The urban future in Malaysia is based on network function and this complexity is articulated deeply in this article by studying the rapidly developing mega urban region area in Malaysia which stretches from the Bernam Basin to the Linggi Basin.
12	Geopolitik dan Program Perumahan Rakyat di Kuala Lumpur Pasca Pilihan Raya Umum Ke-13	Junaidi Awang Besar/ 2015	PhD	Settlement, Geopolitic, Policy	Ethnic composition plays a role in elections and is closely related to geopolitical.
13	The Malay Enclave of Kampong Bharu as a Living Tradition: A place of uncertainty.	Ujang & Abdul Aziz (2016).	Environment-Behaviour Proceedings Journal, 1(2), 197-202.	Kampong Baru, Malay community, culture	The future of the Malay settlement is still being determined. People-oriented planning based on a deep understanding of culture and tradition can lead to a redevelopment approach.
14	Pusat-Pusat Pemerintahan Kesultanan Melayu Johor Membina Penempatan Awal Orang Melayu di Sepanjang Sungai Johor	Abdullah & Jambi (2017)	Jurnal Peradaban, Jil. 10, 38-61 (2017)	Kesultanan Melayu Johor, Sungai Johor, Pusat-pusat pemerintahan, Penempatan Orang Melayu,	The early settlement of the Malays exists due to the development of the Johor Malay sultanate's government centres along the Johor River.

Table 2.1 continued

15	Preserving Cultural Landscape: Malaysia's East Coast Traditional Malay Settlement in Change	Jaffar & Harun (2019)	Asian Journal of Behavioural Studies (AjBeS), 4(16) May / Aug 2019 (pp.49-63)	traditional settlements, heritage sites, conservation of heritage sites	The findings reveal the effects of settlement destruction, including six factors; natural disasters, lack of maintenance, modern development, destruction by irresponsible parties, lack of awareness and deterioration of traditional products in the market.
16	Faktor Penentu Kelestarian Sosial di Penempatan Melayu Tradisional	Jaffar dan Harun (2019)	Kolokium Bersama Kajian Pascasiswazah Alam Bina (PETARI 2019)	Kelsetarian sosial, Malay settlement	The six indicators that affect the social quality of the population are the preservation of local identity (preservation of local identity), infrastructure facilities, walkability, accessibility, comfort (pleasurability), and safety (safety) to achieve the goal of sustainable development (Sustainable Development Goals) globally.
17	Enlivening the Mosque as a Public Space for Social Sustainability of Traditional Malay Settlements Planning Malaysia, 18(12). https://doi.org/10.21837/pm.v18i12.750	Jaffar, Harun & Abdullah (2020).		Public spaces, mosque, Malay settlements	The results showed that mosques were ranked as the highest public space priority in the two sample settlements.
18	"Perubahan Sosioekonomi Masyarakat Orang Asli Selepas Penempatan Semula di Kampung Pertak dan Gerachi Jaya, Selangor"	Ng, Yap and Cheng (2022)	Malaysian Journal of Social Sciences and Humanities (MJSSH), 7(9), p. e001742. doi: 10.47405/mjssh.v7i9.1742	Penempatan semula penduduk Orang Asli di Kampung Pertak	The authorities need to monitor the needs of the Orang Asli after resettlement in addition to providing them with appropriate education.

2.5 Theory of Phenomenology in Settlement

This topic discusses the theory of architectural phenomenology before explaining the existence of the human settlements. From the theory of phenomenology, the discussion will be linked to the cause of lost settlement, urbanization, natural disasters and Malay settlement.

Place and placemaking are two crucial keywords in architectural literature. Phenomenological research emphasizes the importance of human experience. The term place focuses on a primary aspect of human existence, which explains the conditions to be somewhere. Place as a concept integrates dimensional nature, personal, and environmental culture into one overall experience. Relph (1976) explained that places are *"fusions of human and natural order"* and *"the significant centres of our immediate experiences of the world".* The quality of the accumulated place and thought centralization of the synthesis power is considerable. Spiegelberg (1982) added that phenomenology includes different conceptual approaches consisting of transcendental or pure phenomenology. However, Coates and Seamon (1984) postulated thats, there are three ways to explore a place and placemaking phenomenologically, namely a sense of landscape, a sense of human lifeworld and a. sense of experimental aspects.

Understanding of such characteristics is also derived through geology, hydrology, climate, topography, soil, vegetation, animal, organism, and more. The landscape is also dedicated as part of the environment and environmental relations. Nonetheless, different scenes create a distinct sense of place. A human lifeworld is an individual or group of taken-for-granted, neither conscious nor unconscious. Usually, the phenomenologist isolates himself from the lifeworld and turns the object into direct attention in order to understand the lifeworld in the area. Seamon (1993, 2000) gave an example of the design-studio project at Kansas State University focusing on the Meadowcreek Project, a multi-disciplinary

learning community in Ozark, Arkansas. They strive to produce self-conscious fashion, a community that works ecologically, psychologically, and socially. The 'taken-for-grandness' community needs attention and guidance for promoting ecological and interpersonal harmony. Seamon (1987, 1997, 2000) observed that this phenomenon is due to the human experience. Any object, event, situation, or experience that a person may hear, see, touch, smell, taste, feel, sense, know, understand, or live is a legitimate topic for a phenomenological investigation. There are various phenomenologies such as light, architecture, colour, landscape, place, power, travel, seeing, learning, relationship, blindness, jealousy, change, friendship, economy, and sociability. All of this happens because humans can encounter, experience, or live through it in many ways. On the other hand, Sampson and Gifford (2010) and McCunn and Gifford (2014), added that human settlement composed of aesthetics sense involves particular building forms, space, and surface symbolizing experience and quality. It reflects the geographical, economic, social, technology limitations and influence of culture. Phenomenologists figures how settlements exist based on the elements described in the earlier discussion. Some elements attempt to connect interior space and nature in settlements planning (Doxiadis, 1974). In the beginning, humans would identify their place with meaning according to the place. Doxiadis (1974) and Carbonell et al. (1996) claimed that settlements start from a single house before further developing upon modification to enlarge the place, making their sizes less equal. This phenomenon is happening to the Malay village in Malaysia. The village structure pattern is different at the macro level, depending on building materials, technology, and skills possessed by local craftsmen. The traditional settlement pattern primarily consisted of several small settlement units indicating a relatively small population density. Construction techniques using round huts demand fewer skills while constructing roof structures requires

limited technology (Mellaart, 1967). Based on the characteristics, the case study in this research will uncover the gist of the phenomena.

Phenomenologists often point out the explications of real human experiences and the reality of life. They use the word 'lived', which is applied to ‘live reality’ or ‘lived experience’ is justified by Seamon (2017) where *"experience is always alive"*. Lived means a wide-ranging spectrum of human experience, meaning, situation, and event (Seamon, 2017, 2018). Humans lived in settlements within a travel time in order to shorten their moving time. In addition to reducing energy, humans connect settlements with surrounding areas to carry out various activities. The place structure explains the landscape, settlement and is analyzed in terms of space and character. The space is described as a three-dimensional organization that creates a place. A character is illustrated as ‘atmosphere’ and is more comprehensive in place. Lynch (1965, 1984, 1995) also explained the structure of place in detail. He introduced the concept of nodes, landmarks, paths, edges, and districts which is a strong foundation for human orientation (Schulz, 1976). Driving, walking, boating, and cycling are path elements that enhance the place. It gives people experience in the activities they go through. Particular street images are reinforced with specific buildings, either unique or otherwise, from natural or artificial structures. Schulz (1985) compounded that building accommodates the environment. Generally, identification of the path takes place before connecting functional spaces to ensure continuity. The path with its famous place has a stronger identity and support to bind the city image. Once the direction is determined, the next step is to highlight the scale character and the path hierarchy. Multiple nodes and landmarks are the easiest way to get them (Lynch, 1960, 1995; Dobbins, 2009; Pearce & Fagence, 1996). An edge is a dividing line or boundary between two or more different urban areas (Lynch, 1960, 1995). Continuous flow and clear images are crucial,

although the edge plays a significant role in urban design. Commonly, roads like arterial, road networks and sea lanes are always the most effective orientation elements. The district is an urban area with similar physical characteristics visually and logically. These similarities include the height, size, type or colour of buildings, and culture or activity (Lynch, 1960, 1995). In addition, nodes are a landmark of urban space. An element that is always remembered and marked by people as a place of activity in urban areas. Intersections with special characters for activity focus are usually a not known to observers. Nodes become the added value of a place with specific characters from a particular urban area signifying its attraction (Lynch, 1960, 1995). People use landmarks to identify the physical characteristics of a particular urban area (Lynch, 1960, 1995). A landmark is a specific physical object, easily recognizable compared to other general and uniform characters surrounding a place. Rapoport (1977, 1980, 1990, 2001) and Moore (2019) explained that the environment is observable through a series of things and people, having a pattern and structure. The environment is the essence of settlements. Moreover, the environment is not random or combined with behaviour and beliefs. These factors are explained in human settlements. Rapoport (1990, 1994) referred to it as *"Schemata"* that act as templates to organize people's lives. In the case of the environment, relationships are a primary concern, though they are not spatially exclusive. Objects and people are connected through degrees of separation in and by space. The environment also involves space, time, communication, and meaning. Space organization is a way of understanding, analyzing, and comparing to create a built environment (Kusno, 2000). Humans require space. The environment is only temporary and time organization influences the behaviour. These reactions occur in two ways. First, it refers to macro-scale, such as linear (low and typical of our own culture) versus cyclic time (approximation of many traditional cultures). Future versus past orientation is the

improvement over the past as the future is unpredictable (Rapoport, 1990). As a result of these statements, it helps to accentuate the meaning of settlement.

2.5.1 The 'Place'

Deliberating the truth of human settlement requires elaboration on the place issue. Relph (1976) and Canter (1977) divided the term place into three main components which area a physical form, activities and functions and a meaning of symbol.

Punter et al. (1997) and Montgomery (1998) also agreed that these components strongly influence environmental design. A place is considered a physical condition and connects to humans psychologically and environmentally. It has three elements that affect the psychological state relating to meaning, including aspects of physical condition, internal psychology, social processes, and human activity in a given area. Several researchers acknowledge this, including Relph (1976), Steadman (2003), and Canter (1977). Gieryn (2000) points out that, a place should have three privileges: location, geographical position, the material shape of a place, and its meaning. Therefore, every human being must have a meaningful place. On the other hand, it is different upon viewing from an aesthetic point. It should be noted that the most human experience is to create a place. This idea is supported by Bott (2003), who showed that the integration of physical and cultural elements exists when it involves the perception of all individuals and the human needs to fulfill their function and purpose in life. Thus, the identity of a place depends on physical, social, and cultural factors. According to Rapoport (1977) and Altman (1975), images of places along cultural influences and experiences existed in the people. It creates meaning and connection that gives an identity to a place. It also determines the social and cultural values, especially for the people who live there. This identity supports the cultural importance and sustainability of a place to survive. The place is also associated with many psychological aspects that

facilitate many changes, especially urban design, strongly influenced by building and globalization of culture (Low & Altman, 1992; Brehm et al., 2013). These changes affect physical and human activities. It may have the same meaning, but it has a more profound sense of culture and function from an urban design perspective. The place of human settlement is a living component of the lifeworld and is considered most relevant for assessing its architectural experience and meaning (Seamon, 2015, 2017). It produces a great deal of power in the concept of phenomenologists, whether in theory or practice. According to their perspective, the place is considered *"as any environmental locus that draws human experience, actions, and meanings together spatially and temporally"*. Through this approach, a place encompasses elements of a room, neighbourhood, town, city, and geographical region. (Seamon, 2017).

Consecutively, Schulz (1976) and Relph (1976) said that the most concrete term in the living environment is place. It is often described as something abstract and always considered a permanent object such as a physical building with a material substance, shape, texture, and colour. It is a fact that any reference without locality is meaningless. These features are comprehended with the ‘environment character’ to be permanent. In general, a place provides character and ‘atmosphere’. It is a qualitative and ‘total phenomenon’ irreducible from any possession such as spatial relationship without losing the true nature of sight.

2.5.2 Place in Urban Development of Settlement

Urban design is not just the art of urban planning but the knowledge of how cities evolve and change. It analyze how civilizations choose to represent themselves in spatial form. Cities are not just a physical container of social processes similar to language, but it is more than a functional method of conveying information. Language symbolizes the world

we live in, evolving gradually from historical times (Hill, 1985; Mumford, 1961). It comprehensively covers philosophy, ideology, conceptual systems, and many ways of looking at things. The same thing is happening in the city. Since all human actions are meaningful, the space that we lived in is also full of symbolic values, collective memory, association, celebration, and conflict (Cuthbert, 2006).

In an ideal urban design, a place is an element that connects dynamic features with human needs. Lynch (1960) stressed that, parts of the city are connected to elements of the place, focusing more on specific features, unique, dominant, famous, recognizable, easy to remember, and have common memories with humans. It gives meaning and identification to the objects which are different and unique from the rest (Lynch, 1981). From here, human beings remember being in a place created by the way and function of the space used, either individually or in groups, thus giving a place meaning that distinguishes it from another (Relph, 1976). Apart from the elements and identities of a place involving specific buildings and forms, it also has a deeper meaning from the urban design perspective. The question depends on building images and elements of the place. Is preserving building images makes the place more meaningful? However, the meaning constantly changes according to human functions and activities (Sepe & Pitt, 2014). Subsequently, Rapoport (1990) established that the meaning of the whole environment is created through personalization, taking possession, and perfection. The purpose has been adapted to the situation even though it can be seen clearly or not. Colour, material, scale, light, shade, sounds, kinesthetic, temperature, smell, and others are meaningful elements of everyday life. It forms the terms and characters of the place in contrast and incorporates them into the urban fabric environment. Full appreciation and evaluation of the design quality and success depend on the understanding of the meaning and how to achieve it. These are the pandora box of the human settlement.

2.5.3 Place and Its Meaning

i) Sense of Place

There are two aspects required to be considered in understanding a place. Steele (1981) compounded that, the first is a sense of place, and the second is the spirit of place. The former brings human experience into a situation linking human perception in one place involving personal elements and the latter is supported by Relph (1976) that the space connects the individual to the environmental needs of the known area.

ii) Spirit of 'Place.'

The spirit of place is a characteristic that combines feelings exists in a particular place and location. It is characterized by topography, social activity, and economic development. Nonetheless, Relph (1976) argued that it has a specific meaning from the past, present, and the spirit of preserving the place. Sense and spirit are elements in the emergence of place in modern cities. Its purity is unrelated to history, society, and culture, but its image, economic system, and character shaped modern cities. Perhaps, the identity and meaning of a place in history and culture usually cannot be identified and sometimes lost in contemporary cities.

iii) Sense of Belonging

Sense of belonging, in turn, builds a strong community spirit around the place. According to Steele (1981) and Cuba and Hummon (1993), human activities are the most critical thing in the place. For example, the urbanization process and the existence of open space contribute significantly to the physical comfort of the city. This is because human activities in the public area are a significant factor contributing to the atmosphere development and creating more holistic elements. These situations also exist in river life. Human settlements and rivers are spaces where elements are interrelated dynamically in

environmental contexts (Baird et al., 2015). Therefore, physical and emotional relationships exist in the experience of a meaningful place (Dutt & Samanta, 2013). The presence of physical features such as rivers and mountains highlighted the sense of belonging through the spirit of place (Tuan, 1974).

2.6 The Existence of Human Settlement

The time required to build a settlement is relatively unknown. However, remnants of the structure indicated the type of a particular settlement. It started from individual shelters to mid-size families to a larger number of prominent families. These settlements were established through multiple try-and-error ways without pursuing their experience and knowledge from previous mistakes. Bavarian geographer and scholar, Christaller (1966) and Berry and Chauncy (1970) claimed buildings are correlations of actions, events, situations, and experiences activated by individuals or groups that make up the building, whether for living, working, recreation, or conducting business. However, the building sustains its lifeworld together with other related lifeworld and integrates with the environment spatially (Seamon, 2018).

2.6.1 Principles in Human Settlement

Doxiadis (1974), in his book Ecumenopolis: The Inevitable City of the Future, explains that human settlements consist of two basic components. Anthropos is the content, either alone or in large numbers, that leads to society; and the physical settlement with its surrounding environment, which constitutes a place and consists of natural and man-made elements. These two fundamentals are further divided into five elements, known as the Five Ekistic Principles. The ekistic goal is creating efficient, sustainable, livable settlements and balancing individual and community needs. This principle is relevant to the study because the researcher wants to structure the analytical data for the Malay settlement through the

Ekistic theory and the questionnaire has been designed according to Five Ekistic Principles. to answer the objectives of the study (see Appendix I).

Mumford (1946) claimed that the city started from the formation of families, and city development is the epicentre of human civilization that grew from the village. It developed into a town, city, metropolis, and megapolis. In the real sense, there is no clear overview of human settlement started from the existence of village, town, and city, unless we look at the entire fabricated system in life. This man-made system was closely related to each human settlement depending on the area setting (Doxiadis, 1974). Human settlements started from the beginning of the primitive age to the modern-day development reflecting human existence. It is very complex and involves five elements (Doxiadis, 1974);

i. ***Nature:*** The whole environment provides the basis to form settlements and the function of the surrounding context.

ii. ***Man / Anthropos*****:** The inhabitant, as an individual.

iii. ***Society:*** The interaction system between people.

iv. ***Shell/ Buildings****:* Sheltering structures with specific functions and activities.

v. ***Networks (road and telecommunications):*** The natural man-made system serving settlement includes roads, water supply, sewerage system, electrical generating, facilities, communication facilities, economic policy, educational, legal, and political system.

The above elements evolved according to the economy, society, politics, technology, and cultural system. Understanding human settlements require examining their history since the future is unknown and the present is too narrow for any investigation (Smith, 2015; Doxiadis, 1974). Lessons should be taken from human experiences and reviewing the

origins, principles, and laws that humankind has improvised and developed since the beginning of human civilization. Although Doxiadis (1968, 1974, 2005), who studied human settlement for 40 years, claimed that the chronology and location of early human settlement had changed dramatically, and it is hard to understand. Each archaeological discovery changes the history of all previous human settlement. Thus, the history of human settlement is difficult to identify (Papaioannou, 2005). Doxiadis (1968, 1974) and Tyrwhitt (1978) introduced five principles to build a human settlement, as discussed in the next sub-topic.

2.5.1.1 *1st Principle: Contextual Potential*

Humans use elemental nature as a link to optimize their potential with water and tree, with other people, buildings, and roads as a telecommunication system. They always try to find a logical connection with nature to move freely and have the potential to live, unlike caged animals. Even if trapped inside a wall without a door, people always try to move around to avoid feeling overwhelmed. Schulz (1976) also explained that humans have 'insides' to achieve a sense of belonging. From here he/ she turn to something to achieve his/ her intention.

This function comes from the nature of human 'insides', usually coming from the heart. Physically, they need to have an opening with the outside. This enables human nature to interact with the surrounding and physical space. For example, the building interacts with the environment when built on the ground and rising toward the sky for high-rise building. It is considered a man-made environment to relate the inside and outside space for human convenient.

2.5.1.2 *2nd Principle: Minimization of the Energy*

Humans try to reduce their energy in search of closer relationship to perform their daily routines, more intimate areas to conduct activities like cooking, gathering, working,

and others. However, phenomenology is also one of the crucial elements of humanity. Humans strive to achieve the highest level of comfort in the environment. According to Wahid (2008), this integration provides an image of the place and area. Thus, it does not represent a landmark, instead it creates a settlement that can sustain community and activity, involving the phenomenological aspects of the environment. This phenomenon is created by those living there depending on their understanding of the human-environment relationship.

2.5.1.3 *3rd Principle: Privacy*

Privacy is a protective space for humans. For example, choosing the distance between one settlement and another, between animals or objects they feel safe and comfortable. Privacy becomes a boundary in every place meant. This distance keeps them safe and healthy throughout their daily lives. However, various arguments regarding the privacy concept depend on several variations and aspects (Hall, 1966; Wahid et al., 2009) discussed the importance of privacy extensively. For instance, the meaning of privacy for Western and Islamic views are different. For the Muslim community, privacy emphasizes the elements of lifestyle, the political order, social organization, culture, economic policy, and legal system based on the tenets of Islam with reference to Holy Quran and Hadith. It is so conclusive that even the façade and view of a building in a settlement should be considered for occupants' privacy. For example, in ancient Iran, most of them have a comfortable and more private life because the design of courtyard house that involves a visual privacy perspective.

2.5.1.4 *4th Principle: Optimization of the Relationship Between Human and Nature*

Humans always try to optimize their relationships depending on the surrounding area. This principle leads to physiological and aesthetic rules, directly affecting architecture. These relationships depend on nature, man, society, building, and networks. From that,

people learn how to manipulate the environment to suit their settlement. It also depends on the circumstances of a place. Closer example to our settlement in Indonesia and Malaysia, the main problem is the temperature difference between the inside and outside of the building. According to Alamsyah and Wahid (2010), the temperature outside the settlement is usually higher than indoor. Therefore, people in ancient times planted many kinds of trees outside. It helps to reduce the temperatures outside the building for the Javanese and Malay community respectively. The entire Javanese residential system is responsible for the natural environment, and they learn in-depth about the natural symptom and its relationship to settlement. Usually, Javanese people consider the importance of natural influences such as sun, wind, water, vegetation, and social life in human settlement. The nature of human settlement can be identified through analysing interactions and equilibrium between human structure and content. These are some of the studies focusing on the settlement. Today, professionals such an architects, planner, civil engineers and urban economist, ecologist and administrator are focussing on their specialized field and not in the overall aspects of human settlement.

2.5.1.5 5th Principle*: "Successful Human Settlement."*

Humans develop all the four principles based on time and space. Then, they began to create systems such as the floor, wall, roof, door, and window that allow them to maximize context (1st Principle), minimize energy expanded (2nd Principle), make separation from others (3rd Principle), and optimize the relationship between human and nature (4th Principle). The completion of these principles is called Successful Human Settlement, a balance between man and man-made environment. The life system has various shapes according to human creativity and will. It also depends on the location and circumstances of the area. Plus, the people's belief in cosmological power represented by some abstract symbolism

according to their belief. According to Alamsyah and Wahid (2008), each symbol has a different meaning, especially on nature and cosmological power in human settlement. A successful settlement is only achievable when a dynamic balance between humans and their total environment is combined. Human happiness appears when there is a link between enjoyment and satisfaction, and elements of their physical background can be adapted more easily. We should remember that human life is not static. It evolves and develops over time and circumstances. Therefore, settlements may develop relying on the creativity and appropriate changes according to their desires.

Seamon (2018) showed that there are individual lifeworlds in the use of buildings, and at the same time, an individual produce more complex lifeworlds. The more 'live' and 'lifeworld' characters of the building it supports the individual nature of the lifeworld house in the settlement.

2.7 The Evolution of the Human Settlement

In the beginning of town development was dynamic, later the expansion becomes static, either ceasing to develop or gradually less growth (Kostov, 1992). Eventually, it was still able to survive for a long period of time. In this regard, people learn to build a better place by finding solutions to the existing built-up settlement problems. From there, they try to improve the quality of the settlement to make life even better (Hubbard et al., 2003). For instance, this is particularly true when there was a war in the town they lived. The devastation of war made them realize one way to build a proper structure for a fortification. It serves as a defence system for the entire town. As they felt more comfortable and secure, it improves the quality of the environment and psychology of the settlers (Ashworth, 1991). Sometime a static town growth makes human life better where their needs and resources increase proportionate to the existing demand. Sufficient resources gave them more opportunities to

create a pleasant environment (Hilton, 1984). Initially, the town population was minimal, consisting of the present villagers living there for a long time but most people were still unable to adapt to a town lifestyle. Over time, their thinking patterns changed as they need many necessities in order to live in the town. Their lives became more accessible to various daily needs. Therefore, supporting a new lifestyle made the existing town system grow (Stanislawski, 1946). Mayer and Knox (2010) added that this made individuals or groups more aware of their daily needs.

A town is considered a pyramid that offers services and expenditures for human settlement. However, a pyramid is also dominated and exploited by its members within the system (Doxiadis, 1968, 1974). A town plays an undeniably vital role as a centre of evolution and development. It provides services not only for non-agricultural activities but also for creating community networks and provides current needs between agricultural and early urban settlements. The town has succeeded in producing unsuspected human needs. It provides service to every person in the area and the surrounding area. Those out of towncome to support the existing system, indicating people who stay away from them will get fewer services.

While the total population before the agricultural revolution around 10,000 years ago has been measured in various ways, the probable initial population was 10,000 people millions of years ago. It then increased to 16 million after the onset of the agricultural revolution (Doxiadis, 1968, 1974).

A lot of changes happen today. Humans have created a new life system over the past 150 years (Doxiadis, 1974) and it revolutionizes human settlement, either consciously or not. These changes occurred very slowly at the early stage, causing unreadiness to solve future challenges. The most important character in the new settlement is to become more and more

dynamic. Humans began to change from a static city to a dynapolis (Ehrenhrantz & Tanner, 1961; Doxiadis, 1960, 1962, 1967, 1974). In the past, a growth of a town or city was a very dynamic process. Today, the city is becoming more dynamic. Nevertheless, it continues to grow and constantly evolves due to technological changes.

2.7.1 The Pattern of Ancient Settlement

Some settlement patterns are concentric and configured, as found in Ancient Crete. Some are orthogonal and compact form concepts. Most others spread out as in the Far East (Doxiadis, 1967, 1974). Apart from that, there are various patterns such as linear forms, round and square designs. Linear trends are abundant in river areas for people to access transportation and agricultural purposes. The most significant change is the amount of land needed to produce food for each person. According to (Clark & Piggot, 1965), 0.5 ha (1.25 acres) of land in Europe is sufficient to produce food for everyone using mixed farming, meaning that the amount of land an individual need today is 600 times less than what was needed in ancient times to gather food and hunt.

These changes brought a new type of social organization that makes it easier to do things. However, humans today do not live solely on farming and cattle-breeding activities. There are even more activities in the field than in the past. According to a study by Christaller (1966), some villages have expanded beyond the existing boundaries and formed a hexagonal pattern. Firstly, discovered in Bavaria, this pattern was also found in several places, including Greece (Doxiadis, 1968). Figure 2.1 shows some of the models presented in the pure form, while Figure 2.2 compares them with other patterns. However, it is a general pattern and does not reflect the actual situation. The reality is various territories exist and differ, as shown in Figure 2.3. This pattern is in contemporary Greece but is very similar to ancient ones (Doxiadis, 1974).

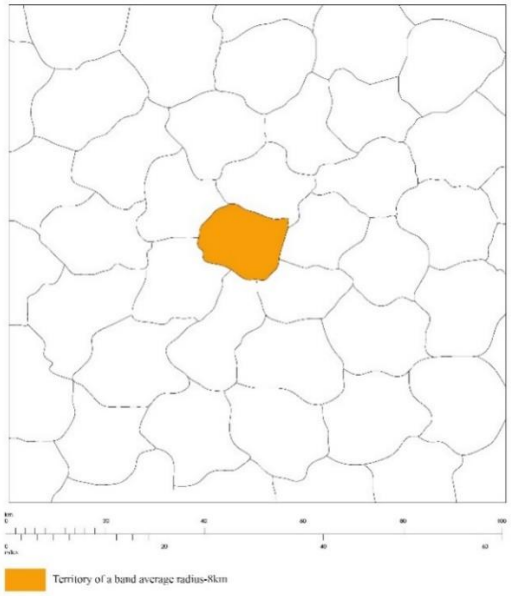


Figure 2.1: A theoretical pattern of territorial organization of bands

(Source: Edited from Doxiadis, 1974)

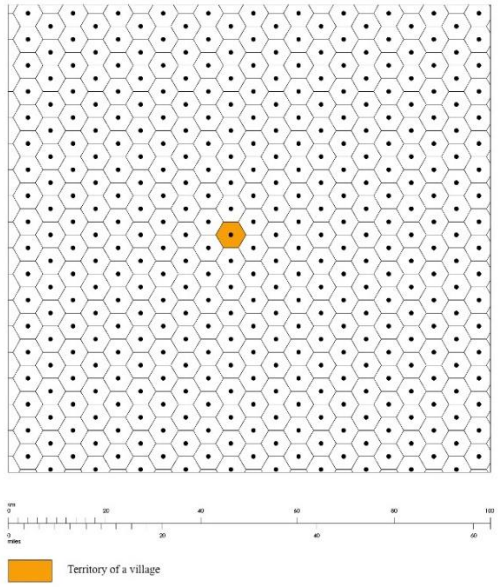


Figure 2.2: A theoretical pattern of territorial organization of villages

(Source: Edited from Doxiadis, 1974)

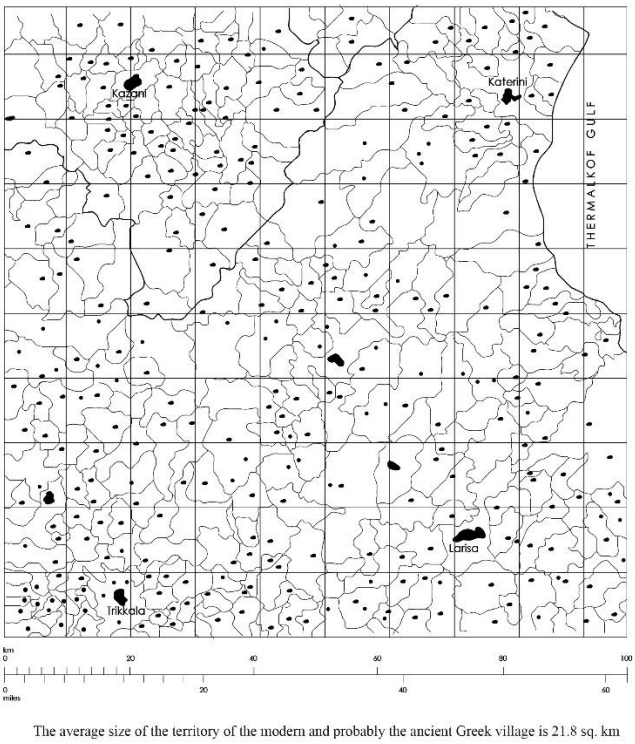


Figure 2.3: Actual pattern of territorial organization of villages in modern Greece (Source: Edited from Doxiadis, 1974)

These settlements initially create and spread out regardless the pattern is continuous or disconnected. Eventually, this pattern forms a system connecting the entire subject area, both arable and non-arable. Doxiadis (1968, 1974) postulates that although each village's actual territories were not the same, the pattern of these villages would be similar as they expanded and spread out over the area. This is due to the relatively small territories of the village pattern. However, with the geographical stratification of physical features such as waterfront and hills, some areas become more significant since their abundant livelihoods depend on cattle breeding and hunting.

The village also has its uniqueness. There are various population and territorial area varies in sizes (Putra, 2019). People are continuously trying to solve problems surrounding villages built up through local conditions, tradition, and creativity. It indirectly influences

and produces various construction sizes and structures, as seen in most existing villages. Most of the town's number exceeds the amount built in. Human beings enjoy living together in a communal group where they share common facilities and form a political unit within a community. Therefore, their habitat generally expands, and territories extend in various situations, either individually or in groups.

2.7.2 The Ancient Settlement

A study conducted in the 1960s exhibited a broad phenomenon of human evolution in the settlement. However, it is not a discovery, which involves the entire history of human settlement. Findings such as these in the Lepenski Vir in Yugoslavia Catal Huyuk, Turkey (Miksic, 2017) have undergone a revolution, with each settlement is either be tentative rather than concise. Many elements need further studies based on the changing settlement trends (Doxiadis, 1970). These changing trends are crucial for an in-depth investigation to examine the growth and development of dynamic and non-static settlements. The purpose of how, when, and where a space formation was created is a critical point of a settlement's existence through evolutions and trends. It is established that it was built according to times. Hence, the requirement of the present is produced from here (Doxiadis, 1970, 1972). Today, the effects of globalization and urbanization have led to imbalances in a settlement. Most of the greatness and quality of the earlier settlements were destroyed and impacted history (Hendriksen, 2014). The balance between humans and nature is crucial for the quality of life in humans. Again, Doxiadis (1974) also argued that the current urban life would be more meaningful if it balances urban and rural (from here comes the value of beauty and more comfortable quality of life). However, it is impossible to reinstate the situation because each element involved in human settlement is dynamic and complex, and it has to do with several structures (Doxiadis, 1968, 1974, 1977).

There are two reasons for studying the past settlements. The first is to know about the value and quality of lost settlements. The second is to identify the entire life structure that achieves balance in the quality of life. Thus, identifying their whole life structure allows learning about the development of a human settlement. Then, the past values are manipulated and adapted in the present human settlement (Doxiadis, 1968, 1974, 1977).

2.8 The Growth in the Human Settlement

The world is currently undergoing lots of changes, not just in terms of population, areas covered, energy used, communication made, and income confusion. The confusion happened when no one understood what 'city' really was (Friedmann, 2005). Identifying a city two centuries ago was relatively easy, but not today for two leading causes. Firstly, the population has spread away beyond the old city limits creating a growing human settlement spreading in various directions (Dorling, 2013). Secondly, people live in rural areas while the town has access to the city living system (Patacchini et al., 2009). They can connect to the city using vehicles and road systems.

A village has transformed into an informal, densely populated working inner-city area near the city centre into an informal settlement (Figure 2.4-a and Figure 2.4-b). However, urban life is still an attraction for people today due to the numerous amenities and content in modern city life such as advanced transportation, high-rise building, global exposure, business opportunity, better education, health, and recreational amenities (Lagakos, 2020; Schultz, 1971). Settlement in the city has many different levels and types depending on the place. It covers a wide range of groups and various social and personal profiles, including businessmen, salary workers, school children, parents, disabled people, tourists, and more, leading to a unique city population. Therefore, there are different types of settlements spikes a spice at lifestyle in the settlement.

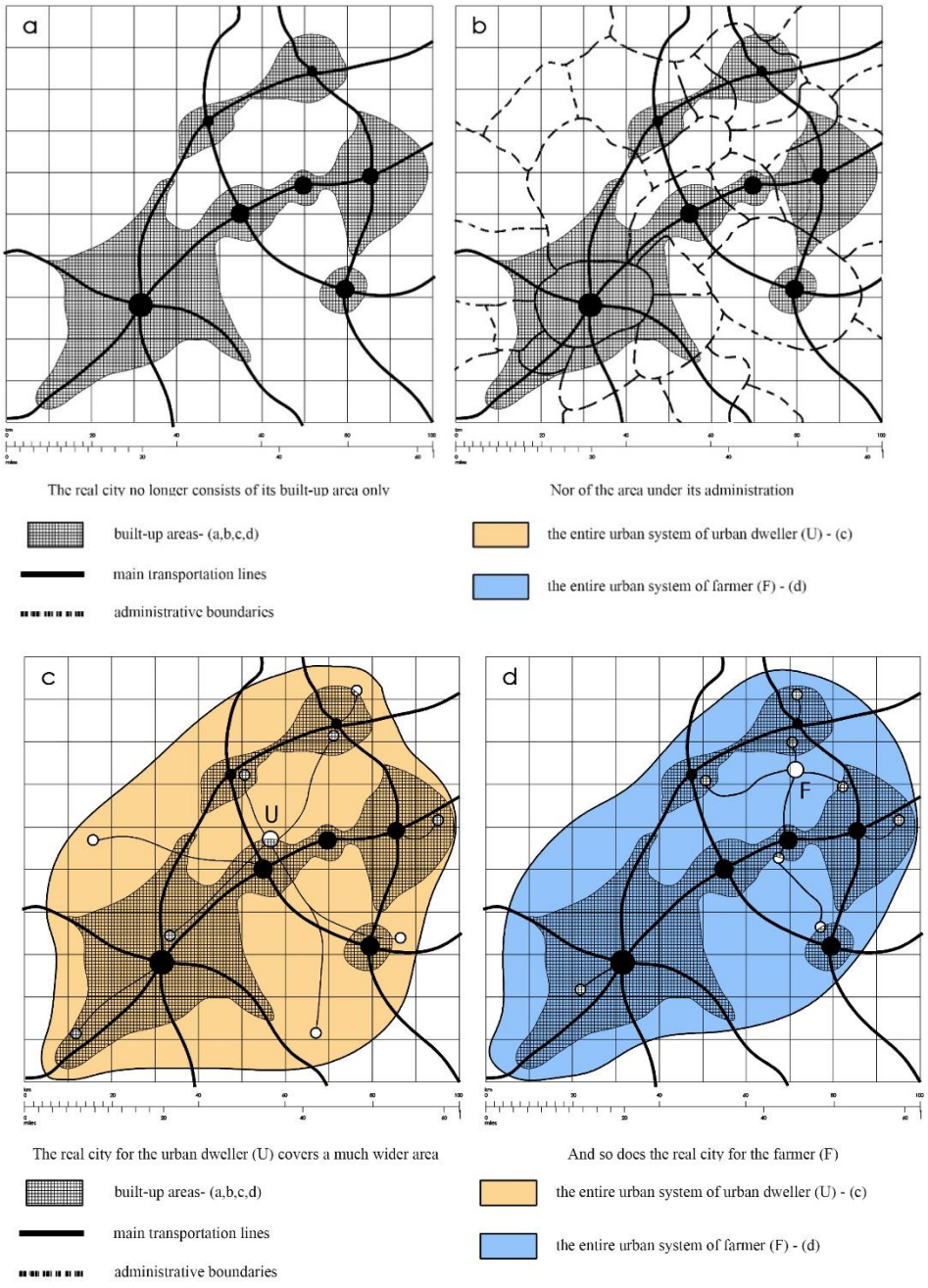


Figure 2.4: The change from city to the urban system

(Source: Edited from Doxiadis, 1974).

Nowadays, the town residents are involved with human settlements around the city, as in Figure 2.4 (c). Farmers living outside the city also go through the same living system. Maybe his wife works in a nearby town, or her son goes to a neighbouring town. On the

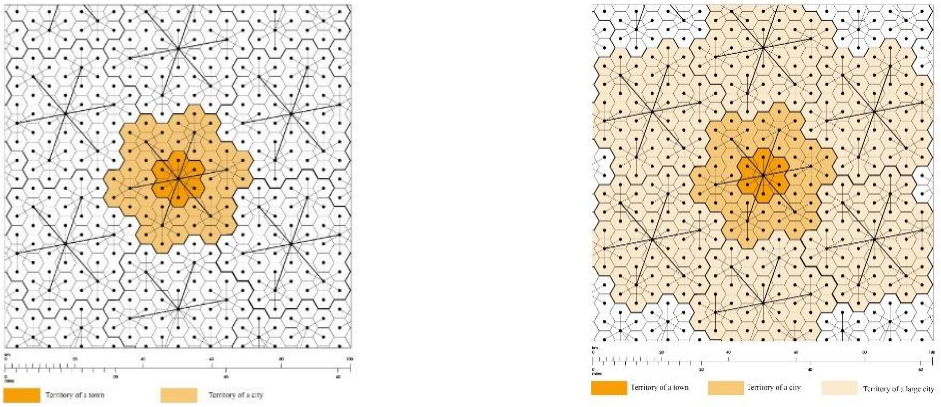
other hand, he is also a member of the farmer's club, which has an office in the central city. Figure 2.4 (d) shows these situations. Therefore, humans today no longer live in the city but prefers the urban environment (Doxiadis, 1974).

2.8.1 The Industrial Revolution

The evolution of human settlement has changed dramatically after 10,000 years due to the birth of new technologies. On 27 September 1825, the first railway took passengers from Stockton and Darlington in North England (Doxiadis, 1974). This technology revolutionized the human settlement landscape. The changes may have begun in 1765 with the Industrial Revolution (Allen, 2012), started when Watt successfully built the steam engine (Spear, 2008). Nevertheless, this change is unnoticeable. It became apparent in 1825 when the railway train successfully transferred the first passengers without using labour and animals (Erns, 1994). The steam engine is an emerging technology followed by other techniques to save humanity such as trains, automobiles, and aeroplanes emerged (Mohajan, 2019). Significant changes began in the history of human settlement, not only in terms of population and territorial size growth but rather the settlements that entered the Third Era in 1825 (Doxiadis, 1974). The First Era was a nomadic settlement hundred thousand of years ago. The Second Era started when humans built permanent settlements up to 10,000 years ago.

Cities have grown tremendously and can accommodate larger territories for the last 6,000 years. Figure 2.5 (i) theoretically shows the evolution of a town to city, covering another seven towns. It further grew and accommodated as many as seven other cities shown in Figure 2.5 (ii). The incompatible pattern of a city makes it unique. Its origin follows a town pattern since a city emerged from a town. Over time, this pattern develops in an unsystematic way and changes according to the geography of a place and occurs in most

cities globally. For example, in ancient Greece, the existence of a city created the political boundaries of several city-states (Doxiadis, 1974).



(i) (ii)

Figure 2.5: (i) A theoretical pattern of territorial organization of cities (ii) A theoretical pattern of territorial organization of large cities (Source: Edited from Doxiadis, 1974).

2.8.2 The Mobility Exchange

This change is visible through the basics of human movement in human settlement. At first, humans moved from one location to another by walking. Then, it improved by using animals as transportation. Now, they can move at various speeds using machine technology. Thus, they can connect the city and form urban systems (Bertolini & Dijst, 2003). The same procedure in ancient times when people began to build small romantic towns on foot.

Previously, technological limitations restricted progress. The small, isolated ancient cities were interconnected. Human movements also rapidly evolved as parts of the change or grown kinetic fields and formed systems of cities. When movements intersect, it creates a new city. The old static city changed in two ways (Doxiadis, 1977). The first is through a concentrated city development, and the second is through several directions leading to an urban system (Figure 2.6). The changes occurred due to the development of human mobility. Such development also inherited until the new era.

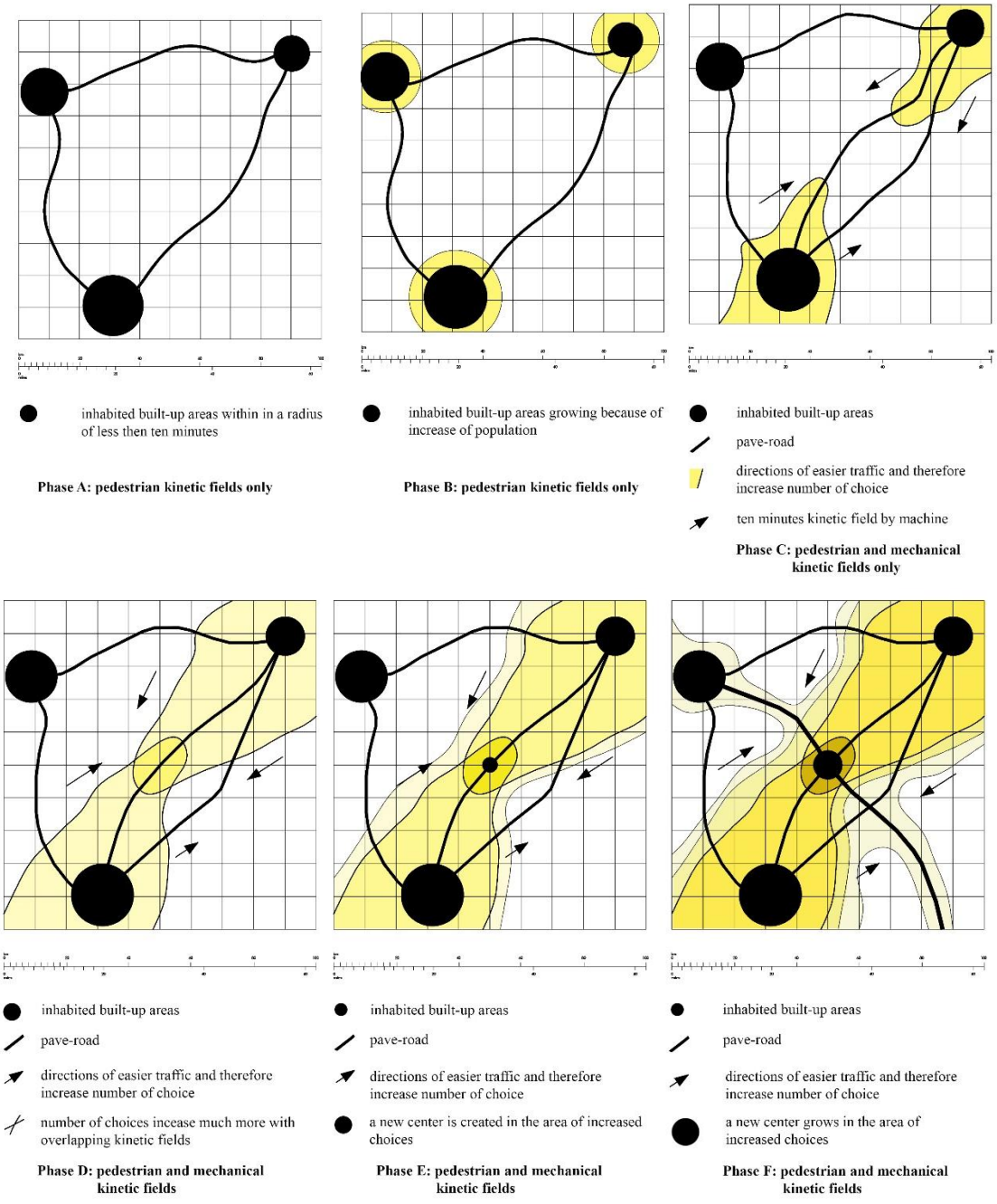


Figure 2.6: From a city of pedestrians to an urban system (Source: Edited from Doxiadis, 1974)

2.9 The Settlement in New Millenia

Many architects and planners found urban forms improve physical quality. The traditional built environment inspires most of them. Peel and Lloyd (2007) established this is as 'Neo-Traditional' town planning. It is one of the best concepts in the planning approach (Davies & Townshend, 2015). New urbanism in the neighbourhoods and cities provides a design based on strategies leading to traditional urban forms. Besides, it aims to increase suburban sprawl and inner-city decline in planning that later term as New Urbanism.

2.9.1 Transit-Oriented Development (TOD)

Transit-Oriented Development (TOD) is also one of the concepts in New Urbanism (Lierop et al., 2016). This concept has various terms intended to convince the idea of TOD, such as 'Transit Village', 'Transit Friendly Design', and 'Transit Supportive Development' (Fulton, 1996). However, most TOD shares some essential elements such as development close to the transit system, mixed-used growth, and conducive development of transit riding. Developing residential land use near rail stations is one of the elements in TOD. It encourages people to live closer to transit services and aims to reduce the driving distance of mixed-used communities.

2.9.2 The Rise of New Urbanism

The historical approach is fundamental to this movement. Bohl (2000) argued that the action was a smooth planning process, using history as a critical indicator. Then it blends with different combinations of settlements to form neighbourhoods. This approach is very different from the construction of superblocks and suburbs projects. New urbanism believes that local walking use, supporting neighbourhood connections, and enhancing community strength give residents satisfaction (Dill, 2006). The main ingredient in the new urbanist and

neo-traditional design is designing a set of settlements, including settlements mixture. It includes a combination of household and income. In terms of structures, the human relations provision and density are integrated into neighbourhoods to encourage people to reduce their dependence on automobiles (Dill, 2006). New urbanists also believe that small-town neighbourhood characteristics in the 1920s can be improved through front porches, narrow streets, back-alley garages, slight setbacks, and street trees.

Additionally, neo-traditional development known as the new urbanist emphasized sustainable urban form. On the other hand, transportation emphasis on pedestrian orientation and walkable villages. It promotes a higher population density than a typical suburban. Mixed land usage prioritizes the mix of residential, commercial, and civic uses. Approach through ideas that would be self-contained, tightly clustered, walkable, and shaped like small American town of pre-World War II. It encourages drivers and pedestrians to go through various path options, which helps people walk from one place to another. Therefore, preservation of traditional architectural characters is possible. It also promotes street life through narrower streets, porches, and public open space (Nasr & Volait, 2003).

2.9.3 The First New Urbanism

In the late 1980s, The Urban Village model was introduced in the United Kingdom. According to Aldous (1992), it is a model in neo-traditional development. The Urban Village is located on a greenfield or brownfield site beyond the existing development area. It also has high density, a mix of settlement tenures, mixed-use, ages and social groups, high quality, and pedestrian based. In a variety of life that does not respond to community life, The Urban Village is considered a trend capable of meeting those needs. It is integrative with community elements in terms of efficiency, beauty, and relationship on a large scale. Other

issues such as traffic, pollution, and infrastructure costs also encourage this trend to find a better solution to the problem of life quality.

2.9.4 The Effects of Modernization on Contemporary Settlements

However, previous scholars believed that New Urbanism and reality in practice have their gaps. According to Beatley (2000), New Urbanism design is denser, more compact and walkable than sub-urban areas, unlike the reality. Compared to conventional and sub-urban development, New Urbanism lacks transit, mixed uses, and other elements that are considered unsustainable.

2.10 The Determinants of Settlement

Previously, humans depended on the relationship to the place in a physical and sense factor. In ancient Egypt, the Nile was a landscape structure and a public building that created a sense of security by symbolizing an eternal environment order. Schulz (1976) acknowledged this and further explained that the spirit of a place or *genius loci* was an element that shaped the settlement, originated from the Roman concept. The ancient Roman believed that every life had a genius or spirit. This spirit permeates the life of peoples and places, accompanies birth to death, and determines their character and essence. Pallasma (1986) also argued that architecture exists in various realities of human life. The emotional forces of ruins abandoned settlements make us think and imagine the fate of settlement owners. It has separated us from reality. Architectural quality not only exists in the sense of reality, but it awakens human imagination. Architecture is always built with 'spirit'. It considers the settlement of spirits, the dwelling place of metaphysical beings.

2.10.1 The Influence of Geography

Since prehistory, coastal and river people in the world have inhabited the areas. Early inhabitants found a suitable area for human settlement due to geographical factors and environmental conditions closer to home. In Malaysia for examples were Guar Kepah, Seberang Prai, Penang, and Kelumpang, Matang, Perak (Md Jahi et al., 2016). These areas that were initially a human settlement later developed into a small port visited by foreign traders from India, Persia, China, Arabia and the Archipelago. Then, it developed into a large port and serves as an entrepot port. Initially, their lives were as nomadic as other people around the world. Once they started farming, they decided to stay in the area. These are the reality of settlement elsewhere. They later began to develop additional skills such as boat making and build houses using mangrove trees as structures for the settlement. The community also started trading activities with other people in the rural area (Airriess, 2003) by making the river a central communication system. The trading activity later developed into a small port on the coast. Then, merchants visited the port from India, Persia, China, and the Archipelago. It eventually evolved into a giant port and became an entrepot port. The Pelabuhan Ketupang finally functions as a supplier port that collects raw materials on Kelumpang Island before being transported to the entrepot port in Lembah Bujang (Md Jahi et al., 2016). This situation shows that geographical factors and environmental threats do not necessarily determine human settlement. Even the destruction of human settlements happens due to these factors. Currently, most human settlements are destroyed due to the floods hitting the riverbank. Further discussion on this matter is presented in the next chapter.

2.10.2 Topography and the Source of Food

The Malay village landscape was made of paddy fields and houses along a river extended to the higher plains, known as '*darat*' (Shari, 1992). The area is quite hilly, and

there are usually fruit orchards and rubber trees. Village areas along the river are also divided into *'hilir'* and *'hulu'* (Kling, 1989). They are the reference point of prestigious institutions or buildings in the village, such as the mosque or residence of the village leader. Therefore, Kling (1989) concluded every villager knew their residency, either*' hilir'* or *'hulu'*. Areas further upstream are called *'dalam'* or *'solok'*. The subdivision also has different symbols and dialects based on the state, although it has the same meaning as the east coast. The subdivision of the two villages is called *'alik jatuh'* and *'alik naik'*, which means sunrise and sunset or east and west.

The spatial of traditional Malay villages is organically according to the shape of the river (Harun, 2011; Samsudin, 2014). The houses were built in line with the porch overlooking the river (Wahid et al., 2021). In addition to paddy fields, another landscape that paints traditional Malay villages are coconut trees. Almost every house compound is planted with coconut trees (Salleh et al, 2016; Ramele & Yamazaki, 2013). Coconut trees have many uses for the Malay community. Apart from foods, it also can be a filter or sunscreen. Traditionally, coconut trees are grown in the same age as the settlement itself, and every tree was grown when there were newborns. In addition to coconut trees, extensive grassland is also a landscape or panorama in villages. The field is pasture for cattle and goats, while lower and wet areas have more shrubs. This area is also known as a valley area and is often seen in the group of buffaloes.

2.10.3 The Importance of the River

A river is a central place for water access to sustain life (Leakey & Lewin, 1979; Alam, 2021). It is the fundamental source of human life. Mumford (1961) explained that humans have the option of staying nomadic or permanent in an area. Apart from being a water source, a river also provides sustenance, transportation, communication, and cultural

formation for a human settlement. Mumford (1961) and Choomgrant and Sukharomana (2017) added that a river is also the basis of a better experience compared to other areas. Ibrahim et al. (2018) argued that most traditional settlements are also located around the river fringe. It is not surprising that most locals are engaged in paddy cultivation and involved with fisheries as a significant socio-economic activity (Ismail & Hasan, 2018). Besides, settlements in arid landscapes greatly influenced the traditional house design that can adapt to humid soil levels, tropical climate, and flood problems. Numerous countries in Asia make rivers the beginning of human settlements. Vadillo and Kallio (2020) claimed the Mekong River serves as a liaison for different places where difficult areas often form waterways. It was considered easier than land routes in the past. According to Hudson and Shaw (2003), diverse ethnicities in terms of language emerged through the same linguistic family and similar lifestyles since various beliefs and cultures also exist by the river. Water is one of the four elements of ancient cosmography, which is arguably essential for physical and organic life. Humans need culturally appropriate water, investing through the meaning of water in rivers. Humans can understand rivers and lakes and use it as a form of human control over their non-existent nature.

Williams et al. (2019) assure that human settlement consistently adapts to climate change and the environment. Kwansuwan (2014) explained that amphibious cultures rich in aquatic environments shaped various vernacular features of traditional coastal communities. It is from here that a unique housing standard, which reflects the environment and behaviour of daily life emerged. The relationship between socio-environmental activities and physical structure are pillars of social transition from past to present culture.

Such statement is also agreed by Thaitakoo and McGrath (2008), it also exists in the Chao Phraya River, one of the major river systems in Indochina, as its basin defines the

provinces of Central and Northern Thailand. Rice fields and forests monopolized the upper basin. Meanwhile, the lower Chao Phraya River delta stretches over the urban agricultural market landscape dominated by orchards to the west, rice fields to the east, shrimp farms along the coast, and lowland fish farms. The geographical body of the Chao Phraya River Basin influenced architectural planning and settlements. The natural environment determines the design exemplying the *"Good Old Days"* of Siam are remembered in the *"Thai Environment and Culture"*. Wichiencharoen (1993) continued that the cultural patterns of Thai life similar is aligned to nature. Coastal communities are vital in understanding the role and influence of tradition in the daily life of amphibious cultures. The community is mainly crowded and settled close to the river; raising the settlement enables prevention and response to annual floods and high tides (Loucks, 2019). In the commercial community, rafts and boathouses were used as shophouses to coincide with residential units for easy travel and trade along the river. This practise has continued since the time of Rattanakosin. Unfortunately, the utopia scenery of Thai culture is now gone (Yodsurang et al., 2015).

According to Hassan and Ku Hassan (2001), there are three patterns of traditional village settlements in Malaysia, namely the land village, water village, and mixed village. The model of land villages and water villages is based on the topographic features of the riverbanks. The land village initially lines the riverbank before leading to the land. Meanwhile, the water village also started by the river, then built on stilt settlements facing the water. The socio-economic activities of these villages communities are fishermen (Shari, 1992). Topography factors of the river basins influence the settlements pattern and the development of Malay craftsmen. With the ability of builders to build stronger jetty over time, people build houses on high-quality jetty or shelters. This settlement is known as the

water village (Zanuri et al., 2020). Each home in the village also has a bridge connection. A combination of two morphological forms, namely land and water, is the combined village pattern, which is difficult to determine since the habitat is above the water and spreads to the area. The elevated boardwalk became a new spine for the community to move about. The boardwalk prevents the contact to the community interaction.

2.11 The Causes of Lost Settlement

A lost city is a settlement that underwent terminal decline and was completely uninhabitable since its former significance was no longer known to the world. Locations of many lost cities have been forgotten, but some have been rediscovered and studied extensively by scientists (Cox, 2020). Recently, abandoned cities or cities whose location was never in question are called ruins or ghost towns (Scarbrough, 2020). The search for such lost cities by European explorers and adventurers in Africa, the Americas, and Southeast Asia from the 15th century onwards eventually led to the development of archaeology. Cities may become lost for various reasons, including natural disasters, economic or social upheaval, or war (Reddy & Wissink. 2020; Erlick, 2021).

2.11.1 The Disaster

Human history around 10,000 BC to 8,000 BC recorded an annual increase of only 0.01%, before increasing above 0.1% around 1,500 AD and 0.46% in 1800. It further increased to 0.75% in 1900 and surpassed 1% after World War II (1.90%) and 1960 (1.95%). Over the last decade, it has remained relatively stable. In general, the population evolution in settlements possibly has many different types, as shown in Figures 2.7(i) and (ii). The difference is due to the location where the established settlement in ancient times (Figure 2.7-iii). However, this does not mean that cities such as Paris, London, Angkor Watt, or other

ancient cities had not experienced the same crisis as nowadays. There are many similarities and differences between cities due to state and location factors. The most striking similarity is that most big cities experience dynamic phases at different times. The same applies to most cities today.

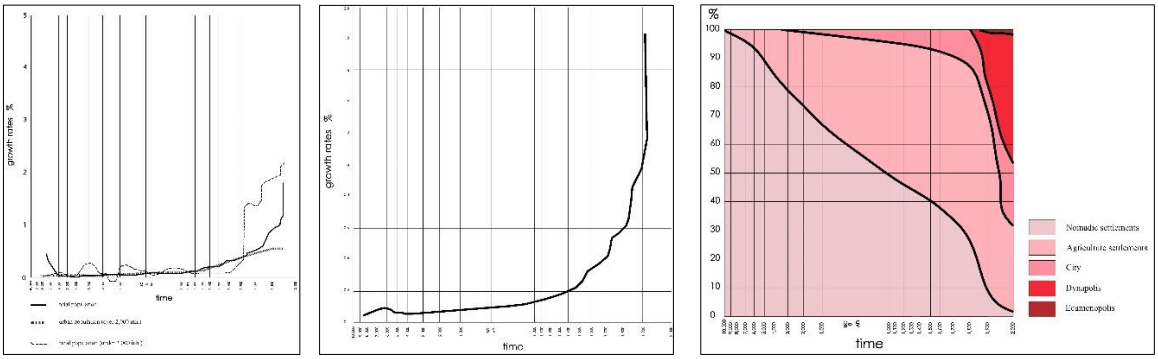


Figure 2.7: Different types of population evolution in settlements (i) and the past rates of growth of the global population (ii) Different types of population evolution in settlements (iii) (Source: Edited from Doxiadis, 1974)

Cities continue to grow in many ways, not only economically for the nation but also practical for those living there (Frey, 1993). Moreover, cities are functionally and symbolically identified for those who do not live there. By ignoring cities and failing to include them in public debates about who we are and how we want to live, we neglect cities and their historical significance, together with existing connections. Eventually, this influences the prosperity of diverse places across the country. A widespread reflection on the moral obligations that constitute American society is also lost (Beauregard, 1996). New York City had lost its soul in the early 21st century (Zukin, 2020). Some doubt it ever had a soul since New York has always shed its past, tearing down old neighbourhoods, and erecting new ones in their place, usually in a bare-faced struggle for financial gain. Others are shrugging because all big cities today are erasing their gritty, bricks-and-mortar history to build a shiny vision of the future (Garcia, 2003). Similarly in China, Beijing, Shanghai,

and other cities are clearing out the narrow, rundown alleys in their centre, removing longtime residents to the distant edges of town, and replacing small, old houses with expensive apartments and new skyscrapers of spectacular design (Shepard, 2015). Artists and gentrifiers move into old immigrant areas in London, Paris, and New York. They praise the working-class bars and take-out joints but overwhelm them with new cafés and boutiques, likely followed by brand-name chain stores. Universal rhetoric of upscale growth, based on the capital economic, state, and cultural powers of the media and consumer tastes, is driving these changes and exposing a conflict between city dwellers' desire for authentic origins a traditional, mythical desire for roots and their new beginnings; the continuous reinvention of communities (Bolay, 2020; Ivester, 2020). Speaking of a city being authentic at all may seem absurd, especially in a global capital like New York, neither people nor buildings have a chance to accumulate the patina of age. Most residents are neither born nor live in the same house for generations. In addition, the physical fabric of the city is constantly changing. All over the world, *"Manhattanization"* signifies everything that is not an authentic city: high-rise buildings that grow taller every year, dense crowds where no one knows your name, high prices yet inferior living conditions, and intense competition to be in style (Zukin, 2020). The lost of cities also happen because less human to live and unsuitable for social and personal development.

(i) Natural Calamity and Settlement

Not all the cities caused by natural calamity disappeared completely. The rebuilding of a city in its original location after a significant disaster was usually back then. For example, the great fire in London in 1666 (Waddell & Jacob, 2019) and the Great Lisbon Earthquake in 1755 (Burchard, 2019; Gupta, 2018; Martins et al., 2018) was no exception to this situation. Those destroyed after World War II were rebuilt in the same place

(Doxiadis, 1974). It is believed that the Polish wanted to transfer human settlement to Warsaw, and the Soviets wanted to move it to Stalingrad. Meanwhile, a proposal to relocate Berlin to a new city was rejected since it created a traffic network in the city centre and had nearly 3,800 miles (over 6,000 km) of streets, railways, and local transport. After World War II, almost 900,000 people returned to Hamburg, including 80% children (Loddenkemper & Konietzko, 2018; Wolff, 2018). In addition to practical discussions, it is natural that they wanted to return to their original settlement that held many memories of raising children, burying parents, and celebrating new births.

(ii) The Destruction of Fire

Fire is also a primary burning agent causing urban destruction until recently. History recorded those major fires have occurred in ancient times and destroyed the human settlement system in the city. For instance, London in 1666 (Hanson, 1989; Waddell & Jacob, 2019), Moscow in 1812 (Alex, 2018; Shvidkovsky, 2017), and Chicago in 1871 (Spinney, 2020; Read, 2018; Eden, 2020). Russia and Finland were established as towns was built of wood as the main material (Bekasova, 2020). Nonetheless, fires have destroyed human settlements there several times. It was estimated that every town in Finland was burnt and destroyed within 30 to 40 years. It was evident in the 19th century that some areas in Finland were severely burnt, such as Pori in 1801 (Keskinen, 2019), Oulu in 1822 (Frigren, 2017), and Turku in 1827 (Simonton & Salmi, 2017). This incident led to a substantial change in the wooden city of Finland. Many elements were lost after this incident, changing the settlement system in Finland. The high walled closed street was gone, aisles became boundaries between buildings preventing closer construction, roads became more comprehensive, reduced population density and the city profile was lower. In the square area,

buildings within a settlement were built nearby to prevent fires from spreading during the war.

(iii) Volcano Disaster

Volcanoes can destroy human settlements. The city is covered with thick dust that would take hundreds of years to remove. Pompei was destroyed in AD 79 with Herculaneum city (Scandone et al., 2019; Baker, 2018) and Stabiae City, Italy (Petrone, 2019) in the early 18th century. The site became a tourist attraction, with estimated tens of thousands of visitors every year. For instance, the San Francisco earthquake and fire of 1906 and Japan also experienced many disasters caused by eruptions, such as the 1783 Asama eruption (Barinov, 2018; Suzuki et al., 2018) and the 1953 Myozin-syo eruption (Minakami, 1974). It is also well known that the islands of Japan and the adjacent regions have suffered frequently from a series of catastrophic earthquakes of tectonic origin, including the 1854 Nankaido (Kanamori, 1972), the 1923 Kwanto (Kobayashi & Koketsu, 2005) and the 1933 Sanriku-oki earthquakes (Obana et al., 2018). Such disasters promoted the development of seismology and volcanology in Japan to protect people from violent earthquakes and volcanic eruptions (Minakami, 1974). According to Ladinski (2017), the Skopje, Macedonian earthquake on 26 July 1963 was the most destructive earthquake in the recent history of Yugoslavia (Kızılçaoğlu & Önal, 2020). It caused losses of about 15% of the gross national product in that year. The Skopje earthquake was unique among other catastrophic earthquakes of the past 30 years in Europe and the Mediterranean region. It triggered a high level of awareness and activity by the government, population, scientists, and engineers to the need for organised and sustained efforts to be implemented in earthquake disaster management. Earthquake catastrophes were no longer only a scientific problem. They were recognised as crucial economic, technological, political, and social problems, not only in the

affected region but also on both national and international levels. These are among the evidence of a city that suffered from earthquake damage.

(iv) The Hurricanes

Hurricane is also one of the contributing factors to the destruction of human settlement. The debris of floating buildings and the rubbish dumped everywhere is a phenomenon that occurred during the hurricane. Few significant effects occurred in the early 20th century, apart from the Galveston Hurricane in 1900 (Ian Raymond, 2020; Gautam et al., 2021) and the Texas and Louisiana Hurricanes in 1915 (Horowitz, 2020; Trivedi, 2020). From the middle 1920s through 1969, thirteen devastating hurricanes struck the United States. Then, from 1970 to 2003, the United States experienced a respite from deadly or devastating hurricanes, punctuated by Hurricane Agnes in 1972, Hurricane Hugo in 1989, and Hurricane Andrew in 1992 (Willoughby, 2012). Hurricane Katrina in August 2005 was a major natural disaster that resulted in squalls, storm tides and severe flooding in the United States (Palinkas, 2020; Derrible et al., 2020). More than half a million people were forced to leave their homes and have not returned. The hurricane destroyed vital infrastructure and damaged the natural environment.

(v) The Floods

Climate-related disasters emerged as the most prominent challenges of climate change in recent decades. Floods are the most frequent disaster with considerable consequences (Dhar & Nandargi, 2003). Developing countries face extreme events associated with climate, and the regions of South, Southeast and East Asia, Africa, and small islands are the most affected (IPCC, 2007). According to UCN (2007), 94% of natural disasters caused by climate between 1990 and 1998 occurred in developing countries. In recent decades, extreme floods have hit many areas, particularly in developing countries,

causing severe economic damage and human suffering, especially in rural areas (Mirza, 2003; Chen et al., 2020). Rising sea levels due to climate change presumably multiply flooding occurrence in the future (Habel et al., 2020; Nagai, 2020; Rohmer et al., 2020). Although there is some uncertainty about the nature and magnitude of sea-level rise and climate change, scientific evidence suggests that the coastline will experience adverse problems in the future (McEvoy et al., 2021; Abia et al., 2020). This is very crucial as coastal areas are among the most populated in most countries. According to Molua and Lambi (2007), 23% of the world population live within 100 km of the coast and 100 m above sea level. Rising sea levels are likely to result in a lack of coastal protection systems such as mangrove forests, further increasing the risk of flooding on coastal settlements. Urbanization with climate change poses challenges for the people in future cities (Jha et al., 2013; Adger et al., 2020; Gizelis, 2021). According to Adams and Frimpong (2019), rapid urbanization and poor urban services caused flooding in Maputo, Africa. Recurrent floods, including the recent Typhoon Idai in Maputo, negatively affect infrastructure services such as sanitation, solid waste management, water supply, housing, and accessibility for emergency response (Emerton et al., 2020; Charrua et al., 2021). Typically, informal settlements are located in flood risk zones near the river areas (Melore, 2020; Ndebele, 2020). Slumpy housing and poor infrastructure conditions deteriorate during floods and challenge settlers who frequently experience repeated incidents. Since 1970, Mozambique in Africa has been hit by more than 35 cyclones and tremendous floods in 2000, 2001, 2007, 2008, and most recently in 2019 (UN Habitat, 2010). With a climate highly vulnerable to natural disasters, urban population growth throughout the city has left devastating consequences for the country's-built environment, including social and economic development. Urban settlements such as Maputo City in Africa cannot cope with frequent floods due to heavy rains that often disrupt

life in the environment having poor infrastructure services with limited response from local communities (Zehra et al., 2019; Satterthwaite et al., 2020).

(vi) The Destruction of War

War can also destroy the entire town, causing it to relocate to a new place. A good example is Casino in Italy relocated from the edge of a mountain to a new location about 200 feet (600 m) from the original settlement. Ruins of the old city due to bombing are still visible, although the whole area was destroyed (Doxiadis, 1974). It later became a monument, and new construction was not allowed. There are transfers taking place in Noto and Avola towns, Sicily (Fasolino, 2018). According to Azzouz (2019), cities at war in Syria, including Aleppo, Deirez- Zor, and Raqqa, have been radically reshaped by conflict, displacing half of the Syrian population and massive destructions of the social, cultural, and built environments. In Homs, over half of the neighbourhoods have been heavily damaged. Contested, divided, and several times partially besieged, Homs has been transformed by a war that destroyed the ordinary and sphere of urbanites everyday life. The most recent one was the destruction of Mosul in Iraq by the Americans. Schools, mosques, churches, and unfinished buildings turned into collective shelters; streets became informal local markets; conflict frontiers divided suburbs into checkpoints and walls; and entire neighbourhoods became jungles of rubble and ruins (Zarandona & Munawar, 2020). The life and fortune of the country ransack by war destroyed the civilised world.

2.12 The Future of Human Settlement in 2050

Migration also created a process that led to the end of centripetal cities, the largest population in the US and Europe in the 20th century. This situation is known as ‘the era of the middle landscape’ where cities are densely populated than ever before (Kostov, 1992). Most urban societies are in the city, thus increasing the annual urban population. This process

dates back to the 19th century and 20th centuries. It began to develop rapidly around 1800. The significant impact had changed in the natural population growth, rural to urban migration, and reclassifying rural into a metropolitan area (UN Habitat and UNESCO, 2008). Changes are beginning to affect population growth, rising employment opportunities, and demand for settlement (Wahid, 2020). However, there are two conditions in globalization, either positive or negative. The positive things are the information technology advancement, media transformation into sophisticated media, advanced modern construction techniques, and particularly the perception aspects of globalization itself. However, from a negative point of view, it affects the poverty within informal settlements such as slums, squatters, and less efficient living as urban poverty levels increase (Hofmann & Wan, 2013). Informal settlements in developing world are divided into two squatter settlements and slums since the city migration has two main consequences. First, the rich have a comfortable settlement and enjoy complete infrastructure. Second, the poor live in the slum areas or urban peripheral sites of the capital. Taking an example in Pakistan, Malik and Wahid (2014) observed that the slums dates back to the traditional pre-independence settlement period and has grown rapidly. Therefore, the urban situation cannot support present and future growth. Slum settlements primarily have poor living conditions and a lack of complete infrastructure. They live in cities in a settlement area with inadequate water resources and sanitary systems (Ahmad, 2020; Aziz et al., 2015).

Another concern of urbanization is about a population explosion hitting the world. People living in urban areas in 1950 was just 29.1% of the world population (Doxiadis, 1974). Then the population increased to 37.3% in 1975. There was a sudden increment of 50% in 2007, doubling the world population. The main concern is that it will increase by 2030, where the United Nations estimates that 60.8% will live in the city (UN, 2003; Wahid,

2019), while 43% will live in slum areas (UN, 2003: 5). In Asia, a system called the New World Order is going to hit 600 million people, covering economics, politics, and the environment. According to the UN Nations, half of the world population lived in cities by 2008, and about 70% will be city dwellers by 2050. Cities in Asia and Africa recorded the most significant growth during that time. Also, it is estimated that the number of megacities (minimal population of 10 million) will increase from 19 to 27 in this century. More than half of the world's cities are located in Asia (Mat Jahi et al., 2016 and Wahid, 2019). However, this development creates a gap between urbanization planning and experience (Hadi, 2011; Wahid et al., 2019).

2.12.1 The Force of Urbanization

The city grows into a community, and everything in the town shapes the life pattern in many ways. The old economic organization design changes gradually with a more "rational" organization in food production through buying and selling system between buyer and seller (Wahid et al., 2009 and 2010). It attracts elite groups focussing on the government hub and religious activities. Meanwhile, community groups focus on the activities centre (McGee, 1975; Kostov, 1992). The economic side of the city focuses on investment and various job structures created from marked development and multiple sectors (Wahid, 2009). The educational system, commercial, and political centre are crucial (Wahid et al., 2020). This situation would often attract rural migrants to build industrial cities in 19th century Europe (McGee, 1975).

Economic growth and development fundamental began during the Industrial Revolution (Doxiadis, 1968 and 1974). The Western world increasingly understands urbanization and its relation to economic development. Urbanization then became a medium

for social change on a more comprehensive scale. All humans are affected and feel the effects (Abidin, 2010; McGee, 2009). Families become smaller; religion loses its vital position, the formation of new social structures, new 'power' and 'class' patterns characterization, social structure, and human behaviour patterns are changing. These changes also caused urban societies of different entities to emerge (Wahid, 2020; McGee, 1975, 2009).

It marks the beginning of urbanization and globalization processes. Even on a small scale, it still has a massive impact on human settlement. Understanding rural-urban migration requires assessing the economic facets of the urbanization process (Wahid, 2020). This economic principle has changed during the town growth. Human labour has changed from the agriculture sector to non-agriculture. Looking at the historical experience of the industrialized Western world, for example, this change has spread throughout the country. It is considered as the basis for increasing economic productivity levels (McGee, 1975, Shari, 1992). The factors of urbanization also affected the villages in Asia that appear to be a close example of globalization and urbanization in transition.

2.12.2 The Global Phenomenon: Urbanization Impact on Human Settlement

Urbanization is a general term refers to the migration from rural to urban areas for social development purposes (Hadi, 2011; Wahid et al., 2020). Rapid urbanization has taken place around the world, including Asia. The urbanization process mainly results in traffic congestion over the entire area due to the domination by newcomers from rural and urban areas. The development process exploits the human resources to drive economic, social, and political developments. Their presence in the city led to the settlement issue, which is one of the major problems, leading to high demand in housing (Malik & Wahid, 2014; Roosli et al., 2019). The economic development of a city is often associated with urbanization. Likewise stopping the urbanization process interrupts the economic system and social

development (Wahid et al., 2020; Dahlan, 1997; Shari, 1992). The urban poor will help to drive the pace of urbanization. Where transportation, medical care, recreational facilities, and education is part of amenities required in the urban system (Shari, 1992; Lamry, 2014; Malik & Wahid, 2014). The meaning and definition of globalization between countries are different to suit their context and problems.

Globalization shapes urbanization. An ongoing economic and social system improves investment as a key to globalization with the foreign investment in a country. The idea of globalization is based on human insight into the world ability to reduce cultural diversity through manufacturing goods and perception (Malik and Wahid, 2014). Globalization also utilizes a critical human capital approach to transcend national and domestic markets and open up international investment in the global business world. Humans always believed that migrating from one place to another gives them new opportunities to improve their standard of living (Wahid, 1996).

2.12.3 Economic Growth in Settlement Contribution

The global population in 1825 was only 1 billion people. Doxiadis (1974) estimated the world population in 1975 reached 4 billion, representing an average rate of 1% per year over 150 years as in Figure 2.8. Meaning that the population has not reached 5 billion, and the earth still can accommodate people in cities in the past.

The economic changes exist due to two things (Doxiadis, 1974, 1976). Firstly, humans nowadays no longer live on the previous economic practices and presently advanced technology. Compared to the past technology, it was constrained to facilitating human demand, besides, technological development changed the social economy (Schumacher, 1976; Karsono and Wahid, 2009). Secondly, the increasing human population resulted in urban sprawl and population explosion in some settlement areas (Wahid, 2020). More

population means more space to construct settlements and requires more consumer goods. It also requires more mode of transport, more consumption of fossil fuels, and more pollution of air, land, and water. Thus, population growth leads to increased pollutions.

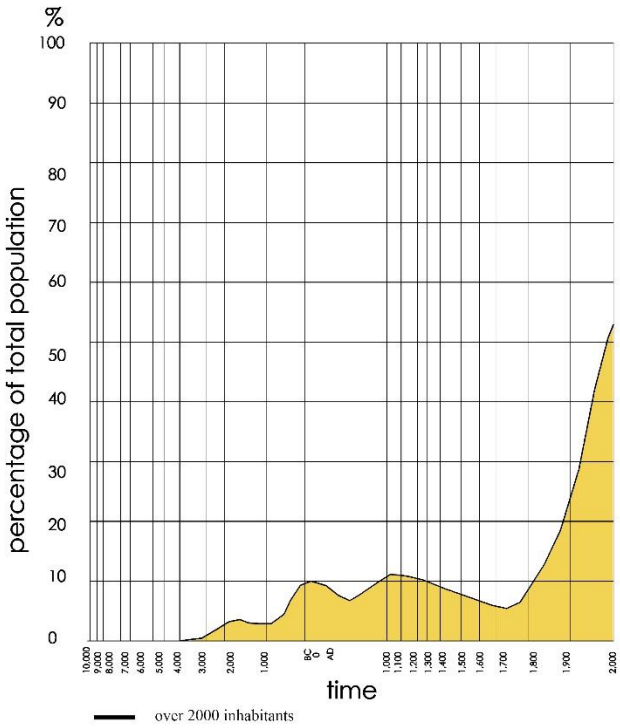


Figure 2.8: The percentage of the global population in settlements of more than 2,000 inhabitants (Source: Edited from Doxiadis, 1974)

Different types of pollutions are causing several problems in the physical environment that are further affecting the biological environment considerably, such as air and water pollution, deforestation, global warming and climate change, land/soil degradation, and extinction of species (Mittal & Mittal, 2013; Molina & Molina, 2004). It is also possible that rural-to-urban migration pressures are much stronger than visualized in the urbanization projections. Rural poverty tends to be transformed massively into urban poverty when circumstances deteriorate in rural areas (Malik & Wahid, 2019). It could be the case under the expected relentless demographic pressure to build in the rural areas of some of the

countries examined. Furthermore, as a result, poverty and food security problems become much more visible (Ruel et al., 2017; Battersby & Watson, 2018). The need for remedial action would correspondingly grow more urgent and move up the agenda in the international development effort. At the same time, the concentration of people in urban areas would make interventions more feasible compared with steps required if the populations in need were to be dispersed widely over large areas lacking infrastructure (McFarlane et al., 2017).

It happened for the first time in the global history of human settlement (Blackie and Turner, 2018). The crisis began before 1825 only in Northwest Europe. The transportation revolution was introduced in 1825 during the Industrial Revolution and led to a population explosion. Revolutionizing human settlements began in 1825 with the development of trains, which flourished the competition between railroads and automobiles, thus creating many technological improvements. From here, changes in human settlement range from the old settlement type to new ones (Allen, 2017; Hill, 2018). The advances in technology and machines significantly changed human life for the better. However, on the other hand, it has a lot of problems, especially about the issue of evolving human capacity in some places. Population distribution between rural and urban areas is also changing rapidly. For the first time in history, the urban population has seen more changes than ever before. In 1960, it was 45.2% and increased to 58% in 1975, according to a study conducted by the Athens Center of Ekistic Study (Doxiadis, 1974, 1972, 1968).

2.12.4 Social Impact in Settlement

The world population rose to variable degrees. Population pressures affected some countries due to a lack of space to develop, cultural, social, biological, and other factors. Despite facing many limitations, it may still change the course of human life in the future. Limited space problems in some areas caused people to look for new areas to develop

(Doxiadis, 1968 and 1970). Also, land conversion from agriculture and horticulture to buildings are spreading more if not controlled. According to Karsono and Wahid (2010), these concerns also caused the ecological system of the environment to undergo drastic changes, especially in peri-urban areas, which are considered sensitive areas of urban ecology. These radical changes affect the ecosystem and cause future generations to face significant problems with their basic living needs, particularly food sources (Winarso et al., 2015; McGee, 1994, 2002).

2.12.5 Infrastructure

Many developing countries have been criticized for the high urbanization rate but with undeveloped infrastructure. Rapid urbanization and population growth in 2/3 of world cities with at least 10 million populations already exist. This phenomenon occurred in many cities such as Bangkok, Mumbai, Jakarta, and Mexico (Wahid, 2020; McGee, 1994). The government has difficulty managing settlement demands, public amenities, clean water, drainage, and refuse dumpsites, to name a few. Nonetheless, good governance aids the economy of a city and vice-versa (Jordana, 2017; Khan et al., 2019). The increasing number of workers migrating to developing countries increases the conflict in the city. On the other hand, civil war stifles the city sustainability process. Government transformation in the democratic system causes chaos during the transition period. This situation may lead to urban poverty if the democratic process is done wrongly. Other effects such as the community transformation emerge through lifestyle, i.e. in Iraq, the Sub-Saharan countries, Kosovo, and the Libyan Revolution. According to Wahid (2014), any country that has been independent for over 50 years has experience infrastructure failure. Nowadays, addressing social interactions and accessibility to services and facilities is crucial. Some countries have adopted fast track construction systems aimed at improving infrastructure. A facility such as

a road network has grown. Also, communication and digital information infrastructure have developed. In Asia, however, most cities have strategic locations to promote neighbourhood satellite cities. It aims to improve the industry, agriculture, tourism, and fisheries sectors.

Informal human settlement is the main issue involving the demand for settlement facilities and urban poverty. Construction by both government and private sectors caused inconvenience for urban poor to find settlements. Developers prefer to build more expensive accomodation beyond the reach of the urban poor (Lucci et al., 2018; Treble, 2018; Sana & Wahid, 2014). According to Lamry (2014) and Dahlan (1990), redevelopment of most informal settlements through privatization resulted in the urban poor moving elsewhere. However, the re-settlement process of these low-income communities poses enormous financial problems for them. The daily expenses of this group will be higher, and the new settlement would not promise better conditions than before. They had to buy a new settlement and get credit from informal sources. It is a living burden in terms of loans repayment. Their poverty problem continues in the new settlement (McGee, 1970; Wahid, 2020).

2.12.6 Urbanization and the People

Each city has its mindset, and this uniqueness helps it to grow and to seek freedom without losing direction. It can also develop according to a pre-determined plan (Kostov, 1992; Van, 2020). Each city has its own story and narrative based on the location and circumstances, with urban form and experience. New cities continue to be built globally, thus becoming more significant and smaller scale to some extent. Despite its stories, experiences, and narratives, there is one thing unchangeable in the new future cities, that is solely unpredictability. Increasing pressure on urban forms leads to many discussions, especially those experienced by designers and administer of cities. It discusses the historic

fabric that needs to be tightened up and preserved in the cities development (McGee, 1991 & Kusno, 2019). ‘Ruralization’ must align with the typology of urban models so that their groups can become urban communities. Ruralization is believed to be part of urbanization. Urbanization is a city physical development, while ruralization occurs after rural-urban migration. According to Wahid (2014), urbanization invades rural areas that is prevails in the globalization era. All needs in urbanization, such as environmental, social, economic, and psychological change, are widely accepted.

On the other hand, as rural communities become more urbanized, cities turn into swamping cities, affecting the quality of urban areas to better function. The ruralization risks in producing the environmental quality until it has been accepted as urbanization. A city with numerous societies that moves too much turns an urban area into a rural area. Perhaps, it also affects the urban lifestyle and the urbanization model (McGee, 1975). Recent developments show urban geographers and those involved with urban morphology focus on townscape management. It is considered something beyond the scope of conservation-focusing solely on physical and tangible forms. This approach attains on caring for all traditional fabrics. Fitch (1990) named it *"curatorial management of the built world"* in his book on historic preservation. However, not many authorities have operational and financial planning to implement this approach. Conzen (2004) is the pioneers who came up with this concept and outlined the key to managing the townscape. Integration of town plans, buildings fabric, and land utilization are needed for ‘historicity’. It has to be done after the town has grown over a long period, with many traditional buildings becoming smaller. In terms of planning, the experience of individuals and communities is accomplished in urbanization. The concepts of diffusion and adaptation through urban planning provide an urban experience. How do the people feel about the experience? According to Wahid (2014),

the urbanization process in developing countries takes many forms. Whether the rural environment absorbs into urban areas or the urbanization process incorporates into rural areas. Either way, these processes take place in developing countries. Townspeople still practice the village attitude and culture in the city. They still depend on chickens and cow's livestock, even though urbanization has absorbed rural areas (Wahid, 2014).

2.12.7 Urbanization and the Community Sustenance

Over the years, the global era has brought some new relationships in image formation. Various forums discuss the image (Lynch, 1962; Wahid & Hadi, 1982). In the past, local cultural features played an important role in urbanization, and it has also been able to break up the urban ethnic. However, how can local culture be described so clearly in one place? Today, foreign cultures constantly challenge local perceptions, and they often succeed. At least, an attractive facade image is acceptable to the public. However, in Malaysia urban life has dramatically changed the identity and culture of the Malays, becoming increasingly fragile. Eventually, global culture has succeeded in capturing the local culture and providing images of places having no connection to the local community. As a result, the space that exists is apart and different from the basic needs of the Malay community. The Malays only have a little experience to face the city. Therefore, they see the city as a stage unfamiliar to their experience. Urbanization in Malaysia before the 1970s was socio-economic dominance, activities and for the population of the Chinese and Indians (McGee, 1975). Thus, urban space is already divided by ethnicity.

Urban forms and the entire landscape in most traditional cultures have two critical elements. It depends on sacred schemata and meaning. Most cities under the influence of culture can understand through it. Rapoport (1990) argued some cultures emphasized health, recreation, humanism, or materials dwelling. Over an extended period, from Plato to Botero

to Utopian cities of our time. It is an ideal method for specific complex meanings. It explains the urban formation through colonial power and by various immigrant groups. Through it, understanding the different roles of cities is possible. Various cultural constructs exhibit the presence or absence of unique pride, diversity of urban hierarchies, and definition of the city. All elements are a prerequisite for a settlement before it exists in the city (Rapoport, 1990). According to Mat Jahi et al. (2016), the sustainability of a society should not depend solely on profit but rather on something beyond the function of development. If such an event can sustain society ethics and morals, it will be sustainable. Development that enhances community dignity is socially sustainable. The purpose of seeking social sustainability is to make the event more human or explore the soul that makes it more meaningful. The role of social aspects in architecture is essential within the community. An architectural approach that understands the urbanization process should develop settlements that enable people to develop themselves, their families, and the community (Wahid, 2014).

2.12.8 The Dilemma of New Country

During the British occupation of Malaya, the Indian and Chinese immigrant were encouraged. Opportunities to become a member of the police and military were also opened to immigrants in 1873. They were known as The Perak Armed Police, The Malay States Guides in 1896, Selangor Military Police in 1875, and Kelantan Military Police in 1909 (Singh, 1965; Gullick, 1978). Back then, most police officers were comprised of British people, unless the position of Assistant Commissioner of Police (ACP) held by the Malay royalty and dignitaries in the Federated Malay States. There were many squatter settlements in the city due to urban poverty problems faced by migrants (McGee, 1975). It is located in a traditional village near the city and inhabited by people working in the city. Over time, it evolved and became a focus for migrants from rural areas (Johnstone, 1981). Most people

who move to this city are youngsters, looking for opportunities by selling whatever skills they learned in the village. They embarked on urban life with primary school education and reading, writing, and counting skills. Most of them only got lower-level jobs and preferred the position of police and soldiers at that time. Eventually, the opportunity opened for rural people to learn minimum education in the village in the 1950s (Shari, 1992). Their skills and knowledge have opened up opportunities to fill middle-level positions in government and private sectors (McGee, 1974). This migration process does not make the city as dense as Jakarta and Rio de Janeiro.

The migration that has taken place within these rural-urban brought together human movements, habits, and attitudes, together with political, economic, and social organization changes. Most politicians in Kuala Lumpur are Malay originated from rural areas (McGee, 1974, 1975, 1976). However, not all rural aspects are entirely lost in the urban environment, particularly during the urbanization of a rural population. Nonetheless, the cities people are mainly from rural areas, which is not impossible since most cities have experienced urbanization (McGee, 1975). Most cities also experienced the ruralization process, which blunts rather than sharpen the distinction between rural and urban. This process is not similar, and it may not be the same as the urbanization of the West due to the lack of improvements in technology and communications such as an extension of roads, education, radio, and film.

2.13 Malaysia: From Village to World City?

According to the Statistics Department, population growth in Malaysia will reach 38.5 million by 2040 (Ziegenhai, 2019; Population Development Malaysia, 2017). The industrialization has impacted since 1980, where 2/3 of the population is now urban and concentrated in several cities. Urbanization contributes to the economic growth of a country by providing a more dynamic process through advanced infrastructure while also preparing

employment and economic opportunities for urbanites need (Umanailo, 2019). Currently, Malaysia is yet to face a more significant challenge in terms of population density, showing an increase in the history of urbanization. Population growth in Malaysia has been steadily increasing since 1970. Between 1970 to 2010, population growth increased from 26.8% to 70.9%. In the future, the situation would presumably become more challenging as small towns and cities develop and exceed the border area (McGee, 1974). Due to population growth in the future, human settlements will become denser as small towns and cities develop rapidly. It would be a massive conurbation of urban centres or mega-urban regions. The situation worsens as the natural ecosystem depleted, replaced by the urban region. There will be other adverse effects such as air pollution, dramatic changes in land use, loss of biodiversity, habitat fragmentation, and declining ecosystem services (Hezri et al., 2015).

2.13.1 The Influence of Culture in Malay Settlement

The traditional Malay community also believes in myth and cosmology in the concept of space existence, possibly due to the influence of Hinduism before the Islamic era in Malaysia. Harman Shah and Wahid (2010) explained that the role of myth in the development of settlements was as the 'soul' or 'spirit' of the people associated with it. Mythology in developing countries is something that is not left out. It even reflects various customs and beliefs still practised in Malaysia. For example, among traditional people of the East Coast, *Main Puteri, Menora,* and *Ulik Mayang* are still part of their life (Matusky, 2020). The *Tajul Muluk* book also becomes a reference for house construction and orientation (Lubis et al., 2020; Abd Rashid and Che Amat, 2014). According to Harman Shah and Wahid (2010), mythological records also explained why the Banjar houses has high ceilings and floors raised at different levels. The principle of respecting parents and the activity spaces differentiation by gender developed through culture in human settlement. The

influence of the environment and culture of the community is powerful, indeed affect the construction of a dwelling or house in traditional Malay society (Aziz et al., 2008). The chosen settlement site is through various ideas and processes before building a settlement (Ani, 2012). Over time, the number of houses increases, forming a group of settlements and ranks known as villages or *'desa'*. The link between culture and nature developed various patterns of Malay villages. The Malay community culture is not focussing on custom and tradition only, exhibiting its uniqueness who are skilled in every aspect of the arts. However, they also involved in constructing the traditional Malay settlement (Khairudin et al., 2018).

2.13.2 Opportunities on the Waterways

The Malays have enormously high boat making skills, allowing them to be great sailors in prehistoric times. The Malays sailed and traded with foreign countries around the world (Evers and Hornidge, 2007; Evers, 2017; Evers and Anna, 2008). Trading activities were initiated in coastal areas subsequently expanding into a global business. They also cooperate with traders from India in the West and China in the East (Fahimudin, 2020). Malay traders are also said to have arrived in Southern China and Funan in the early centuries. Trading activities in this group later changed from being mangroves settlers to international traders.

2.13.3 The Past Experience: The River of Life

Much has been said about the role and contribution of rivers in human life, especially as a medium of transportation and social life (Pula, 2019; Isa and Samsudin, 2020). The relationship between the location of the city and the river is very dominant. Before the arrival of colonials, the main transportation route was by river and sea (Mohd. Faiz, 2019). However, elephants were also used for land transport. Therefore, the town was built by the

river. Human settlements such as villages were also built along the river and coastal fringe (Ibrahim, 2018).

Rivers were the people's choice to go in and out of an island (Mentayani, 2019). Saleh (1983) wrote that the formation of settlement concentration with a settlement pattern is along the riverbank; the main factor is the river. The river is also a natural transportation networks that has several other benefits. People used water in domestic activities and as a source of income for the community (Lamb, 2018). Residents living on the riverbanks can meet the needs and sustain their lives, transportation and mobility, economic, social, cultural, and political. Based on the population concentration and interaction with the river, the river culture was born.

Rochgiyanti (2011) testifies the river and settlement marked by the wooden pole at each house facing the river and referred to as a "station" that connects multiple villages and is accessible to everyone. As in the Kelantan River, the lush delta was formed. Many agricultural activities are carried out in the area. Kota Bharu city is in good geographical condition having fertile soil. The delta can accommodate a large population. In addition, the lush delta attracted the attention of locals. It is also capable of sustaining a dense population and promoting urban growth. Nowadays, the river is the only unnoticed natural heritage through increasing urbanization. Rivers flowing through urban areas are threatened by pollution, erosion, and sedimentation, making them unusable for domestic purposes. Rivers in the city become channels to remove various waste, including toxic. This behaviour results in the loss of a highly valued natural gift (Mohamad et al., 2005).

2.13.4 The Demise of the River and the Malay Identity

Like any other cities worldwide, early settlements in Malaysia can be found near the rivers and coastal fringe. During the British colonial era, the cities location was not confined

to the geography and position of the river, many other colonial cities found in Malaysia having no contact and connection to the river. Instead, they are based on economic importance, such as mining trade, agriculture resources, together with import and export activities (Mohamad et al., 2005).

During the Colonial rule in 1920, the British built roads and railways for the benefit of economic and grew into cities. The road is connected to the main town as an agricultural collection centre. Therefore, this situation encouraged the construction of cities along the route. (Kiroh & De Silva, 2018). Eventually, rivers were no longer a vital factor to decide city locations. It also happened during the post-independence era. New urbanization programs created during the New Economic Policy (NEP) by private developers consider a river at the back of the houses. Almost all new towns built are located far from the river since it was no longer the primary transportation system after the Industrial Revolution. Cities grew and expanded to function as a mining centre, a collection and distribution centre for rubber products and other cash crops. Later, it became a capital, such as George Town, Kuching, Kota Kinabalu, Taiping, Ipoh, Seremban, and Kuantan. Kuala Lumpur, the largest city of all, became the national capital. Roads were connected to all these main towns even after independence. Cities continue to develop rapidly for economic and development purposes (Idrus et al., 2011). Thus, the role of rivers as communication waterways is decreasing. The relationship between rivers in the community slowly disappears (Hartanto & Ruly, 2020; Wicaksono, 2018). Besides, new cities built after independence consisted of a new business centre and modern housing (Awang Besar et al., 2012). According to Sendut (1962), a noteworthy discovery in the late nineteenth century was economic minerals, especially tin, causing traders to establish many mining centres such as Taiping, Ipoh, Kuala Lumpur, and Seremban. It was associated with a modern plan that was compatible with the

influx of the Chinese. These cities have the same characters as a colonial town but are vaguely different from their organization. The new town is disconnected from the location of the river activity. However, there were still cities that existed during the colonial and remained near the river. For example, Kuala Lumpur, as a result of mining activities, has grown into a political, cultural, trade, industrial, and tourism centre. Its strategic location is at the confluence of the Klang and Gombak Rivers. Additionally, the Klang and Damansara Rivers fragments pass through Petaling Jaya, a new colonial town planned before independence (Mohamad et al., 2005).

2.14 Phases of Urbanization

Urbanization in Malaysia consists of three phases, namely the nascent, pseudo, and rise of mega-region. The British established a modern administrative centre in the 18th century, although Melaka was an empire in the 15th century. British managed the city centre through breakage and order aimed at exploiting commercially available tin ore and rubber, in addition to agriculture goods and other services (McGee, 1971). Locals at that time could not adapt to the urban lifestyle that controlled the capital market economy at the time. British then brought in immigrants from India and China to be forced labourers to develop the city centre and rubber estates as well as mining (McGee, 1971; Hadi et al., 2011).

2.14.1 Nascent Urbanization and "Guest Are Not Invited."

This period marks the beginning of the urbanization process in Malaysia, especially in urban areas. During this period, the British brought in immigrants, mainly from China and India, to exploit resources, advance the tin mining and rubber industry, and assist in the British administration sector (Shari, 1994; Reddy and Selvanathan, 2020). On the other hand, the Malay did not want to cooperate with the British since they already had a comfortable life in villages. They have fields to grow rice, raise animals and live in close-knit

communities. The British have established their administrative offices in the Peninsula, Sarawak, and North Borneo (Shari, 1992; Lamry, 2016). This period was nascent urbanization because the urban landscape was still in the early stages of urban development (Hadi et al., 2010; Hadi & Ismail et al., 2018). At the same time, a new town was established as an administrative centre that served to regulate districts, states, supplying gifts and daily necessities. The urban population is then divided into two sections. The British occupation was first in the hierarchy, and the Chinese and Indians were in the lower ranks. At that time, locals lived in urban, rural, and suburban areas. Some were looking for limited job opportunities in a city (McGee, 1974; Folks & Jomo, 2013). The Indians were located far away from the city at rubber farms to serve as sources for economic growth. The population was relatively small during the nascent urbanization phase. Then, locals began to learn from urban centres and understand the new way of life, based on the commercial transactions and specific working hours. Meanwhile, immigrants from China and India also learned this experience as they had just moved to Malaya (McGee, 1974, 1969, 1988).

2.14.2 Rural-urban Migration

The extension of education in rural areas occurred in all countries. The migration tendency to migrate to urban areas is higher for those with lower education than the highly educated. The people prefers cities for job opportunities to suit their education level. Transport technology, radio, and film have facilitated farmers to understand the city environment and life. Although there are problems after moving to cities, such as population pressure, lack of land, and limited employment opportunities, the "pull" factor plays a crucial role. Any port in the world never promised any job opportunity to improve its economy. However, the impact of the pull factor on the rural area is increasing. More personal motivation than economic motivation occurred. This migration occurred because they were

no longer interested in the traditional village environment. In addition to the educational hub, youngsters tried their luck in the city having more opportunities, rather than the village. They are categorized as 'innovating migrants'. Besides, motivational pressure factors also caused rural people to migrate. Also, the value and culture of migrants are significant in their preparation to emigrate. They tried adapting their dream, motivation, and culture to the urban environment (McGee, 1975). It depends on the origin of rural society and the nature of the city they moved to. For example, African tribesmen from tribal cultures have difficulties living in industrial cities. Their background in the village does not match the industrial city environment. The factors that make them adapt to the urban environment make them more likely to live with their groups from the same rural area.

2.14.3 Liveable Mega Urban- Regions in Malaysia.

The impact of globalization has given Malaysia rapid growth. Meanwhile, the urbanization process led to many evolutions in the human settlement in Malaysia. Starting from small urban centres, small towns, cities incorporated into urban centres, become mega-urban regions from Klang Valley to Port Klang (Hadi et al., 2011; Idrus et al., 2011). The second conurbation is located in Georgetown, Seberang Perai industrial town across Kulim industrial area, while the third is in Johor Bharu and Pasir Gudang. Most of these urban conurbations have almost 20 million inhabitants. Compared to Bangkok in Thailand and Jakarta in Indonesia, these three urban conurbations are still the smallest (Aziz & Hadi, 2017).

2.14.4 Pseudo Urbanization

The pseudo urbanization phase occurred after World War II. The Malays in villages faced poverty issues after the war ended. Therefore, the urban population became more fertile due to rural migration to urban areas. Labor brought in from China and India was

halted. After the war ended and Malaya became independent in 1957, Malaysia grew swiftly from a poor background without a good education (Shari, 2008; Embong et al., 2011) The Malays began to enter the urban labour market known as the kitchen to work as housekeepers, gardeners, and construction workers in the city (Loebis, 2019).

2.15 The Malay in the Colonial City

This section explained the settlement of the Malays during the colonial era. The development must be humane because it has no meaning if it does not provide a comfortable space for the community, especially for the poor. During the colonial period, the existence of evolution is mainly strictly related to the provision of space (Dahlan, 1997; Shari, 2008). The position of humans in society, either personally or socially, is divided by their respective classes hierarchy. However, emphasis on cultural development and urban planning aspects is necessary so that there are no marginalized groups to create a friendly city. In the urbanization process, urban planners help make space a place. Most urban planners design according to their client's wishes, development rules, and mood but rarely based on the community needs (Dahlan, 1997). All settlements and housings requirements are considered complete upon implementing all rules and regulations. Urban planning should shape the face of development, preserve the memory of the current urbanization process, and contribute to the formation of local community identity. It is vital that promoting culture in physical form is completed to survive, and architectural work contributes to the sustainability of the city and the impact on various races. However, this is not the case in most colonial cities in Malaysia (Fadzil et al., 2016). The colonial development was not considering the local inhabitants. It only relates to the interest of the economic factors that benefitted the British.

2.15.1 The Contrary of Colonial City

The colonists sought to shape urban settlement by replicating their settlement land, known as replica towns. They needed to create it by 1800, had developed in tropical regions like Africa and Asia, and an example of the colonial city existence. According to McGee (1975), there are three types of town development:

1. Town represents a mix and pre-industrial cities. For example, in Kano, an administrative centre of indigenous societies and a colonial organisational structure grafted into the pre-industrial city area already exist.
2. A town benefitted from mineral resources such as in Luanshya, Central Africa. This whole area is the natural industry.
3. The large port town acted as the centre of import and export for the colonial empire.

In Malaysia, British colonial exploratory cities exhibited urban culture conceptualized by the British colony until 1948. It was needed to administer exploration to accumulate wealth, activity, and progress. In addition, it was further linked to the tradition of commercial centres in the province of South China from which the shopkeepers came. The two-storey shop became a residential house upstairs and business downstairs. Grocery stores and wholesale centres, wet markets, transportation service activities, and other necessities are operated by this group (Hadi & Idrus, 2014). The city exploits symbols of progress and modernity that influenced locals towards accepting the elements of Western culture (Wan Yusoff, 2005).

2.15.2 Divide and Rule

Trade and business were operated by the Chinese. The colonial British built roads and urban facilities in major cities such as Kuala Lumpur. Transforming Kuala Lumpur

heterogenetic into an orthogenetic city is not easy. It involved many difficulties and sacrifices. Previously, the heterogenetic city transformed into a traditional orthogenetic centre and gradually changed the urban pattern in Kuala Lumpur between 1947 and 1957 (Nagata, 1974). Population in Kuala Lumpur having various ethnicity and culture needed to be in line with the Malayan cultural image of the time. A new urban society with different racial backgrounds confined a secularized background created from a group that later produced a society that accepts Western values. They detached themselves from the traditional-directed benefits of most Malaysian populations, especially the Malays. Judging from the capacity in economic interest led to the introduction of NEP. NEP policies are only created to improve the social system (McGee, 2009), attempting to balance racial wealth in Malaysia. Meaning that any racial policy that endangers the stability of other races will result in destruction. Eventually, any system that involves only one group becomes a colonial policy, namely a concept of divide and rule, and should be avoided (McGee, 2009; Christie & Noor, 2017).

2.15.3 The Settlement of the Malay Post New Economic Policy

The settlement expansion has grown exponentially after NEP launching. Efforts to compensate for urban and rural inequalities are continuing. The ultimate goal of eliminating poverty among the Malays gathered pace. Socio-economic and physical facilities development are widespread, though it spreads slowly either in new industrial cities, in the city, or developed rural and suburban areas. Various support activities have been created to meet the growing urban population needs. Until the early 1990s, main megacities in Klang Valley, Penang-Seberang Prai, Kulim-Sungai Petani, as well as Johor - Pasir Gudang, have emerged.

Meanwhile, the suburbs have expanded far beyond the agricultural fields. Most agricultural areas have been converted into residential areas, new industries, and even new cities. The land conversion practise led to the decrease in food production. The prospectors from urban areas came to offer the villagers with lucrative offer and the small farmers moved to the city. The new agglomeration of business centre developed in urban periphery. According to Mat Jahi et al. (2016), urbanization of rural and agricultural areas also spread out in all capitals.

2.15.4 Museumification of Malay by the Colonial

Various needs that were not supposed to exist have been created, especially by Westerners who are too afraid of life itself. The Civil War occurred due to the madness of the world's great powers attacking small nations in the name of democracy. In the end, devastating small countries need the help of foreign powers to manage and develop the country faster. Unfortunately, the unrest started, and the country became insecure (Wahid, 2014). After World War II, the introduction of the estate planning concept of human settlement prevented urban poverty and provided a hygienic environment (Tipple, 2000). It also plays a vital role in bringing rural communities to the city. There was rapid urbanization between the 1970s and 1980s in Malaysia, increasing from 26.7% to 34.2% while yielding an annual rise of 5.3% or 2.2 times faster than the national total population rate. The development of the construction industry, manufacturing, utilities, and service sectors mainly contribute to job opportunities. Migration from rural areas is also due to regional developments and new growth centres. The settlement is not only considered a shelter; it is also a structure with a more conducive environment for people who struggle to live. Architecture in Malaysia is still considered new to urbanization challenges (Wahid, 2014). Academics are more confident in making Malaysia a sustainable environment. What does it

mean to be in Malaysia? What is the main focus of development in Malaysia? Are they viable in the physical sense, infrastructure, or humanity? Urban planning is now more focused on the urbanization pace of the transportation sector, human lifestyle, and industrial development, especially in the urban population. Urban areas focus on trade, financial centres, and developed infrastructures. Moreover, it is considered a source of life for people with economic and educational capital. However, it is different for other groups. The city is also a centre of urban poverty, forcing the urban poor to remain in the urbanization process (Wahid, 2014). Formal squatting informal human settlement causes spontaneous unrest to the economy, environment, and human health. Nonetheless, these events have become part of the urban living environment of the developing world. Urban areas have undergone significant changes. Uncontrolled development aggravated the destruction of settlement.

2.15.5 The Colonial City with the Darkness

Kuala Lumpur was said to be a typical colonial city. The trading post of Kuala Lumpur started with the influence of Gombak and Klang River. In 1816, it was one of the cities of a particular order and developed from a mining centre. It then became the colonial administrative centre of the Federated Malay States in 1896. With the rapid development of European-owned tin mines and rubber estates in the early 1900s, European commercial development also drew a graph on Chinese political and economic activity in city development. In 1948, it became the capital of the new Federation of Malaya. Kuala Lumpur has become an immigrant-dominated city in the last century (Moore, 1964; Sendut, 1964 and 1965). According to McGee (1964, 2009), it becomes a place for Europeans and Chinese to dominate through economic activity. In 1957 after independence, an integrative role was introduced. It is not just about politics; it creates a new culture, a mixture of different ethnicities. From this new culture, there exists a country with its uniqueness. From a diverse

mix of indigenous peoples and cultures from the lower and middle classes, it began to overgrow from 1947 to 1957.

2.15.6 Marginalized by Ethnic Distribution

After the British departure and the independence, the formula of counterbalancing the Malay political power with the Chinese and other immigrants' economic power did not work well after independence. The lack of interaction among ethnic groups widened the gap and grievances against one another's powers. The major event that complies with this argument is May 1969 racial riots that brought major shift in the country's political, social and economic life. Malaysian society is multiracial, and countless observers have drawn attention to the unequal geographical distribution of its two major ethnic groups, Malays and Chinese. The overall population of Peninsular Malaysia statistically show most urban areas are mainly populated by Chinese, whereas Malays are primarily concentrated in the rural hinterland (Elhadary et al., 2013; Ahmad & Saringat, 2004). A few main towns, particularly on the East Coast, are mostly Malays, although the city core tends to be inhabited and owned by the Chinese. Those ecological town areas convey Chinese as a typically urban character, whereas the Malays areas maintain a typical rural appearance. It is not without justification that Malays areas within Malaysian towns are usually called 'kampung', whereas Chinese counterparts are given place and street names or sometimes called Chinatown (Evers, 1977, 2013; Anderson, 1987; Christiansen, 2005). The basic patterns of ethnic formation remain the same as in 1947 and 1957 (McGee, 1975). There is no integration of new entrants into the middle class and upper-class group. Currently, each institution has an institutional framework. For the town dwellers, the Chinese who had the dialect of the same community dominated economic and social systems. The population increased by 140,000 from 1947 to 1957, changing the ethnic composition. Thus, Kuala Lumpur still maintains the image of the

Chinese city even with a small community but is considered a talented minority. The rate of various ethnic groups increment varied considerably, in which Malaysian exceeded other nations with an increase of 116.5% (Table 2.2). However, they represent only 18.2% of the total population, dominated by the Chinese. Temporarily, an increase of almost 50% that was 70,000, although it was not a natural increase caused by the in-migration of Chinese in the city.

Table 2.2: Numbers and Percentage of the Main Ethnic Groups, Kuala Lumpur from 1947 to 1957

Year	**1947**		**1957**			
Ethnic	Number	% Of Total Population	Number	% Of Total Population	Rate of Increases (%)	The Proportion of the Total Increase (%)
Malaysians*	21, 989	12.4	476, 15	15	116.5	18.2
Chinese	111, 693	63.4	195, 882	62	75.3	59.9
Indians	31, 607	17.6	53, 506	16.9	69.3	15.6
Others	10, 672	6	19, 286	5.9	80.7	6
**Malaysians include both indigenous and immigrant Malay groups*						

(Source: McGee, 1975)

Rural characters of the Malays and the urban living mode of the Chinese are often noted, described, and explained. Malays always have been rural people who have adopted their lifestyle to the tropical climate of torrential rains and paddy agriculture. On the other hand, the Chinese are immigrants and had to find an ecological niche left by the Malays. They came to Malaya with the expansion of modern capitalism, partly even before colonial rule was firmly established (Evers, 2013). They were left to extend markets, provide labour

for tin mining and the capitalist plantation economy, in addition to finding and settling the communication centres of new political and economic systems, namely towns and cities (Shari, 1992). Thus, a colonial plural society emerged with a labour division based on ethnic. These reasons for the unequal geographical distribution of Malays and Chinese are not necessarily sufficient to explain present-day urbanization under different circumstances. It is due to the abandonment of cultural aspects and the disregarded ideological superstructure. Even if the fundamental socioeconomic structure changes or the present development policy of rectifying the racial imbalance within the occupational and residential structure meets with success, Malays are unlikely to change their way of life immediately, nor is the ethnic structure of Malaysian cities likely to be reversed soon. Although they were lured to the cities by the Malaysian government for job opportunities, the rural Malays still appear to maintain a rural ideology. Malay politicians are known to have admonished Malay civil servants to stay in town after retirement instead of returning to their home villages. Even within cities, areas with a concentrated Malay population tend to preserve their rural character, at least symbolically. Despite frequently crowded conditions, they still built houses on stilts, planted a few coconut trees, and raised chickens (Evers, 1977).

2.15.7 Geopolitics Strategy by Immigrants

In 1947, the Chinese immigrants dominated traditional settlements in the city. Although they were expanding in the cities, the Chinese were concentrated in early settlements, from Market Square to Circular Road in the east and Pudu to Sungai Besi / Cheras Road in the south (Isa & Kaur, 2015). The area boasts a wide variety of settlement and social groups, including densely populated areas of Chinatown and Pudu shops; Tong Shin Terrace, a mix of squatter houses, industrial workshop, shophouses on Iron River, and luxury Chinese mansion or *"Millionaire Row"* in south Circular Road (Sendut, 1966).

The Indians are concentrated in two main areas, one to the north of the city along Ipoh Road in the Sentul district. There is a railway workshop providing job opportunities. Another area is in Brickfields, where labour lines for the Public Works Department and Malayan Railways had been the original focus of this settlement (Stenson, 2011). Malaysia has a relatively small percentage of the city population, concentrating on three ethnic groups. Nonetheless, it has been the focus of many races to stay in Kuala Lumpur. The Malay community is 46% and lives in Kampung Baru, located north of Klang River. It originated as a planned settlement established by the British in the late 18th century. Kampung Baru is a primary Malay settlement with a great mix of population surrounded by hills to the west of the city. Previously, a squatter settlement in Kuala Lumpur was considered a residential ecology. It grew during the Japanese occupation, following economic development through immigrants and workers from China and India. These squatters were built using cottages in urban areas with security, low income, and inadequate settlement and caused many problems with administration (McGee, 1975; Sendut, 1966).

What happen in 1957? The original patterns of ethnic focus are changing. Firstly, traditional city centres are becoming more and more central. The desire to live in the same community of race, language, religion and culture significantly contributes to this continuum. It is common for people to live close to their workplace. It is also one of the critical factors. This area is beginning to increase densities (Hadi, 1994; Wahid, 2020). For example, the Chinese settlement, which started to expand from Chinatown southeastwards to Sungai Besi, has infiltrated a mixed population housed in government squatters. However, Kampung Baru, Pudu, Chinatown, Sungai Besi, Sentul, and Brickfields remain the focus of Malays, Chinese, and Indians (Sendut, 1966, 1968). Political, social, and economic pressures also changed dramatically during this time. Malaysia gain independent in 1957 and it

changed the settlement pattern in the city. The area between Batu Road and Gombak River has been cleared, and a low-cost apartment is underway. However, squatter settlement areas still breed wherever there is vacant land. The push for city boundaries has unified Kampung Ayer Panas, north of Kampung Baru, and increased the Chinese focus in the city (McGee, 1975). Meanwhile, in the east, Kampung Dato Keramat is the focus of the Malay community beyond city limits. The mix of middle and upper-class settlements is growing, divided into four parts; 1) Government settlement areas, such as Lake Gardens, Kampung Pandan, and Merdeka Stadium, are mixed ethnic regions due to the growing government sector in the area. 2) Wealthy settlements such as Kenny Hill, Ampang Road, and Golf View Road are areas for European diplomats and business executives, Malayan administrators, and wealthy Chinese and Indians. 3) The middle-class neighbourhood as in Pahang Road. 4) Lower middle-class like Tong Shin Terrace (McGee, 1975; Sendut, 1966). In 1957, although the percentage of ethnic mix increased for middle to upper-class areas, it included non-Malayans. The river area is still the focus of traditional settlements in Kuala Lumpur. These areas are racially mixed, even though Kuala Lumpur has become an influent colonial city (Nayan, 2020).

2.15.8 Immigrants Take Over the Area

The Chinese connection with the city increased upon rising settlement boundaries in New Village (Kampung Baru) areas, such as Ayer Panas Kampung Baru. Most residents are immigrants from poor labouring classes who moved from rural areas during the Emergency. They face challenges in the city, establishing tradition-directed areas with the benefits of existing communities. The Malays grew by 3% and the Tamils still dominated by a small amount. The number of Europeans is also increasing in 1947, due to additional staff in

European commercial houses, diplomatic relations between countries, and so on (McGee, 1975).

The residential segregation pattern changed dramatically from 1947 to 1957. It is not surprising that during such rapid population growth and expansion of the city, the basic patterns of ecological segregation in 1947 did not change much. Various groups had established the state of the old settlement centre, such as tightly packed shophouses area in Chinatown, Malay settlement in Kampung Baru, and Indian settlement in Sentul and Brickfields (McGee, 1975; Sendut, 1966). The ethnic population grew and maintained 'cultural foci' in most social, political, and economic institutions. These relationships still preserved the traditional elements of each community leader. Simultaneously, the urban area on Western patterns increased, primarily in the hilly areas to the west. It is a wealthy Chinese settlement, new political and elite administrations among Malays, Indians and European managerial and diplomatic groups. The shifting city boundaries in the north and east created Kampung Baru, established in the suburbs during the Emergency. However, it is dominated by the Chinese and only involves slight differences in the community along the border, giving a little ethnic mix in the city (Sendut, 1964, 1966).

2.15.9 The City of No Winners

According to Wahid (2014), most professionals and architects actively promote energy conservation. For centuries, energy conservation has been applied in human settlement design. It is not something new in architecture. Traditional people are well known for using more responsive natural elements in human settlement. The passive design approach, which was already known to the traditional community, and local materials have created a robust cultural tradition, especially for the Malay community. These elements combined have also enhanced the image and identity of a culture and society. However, as

times began to change, various technologies and materials were introduced. Many unique buildings began to emerge according to current conditions and human will (Wahid et al., 2020). Colonial city was created to support urbanization systems for the Chinese and Indians only (Evers, 1977, 2003, 2016). The invaders never care about the Malays suitability to stay in the city. According to Ever (1977, 2003), most urban spaces in Malaysia built by colonists were considered appropriate only for the Chinese. Chinese closed space is very different from the Malays centrifugal space. This urbanization concept is based on their geographical, social, and religion, creating a colonial city image. The Chinese have adapted to the urban system because they have been able to appreciate the full city image and city life in their mind map from the very beginning. The city morphology emphasizes clear structures, boundaries, paths, and activities. The Chinese love to see the city as a tightly knit socio-political unit with jobs, spiritual growth, clan and family ties, dark groups, and so on. They prefer to capture the image of a city with a marketplace. Contrarily, Malay settlements stressed more on informal areas related to the political space and socio-religious, such as mosques, palaces, and cities as nodes. Informal Malay settlement does not have a clear border. For most Malays, *"the village itself and the city"* are existed in their mind (Evers, 1977, 2003; Embong, 2011; Hadi, 2001), aligned with Dahlan (1997) idea of rural mind but urban experience.

Colonial town, arguably a friendly city, could not create the right environment with Malay identity. It is alienated for the Malays, forcing them to change their lifestyle (Hadi, 2001; Embong, 2011). Border colonial cities acted as security gates for the Malays who migrated there. Initially, the Malays felt excited to see the impact of globalization and rapid development in the city. However, it created a sense of insecurity within them. Various laws embodied in the colonial city and migration has put pressure on the Malays due to the fear

engulfing the colonial town. It is under suspicion, causing doubtful among each other. The authority having superpowers then translates it. Eventually, the colonial city only depicts greed, inequality, fear, and violence, symbolizing security gates (Loebis, 2019). Due to this situation, the Malays prefer to focus on their comfort and daily elements (the spirit of life). As a result, the Malays were challenged to adapt to city life, causing them to fall behind. A colonial city built on economic development alone does not suit the Malay spirit. City planners and architects customizing the 'spirit' of the Malays in the urban system must establish urban planning in its life. Dahlan (1997) claimed that most cities had provided only a concept of a Chinese shopping mall that has been slightly adapted to suit the Malaysian community. As a result, the social decline began with an increased city population. Then, forces of disintegration began to cause discord acts on individuals and groups of Malays in the city. Eventually, the city social life was affected and changed, making the life quality less stressful. According to Jahi et al. (2016) and Wahid (1997), a design that neglects or fails to understand the needs and identity of the Malay community must be considered. Although technically, it meets all requirements. It also appeared that most urban planners in Malaysia failed to provide a design that complies with the Malays. Inadvertently, the Malay identity erodes during the urbanization process and city colonial system.

2.15.10Security Gates in Colonial City

Urbanization has seen so many Malays migrated to colonial towns, especially Kuala Lumpur. Do Malays feel safe after migrating to a colonial town? Did the colonial town also welcome them? The answer is no. The Malays migrated for a better livelihood. They worked as drivers, housekeepers, and office boys after arriving in the city (Shari, 1992; McGee, 1975; Wahid, 1997). Colonial town prepared an unsafe condition for Malay identity. Even in the village, at that time, most of their agricultural land had been converted to commercial

farms, causing agricultural prices from smallholders to decline. Therefore, this forced the Malays to migrate to the post-colonial city to find better economic resources to support their families. Some had to stay in squatter settlements by the river and under the bridge to seek shelter. All this they encountered in the colonial city, which was considered a friendly city by the colonial (Loebis, 2019). Unbelievably, the effect is still visible today. Many Malays migrated from rural areas to Kuala Lumpur still living in squatters. Kuala Lumpur became a bustling city and attracted more Malays from rural areas. The rural (kampung) and rural attachment is still strong as practiced by the Malays. They left the city for traditional festivities. Roads are quiet, and activities are slowing down. Meanwhile, the highway heading out of Kuala Lumpur is as crowded as a celebration on the road. The majority are Malays returning to their villages. The village is considered a friendly place in their life. The adventures of living in a village are different from the city, which is their final destination. Later they discover, the city is cruel (Loebis, 2019) and not fit to their lifestyle but still there is the place for them to seek fortune.

2.15.11Alienation in the City

The insecurity and alienation in the city appear when the Malays do not have communication and meaning of their names. They are divided and categorized by occupational status. After that, they were given a uniform with a specific logo for easier identification. They are just a garbage man, security guard, and office boy, without emotional interaction with their names. Moreover, most of these professions are separated from local communities of individualistic life (Loebis, 2019). This situation is very different from their village life. The Malay worked according to their task. Calling the name of the Malays is more similar to gauge their manners and culture. Emotional relationships such as an uncle, aunt-in-law, and others formed familiar relationships with the Malays. They are more

independent and humanity sense. Evidently, the Malays do not classify according to the class to constitute their identity. Thus, the Malays prefer to return to the village to recharge their humanity at least once a year (Loebis, 2019).

2.15.12The City with No Hope

The attachment of the Malays in Kuala Lumpur depends on the role in the city. In terms of demographics, their jobs and social patterns are closely linked through their progress in Kuala Lumpur. The function of a city is to offer job opportunities (Wahid, 2020). At the same time, jobs need to be found and wanted by individuals or groups seeking to earn income. Many factors inspire job searches, such as education, age, and sex. Regardless, in a plural society like Malaya with separated ethnicity from the socio-economic structure created by the colonial, it was difficult for these ethnic groups to break the tradition. In the history of Malays in Kuala Lumpur, there is a contradiction between increasing political power and their failure to create jobs for economic domination. Although they seem to have political power, but they do not have no economic role in the city (McGee, 1975).

In the context of urban divisions, the urbanization process of the Malay village must be seen and understood. McGee's (1975, 1977) experienced in the migration process focusing only on the creation of urbanization process. However, it did not look micro and absorbed the feelings of Malays during the urbanization process. At that time, the Malays made Kampung Baru an entry point to migrate to other part of Kuala Lumpur. The port is said to be an area where the Malays, religious, and cultural community are helping each other to migrate to Kuala Lumpur irrespective of areas throughout Malaysia (Hadi, 2001). Although becoming urban citizens, they have limited experience of city exploration since their job opportunities are more focused on the services sector. For example, a maid has

uncertain working hours and receive a monthly payment. It gave them a new experience working through a new system (McGee, 1975) that is not available in the village.

Then, they received free meals and accommodation from their employers. However, their lives are concentrated only in the settlement and urban kitchen. Contrary to their experience as gardeners and drivers, they have space to move around and explore city life more closely. The rural people experience was more dependent on the forms and structures built up than the ownership of colonial powers. They had broken down the urban landscape according to specific functions controlled by individual communities. Thus, it was difficult for ordinary people to venture into the colonial administration environment (Samsudin, 2013). The Malay was concentrated only in the suburbs, while other races and colonials dominated urban areas completely. They enjoy living in the suburbs, though they cannot explore real life in urban areas. The Malays cannot enjoy the city living pattern subdivided into these areas (Evers, 1977, 1975). The reason is the city itself came from a group of migrants. Other migrant groups are concentrated in other parts of the city. Therefore, every experience in the city creates a different city atmosphere. It is also strenuous for the Malays to continue exploring and enjoying city life during that time (Evers, 1977, 1975; Embong, 2011; Embong et al., 2011; Hadi, 2001).

2.15.13The Poverty Continues

The migration process to the urban reality of the Malay community subjected them to continued living in poverty. The growth of agricultural sectors in the country is still lacking compared with other industries (Lamry, 2014; Shari, 1992; Shamsul, 1997). Efforts to eradicate poverty and prevent urban migration should start in rural areas. Radically reforms need to be implemented in the countryside to avoid the occurrence of Malay poverty

in the city. Also, the rural economy needs to be diversified to ensure economic sustainability in the country.

Then, the Malays rise higher than other ethnic groups after that period. They have successfully transformed the entire population of Kuala Lumpur, becoming the dominant ethnic group (McGee, 1975; Embong, 2011). Ecologically, they are divided between the Malay reserve in Kampung Baru and other areas in urban suburbs. However, a small group of Malay communities lived in ethnic regions in government quarters (Awang Besar, 2014). The Malays are involved in service industries such as gardening, driving, low government and white-collar, clerical occupation, police, and army. At the same time, many urban Malays grow vegetables and fruits to sell in the city market.

2.15.14Limited Political Power

At that time, the Malays political power was minimal. Traditional leaders are said to function only as those living in the British administration and approved decisions made by the colonials (McGee, 1975, 1977). A strong unity supported the Malay community despite differences between aristocrats and ordinary people. McGee (1975) added that they have close contact between villagers in urban villages and the urban Malay, especially during the Sunday market and festive season in Kampung Baru. Islam religion practised by most Malay also played a substantial role in strengthening close ties between Malay communities. Usually, they would pray in the '*surau'* and interact with each other (Evers, 1977). The spirit of *silaturrahim* encourage the unity of the Malays even in urban areas. The Malay community was considered the most extensive community involvement in the city structure in colonial times. From here they organise their connection and set up political party.

2.16 Social Agenda for Malay Settlement

The formation of Kuala Lumpur, either by coincidence or planned by the British, was challenging to keep up with the current urban lifestyle and pace. 1947-1957 saw increase in Malay population in the city, indirectly increase the population in Kuala Lumpur (McGee, 1975; Sendut, 1966). It also leads to higher settlement demand, causing many squatter settlements to exist, mainly in Kampung Baru and its neighborhood (Johnstone, 1981). There were slight changes in the employment sector, but the Malays continued their occupation in colonial times. This immigrant group has dominated the manufacturing and commercial sectors. Although the Malays political power has increased, they remain a minority in the urban economy. The post-independence era saw it as the most rapid change in the Malays city population. Only 18% were born in Kuala Lumpur, while almost 32% of the Malays were from rural areas since 1957 (McGee, 1975).

However, according to McGee's Western perspective without touching on urban issues and said that Malay's migration to the city as a whole is getting momentum. The urban space becomes more complicated by social processes established by the British. The colonial also created two distinguish geographical formations (Hadi, 2001) and separated urban and rural areas. At the societal level, they positioned settlements according to specific geographical conditions and adjacent to each other (Shari, 1992; Lamry, 2004). Relationships and social interactions between ethnic groups only occur when Malays buy goods at Chinese grocery stores. At that time, Indians built the railway line. Indeed, the urban space and its surroundings were strange to the Malays previously (Evers, 1977).

Contrarily, their villages have land surrounded by greenery. It is considered a vast social space from the traditional Malays view of the village. Although the Malays still think of the city as the town of their own, it is still strange for them to live there (Evers, 1997).

This situation was odd for them compared to the Chinese and Indians. They have built their settlements in some regions of the city. Also, the power and hierarchical system of the society caused isolated relationships between the colonists and the Malays.

2.16.1 Independence and Pressure at National Equality

The Malays began to express concern about the increasing number of immigrants. At the same time, they have no right to be involved in the modern sector. However, there was not much that they could do in colonial times because they could not lead their future. They have lost the power in their own country unless those related to Islam and Malay customs. However, in the 1940s, the Malays under the leadership of Dato 'Onn Jaafar began acting when they were forced to accept The MacMichael Agreement to the Malayan Union. Under this arrangement, the position of Malay Rulers, Malay state autonomy, and Malay rights was considerably eliminated. Malaysia was governed directly by Whitehall in London through a Governor-General, similar to Hong Kong. Eventually, the Malays unite to fight the common threat faced.

The Malaysian Chinese Association (MCA) was established in 1949 to protect and advance the interests of the Chinese. UMNO and the Malaysian Indian Congress (MIC) were founded earlier in 1946 (Boestamam, 1983; Salleh, 2015). The integration of three racial-based parties formed *Parti Perikatan*, which finally gained independence from Britain in 1957. The association is based on the division of responsibility, namely balancing the economic power of non-Malays and the political power of Malays. In the beginning there was a conflict, the non-Malays have been demanding equal political rights with Malays, including citizenship, a secular country without a religious background, and English as the official language. The Malays are concerned about losing their position to the new non-Malay citizens and losing political power. Thus, the *"Agreement 1957"* has been achieved,

which stated the Malays acceptance against granting the Federation of Malay citizenship through *jus soli* principle to the Malays born after August 31, 1957 and recognizing the Malays unique position by non-Malays. In addition, the Malays are also willing to share with new citizens together to boost the country economic development. Eventually, immediate citizenship was given to one million non-Malays (Mahathir & Jamaludin, 2004). However, Singapore could not agree on some conditions, insisting that the concept of *"Malaysian Malaysia"* is held against the *"Malaysian Malays"* who fought for the party. In 1965, Singapore left Malaysia and became a republic. DAP still currently pursues the *"Malaysian Malaysia"* struggle in Malaysia. Nonetheless, the Malays economic position improvement compared to the non-Malays did not materialize as expected in which the Chinese won easily. When the Malays took a step forward, the Chinese had gone two-step further (Mahathir & Jamaludin, 2004).

So does their position regarding NEP. As expected, their political parties, such as DAP, MCA, and Gerakan, disagree on NEP. Although, they support its objective to reduce poverty, mainly because it benefits the Chinese poor in urban and rural areas. However, they also see NEP as unfair and discriminatory. According to them, NEP implementation would undermine the Chinese economic power and threaten the future of the Chinese community. It would hinder their initiative and viability, restricting Chinese private investment. The Chinese community is working hard to get what they see as justice, equality, and meritocracy. They also fight to end discrimination and the Malays right (Faaland et al., 2005).

2.16.2 Tragedy of 13th May 1969

The events of May 13, 1969, were dark history for Malaysia. The government introduced the New Economic Policy (1971-1990) to eradicate poverty regardless of race.

Besides, the restructuring of Malaysian society eliminates racial identity based on economic functions and activities. Malay groups such as farmers and fishermen become the modern industry trade. It intends to help the Malays in the production and distribution of income more equitable, balanced regional development, increase employment opportunities, and help the economy of the Malays (Lamry, 2014). The government also set up agencies to help reduce the gap between people. The Malays are expected to compete with other races, especially China's economy. This program is considered successful for eradicating poverty and liberating poor Malays, especially those living in the village. The Malays began to receive benefits such as increased education level, water supply and electricity, increased employment opportunities, and more.

2.16.3 New Economy Policy: The Unfinished Agenda

After the 1969 riots, leaders took an approach to repair the damage. After being forced into oppression, discrimination, injustice distribution of national wealth, and the British exploitation, a firm policy was finally taken. The introduction of the New Economy Policy helped the Malays and other races become more advanced in the economy. It also aims for the Malays to contribute to the economy alongside other ethnicities. The wealth of the Chinese and others are not confiscated. However, the Chinese question- '*why should we help the Malays'?* Tunku Abdul Rahman stated in the Far East Economic Review (1988), *"The Malays have no place in the state of British rule. Their rights are not respected. Malay School were at a very low level of education. The Malays were given education "local" for three and four years.* According to Abdul Rahman (1971), the Malays only learn to grow vegetables, make baskets from rattan ladles, and follow their lives. *Then they will be able to work for survival. There are also rich Malays who can send their children overseas.*

However, most Malays despised by all ... the Malays need help to raise the standard of living".

The time allocated for NEP was 20 years, up to 1990. Then it was replaced by the National Development Policy (DPN) in the 1990s. For the Malays, NEP implementation still did not manage to raise productivity to the level of non-Malays. Without NEP and being alone in the free market, the Malays will be left behind due to the discriminatory policy of the British colonists. Meanwhile, private-sector discrimination is against them. They are incapable to success due to unbended discrimination in the Chinese community. The Malays always have a simple philosophy of life. To them life is temporary, and acquisition of wealth and religious reason are sometimes not carefully observed. It only confirms that the British managed to brainwash the Malays. They are considered lazy physically and mentally, just living decently in the village, imagining a happy life and riverside meadows. They are only fighting over a small toll collection while the rich mines plundered in front of them without gaining anything in terms of wealth, jobs, and a higher living standard. Currently, the Malays lost again. They are still left behind and should not have suffered defeat. Surrendering this fight might cause the Malays to become slaves in their own country, both in politics and economics.

2.16.4 The Challenge of New Economy Policy

From the early years of British rule in Malaya, the state economy production was organized in two lines. The West founded the modern sector and integrated it with the world economy and advanced business system, developed according to the current situation. However, the agriculture economy is further classified by its enclave, separated and indirectly connected to the outside world. Tin and farm sectors are expanding, while commercial and industrial sectors are growing in the city. Though the traditional industry

has not moved, it has deteriorated as more people occupy the land due to the population increment. The revenue gap between the two sectors is growing. It is imbalanced and infects social and cultural differences. According to Faaland et al. (2005), Malay agriculture supports urban society, but the British government policy was unfair to the agricultural sector compared to other agricultural industries. The Malays are the most vulnerable to poverty, but they are also the last to receive any aid. Many people in rural areas are without electricity, roads, clean water supply, and so on, which exposes them to various diseases.

According to Abdul Rahman (1971), Europeans, Chinese, and Indians are mostly involved in the modern economic sector and work as entrepreneurs, managers, and employees in firms, farms, and trading companies. Meanwhile, the Malays engaged in the traditional agricultural sector and fishermen with low incomes. They began to engage in current income after the job reserved by the British as police and military. However, these jobs did not attract non-Malays due to low salaries compared to the private sector controlled by their ethnic group. Social discrimination and racism toward the Malays through business and industry groups controlled by non-Malays existed in various forms. In business, British and Chinese bankers refused to serve them because they were deemed to have no experience so as in wholesale, retail sales, export and import business, they are not allowed for business associations. Although the Malays find a job in the private sector, they are ignored due to racial, language, and cultural discrimination. Many Chinese shops refused to appoint Malays workers. Only low-income jobs are offered in the city, such as gardeners, drivers, general labour, and security guards (Mahathir & Jamaludin, 2004). Colonization is one of the reasons that caused the poverty among the Malay. If a society does not progress while others continue to advance, the old organization will be left behind as currently occurred to the community. Once political power was slipping from Malay to British colonists, the fate of the Malays

darkened. Unconsciously, they carried out policies that rolled back the Malays. Foreign communities were encouraged to come to Malaya by the British, working in the rubber fields and mining. Immigrants like China and India monopolized small businesses under British rule. The Malays were not allowed to enter the area and were blocked from various angles. Therefore, the Malays development is far behind the Chinese (Abdul Rahman, 1971).

Overall, the non-Malays managed to seize the opportunities available in Malaysia. For the Malays, the chances are not directly in their favour. Over time, the economic disparity has widened. The system needs to change, allowing the Malays to participate and benefit from the rapid economic development in the country. A good record in racial relations exists among diverse races, religions, and languages since the British and non-Malays would not openly challenge the political sovereignty of the Malays daily life-related matters. It ensures the Malays feelings are not offended. People usually separate their personal life and work. Colonialists have large international monopolies, farms, and mines. Upon arriving in Malaysia, they realized the usefulness of Chinese and Indians for them. This society can provide the infrastructure for European economic activity, mediating a platform for the Malays. The wealth accumulated by the Chinese also made them a good market for British products. After that, the Malays began to push away from the city and urban centre. During this process, the political and economic status of the Malays began to decline, while the economic and political power of the Chinese escalated (Mahathir & Jamaludin, 2004).

2.17 The Malay Settlement

Ritter (1779-1859) in Doxiadis (1974) claimed that rural settlements have been the functional and living space of human existence since prehistoric times. The systematic review of rural settlements began only in 1920 by Paul Vidal de la Blache. Moreover, the

Commission on Types of Rural Habitation (IGU) was formed simultaneously. The first report in 1928 attracted many researchers. However, the study of settlements is still experimental. The village integrates four elements, namely the place and house, besides infrastructure and public facilities. The place is a location of an area, known as a site. Land conditions, in turn, affect settlement prices, supported by infrastructure and road networks. The following narratives explains further the type of settlement and it pace of formation and characteristics.

2.17.1 The *'Desa'* Setting

There is no clear geometric arrangement in the village arrangement. Instead, interactions and social relations, culture, and way of life define a village. The definition of open and private village areas is unclear and overlaps. Boundaries between communities are also indecisive, although drainage and irrigation determine paddy fields (Harun, 2011; Hanafi, 1986). Children can play safely around the house and in open areas. Coconut trees surround the environment, and other trees provide shade allowing outdoor space during the afternoon. In planning and designing a village, it is essential to know two main things, village and community contexts. The relationship between the village and the community needs consideration to ensure success in future community development. The role of landscape architects is to create a landscape design while simultaneously creating a competitive and lasting community (Sendut, 1961, 1962; Abd. Rashid et al., 2018). Village transformation is necessary, responding to the government call for rural development. However, social aspects such as the community and local spirit should be considered in the planning and design of the community landscape. Landscape architecture emphasises the physical environment that supports community activities pursuing local identity.

Also, three vital elements of the environment can shape the understanding and context of the Malay village (Harman Shah & Wahid, 2010):

i. Informal environment

ii. Implied identity

iii. Floating space phenomenon

Today, most environmental management formally divides the category of environment. It can be seen either at the macro or micro level. The former officially separated most trees and fields from other activities. However, traditional communities rarely have boundaries and divisions in creating an environment. Identity is one of the significant differences between the conventional wisdom used by the Malays and the Western communities. Western culture emphasizes explicit things such as clarity and exposure. The Malay community, in turn, adopted a more expressive, gentle approach with various elements of implied meaning. It emphasizes the aspects of myths and cosmology in the formation of society and the environment.

2.17.2 The Past of *'Desa'*

The settlement pattern can divide into spontaneous and planned. Before World War II, this type of village reflected the efforts of various ethnic and cultural backgrounds that had left their mark on settlements. Communities settlements are closely linked to farming activities and planned arrangements (Sendut, 1961; Shari, 1992). Ethnic identity and rational functioning have merged while traditional Malay villages also carry-on rubber cultivation. Village settlements are irregular and informal, though some landmarks may help identify the building orientation. Every settlement looks harmonised with the environment. There is no main road in the village except the entrance. Instead, only small alleys link the villages, houses, and other surrounding communities. The lanes are organically pathways (Shari,

1992; Wahid, 1999). The '*desa'* is the minor community settlement in terms of population. The village is a suburb, traditionally supported by agricultural activities such as paddy fields, fishing, rubber, and oil palm. It may seem clustered by observers, but the character makes it unique and unseen in the city (Putra, 2018; Harman Shah & Wahid, 2010).

2.17.3 The Formation

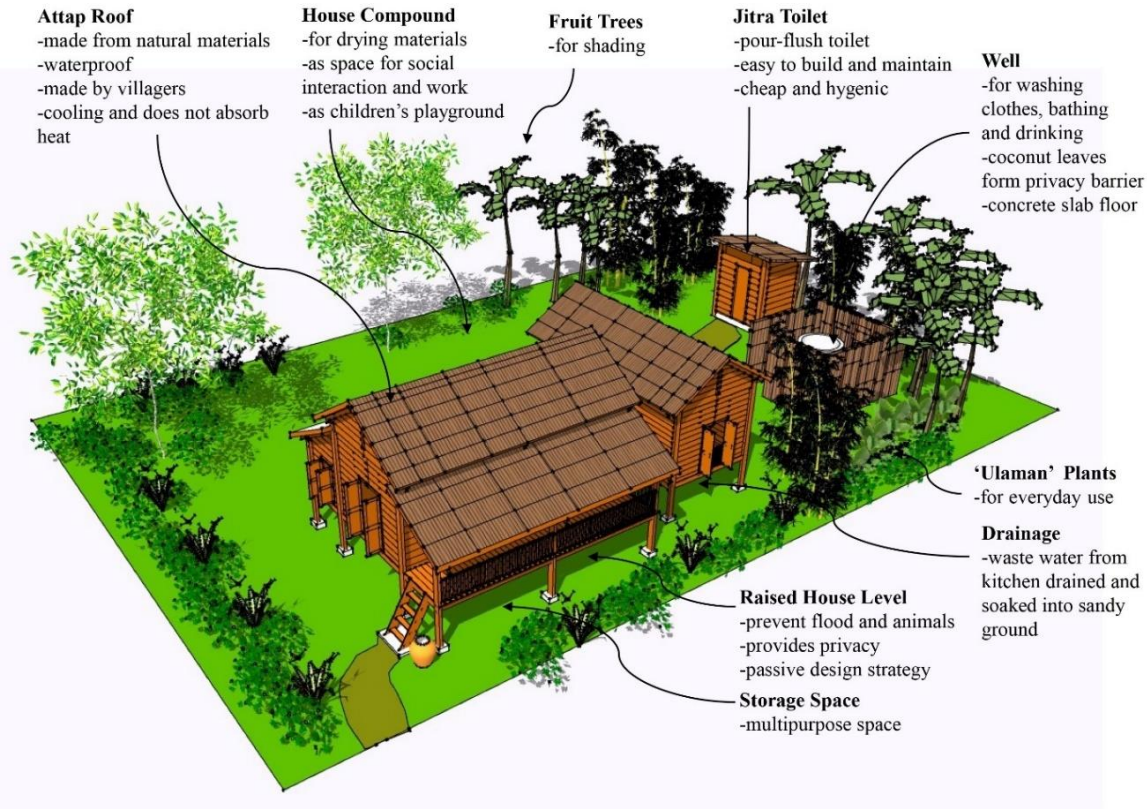


Figure 2.9: Malay settlement compound (Source: Abdullah, 2019)

A typical village environment in Malaysia consists of a house, a tree that grows naturally, a yard, and a natural path connecting a home. The houses are similar, and the atmosphere is harmonious with the surroundings. The connection path is organically natural in terms of building materials and spaces (Harman Shah & Wahid, 2010). It naturally formed without specific classification. Public and private spaces did not divide by physical elements such as fences (Figure 2.9). What exists is probably just a sense of territory. There is no

precise geometric arrangement, symmetry, or description of a village (Harun, 2011; Hanafi, 1986).

2.17.4 Types of Malay Settlement

There are several elements to consider in defining village settlements.

i. Population composition and ethnic group.
ii. The basics of economics and jobs.
iii. Settlement pattern.
iv. Physical properties and location.

The types of settlements commonly found in Malaysia are as follows:

2.17.5 Farm Village

These settlements typically consist of several patterns, such as centred, linear, and scattered. Some villages are located in oil palm and rubber plantations, where some residents work in the fields. Villagers also grow other crops such as vegetables, fruit trees, coconut, and spices for personal use. This type of village is well equipped daily facility, and they do not rely on outside providers. These villages existed during the colonial era. Originally, paddy cultivation was a significant activity while additional crops were grown for their use. However, after independence, the farming pattern changed. Many villagers, especially in the Southern Peninsula, do not plant rice anymore; instead, they use paddy land to grow lucrative crops such as rubber, oil palm, and coconut. The pattern of farm village differs according to the type of crops planted in the plantation.

2.17.6 Fisherman Village

The Malays are seafarers, turning to the sea for their livelihood. Most of the population along the river are working as fishermen. In Malaysia, fishing villages are the

focus of traditional houses. The house was built by a similar carpenter using local materials since certain forms reflected the heritage concept and cultural significance. The socio-economic of fishermen can be seen from three perspectives: the ownership of fishing gears (boats, nets, and other equipment), the boat owner, and the worker. Some fishermen have no fishing gear, using only their limited resources. These advanced fishermen are relatively small compared to conventional fishermen. In addition, the fishing community is categorized into large and small fishing vessels. Large vessel requires large amounts of capital and vice-versa. In terms of technology, the fishermen apply both modern and traditional techniques. Those who have large capitals are equipped with advanced equipment to maximize their income. The houses of fishing village are very basic, and the arrangement are close to the river.

2.17.7 Traditional Village

The traditional village is an unplanned or organic settlement with simple housing structures. Interestingly, their boat-repairing knowledge acquired can be used to repair their houses. This circumstance is the origin of a fisherman traditional village. It can be traced back to the early explorer who settled at the riverbank, later accompanied by their relatives. Before long, the number of houses increased and became a village. Nowadays, the traditional village accommodates numerous people who are mainly involved in urban activities with poor physical and slump conditions. The fishermen spend most of their time at sea, reaching back home later in the evening tiredly. According to Wahid and Harman Shah (1989), fishermen only spend 18 days in their utmost lucrative catch due to the weather, net mending, and participating in social events of the village. Thus, the time taken to focus on the settlement is very much affected by their daily activities.

2.17.8 Well-Planned Village

Currently, various housing concepts have been developed in Malaysia. Among them are housing projects developed by the government such as Projek Perumahan Rakyat (PPR), Projek Pembangunan Rakyat Termiskin (PPRT), Projek Penempatan Rakyat Setempat (PPMS), and settlement projects in rural areas with the concept of Projek Rancangan Kampung Tersusun (RPT). The development of these mentioned projects is mostly in rural areas. It aims to balance rapid development in urban areas with rural areas. According to Aziz (1988), it is one of the government agendas in developing rural areas to solve the backwardness and poverty problems. The program also also aligned to the National Economic Policy that is to narrow the gap between those living in rural and urban area. In reality, rural communities are synonymous with poverty. Planned Village or 'Kampung Tersusun' was initiated after the Emergency in 1968.

2.17.9 Aboriginal Village

The Aboriginal Village is an unplanned native settlement located in remote areas near rivers and hard to reach by the transportation network. The settlement pattern is scattered, and indigenous people live in nomad communities. Their daily activities are self-sustained, such as farming, hunting, and fishing. However, bridging the gap of rapid development and mainstream society requires placing the Aboriginal community at all stages of development, from the most basic life to a community on par with mainstream society (Benjamin, 1976). Currently, Rancangan Penempatan Semula (RPS) brought the Aboriginal community into the mainstream, moving them from the hinterland to the suburbs. According to Carey (1976), the British implemented a resettlement policy of indigenous people out of the forest before establishing RPS. The policy aimed to maintain national security, namely, to prevent the movement of communist terrorists among the Indigenous people and restrict

the development of subversive influences. The RPS was planned in the mid-1970s to regroup the Aboriginal people living along Tititwangsa since their village demise due to dam construction. Therefore, the objective of resettling Indigenous people has changed from maintaining national security to improving the socio-economy of the Indigenous community. Unfortunately, the efforts have transformed the settlement environment of the community from a forest to a socio-economic development environment planned by the government. These environmental changes cause cultural shocks and difficulties for Indigenous communities adapting to new environments (Hassan, 1989). This circumstance occurs because they lose their life skills previously practised since they are not suitable in the new environment after relocation (Asnarulkhadi & Hanani, 2008).

2.18 The Pattern of the Malay Settlement

The village formation in the rural is a unique form of the living environment. They could form a comfortable life without being influenced by any modern foreign element. Hamzah (2001) stated that *"kampung"* and *"desa"* are two different things, distinguished by their respective location. *"Kampung"* usually refers to a residence near a city, whereas *"desa"* refers to a rural residence. The former may represent the vicinity of a city, but the latter is not appropriate for a suburb (Hamzah, 2001). Three types of settlement patterns can be identified in the village area, namely cluster form, linear form, and scattered form (Ministry of Housing Local Government, 2010). Cluster forms are forming through settlements that are more focused on open space. Usually, this open space has a mosque, prayer room, or place for the community to perform (Figure 2.10).

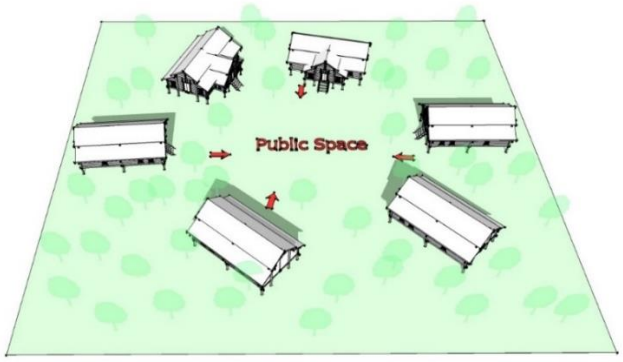


Figure 2.10: Cluster pattern. (Source: Edited from Pelan Induk Kampung Tradisional dan Penempatan di Dalam Kawasan Pihak Berkuasa Tempatan Semenanjung Malaysia, Local Government Department 2010. Drawing by: Abdullah, 2020)

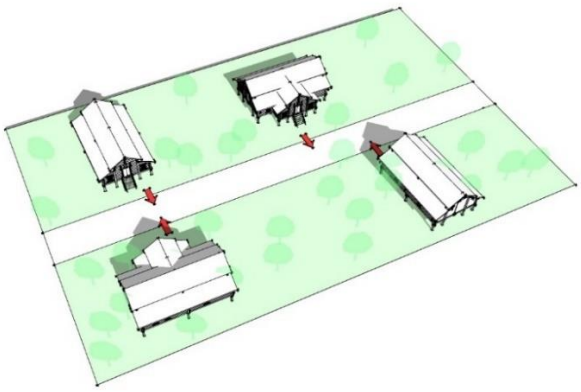


Figure 2.11: Linear pattern. (Source: Edited from Pelan Induk Kampung Tradisional dan Penempatan di Dalam Kawasan Pihak Berkuasa Tempatan Semenanjung Malaysia, Local Government Department 2010. Drawing by: Abdullah, 2020)

The open space also serves as the centre of the village activities and community. Linear form patterns are often found near roads or along rivers. Linear form settlement develops through the transportation system, which is crucial for villagers (Figure 2.11). On the other hand, scattered form or unclear is produced since the settlement area does not have a clear physical boundary (Figure 2.12). It is also the basis of village existence. Usually, it is located far away from roads and rivers, unaffected by geographical factors. This pattern is mostly found in foothills.

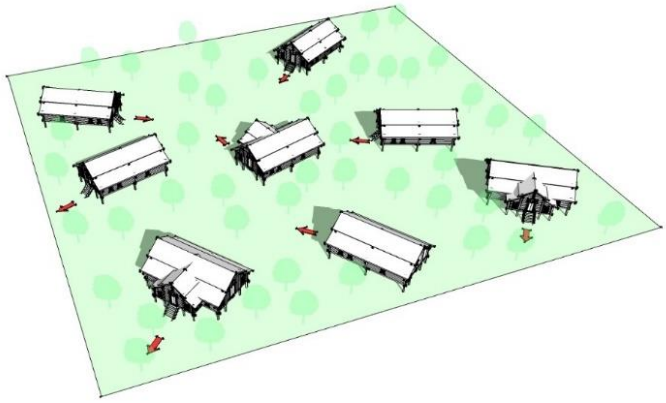


Figure 2.12: Scattered or unclear pattern. (Source: Edited from Pelan Induk Kampung Tradisional dan Penempatan di Dalam Kawasan Pihak Berkuasa Tempatan Semenanjung Malaysia, Local Government Department 2010. Drawing by: Abdullah, 2020)

In Malay settlements, followers of the Sultan mostly live around the palace in the urban area. Being a short distance from the palace led them to establish a settlement. At a small scale, initially, it grows according to population. The area around the palace eventually became an active area with various activities by the villagers. The palace is built near the rivers in near the city, regarded as ideal locations, such as Kota Bharu and Kuala Kangsar. The river is convenient in terms of communication and access to the city. According to Aziz (2010), the size of a settlement determines the symbol of a government. It shows the government strength in terms of power and wealth possessed by the Sultans. The settlement pattern during that time was built in clusters based on the number of family members and relatives. This approach ultimately combines a harmonious atmosphere with its surroundings, including humans and nature.

2.18.1 The Malay Settlement Compounds and Boundaries

There are different character regarding layout and settlement patterns in the Malay settlement area. No physical boundary determines a village, except for small informal streets. Hamzah (2001) mentioned the term 'boundaries' or translated as '*sempadan', 'had'*, or

'takat' means separation or level between areas. The street is also decorated with plants, such as trees and daily vegetables. These informal streets create social interaction among people and pass through every settlement. Therefore, this area becomes an interaction medium among residents, asking about their daily activities and problems. These small lanes trigger a neighbourhood that strengthens interaction in Malay settlements. According to Wahid (1996), several local social grouping units formed in the Malay village is very useful. It has its character that can help identify the village. The concept is, the village is not only a spatial demarcation; it also gives a sense of belonging through the place that exists in the term *'berkampung'*.

2.18.2 Religion on the Malay Settlement

Religious beliefs are inseparable from every human soul, as in the Malay community, playing a significant role either individually or in a community group. The purpose of religion is peculiarly strong in Malay Kelantan identity. Based on their day-to-day activities, attending religious lectures is a cultural event. This attitude made them known as a religious community. Therefore, for example Kelantan is famously known as *'Serambi Mekah'*. Initially, there were numerous Islamic studies huts *or "pondok agama"* established by scholars. This concept influenced the Malays mind and souls to religious interests, culture, and tradition (Kling, 1989). The advent of Islam strengthened the Malays belief in the existence of God and the supernatural. This understanding is the essence of religious life. The firm conviction in *Tauhid* is the backbone of *Aqidah* for the Malays. The Islamic religion, faith, and compassion have become synonymous with the Malays spirit. Through religious belief and goodwill, there exists a relationship between man and God, in addition to human-to-human relationships (Kling, 1989).

Religious beliefs have produced various daily activities or seasonal celebrations. The ritual activities include '*fardhu ain'* such as daily prayers, Friday prayers, other ceremonies such as *'doa selamat'* and funeral. Moreover, there are also seasonal activities celebrated by every Muslim, such as Hari Raya. Therefore, the space within the settlement also considers factors that facilitate the event (Wahid, 1996). Religious activities can create healthy relationships. In villages, the religious movement becomes a medium for strengthening community relations. Construction of the *'surau'* and mosque usually built at the village centre provides convenience for religious activities (Local Government Department, 2010). Villagers gather and perform their duty to God, performing the *'tahlil'* and prayer, in addition to talking and greeting each other. This strong social bond is not only among adults but also among children, regardless of gender.

For the community, the entire space in residence has a relationship with religious activities. According to Wahid (1996), the Malays are praying five times a day, needing water for ablution. The cleanliness factor is particularly emphasized in the Malay community. The bathroom location should be in the appropriate area of a residence. It is not only for ease of ablution but also for privacy reasons. When it comes to ceremonies, women should not mix with men. Both bathroom and washroom should be located appropriately to prevent men from entering the women field. Thus, the Malays contemplate the zoning division between public and private in the design area. Most washrooms and bathrooms in traditional settlement designs are built outside the home. However, such plans are no longer practised currently for various reasons.

2.18.3 The 'Desa' Sustainability

The village is competitive and sustainable through farming, rice cultivation, fishing, and agricultural activities, to name a few. Ismail (2015) explained that every community in the village usually adopts a traditional lifestyle. The village lifestyle is a tradition that has always been practised and sometimes inspired by city life. In contrast, anthropologists such as Firth (1943) argued that a village depends on the people relationships and daily activities to the source of the natural materials. According to Rapoport (1981), the cultural expression changed continuously and simultaneously with the meaning of a building or village. However, such a replacement is not a drastic change, but something is constantly changing, either permanently or not. In this context, Rapoport stated changing culture and life views also caused other related things to change.

2.18.4 Sense of Neighbourhood

In the village the formal social hierarchy is the Headman *(Penghulu).* The leader is responsible for the affairs of local people and has a legal relationship with the government. Villagers have established relationships with the community, where they are comfortable and feel that the village belongs to them. These relationships sparked a sense of community in which they can engage in activities together, whether formally or informally. This situation reflects the local community identity in their way. Characters are not found elsewhere, give meaning and a sense of place to the local environment. The latter is evidence of the village environment. Unique characters unavailable elsewhere reflect their activities and way of life concerning the nature and values of the surrounding context. The physical environment is an aspect that needs consideration to ensure the local spirit remains. It creates a style of vernacular design that has a different manner than vernacular and modern. It also has a distinct sacred and profane compared to the contemporary style. However, they all

depend on the situation of landscape, trees, grooves, hills, rock, and water (Rapoport, 1990). The physical environment characters in the village include houses, businesses and shops, institutions, gardens, playgrounds, and others. These places of attractions are landmarks where the community is comfortable and carries out daily activities together. It is crucial to ensure that the village environment is sustainable in the future. Valuable aspects that reflect the village atmosphere must maintain despite progress. In other words, development does not necessarily make the village more like a city; the local community reaction also needs deliberation.

2.18.5 The 'Armchair' Development

It is important to note that any human settlement in Malaysia or anywhere else does not exist by itself. It has a close relationship with nature and the environment. Human settlement in terms of the situation alone has no impact on development planning. It has to consider various aspects such as appropriate standards determination, cultural understanding and requirements, and community needs such as economic, social, administrative, and political aspects. According to Harman Shah and Wahid (2010), three main problems lead to environmental instability. The first is differences in approach, language, and information used; secondly, different strategies and communication; and thirdly, separating nature from environmental nature. Differences in language refer to the presentation method and the type of information used in these fields. If planning is an impossible field, there is no doubt about the scientific method of the environment elemental analysis. As a result of language differences and this type of information, opinions from other parties would be troubling to shape the continuity between development planning and environmental management. When a society starts to question the understanding of an issue, it causes them to ignore the issue

since the information received is not clear to the public. Therefore, it is not surprising that a well-supported development plan does not necessarily benefit the global environment.

2.19 Conclusion

The existence of dynamic human settlements depends heavily on human needs to obtain daily necessities. The Ekistic Theory introduced by Doxiadis (1972) has primarily dismantled the factors of settlement existence through five principles. Western theory dissects many factors of settlement's existence fundamentally without discussing the cultural aspects in depth. Nevertheless, this situation has been balanced by Rapoport (1980), who injects elements of the built environment more comprehensively through the cultural context. This is different from the theory of urbanization put forward by Eastern scholars who discuss a lot about the effects of urbanization on the Malays in a more focused manner. The discussions produced by them are seen to give a picture of the Malay race in the face of the pace of urbanization. However, these theories do not discuss the impact of urbanization directly on Malay settlements. It is more of documentation on the chronological incident and evidence led of the social, cultural and political entity towards the three major race in Malaysia during the British rule. The discussion formulated in the Literature Perspective starting from human settlement theory and phenomenology, the discussion is linked to the causes of settlement loss, urbanization, natural disasters, and Malay settlement (Figure 2.13 and Appendix H). It gives the overview of the early scenario of the discussion on the case study area that appear in the chapter after Research Methodology. The next chapter will discuss the research methodology on Malay settlements in Kota Bharu.

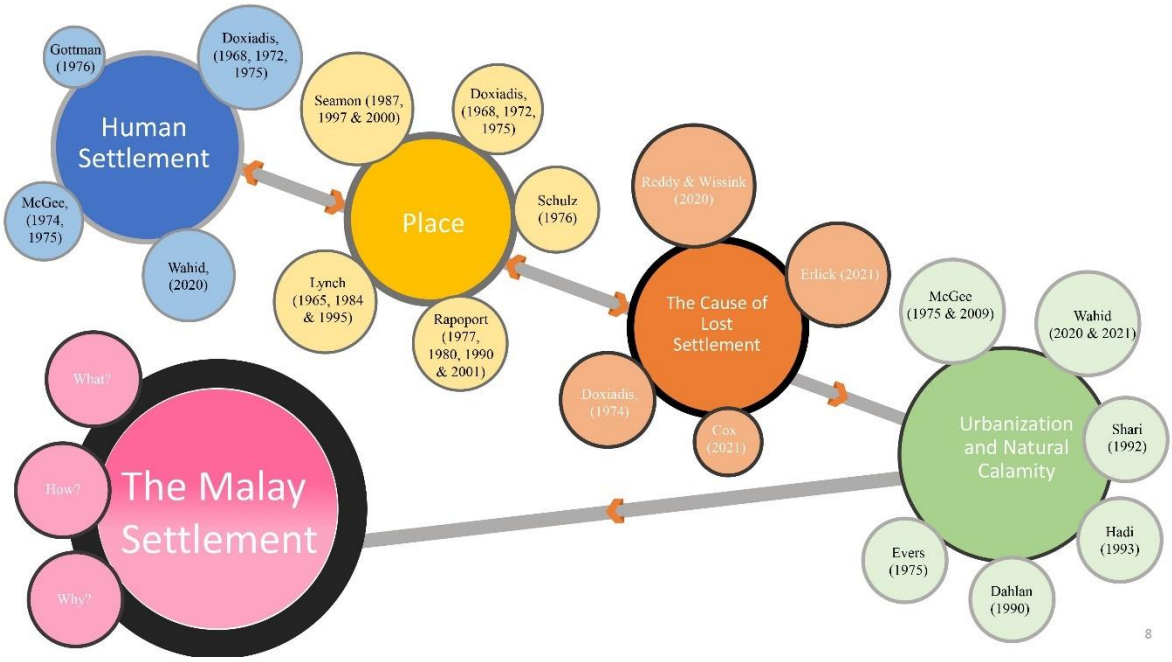


Figure 2.13: Summary of the Literature Perspective framework (Abdullah, 2022)

CHAPTER 3

RESEARCH METHODOLOGY

The previous chapter focuses on literature explaining the theory, evolution, and factors related to the growth of the human settlement. In this chapter, the researcher attempts to describe data collection techniques in order to give a clear overview of the process. To link the objectives and research problems as discussed previously in Chapter 1 and the importance of Literature Perspective to uphold the thoughts, this chapter begins to relate the relationship of the study's objectives as a basis for the underlying significance throughout the study. The main focus of the study is (i) To explore the consequences of urbanization and natural calamity on the Malay settlements along the river fringe, (ii) to examine the pressures of urbanization and natural calamity on Malay settlements destruction and (iii) to analyze the impact of urbanization and natural calamity on the settlement's destruction on architectural values in the area. Generally, it aims to provide insight into Malay settlements in the future and the consequence of current situation in the Malay settlements. The literature illustrated the settlement principles, defined by topography, economics, culture, and ingenuity of the people. From the overview of literature, the technique of collecting data can be related closely in order to speed up the process.

3.1 The Research Team

The study was conducted in early December 2019 at Kampung Atas Paloh, Kota Bharu, Kelantan. During the fieldwork, primary data was obtained from questionnaires distributed to villagers assisted by the Headmen. Several research assistants are chosen among the villagers based on their age, influence, and social reputation. Their assistance and presence helped to develop trust among the villagers and smooth communication with the

locals. The survey started with the distribution of questionnaires to the villagers (18 years above) with the help of the assistant. Each assistant was selected from the village of the case study area. Hence, each assistant can stipulate more accurate and in-depth information on the case study area since they are more knowledgeable about the intricacies and environment of their surrounding community. The participant observation technique was employed to understand the day-to-day activities and routines of the community. This technique has been applied by previous anthropologists and urbanologists like Malowski (1956), Wahid (1996), and Dahlan and Baharuddin (1980). The researcher visited the study area frequently to get an in-depth understanding. Although the researcher was raised and bred in the same cultural background, he had left for quite some time to pursue his education and eventually returned to re-observe the area during this fieldwork. Therefore, it is easier for the researcher to record the daily community activities. Besides, it seeks to document and gather accurate information about the community and neighbourhood, together with the implication of their daily livelihood concerning dependency on the river fringe.

3.2 The Case Study and the Malay Settlement in Kota Bharu

There are eight settlements selected near the river fringe as the case study to illustrate the setting of the Malay settlement in Kelantan. The location of the settlements area is around (i) Kampung Atas Paloh, Kota Bharu, (ii) Kampung Menuang, (iii) Kampung Kubang Pasu, (iv) Jalan Post Office Lama, (v) Kampung Masjid, (vi) Kampung Tok Semian, (vii) Kampung Haji Harun, and (viii) Kampung Pengkalan Pasir, (Figure 3.1). The 2014 massive floods in Kelantan caused historic changes to the river fringe and directly affected the settlements. After seven years of the great flood, the area experienced demographic changes as well. The researcher also used the i-town website to look at the current state of land use in Kota Bharu, which was primarily agricultural. Different physical forms in architectural

values are also a significant factor to select the settlement. It provides a realistic picture of the people living along the river fringe. Each settlement has its own story due to its impact on the environment. In addition, economic, social conditions and the number of family members living together narrated the story of the settlement for it describes a single functioning, although it changes due to factors influencing the evolution as explained further in Chapter 5.



Figure 3.1: The case study area (Source: Abdullah, 2021)

This area was selected since it is among the old settlements in Kota Bharu and rich with cultural, historical, and architectural values. Therefore, the researcher has a deep understanding of culture, communication, and a sense of place in the case study area. It was also identified as the early Malay settlement of Malay city located on the Kelantan River and Budor River fringes. The case studies are suitable for the research title due to being located

in an urban area near the river fringe, having Malays as the major population, and being directly impacted by natural calamities such as floods. Besides, the frequent flooding occurring in the study area almost every year is one of the contributing factors to its importance. The worst flooding in 2014 (Berita Harian, 2014; New Straits Time, 2014) caused a lot of damage to property, causing the river fringe to erode badly. Previously, the Kelantan River was a platform to connect and create cultural values and activities through rivers and cities. However, this culture has become lost due to increasing global challenges and urbanization in Kota Bharu. Without a solution to this problem, this culture will likely continue to disappear under the Industrial Revolution 4.0 challenge. Industrial Revolution 4.0 refers to an array of 'new' technologies that sound smart and make us feel out of date and marvel at the future: technologies like blockchain, big data, artificial intelligence and the Internet of Things. This technology predicts changes that will change every part of our lives. But is this technology able to help develop the Malay community? The researcher point is that the identity of the study area is being eroded at present. Even though there has been much technological development, it has not significantly impacted the Malay identity and culture development in the study area. Further detail of the case study will appear in Chapter 4.

3.2.1 The Selection of Research Area

An in-depth inquiry that aligns with the study objectives is needed to portray a clear profile of the human settlement. A Malay settlement along the river fringe has been selected for the case study to ensure a highly focused, in-depth investigation to uncover the intention of the study as mentioned earlier. It aims to find more detailed and rigorous information through various methods and techniques. As a result, several reviews and visual analyzes is conducted to achieve:

1. The planning origin in settlement area:
    a. Kota Bharu, Kelantan - the area along the river fringe in Budor River Village, Kota Bharu, Kelantan.
2. From the case study, five elements were studied in detail according to the hierarchy of physical human settlement, the relationship between physical space, neighbourhood, geographical connection with human settlement, and socio-culture influences in early human settlement development in the research area.
3. To record and respect local communities' interactions with the built environment, such as the impact of river fringe areas on daily lives.
4. To record the socio-economic of the population in the study area impacting their settlement.
5. To highlight socio-cultural variables, whether the nature of causal factors and cultural heritage is preserved, changed, or lost due to changes in geography and river conditions, lifestyles, urbanization, and impacts on the Malay population community at the river fringe area.
6. To examine the people's responses, dreams, and hopes regarding traditional cultural development, the future of human settlement, and possible future contributions.
7. To examine and record the human settlement changes using land survey techniques in identifying the origin and evolution of human settlements by formulating the "why and how the change will happen" question in the case study, resulting in several expectations on future impacts.

Both architecture and urban design imply a broad picture of human settlement. The technique commonly used in architecture and urban design analysis is applied to

comprehend data in the case study area. A detailed explanation is described in the next sub-chapter.

3.3 Research Strategy

There is a thousand way to paint an elephant, furthermore research work is an art (Othman, 1980). Therefore, before the researcher determines the research approach, studies have been done to identify the appropriate methods for this study based on the context of similar studies on human settlement, urbanization, and anthropology. Previous studies conducted by scholars such as Wahid (1996), Dahlan and Baharuddin (1978), Dahlan (1997), Shari (1992), Wahid and Harman Shah (2002), and Karsono (2002) found a similar research approach. Although different contexts, accurate research methods are essential to determine the direction and ensure that the study objectives are acquired. The technique of inquiry applied by other researcher can be a useful knowledge to conduct the research of similar kind. Mostly, previous scholars use fieldwork as the research method.

3.3.1 Research Implementation

This sub-topic discusses the research implementation involving strategies for data collection. There are three phases of data collection namely:

(i) Phase I requires forming a conceptual theoretical framework.

(ii) Phase II is about pre-investigation.

(iii)Phase III is the final investigation.

3.3.2 Phase I- Conceptual Theoretical Framework

This phase involves knowledge incrementally to generate the frontier of knowledge as described in Chapter 2. Conceptual Theoretical Framework is a crucial process, consisting

of a strategy that provides a link to answer research objectives. To proceed with the inquiry, Pre- investigation on the research process is implimented.

3.3.3 Phase II- Pre-Investigation

Phase II involves three main aspects, namely:

a. Conceptual Theory

b. Pre-Observation

c. Pilot Test

Once the researcher has identified the level of studies, obtaining information and documents commenced. This phase is a fraction of the passive study level as described by Dahlan (1997). After identifying the conceptual, theoretical framework, pre-observations are conducted in the study area. Then, the pilot study technique subsequently to test the effectiveness of the questionnaire designed before the actual study was conducted (Creswell, 2014). On the other hand, the pilot test is to evaluate the concept, test the feasibility and acceptability of study as designs earlier and proof-of-concept before actual research begins. Findings from this test portray an idea of whether variables used are appropriate or otherwise. A simple and open-ended questionnaire are crucial to avoid confusion among respondents. Emphasizing the question structure is necessary to avoid lengthy time and complexity.

3.3.4 Phase III- Final Investigation

This phase is a breakdown of the investigation of the research. It contains quantitative and qualitative data collection. Figure 3.2 shows a summary of the three phases.

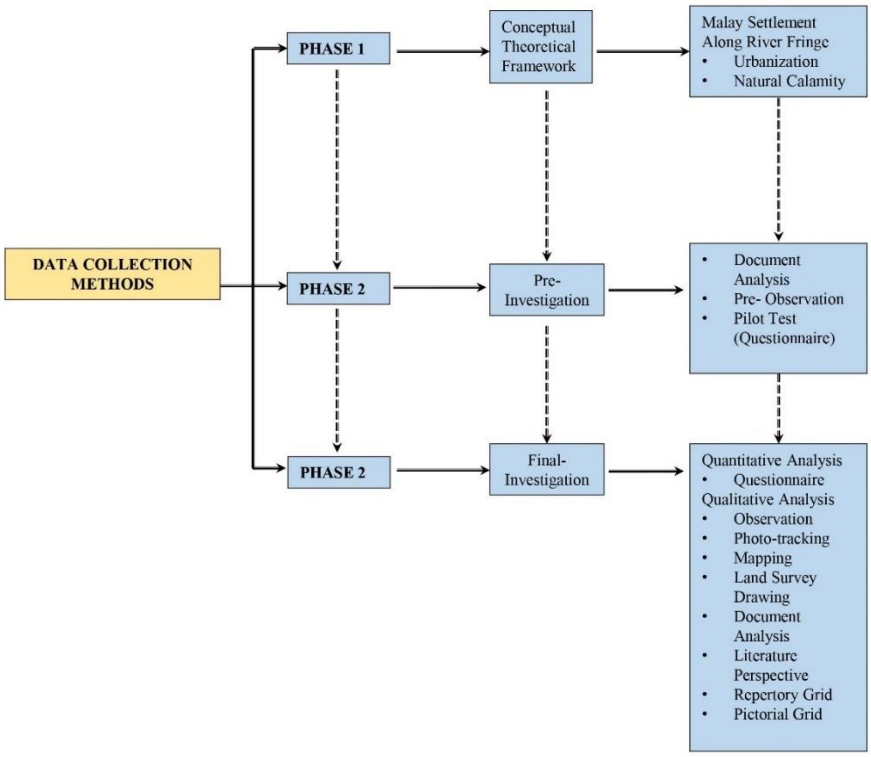


Figure 3.2: A summary of Data Collection Method

3.4 The Research Approach

According to Wahid (1996), Dahlan and Baharuddin (1978), Dahlan (1997), Shari (1992), Wahid and Harman Shah (2002), Shamsuddin (1997), Sulaiman (2000), and Karsono (2002), the researcher found that previous studies using qualitative, quantitative, and mix-method approaches can be a comprehensive technique. According to Lynch (1960) and Wahid (1996), most studies on urban design involved multi-dimensionality. Besides studying the built environment, a mix-method is the most suitable approach to conduct the research (Creswell, 1994, 2009). Therefore, as the scope of the study touched on human settlement, a mixed method is appropriate to develop the scope of inquiry. Quantitative methods can provide overall conclusions through a framework and through sample and primary data, however, this approach cannot illustrate the picture accurately of the phenomena that occur in the study area.

Qualitative methods are applied extensively based on approaches by previous scholars mentioned. Since the structure of this study also involves an anthropological approach similar to Dahlan and Baruddin (1980), Wahid (1996), Shari (1992), McGee (1975), Embong (2011), and Hadi (2001, 2010), this study covers a similar approach that encompasses as anthropology, urbanization, social sciences, human settlement, and urban design as Wahid (1996), Karsono (2013), Karsono and Wahid (2009) and Shamsuddin (1997).

A study on human settlement and urbanization by Wahid (1996) thoroughly discussed anthropology, architecture, transformation, social, cultural, and urbanism through architectural phenomenology using qualitative, and quantitative by applying a mix-method technique. Meanwhile, a study conducted by Karsono (2013) explained the phenomenology of rivers related to people and places. Both studies mentioned that quantitative data were obtained by distributing questionnaires and identifying elements of what, how, and why that influenced the transformation of the settlements and changed the cultural attachment of people. An extensive description of the phenomenology study requires constructive effort. According to Zeisil (1984: 2006), *"multiple methods of research can be an effective way to raise the quality of research"*.

In this study, the mix-method related to the study's objectives was considered. Numerous other similar studies also utilized this method, such as Sendut (1966), Dahlan and Baruddin (1980), Shari (1992), McGee (1975), Embong (2011), Hadi (2001, 2010) Wahid (1996, 2021), Sana and Wahid (2014), Karsono (2013), Ying (2017), and Raphael (1981).

Interactions between daily activities involving socio-economic, culture, and environment provide a better understanding of people's activities in shaping their environment. The quantitative methods from the questionnaire and observation on-site

investigation to experience the actual situation can be of great advantage. The case study in Kota Bharu with a majority Malay population, became the main focus of this study. As a local, the researcher has to observe the site as an outsider in order to uncover what has not been shown conventionally by the local. According to Wahid (1996), this technique allows the description of visual data and study background while analyzing the human settlement transformation.

The observation-participant method implemented in the research, which is among the best methods for social anthropologist practitioners (Othman, 1980). The approach is to observe the daily activities of the local and live with the community studied in this area. The researcher also tried to avoid the conventional method, such as the 'armchair researcher' as widely used before the Malinowski method was introduced. According to Othman (1980), the participant observation method is the most popular method used, especially by social anthropology. This method is considered a new era of anthropology with the emergence of 'modern anthropology'. Before the end of the 19th century, most anthropologists were 'armchair anthropologists' who used data about people and society from travellers, government officials and Christian missionaries who had travelled to foreign countries. Malinowski was the first to do in-depth outdoor research using the local community's language and living in his tent because he was studying the neighbourhood of one area. However, social anthropologists, today have also used questionnaire methods to obtain quantitative data. This study combines the two methods, including other methods as described in Chapter 3, to produce a more in-depth analysis of Malay settlement. A detailed investigation in the aspect of urban design study on earlier researchers (Table 3.1) compliment the approach taken previously by researchers on urban design. The selection of past studies was based on the urban design context. The researcher used Table 3.1 as a basis

to review the research methods used by previous researchers. Since this study is conducted in the context of Malay settlement, the researcher can understand the style and pattern of past research methods that have been proven successful.

Table 3.1 shows three main research technique applied in the study and most of the past researchers chose the mixed-method. This approach makes the data more in-depth and focused on the concept of 'place-based' (Karsono, 2013), which describes the entire study area through combining quantitative techniques. This study traces the same approach along with an anthropological technique.

Table 3.1: Previous Research Methodology in Urban Design

(Source: Abdullah, 2021)

Item	Researcher/ Year	Data Analysis		Data Collection Technique							Research Approach			Research Strategy
		Qualitative	Quantitative	In-Depth	Observation	Behaviour	Mental Sketches	Questionnaire	Document	Photo-tracking	Qualitative	Quantitative	Mixed-Method	Case Study
1	Lynch, 1960	•		•		•			•		•			
2	Worsket, 1970	•			•				•		•			
3	Doxiadis, 1970	•			•		•		•					
4	Seamon, 1984	•			•	•				•				•
5	Schulz, 1987	•			•	•	•		•					•

Table 3.1 continued

6	Wahid, 1988	•		•	•		•	•	•	•	•		•	•
7	Wahid, 1996	•	•	•	•	•	•	n=233	•	•			•	•
8	Shamsuddin, 1997	•	•	•	•	•	•	n=330		•			•	•
9	Manley & Guise, 1998	•			•	•			•		•			
10	Thomas, 2002	•			•	•					•			
11	Ahmad, 2004	•	•	•	•	•	•	n=330	•	•			•	•
12	Gehl J, 2006	•	•		•	•						•		
13	Wahid, 2008	•		•	•				•	•	•			•
14	Jaafar, 2009	•	•	•	•	•	•	n=330	•	•			•	•
15	McGee, 2010	•			•		•		•		•		•	
16	Shamsuddin & Sulaiman, 2011	•	•	•	•			n=330					•	•
17	Jaafar, Shamsuddin & Sulaiman, 2012	•	•	•	•	•	•	n=330	•				•	•
18	Karsono, 2013	•	•	•	•	•	•	n=330	•	•			•	•
19	Rahman N, 2014	•	•	•	•	•	•	n=340	•		•		•	•
20	Ja'afar, 2014	•	•	•	•	•	•	n=330	•	•			•	•
21	Norhafizah et al, 2014	•	•	•	•	•	•	n=340	•				•	•
22	Wahid et al, 2021	•	•	•	•	•		n=350	•	•			•	•
	Total	23	12	14	21	16	13	11	18	10	8	1	13	15

The research strategy applied in this study focuses on a single case study, similar to previous researchers in the context of human settlement and urbanization. According to Wahid (1996, 1999, 2004, 2008, 2014, 2020, 2021), Sana and Wahid (2014), Karsono and Wahid (2009), Wahid et al. (2010), Raphael (1981), Dahlan (1980), and Shari (1992), a case study is an appropriate technique for the mix-method approach. Yin (2004) argued a single

case study could represent a critical test of theory development. Based on Wahid (1996, 1999, 2004, 2008, 2014, 2020, 2021), Sana and Wahid (2014), and Karsono (2013), a case study is the most appropriate method that focuses on human settlement, urbanization, phenomenology, and surrounding contexts. Furthermore, it can also relate with the history, background of the study area, and morphology context with various research techniques to get better result.

In this research a Malay village located on the riverbank of the Kelantan River is examined. Strauss (1969) emphasized that fieldwork is the most critical test for an anthropologist. Successful fieldwork depends on the researcher level of overcoming a psychological revolution experienced when observing the raw social material in society.

Chapter 4 further explains the selection of study areas comprehensively. Availability of relevant documents to assist the study area allows the researcher to get an overview of the area. The location of the study area closes to his residence enable the researcher to gather all the intended information as below:

a. The researcher has a mental map of the actual study area position.

b. Due to the lack of information on human settlement in Kota Bharu, the researcher needs to prepare questionnaires related to studied aspects, such as family background, household structure, household income, ownership patterns, migration patterns, and cultural patterns.

c. The mental image of this place gives the researcher a psychological advantage. Mental preparation is an important aspect for researchers to avoid the problem of culture shock, even though the study is conducted in Kota Bharu. The researcher gains the mental image due to this area through past experience, and the survey gives psychological advantages and confidence in conducting research in the area.

According to Othman (1980) explains that mental image can be obtained through surveys, pilot studies and experience in social science research. However, identifying the existing problems helps to adapt to the study area since it was gradually changed and does not have any contact with the locals.

3.5 The Research Technique

This sub-topic thoroughly elaborates the techniques used in the study, motivated by what, how, and why the Malay settlements disappeared. It also offers an extensive discussion on the selection factors, objectives, procedures for collecting information, and how data is obtained. This technique derives the answer to each objective more comprehensively. Figure 3.3 show the relationship between each objective and technique.

3.5.1 The Reconnaissance Survey

Reconnaissance surveys in architecture consist of observations around the area and record typologies of buildings, structures and neighbourhoods representing different architectural styles, periods and construction techniques. Maps such as Standard Sheets are used as a guidance for reconnaissance. The earlier reconnaissance was conducted in October 2019. Throughout the earlier preliminary survey, it was necessary to understand the cultural aspects of the locals. The researcher has identified the route, zone and area of the study more precisely. After making a survey of the study area, the researcher proceed to the collection of field data. The pilot test was conducted in May 2020 after the Movement Control Order (MCO) in Kelantan. Pilot test results changed the questionnaires distribution strategy. Before beginning fieldwork, the researcher needs to know the study area's political setting and ideological climate to identify the influential people there to establish rapport. Othman (1980) argues that an ideological setting and political climate are required to achieve access to information and support the populace. They are native sponsors or sponsorships.

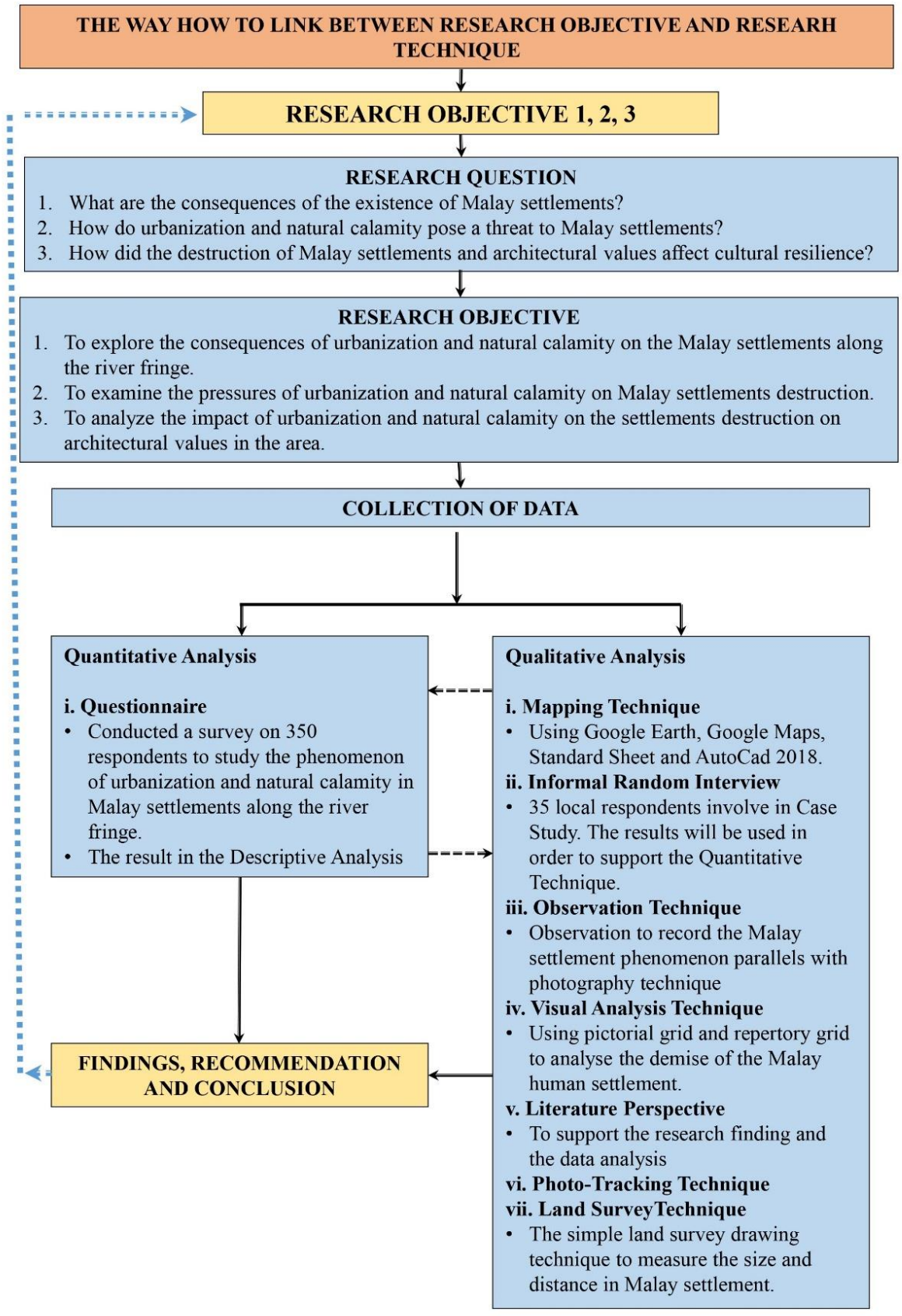


Figure 3.3: The relationship between Research Objective and the Research Technique

In this research, the researcher sought to ask ASP Tuan Benny Sukmaputra bin Zulkifli for assistance with this study; he served as a sponsor and introduced two Headmen who served as native sponsors. Sponsorship had led the researcher to introduce two native sponsors in the study area. They were two influential people with good personalities and fully respected by communities. It is required to meet with the village representative or *Penghulu* (Headman). It was critical to obtain permission from the Headman to ensure the fieldwork ran smoothly. The researcher used the opportunity to meet the Headman for a friendly conversation. Malaysian culture emphasizes the importance of good manners, particularly to older people. Therefore, the researcher has given a souvenir to the Headman in appreciation for his cooperation and as an expression of respect, who contributed significantly to the researcher in carrying out research in this area. The relationship with the Headman is essential as the information provider and assistant. Finding information from the Headman and research team helped the researcher run this study more smoothly.

3.5.2 Mapping

Most architects and planners prefer to use mapping methods. It aims to get a broader picture of the historical line in an area. The researcher used this method to demarcate the area and revised the initial visit in April 2019. It has been widely used by architects and planners such as Lockard (1985), Lynch (1960), Venturi (1977), Wahid (1996, 2021), and many others. Visual representations of physical conditions such as the form and pattern of human settlement are achievable through this technique. Macro and micro-level overviews are also available, and the use of Google Earth, Google Map, Drone MJI, and AutoCAD 2018 provided a lot of positive input. Both programs can identify human settlement patterns roughly at an early stage before carrying out fieldwork. Various techniques such as

sketching, photography, mapping, and land survey have dramatically helped the researcher obtain and collect data accurately.

3.5.3 Informal Random Interview

Before fieldwork, the researcher visits the study area several times for familiarization while performing the visual analysis techniques. The face-to-face and informal interview methods in Bahasa Melayu were conducted at this level as well. The interview questions were designed to answer the objectives of the study and in line with the main topic of the questionnaire, such as the background of the respondent, the use of spaces in the house, facilities, neighbourhood, migration to the city, problems in the neighbourhood, disasters, issues of carpentry and art. The researcher documented the answer in diary and audio files intended for administering the questionnaires. All information obtained is completed and systematically recorded. The researcher also provided a respondent interview form to facilitate the interview session to ensure a smooth process.

Choosing a place to run an informal group interview is very important. An informal session assures honest and accurate information. The researcher and respondents are not stressed due to formalities since most the Malays are reserved people and they prefer to be informal but full of manners (Wahid, 1996). The researcher has implemented the group interview and collected the questionnaire assisted by the headman in *'warung'* at Pasar Kubang Pasu, Kota Bharu, Kelantan which is located 100 meter from the case studies areas. The selection of ‘warung’ was because Headman I, Mr Abdul Azizi bin Hassan, a trader at Kubang Pasu Market who has many contacts which facilitate the administration of the questionnaire. Unlike the mosque, the atmosphere in the ‘warung’ will create an informal environment that is not bound to prayer time. In addition, the diversity of visitors in terms of gender and age also needs to be considered. Besides, it is also a chance to socialize with

the local community. For the questionnaire, the respondents filled out the forms provided at the same time during the interview session. However, the difficulty was that the researcher had to introduce himself repeatedly to the respondents since the 'warung' customers are continuously changing. The informal interview at the 'warung' is between 9 am to 12 pm and extended to 2 pm to 6 pm, which was the peak hour based on their present. Morning is the time is mainly for men to go out for breakfast and the researcher take this opportunity to have breakfast and chat with the respondents. However, in the evening, it is time for them to relax and talk in the 'warung' after a long day of work. Here, various layers of society gather from different ages, especially teenagers, youth, and old folks.

The second level focused on the micro-scale part of the study. This level was conducted using an informal random interview involving a selection of 35 respondents to gain information on human settlement. Based on the first level interview results, the information on the settlements were gathered in the study area. With this information, the researcher can identify the settlements typology, initial planning, history, human settlement evolution, and Malay community neighbourhood. At the same time, the initial human settlement planning in the study can be traced.

3.5.3.1 Sample Size for Interview

Although the interview technique is conducted informally, the random selection of the respondents can motivate the researcher to achieve the study objectives. Sample size selection does not need to be large but more on data quality (Rahman, 2014; Shamsuddin, 1997). The interview technique supports the data, and the appropriate sample size is between 20 - 40 out of the approximately 1800 populations. Shamsuddin (1997) supported these findings on rigorous studies versus quantitative study samples. Other studies conducted previously are as follows; Ja'afar (2014) - 21 respondents, Ja'afar et al. (2012) and Rahman

(2014) - 20 respondents, Shamsuddin et al., (2004, 2007) - 21 respondents, and Abaszadeh (2011) and Lych (1960) - 30 respondents. Based on this information, the number of respondents is flexible. Therefore, the appropriate sample size is 35 respondents from residents to support the data collected. Table 3.2 shows the respondent profile for this technique.

Table 3.2: Respondent profile for Random Interview Technique

Random Interview Techniques					
Code	**User Type**	**Address**	**Occupation**	**Sex**	**Level of Familiarity with the Study Area**
R-1	Villagers	Kampung Atas Banggol	Government Servant	Male	Rental/ Very Recognizable
R-2	Villagers	Kampung Atas Banggol	Trader	Male	Owner/ Very Recognizable
R-3	Villagers	Kampung Jalan Atas Paloh	Trader	Female	Owner/ Very Recognizable
R-4	Villagers	Kampung Tok Semian	Trader	Male	Owner/ Very Recognizable
R-5	Villagers	Kampung Tok Semian	Art and Culture	Male	Owner/ Very Recognizable
R-6	Villagers	Kampung Atas Banggol	Pensioner	Male	Owner/ Very Recognizable
R-7	Villagers	Kampung Masjid	Trader	Female	Owner/ Very Recognizable
R-8	Villagers	Kampung Masjid	Own business	Male	Rental/ Very Recognizable
R-9	Villagers	Kampung Masjid	Private Sector	Male	Owner/ Very Recognizable
R-10	Villagers	Kampung Jalan Atas Paloh	Trader	Male	Owner/ Very Recognizable
R-11	Villagers	Kampung Jalan Atas Paloh	Housewife	Female	Owner/ Very Recognizable
R-12	Villagers	Kampung Jalan Atas Paloh	Trader	Female	Owner/ Very Recognizable
R-13	Villagers	Kampung Pengkalan Pasir	Trader	Male	Rental. Very Recognizable
R-14	Villagers	Kampung Kubang Pasu	Housewife	Female	Owner/ Very Recognizable
R-15	Villagers	Kampung Kubang Pasu	Private Sector	Male	Rental/ Very Recognizable

Table 3.2 continued

R-16	Villagers	Kampung Menuang	Own Business	Male	Rental/ Very Recognizable
R-17	Villagers	Kampung Menuang	Private Sector	Male	Owner/ Very Recognizable
R-18	Villagers	Kampung Menuang	Housewife	Female	Owner/ Very Recognizable
R-19	Villagers	Kampung Jalan Atas Paloh	Trader	Male	Owner/ Very Recognizable
R-20	Villagers	Kampung Kubang Pasu	Own Business	Male	Owner/ Very Recognizable
R-21	Villagers	Kampung Tok Semian	Trader	Male	Owner/ Very Recognizable
R-22	Villagers	Kampung Tok Semian	Government Servant	Male	Owner/ Very Recognizable
R-23	Villagers	Kampung Jalan Atas Paloh	Private Sector	Male	Rental/ Very Recognizable
R-24	Villagers	Kampung Jalan Atas Paloh Village	Trader	Male	Owner/ Very Recognizable
R-25	Villagers	Kampung Kubang Pasu	Online Business (Home)	Female	Owner/ Very Recognizable
R-26	Villagers	Jalan Post Office Lama	Trader	Male	Owner/ Very Recognizable
R-27	Villagers	Jalan Post Office Lama	Housewife	Female	Owner/ Very Recognizable
R-28	Villagers	Kampung Masjid	Own Business	Male	Owner/ Very Recognizable
R-29	Villagers	Kampung Tok Semian	Art & Culture	Male	Rental/ Very Recognizable
R-30	Villagers	Kampung Jalan Atas Paloh	Housewife	Female	Owner/ Very Recognizable
R-31	Villagers	Kampung Jalan Atas Paloh	Houseewife	Female	Rental/ Very Recognizable
R-32	Villagers	Kampung Atas Banggol	Housewife	Female	Owner/ Very Recognizable
R-33	Villagers	Kampung Jalan Atas Paloh	Trader	Male	Owner/ Very Recognizable
R-34	Villagers	Kampung Tok Semian	Private Sector	Male	Rental/ Very Recognizable
R-35	Villagers	Kampung Jalan Atas Paloh	Trader	Male	Owner/ Very Recognizable

Various mediums were used to record interview techniques, including pens, pencils, voice recorders, and notebooks. With the help of a voice recorder, the researcher can review every conversation recorded. On the other hand, notebooks recorded any unclear data (Wahid, 1996). The language used in every interview session was the local Malay dialect.

3.5.4 Observation

The observation technique was also used to support interview techniques conducted at the micro-level. It recorded the current activities of the people and places. Therefore, the researcher visited the study area several days per week to record more accurate actual images through observations (Figure 3.4).

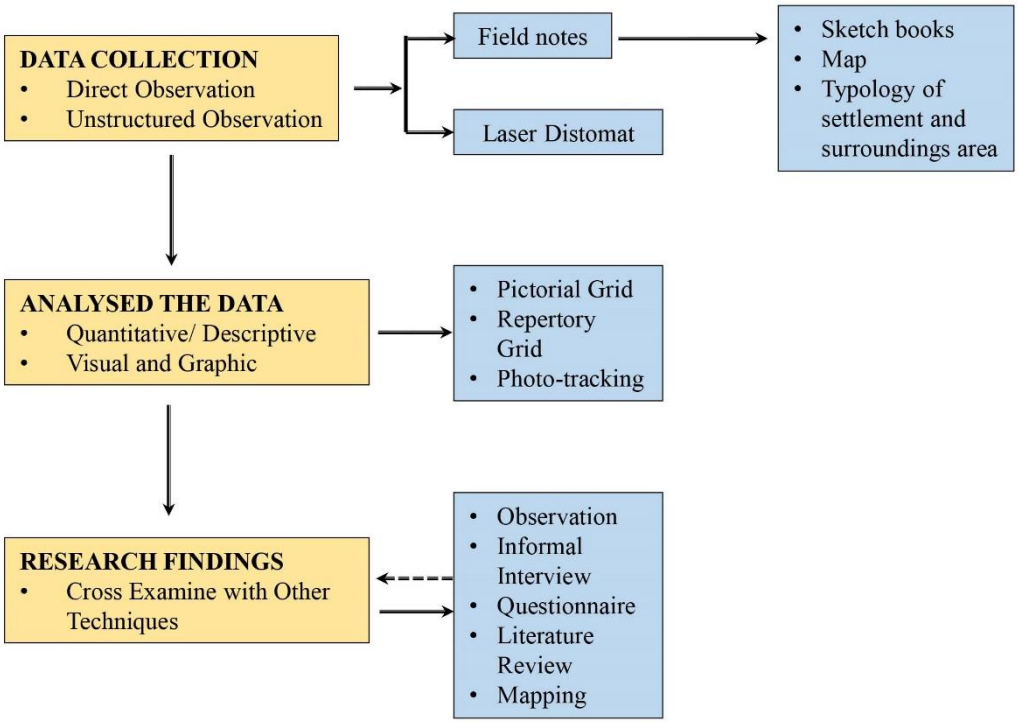


Figure 3.4: The summary of an Observation Technique

Various society events, as well as cultural differences and ways of life, were explored. It depends on the location and situation of the study area as selected. The participant observation technique significantly helps to ease the data collection. All daily activities were recorded in the research diary at various stages such as type of activities, time, number of people involved, event, culture, weekly and monthly activities to provide a clearer picture of humans, settlement, and activities near the river. Observations are also conducted during Monsoon Season to see the river situation and community activities.

3.5.5 Visual Analysis Study

A visual survey was conducted to discover the research area's socio-economics and group of people. The main focus areas, such as 'warung', 'markets', and so on, are vital locations to this method. The researcher began to interact with the surrounding community as initial contact to determine its ideological climate and political setting (Othman, 1980) it helps to enhance the visual image and facilitated the plan of study strategy.

Before the fieldwork, the researcher obtained a Standard Sheet from the Land Office Kota Bharu before conducting a visual analysis in the case study area. Standard Sheets are Cadaster Maps and the combined result of digital lots from the National Digital Cadastral Survey Database (NDCDB). The information displayed, such as Unique Parcel Identifier (UPI), State, District and Mukim/Section information, Confirmed Plan number and lot number, are also displayed according to their presentation. The Standard Sheet is in the Cassini Soldner projection and is available in digital and printed formats. The researcher has used the Standard Sheet to identify the study area, access, land lot and boundary in the study area.

The visual analysis provided preliminary pictures and phenomena of the place, location, circumstance, and environment. It was also carried out for building typology, the

geography of the place, human settlement pattern, and identifying landmarks and nodes of the study area. The researcher also needed to familiarize himself with the research area in the early stages before the actual fieldwork. The researcher surveyed the area during the monsoon season by rowing a boat owned by the local community in December 2020. Consequently, the researcher captures the identity and images of the community with the help of the local headman, the community does not feel that there is a visitor from the government sector. This strategy is to avoid the communication gap between the community and the researcher. This is the critical time because the government is demolishing few settlements in this area.

Recording visual analysis requires various equipment such as a camera, notebook, sketchbook, maps, pens, and pencils (Wahid, 1996; Moughtin et al., 2007). The researcher also used a drone Model Dji Mavic Mini 1 to survey the settlement condition, especially after the demolition process. Most of the recording was done by walking and riding a vehicle. The study area is a settlement that has many small roads as access. Using motorcycles is more practical for researchers to conduct research more efficiently.

"The atmosphere around noon saw residents of Kampung Pengkalan Pasir talking at the 'warung' about the fate that will befall them. The life and future are getting harder. Daily life will be affected. Sources of income are declining due to the demolishing work on their settlements. No more children playing around the streets and settlements, and no more housewives talking outside their homes under the shade of trees. Men are at a standstill thinking about the future of their families" (Source: Fieldwork observation, 2019).

This statement is an expression of the locals during the observation work. Chapter 5 discussed a more detailed scenario on the effects of changes in human settlement patterns to places and humans.

3.5.6 Secondary Data Collection Technique

The literature review described in this study refers to journals and publications related to the original human settlement theory. The researcher refers to books and biographies that touch on human settlement development. Most newspaper sources further explained the 2014 great flood phenomenon. Government agencies provided political, economic, and social development information, including regulations and physical development derived from the Planning Department. This department is crucial to obtain a city map and district of study area involving the formation and evolution of human settlement. Topics related to the case study history are referred to the State Museum and State Library. The researcher also referred to the Department of Statistics for statistical data regarding population index, transportation, and other related figures on physical and economic developments. All information provides an overview of the study area and issues related to the scope of the study. The next chapter in Chapter 5 discusses the results of the research.

3.5.7 Photo- Tracking Technique

Barnard (1921) had said *"a picture paints a thousand words"*, and the real drama of life could only be explained through a visual caption. A photography technique is the most appropriate and widely used by architects and planners. Environmental conditions and areas of a place can be recorded more clearly. Photography techniques used in this study include two aspects, namely single shot-photography and photo tracking. Architects and planners widely used both methods during site visits. Photo tracking does not concentrate on the study subject but requires sequence techniques on the occurrence and condition of the site. It helps to depict the real situation of the site. However, the researcher used this method to cross-check descriptive information during site visits. As well as photography techniques, the

researcher has extensively captured the study area and can perform visual analysis more accurately depending on the study area condition and location. Photographic techniques provide a more accurate image, while sketch and land survey techniques capture physical form measurements successfully. The integration of these three techniques provided a more accurate picture of the case study area size, distance, and image. Recording research requirements helped the researcher with photography techniques. Lastly, combining pictorial techniques of the repertory grid represents the architectural analysis. The research also employed an exploratory technique coupled with a descriptive analysis from observation and photographic techniques to gather the criticism of Malay settlements. Pictorial and repertory grids were applied in the investigation to achieve the first objective. The image captured the original typology, building materials, geographical, neighborhood community, and religious and community activities. Nonetheless, this information is beneficial to the researcher for future development proposals.

3.5.8 Land Survey Drawing

The land survey drawing approach helps visualize the Malay settlement. It focuses more on the physical aspects. The land survey drawing technique measures the distance between one settlement and another settlement. This method of drawing was also carried out with the research assistant to facilitate the measurement process.

In contrast to actual standard land survey drawings, the technique used in this study uses basic measuring tools, such as a tape measure and a sketchbook, to record measurements. The distance from the house and the river, from one house to another and the floor plan's size is measured using the land survey drawing technique. The measurement method was manually measured without using electronic tools and also manually recorded

these measurements through sketching techniques. The input of measurement will be converted to Autocad 2018 software intended for recording purposes.

3.5.9 The Questionnaire

The questionnaire was designed based on the 5 Principle of Ekistic Theory by Doxiadis and guided by the study objectives that require investigating people, urbanization impact, and natural calamity in human settlement. There are 164 questions divided into eight sections or chapters, including socio-economic, services in human settlement, settlement characteristics, neighborhood characteristics, natural calamity characteristics, lost and disaster, art in the community, and migration characteristics.

3.5.9.1 Type of Sample for Questionnaire

The precise number of populations in the case study area is estimated based on the number of houses. According to the Headman I, Mr Abdul Aziz bin Hassan, there are 400 houses altogether in the area consist of various ages, genders, and occupations. By taking the number of household members 4.5 person per household (Jabatan Perangkaan 2019) the estimated population sampling is 330. Thus, the principle of deriving population samples from the sample size taken is derived from the accuracy rate was based on calculations by De Vaus (1991). Based on a 5.5% sampling error at a 95% confidence level, the sub-small group should have at least 50-100 cases (De Vaus, 1991). Table 3.3 shows the minimum sample size of n=330 suitable for Malay settlements on the river fringe with a 5.5% sample error. It is believed that this number is sufficient according to Raosoft, G-Pro after cross-examining with Open Epi sampling software. The appropriate sample size is of n = 323 with a 95% confidence level is sufficient to represent the case study area. Therefore, the sample size of n= 350 used in the study area is sufficient. Abaszadeh (2011) supported that, the context of this study does not require high accuracy as the data will be supported by other

techniques such as informal interviews, observation, visual analysis, mapping and literature perspective to obtain information from the respondent as much as possible. In a way, the random sampling enables the researcher to gather information not restricted by the specific rules. The respondents who are 18 years old and above and are local to the community in the case study area. Most residents have lived here for three generations. Only eight Malay villages are involved, namely (i) Kampung Atas Paloh, Kota Bharu, (ii) Kampung Menuang, (iii) Kampung Kubang Pasu, (iv) Jalan Post Office Lama, (v) Kampung Masjid, (vi) Kampung Tok Semian, (vii) Kampung Haji Harun, and (viii) Kampung Pengkalan Pasir. Respondents under the aged of 18 are not involved in the questionnaire technique. Only Malays are involved in this technique because this study examines Malay settlements. Apart from the eight study villages, other areas were not involved in the questionnaire technique. The researcher implemented this method due to the impromptu answer that can assist the researcher to get the genuine reply from the respondent (Etikan and Bala, 2017).

Initially, each village had no specific figures before the questionnaire was distributed. However, after all the questionnaires had been collected, there were various respondents from each village (refer to Table 5.2: Survey in Kota Bharu). The difference in the number of respondents is due to the number of residents in each village being different. Referring to Table 3.2: Respondent profile for Random Interview Technique, all respondents for the informal interview were selected depending on the Level of Familiarity with the study area, which is for respondents who have lived for three generations (eighty years above) and they were identified through two Headman. This is because the researcher wants to select respondents who are able to strengthen the study data because of their level of familiarity with the study area.

A higher sample value indicated more narrative from respondents motivating the researcher. The respondent are the resident living in the settlement provide accurate information. Table 3.3 illustrate a similar attempt in determining the sample size of similar population that has been carried out by other researcher of similar nature. This is evidently shown in Table 3.1 (refer to sub-topic 3.5), the sample size from a previous study by Wahid (1996) is n= 233, while Rahman (2014) and Norhafizah et al. (2014) established a sample size of n = 340 respondents and a study by Wahid et al. (2021) had 350 respondents. These findings indicated that the sample size taken varies accordingly. It focused on the information obtained from respondents for a significant impact on the study. However, the sample size must be based on accuracy, which is fundamental to sample accuracy (De Vaus, 1991). Hence, the principle of deriving population samples from the sample size taken would deviate from the accuracy rate was based on calculations by De Vaus (1991).

Table 3.3: Sample size requirements for sampling variation at 95% confidence rating

Sample Error (5 %)	**Sample Size (%)**	**Sample Error (5 %)**	**Sample Size (%)**
1.0	10000	5.5	330
1.5	4500	6.0	277
2.0	2500	6.5	237
2.5	1600	7.0	204
3.0	1100	7.5	178
3.5	816	8.0	156
4.0	625	9.0	138
4.5	494	9.5	123
5.0	400	10.0	110
		10.0	100

Source: De Vaus (1991)

3.5.9.2 Questionnaire Pilot Test

The researcher distributed 20 questionnaires randomly to the research area to determine the potential research ideas and problems. A questionnaire pilot test could avoid culture shock and mental preparation for the researcher (Dahlan & Baharuddin, 1980). On 10 May 2020, the test was self-conducted by the researcher during the weekend. Back then, the MCO was terminated in Kelantan. The random questionnaires distribution involved eight villages to the respondents aged 18 and above in the study area. The respondents selected during the Pilot Test were 20 people based on their Level of Familiarity in the study area. All respondents have lived in the study area for three generations. During the Pilot Test, ASP Tuan Benny Sukmaputra bin Zulkifli did not introduce the researcher to the Headman. So, the researcher had to use the method of asking the residents living in the study area. Two days were insufficient to answer 20 questionnaires due to time constraints, especially on Fridays. The majority of the Malay community go to the mosque to perform Friday prayers at noon before spending time with their families afterwards. On Friday, the researcher manages to have seven respondents to test the questionnaire. The pilot test started at 9 am and end at noon before resuming at 3 pm until 6 pm. On Saturday, 11 May 2020, the researcher conducted and completed the remaining 13 questionnaires. The researcher found that each respondent spent 15-20 minutes completing the questionnaire. The questions asked were easy to understand since they were open-ended questions. Respondents only require short time to answer.

However, each survey took a long time because respondents always asked the purpose of the study, the researcher's biodata, the current situation of MCO, and some expressed personal problems. The pilot test was conducted without the assistance from the Headman. Therefore, researchers could not restrict the tempo of conversations to respect the

local community. Since the researcher access the area alone, it facilitated surveying the area and entering small lanes to do the reconnaissance. It saved a lot of time and reduced suspicion in the community. In general, the pilot test ensured the questions were easy to understand. Since the questions were self-administered and open-ended, respondents straightforwardly understood them all. However, there were various problems and scenarios encountered while conducting this pilot test, such as:

a. Some respondents answered wisely and not closely related to the question of the study. Some respondents are educated, and they explained and gave a broad opinion about the study area.

b. Some respondents though that the researcher is a government officer, wanting to monitor their activities. During that time, the issue of demolishing settlements in Temporary Occupational License (T.O.L) land was on its way. The researcher tried to be neutral and politely explaining the purpose of the study to them.

c. Some respondents attempt to explain their predicaments and the hardship of their daily life. They expected the researcher to deliver the message to the State Government. This particular circumstance extended the questionnaire process.

Upon completion of the pilot test, the researcher conducted a Reliability Analysis on 16 questionnaires. It is a crucial process for measuring the internal consistency of a set of scale items. Using IBM SPSS Statistics 26 software, the researcher found Cronbach's Alpha value reached 0.810 (Table 3.4). These results indicated its reliability study variables. The questionnaires also ensured that the researcher did not measure the same idea. In general, most researchers agreed that a value of 0.7 is reliable (Yaacob and Kamaruddin, 2019).

Table 3.4: Cronbach's Alpha value has reached 0.810.

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Item
.810	.807	16

The researcher began to revise the question to fit the duration of data collection. Since the total sample was 350 respondents, the time required would be longer if the distribution was done individually. The researcher was assisted by the local contacts acting as sponsorship as mentioned in subtopic 3.4.1 (The Reconnaissance Survey). ASP Tuan Benny Sukmaputra bin Zulkifli introduced two individuals as the native sponsor and Headman.

3.5.9.3 Administration of the Questionnaire

Administering the questionnaires has been a very long process due to the Movement Control Order (MCO) during the latest COVID-19 pandemic that hit Malaysia, including Kelantan. It intended to achieve the study objectives through the well-designed questionnaire. Subsequently, a short training conducted by the researcher has been given to the two Headman to facilitate the inquiry in the study area. The survey was completed with a local assistant, and the area subdivision was arranged carefully. It aimed to make the survey area more accessible and comprehensive. This survey has considered the central part of research to achieve the study objectives discussed in the previous chapter.

Initially, the researcher prepared 500 questionnaires, divided into two Headmen. Each Headman of the village handled 250 questionnaires to assist the researcher. However, in the final process of collecting questionnaires, the researcher only collected 350 forms. There were two Headmen in Kampung Atas Paloh, namely Mr Abdul Azizi bin Hassan (Figure 3.5-i) and Mr Abdul Rahim Bin Shuib (Figure 3.5-ii). The Headman of a community usually acts as an intermediary to give confidence to the community. The researcher

thoroughly explained the purpose of the study during a meeting with both Headmen in June 2020. They were assigned to distribute the questionnaires to the community.



Figure 3.5: The researcher with the Native Sponsor namely Mr Abdul Azizi bin Hassan (i). The other Headman is Mr Abdul Rahim Bin Shuib (ii) (Source: Abdullah, 2020)

As Headman I, Mr Abdul Azizi bin Hassan is a trader in Kubang Pasu Market, always met the community in the study area every day. To avoid the clash in distributing questionnaires, Mr Abdul Azizi was assigned to distribute questionnaires in Zone A, namely Kampung Atas Paloh, Lorong Tok Semian, and Kampung Atas Tol. Meanwhile, Mr Abdul Rahim Bin Shuib distributed in Zone B, namely Kampung Menuang, Kampung Haji Harun, Kampung Kubang Pasu, and Kampung Jalan Pos Office Lama. Both Headmen then appointed six assistants for each zone (a total of 12 assistants). The researcher also visited the study area almost daily, between 1 pm and 5 pm and during the weekend from 9 am to 5 pm. This inspection was done so that the Headmen assistants could distribute the form more smoothly. In addition, meetings with Headmen were held every Saturday morning around 10 am for a month.

3.6 Data Analysis Technique

The main objective is to study the evolution of Malay settlements along the river fringe using various analytical techniques to achieve it. As collecting data through random questionnaires and interviews began, researchers began to use mapping techniques using Google Earth and Google Maps. Using the Autocad 2018 software and Land Survey Drawing techniques, the researcher identified the settlement patterns from 2010 to 2021. The

year 2010 was used as the basis because the construction of the Floodwall has not yet been carried out, and the 2014 floods have yet to occur. Thus, the researcher identified the settlement pattern before the construction began.

At the same time, observation and visuals were conducted to record the existing settlements. Data from the observation technique are analyzed and elaborated through note taking and note-sketching. These methods allow the data to be described visually, including various analytical sketches, diagrams, and photographs supporting relevant theories. According to Thomas (2002), it can encourage researchers to be more sensitive to small things and more focused on research. Photographic techniques recorded randomly selected settlements to carry out the visual analysis process. All interview information was recorded through an audio system as well as a diary. After the questionnaires were collected through the Headman, it was found that only 350 questionnaires were completely out of the total of 500 distributed as per described in subtopic 3.4.9.3. Others researcher in urban design also used this approach, including Wahid (1996, 1999, 2004, 2008, 2014, 2020, 2021), Sana and Wahid (2014), Karsono (2013) and Shari (1992) to enrich theory and ideas in the studies. On the other hand, the Statistical Package for the Social Sciences (IBM SPSS Statistics 26) generated the data from the questionnaires to produce a descriptive analysis and cross examine with the 5 Principle of Ekistic Theory by Doxiadis, literature perspective, interviews, mapping, visual analysis and observation technique.

3.7 Summary

External research can be considered a branch of research in a particular field conducted outside a researcher office, so this approach does not have any rules and binds external research. However, several factors need to be taken into account so that the planned work is not disrupted, including:

In the context of researching own culture as the researcher did in Kelantan, the possibility of obtaining complete data is difficult since respondents would assume the researcher already knew the aspects studied.

The topic studied was considered sensitive by respondents because, at the moment, the demolition work on TOL Land was underway. Since it involved human settlement, some respondents refused to provide information. The research title that was considered sensitive makes them reluctant to cooperate and believe it was not beneficial for them as demolition work takes place. Although these respondents were relatively small, it would affect the researcher morale.

Surveys conducted in the Kota Bharu urban community also faced time constraints. The location of the case study is located in Kota Bharu. They are residents of Kota Bharu, as explained in the next chapter. Urban people are always busy with daily activities, and time is limited. Timely interviews are indeed problematic for the smooth running of the study. Most communities have other schedules after working hours. Furthermore, they go to the mosque in the evening from around 7 pm to 9 pm.

Movement Control Order (MCO) in Kelantan is also a threat to the researcher. The uncertain MCO period affected fieldwork and the overall planning schedule. Since the Covid-19 virus does not show signs of recovery, MCO may continue. It also caused difficulties for the researcher and Supervisor to discuss face-to-face. This situation pressures the researcher to ensure that the research runs smoothly.

Weather conditions during the monsoon season affected the study timeline. Usually, it begins in December until February. Heavy rains every day for weeks is common in Kelantan, further complicating the research process. In Kelantan, it frequently rains heavily every day for several weeks, which makes the research process more challenging because

numerous roadways have to be closed. Furthermore, most people in the research area are busy preparing for floods.

3.7 Conclusion

The human settlement topic is an extensive study. The research methods applied various techniques and generally, this study applies a methodology similar to Wahid (1996). This study used a mix-method approach involving data collection and analysis (Creswell, 2009) to enrich and balance the data in the study. The observation-participation method used by anthropologist Malinowski in 1957 (Symmons-Symonolewicz, 1959), Raphael (1981), and Wahid (1996) is the best method for such study. Wahid (1996) combined human settlement methods and urban design, considered the best example similar to these studies. Based on the conceptual framework, the human settlement destruction was not only due to the natural calamity factor, but the urbanization process also posed significant challenges requiring attention. Applying a case study strategy to uphold this statement is an interesting approach to study the phenomenon. The application of various qualitative techniques described the 'what', 'how', and 'why' this phenomenon occurred, thus enriching the study. Quantitative techniques such as questionnaires from the local community were analyzed to explain the results.

CHAPTER 4

THE SETTLEMENT: THE CASE STUDY

4.1 Introduction

The previous chapter focuses on the Research Methodology, explaining the techniques and approaches to convey the Research Objective.

This chapter touches on the cultural interpretations and manifestations that shaped the Malay settlement. Understanding the formation of settlements in the study area requires understanding the Malay cultural context. Firstly, this chapter discusses the introduction of the study area in terms of environmental factors as well as physical, social, and cultural relations in the settlements. The Malay forms the majority of the population in Kelantan which comprise 95 per cent of the population and the Chinese 5 per cent (Department Statistic Malaysia, 2020). In the study area, a similar ratio of the race domination appears. Secondly, the significant of the Chinese settlers will appear in discussions and how it creates a friction of morphological changes towards the Malay settlement of Kota Bharu. The third part discusses the settlement evolution in Kota Bharu due to the urbanization pace. The fourth part discusses on the Malay settlement in Kampung Jalan Atas Paloh and its surroundings as it directly exemplifies the event of discussion in the research area. Finally, the last part discusses the natural calamity that impacted the destruction of Malay settlements in the study area and how the process such as geography, topography, culture, and urbanization affect the study area. All of these current changes as the result of the natural and consecutive social, political, and cultural conditions as explained by Doxiadis (1974) in the previous chapter.

4.2 Kelantan and Kota Bharu in the Malaysian Context

Kota Bharu is located on the Kelantan River on the North-East Coast of Malaysia. The North-Eastern coastline of Malaysia is the main route attracting foreigners to Malaysia. In the North is Thailand, and historically there was a close relationship between Kota Bharu and Thailand as a result of its geographical position and distance between both territories. (refer to Figure 1.1) Kota Bharu is considered a regional capital and developed as a trade centre. In the past, the main crop grown in Kota Bharu is paddy and coconut plantation around the river. Paddy is the primary food source among the community, and it became a source of income for most of the populations (Raphael, 1981). The city is habitated by the Malay with extreme and unique identities. These case studies investigate current conditions, including geography, ethnicity, size, culture, socio-economy, pattern, and planning. The East Coast of Malaysia is often considered as a different regionalism regarding culture, socio-economy, politics, lifestyle, and local beliefs that shape their thinking and the spirit of place.

The state has 11 districts consisting of Bachok, Kota Bharu (State Capital), Machang, Pasir Mas, Pasir Puteh, Tanah Merah, Tumpat, Gua Musang, Kuala Krai, Jeli, and Kecil Lojing. Kelantan is on the East Coast that receives high rainfall every year, especially during the monsoon season. According to the Malaysian Meteorological Department, the expected total rainfall in Kelantan during the monsoon transition in October 2021 is between 200 to 400 mm. The highest expected rainfall during the northeast monsoon 2021/2022 in Kelantan was in November (more than 600 mm) and December 2021. The total population of Kelantan is estimated to have more than doubled from 707.30 thousand in 1970 to 1906.70 thousand in 2020. In Kelantan, 96% population is Malay (Malaysia Statistic Department, 2020).

4.2.1 Communication and Connection

Connection is not a significant issue for Kota Bharu residents. Located near the Kelantan River is advantageous for them. In addition to being a communication system, the Kelantan River also serves as an area to fertilize the Kelantan Malay culture. The Kelantan River provides a spirit of 'place' that combines various characters between 'place' and location. Every element of topography and character led to social activity, and economic development emerges. Although the roads are available, boats are still used today from Kampung Palekbang, Tumpat to Kota Bharu minimally (Figure 4.1).



(i) (ii) (iii)

Figure 4.1: Kota Bharu from Kelantan River in 1907 (i) and a boat connecting the people of Kampung Palekbang, Tumpat and Kota Bharu (ii and iii)

4.2.2 The Economics of Late Settlement

In the early days of settlement, agriculture was a significant source of income for the Malay community here (Figure 4.2 i and ii). Geographic and strategic locations creates jobs and open up more business opportunities. After 1960s, it linked access to a considerable impact on the area. Development often pushes people to create chances. During the colonial era, it opened new opportunities in the employment sector. It started with agricultural activities; the economic pattern is growing. Some work as clerks and other positions in the colonial administrative system. However, the job opportunities offered are for the low post.



(i) (ii)

Figure 4.2: (i): Coconut trees along the Kelantan River. (ii): Early human settlement along the Kelantan River (Source: Kelantan State Museum)

The Nobles and Sultan concern also played a significant role in developing a community. In the Palace (Istana Balai Besar Kota Bharu), various opportunities arose due to the Sultan's responsibilities. Villagers work as the Sultan's maids in the Palace. The close relationship between the people and the Sultan resulted in a harmonious society. Jobs opportunities in the Palace are monopolized mainly by residents of around the settlements area. They became palace chefs and royal craftsmen.

4.2.3 The Economy Today

Today, Kota Bharu is one of the poorest cities in Malaysia (Mohd et al., 2018; Jamaluddin & Hanafiah, 2021). There are a few limited industries such as match factories (the first in Malaysia), ice, biscuits, and building material. Other arts and craft industries such as handicraft, *'batik'*, silverware, *'songket'* weaving, and kites were available around 1977. However, the art industry was declining today most of the villagers work as secondary economic activities such as construction, banking, finance, wholesale, and retail trade in Kota Bharu. Industries such as rubber, palm oil, tobacco, coconut oil, and wood products manufacturers have disappeared in Kota Bharu (Anuar & Mohamed, 2021; Nik Hussain, 2011; Nik Mohd. Salleh, 1984; Hasan, 2014). This is because the urbanization that takes

place in coastal areas of Kelantan has changed. The change in land use from agricultural to non-agricultural caused the erosion of riverbanks due to annual floods.

4.2.4 The Malay Port City

At the outset, a sense of belonging formed a strong community spirit around the place. Human activity has influenced places to have stronger relationships. Kota Bharu was known as a port city. Outboard boats were always trapped on the Kelantan River to keep it active. There was a pier near the *'Tambatan Di Raja'* at the time. Additionally, a warehouse was also built to store goods, either import or export. Today, the warehouse has been demolished and is built with the Kota Bharu Customs Office (Figure 4.3).



(i) (ii) (iii) (iv)

Figure 4.3: Pictures shows Kota Bharu as a busy port for traders along the Kelantan riverbank during the 15th century (i). Since then, the area became Tambatan Di Raja (ii and iii) near the Police Station. Nowadays, the Police Station has become Kota Bharu Custom Department (iv). (Source: Kelantan State Museum)

4.2.5 The First Match Factory in Malaysia

One of the fascinating parts in this area is a match factory, Kelantan Match Factory Sdn. Bhd., which was built in 1930. It was the first factory in Malaysia (Figure 4.4), located 100 m from the case study area. The river is the primary source of the economic system in terms of transportation and materials supply to the factory.



(i) (ii) (iii)

Figure 4.4: Kelantan Match Factory Sdn. Bhd. (i) that still exist today located in Kampung Sungai Keladi, Kota Bharu (ii and iii) (Source: Abdullah, 2020)

The match factory encourages other activities to this area. There were new furniture factories and shophouses carrying out various business activities. This area was dominated by the Chinese ethnic. This area is known as Kampung Sungai Keladi and is close to Kampung Atas Paloh. Its strategic location, after the existence of the match factory industry and its proximity to Sekolah Menengah Jenis Kebangsaan (Cina) Chung Hwa Kota Bharu, became an attraction for Chinese people to live here.

4.3 The Chinese in Kota Bharu

In the early 1820s, a group of Chinese pioneers from the Hokkien District of China opened their first settlement in Kota Bharu (Abdul Hamid et al., 2019; Tan et al., 2017; Imran et al., 2015). Their original intention was to find opportunities in Kota Bharu. Most of them are siblings or friends of the clan. The initial voyage searching for sustenance changed after seeing more significant opportunities. The lush geography of the Kelantan River and the existing water transport system are starting to catch their attention. Therefore, they intended to make the river fringe the first settlement. According to Raphael (1981), before the Chinese people arrived, the original site of Kampung Cina was an empty plot of land filled with bushes and hosted small agricultural activities. A small group of Malay families inhabits this area. They are Kelantanese, said to be living on the outskirts of

Kampung Cina. The local community welcomed the Chinese presence where the Malays are very generous and friendly to visitors.

4.3.1 Chinese Village in the Early Events

Once the Chinese Village was established, the pioneers began their activities. Their daily exercises were similar to the locals. They diligently cultivated crops, such as peppers and nuts, in addition to raising pigs, ducks, and chickens. From day-to-day operations, they diversified into small businesses intended only to sustain their lives. At that time, there was a quarry near the village known locally as *'Gok Kapur'*. In the Kelantan dialect, *"Gok"* means hut. Excellent coral qualities were processed and eaten with betel. Betel nut is also known as eating lime. It is often used in making Malay cakes and is white in colour—the white colour obtained from corals. Producing lime is done by burning the shells until they become ash using firewood. After being ashed, it will be filtered to separate impurities and mixed with water until it becomes viscous. Nut and *'Sirih'* leaves became the traditional pastime for locals, especially among old folks. At the same time, low-quality corals were used as a finishing material for the brick wall. Most of the quarry workers were local Malays who also worked as fishermen as an additional job. The demand for lime production was rising. The growing number of new settlements increased the demand for these materials. During the Japanese occupation of Kota Bharu, 'Gok Kapur' was finally closed, forcing many locals to find new jobs. Usually, any changes in the city would cause suffering. Chinese migration posed a new problem, especially for social issues, slavery, and even exploitation of low-income workers. Not only did they bring their habit and temperament, but also new political, economic, and social organizations (Haniffa & Mohamad, 2017; Noor, 2009; Md Nor, 2019).

4.3.2 Kota Bharu in the Roaring 20's: The Great Flood, Fire and Chinese Ethnic

Kota Bharu expanded rapidly in 1900 and 1930. The main events during this period significantly changed the morphology of Kota Bharu. These events moved the Kota Lama city to a new area further away from the Kelantan River that currently, Kota Bharu existed. The Kelantan River frequently flooded during the monsoon season, and in 1926 there was the worst floods ever occurred. It destroyed many commercial buildings near the river. The government at the time had extended assistance to those affected by the disaster. Most farmers lost their livelihood due to the destruction of rubber plantations and livestock (Muda, 1971).

In 1927, a fire broke out, destroying approximately 300 business premises (Raphael, 1981). Initially, the business premises were built together by the Malay and Chinese communities. Located on the Kelantan River fringe, the premises were the heart of communication, transportation, and import and export industries by boat and *'sampan'*. According to Raphael (1981), the fire was arguably caused by Chinese treachery. The Chinese were said to set fire to their shop for insurance compensation. Insurgency protection at that time became a Chinese practice in their business. Through this insurance compensation, the Chinese were finally able to build better premises promptly. They built new premises and quickly regained control of Kota Bharu (Raphael, 1981). This strategy did not occur among the Malay traders, as they were still less exposed to the insurance tactic method. This tragedy paralyzed the Malays economy due to the loss of income to build new premises. The Malay community was suppressed, deprived of their rights. This situation led to a racial riot in Kota Bharu, which forced the government to intervene (Raphael, 1981).

4.2.3 Ethnic Zoning

Development should have an element of humanity. If it does not provide a better life to the community, it does not carry any meaning, especially against the poor community. To create a better city for the Malays, it should be in the development context and community needs (Dahlan, 1997). Once the decision was made, the applicable zoning separated the Chinese and Malays in Kota Bharu was created. The Chinese are separated to the South in the Lido area of Kota Bharu, while the Malays are still in Budor River separated by the open space known as *'Padang Merdeka'* as a boundary dividing zones between the races. The zoning remains until today, where the Lido area has become a commercial, hotel, and residential area for the Chinese. It was developed with a gridiron and had colonial influences in architectural style. The colonial design impacted terms of façade and character of the building, presumably built in 1930 during the colonial era (Figure 4.5). On the other side of the Budor River, the origin of the Malay settlement in Kota Bharu appears to have an organic pattern layout along the river. Architecturally, it has a traditional influence. Many traditional buildings were thought to have been built in 1840 based on the roof style and building materials.

After a long time, the state of the Malay community is deteriorating, in addition to the poor and irregular urban services. The area is thought to be incapable of developing into the full potential for Malays. The incomplete infrastructure caused a tremendous effect on the Malays. Eventually, the outsider's area looking for economic resources in Kota Bharu that inhabit the human settlements. The situation is different from the Chinese settlement pattern. They continue to develop into the economic system suited to the present location. After nearly 100 years of the tragedy, ultimately, this area is seen as the only existence of the Malays in urban areas.



(i) (ii)

Figure 4.5: Independence Field or Padang Merdeka as a barrier for Chinese and Malay settlements (i and ii). (Source: Abdullah, 2019)

4.4 The Malay Settlements Emergence

The Palace Complex, located in the centre of Kota Bharu, was built on 4 acres of land in 1844. It was built to replace Istana Kota Lama at Kebun Mengseta and Pulau Saba, which had collapsed due to erosion (Figures 4.6-i and 4.6-ii).



(i) (ii)

Figure 4.6: (i): The Old Kelantan map, (ii): The Istana Balai Besar map in 1910 (Source: Edited from Kelantan State Museum)

This factor encouraged Sultan Muhammad II to construct *Istana Balai Besar*. Possibly, he also needed a stronghold of defense because, at the time, the Civil War broke out between his brother and his uncle, Long Jenal. The selected site had a strategic location near the Kelantan River, which was the heart of transportation.

4.4.1 Malay City

With the presence of Istana Balai Besar in 1844, Kota Bharu changed. Most Malays began to build their settlements on *'Buluh Kubu'* and *'Dalam Kubu.*' Later, it evolved into a compact settlement as the population increased. The most concentrated areas were Kampung Masjid and Kampung Kubang Pasu. Business centres also appeared around the Kelantan River, becoming a regional economic development for the community. Activities related to the economy, such as agriculture, led to the rapid growth of settlements. It caused humans, either individuals or groups, more aware of their daily needs. It was undeniable that a town played a vital role as a centre of evolution and development. From here, Kota Bharu flourished, and people began to come to support the existing urban system. People coming from various directions focus on Kota Bharu in their daily activities. Kota Bharu became city centre and grew with a new administration established in 1903. With the Bangkok Agreement (1902), Siamese Government surrendered Kelantan to the British and was administered by the British Council on July 25, 1903- William Armstrong Graham and Assistant H.W. Thompson. From July 25, 1902, to July 15, 1909, the seven-year administration became known as the Graham Administration. It had made plentiful changes to the morphology of Kota Bharu (Thomson, 2004). Also, many new administrative buildings have been built, such as Government Department Buildings, Subordinate Courts, Central and High Courts, and Prison Offices. During this time, British powers came to develop Kota Bharu under the pretext of *"democracy"*. They helped small countries to

develop and administer their states while they took the revenue and wealth of the state for their political benefit. Unfortunately, this is what happened in Kota Bharu. Sadly, the state has been unconsciously controlled by the West.

Until 1941, Kota Bharu had its Land and District Office Building, Court, Police Headquarters, Public Works Department building, hospital, and others. During the reign of Sultan Ismail Ibni Sultan Muhammad IV (1920-1944), he built the Grand Mosque of Kota Bharu, the Muhammadi Mosque. It has become a centre to spread Islam to the entire population of Kota Bharu. At that time, 90% were Malays, and the rest were Kelantan Born Chinese, who speak and understand the customs of Kelantan culture.

4.4.2 Kota Bharu Urban Formation

The core area of the population is concentrated mainly in the city centre around Kota Bharu. This urban area near the Kelantan River is a communication and transportation hub, central to the town development (Figure 4.7). Nonetheless, the majority population in Kota Bharu is the Malay community and is considered a natural city formation. Kota Bharu population increased dramatically from 362,714 in 2000 to 609,886 in 2010. Kota Bharu is considered the largest city on the East Coast, with the concept of Islamic City introduced by the Islamic Party of Malaysia (PAS), which took over from the political ruling party- UMNO in 1990. The city of Kota Bharu is a moderate size with neighborhood-based activity lingering among the religious community.

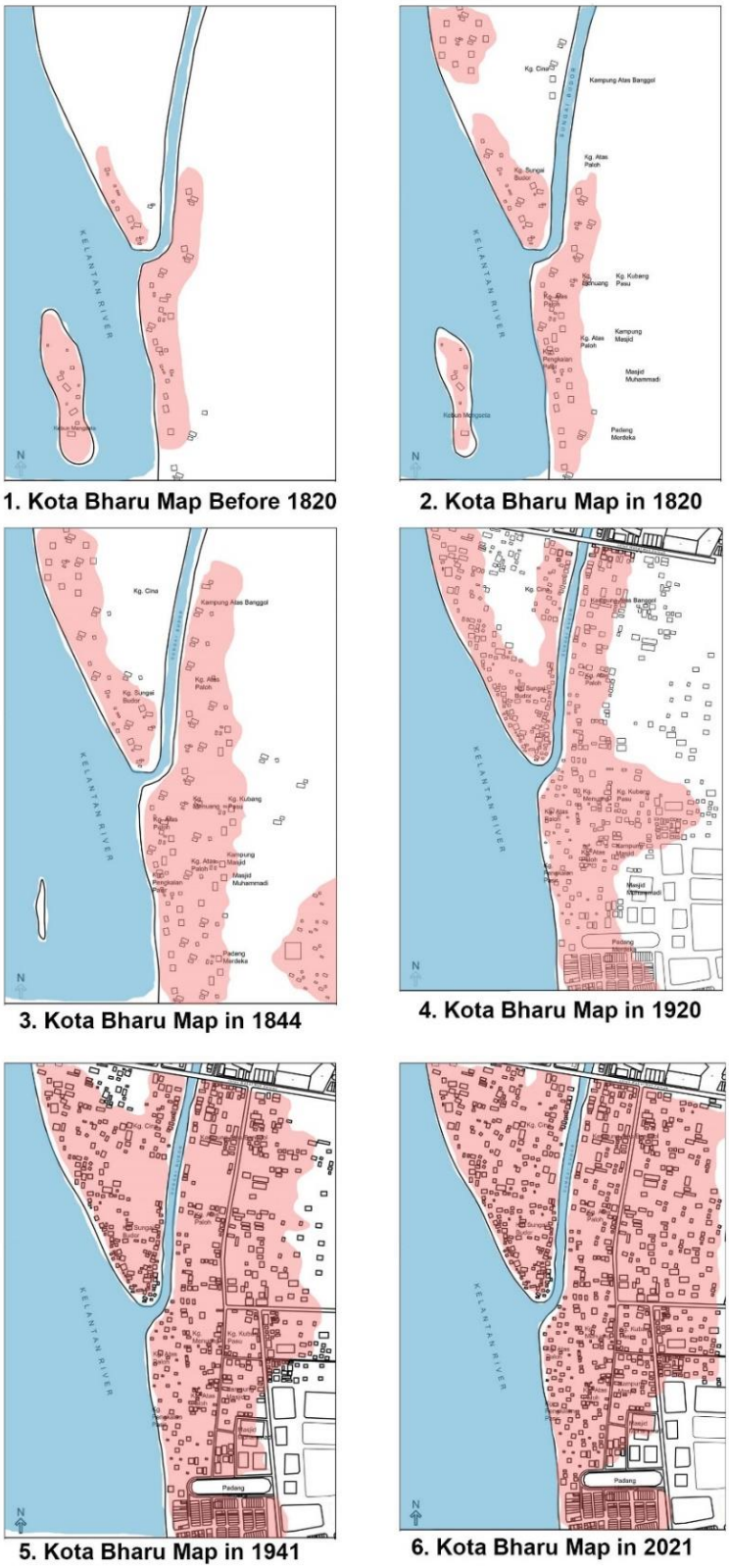


Figure 4.7: Urbanization in Kota Bharu expansion dictated by the red color region (Source: Fieldwork, 2021)

4.4.3 Unique Characteristics: Malay Urban Prototype

Kota Bharu was not a colonial city like Kuala Lumpur, Ipoh, Taiping, and George Town. It is unique compared to other cities in Malaysia. Kota Bharu is an indigenous Malay city made up of small villages. Most Malay villages have grown due to population expansion. The location of Kota Bharu near the Kelantan River stimulated economic activity and accelerated urbanization. Starting from a small village, it has grown into a city inhabited by the Malays. It can also be categorized as an *"Orthogenic City"* because the Malay community develops various local products. They have developed identity-initiative products rather than colonial influences. The clear urbanism of non-colonial influence is that Kota Bharu was considered unique as administrators and landownerships. It is totally the Malay system in all aspects. They succeeded in establishing cities starting from small villages of various settlement types. In 1978, the government offered opportunities for urbanization in the community through the National Economic Plan (NEP). As a result, Kota Bharu has grown and been considered the showpiece of Malay urbanism.

Political power, through government policy, has arguably taken an enormous risk in developing Kota Bharu as a Malay city. During UMNO reigned in Kota Bharu, political parties were committed to implementing policies that led to this thriving city dominated by Malays (Raphael, 1981). The government takes appropriate actions to strike a balance between the economic development of the Malay dominations. It provides an opportunity for the Malays to compete in urbanization and globalization with other ethnicities. Those who still live in rural areas are not afraid to migrate and start a new life in the city, provided the dominant inhabitants are Malays. It also opens up opportunities for them in education, economy, cultural, and social development. The Malay dominance in Kota Bharu provides a balance in ethnic power. According to Hasan (2014) and Hassan (2020), previously, the

British had developed similar urban services and built new administrative centres. Their priority is to dominate the economy and to extract resources in each territory. Therefore, they placed many Chinese in the city during the colonial era for economic boosts and benefits for the colonies. However, most Malays still stay in rural areas. They lived in a village lifestyle around religious domination, adhering to Malay Royal families and dominating the rural community.

4.5 The Emergence of Elite Settlement

Kampung Kubang Pasu is one of the case study locations, located a few kilometres away from city center, and Kota Bharu are connected by the main access, the Jalan Post Office Lama. The existing settlements around the access were said to be among the earliest settlements after the founding of Kota Bharu. The first place to be seen is Kampung Masjid which located near to Masjid Muhammadi. According to a respondent, Kampung Masjid existed in 1905, the mosque was constructed from wood, before the changing of the building materials. Later, it was refurbished from wood to brick and concrete in 1922 to keep up with the development of construction technology. In the neighborhood are other settlements such as Kampung Kubang Pasu, Kampung Jalan Atas Paloh, Kampung Menuang, and Kampung Haji Harun, located close to each other.



Figure 4.8: Jalan Post Office Lama between 1907 and 2012

(Source: Kelantan State Museum)

Jalan Post Office Lama (Figure 4.8), a street named after a post office building, once housed a post office of Kota Bharu. The post office was the first in Kelantan. Unfortunately, it was demolished in 1930.

4.5.1 The Existence of Malay Settlement in Kota Bharu

To carry out the fieldwork, the researcher conducted a visual observation on September 30, 2019, in Kampung Jalan Atas Paloh and surroundings. There are many Malay settlements in Kota Bharu. The visual observation provides a basic understanding of Kampung Jalan Atas Paloh and a complete picture of the case study. Additionally, it equips the researcher with more confidence and knowledge about the study area. Observing the study area gives an understanding of its place, culture, and character. The development of existing settlements has changed dramatically. While most residents are the heirs of original inhabitants. Urbanization in the area considerably impacts the Malay settlements. One of the attractions of Kampung Jalan Atas Paloh is that there are several settlement units in it. The village was named after an influential person in this area. It is where several home-based industries were started.

It has become customary to name a village honouring a specific name based on its activity or the presence of a particular resident, although there were only a few settlements. For instance, most of the residents from Kampung Menuang work in the copper industry to produce pottery and other copper items. According to Kamus Dewan Bahasa Edisi Keempat (2016), “menuang” means pouring (filling) liquid into a container, melting (metal) by heating it, or casting molten iron into a mould (to form something). They also manufactured gold coins or *'ufti'* for trading with the Siamese Kingdom. The same thing happened in Kampung Haji Harun, located next to Jalan Tok Semian. This village existed because Tok Aki Haji Harun was a religious figure there. Therefore, his name was preserved as the village

name honouring his leadership. Family relations and close brotherhood existed in Kampung Haji Harun. Perhaps most of its residents have family relations. The founder, Tok Aki Haji Harun, invited his relatives to live near his family. At the beginning of the village, there were presumably only three houses. The close relationship caused them to build small bridges in the kitchen area linking each house. Among the religious institutions and schools that flourished in the Jalan Post Office Lama is the Council School (Sekolah Majlis), currently becoming the Kelantan Religious and Cultural Centre (Muzium Majlis dan Adat Istiadat Agama Islam Kelantan). This village became another religious institution in Kampung Kubang Pasu was also lost to the urban flow.

4.5.2 Kampung Jalan Atas Paloh: The Village in Urban Area



Figure 4.9: The image of the study area (Source: Abdullah, 2021)

Kampung Jalan Atas Paloh is located in Kota Bharu (Figure 4.9) and there is a small river known as the Budor River, a subsidiary of the Kelantan River. The view of a dense settlement along the river becomes the identity of Kampung Jalan Atas Paloh. The compact

neighbourhood has a close distance to each other. Simple construction with poor building services has become the norm for the community, although they remain there.

The location of this settlement is about 300 meters adjacent to the palace complex. As mentioned in subtopic 4.3: The Malay Settlements Emergence, page 174), the Palace Complex, located in the centre of Kota Bharu, was built on 4 acres of land in 1844. There are still many other villages (Figure 4.10) around Kampung Jalan Atas Paloh and became the attention of the study. It includes:

i. Kampung Menuang

ii. Kampung Masjid

iii. Kampung Kubang Pasu

iv. Kampung Pengkalan Pasir

v. Kampung Haji Harun

vi. Kampung Tok Semian

Kampung Jalan Atas Paloh is a unique and has a vibrant place of history and culture. It was chosen due to its geographical location near the Budor River and is primarily inhabited by the Malays. Rivers became a source of the communication system and culture of the Malay community. Visually, most human settlements here still retain the vernacular architectural character of the physical and planning aspects that are organic and linear along the river (Figure 4.11). The typology of the houses also varies, and the roof are '*Singgora'* roof tile (made from clay).



Figure 4.10: Location of the study area and surrounding villages (Abdullah, 2019)



Figure 4.11: An image of Malay settlement along Budor River, Kelantan

(Source: Fieldwork, 2021)

Not much new development is taking place in this area. The static situation led to the settlement renovation according to the economic and social conditions of the owner. There is one new condominium project along the river under construction to meet the needs of urban population. It has 160 units located on the site of an abandoned board factory. Initially, human settlements heavily relied on the river as their primary source, although they have evolved with the increasing number of families. Ismail (2015) explained that every village community usually has a traditional lifestyle, always followed and motivated by the life of the region. In contrast, anthropologists such as Firth (1946) argued that a village depends on people's relationships and their daily activities of resources in the region where they settled.

For the researcher, Kampung Jalan Atas Paloh is a piece of the puzzle since there are still a few settlements around. A compact settlement causes the researcher to observe the whole area to see the continuity between Kampung Jalan Atas Paloh and the surrounding villages. Malays are known for their strong family ties. Brotherhood is essential in customary manners and culture. The impact of a society existing among the residents created a massive settlement in this area (Figure 4.12).



Figure 4.12: The settlements Kampung Jalan Atas Paloh that exist along the Budor River (Fieldwork, 2019)

4.5.3 The Pattern of Malay Settlement in Kota Bharu

Most of the settlements built in Kampung Atas Paloh, Kampung Masjid, Kampung Pengkalan Pasir, and Kampung Atas Banggol are linear settlements. This pattern exists along main roads such as Jalan Post Office Lama, Jalan Atas Paloh, and Jalan Atas Banggol. The

formation of settlements is influenced by close family ties. Furthermore, the conditions of the compact settlement and the irregular plot size caused difficulties to build fences. However, there are some settlements, near the main road were fenced. It was just for safety purposes from traffics. Previously, fences were built using bamboo to mark the house boundaries and there is informal roads and pedestrian pathways between houses. The multi-function *'serambi'* is fully utilized, serving as a zone for male guests and social community space. The 'serambi' of a Malay house is a wide open and elongated space at the forefront of traditional Malay house design (Sulaiman, 2021; Idrus, 1996). This space was designed as a multifunctional space by the previous Malay community to meet the needs of culture and daily life. The ‘serambi’ of a Malay house functions as a place to celebrate guests, a family dining room, a place of worship and a resting place for children and male guests in daily life (Sulaiman, 2021). Residents would also greet neighbours passing by their houses. During observing Jalan Post Office Lama, there was no form of social community interaction as the traditional settlement character. Roads built for motorways separated the local community in terms of neighbourhood spirit and community. Settlements with fences originally for security purposes have become a hindrance and detachment from social relations between neighbourhoods. These issues will be explained in Chapter 5.

4.5.4 Typology of the Malay Settlement

Architecture means the art and science of building (Wahid, 1996). The term has been used since 1563, derived from the Latin word architecture and Greek *arshufektari*, meaning master or craftsman (Yahya, 1995). Therefore, architecture means a building built by someone fully aware of the intricacies of carpentry and construction (Mustafa, 1991). Structures creation is also closely related to other features such as urban, population, and others. These elements are part of the civilization of a society. Therefore, the architectural

field covers various areas such as villages, landscapes and open spaces, and the environment. In addition to covering the arts of the public life needs, it also symbolizes the local community creativity (Ahmad, 1990).

Visiting the study area almost felt like being in the past. Jalan Post Office Lama, which is the primary access to the study area, reflects the role of traditional settlements in Kota Bharu. Along the way, there are some traditional Kelantanese settlements between 100-150 years old, and only a few are still in good condition. These timber houses still retain the original design features and are well-maintained by homeowners. The Malay settlement typology has many different characteristics in terms of the design and the roof style (Table 4.1). Mostly, the owner was one of the Sultan's relatives. Earlier communities or the public could not afford such Malay house design characteristics. The craftsmanship and workmanship quality are of skilled carpenters and carvers in Kelantan. The traditional settlement may be located in this area since it is near the palace complex as described previously.

4.5.5 The Yellow Flood or 'Bah Kuning' in Kelantan.

Generally, the frequency and magnitude of floods in Malaysia are very high. Malaysia is vulnerable to flood risk due to its physical geography. The monsoon climate usually causes floods between November and February. Historically, Malaysia experienced floods almost all year round. However, the worst floods of the 20th century were recorded in 1926, 1963, 1965, 1967, 1969, 1971, 1973, 1979, 1983, 1988, 1993, and 1998. The worst unforgettable floods that occurred in the last 20 years (Abdullah et al., 2019) were in December 2006 and January 2007 (Johor), 2009 and 2010 (Kedah and Perlis), 2014 (Kelantan, Terengganu, and Pahang), and 2021 (Pahang). Deforestation and urbanization

raised sea levels to the surface, thus preventing water absorption and increased runoff emissions and flow velocity while significantly reducing concentration time (Chan, 2015).

Table 4.1: Typology of Malay residential in the study area (Fieldwork, 2019)

No	Residential Typology	Structure	Wall	Roof	Floor	Size (Approx)	Village (Kampung)
1		Timber	Timber	Asbes-tos	Timber	25’ x 70’	Jalan Atas Paloh
2		Timber	Timber	Asbes-tos	Timber	40’ x 27’	Jalan Atas Paloh
3		Timber	Timber	Asbes-tos	Timber	35’ x 75’	Tok Semian
4		Timber	Timber	Asbes-tos	Timber	45’ x 85’	Menuang
5		Brick-wall	Brick-wall	Roof Tiles	Concrete	53’ x 73’	Jalan Atas Paloh
6		Timber	Timber	Sing-gora	Timber	20’ x 65’	Menuang
7		Timber	Timber	Sing-gora	Timber	120’ x 80’	Tok Semian
8		Mix-Material	Mix-Material	Asbes-tos	Mix-Material	28’ x 75’	Menuang
9		Timber	Timber	Asbes-tos	Timber	20’ x 55’	Haji Harun
10		Timber	Timber	Metal	Timber	40’ x 30’	Atas Paloh
11		Timber	Timber	Sing-gora	Timber	90’ x 120’	Jalan Pos Office Lama

A ten-day continuous rainfall led to a massive flood, known as the Red Flood (*Bah Merah*) among Kelantanese, which marked the worst floods ever in Kelantan in 1927 (Figure 4.13-i). It was called red due to the unusual colour of red mixed with mud. The incident claimed human lives and destroyed their settlements. Forty years later, it hit Kelantan again in 1967, claiming 38 lives and affecting 84% of the state population (Nawan, 2015). Despite measures taken by the State Government, floods occurred again in December 2014, known as the Yellow Flood or '*Bah Kuning*' (Figure 4.13-ii), changing the coastal bank of the river (Jabatan Pengairan dan Saliran Negeri Kelantan, 2015; Kasinathan et al., 2020). Yellow Flood paralyzed the infrastructure and economy of Kelantanese. It is the most devasted flood in the history of Kelantan. The effects of this flood have also resulted in many other problems such as electricity supply disruption, food shortage, property destruction, loss of settlements and infrastructure, settlement changes, and more (Md. Akhir & Azman, 2018; Kaoje, 2020; Achmad Bahar et al., 2020).



(i) (ii)

Figure 4.13: The Red Flood or '*Bah Merah*' in Kelantan 1927 (i) (Source: https://www.hmetro.com.my) and The Yellow Flood or '*Bah Kuning*' in 2014 (ii) (Source: https://www.nst.com.my, 2014)

After the incident, a few residents took the initiative to improve and raise the level of the residential floor so that it would not be flooded. These benefit the locals to adapt to the monsoon floods and seasonal disasters. However, economic activity in rural areas

depends entirely on the type of land resources available in the village. According to Karim et al. (2016), most of the villagers in Kelantan work as labourers on agricultural farms, such as rubber tappers on farms owned by foreign investors. Most of them did not have agricultural farms, with only a small number of settlers owning private land to cultivate. They used this land to secure their lives with small private farms and settlements. They grew bananas, mangoes, guava, and other fruits for sale. In 2014, these farms were destroyed during the floods and affected their income. Villagers who own cattle and livestock suffered when they tried to take these animals to the hills, but the animals died due to the high flood (Mohd et al., 2020). After the flood in July 2015, the villagers lived in tents or poor housing conditions. However, some economically wealthy people rebuilt their homes with modern brick and sand immediately after the floodwaters receded (Agamuthu et al., 2021; Saraf et al., 2018).

4.5.6 The Floodwall in the Malay Settlement

Although the floodwall at the Budor River was yet to be built, a settlement pattern existed in Kampung Masjid and Kampung Jalan Atas Paloh in 2005. Not many settlements were built in Kampung Jalan Atas Paloh along the Budor River fringe. Logically, it was due to the flood event that swept settlements around the river. Most settlements were built on stilt to prevent flooding. Construction of a floodwall took place in 2010 to avoid annual floods. The construction process took four years, from 2010 to 2014. Malay settlement patterns underwent various changes between 2010 to 2021 and will be explained in Chapter 5.

4.6 Conclusion

The river coastline heavily influenced the Malay settlements in the area. The study area has an eclectic mix of small Malay villages. Its location near the Budor River has formed

various settlement typologies in Kelantan. The grandeur of traditional Malay society skills is observable through this settlement. It was formed through a highly skilled through the glory of Malay civilization. The past glory has been documented by selecting village names, settlement patterns, and building typology. Although prone to floods, the government has helped save the Malay settlement through floodwall construction in 2014. Efforts made by the government are drastic action to develop Malay settlements on the river fringe. The floodwall construction boosts the living standards of Malays living here and it improves the quality of Malays life. The effort made by the government to protect the village by floodwall is contradict with what is happening with the demolition of the area in the process. The next chapter will further discuss on the analysis of the study that appear in Chapter 5.

CHAPTER 5

ANALYSIS OF THE MALAY SETTLEMENTS

5.1 Introduction

The previous chapter discussed the area of the case study and described in detail the situation of the Malay settlements in Kota Bharu. Previously, the researcher has discussed using the Five Principles of Ekistic Theory by Doxiadis in subtopic 3.4.3: The Questionnaire and subtopic 3.6: Data Analysis. The use of the Five Principles of Ekistic Theory by Doxiadis is to align with all research objective and, all the questionnaires discussed in Chapter 5 have been designed according to the Five Principles of Ekistic Theory by Doxiadis. The Five Principles of Ekistic Theory by Doxiadis are still relevant in the context of the study of human settlement today because he has developed a ground theory. The researcher only used the principle as a basis to design the questionnaire and adapt it to the research method. The same thing happens as there is a study of architecture based on the Six Principles by Vitruvius in the book De Architectura written around 30-20 BC, which is still referred to by scholars in academic writing today. This chapter will focus on the analysis of the data obtained to answer the objectives of the study. This chapter will be divided into several sub-topics that will discuss the Five Principles of Human Settlement introduced by Doxiadis (1972) as below:

i. 1st Principle: Contextual Potential
ii. 2nd Principle: Minimization of the Energy
iii. 3rd Principle: Privacy
iv. 4th Principle: Optimization of the Relationship Between Human and Nature
v. 5th Principle: *"Successful Human Settlement"*

5.2 Principle 1: Contextual Potential

Initially, humans tried to understand the context of the surrounding in the beginning of their life. Before a settlement is built, humans will seek connections through the context of the environment to provide convenience in their daily lives. Contextual potential played an important role before the existence of the human settlement. Then, these contextual elements evolved and formed an environment that encompasses culture and the world which is built through various features. According to Rapoport (1977, 1980, 1990, 2001) and Moore (2019), the environment needs to be viewed from various aspects, such as the series of things and things, things and people, and people and people. Settlement initially started from a single space, and then further developed through various sizes, as described by Doxiadis (1974) and Carbonell et al. (1996). All these combinations influenced and formed the pattern and structure of the Malay settlement. As a result, what we see today is an integration that will provide an image into the 'place'. It also contributes towards developing the image of an area.

5.2.1 Socio-Economic Characteristic

The Malay village environment is rich with naturally landscape favorably fruit orchard, where houses are built on stilt scattered and connected by natural and organic pathways, forming a unique and invisible environment compared to the city area. This assertion is supported by visual observations from the study conducted by the researchers in September 2019 and then along 2020 and 2021 (Table 5.1).

Table 5.1: The Malay residentials in the study area

No	Settlement Typology	Structure	Village (Kampung)	Natural landscape	Built on stilt	Organic pathways
1		Timber	Jalan Atas Paloh	Yes	Yes	Yes
2		Timber	Jalan Atas Paloh	Yes	Yes	Yes
6		Timber	Menuang	Yes	Yes	Yes
7		Timber	Tok Semian	Yes	Yes	Yes
8		Mix-Material	Menuang	Yes	Yes	Yes
9		Timber	Haji Harun	Yes	Yes	Yes
11		Timber	Jalan Pos Office Lama	Yes	Yes	Yes

(Source: Fieldwork, 2019)

The study area was comprised of eight Malay settlements located in Kota Bharu, as mentioned in the previous chapter (Refer Chapter 4). Based on the results of the randomly distributed questionnaire as shown in Table 5.2, most respondents are composed of residents of Kampung Jalan Atas Paloh, Kota Bharu, 30% (n=104) of the survey area.

Table 5.2: Survey areas in Kota Bharu (n=350)

Item	Frequency (n)	Percent (%)
Kampung Jalan Atas Paloh	104	29.7
Kampung Menuang	35	10.0
Kampung Jalan Post Office Lama	39	11.1
Kampung Kubang Pasu	51	14.6
Kampung Pengkalan Pasir	39	11.1
Kampung Lorong Tok Semian	20	5.7
Kampung Atas Banggol	22	6.3
Kampung Masjid	40	11.4
Total	350	100.0

From the interviews, settlements at Jalan Atas Paloh Village was the early Malay settlements in Kota Bharu. With the help of the drone view (refer to the Figure 3.1, Figure 4.9, Figure 4.11, Figure 4.12 and Figure 5.25), it was found that all the residences in this settlement area are dense and compact. This result is supported by one of the respondents as follows:

'... Kampung Jalan Atas Paloh and its surroundings were one of the famous villages at one time. Most of the residents here are close ties: family relatives living together in one plot of land. Kampung Jalan Atas Paloh has a larger population than other villages .. (R-10).

Along with Doxiadis (1974) opinion, the process of settlement existence should be seen from various aspects such as geography, topography, growing populations, changing technologies, changing conditions of the natural environment, and successive social, as well as political and cultural attributes. The observation shows the Malay community do their daily activities suited to the context and potential of the community. Lorong Tok Semian Village close to Atas Paloh Village and it became the ground for Islamic thought and religious activities, has the smallest number of respondents, i.e. 5.7% (n = 20). This small

settlement is bordered by small alleys separating it from other villages. Historically, there was a *Pondok* (i.e. Islamic traditional institution) established in this area. The concentration of the people in seeking knowledge during this time led to the growth of population concentration. However, this education institution was no longer exist due to the changes in the lifestyles of the community. There is a Muhammadi Mosque which is located 500 meters from this village, and it became a new venue for villagers to gain Islamic knowledge. For the Malay community, they are paying serious attention in religion and customs that forms their strong identity and also moulds their thinking in establishing the Malay settlement. This opinion is in line with Evers (1977) who stated that a mosque (or '*surau*') and a market are included in the design concept of the Malays, and it became the ground for Islamic thought and religious activities. Although a new '*surau*' has been built in the village, it does not carry the same functions as the one established in this settlement in the early days. This finding was recorded through the statement of the respondents:

'..Surau here have been used for congregational prayer activities only. The situation is not the same as before when I was young. The 'surau' is a place for children to learn to recite the Al-Quran, and many religious ceremonies are held here too. Today, most people do not use the 'surau' for feast activities. Most of the feasts are held at their house .. '(R-29).

Another observation by Doxiadis (1972, 1974) that the establishment of the settlements should be observed from the aspects of geography, urban planning, and related disciplines covering a range of topics and methodologies. This finding has proven that humans' lives are lingering around the environmental elements. These elements contribute to the idea and inspiration of how people want to adapt these elements to suit their lives. This finding is in line with the opinion of Seamon (2018) and Firth (1984) who explained that the reason of such condition is due to the fact that humans do not live alone. Rather, they interact

with living things that exist around them (both natural and non-living thing). This study found that the relationship between culture and community activities is place attachment, as Tuan (1980) explained, and helps to enhance the image of 'place'. Besides, the way in which the Kelantan River is linked to the settlement has played the most critical role in this settlement area. This is because the Malay tradition also requires water resources in life, just like any other early settlements. The linear location of the house-close to the water sources reflects on the energy saving as stressed in 2nd Principle of Doxiadis in the next sub-topic. This opinion is in line with Clark and Piggot (1965) who mentioned that the early human life depended on their nature to hunt as well as to build habitat from various natural sources such as trees in order to protect themselves and to create small boundaries for their habitat.

In Malaysian context, the same situation occurred during the prehistoric times. Findings of several studies previously done by (Jahi et al., 2016; Ismail, 2015) points out that rivers and geographical factors are the leading causes of the existence of human settlements. The river delta was a location for agricultural activity until it evolved into a port as the agricultural industry expanded. The 'Tambatan Di Raja' was constructed to foster trade activities in Kota Bharu since trade activity there was very active, according to historical documents. According to observations, Kampung Jalan Atas Paloh is more populated than nearby villages.

Geographically, the landform along the river fringe can be categorized into three areas. Table 5.3 reveal that 51.7% (n = 181) of respondents lived in the riverside area. While other 10.6% (n = 37) reside stayed at muddy areas. These findings indicated that river and geographical elements can greatly influence the Malay settlements in this area. The river has become the inspiration that attracted the constitution of these settlements.

Table 5.3: Condition of settlement areas (n=350)

Item	Frequency (n)	Percent (%)
River side area	181	51.7
Muddy area	37	10.6
Open and flat land area	132	37.7
Total	350	100.0

While the river considers as the main causes at settlement, on the other hand, it also contributing towards establishing the 'place making' for the Malay community since then. From the early years, the Malays was relying on the river in their daily activities, it was also a major cause of the rapid development due to the availability of transportation, internal migration and royal institution.

Earlier as the writing by Ponty (1962), said that this development is due to three aspects in the formation of ‘place’ which are: a sense of the landscape, a sense of human life world, and a sense of experimental elements. Coates and Seamon (1984) elaborated further where they assert that characteristics are developed through geology, hydrology, climate, topography, soil, vegetation, animal, organism and many other factors. This indicates that the Malays also have similar ideas and ways of understanding the establishment of their settlements, as described by the previous scholars. Their way of thinking is built on the same aspects before a settlement is created. Although it might be just trial-and-error process in the beginnig, the people eventually managed to form the settlement and develop a ‘sense of place’ as they settled over time (Doxiadis, 1974).

In conclusion, it was found that most of the Malay settlements in the area being studied are located along the river. A river as a medium of transportation is still very important to the settlers. It could be justified from the early years that the settlement grew along with the activities and family institutions. The Malay settlements were among the early

settlers in this area, given that most of their daily activities were formerly very common with the river and agriculture activities. Although it remains precisely unknown about the time of their existence, it can be seen that the settlements in this area are closely related to geographical conditions. As the majority group in this area, the Malays community appears to have succeeded in establishing settlements and an organized system of life either economically or socially.

5.2.2 The Ownership of the Settlement

Referring to Table 5.4, most of the residents (56.3%; n = 197) in the study area self-own home and are original settlers who inherited their homes for generations. It shows that the houses in this area originated from the early settlement inherited for generations. The residents stayed in the area without moving elsewhere.

Table 5.4: Types of settlement ownership (n=350)

	Status of Settlement		**Settlement Ownership**	
Item	**Frequency (n)**	**Percent (%)**	**Frequency (n)**	**Percent (%)**
Owner	197	56.3	-	-
Rental	153	43.7	-	-
Buy from developer	-	-	12	3.4
Buy from individual	-	-	30	8.6
Inherited	-	-	187	53.4
Rental	-	-	121	34.6
Total	350	100.0	350	100.0

Based on the survey, it was found that the original settlement in this area is identified through the physical condition of their settlements. The residences in these settlements are still in good condition since they are owned by the residents who normally maintain their property. This situation is in line with the opinion of Rapoport (1977) and Altman (1975) who stated that the image of a ‘place’ is developed along the cultural influences and

experiences which existed through humans involvement in housing activities. Eventually, such development will form the meaning and relationship between ‘place’ and later develop into an identity of the ‘place’. It will also produce people’s attitudes towards their sense of social relations and cultural values in these settlements, especially for those living in the area. The resulting identity in these settlements highlights the importance of culture and sustainability of survival to those who maintain the living system of the community.

On the other hand, a different situation was observed from the tenants who live in this area. The results show that, 43.7% (n = 153) are tenants, and most of them (34.6%; n = 121) came from Pattani, Thailand. During an interview, one respondent informed that the tenants are mostly from the Pattani community who migrated to Kota Bharu and worked in the area as restaurant waiters, cooks, and many other works

‘… I have come to Kota Bharu about 15 years ago and rented here. Coming here at that time was to make a living as a 'tom-yam' chef restaurant. Usually, we come to Kota Bharu with some friends from the same village .. ’(R-18)

The tenant does not show their commitment maintenance and condition of the residences. However, based on the different perspectives of the resident owners, there are some limitations for the tenants to renovate and maintain their rented homes accordingly. Despite their limitations, they do show tenants a ‘sense of belonging’ towards their settlements. This is due to the fact that they are part of the community that has been there for many years and accepted by the local community. This finding is supported by the study by Relph (1976) who explained that a *"sense of place"* is to bring human experience to the local situation and also to connect a place with its personal elements. Such a sense will also create aesthetic values among the people, such as by caring for soft scape and horticulture around their settlement area in order to strengthen the local identity.

The statement above shows that tenants who migrated to Kota Bharu stayed with some of their acquaintances most commonly are the Malays of Atas Paloh Village. In the eighties, fortune seekers from the Pattani drove their cars or trucks to search for jobs. They come in group andestablished their settlement area as a platform for other migrants to join them later. This point shows that tenants' migration also contributes to the existing characteristics of the 'place'. An important aspect is not about the tenant status, but about how they have contributed to forming the 'place'. This finding is in line with Schulz (1976) and Relph (1976) stating that the most concrete term in a living environment is developing a 'place'. It shows that the local people's shared a meaning of 'place' with the migrants due to the same belief and similar culture. This provides an image of a permanent object, such as a building which has a material, shape, texture, and colour. This settlement exists through a 'phenomenon' that cannot be reduced from any possession, such as a spatial relationship, without losing the real nature of sight (Figure 5.1).



Figure 5.1: Organization of meaning that creates colours, forms, signs, materials, landscaping, sizes through settlements (Source: Abdullah, 2021)

In conclusion, the settlement ownership factor embodies a unique character in terms of local identity and 'place making'. Generally, there are two types of ownerships, namely the owners and tenants. In the settlement exemplifies the character of a place, although the rental tenants do not have ownership status, however, their sense of belonging and place attachment drew them to the caring of the residence. As observed, the resident owners in this area have a strong bond with the environment and the community. At the same time, the

migration of tenants to this place does not disrupt the existing community system, rather their settlement has brought along several elements from their original place into the existing elements in this area. This situation shows that the integration between these two types of residents has affected the existing meaning of this 'place'. The original community in this area can live in harmony with the migrants from Thailand, which has proven that the Malay communities are generally well accepting in treating outsiders as their guests. This finding also shows that the lives of the original community in this place were not affected by the patterns of life by the migrants since both groups have almost similar customs and culture. Therefore, the impacts of the migrants may not seem tremendous and significant in influencing the community of the Malay settlements in this area. They work in restaurants as waiters and open restaurants. Some have lived here for 15 years. They have built a 'place' as explained by Relph (1976) through a similar lifestyle and culture (in addition, they also have a mental image that the situation here is almost the same as the pattern of life in Thailand). It makes them comfortable with work and daily life. As explained by McGee (1975), people who migrate have a suitable job and lifestyle in the new place and will stay longer in the area. This is what happened when the Malays migrated to Kuala Lumpur. Kampung Baru is a platform for Malays to adapt to the city experience because the situation in Kampung Baru is almost the same as in their village.

5.2.3 Land Tenure

As described by Doxiadis (1974) in the 1st Principle of Human Settlement Theory, before humans find a suitable place as their settlement, they will usually try to connect the environmental elements in daily life activities. The low-lying area along the riverbank of the Kelantan River was initially used as an agricultural area. Most Malay settlements along the river fringe area have a front porch facing the river (Figure 5.2), similar to the study carried

out by Wahid et al. (2021). Although the settlement is not planned, the area along the Kelantan River is rich with agricultural and water transportation activities. Although there is no main road in this area; the only way is through the entrance to the village with a width of 3.5 meters with tarmac finishes. The entrance also provides 1-meter pathways which connect one house and another. The size of the pathways is adequate for pedestrian walkway and for motorcycles.



Figure 5.2: The Malay settlement overlooking the Budor River at Jalan Atas Banggol Village, Kota Bharu (Source: Abdullah, 2021)

After a long period, the study area along Budor River became the concentration of the population. Most of the land status in this area are still maintained as agricultural land. The Malay community encourages their sons or daughters to live close with their parents. The house will be renovated and expanded to provide space for additional family members. This situation causes the settlement area to become denser due to the lack of control regarding setbacks and building boundaries.

Table 5.5 shows the highest number of houses built on a piece of land, 62% (n = 217) are 1 unit per plot, while 38% (n = 133) represent the number of more than one residential unit on the same piece of land. Usually, 12.9% (n = 45) of the area was comprised of two-houses-per-unit land. Meanwhile, 8.9% (n = 31) of total residential units are comprised of more than five houses on one plot of land. There is no specific land plot size in this area because the majority is agricultural land. This finding highlight that the multi-unit settlement pattern is a common phenomenon for settlements along the river.

Table 5.5: Total number of houses in one-land plot (n=350)

Item	Frequency (n)	Percent (%)
One house	217	62.0
Two houses	45	12.9
Three houses	41	11.7
Four houses	16	4.6
More than 5 houses	31	8.9
Total	350	100.0

Most of the residents in such areas are relatives who practiced extended family systems mostly married to family members. This area was formerly surrounded by paddy fields, rubbers, and oil palm plantations. The village may seem clustered according to different views, but this characteristic is what makes it unique and different from the city area (Putra, 2018; Harman Shah & Wahid, 2010). The following interview excerpt supports the aforementioned finding:

'..Once upon a time, the area along the Kelantan River was agricultural. Many coconut and vegetable plantations were planted in this area before the construction of the fort. The area of Kampung Pengkalan Pasir is known as the place where the sand factory is collected from the sand bar or the river .. '(R-32).

As recorded from the finding, the area has a very fertile delta, and active agricultural activities are carried out on a large scale, mainly by the Malay settlers. In addition, various other activities, such as a sand factory that provides job opportunities to the locals. Most of the jobs are within their settlement area only. The residents in this area did not face transportation problems due to the proximity of settlements to the rivers (Figure 5.3).



Figure 5.3: River connection influences place, identity and Malay settlement patterns in the study area (Source: Abdullah, 2021)

It was also discovered that the land status in the area has an impact on the relationship between culture and human activities. The virgin land was cultivated by the early settlers and inherited to their children according to the customs of the Malays. Seamon (2017) mentioned that a place is considered *"as any environmental locus that draws human experience, actions, and meanings together spatially and temporally"*. Through this approach, a place can encompass the elements of a unit, neighbourhood, town, city, or any geographical region. Due to the availability of the land and its main agricultural activities, the area was continually used according to the lifestyle of the Malays who prefer to live together. The spirit of '*gotong-royong*' (i.e. working together) which exists among the Malays community has become part of their culture that suits the river activities, agriculture and settlement. As recorded from the interview, one respondent said:

'... originally this house was inhabited by my grandfather. He was one of the first settlers to come here. He worked on this land in 'gotong-royong' with other relatives to grow paddy. Later, he built two houses on this land for my relatives to live together. Our settlement is connected via a small bridge made from timber platform between the kitchens of the house…'(n-27).

In conclusion, it was observed that the status of the land in this area was originally agricultural land based on the Standard Sheet from the Kota Bharu Land Office as explained in subtopic 3.4.2. Agricultural land can create an environment and culture that is more in line with the Malay culture. Through agricultural activities together with the activities by the

river, the community adopted the community spirit through '*gotong-royong*' to build their settlements. Yet, it is also worrying that there will be issues of land acquisition or land conversion in the future. These changes will affect the existing ecosystem and can cause future generations to face significant problems with their basic living needs. There were also emerging concerns about ecological issues and their impacts on the Malay community. Such issues can further impact and change the lifestyle and environment of the Malays who have long practiced the community spirit. This topic will be explained in more detail in the next chapter.

5.2.4 Household Characteristics

According to the Report from the Department of Statistics Malaysia 2020, the total population of Kelantan in 2020 is estimated to be more than doubled compared to 1970, from 707.30 ('000) to 1906.70 ('000). Although the highest population growth rate was recorded in 1991, which is 3.3%, the rate continued to decline to 1.2% until 2020. From 2010 to 2018, the number of rural residents in the state exceeded the urban population. As shown by the survey results in Table 5.6, most respondents have lived in Kota Bharu for more than 20 years (50.9%; n = 178). These respondents are also originally from early settlers who have much knowledge about the history of the Malay settlements in the area. Most respondents (50.9%; n = 178) have lived and settled in this area since they were young since 1930's.

Table 5.6: Period of living in Kota Bharu (n=350)

Item	Frequency (n)	Percent (%)
Below 5 years	60	17.1
6 - 10 years	54	15.4
11 - 20 years	58	16.6
Above 20 years	178	50.9
Total	350	100.0

The respondents have been living in Kota Bharu through generations (i.e. for three generations based on the calculation of one generation = 25 years). This is supported by the interview with the following respondent:

'... at that time, I was a child, Pengkalan Pasir Village was famous because here there was a sand factory. Sand is sucked from the river using large machinery. Many residents here work there. Some outsiders come here to work, and they rent houses here. Due to that event, this settlement is known as Pengkalan Pasir Village…'(R-13)

It was observed that river activities are no longer practiced by the residents. However, there are people who use the river for fishing activities. This implies that the river is still being used by the residents, although in small numbers. This finding is contradicted with a survey by Baird et al. (2015), which reported that human settlements and rivers are spaces where elements are dynamically interrelated in environmental contexts. Nowadays, most communities who are settling in this area are living separately without having any contextual connection with the river (as shown in Figure 5.4). One plausible reason could be that the community's lifestyle has undergone various changes within the long period.



Figure 5.4: Only a few people who still use the Budor River to park boats for daily use (Source: Abdullah, 2021)

Up until now, there have been various changes in the study area. While most of the settlement areas are still inhabited, some others appeared to be damaged. Most residents have also undergone various experiences, especially floods and urbanization process in the area.

The questionnaire found that 17.1% (n = 60) are residents who have lived in this area for less than five years. They are young people who work around Kota Bharu and live in the area.

In conclusion, the settlements in the study area are mostly inhabited by people who have been living here for a long time and most of the residents belong to the elderly group. With the richness of knowledge and historical events experienced by them, the Malay settlements in this area have been observed with their own unique characteristics. Therefore, the preservation of the original settlements should indeed be implemented as one of the efforts to revive the Malays' cultural environment and community identity. On the other hand, it was also observed that the elder population in this area is no longer using the river as a source of their daily activities due to a change in their lifestyles. In addition, from the total population of those who have long settled and the number of boats available, it can be inferred that river activities are no longer practised by the residents in this area. This indication a disadvantage to the settlements and led to the decline of such skills such as boat making and carving which the Malays have long acquired from their river activities as per discussed in the Chapter 6.

5.2.5 Employment

In Kelantan, the unemployment rate remained the same in both 2019 and 2018, i.e. at 4.0%. On the national scale, the graduate unemployment rate has actually increased from 1.0 percent percent in 2018 to 7.0% in 2019 (Department of Statistics Malaysia, 2019). Female workforces in the country were reportedly have dominated four categories of employment compared to male workers, namely professionals (4.3%), technicians and allied professionals (3.4%), skilled workers in agriculture, forestry, livestock and fisheries (10.4%) as well as skilled workers and related carpentry workers (7.5%).

In terms of the employment sector, Table 5.7 shows that the residents in this area are primarily those who are self-employed (25.7 %; n = 90). They work independently in their own home, either by running grocery stores, opening stalls, venturing on online business, and, or repairing vehicles. Most workplaces are within the settlement area, thus most of the customers are locals and surrounding people within the settlements. At the same time, there are also residents who are self-employed in other businesses (22%; n = 77). This group includes traders in Kubang Pasu Market, Buluh Kubu Market, night market and eatery establishments who are working outside their residences most of their time, including Fridays and Saturdays. According to one respondent, he runs a business every day except on Tuesday, and he will only rest at home when needed.

'... usually on Friday and Saturday are the busiest days of business in the market due to holidays. Usually, I will have a break on Tuesday as that day is a day with fewer customers. Income is also volatile, especially during the rainy season. '(R-12).

Meanwhile, there are a total of 13.4% (n = 47) respondents who are jobless at the moment. Most of them are youngsters who have just graduated and are still waiting for their examination results. However, there are some youths who do not have a permanent job are doing odd job to generate income, such as by helping the villagers to fill out zakat forms to get assistance from the government. Some are working as assistants for cultural performances in Tumpat (another district about 30 km from Kota Bharu). For example, performing *Dikir Barat* (folk song) or other performance:

'... erratic work depends on the performance of Dikir Barat. If there is a performance, usually, the organizer will call me to make preparations. I will be paid RM 80 for one performance. Now it is Covid-19 Pandemic season, so I do not have a job because of Movement Contol Order….' (R-29). The respondent is a full-time Dikir Barat musical

instrument player. Due to the Movement Control Order currently enforced, it is difficult for him to get invited to play a musical instrument. This situation makes it difficult for him to make a living.

Table 5.7: Sectors of employment (n=350)

Item	Frequency (n)	Percent (%)
Government Sector	62	17.7
Private Sector	46	13.1
Palace	5	1.4
Art and Tradition	2	.6
Self-employed (from home)	90	25.7
Self-employed (business)	77	22.0
Pensioner	21	6.0
Not working	47	13.4
Total	350	100.0

The finding shows that the Malays in Kota Bharu are still able to gain benefits from the city lifestyle. Some residents carry out business activities around Kota Bharu. The city life in Kota Bharu, an attraction for visitors, has allowed some locals to conduct business activities at Pasar Siti Khadijah, Pasar Kubang Pasu and night markets.

Nevetheless, most of the residents are actually traders, and the Malays area are still considerably lagging in terms of achieving a better career prospect in life. A similar scenario was observed in a study conducted by McGee (1974). A similar scenario was observed in a study conducted by McGee (1974) explained that the Malay community in urban areas are still lagging economically, resulting from employment opportunity. One possible factor is due to their lifestyles, many Malays are more concerned with family relationships bog to village lifestyle. This has caused their lacks ability to compete with the emerging economic powers of other ethnic groups in the city (Shari, 1992; Hadi, 2001). Furthermore, the Malay

community in the settlements seemed to have lost their connection with the original characteristics of the 'place' where they used to rely on the river as a medium of transportation and trading activities.

Table 5.7 also shows that traditional art and culture work has the lowest percentage of employment (0.6%; n = 2). This somehow indicates that such work is no longer being significantly practised in today's setting. Unlike in the past where cultural norms were fully embraced by the Malays in this area, the decline of community engagement and river activities appeared to have resulted in job losses in terms of traditional aspects. This is evidenced in this study where traditional art and other cultural traditions no longer seemed to be practised by the Malays community here. Consequently, the young generations have also turned their attention to other employment opportunities in the city areas.

In summary, the Malays in the area being studied are the community who are very hardworking and have the spirit and motivation to move forward in their lives. Even though the majority are self-employed, they are very passionate about doing busines, either through the conventional method in the Malay market or online business. At the same time, they are also looking for other job opportunities in the city and trying to achieve a better quality of life. Yet, in terms of economic development, they are benighted compared to other ethnicities, especially the Chinese community. One of the reasons is due the lost of the river activities which were the centre of trade and economy of the Malays in the early years. With the decline in the resourceful river activities, the Malays hardly adjusted to their new economic skills. The old tradition skills was inherited through generations which is no applicable today.

5.2.6 Household Income

A settlement is initially developed through the formation of a family. The family institution encouraged the settlement to be more significant. Mumford (1946) testified that the evolution of a city started with the formation of family. He added, the development of a city as the epicentre of human civilization grew from a village formation which was then developed into a town, city, metropolis, and finally megalopolis. In addition, the income status of the residents also plays a significant role in the settlement transformation process, whereby, in the beginning, the amount of income determines the family's ability to support their lives.

As seen from the survey results in Table 5.8, the urban poor group represents the highest percentage, whereby a total of 30.3% (n = 106) of the residents only obtained a monthly income between RM 1000 to RM 1499. (According to the Department of Statistics Malaysia 2020, the B40 group who earns RM 2139 to RM 3030 is categorized by the Government as *the* low-income group is considered as a guaranteed household. Those who earn less than B40 can be classified as poor in Kelantan).

Table 5.8: Family's monthly income (n=350)

Item	Frequency (n)	Percent (%)
RM 0- RM 499	54	15.4
RM 500- RM 999	72	20.6
RM 1000-RM 1499	106	30.3
RM 1500-RM 1999	75	21.4
RM 2000-RM 2499	30	8.6
RM 2500-RM 2999	10	2.9
RM 3000-RM 3499	3	.9
Total	350	100.0

This finding indicates that poverty is a major issue in the area being studied. This poverty issue has become more critical with the pressure of city lifestyles and the increasing cost of household items. There are still residents who are living in deteriorated houses (Figure 5.5). Some staying with ill parents and only depending on income as cleaners. Their settlements were observed to be an unsatisfactory condition in which are built from basic structures and metal sheet. Over time, the structure of these residences suffered damages, and the occupants could not repair their houses due to economic constraints. In an interview with one of the respondents, he elaborates that:

'... my income is around RM 700 a month. I took a wage as a cleaner to a neighbour with a more flexible hour. If working with a company, I can't spend time taking care of my mom. With this income, I support my mother, who has been ill, and use the money to purchase medicines too. Sometimes some NGOs come to help us. The condition of the house was littered and leaking because we did not have time to clean the house. The surrounding area has long been abandoned ...'(R18)



Figure 5.5: The poor settlement conditions still occupied by the respondents

(Source: Abdullah, 2021)

The finding provides evidence that the traditional settlements which are mostly dominated by people who are primarily involved in seeking jobs in urban activities have poor physical conditions in the houses and in slums. Likewise, the occupants do not have other options or places to move in order to continue their living. Generally, the present place

of shelter in this area is no longer considered by many as a sense of pride as compared to the previous Malay generations.

In addition, it was found that family size and low-income status were also among the factors which put pressure on the interior space in the settlements (refer subtopic 5.3.1: Socio-Cultural of Malay Customs). Eventually, some of the residents need to move to other areas to have a more comfortable living place. This finding is in line with Doxiadis (1968, 1970) who agreed that limited space problems in some settlements would cause people to start looking for new areas to develop. Due to this reason, many residents have migrated in search of a better life. At the same time, the original owners will rent their residences to others. This is as commented by one respondent as follows:

'... I rented this house almost eight years ago with a rent of RM 150 a month. Originally the owner lived here, but because he has six children, he has rented a terrace house in Kubang Kerian. This house has been used as a rental house .. '(R-34).

Meanwhile, 15.4% (n = 54) of the respondents have the lowest monthly income, i.e. below RM 499. This includes housewives who work from home in which their income is not static as they still have other sources of income, such as financial supports from working children and small home-based businesses, as well as wages from other skill work like Qur'an teaching, sewing clothes, farming, and others. Some other residents are doing fishing activities in nearby river areas. The finding revealed the role of income factor in bringing impacts on the image of the place. Moreover, human comfort towards their settlement is also influenced by the income they earned. Altogether, these aspects will provide an image of the place (Wahid, 2008) which later contributes to the image of the settlement area. The image of a place is not only representing a landmark, it also creates a community of Malay settlements who can sustain the identity and values of the community and activities.

In conclusion, the settlement condition is reflected by the income status of the residents in the area. Poor financial factors and low-income issues have made these settlements appeared poorly organized and developed. Some of the damaged inhabited settlements cannot be adequately repaired due to the owners' relatively low income status. Majority of the residents are below B40s (RM 2139 – RM 3030) who are still struggling to climb their social ladder and life in the city. They are also pressured by other factors, such as the health problems of family members and the rising cost of living. Such condition has made the affected residents no longer think about solving the comfort issues of their settlements. Many people are no longer considering their settlements as a pride in their life. Despite the finding, some of the Malays are still using the river as their source of additional income, as can be seen from the fishing activities along the Budor River. Although this activity is generally seen as a hobby, it is also helpful to reduce the income burden in the people's daily lives. Somehow, such activity also reveals that the Malays are still adapting their life to the river's environment.

5.2.7 Side Informal Activities

In terms of side income, the survey results in Table 5.9 show that most respondents are keeping various types of farm animals in this area. The highest percentage represents those who have chicken livestock in the settlement area (24.3%; n = 85).

Table 5.9: Livestock in the settlement area (n=350)

Item	Frequency (n)	Percent (%)
Cow	9	2.6
Goat	14	4.0
Sheep	1	.3
Chicken	85	24.3
Bird	30	8.6
None	211	60.3
Total	350	100.0

As the study observed, most of the livestock animals are kept under the houses. The Malays built their house on stilt. The ground is used to keep the animals, and also as storage or parking spaces (Figure 5.6). As a result, the ground level below the house are very dirty and smelly, which are also unpleasant to the neighbourhood environment. Additionally, lower level of the house is generally not properly managed, leading to intermittent drainage problems.



Figure 5.6: Livestock in the settlement area (Source: Abdullah, 2021)

On the other hand, 0.3% (n = 1) there are those who have sheep and other livestock kept far from the settlement. The residents with cattle livestock in the field which is not far from the settlements show that the Malay community is still preserving the village's way of life although the urbanization of city life is encroaching on their area. However, this way of life will create another problem for the neighbourhood, particularly due to the unpleasant smell and sludge that will disrupt the health condition of the community. Despite such issues, the residents in the study do not have other options due to their long-practised traditional way of keeping animal livestock. Observably, the lifestyles of the residents in this study show that they do not adapt to the urbanization process in the city. The village's cultural values, of keeping livestock is sustained which reflected the rural life in urban areas. As commented by Wahid and Hadi (2014), even though the village lifestyle is still applied in the city, such living conditions are seen as not suitable for urban development. As further explained in their study, this urbanization process will generally be taking place in developing countries. Although communities become more urbanized, cities will turn into

overwhelmed areas, affecting the quality of urban areas to meet a better function. When a city has such lifestyles, the urban area will eventually become more like a rural setting. It will also affect the urban style of life and the model of urbanization (McGee, 1975).

In summary, Malay community in the area is still practising the traditional way of village lifestyle daily. Yet, their practice and inheritance of the traditional way of life led to their lack of knowledge in the urbanization process which has already been absorbed into their settlements. Without proper knowledge and management, such activities may also bring problems to the surrounding settlements and other neighbourhoods. The pressures of life in the city may cause the residents to perform daily activities beyond boundaries without thinking about its impacts on others. Due to improper management, the settlement area will eventually become a denser and dirty squatter area if the actions are not curbed. From another perspective, the Malays are also able to make various benefits from their living environment with the availability of multiple resources to sustain their life, such as through river activities and having livestock animals. Under any circumstances, the community is still preserving some cultural values within the city setting. Such values present good examples of positive attitudes for others to consider towards improving their quality of life.

5.2.8 Dwelling Characteristics

The Malay community has homes inhabited by more than one family. As reported in Table 5.10, this study also found that the majority of respondents (66.6%; n = 233) were from one-family households. While 24.3% (n = 85) of respondents said there were two families in one residence, 7.4% (n = 26) included up to 5 families in one residence.

Table 5.10: Other family members living in the dwelling (n=350)

Item	Frequency (n)	Percent (%)
1 family	233	66.6
2 family	85	24.3
3 family	4	1.1
4 family	2	0.6
5 family above	26	7.4
Total	350	100.0

Most importantly, most of the respondents are reportedly comfortable living in their dwelling since they have been living here for a long time. Generally, the respondents felt comfortable to live and practise their culture and way of life which have long being practised by the community. This finding is also consistent with the study by Wahid (1996) who agreed that the Malay settlements are influenced by their customs and cultural values. The following response from an interview supports this finding:

'... I (uncle) live with my wife and also my children and daughter-in-law here. My son got married about seven months ago. I allowed him to live together because they cannot afford the house due to the high price. For renting, maybe he cannot afford it yet, and he also works in Kota Bharu. Let him stay here first while waiting for a stable life-income ...'(R-6).

This statement also shows that the integration between physical and cultural forms occurs when it involves the various perceptions of individuals living in the same dwelling. They have various needs in fulfilling the purpose of daily life in their settlements. The combination of families in the same dwelling also formed an identity of the 'place'. As described by Bott et al. (2003), such integration will create the settlement pattern of the community through reliance on the physical, social and cultural aspects.

However, the identity of the 'place' and its physical form will change according to the current situation and family members' needs. Through observation, the researcher found

that this change has occurred due to the globalization of culture. In this study it was found that although many family members reside in the settlement area, the variety of activities that exist in the area is not uniform due to the type of work, gender, education level of family members and the need for living space for family members. This causes physical changes to the residence. These findings are in line with Altman (1992) and Brehm et al. (2013) who stated that the changes will affect human activities. For example, it was found in this study that although many family members live in a settlement, the activities that exist in the residence are different from others due to the globalization of culture, as described earlier.

5.2.9 Dwelling Condition

Table 5.11 shows that large family members are common in Malay family at Kota Bharu. 44.9% (n = 157) of the family with more than five persons in a unit is available here. According to respondents, many family members are not the main problem in their homes because men usually sleep in the living room. The study also observed that rooms are generally assigned for parents and women, while the male family members always share one room. Those who own their residence have the freedom to redesign the internal space of their house. As for those who rent, they have no choice but to use whatever space has been provided in their settlement.

Table 5.11: Number of residences in one residential unit (n=350)

Item	Frequency (n)	Percent (%)
1 person	8	2.3
2 persons	38	10.9
3 persons	44	12.6
4 persons	103	29.4
More than 5 persons	157	44.9
Total	350	100.0

Observation also recorded that some of the residential units were divided into two parts; The right wing is occupied by the owners and their family themselves, while the other wing is used as for the residency of the owner's siblings who live together (refer to Table 5.19/ Column no. 1).

This residency arrangement is common in this area. Throughout the study period, the researcher witnessed that various changes have taken place in the area being studied. The community varies accordingly to age and gender groups. Most respondents who have been living here for a long time are still tied to specific activities. A different situation happens to the young people who experience a different lifestyle from the older generation. The observation also found that some of these settlement zones will continue to grow and become more dynamic following rapid development. As Doxiadis (1974) discussed, we cannot accurately predict settlement changes due to technological and economic consequences. The same situation also applies to the Malay settlement regarding the challenges that will occur in the future. This change occurs according to the wishes of the occupants and the environmental conditions and affects the design of the residence and space. Based on the study observations, most of the settlements in this area have varying designs. They were not built in a similar form and design from one to another. In terms of the number of bedrooms, Table 5.12 shows that most residences have three bedrooms (38%; n = 133). For a large family, residences with three bedrooms are mostly preferred.

Table 5.12: Number of bedrooms in one residential unit (n=350)

Item	Frequency	Per cent
1 bedroom	20	5.7
2 bedrooms	87	24.9
3 bedrooms	133	38.0
4 bedrooms	95	27.1
More than 5 bedrooms	15	4.3
Total	350	100.0

Only few other residences in this settlement area are one-bedroom units, (5.7%; n = 20). Despite the small number, this situation somehow reflects the reality of life in the city which is not entirely able to provide comforts sought by all residents. As noted in the interview conducted, one respondent revealed that he is currently renting a house with one bedroom only. According to him, the house owner has migrated elsewhere. Although the space in the house is very limited (as shown in Figure 5.7). the respondent had no other choice than to rent it due to the location and cheap rental factors.



Figure 5.7: The condition of a one-bedroom house in Pengkalan Pasir Village (Source: Abdullah, 2021)

The above finding revealed the reality of life faced by several Malays in Kota Bharu. To certain people, the settlement area is treated as a place to address their basic life needs only. Some respondents work as full-time traditional performance artists. Their income depends entirely on invitations to traditional performances from the organizers. At the time this study was conducted, the COVID-19 pandemic had hit Malaysia, resulting in the execution of the Movement Control Order (MCO). This situation has made it even more challenging for them to live in the city due to the constraints of the MCO.

In conclusion, most settlements in the area being studied are comprised of one-family type of residential units, while extended family is uncommon. This situation is considerably normal for a Malay settlement. On the other hand, majority of the residences are occupied by more than five family members. This finding indicates that the Malays settlements are mostly comprised of large family. For the Malay community, large number of children are a

sense of pride for the family. Moreover, despite the relatively limited number of rooms in their residence, the respondents can still adapt to the conditions and changes. Nevertheless, family size is also linked to the quality of comfort of a settlement which can also affect the psychology and privacy aspects of the family. Due to growing a number of children, the families would need the adequate size and space of a settlement. Due to the challenging lifestyles in the city, the residents should be able to feel comfortable in their own space in their settlement.

5.3 2nd Principle: Minimization of the Energy

Once humans begin to build their settlements through their contact with the environment as described in the 1st Principle, humans will start to find relationships in the space within the settlements. They begin to think of ways how to move on with their daily lives. In order to survive, they need to do daily activities such as cooking, washing clothes, eating, and others. Starting from one single space, humans then seek to establish other spaces to suit their needs in daily lives. Although this space is formed within one settlement, the idea of the existence of this space is very important for humans in moving on in their daily lives. Space is a reflection of the activities, customs, and culture in their daily lives. For the Malay settlements, the space that exists in their settlements is different from other ethnicities. This is due to their daily customs, and cultural factors that affect their pattern of life (Wahid, 1996). Each ethnicity has a variety of cultures and traditions that influence their settlement patterns. Humans begin by finding connections with the surrounding areas. Then, they will think of ways on how to minimize their daily movement. Mostly, humans do not want to move too far from their settlement area, whether for the purpose of working or everyday living.

5.3.1 Relationship Between Settlements and Their Environment

It was observed that most of the settlements in the area being studied were built on stilts above the ground. Initially, this construction technique was common to prevent floods and the threat of wild animals. Due to the flood factor, Malay settlements are then reflected on the weather conditions. Another reason is for the privacy factor for the occupants. The passers-by cannot see through the opening of the house. House with high floor level will make the occupants feel safer from threats. This privacy aspect has provided important visual elements in the Malay settlements.

Table 5.13: Cross tabulation of the vehicle storage and number of floors (n=350)

			Number of floors		**Total**
			1 Storey	**2 Storey**	
Vehicle storage	**Car porch**	Count	57	16	73
		% Within vehicle storage	78.1%	21.9%	100.0%
	Under the settlement	Count	103	34	137
		% Within vehicle storage	75.2%	24.8%	100.0%
	Outside the settlement compound	Count	101	39	140
		% Within vehicle storage	72.1%	27.9%	100.0%
Total		Count	261	89	350
		% Within vehicle storage	74.6%	25.4%	100.0%

As seen from Table 5.13, most of the residences in the area are one-storey building (74.6 %; n = 261). As observed, single-storey settlements are mostly built in this area due to the location factor, i.e. near the river area. Most residences have specific car porch areas (78.1%; n = 57). Meanwhile, some residences use this space for other usages, such as a store, selling groceries, storing boats, keeping livestock animals, and building a room for rental (Figure 5.8).



Figure 5.8: Figures showing the use of the ground space of the residences

(Source: Abdullah, 2021)

As identified, the ground floor space is primarily for public use only. Meanwhile, the family living area is more focused in the private space on the first floor. It was also found that only 25.4% (n = 89) of the settlements had double-storey floors. For most of the residences, cars will be parked outside the houses (27.9%; n = 39)., the bedroom is assigned in the space of the first floor, while the living room is normally at the ground floor. In any flood disaster, most items at the ground floor will be moved to the top floor to minimize property destruction. This is due to the reason that people will normally live in settlements that can minimize their physical movement and time due to the annually occurred flood disasters. While carrying out their daily activities, humans will try to minimize their energy usage by looking for a closer relationship with the environment to operate their daily lives. This will contribute towards establishing more intimate area for them to conduct activities like cooking, gathering, working, and various activities.

'... usually, I would lift the items on the ground floor to the first floor when I saw the rising water level. The ground floor is fully used during normal times. While the upper floor will be crowded when the river water level rises. I will move the goods to avoid damage in the event of a flood ...'(R-10)

In understanding the place, this study's observed that these settlements are related to each other. This connection is established through various conditions, such as the environment as well as human activities. A place is linked to various objectives which gives

people the impression of 'being somewhere'. This finding is supported by previous scholars (Schumacher, 1976; Smaldone et al., 2005) stating that human wills are supported by various purposes and activities that can lead to the existence of characteristics of the place. There is a variety of positive feelings among the people towards functions that meet their requirements of the place. Such feelings will create passion and motivation, regardless of whether the area is in the form of individuals or groups.

In summary, many Malay settlements are built according to environmental conditions and geographical factors. The design of the settlements which are built with stilt on the ground is widely used in the area due to its close location to the Budor River. The reason is that the residents try to connect their life with the river that provides various resources for their daily lifestyle. At the same time, the lower space of the residences is used as a space for various functions at present. During the flood disaster events, these settlements will be safe from any destruction due to the height of the floors. Meanwhile, in the general days, this space will be used for a variety of functions in order to provide convenience and minimize the energy usage. Therefore, it can be implied that the Malay community is creative with different ideas for utilizing their settlements on the riverbank. Instead, any changes done in the ground floor area will also affect the image of the settlements. Most of these lower house levels are seen to be lack of cleanliness and tidiness due to the various usages. Although this space is temporarily established, it was found to be a manifestation of the formation of ‘place’ in a Malay settlement.

5.3.2 The Application of Building Materials of Settlement

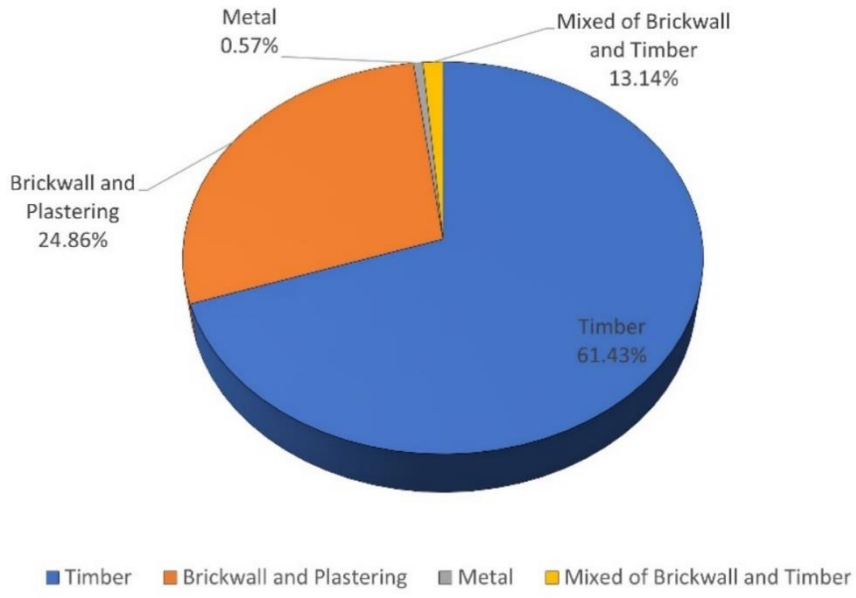


Figure 5.9: Type of wall material in Malay settlement (n=350)

As mentioned previously, the Malay settlements have long been established in Kota Bharu. Based on the survey results in Figure 5.9, most settlements in this area were built using the timber material for walls (61.4%; n = 215).

Timber was widely used in these settlements since the early years because of its properties and easy to work with materials. Traditionally, the Malays were skilful at building houses using timber. These building skills were acquired by some residents from their mastery of boat-making skills. The main difference is that the construction techniques of the settlements finishes and articulation of how's the social status values of the residents. As observed in this study, the '*dinding janda berhias*' and '*tanggam*' design systems were the early construction techniques for settlements with high social status due to its complexity and superior quality of architectural values. The 'Tanggam' system is a method of joining wood (Rahman et al., 2022). The function of using 'tanggam' is to connect wood without

using nails. In addition, there are also settlements which were built using the mix of timber and brick wall as the wall materials.

Figure 5.10 also shows that many of the settlements in this area have gone through the process of space transformation and renovation work. After a long time period, the size of the family has increased, and thus more extra spaces were needed by the residents to accommodate their large number of family members.



Figure 5.10: Settlement conditions that are unsafe to live (Source: Abdullah, 2021)

This finding indicates the creativity of the Malay community in transforming their living space in a flexible manner. On the contrary, metal was the least used building material for walls (0.6%), suggesting that the material was deemed as hot and not suitable to be used as a wall. It was also observed that most of the metal material was used in the kitchen area. Initially, the walls were made from timber, but over time, the material was damaged due to the weather factors and wet conditions of the space. The materials is then replaced by using timber. Therefore, the use of metal is considered as a more suitable method for the kitchen area because the area is actively used in the Malay settlements.

'... the kitchen walls were replaced with metal because the original timber had rotted and damaged. This settlement that I have lived in for a long time. So over time, the walls have been damaged due to the kitchen that I always use for cooking. To change with other materials, the price is quite high. So, I use metal because it is durable from the weather. Although it is a little hot, it is acceptable to me… '(R-11)

Table 5.14: The column, floor finishes and roof finishes in Malay settlement (n=350)

Item	Column		Floor Finishes		Roof Finishes	
	Frequency (n)	Percent (%)	Frequency (n)	Percent (%)	Frequency (n)	Percent (%)
Singgora Tiles	-	-	-	-	58	16.5
Timber	205	58.6	191	54.6	-	-
Concrete	134	38.3	123	35.1	-	-
Zink	11	3.1	-	-	191	54.6
Mixed Material	-	-	36	10.3	-	-
Concrete Roof Tiles	-	-	-	-	28	8.0
Asbestos	-	-	-	-	34	9.7
Metal Deck	-	-	-	-	39	11.1
Total	350	100.0	350	100.0	350	100.0

Since the settlements were built from timber, all their components including main structures such as the column and trusses was made from timber. As reported in Table 5.14, timber was widely used in building the column structures (58.6%; n = 205). It was also found that most of the column structures were used in the original settlements. A similar finding was recorded for the floor finishes whereby timber flooring was widely used in the settlements (54.6%; n = 191). Despite this, the nature of this building material has caused it to be quickly damaged, and consequently most of the structures and conditions of the settlements in this area are in a rather bad condition became of the settlement structures were damaged and thus uninhabitable due to lack of safety factors (Figure 5.10).

In conclusion, timber as building materials was widely practised in this settlement area. Timber was the most readily available material since the initial development of this settlement area. Generally, humans will always try to minimize their energy with the usage of the easiest way to build settlements. Therefore, the level of skills in timber construction among the residents was extensively applied during that time. It was also due to the location

of the settlement area which was close to the river in which boats were used to transport the building material. These boat-making skills were reflected in the settlement construction at the time. Apart from that, it was also found that metal is one of the preferred material as a replacement for timber. Large metal sheets with the size of 2'-" X 4'-0" was used as the alternative in the repairing process of the residences. This change in building materials is due to the lack of skills available for timber construction. Therefore, metal is a good alternative for it is easy to install and requires low costs.

5.3.3 The Physical Effects on the Malay Settlement

Initially in the traditional Malay culture, it was believed that the concept of space is influenced by myths and legends. This belief originated from the Hindu influence before the advent of Islam. This view is supported by Harman Shah and Wahid (2010), who explained that mythology is used as a '*roh*' and '*semangat*' (i.e. spirituality) in the construction of the Malay settlements. In detail, such influences can be observed in the movement of the music and cultural performances in the Malay tradition. The Malays' customs and beliefs can be understood from several cultural practices, such as traditional musical performance such as *Main Puteri, Menora* and *Ulik Mayang* which are widely available in the East Coast area. From the construction perspective, the book Tajul Muluk is also a popular reference for the construction of a Malay settlement (Lubis et al., 2020; Abd Rashid & Che Amat, 2014). The environment and culture of the community have significant and strong influences on the Malays' traditional settlement construction techniques. The Malay settlements in the early years were built in small groups of units, and then eventually expanded into what is known as villages or '*desa*'. The construction skills acquired through these construction techniques had finally evolved due to the similarity of techniques among many settlements.

Table 5.15 show the observation results of the random visual analysis and observations as conducted in this area which have been identified based on the typologies of the roof in the Malay settlements. The configuration of the Malay settlements is influence by its roof. Table 5.15 shows the visual analysis and observation results of the Malay settlements with shed roof typology (*bumbung pisang sesikat*).

Table 5.15: The Malay settlements with shed roof typology

(Source: Abdullah, 2021)

No	Type of Roof Shed Roof (Bumbung Pisang Sesikat)	Structure			Wall				Roof						Floor			Space on ground		Fencing		Note
		Timber	Concrete	Mixed	Timber	Concrete	Metal	Mixed	Berlian	Singgora	Tiles	Metal	Asbestos	Metal -deck	Timber	Concrete	Mixed	Yes	No	Yes	No	
1		T			T								A		T			√		√		
2		T			T								A		T			√			√	
3		T			T								A		T				√	√		
4		T			T							M			T				√		√	
	Total= 4 Unit	4	-	-	4	-	-	-	-	-	-	1	3	-	4	-	-	2	2	2	2	

(*Note: T = Timber; A = Asbestos; M = Metal; C = Concrete; S = Singgora; MX = mixed)

It was found that all four settlement units with shed roof typology were built using wooden structures. These four settlements still maintain the use of timber as the material for wall construction. The results also revealed that not many of the Malay settlements in the area being studied were designed with shed roofs. This is probably due to the reason that

settlements with this roof typology is considerably a new and modern architectural trend in this area. This roof typology has revolutionized from most designs in this area. Furthermore, changes in the pattern of the settlements are also related to other factors, such as the socio-economic status of the occupants.

As shown in Table 5.16, the analysis through the pictorial grid found that 19 out of the 26 units of the hip roof-shaped settlements in this area were built using the timber materials. The settlement structure uses timber as a main structure and building materials. Most of the Malay settlements in this area were built through traditional construction techniques. As visually observed, most settlements with this roof typology are still in good condition. In addition, 16 residential units still retain the usage of timber as the main building material for wall. Based on the random observation, 14 residential units still have the '*Singgora*' roof tiles made from clay.

At present, the '*Singgora*' roof tiles typology is rarely found in the residences due to its complicated maintenance process. Meanwhile,16 residential units have fences as their security system. However, most of them have undergone several renovation processes due to various factors, such as weather resistance and the increase in the number of occupants. It was also observed that many of the ground floor spaces in the Malay settlements have been transformed and renovated in order to accommodate the growing number of occupants. This finding is in line with the study by Rapoport (1990) which stated that the space available in the people's settlements is reflected by their pattern of daily life. As similarly found in this study, the lifestyle of the occupants played a significant role in the transformation of the Malay settlements in this area.

Table 5.16: The Malay settlements with hip roof typology

(Source: Abdullah, 2021)

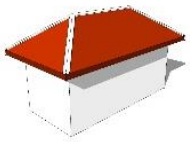
No	Type of Roof Hip Roof (Bumbung Perabung Lima)	Structure			Wall				Roof						Floor			Space on ground		Fencing		Note
		Timber	Concrete	Mixed	Timber	Concrete	Metal	Mixed	Berlian	Singgora	Tiles	Metal	Asbestos	Metal -deck	Timber	Concrete	Mixed	Yes	No	Yes	No	
1		T			T					S					T				√	√		
2		T			T					S					T			√			√	
3		T			T					S					T			√		√		
4		T			T								A		T			√		√		
5			C			C					T					C			√	√		
		T			T					S					T			√		√		
7		T			T					S					T				√		√	
8		T			T					S					T				√		√	
9		T						MX					A				MX		√		√	
10		T			T								A		T			√			√	

Table 5.16 continued

11			C			C					T					C			√	√		
12		T			T								A		T				√	√		
13		T			T									M			MX		√		√	
14				MX				MX		S							MX	√			√	
15		T			T					S					T			√		√		
16				MX				MX					A				MX	√			√	
17		T			T					S					T				√		√	
18			C			C					T					C			√	√		
19			C			C					T					C			√	√		
20			C			C					T					C		√			√	
21		T			T					S					T				√	√		
22		T			T					S					T			√		√		
23		T						MX		S							MX	√		√		
24		T			T					S							MX	√		√		

Table 5.16 continued

25		T						MX						M			MX		√	√		
26		T			T					S					T			√		√		
	Total= 26 Unit	19	5	2	16	5	-	5	-	14	5	-	5	2	14	5	7	13	13	16	10	

(*Note: T = Timber; A = Asbestos; M = Metal; C = Concrete; S = Singgora; MX = mixed)

It was found that most of the Malay settlements in this area were built with gable roofs, or long roof (‘*bumbung panjang*’) typology. In detailed, a total of 53 residential units with gable roof were randomly recorded. Referring to Table 5.17, 34 residential units still use timber structures. While a total of 32 residential units still retain the usage of timber as the main material for walls, only one unit uses metal for wall. The choice of material depends on the socio-economic status of the family. Timber building materials are expensive, thus, the residents used metal to replace the damaged timber. It was also found that a total of 21 residences have converted the '*singgora*' roof tiles to metal. Metal was chosen by the residents as the replacement material due to its higher resistance to the weather. Besides, '*singgora*' tiles is a material that is difficult to obtain and complicated to install, while metal, on the other hand, is considerably more suitable to be used in these settlements. These findings are supported by the following interview results:

“..originally, the roof of this house was built using Singgora roof tiles as well. Just like the settlement next door. Since most of the roof were broken, I replaced it with metal because it was easier to install. The metal was bought by me and installed by a nearby carpenter… ”(R-18)

Table 5.17: The Malay settlements with gable roof typology (Source: Abdullah, 2021)

No	Type of Roof: Gable Roof (Bumbung Panjang)	Structure			Wall				Roof							Floor			Space on ground		Fencing		Note
		Timber	Concrete	Mixed	Timber	Concrete	Metal	Mixed	Mixed	Berlian	Singgora	Tiles	Metal	Asbestos	Metal -deck	Timber	Concrete	Mixed	Yes	No	Yes	No	
1		T			T						S					T				√		√	
2		T			T									A		T			√			√	
3		T			T								M			T			√			√	
4		T			T						S					T			√			√	
5		T			T						S					T			√		√		
6		T			T						S					T			√			√	
7				MX					MX					A				MX		√	√		
8		T			T								M			T			√			√	
9		T			T									A		T			√		√		
10				MX					MX					A				MX	√		√		
11		T			T									A		T				√		√	
12		T			T									A		T			√		√		

Table 5.17 continued

13			C			C						T					C			√	√		
14		T							MX		S							MX	√		√		
15		T			T									A		T			√			√	
16		T			T									A		T				√	√		
17				MX					MX					A				MX		√	√		
18				MX					MX					A				MX		√	√		
19			C			C									M		C			√	√		
20		T			T								M			T				√	√		
21				MX					MX					A				MX		√		√	
22		T			T								M			T			√			√	
23		T			T								M			T			√			√	
24				MX					MX					A				MX		√		√	
25		T			T						S					T			√			√	
26				MX					MX				M			T				√		√	

Table 5.17 continued

27		T			T								M			T			√			√	
28		T			T									A		T				√		√	
29		T			T									A		T				√	√		
30		T			T									A		T			√			√	
31				MX					MX				M					MX		√		√	
32		T			T								M			T			√			√	
33				MX			M						M			T			√			√	
34				MX					MX				M					MX		√		√	
35				MX					MX				M					MX		√		√	
36				MX					MX				M					MX		√		√	
37		T			T								M				C			√		√	
38			C			C						T					C			√	√		
39		T			T								M			T			√			√	
40		T			T								M			T				√		√	

Table 5.17 continued

41		T			T							M			T				√	√		
42		T			T								A		T				√		√	
43		T			T								A		T				√		√	
44		T			T								A		T				√		√	
45		T			T							M					MX		√		√	
46			C			C						T				C			√	√		
47		T			T									M	T				√		√	
48			C			C						M				C			√		√	
49				MX					MX			M					MX		√		√	
50				MX					MX			M					MX		√		√	
51		T			T								A	M	T				√	√		
52		T							MX				A				XM		√		√	
53		T			T						S				T			√			√	
	Total= 53 Unit	34	5	14	32	5	1		15		7	3	21	20	3	32	6	15	20	33	17	36	

(*Note: T = Timber; A = Asbestos; M = Metal; C = Concrete; S = Singgora; MX = mixed)

According to the several respondents, the main factor for them to replace the *singgora* tiles material was because of the damages caused by heavy rain. At the same time, they had to replace the material due to its difficulty in finding the materials and complicated way to install it. Consequently, the residents had to search for a more suitable alternative by using the readily available metal material around Kota Bharu. Compared to the *singgora* tiles, the installation process for metal material is economical, faster and durable. The results also found that 33 residential units with gable roof typology were built directly on the ground, i.e. without stilt on the ground as shown in Table 5.18.

Table 5.18: The Malay settlement with Dutch gable roof typology

(Source: Abdullah, 2021)

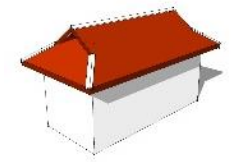
No	Type of Roof Dutch Gable Roof (Bumbung Limas Belanda)	Structure			Wall				Roof						Floor			Space on ground		Fencing		Note
		Timber	Concrete	Mixed	Timber	Concrete	Metal	Mixed	Berlian	Singgora	Tiles	Metal	Asbestos	Metal -deck	Timber	Concrete	Mixed	Yes	No	Yes	No	
1		T			T					S					T			√			√	
2		T			T					S					T			√		√		
3		T			T								A				MX		√	√		
4		T			T					S					T			√		√		
5		T			T					S					T			√		√		

Table 5.18 continued

6		T			T					S					T				√	√		
7		T			T								A		T				√	√		
8		T			T					S					T			√		√		
9		T			T					S					T			√		√		
10			C			C					T					C			√	√		
11		T			T								A				MX	√		√		
12		T			T									M	T			√			√	
13		T			T								A		T			√			√	
14		T			T					S					T			√		√		
15		T			T					S					T			√		√		
16		T			T					S					T			√		√		
17		T			T								A		T			√		√		

Table 5.18 continued

18		T			T					S					T			√		√		
19		T			T					S					T			√			√	
20		T						MX		S							MX		√	√		
21		T			T									M	T				√	√		
22		T			T					S					T			√			√	
23		T					M			S					T			√		√		
24		T			T					S					T			√			√	
25		T			T								A		T			√		√		
26		T					M			S					T			√			√	
27		T			T								A		T			√		√		
28		T			T								A		T			√		√		
29		T			T									M	T			√			√	

Table 5.18 continued

30		T			T					S					T				√		√		
31		T			T					S					T			√			√		
32		T			T									M	T			√			√		
33		T			T					S					T			√		√			
34		T					M			S					T			√			√		
35		T			T								A		T			√			√		
36		T			T									M	T			√			√		
37		T			T							M			T			√			√		
38		T			T								A		T			√		√			
39		T			T							M			T			√			√		
40		T			T								A		T			√		√			
41		T			T					S					T			√			√		
	TOTAL= 41 Unit	40	1		36	1	3	1		22	1	2	11	5	37	1	3	34	7	24	17		

(*Note: T = Timber; A = Asbestos; M = Metal; C = Concrete; S = Singgora; MX = mixed)

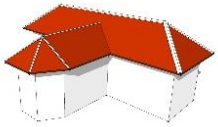
Referring to Table 5.18, the Malay settlements with Dutch gable roof typology is also among the most common settlement design in the area being studied. Based on random visual observations, 40 out of these 41 residential units are using timber structures. Meanwhile, 36 units still maintain the use of timber as the main material for wall. This finding indicates that most residences in this area have retained their original construction, including the material use for roof construction. This is supported by the previous discussed finding, showing that 22 residential units still retain the use of *Singgora* material for roof construction. The usage of the *Singgora* roof can widely be seen in this settlement area. Meanwhile, 37 settlements with Dutch gable roof typology still maintain timber for floor structure.

In addition, it was also found that a total of 24 residential units with Dutch gable roof were fenced for security purposes. Most of these settlements are located near the main road areas, fences have been widely built around these settlements, because many vehicles leading to the city centre drives at fast speed.

From Table 5.19, only three residential units in this area are using the Limas Belanda roof typology with timber as the primary material for their structure. As observed, all three units still maintain the traditional architectural features in terms of form and building materials. In addition, these three units still use timber for wall and floor construction. On the other hand, they still retain the original *Singgora* material in roof design. These findings indicate that these residential units are unique from others in terms of shape and space planning. Not many of such settlement design can be found around the area being studied. One plausible reason could be that this type of settlement design is mostly owned by the elite group of the Malay community which have long existed since the early days of Malay settlements in Kota Bharu.

Table 5.19: Malay settlements with Limas Belanda roof typology

(Source: Abdullah, 2021)

No	Type of Roof Bumbung Limas Belanda	Structure			Wall				Roof						Floor			Space on ground		Fencing		Note
		Timber	Concrete	Mixed	Timber	Concrete	Metal	Mixed	Berlian	Singgora	Tiles	Metal	Asbestos	Metal -deck	Timber	Concrete	Mixed	Yes	No	Yes	No	
1		T			T					S					T			√			√	
2		T			T					S					T			√		√		
3		T			T					S					T			√		√		
	Total = 3 Unit	3			3					3					3			3		2	1	

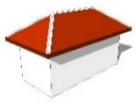
(*Note: T = Timber; A = Asbestos; M = Metal; C = Concrete; S = Singgora; MX = mixed)

Through visual observations, it was found that majority of the Malay settlements in Kota Bharu still maintain using timber as the main material for building structure. As seen from Table 5.20, 101 out of 127 residential units still retain the timber structure. It was also observed that most of the units with timber structure were still in good condition. This shows that the residents in this area are very concerned about the use of building materials for their settlements. Yet, the structures of several other units were damaged. Due to the considerably high cost of repairing timber structure, the residents had no choice but to maintain staying in their damaged residences. As claimed by one respondent:

"...I have lived in this house for a long time. There is a lot of damage as it is built from timber. There is also a timber column that has been damaged. However, it is quite expensive to repair this house due to the high price of timber..." (R-10).

Table 5.20: Comparisons of roof typologies in the Malay settlements

(Source: Abdullah, 2021)

Image of Roof							**Total**
Type of Roof		**Shed Roof** (***Bumbung Pisang Sesikat***)	**Hip Roof** (***Bumbung Perabung Lima***)	**Gable Roof** (***Bumbung Panjang***)	**Dutch Gable Roof** (***Bumbung Limas Belanda***)	***Bumbung Limas Belanda***	
Total Unit		4	26	53	41	3	127
Elements	Material						
Structure	Timber	4	19	35	40	3	101
	Concrete	-	5	5	1	-	11
	Mixed	-	2	14	-	-	16
Wall	Timber	4	16	32	36	3	91
	Concrete	-	5	5	1	-	11
	Metal	-	-	1	3	-	4
	Mixed	-	5	12	1	-	18
Roof	Berlian	-	-	-	-	-	-
	Singgora	-	14	7	22	3	46
	Roof Tiles	-	5	3	1	-	8
	Metal	1	-	21	2	-	24
	Asbestos	3	5	20	11	-	39
	Metal-Deck	-	2	3	5	-	10
Floor	Timber	4	14	32	37	3	90
	Concrete	-	5	6	1	-	12
	Mixed	-	7	15	3	-	25
Stilt on Ground	Yes	2	13	20	34	3	72
	No	2	13	33	7	-	55
Fencing	Yes	2	16	17	24	2	61
	No	2	10	36	17	1	66

It was also observed that most of the walls still retain the original building materials, such as timber. Referring to Table 5.20, a total of 91 residential units still retain the timber wall structures. Only four out of the total 127 residential units use metal as walls. As found in this study, metal was used to replace the damaged timber material on the walls. This is because the residents believed that such replacement is the fastest and most economical method for repairing the affected area. An interesting observation is the uniqueness of the settlements in this area where the use of *singgora* is still being retained as the roof construction material. *Singgora* roof is one of the traditional roofing materials in the Kelantan state's vernacular style of buildings. In this study, 46 residential units were found to still retain the original *singgora* roof. Despite this, several residential units have also replaced the construction with other materials, due to the cost factor and the lack of expertise or skilled workforce with mastery in such construction techniques.

The results in Table 5.17 also reveal that only eight settlement units in this area use the concrete roof tiles. Most of these eight units are among the original settlements that have been renovated utilizing new construction. Based on the same table, a total of 66 residential units were built with fences around their respective residential areas. With the use of residential fences, it was found that the informal path which once became one of the characters of vernacular architecture has eventually disappeared. Somehow, the use of residential fences has presented barriers which have loosened the connectedness among the surrounding communities. Nevertheless, the existence of residential fences at the same time is also a critical and essential element for residential areas today, especially due to security factors and provision of privacy values to the residents.

In summary, various changes have impacted the existing patterns of the Malay settlements in Kota Bharu. These changes include the use of materials, construction techniques, and the space in the settlements. These changes suggest that the urbanization process has taken place in vernacular architecture in this area. It was also found that the residents in this area would minimize their energy and resources in the renovation process of their settlements. This finding was similarly observed from the comparative analysis which proved that the residents will use building materials and construction techniques that are simple, affordable, and available for them. Accordingly, cost factors play an essential role in the renovation process. Another related issue is the lack of skilled human resources with expertise in handling timber materials for the renovation process of the settlement units. Such experience and skills of construction workers are rarely found nowadays. Most of the existing settlements in this area were initially constructed using conventional methods.

According to Schulz (1976), the overall context of human settlement can be understood from this context. As described by Rapoport (1990), the internal space within the settlements can also reflect the lifestyle of the Malays community. Although most of the Malay settlements in this area still retain timber as the main material for building construction, this material will likely be replaced by modern construction materials and techniques in the future. This is due to the lack of experts and craftsmen who can handle construction techniques using wood. Besides, the cost of the timber itself is prohibitive nowadays. Due to these aforementioned factors, the residence owners have to opt for other building materials that are cheaper, easier to build, more durable, and economical further renovation work of their residences in the future.

5.3.4 Infrastructure

Electricity supply, being the fundamental source of all settlements, is due for daily use. It was recorded in this study that most residential units in Kota Bharu are using Tenaga Nasional Berhad (TNB) as the main source of electricity in their areas while others are using generator sets (Figure 5.11). 98.6% of respondents said that they are using this source. However, few residents revealed that they are still depending on the nearby neighbours (1.4%, n = 5) to connect the electrical supply.

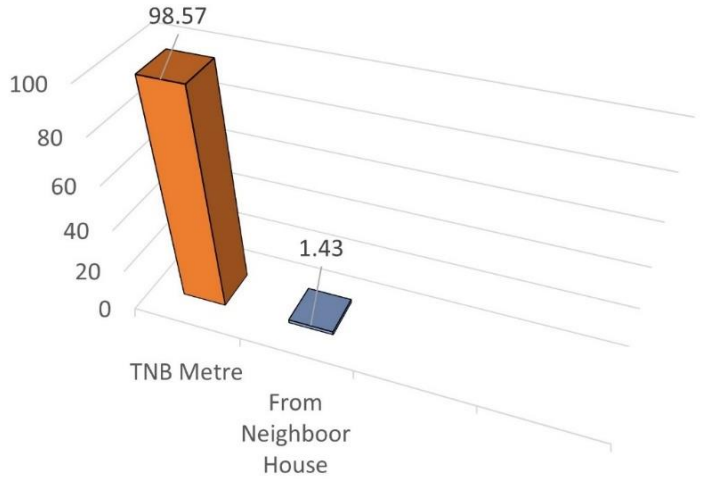


Figure 5.11: Electrical sources (n=350)

In terms of water supply, the crosstabulation results in Table 5.21 show that most water sources are obtained by the residents from Air Kelantan Sendirian Berhad (AKSB) through the use of water meters, as reported by 95.8% (n = 313) respondents. This large percentage is due to that majority of the residences are currently using the indoor toilet systems and outdoor septic tanks. This study observed that septic tanks used in this area were constructed through the conventional method by using the precast 'concrete well'. The disadvantage of this method is that during the monsoon season, the tank will be overflowing

with rainwater. On the other hand, 2% (n = 2) of the residents are still using wells and built their toilets outside the house.

Table 5.21: Crosstabulation between water supply and toilet system (n=350)

			Toilet System		Total
			Outdoor toilet (using a hole)	**Indoor toilet (septic tank)**	
Source of water	AKSB Meter	Count	13	300	313
		% Within Source of water	4.2%	95.8%	100.0%
	Connected from a neighbour's house	Count	0	7	7
		% Within Source of water	0.0%	100.0%	100.0%
	Well	Count	2	28	30
		% Within Source of water	6.7%	93.3%	100.0%
Total		Count	15	335	350
		% Within Source of water	4.3%	95.7%	100.0%

However, results from visual observation revealed that most of residential units in this area did not have good drainage systems. Most drainage systems are not well maintained, as examples shown in Figure 5.12. The drainages were disorganized and lack of cleanliness, which will eventually lead to various health problems among the residences. There are even residences that do not have any drainage system at all.



Figure 5.12: The condition of the drainage system in poor condition

(Source: Abdullah, 2021)

Based on these visual observations, it can be said that there is currently poor quality of drainage infrastructure and systems in the Malay settlements in this area which do not

reflect the status of living and lifestyles in the city. This finding is parallel with Wahid (2014), explains that the urbanization that has increased after 50 years has led to urban sprawl rather than improving urban services. The lack of resources and the unstable politics in the developing country affected services and infrastructure that are not in line with the increase in the population in the city. The infrastructure and public services continue to be weak because they will affect every aspect of life, such as food, social norms, transportation, safety, comfort, quality of life, job opportunities, clean water, sanitation, electricity, housing and settlement. The facilities and infrastructure in these settlements should be good due to its location in Kota Bharu as the capital city of Kelantan.

In conclusion, nowadays, water and electricity facilities are important resources in most of human's daily lives nowadays. In the early days, humans relied heavily on rivers for their daily activities. Nowadays the situation has drastically changed whereby most of the human settlements are provided with water supplies by the government, especially those in urban areas. The availability and convenience of such facility have shown that human life is getting better in terms of necessary supplies. With the improved infrastructure, people are able to minimize their movement, energy, time, and other resources in accomplishing their daily tasks. They no longer have to go through difficult life like those in the early days of settlement. Although, there is an availability and adequacy of water infrastructure development, there are still issues of poor condition and low maintenance of such facilities in the settlements.

The infrastructure like drainage systems and building in the city are still far from well-developed. As observed, the drainage infrastructure and system in the area being studied is still not reflecting a comfortable and conducive lifestyle. Reportedly, many residents are facing challenges to upgrade their residence area and facilities, especially

financial issues. Consequently, the river area has also eventually become more polluted than before.

5.4 3rd Principle: Privacy

The observation results revealed that the development of the human settlements which occurred since its initial existence in the early days is in a dynamic process. This is due to the humans' effort in trying to fulfil their needs, as explained by the 1st Principle. After a long period, this development process will be growing and then slowing down. In this phase, the development has become static due to the issues related to population and settlement density (Kostov, 1992). Nevertheless, it was found in this study that, even in a static development process, humans are still looking for solutions to the problems they faced while living in their settlements. Various issues and problems were identified based on the residents' problems and experiences, and among significant issues are related to privacy and use of space.

5.4.1 Socio-Cultural of Malay Customs

Findings in Table 5.22 recorded that 52.3% (n = 183) of the respondents mentioned about the poor ventilation of cooking smokes from the kitchen in their residences. This poorly ventilated smokes have caused the occupants to feel uncomfortable, especially when cooking activities take place in their houses. The visual observations revealed that most of the residential units have inappropriate window design with small sizes and limited space. In addition, the inappropriate window position in the residences is also among factors that have caused the smoke to be poorly ventilated from the kitchen space.

Table 5.22: Air quality in the settlement (n=350)

Smoke from the kitchen during cooking			The smell from outside the house	
Item	**Frequency (n)**	**Percent (%)**	**Frequency (n)**	**Percent (%)**
Yes	183	52.3	149	42.6
No	167	47.7	201	57.4
Total	350	100.0	350	100.0

As found in this study, several windows are placed in areas facing other settlements (Figure 5.13). As a result, the residences have to close the windows while cooking activities took place in their kitchen areas. According to the interview and observation, this situation has caused a detrimental impact on both the psychological and privacy aspects of the residences.



Figure 5.13: Location of window openings adjacent to the pathway

(Source: Abdullah, 2021)

As similarly noted in the interview, one respondent said that the residences have no choice but to close their windows most of the time to maintain their privacy.

'... the kitchen of our house faces the pathway to the neighbour's house. While cooking, I had to close the window and let the smoke out through the main entrance and other windows. Sometimes I open the window with a small opening to let the smoke out. '(R-33)

Apart from the cooking smokes, the residences were also disturbed by unpleasant smell in their own houses. 42.6% (n = 149) of the respondents agreed that there is a smelly odour from outside which entered into their residences. Due to this situation, windows have to be closed most of the time. As observed, there were traces of dirtiness along the pathways,

whereby half of the lanes are full of dirt (Figure 5.14). This situation indicates that the level of cleanliness in this settlement area is at an unsatisfactory level.



Figure 5.14: Dirty roads with unhygienic conditions caused discomfort to residents (Source: Abdullah, 2021)

These findings are parallel with Mark et al. (2018) who argued that humans organized their settlements according to their daily activities. Notably, the organization of communication is about human activity. Referring to Table 5.23, 53.7% (n = 188) of the respondents stated that they do not have a separate dining area in their houses in which most of the dining area is located in the kitchen area.

Table 5.23: Dining area in the Malay settlements (n=350)

Separate kitchen and dining areas			**Has another dining area**		**Dining in other areas than the dining room**	
Item	**Frequency (n)**	**Percent (%)**	**Frequency (n)**	**Percent (%)**	**Frequency (n)**	**Percent (%)**
Yes	162	46.3	115	32.9	-	-
No	188	53.7	235	67.2	-	-
Kitchen	-	-	-	-	100	28.6
Living Area	-	-	-	-	176	50.3
Balcony/ Serambi	-	-	-	-	74	21.1
Total	350	100.0	350	100.0	350	100.0

Majority of the residents had their dining table placed in the same space of kitchen area. This is due to the small size of their residence area which has also made it difficult for them to renovate the kitchen space. According to one respondent, he could not renovate the kitchen space because his house was too close to another neighbour's house.

'... the size of my family is getting bigger. I need extra space, especially in the kitchen. However, the house next door is the house of a neighbour who is also my brother. So dining room is located in the kitchen ...'(R-11).



Figure 5.15: The kitchen and dining area are in the same space

(Source: Abdullah, 2021)

This situation has caused the cramped and uncomfortable condition of their kitchen. Besides, it has also affected the residents' privacy in the houses, especially when there are guests. As observed, the residents had to adapt to the changing environment of their settlements following the low economic status. Therefore, most of them had to make full use of the dining area in the kitchen within the narrow space of their residential units (Figure 5.15).

Table 5.24: Location of religious ceremony (n = 350)

Item	Frequency	Per cent
In house	237	67.7
Out of house	17	4.9
Mosque/ surau	93	26.6
Hall	3	.9
Total	350	100.0

Following their traditions and culture, the Malays generally prefer to organize religious events at the '*surau*' and mosque to strengthen the relationship among the community. Therefore, healthy relationships among people can be created through religious activities. Especially in villages and rural areas, religious activity has become a medium for strengthening community relations. Buildings like '*surau*' and mosque are usually built in the middle of a village in order to provide a convenient place for the villagers to perform religious activities (Local Government Department, 2010) for the events organized at mosque or '*surau*', the residents will gather and perform religious activities like praying and perform '*tahlil*', at the same time gather and through such practice it strengthens the bond among residents. As a result, these activities will result in stronger social bond among the community, not only among adults but also children, regardless of gender.

However, at present, such preference in religious activities has changed over time due to various factors. As what were observed in this study (Table 5.24), majority of the respondents (67.7%; n = 237) will organize religious ceremony such as '*doa selamat*' in their own residence or house. The Malay community prefers to hold religious events in their residences partly due to their belief that such activities can provide more blessings for their houses. Besides, it is also because they consider that holding the religious activities in their residences would be more practical and convenient for relatives to gather. However, several respondents preferred to hold ceremonies at nearby mosques and 'surau' (26.6%; n = 93). At the same time, only 0.9% (n = 3) held such events in the community hall.

In conclusion, human activities, opening location and culture will affect privacy in their homes. The comfort of the residents is another aspect which is also related to their daily activities. Most residences have multiple functions which indicate different activities performed in each unit. A dense settlement with limited space has restricted the privacy of

the residents, as described earlier. This factor has prevented the residents from living a more comfortable life, given their various daily activities. For instance, residences with limited kitchen and dining area may lead to discomfort and other related problems, particularly for housewives who actively use this space for their daily chores. Due to the active use of the kitchen especially in the morning, they would need a more comfortable space to do activities in the kitchen. This situation is even worse when the kitchen's narrow space has been merged with the dining area. Due to the lack of resources, the residents had to adapt themselves to the existing limited space. This dual functionality of kitchen and dining activities is one of the concerns which highlight the need for the Malay community to consider the privacy aspect of their space and settlement. Another case is related to the organization of religious events, such as the, '*doa selamat*' ceremony which is mostly held by the people in their own residences. Such preference among the community may lead to another privacy issues at own home, especially when guests also have to make full use of the space in the accommodation during such events. In long run, '*surau*' and mosque, which used to have many functions for the community activities, will eventually lost their significance and relevance within the Malay community.

5.5 4th Principle: Optimization of the Relationship Between Human and Nature

In village planning and design, there are two important things to be considered. The first is the village context and the second is the community context. The village context has been explained through the previous discussion in the 1st Principle about the village and river relationships. The village areas generally have no physical boundaries, and most of the settlements are built on organic paths. Although the community relationships in this area are not clearly specified in this arrangement, there is generally a strong bond of relationships between the communities. Therefore, the aspects of community development need to be

considered when looking at the transformation of the Malay settlements. Both local spirit and social aspects need to be emphasized in the transformation of a village. As observed in this study, the strength of community relationships is critical in the formation of early Malay settlements. If the community members are disconnected from the new development process, the people would not be able to benefit from the planned development. This opinion is also agreed by several scholars (Sampson & Gifford, 2010; McCunn & Gifford, 2014) who reported that a human settlement is composed of a sense of aesthetics involving particular building forms, space, and surface as symbolic experience and quality, as well as social, cultural influences and the limitations of the technology used.

5.5.1 The Settlements and their Neighbourhoods

Table 5.25: Neighbours surrounding (n = 350)

Item	Frequency (n)	Percent (%)
Outsider	128	36.6
Friend	121	34.6
Relative	92	26.3
Others	9	2.6
Total	350	100.0

Most of the neighbours of the respondents in this settlement area are outsiders (workers from Thailand and other region). Table 5.25 shows that 36.6% (n = 128) of the neighbours are outsiders, i.e. those who are not the original residents from this area. In detailed, these people have migrated from their original places to work in Kota Bharu.

'... My neighbour is from Jeli. He came to here to work. Sometimes he would go back to their hometown on Friday...'(R-22).

In addition, relatives remain to be one of the native residents' neighbours, in which 26.3% (n = 92) of the respondents lived next door to their relatives. These people were the original group who lived here and established settlements close to each other.

'... sometimes, not every day, I go to the neighbour's house. However, when going through this road, I will see my neighbour in the kitchen area. We greet each other informally ...'(R-14).

Based on the statement above, most respondents revealed about the close relationship between neighbours among the Malay settlements in this area that developed good relationship among the Malays, and it indicates their tremendous respect towards neighbours. This is resulted from the original communities who settled here and shaped their lives by establishing connection with the environment. Strong kinship ties have also shaped the neighbourhood and its physical elements, including conventional buildings, plants, and traditional appliances. These elements are integrated with traditional values such as lifestyle, attitude, beliefs and spiritual values. Physical and mental cohesion, both physically and spiritually, can create an interesting classic pattern of the traditional built environment (Rapoport, 1990). It was also found that communities in this area can be identified through their social, cultural, and way of life involving relationships with family members, neighbourhood as well as community. In line with Sendut (1961) and Wahid (1999), the study finding supported that this social space can maximize the relationship between humans and nature with more freedom and open space without borders. In such an environment, children will benefit from a more exploratory life where they can play without any distraction and be safe from any threat due to the safe neighbourhood that surrounds them. The cosy surrounding in this safe neighbourhood has made this area a positive social space and a focal point for childrens activities in the area being studied.

'... many of my relatives are here, so our life backgrounds are almost the same. I have no problems with my neighbours. If there is a little dispute, we usually try to settle that problem nicely...'(R-25).

As noted in the statement above, most respondents have similar lifestyles and socio-economic status. With good neighbourhood practices, the community in this area are getting through their lives in a convenient and good way. In such a dense settlement area, the residents on the other hand are able to help each other more effectively. Although living in urban areas, the majority of them still practice the good values of Malay traditional life. Therefore, a similar standard of living will form a spirit of place which combines the feeling that exists in a particular place and location which have various topography and character, social activity, and economic development. As Relph (1976) noted, it has a specific meaning from the past, the present situation, and the spirit of preserving the place. The people's senses and spirits are important elements in the emergence of a place in the modern city. The purity of these elements is unrelated to history, society and culture. Resulting from these elements, the modern city will be shaped with certain images, economic system, and characters. Thus, the identity and meaning of a 'place' to history and culture usually cannot be identified; it may have been lost in the process of development of the city.

In this study, it was observed that there are differences between settlement patterns. There are no physical boundaries that separate between settlements in the villages; the area is only identified by small streets or pathways which were formed in the traditional way. According to Hamzah (2001), the term boundaries or literally translated as '*sempadan*', '*had*' or '*takat*', means separation or level between one area and another. The purpose of this pathway is to create social interaction between communities. It connects every settlement in the area and eventually becomes a medium for interaction. The formation of this pathway has strengthened the interaction among people in the Malay settlements. According to Wahid (1996), units of local social grouping formed in Malay villages are beneficial because of its characters that can help to identify the villages. The concept that

exists in villages is a spatial demarcation and a sense of belonging through the place that exists in the term *'berkampung*'.

In summary, there is a close neighbourly relationship among the people in the area being studied, which has created a more harmonious neighbourhood environment. Neighbourly relationship is one of the features found in the establishment of the Malay settlements. To the Malay people, neighbours are not considered outsiders, rather they are considered as guests who need to be respected. According to Islam, a neighbour is given a priority in daily living. A good neighbourhood will form a safer space in community. It is a vital element in the formation of safe settlements. However, at present, to some extent, the neighbourhood element has been slowly lost due to the changing lifestyle among the community. Malay settlements nowadays do not have strong neighbourhood ties as what was observed in the early settlements. As a result, this factor may cause social problems in the Malay settlements. In the past years, neighbourhood was not only functioning as a medium for socializing, but also as an observer to the settlement area. Yet, the situation has changed nowadays due to changes in people's lifestyle as well as the design of the settlement area itself which separates the context of environment.

5.5.2 The Effect of Change and Transformation of Malay Settlements

During the colonial rule by the British in 1920, roads and railways were built to exploit the economic wealth of the nation. The built road contributed to connect rural and urban areas to facilitate the traffic flow on land. Following this development, the construction of settlements began to focus along areas near the roads, as similarly reported by Kiroh and De Silva (2018). This situation also spurred the construction of cities along the roads. Urban planning made by the colonials started to cause problems to the Malay settlements. Rivers were no longer a significant factor in the city location. A similar case

was also happened in the post-independence era whereby the new urbanization programs made during the NEP by private developers has caused the river area to be facing the back area of the houses. All those the Malay settlement identities have begun to disappear. Front porch is no longer a characteristic of the Malay settlements. Almost all of the newly built towns are located away from the river. This situation occurred because the river was no longer the primary transportation system of the community after the Industrial Revolution.



Figure 5.16: River is no longer being used as the front porch area in the Malay settlements

(Source: Abdullah, 2021)

Figure 5.16 shows the condition of the unconnected porch and river in the Malay settlement area. It was also observed that the settlements are now being built and renovated without the porch built by facing the river. The pattern of Malay settlements has now changed, compared to the initial design in the beginning of the settlement's establishment. According to Wahid et al. (2021), the houses were built in line with the porch overlooking the river.

Before the arrival of the colonials, human settlement areas such as villages, were built along rivers and coastlines, aside from the cities (Ibrahim et al., 2018). During this time, river was a natural transportation that has several other benefits. After their arrival, the colonials had built roads in Kelantan, apart from reaping people’s wealth. Roads and vehicles were used in order to accelerate the process of land communications, regardless of the socio-economic impact on the Malays at that time. Nowadays, majority of the community have

own vehicles in their settlements which are used by the people to get to their necessary destination.

In the research conducted, it was found that not all respondents have a car for one family. As reported in Table 5.26, (60.3%; n = 211) the respondents own a car. However, this does not necessarily mean that the people are better off living in the settlement area.

Table 5.26: Types of vehicles owned (n = 350)

Item	Frequency (n)	Percent (%)
Bicycle	36	10.3
Motorcycle	98	28.0
Car	211	60.3
Others	5	1.4
Total	350	100.0

These findings also show that there are still several respondents who use bicycles as their main transportation in daily life (10.3%; n = 36 (10.3%). As observed, this group could not afford a car, and they would use taxi if need to go further. According to an interview with one respondent (R-33) said that, he only uses bicycles and motorcycles to get to city areas, and he will use the taxi service when he wants to go further with his family. This finding indicates that some of the people in the community are still lacking behind in the pace of urbanization. Although the city is mostly deemed as a centre for creating opportunities, there are still people who are still left behind this development process. Due to their high level of need and motivation to live in the city, this group tries to adapt to the environment. This finding is supported by the opinion of McGee (1975) stating that most migrants who move from rural to urban areas have the motivation to adapt to urban life. Although lacking in terms of technological capacities, these people still trying to create opportunities and improve their quality of life according to circumstances, pushed by the self-motivational factor.

Rapid development of technology nowadays has changed the community's lives, at the same time putting more pressure on their lives. In terms of spaces, for instance, the Malay settlement pattern usually does not provide space for vehicle parking. This is probably due to the use of boats since the early days which did not require any space in the settlement area. Rather, these boats were usually parked on or nearby the river area. Nowadays, the residents are facing problems due to dense settlement areas and insufficient parking space in this settlement area. Eventually, the area became congested due to the increasing number of cars parked around the house.

Table 5.27: Areas of vehicle storage (n = 350)

Item	Frequency (n)	Percent (%)
Car porch	73	20.9
Under the house	137	39.1
Outside the house compound	140	40.0
Total	350	100.0

In line with the findings in Table 5.27, many respondents (40%; n=140) parked their cars outside of their residential compound, and only 20.9% (n=70) have specified car porch. Notably, this parking situation is actually dangerous for the traffic system due to most cars being parked on the side of the road. Due to the dense settlement areas, parking spaces are mostly unavailable to homeowners.



Figure 5.17: Limited parking in settlement areas (Source: Abdullah, 2020)

It can infer that the Malay community in this area are generally using car as a necessity for daily life. It was observed that the problem of car parking seemed to be a major issue among the community due to the dense settlement area (Figure 5.17).

5.6 5th Principle: Successful Human Settlement

Successful human settlement can only be achieved with all the principles, starting from the 1st Principle to the 5th Principle, have been met. This success is a combination of balance between humans and the environment as a whole. Human happiness seems to be easily formed by the combination between satisfaction and physical elements. Therefore, human life will never reach a static point. Their experience in the settlements will keep evolving, depending on the time period, social level, economy and environment factors. Therefore, human settlements will always change according to the dynamic human needs, preferences, and creativity in actions and behaviours. Studying about the success of human settlement is not an easy task since there is a need to look into the aspect from the whole system of life.

5.6.1 The Evolution of the Settlements

As reported in Table 5.28, 53.1% (n = 53.1) of the respondents did not completely renovate their residences. The settlement in this area are still using a lot of the original structure, but the renovation work does not seem compulsory. Rather, the renovation work was only made by the residents under circumstances were deemed necessary.

On the other hand, 46.9% (n = 164) others have done renovation work on their houses. In detail, most of the renovation done is in terms of increasing the space of the residence (41.4%; n = 144). As elicited from several respondents, this renovation work was

done due to the need to have additional space with the increasing number of family members in their residences.

Table 5.28: Renovation done on the residential units (n=350)

Have done renovation of the house			Types of renovation done	
Item	**Frequency (n)**	**Percent (%)**	**Frequency (n)**	**Percent (%)**
Yes	164	46.9	-	-
No	186	53.1	-	-
Reduce the size of the house	-	-	13	3.5
Extra space in the house	-	-	144	41.4
Completely modified from the original shape	-	-	20	5.7
None	-	-	173	49.4
Total	350	100.0	350	100.0

Initially, the residences in this settlement area were built based on the number of members and the economic level of the family. Over time, family members are increasing, and so does the economic status of households. By nature, humans need a certain level of privacy and comfort in the space of their settlement area. For the Malay community, more private space is especially needed for women in performing their daily tasks. Therefore, the success of a Malay settlement in certain areas cannot be measured solely by the time frame of the settlement. It also depends on the time it takes for such settlement to achieve a better level of development process.

The economic status of a family is a critical factor for renovation process of a residence. As shown in Table 5.29, 11.7% (n = 41) of the respondents agreed that they renovated their houses due to the additional money available from their income.

However, one of the advantages of the traditional design is that the renovation process is easy to carry out. Through the use of local materials such as wood in the construction technique, the traditional renovation work is simpler to be done compared to

building materials like brick walls which would require more workforce and higher costs for renovation work.

Table 5.29: Reason for renovation works (n=350)

Item	Frequency (n)	Percent (%)
Need more space (increased households)	144	41.1
Shrink space (shrink household)	20	5.7
Sustenance of more money	41	11.7
Never modify	145	41.4
Total	350	100.0

The renovation work of the residential units also depends on the daily activities by the family members, thus the process is not static and will change according to circumstances. As one respondent mentioned during the interview:

'... originally, this house had only two rooms. Eventually, as the children grew, I renovated the house and enlarged the living room. My son can sleep in the living room…'(R-12).

Based on the study, it was found that the renovation of the Malay residences in this settlement area can be reflected by their activities around the city. Their ability to make change on the settlement spaces and areas depends on their economic capacity. City life is full of attraction for the local community in which various facilities are available to support the people's modern life in the city. Several scholars (Lagakos, 2020; Schultz, 1971) agreed that there is abundance of facilities provided in the cities, such as business opportunities, better education, health and recreational amenities, and global exposure. As observed in this study, there are various levels and types of residences in this settlement, and this depends on how the community understand and perceive the place itself. Eventually, the Malay community living in this settlement area have been adapted to the lifestyles and way of thinking in the city.

In summary, the Malay settlement has certain unique characteristics in a way that it can be transformed according to particular circumstances. The Malays did not build their settlements based on a static structure like before, rather the development of the primary space as based on the 1st Principle as discussed earlier. After a while, the space began to change according to certain circumstances. These changes took place according to the level of the economic status and space requirements as needed by the community. Usually, a living room is considered as the main area of the residence that will undergo acertain renovation process. However, due to the revolution in terms of construction techniques and level of carpentry skills in the current settlement development processes, the spirit of '*gotong-royong*' is declining among the Malay community in construction work. Measuring the success of a settlement development is not an easy task due to the need to account for various aspects of changes that take place. Malay settlements will also experience changes due to technological progress. However, we are still determining whether the changes will positively or negatively impact the study area in the future.

5.6.2 The Floodwall and Urbanization

As this area is in the red zone category of flood disaster, the government has built a flood wall to control floods every year. The construction process took five years, from 2010 to 2014. The flood wall was first tested in 2014 when the construction was unable to fully control the Great Flood disaster at that time. The flood disaster was one of the worst floods in the history of Kelantan. The event had practically affected almost all the areas of Kelantan to be paralyzed at the time, including this Malay settlement area which also suffered from the disaster. During the interview, one respondent (R-32) said that most of the river water which had flowed into this area was not coming from the new flood wall, but through the Kota Bharu urban area. At that time, the water level of the Kelantan River exceeded the 1-

foot level of the newly constructed flood wall. If the flood wall was not constructed in 2014, the entire settlement would most likely be destroyed due to the rapid overflow of the river water. Table 5.30 shows the impacts of flood wall construction on the settlements.

Table 5.30: The impacts of flood wall construction (n=350)

Item	Frequency (n)	Percent (%)
Flood still happen	77	22.0
Flood does not happen	106	30.3
Can reduce the water level	147	42.0
The river water is getting dirty	16	4.6
Others	4	1.1
Total	350	100.0

Usually, the Tambatan Di Raja Kota Bharu area is used as the leading benchmark for water level. The observations on the Kelantan River in this study took place in January 2021. At that time, most residents in this area were apprehensive about seeing the weather phenomenon that occurred in Kota Bharu. The heavy rain had occurred every day for several weeks, causing the water level of the Kelantan River to rise suddenly. This is as mentioned by one respondent in one of the random interviews conducted during the monsoon season in January 2021:

'... the non -stop heavy rains like this reminded me of the 2014 floods. At the time, the weather was exactly like this. I think we will face another flood this time ...'(R-12).

As observed, most residents in this area were very worried about the rising water level of the Kelantan River. Some respondents had stored their items such as furniture and other daily equipment in safer areas. At this time, the Tambatan Di Raja Kota Bharu (Figure 5.18) area was seen as a gathering place for the people of Kota Bharu. People would come here to observe the development of water levels.



Figure 5.18: Kelantan River water level in January 2021 (Source: Abdullah, 2021)

Following the COVID-19 Pandemic in late 2019, the authorities have issued a restriction for people to do any gathering activity in the area. At present, Tambatan Di Raja Kota Bharu has been entirely closed by the authorities' order, and fines will be imposed to those who disobey this order. Once the area was closed, the public are no longer be able to observe the flood water level as they did in the previous year. Based on the survey results in Table 5.30, a total of 106 respondents (30.3%) said that floods no longer occurred after the flood wall was built. Figure 5.18 shows several visual observation work done in this study while using boats which was assisted by several local people.

As observed, the water level of the Kelantan River was very high and achieved the warning level, thus a flood disaster could happen any time at that time. However, with the Flood Wall, the water of the Kelantan River could not enter the area. Another reason is because the Flood Control Gate built in Budor River was completely closed to prevent water from entering this river. If the gate was not built, this area would face another flood disaster as experienced in the previous year. Thus, the Malay settlement area was free from floods until present. It can infer from this study that addressing the community's needs is significant for the development of the Malay community in this area. As similarly stated by Wahid (2014), a development approach that understands the process of urbanization could develop settlements that allow people to develop themselves, their families, and society itself. With the availability Flood Wall and Water Control Gate, flood disasters have been brought under control. As a result, the residents felt safer than before to live in this area.

In summary, the Malay settlement area in this study is located in the flood zone. Catastrophic floods have caused severe destructions to the Malay settlements and their properties before. Nevertheless, the construction of the flood wall has given new hope to the Malay community now. They begin to feel safe and confident, and thus they are able to live a better life than before. Seemingly, the flood wall construction has provided positive impacts and new opportunities that the residents never expected to have. This is especially in terms of the prospects of property value and new development to address the demand for urban settlements. With the increasing property values nowadays, such demand has opened the developers' eyes from both private and government agencies to develop Malay settlement area with strategic residential locations which are free from annual flood events.

5.6.3 The Flood Wall and the Evolution of the Settlement Patterns

The previous sub-topic has discussed the impacts of the Great Flood in 2014 and the construction of the flood wall as an effective way facing of flood disasters. After seven years of its development, the flood wall is increasingly showing positive results for the benefit of the residents. Despite this construction was also associated with various other agendas that can significantly impact the development of Malay settlements. As shown in Figure 5.19, this area is comprised of many Malay residences because they are among the earliest Malay settlements in Kota Bharu. In addition, in 2005 i,e, before the flood wall was built, there were a lot of Malay residences located at Masjid Village which was near to Muhammadi Mosque and Jalan Atas Paloh Village.

The researcher visited this place in 2005 and found that there were many traditional Malay settlements in this area. These Malay houses had high value due to their traditional architecture with high-quality wood carvings that show the quality of the previous Malay community. Although the flood wall was not built at the Budor River at that time, this

settlement pattern is considerably unique since it indicates that not many settlements were built around the Budor River. This is because this area was previously impacted by annual flood events, so it was deemed not a suitable location to build new settlements around this place. The total population of Kota Bharu at that time was not high due to this factor. However, the historical record shows that a compact pattern of Malay settlements has existed in this area since 1928 as discussed previously.



Figure 5.19: Malay settlements in 2005. There are settlements around Muhammadi Mosque in Masjid Village and Atas Paloh Village (Drawing by Abdullah, 2020)

The construction work of the flood wall was started by the government .in 2010. The main factor of development was due to the need to prevent flood events. As shown in Figure 5.20, many new settlements begin to be built at present. The red colour marks in the map represents new settlements which were built in 2010.

Although the number is small, it can be said that the flood wall construction has brought impact in terms of new development pattern of the Malay settlements. This development has led the Malay community to gain their confidence and secured feeling in settling around this area. In short, the flood wall construction has finally given new hope to the Malays, especially those around the Budor River fringe and surrounding settlements.



Figure 5.20: Settlements in 2010. There were settlements in front of Muhammadi Mosque at Masjid Village and Atas Paloh Village. The flood wall was in the process of being built. (Drawing by Abdullah, 2020)

After the flood wall was fully completed in 2014, it was tested for the first time by the major flood event in Kelantan on December 2014. The Great Flood in 2014 that crippled Kota Bharu also hit this area (refer sub-topic 3.3). According to (Jordana, 2017, Khan et al., 2019), good governance aids the economy of a city, while bad governance will destroy the

city's economic development. Although the government has difficulty managing issues related to settlement demands, public amenities, clean water, drainage, and refuse dumpsites, this effort has positively impacted the Malay settlements on the river fringe.

5.6.4 The First Agenda in Kampung Masjid Settlement in 2013

There are three agendas in the development of the study area involving the destruction of Malay settlements. Two areas were involved in demolishing the settlement in 2013 and the last in 2020, as discussed further in the subtopic 5.5.4: The First Agenda in Kampung Masjid Settlements in 2013, subtopic 5.5.5: The Second Agenda in Jalan Atas Paloh Settlements in 2013 and, subtopic 5.5.6: The Demise of the Malay Settlement in 2020.

In 2013, the flood wall was still under construction process. Most Malay settlements in front of the Muhammadi Mosque were brought down by the government (Figures 5.21 and 5.22). Some of the Malay residences in this area, which used to be rich with traditional Malay architecture, were demolished due to the government’s planning to build a recreational park (Figure 5.23). However, after almost eight years, the area still has not been developed. The demolition of the settlement area has also destroyed all settlement activities and Malay socio-culture life in this place. All settlements, human activities and the meaning of the 'place' in the marked area have disappeared. Due to this reason, most of the residents have moved to other areas in search of new settlements.



Figure 5.21: The hatch area shows the demolished settlement at Masjid Village in 2013 (Drawing by: Abdullah, 2020)



Figure 5.22: The hatch area shows the location of the demolished settlements at Masjid Village in 2013 (Drawing by: Abdullah, 2020)

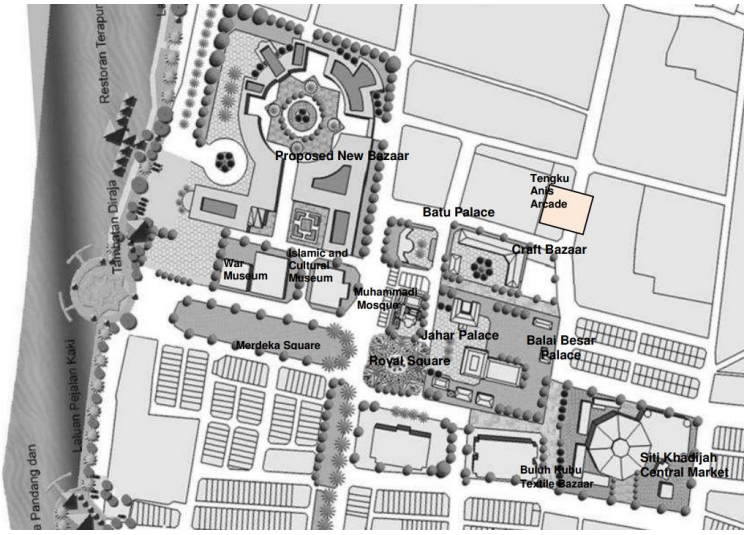


Figure 5.23: Kota Bharu Local Plan Report, 2009

Until present, most of the initial settlements in this area were demolished. In 2013, most of the residences at Masjid Village and Jalan Atas Paloh Village were brought down in order to provide open space and landscaping for public use. Masjid Village is located opposite the Muhammadi Mosque (Figure 5.24). The land was originally owned by Majlis Agama Islam Kelantan (MAIK). In the past, MAIK permitted the original residents at Masjid Village to set up their first settlements around the place. Over time, the mosque needs a larger area to be used as car park and recreational area. Therefore, MAIK has given compensation to the villagers in Masjid Village for the land acquisition process.



Figure 5.24: A parking lot at Masjid Village which used to be occupied by human settlements before the demolition (Source: Abdullah, 2019)

As observed, the area was eventually left with empty space for almost nine years. No development has been made so far to develop this area. A respondent (R-14) shared that he

is also not sure about the future government plans in this area. The main ideas of the flood wall construction were mainly known to prevent floods as well as to develop the entire area along the Kelantan River. The process to develop the area had been carried out in phases. As a result, the Malay settlements had to be demolished in order to make way for future development. Eventually, this situation led the Malays to find and move to a new location for their settlements. It was also observed that the flood wall construction had led to the creation of many new settlements around the area. Before this, only a few settlements were built because this area is exposed to annual flood. There were significant changes during the four-year period starting from 2015 to 2019, especially along the Budor River (Figure 5.25). Residents have begun to build new settlements in this area. They have also renovated their residences to accommodate the needs of their family members.

The development of the flood wall had created a sense of security and given hope to the people to improve their settlements so that they can live more comfortably in the future. The Malays, especially those who live near the river banks at Budor River and Jalan Atas Paloh Village, began to search for new economic resources, such as opening small-medium enterprises around their settlement area as a source of family income. After the Great Flood, residents started to create opportunities to strengthen their family income. Areas that are considered flood-free now are beginning to attract the attention of the surrounding people. The areas seem to be given new hope for those looking to improve their living in the urban area.

'...flood event annually hit this area. I did not get a chance to do business here because the risk of losses is high that would be faced during the floods. After the floods did not happen, I started opening small stalls to generate daily income ...'(R-3).



Figure 5.25: Settlement pattern in 2015. Settlements in front of Muhammadi Mosque at Masjid Village and Atas Paloh Village were demolished (Drawing by Abdullah, 2020)

It was also found that the residents here carried out small-medium business activities around their settlement area. They opened grocery stores and food stalls at the settlement. In this way, they could generate income without having to migrate to other areas. There were not much changes in the pattern of Malay settlement during this time, compared to the previous year. The construction process of the Paloh Garden Apartment only started in 2015, which is a year after the Great Flood 2014. This situation indicates that the developers may have known about the flood wall construction proposal before it was implemented, since the construction process was only started in 2015. The project application which involved

various processes, such as Planning Permission and Building Plan Approval, needs to be done earlier. Due to the delay, the project took almost six years to complete, i.e. from 2015 to 2021.

Meanwhile, the Chinese began to look for more extensive opportunities with the facilities and resources available in this area. At present, the Chinese has increasingly dominated the area indirectly through the urbanization process. The lifestyle of the Malays is known to be highly concerned about the culture and tradition aspects, which has led to their difficulties in adapting to the new settlement pattern. This is especially related to the cultural life in settling in apartments and the urban environment. This finding is in line with an early study (Evers, 1977, 1975) which reported that the construction of a new settlement is not considered as suitable by the Malay population around the area. The construction work has created opportunities through the geopolitical strategy due to its close location to Cina Village or '*Kampung Cina*', located at 500 meters away from the study area. According to Sendut (1966), Chinese community has long dominated the city centre. Through economic power, they dominated the settlement area having strong clans ties in the city centre. There were a total of 420 residential units of Chinese people in the area being studied. According to Wahid (2020), the city is always considered as a place for various job opportunities. At present, job opportunities are mostly depending on many other factors such as education, age, and sex. The arrival of Chinese in this area seemed to be mainly benefit their own ethnicity. Many of them will monopolize the job opportunities that exist. This was similarly observed in Kuala Lumpur during the early independence. According to McGee (1975), although the Malays mostly dominated politics, they did not have economic strength in the city. Consequently, Chinese begun to dominate the economic sector in urban areas. So, in the study area, economic sectors are dominated by them.

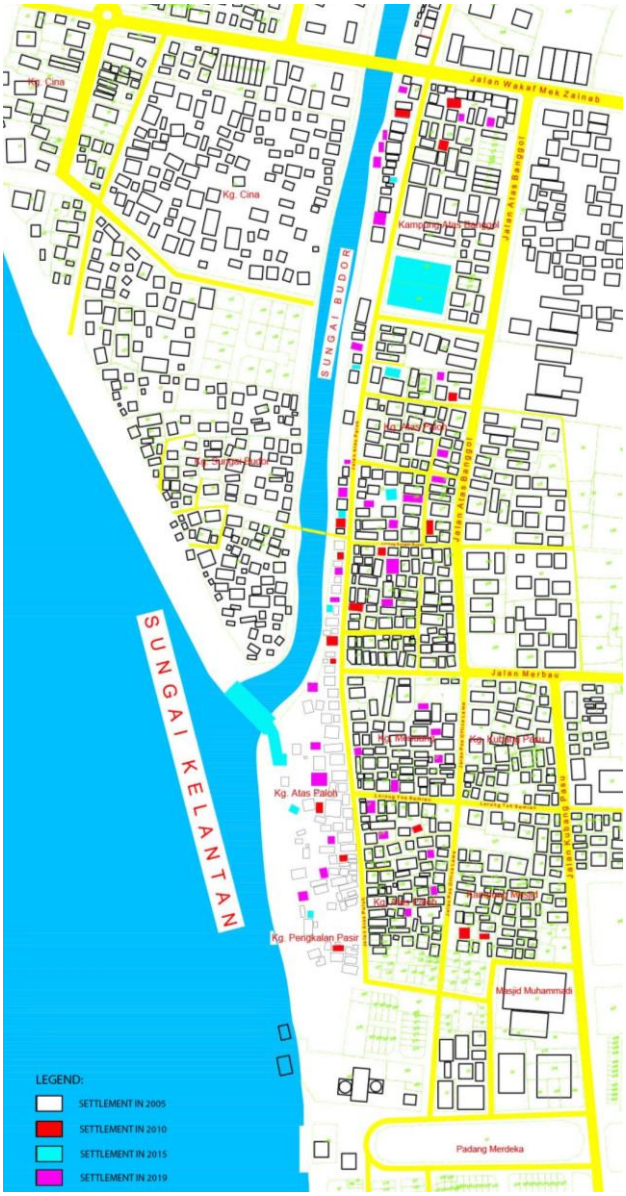


Figure 5.26: Settlement pattern in 2019 showing the existence of new settlements (Drawing by Abdullah, 2020)

Based on the study's observation in November 2019, there was an increase in the number of new residences in the area. Most of the new residences were built in the Jalan Atas Paloh Village. Some of these residences have been renovated to accommodate the needs of people. As depicted in Figure 5.26, the purple colour indicates the new and renovated residences in 2019. As observed, the residences along Budor River were constructed using

basic structures. This type of settlement can be identified based on the usage of building materials and simple construction techniques. Despite this, most settlements in this area have been renovated because the area has been free from the annual floods.

5.6.5 The Second Agenda in Kampung Jalan Atas Paloh Settlement in 2013

The year 2013 has witnessed the demolition of many Malay settlements. The first impacted area was Masjid Village which is located in front of the Muhammadi Mosque. The second area was the residences located at Jalan Atas Paloh Village (Figure 5.27). These two villages were located next to each other; they were only separated by the road, Jalan Post Office Lama. The land acquisition process at that time did not involve other residences at Pengkalan Pasir Village. Only a few residences in the Malay settlements were affected, because most of the land and houses were owned by individual owner. According to National Land Code 1965, in Malaysia, all matters concerning land fall under the governance and jurisdiction of the State in which the land is situated. Under the Act, only the State Authority has the power to compulsorily acquire land, and the acquisition must be for a public purpose. The land acquisition process was done in phases since the government had to make large amounts of compensation to the owners. A respondent (R-27) believed that the land acquisition process will be progressively happening in the future in all areas. At present, the affected people are still waiting for the next phase since the government has given notice for them to evict the property. From the preliminary survey conducted in 2019, the respondents informed that they had received the notice to vacate their settlement. Initially, the construction of the flood wall had given them hope to live a better life, but everything has changed. Since the beginning of the demolition process of their settlements in 2013, no new development has been made so far that can bring benefits to the Malay community around the area. The villagers are living with uncertainty either to stay or to move or to improve

their residence. They are living in the poor condition of the house for several years waiting for eviction.



Figure 5.27: The hatch area shows the demolished Malay settlement area at Jalan Atas Paloh Village in 2013 (Source: Abdullah, 2020)

5.6.6 The Demise of the Malay Settlement in 2020

Based on the study in 2019, the respondents informed that their residences will be demolished by March 2020. Therefore, the land acquisition process will take place within a short period from the time the study was conducted. This process will involve the settlements

located at Jalan Atas Paloh Village and Pengkalan Pasir Village (Figure 5.28). Majority of the residents have been inhabited this settlement area for three generations or 80 years. However, in February 2020, the residents were given notice and ordered to vacate their settlements before March 2020. This notice was issued by the Perbadanan Kemajuan Iktisad Negeri Kelantan (PKINK or Development Corporation of Kelantan) which is a subsidiary company of the Perbadanan Menteri Besar Kelantan (PMBK).



Figure 5.28: Location of Jalan Atas Paloh Village before the demolition work was carried out in March 2020 (Source: Fieldwork, 2019)

The site also became a political issue during the campaign. The 13th General Election was also held in 2013. Leaders representing the State Government, the late Tuan Guru Nik Abdul Aziz Bin Nik Mat and Dato 'Seri Haji Takiyuddin Bin Hassan, have visited this area. The objective of the visit was to offer new hope to the residents of Jalan Atas Paloh village with Affordable Housing project would be built in this area. The project has 420 units with 15 -storey residential units. Since the land will be taken by the government for development, the residents were promised that they only have to pay RM 50,000 to buy the residential unit, even though the market price offered for one unit was actually around RM 160,000 during

that time. Therefore, most residents agreed with the proposal. Therefore, most of the residents agreed with the proposal and the groundbreaking process carried out.

'...the year 2013 is the season the GE will be held. Many leaders came to sow their promises. It also includes the provision of a residential apartment unit here. Unfortunately, no development has taken place until today. Even our house was demolished ...'(R-23).

The statement indicates the negative feeling among majority of the Malays involved who felt cheated and dissatisfied with Perbadanan Kemajuan Iktisad Negeri Kelantan actions (PKINK or Development Corporation of Kelantan) which is a subsidiary company of the Perbadanan Menteri Besar Kelantan (PMBK).



Figure 5.29: The design proposals promised by the government in 2013 (Source: www.google.com)

As evidenced from Figure 5.29, the government had previously made the promise to bring new development proposals for the people, as many parties agreed. During that time, the people in this area were satisfied with this new hope. While the flood wall was under construction, they were given the offer of apartment unit by the government. The ground

breaking process was done by the late Tuan Guru Nik Abdul Aziz Bin Nik Mat and witnessed by Dato' Seri Takiyuddin Bin Hassan, who was the leader of the Kota Bharu Parliament.

As noted from the interviews, more than 300 residents from 64 Malay settlements at Jalan Atas Paloh Village have sought clarification from the government on the issue as well as the amount of compensation as had been promised initially. They felt dissatisfied at that time, considering that the process of demolition has taken place. Up until now in 2021, 48 houses in the area have been demolished, and some of the residents have moved to the *Projek Perumahan Rakyat* (PPR) Jalan Kelochor, Kota Bharu. *Projek Perumahan Rakyat* (PPR) Jalan Kelochor, Kota Bharu is a federal government housing project containing 1,000 units located 2 kilometres from Kampung Atas Paloh. However, residents from 12 other houses which were demolished did not yet any compensation are now renting in other areas. Meanwhile, 16 more families are still waiting for a formal clarification from the PKINK about the demolition of their settlements. They are among the residents who have sought for face-to-face meetings with the government to clarify their issues. Yet until now, no government representative has come to visit and meet the people in the affected areas. The residents felt dissatisfied because they were initially promised that every household living in this area can obtain a house with RM50,000.00, compared to the original price of RM160,000.00. While waiting for the new apartment, they would be moved to a transit house in Badang, Kota Bharu. This was stated in the agreement made on 03 May 2013 (Friday at 11 am), at the site of Lot PT66, Section 2, Jalan Atas Paloh involving Dato' Takiyudin (Member of Parliament Kota Bharu) and the late Tok Guru Dato' Haji Nik Abdul Aziz bin Haji Nik Mat. PKINK had also been informed about this event in the local paper, Sinar Harian, 2013.

The destruction of Malay settlements has also destroyed the social and cultural system of the community. There are daily activities that cannot continue, and some traders have lost their income because the business premises are located in the area, and it is difficult for them to find other jobs. In addition, the main challenge of Malay settlement here is the poor infrastructure system due to dense settlements.

The construction of new settlements by the government and the private sectors has even made the poor image of this area more severe. Developers tend to create more expensive solutions which are beyond the capability of the urban poor. According to Lamry (2014), informal settlements and privatization will always cause the urban poor to migrate elsewhere. Such situation occurs in many Malay settlements during this day. Eventually, the demolition work of the Malay settlements had taken place in April 2020. The process involved 64 units of Malay residences involving nearly 300 households. Until now, 16 settlements are still resisting towards the demolition of their settlements. Before the demolition work, there was no visits made by any representative from PKINK and the government. Thus, there was no negotiation process took place between the parties involved. The most critical issue was regarding the amount of compensation made by PKINK to the settlement owners.

'...we are not given compensation. We were only given a consolation of RM 1000 only. RM 500 was given for us to move then the remaining RM 500 after we moved. RM 1000 is not enough for us who have lived here for 80 years ...'(R-11).

...the amount of compensation is RM 1000 by PKINK, and there is no negotiation process...'(R-33).

Reportedly, most of the residents were dissatisfied about the taking over of their settlements. As also noted during the interviews, the residents were willing to co-operate

with the government and to vacate their settlement, but the amount of compensation received was unreasonable. In detailed, the amount offered was only RM 1,000 which was insufficient for the residents to cover the cost of relocation process, not even enough to cover the costs of truck that is RM 200 per trip. Even worse, 16 families were not given any compensation at all, rather they were just instructed to vacate their settlements. Due to such issues, majority of the residents felt reluctant to be relocated, but they were still looking to discuss the issues further with the parties involved. However, none of the representatives from both PKINK and political bodies came forward to discuss (see Appendix C, D, E, F). Eventually, the Malays felt that they have been oppressed. The situation is worse, with the respect to the expiry date of the notice issued too close to the eviction date. The authorities had cut off the electricity supply in these settlements. The residents involved then were unable to take any action. A group of residents had filed a complaint at the Tenaga Nasional Berhad (TNB) office to consider their predicaments. Unfortunately, TNB said that they are no longer the main electricity supplier in that area (see Appendix C, D, E, F).

'...TNB has cut off the electricity supply here. We have no electricity. Our difficulties increased as the MCO was carried out ...'(R-24).

Pengkalan Pasir Village's is another small village suffering from eviction. The number of residences in this village is small compared to other surrounding villages. It is located next to Jalan Atas Paloh Village. The status of the land in Pengkalan Pasir Village is a Temporary Occupied License (T.O.L). The state government owns the land, so the residents has been there since 1930. It can be said that the entire settlements along the Budor River were built on T.O.L, starting from Pengkalan Pasir Village to Jalan Atas Paloh Village. According to the *Carian Hak Milik* by the respondents, the lease expires on 16th July 2118.

There were almost 64 Malay residences registered under the government office and subject to T.O.L. However, these registered residences did not include illegal settlements.



Figure 5.30: The hatched area shows the settlements of the Pengkalan Pasir Village and Atas Tol Village that were involved in demolition work in March 2020

(Source: Abdullah, 2019)

Eventually, this settlement area had to be vacated, and the demolishing work had taken place in March 2020 (Figure 5.30). These are the unfortunate case of the Malay village in Kelantan and elsewhere in Malaysia. The T.O.L seems permanent settlement to the residents without realizing that they do not have a legal title of the land. The government can take the land at any time.

During the last fieldwork, the demolition work of the settlements is in progress. The observation was conducted continuously through several visits in order to study the progress and the demolition effects on the residents of the Malay settlements in phases. Based on the observation, it was observed that the demolished Malay settlements had led to the lost of values in terms of characters, places, sense of place, and culture of the Malays. This demolition work has caused various loss to the settlement area in terms of activities, communities, neighbourhoods, and Malay cultural attributes (Table 5.31). The demolition is not only physical, but it reflects the symbolic elements of the demise of the Malay settlement in Kelantan stage by stage.

Table 5.31: The impacts due to the demolition of the Malay settlements at Jalan Atas Paloh Village (Source: Fieldwork, 2020, and 2021)

Event	Before the demolition in February 2020	During the demolition in March 2020	During the demolition in April 2020	After the demolition on 2nd December 2020	After the demolition in June 2021
Images					
					
					
					

During the visit, human activities is no longer occurred in the impacted area which previously contributed to shape the place and its characters. The human life experience in the area now has been completely destroyed. The term ‘life’, which describes the human experience, meaning, situation and events (2017 and 2018), as occurred before can no longer be seen in this area. The area which was formerly occupied by the Malay settlements with a variety of activities has now become full of shrubbery and bushes. Such condition was a nightmare for the Malays who have stayed in this area.

The demolition has also indirectly affected other Malay settlement areas, especially in terms of the relationships between the communities. The residents have lost their strong connection and community ties among themselves. The situation has also led to changes in the character and physical attributes of architecture. Such destruction of the Malay settlements was not caused by the natural catastrophic event, as described in the previous chapter. It was due to the greed of the political parties with their agendas who wanted to develop the area without considering the needs and conditions of the existing community.

This finding is in line with the studies by Seamon (1987, 1997, 2000) who explained that any object, event, situation, or experience that a person may hear, see, touch, smell, taste, feel, sense, know, understand, or live, is the legitimate topic for a phenomenological investigation. There are various aspects of phenomenology, such as light, architecture, colour, landscape, 'place', power, travel, seeing, learning, relationship, blindness, jealousy, change, friendship, economy, and sociability. All of these aspects could happen because humans can encounter, experience or live through such situation in many ways. The destruction of the settlement also the destruction of experience as well as the place.

Concomitantly, rapid urbanization has caused the Malays to be suppressed drastically. Economic development in the city areas is associated with various significant

issues which have always been the concern of the government. Notably, the need to generate economic growth is more important to the government than providing the Malay community with a comfortable life in the city. Those poor people in the Malays community are always feeling threatened by issues of natural calamity, urbanization and governance. As evidenced in the study area, the government seemed to have lack of control on the urbanization process which should be developed in parallel with economic development. Similar findings were reported by previous scholars (Wahid et al., 2020; Dahlan, 1997; Shari, 1992) who agreed that the economic system and social development would be interrupted if the urbanization process stopped. The urban poor are being used as a mean to drive the demands of urbanization. They should have been provided with house, transportation, medical care, recreational facilities, and education to provide convenience in their daily urban life (Shari, 1992; Lamry, 2014; Wahid, 2020).

In 2021, a condominium, known as Paloh Garden Apartment, was built on a land that was originally a sawmill area owned by a Chinese, namely Guan Ann Sawmill Sdn. Bhd. (Figure 5.31 and Figure 5.32). It is located close to the Budor River and has up to 28 floors. It has 160 units and a Freehold status. A large number of the units are opened to Chinese buyers. There are two types of residences, namely Type A (1200 sq. ft) with a price between RM 388,000 to RM 488,000, and Type B (800 sq.ft.) which is sold at a price between RM 288,000 to RM 350,000.



Figure 5.31: Paloh Garden Apartment along the Budor River (Source: Abdullah, 2021)



Figure 5.32: Settlements pattern in 2020. Several Malay settlements at Pengkalan Pasir Village and Atas Paloh Village had been demolished in March 2020

(Source: Abdullah, 2021)

Based on the current offered prices, it can be stated that a large number of the Malay community cannot afford to buy a new house due to the high price. The main purpose of this apartment development was not targeted for the Malays, but to the Chinese people who have more stable incomes, i.e. the M40 and T20 groups. In addition, the Malay community in this area are also not adaptive to the pattern of settlements built using the vertical design. This finding is supported by a respondent as follows:

'...I felt it was not appropriate to live in the apartment as I was used to living through settlements on the landed property. If I have the money, I will buy a terrace house or bungalow in another area because it has space to cultivate ...'(R-29).

This statement shows that the Malays in this area prefer to have their settlement in a landed area which can support their activities such as farming and keeping cultivated animals. Therefore, the apartment building was deemed not suitable for the Malay community. It is attractive to the Chinese due to its strategic location and freehold land. Furthermore, its location is a salient point which will attract more buyers since it is close to all urban amenities especially Sekolah Menengah Jenis Kebangsaan (Cina) Chung Hwa. At the time this study was conducted, the development of this apartment was fully completed. However, the Certificate of Completion Compliance (CCC) has not been issued by the architect. As the study observed, with the establishment of this apartment, more Chinese will inhabit this area in the future. Such a more will change the urban pattern of Budor River fringe.

In addition, the Chinese community will be able to maintain their population in this area because there is a Chinese village at a distance of 500 meters from the study area. Due to this reason, this area would most probably be one of the areas which the Chinese has dominated. Eventually, there will be a gap in terms of social status in this area which has never existed before. The apartment residents will live within a gated and guarded security equipped with a Guard House and security systems. At the same time, many other Malays are still living in the original settlements with poor infrastructure system and minimal facilities. This area will also be congested with vehicles owned by apartment owners who live in this area. Since one apartment unit generally has two parking spaces, the apartment will be able to accommodate almost 320 vehicles. With such narrow road and poor infrastructure system, this area will become increasingly congested with vehicles and thus will threaten the safety of the residents.

In addition, the observation also noted that the Malays are still lagging in the modern economy and facing challenges to compete with other ethnic groups, even though they are the original inhabitants who lived in this area. According to several scholars (Shari, 1992; Hadi, 2001), the Malays cannot match the new economic power of other races in the city. This study has revealed the Malays' struggles and challenges in findings ways to live in the city. Since the beginning of their life in the city, these people are just looking for life experiences because the urbanization process did not favour the Malay settlements as evidently proven in the study.

In summary, the pattern of Malay settlements began experiencing changes because humans started to feel safer occupying the river fringe area. In addition, the growing population has brought a higher demand for establishing settlements in Kota Bharu. The observation results have shown the changes on the settlement pattern, especially for settlements built along the Budor River. The year 2014 witnessed how the flood wall was tested by the Great Flood after its completion in the same year. The construction of the floodwall helped the Malay community around the area to survive in the flood event. Nevertheless, after eight years, the Malay settlement area was finally demolished by PKINK under a government subsidiary. A total of 64 Malay residences had experienced severe loss because of the government's manipulation through political mean. Not only that the promised new settlements in 2013 were not built, but their initial settlements were also demolished. With an unreasonable compensation value of RM 1000, they eventually had to relocate due to no electricity supply (see Appendix C, D, E, F). The situation is much worse for other families who did not get any compensation. Due to this situation, the residents have to fight for their right. The court proceedings are ongoing to solve their issues (see Appendix G). Yet, the people are still unsure about what will happen in the future. This incident proved

that the Malay settlements along the river fringe is now threatened by urbanization. Previously, the Malay settlements were threatened by floods that occurs every year, but the biggest challenge is by the government's agenda to acquire their land. Although the flood wall system managed to control the flood issues, the Malay settlements in the area are now facing the disappearance of economic and development challenge. It appears that the government is not able to fully control the pace of urbanization that directly and indirectly that affects the Malay settlements and communities. Therefore, the government should develop a better plan and strategy in order to improve the living quality of the Malay settlements in an urban area at present and in the future.

5.7 Urbanization and Destruction of Malay Culture

During the early process of the existence of a human settlement, humans began to seek contact with the environment. The aim of the settlement building is to reduce human energy and movement in their daily lives. The daily activities of the early residents started from the internal space in the house, such as cooking, washing and working. Then, the activities by the river eventually made the people to develop their carpentry skills, boat making and transfer their skill to build own settlements. Through the '*gotong-royong*' (working together) spirit, the settlement area then started to grow. Over time, the people's skills have also evolved and formed into culture in their daily lives. The people then started using these skills to generate own income. The groups of people include the residents who were carpenters, traders, and also those who ventured into the field of traditional art. The settlements in this area was previously well-known for the traditional artwork done by the community members, such as wood carving, copper work, songket and carpenters. According to Bott et al., (2003), the unification of physical and cultural elements exists when it involves the process of perceiving all individual and human needs in fulfilling their life

functions and purposes. Thus, the identity of the 'place' depends on physical, social, and cultural factors. The development of Malay art and culture eventually made this area became very famous and developed its identity. However, after three generations have passed, it was observed that cultural activities have been declining in this area. Majority of the residents here are no longer active in such activities. As shown in Table 5.32, 341 out of 350 respondents said that none of their family members are currently involved in that field. These findings have shown that Malay art and culture activities are no longer became a way of life among the residents in this area. Some residents even said that they do not find such field of job that can guarantee a bright future for them anymore.

'...I feel traditional Malay artwork is incapable of guaranteeing the future. There used to be a 'batik' workshop before, but eventually, it had to be closed due to competition from Indonesia 'batik' ...'(R-9).

Table 5.32: Number of residents who are still actively involved in Malay artwork (n=350)

Item	Frequency (n)	Percent (%)
Yes	9	2.6
No	341	97.4
Total	350	100.0

In the past, *'batik'* painting is among the selected items for visitors elsewhere, however, the '*batik*' product from Indonesia has penetrated into the industry and sold in this place. This has led to the closure of most batik factories since they failed to compete in addressing the market demand. Due to the lower price of Indonesian batik *products*, most customers began to buy *'batik*' from that country. Consequently, the '*batik*'-making industry which was carried out in this place had to be closed. Due to this issue, the youths nowadays do not have the opportunity and platform to develop such art talents. This has also affected

the Malay settlement area in terms of its cultural features. Rapoport (1977) and Altman (1975) described the depiction of a place along with the cultural influences and experiences that exist in the society. This process creates meaning and connection with the place, which gives identity to the place. It will also determine the social and cultural values of the place, especially for the people who live there. This identity will support the existing culture and ensure the sustainability of the place. With the decline of the activities, the people will eventually lose their opportunities to generate family income and lost their identity through such process. These factors may led the youths to migrate to the city areas which offer more job opportunities that suit their needs.

Unfortunately, for the affected residents living at Pengkalan Pasir Village and Jalan Atas Paloh Village, their settlements have been destroyed due to the land acquisition process that took place in March 2020. As observed in November 2020, their settlements have been completely destroyed. This was among the reasons for the discontinuation of, the Malay cultural activities around this place. The urbanization process has also absorbed into this area through new projects for future development. Initially, the residents in this place were unaware when the urbanization process began to take place. During that time, their lives had not changed much from the early years. The residents were still practising their village lifestyles and daily life activities. According to Wahid (2014), the process of urbanization in developing countries has taken many forms; it is either the rural environment absorbs into the urban area, or the urbanization process has been incorporated into the rural area. Such urbanization process in developing countries is what has been observed in this Malay settlements area. Evidently, the urban Malays at the beginning were still practising the village's lifestyle and culture in the city. However, as time passed by, the urbanization

process has brought significant impacts on the settlements and thus eliminated the sense of place that had long existed in the community.

Based on the survey findings in Table 5.33, nine respondents (2.6 %) are still actively involved in this field of job for around 15 years to 20 years. In contrast, only two individuals (0.6%) have ventured into this field for five to 10 years. In addition, only five of them have been engaged in this job for five years or less (1.4%). These findings indicate that the number of respondents who are still involved in this field is very small. Thus, there is an imbalance of progress in the residents' participation in this field of work.

Table 5.33: Number of years of involvement in the field (n=350)

Item	Frequency (n)	Percent (%)
5 years below	5	1.4
5 – 10 years	2	.6
10 -15 years	5	1.4
15 – 20 years	9	2.6
20 years above	8	2.3
Others	4	1.1
Not involve	317	90.6
Total	350	100.0

The young generations did not develop the skills that eventually be lost among the Malay community in this area. The destruction of the culture will lead to the loss of cultural identity and consistency in practices among the Malay community. The concept of culture has moulded the mind and soul of the Malays with the influences of religious interests, culture and tradition. According to Kling (1989), these factors have shaped the characters and identity of the Malays. The effect of urbanization has led to the decreasing viscosity of the culture among the Malay community in this area. This effect will also eventually impact the pattern of Malay settlements. Rapoport (1970) explained that cultural expression is continuously changing in line with the changes in the meaning of a building or village

development. However, such transformation is not a radical change, but rather something that is constantly changing, whether permanent or not. In this context, as Rapoport explained, when the people's culture and their view of life are changing, so do the things related to these changes. The experience of urbanization did feel by the Malays who adhere to their traditional lifestyle, that in return- hit back to their daily life.

As reported in Table 5.34, 23 respondents (6.6%) said that the residents in this area are not interested in being involved in Malay arts. As mentioned by the respondents, the residents find that most Malay artwork is extremely complex and complicated in terms of the production. In addition, it is challenging to sell their art products due to the competition from industrial products. The price of the products offered by the neighbouring countries are lower than local products too.

Table 5.34: Reasons why Malay art and culture are not being practised (n=350)

Item	Frequency (n)	Percent (%)
The people are no longer interested	23	6.6
Young generations are not interested	6	1.7
Expensive raw material prices	2	.6
Raw materials are difficult to obtain	2	.6
Did not involve at all	316	90.3
Still active in that field	1	.3
Total	350	100.0

According to one respondent (R-18), most of the youths in this area are not interested to learn the skills in Malay traditional arts. These, young generations are more likely to work in urban areas, such as Kuala Lumpur and Selangor, due to better job opportunities. Due to this need, majority of young people have migrated to the cities, and eventually their peers will also be influenced to migrate. Eventually, the young generations are no longer interested in traditional art making and carpentry skills.

Other than that, the declining practices was also caused by other factors, such as the difficulty in obtaining raw materials and the increasingly price of raw materials (n=2; 0.6% respectively). As noted from the interviews, raw materials, such as bamboo, are difficult to obtain nowadays. For example, artists who make quail traps will buy the material from suppliers or from other villagers in Tumpat (30 kilometres from Kota Bharu). The price of wood is also becoming more expensive than before. Due to the high prices even the house building and repairing many respondents have use other materials for their new houses. Due to the aforementioned issues, the values of Malay traditional arts are also eventually declined.

'... there used to be a lot of great carpenters here before. They built houses and Palaces. Now, there is no longer a generation that inherited their skills. In addition, the new house now does not use timber…' (R-22).

As noted from the interviews, this Malay settlement area is often visited by researchers, students, and those with passion in art architecture throughout the country. Most of the attractive landmarks are located at Jalan Post Office Lama. Many local architectural researchers are very fond of studying traditional settlements around this area. According to Wahid (2021), the study of traditional architecture by researchers and students of architecture in Malaysia is mainly on inventory studies and documentation. However, it was not focussing on the conservation of Malay settlement in total.

'...this house is complicated to maintain. The cost of maintenance is very high. The house is experiencing roof leaks as well as the increasingly damaged roof structure. I have never received any help from the government to repair this heritage house ...'(R-6).

Kelantan traditional houses have various typologies. It can be identified by the design of the roof. The Gable roof house is one of the earliest traditional house designs in Kelantan.

In comparison, Dutch Gable roof and Limas Belanda roof houses have colonial influences. Most houses are built using timber with a 'tanggam' system. The construction method of raising the floor from the ground level is used to avoid flooding and wild animals (Figure 2.9). As mentioned by the respondent above, the government has never provided monetary support for the residents to repair the traditional houses in this area. This somehow shows that there is lack of government-level actions towards conserving the values of Malay traditional settlements as mentioned by R-6 in the previous chapter. Most of the Malay traditional settlements in this area have suffered from severe destruction. Without necessary supports from the government, it is challenging for the residents to preserve the Malay traditional architecture in this area. The government is seen to prioritize more on economic development over infrastructure development (Zehra et al., 2019; Satterthwaite et al., 2020; Wahid, 2020; McGee, 1994) and heritage buildings. As similarly observed in this study, this factor has also impacted the sustainability of Malay traditional settlements due to the community's perception that these settlements had no significant values for the government. The high architectural values of these settlements are only appreciated by a few groups of individuals and institutions. The lack of supports and initiatives by the government has led to the loss of motivation and interest among the owners to continue preserving the cultural values of their houses. Lack of knowledge and skills to preserve the traditional settlements, especially the construction techniques, building materials, conservation methods, and timber construction processes. It is observed that, the residents only repaired the traditional houses to address their basic needs only. As a result, the original construction of the settlements is not maintained and loss their values. Therefore, the government can play an effective role by providing supports for the community to develop and maintain the traditional culture and arts in this area. Such level of supports can bring significant effects, not only on the Malay

settlements, but also for the development of culture and tradition in this area. The observed impacts on cultural resilience in this area clearly indicate the existence of gap between the pace of urbanization and Malay cultural resilience which is currently not effectively addressed by the government.

Nonetheless, the urbanization process can also lead to several positive changes, particularly in terms of the advancement of information technology. Although, the construction industry has transformed with the use sophisticated media and advanced modern techniques (Hofmann & Wan, 2013), yet the use of technology in the development of Malay culture still cannot ensure that the Malay culture will continue to grow in the future. The term technology has a subjective meaning to the respondent's understanding. Some respondents think using basic carpentry tools is a technology and vice versa. These results happen because the respondents are from a local community of various ages and education levels.

Table 5.35: Using technology in artwork (n=350)

Item	Frequency (n)	Percent (%)
Yes	15	4.3
No	24	6.9
Not involve in Malay artwork	311	88.9
Total	350	100.0

Results in Table 5.35 show that 24 respondents (6.9%) still did not use modern technology in making and producing arts. It was also found that the respondents preferred to use manual equipment and techniques rather than using technology in performing their work, *'...I am not good at using machines for this job. After all the price of the machine is too expensive. I have never received assistance from government agencies and any parties involved ...'(R-5).*

According to the respondent above, he did not use technology in doing his work due to the lack of knowledge in using it. Moreover, he has never obtained any support from any agency to attend training which can help the people to divert from traditional technology to modern one. They also consider that modern appliances are expensive. The study findings observed that there is many businesses in this settlement area are not able to thrive successfully, and many residents are still not adaptive towards the use of technology in their work. At present, many businesses in this settlement area are not able to thrive successfully, and many residents are still not adaptive towards the use of technology in their work. Even with the implementation of the 4IR in various industrial sectors in this country, many people are still not able to make use of technological skills and knowledge in order to improve their lives. At present, the 4IR policy propagated by the government seems to be more practical for more prominent industries that can contribute to develop the nation's overall economy. As for those under-represented community groups like the urban poor, the use of technology seems to be far-reaching for them to change their work practices in order to overcome poverty and thus to improve the quality of life.

Eventually, the residents will continue to live in poverty. They are mainly treated as a mean for the government to make further economic development of the city areas although the people have been provided with solutions, transportation, medical treatment, recreational facilities, and education to provide convenience in the daily urban system (Shari, 1992; Lamry, 2014; Wahid, 2020). Even with the availability of technological tools and applications, many are still not able to break out of their poverty circle. As observed in this study, among the most affected sector is the Malay art and cultural industry which is no longer growing in significance. Such issue has also affected the development of the Malay settlements as well as the sustainability of their cultural activities.

The lost of arts and culture in place led the residents to migrate (Table 5.7). This finding is supported by Wahid (2020) who stated that economic development is one of the main factors for people's migration. According to Lamry (2014), the income gap between urban and rural residents as well as between major ethnic groups and regions in this country began to change in 1991 to 1997. There are two reasons which hinder the formation of a fair society in Malaysia. First, social differences are still existed although much progress has been made to reduce racial disparities in this country. The second reason is due to income differences between the ethnic groups. One example of such situation is the agricultural sector, which is generally dominated by the Malays, is not being pro-actively emphasized by the government due to more focus on promoting export-oriented industries.

Table 5.36: Young people are still interested in Malay arts and culture (n=350)

Item	Frequency (n)	Percent (%)
Yes	134	38.3
No	216	61.7
Total	350	100.0

The other issues are also other challenges in the agricultural sector which have also led to the migration of youths to cities. This includes the declining primary commodity prices, rising production costs and labour shortages. This migration has caused many orchards and paddy fields in the rural areas to be abandoned. Eventually, the agricultural sector is also considerably lagging behind other industries. Although, the shift from the traditional industry to the modern industry has resulted in economic growth and poverty reduction nationwide, income disparities remain a critical issue even though the number has been reduced. Despite being implemented since thirty years of its official launch, the NEP's effort in reducing the income gap between people is still unsatisfactory.

5.8 Conclusion

In summary, the relationship between the river and the Malay settlements could significantly and directly impact the pattern of Malay settlements. Nowadays, the Malay settlement is no longer concerned with the relationship between people and the river, and consequently the houses are no longer designed with a porch overlooking the river. This change is due to the development of roads to connect humans and places. The Malay community also had to make changes in their settlement area in order to provide at least one area for their vehicle parking. These changes have impacted on the increasingly dense settlement pattern, coupled with the growing number of population and vehicles every day. In addition, the infrastructure system is still in poor condition.

The effect of urbanization and natural calamity are two main factors contributing to the destruction of the Malay settlements along the river fringe. Based on the studies carried out, the significant impacts of the floods can physically and visually be observed and experienced by the Malay community. This natural phenomenon took place due to the monsoon season which has directly affected their settlements. On the other hand, the urbanization factor is a phenomenon that made the people are mostly unaware of due to its quick occurrence and implicit impacts. The residents' knowledge about this process is rather limited even though it happens annually in their settlement, in Kota Bharu. The impact of urbanization is also greatly influenced by economic growth factors. Therefore, the people are unaware of the direct effects of urbanization on their settlements. This urbanization process began to be noticed after the establishment of the flood wall in that area. Initially, the construction of this flood wall had given the residents new hope for living a more comfortable life in their settlement area.

Unfortunately, the government itself is not able to control the urbanization process which has negatively affected the economic growth of Kelantan. The Malay settlement areas are mostly seen as the primary target for Kota Bharu development. The settlements are not considered as an area of development to meet the community needs. The mould of development process seemingly does not bring significant benefits to the Malays. Ideally, development work in the area should be able to realize and reflect the image of an Islamic City as propagated by the State Government. It is critical to observe that the government is not able to balance the conservation of the Malay settlements in order to strengthen the resilience of their culture at present. Eventually, the arts and culture industries would encounter similar challenges and destructions due to the pace of urbanization. The demise of the traditional settlement means the destruction of the Malay arts and identity.

CHAPTER 6

SUMMARY OF FINDINGS AND RECOMMENDATIONS

6.1 Introduction

While analyzing the relationship between natural calamity and challenges confronting the Malay settlements on the river fringe, the researchers discovered that the Malays have always struggled to improve their life while also coping with urbanization in their settlements in various ways. Whether intentional or unintentional, urbanization penetrates the Malay settlement area in various ways. After sixty-four years of independence, it is clear that Malay settlements are s gradually vanishing. This destruction led to the loss of place, identity, and carpentry skills as described in Table 5.33 and Table 5.35 (refer to sub-topic 5.6). Although the NEP was implemented as mentioned in sub-topic 2.14.3 and 2.15.1, the effort failed to enable Malay settlements in facing the challenges of urbanization.

This chapter testifies the findings of this study into five subsections; the first section (i) describes the research agenda with a research question. The second section (ii) explains the main findings of the study into three research objectives. Then, (iii) the recommendations of this study for the issue of Malay settlement along the river fringe will be discussed in the third section. After making some recommendations, the fourth chapter (iv) explains the study's contribution to the theoretical and community aspects. The final section (v) proposes a further study on Malay settlement.

6.2 Research Agenda

This study examines and analyzes the current issues in Malay settlements and has proven that Malay settlements experience various threats of disasters and the process of urbanization. The case study in Chapter 4 describes problems faced by Malay settlements in Kota Bharu. As explained in Chapter 1, this study is focused on three main objectives:

Objective 1- To explore the consequences of urbanization and natural calamity on the Malay settlements along the river fringe. Literature Perspective in Chapter 2 contained detailed discussions on the settlement theory, the natural calamity that resulted in the demise of Malay settlements, and the pace of urbanization according to the views of Western and Eastern scholars. Ideas and inspiration have shaped Malay settlements through rivers and geography from human activities. In addition, the settlement has been actively supported by the Malay community's customs and culture. Western studies mention the relationship between Malay customs and culture, which contributes to the development of its local wisdom. The Literature Perspective has found several aspects to achieve this objective. The research questions were addressed by identifying the Five Principles of Human Settlement, which serve as the main topics of the study. The consequences of Malay settlements were successfully identified through the use of research methods such as case studies, informal interviews, direct participants, and observations as described in Chapter 3 (Research Methodology). The findings established a consequences of Malay settlements in facing the challenges of urbanization previously discussed in the 1st and 2nd Principles. It is a combination of two different situations, namely during the existence of the Malay settlements and the current situation.

Objective 2- To examine the pressures of urbanization and natural calamity on Malay settlements destruction. A Literature Perspective on urbanization and natural calamity has

been identified in order to achieve this objective. This second objective was addressed by using various research methods such as case studies, random interviews, and direct participants, observations, visual analysis, including pictorial grids. The results revealed that the urbanization and natural calamity pressures significantly affected the Malay settlements, including various socioeconomic, economic, and cultural aspects affecting the study area. Because of the rapid pace of urbanization, they now have two options either to continue living in the settlement area or to migrate to other areas, as discussed in Chapter 5 (2nd Principle, 3rd Principle, and 4th Principle)

Objective 3- To analyze the impact of urbanization and natural calamity on the settlements destruction on architectural values in the area. The third objective was successfully addressed by employing research methods such as case studies, informal interviews with direct participants, observations, land survey drawings, and photo tracking. Finally, it encapsulated the findings that reveal an agenda driving today's tragedy, as discussed in sub-topic 5.5.3. 5.5.4 and 5.5.5. As a result of the demise of the Malays settlement, the 5th Principle introduced by Doxiadis (1972) became unattainable in Kota Bharu. The destruction of Malay settlements in Kota Bharu (refer to sub-topic 5.5.6) as a result of greed and abuse of power has resulted in a loss of place and cultural attachment propagated by (Rapoport, 1990), as well as the sense of place discussed by Relph (1976) and Schulz (1976). This effect shows that the government has used the process of urbanization, which cannot control, as a reason, tools or weapon in order to generate the economy. In the end, Malay settlements became 'museumification' in their own country. All findings will be described in more detail in sub-topic 6.2, Research Findings.

6.3 Research Findings

The main component of this research is the destruction of Malay settlements along the riverbanks. This section is divided into three parts; however, this does not imply that these findings are separate from one another. Each finding is related to the previous Chapter 5. This finding explains why Malay settlements on the river fringe are being destroyed and threatened today.

6.3.1 Major Findings

The findings are divided into three parts. The first part (i) discusses the consequences of the Malay settlements along the river fringe. The second part (ii) discusses the pressure of urbanization and the destruction of natural disasters. After that, the third part (iii) discusses the impact of settlement destructions on architectural values and the future settlements in the area.

6.3.1.1 Demise Between Ideas, Principle, and Aspiration of the Malay Settlement.

The Malays established the great Malay settlement along the river fringe.

In Chapter 4 (refer to sub-topic 4.4.1), showed that the existence of Malay settlements proves the power of the Malays to shape the ecosystem in which they live. Without relying on other ethnic groups, they developed independent communities with different cultural, economic, and political systems. Malay settlements have strong aspirations through the environment, ideas, and inspiration. They proved successful adaptation to their environment and the formation of a community dedicated to achieving a high standard of living. The greatness of Malay settlements, the rivers, the Malay customs, and culture has been portrayed in a village. They began to hone their talents and translate skills into settlements from the life by the river, as discussed in Chapter 2. The Malay settlement in Kota Bharu was successfully developed without interference by the colonial. In ‘democracy’, the colonial has

confiscated their wealth. Apart from that, the Malay built environment began to be broken through divide and rule, slowly starting by severing the relationship between Malay settlements and rivers.

The destruction of human activities on the river has contributed to the destruction of the Malay identity

Many activities that had a solid relationship with the river were destroyed. As a result of this predicament, the Malays' identity and way of thinking were also destroyed without they realize it. The rivers have been abandoned and no longer serve the Malays' settlement as discussed in sub-topic 4.1.3, 5.1.1, 5.1.5, 5.1.7 and 5.1.9. The Malays had to change their way of life and their way of thinking to adapt to the pace of urbanization due to these developments. Case studies showed that three generations of Malay settlers had to accept the impacts of urbanization and change their lifestyles. They could not compete in Kota Bharu with the Chinese since they had previously experienced urbanization and they had a 'mental image' of the city, as described by Evers (1975).

The migration process caused the Malay settlements to be abandoned and destroyed.

The migration process directly impacts the Malays' settlement. As discussed in Chapter 5 (1st Principle), most of the settlements were leased to outsiders with no family ties with the neighborhood. The Malay settlement was neglected, abandoned, and destroyed due to migration. This process takes a long time due to two main factors. The first is that Malays have had excellent educational opportunities than other races, and they proved their academic excellence, forcing them to migrate to the city in search of employment opportunities (Table 5.33 and Table 5.37). The second is the scarcity of job options for low educational attainment (Table 5.7 and Table 5.8). Eventually, the migration of the original owners destroyed the settlements and influenced the pattern of Malay neighborhoods.

Malay settlements that did not use local craftsman skills.

Rapoport (1981) stated a cultural shift resulting from changes in river activity towards Malay settlements. This change resulted in the destruction of settlements and resulting in the extinction of Malay art of carpentry. Concomitantly, as discussed in sub-topic 5.2.2 and 5.2.3, supported by Table 5.3.5 and Table 5.37, the art of carpentry is derived from boat carpentry, and it is becoming extinct and is not inherited to the next generation. They are directly affected by the advent of construction technology. At the same time, due to the global monopoly of the timber industry, the price of timber building materials is rising. The capitalist economy benefits a group of parties who raise the cost of wood.

Poor infrastructure in Malay settlement.

In Chapter 2, Wahid (2014) reported that any country that has been independent for over 50 years will experience infrastructure failure. Malay settlements in Kota Bharu has a very poor infrastructure system, and the settlement areas could not withstand the flood disaster due to failing to improve the infrastructure system. In order to provide comfort and ensure a high quality of life, the infrastructure must be improved. According to subtopic 2.3: Human Settlement Issues in Local Contexts, several cases involve the destruction of Malay settlements along the river fringe.As discussed in sub-topics 5.5.6, sub-topics 5.2.4, Table 5.13 and Table 5.14, incomplete infrastructure has threatened the destruction of Malay settlements in Kota Bharu. The banks of the Budor River are highly vulnerable to destruction. Unfortunately, even though the floods occur practically every year, the government has taken no serious action.

Settlement is transformed to boost the economy.

Malay settlements used stilt construction techniques to prevent floods due to their proximity to the Budor River, as discussed in sub-topic 2.9.1, 4.4.6, Table 5.13 and Table

5.14. Most of the ground level has been renovated to fulfill the needs of current occupants. Residences are being transformed to accommodate the expanding number of family members due to the increasing number of occupants. The characteristics of Malay settlements can be transformed depending on the present situation and how it is used to increase their income. Despite dealing with floods every year, the ground level became a place for residents to do business and generate side income.

A low -income group inhabits Malay settlements.

These settlements are home to most of the low-income people. Malay settlements became increasingly backward due to changes in river activities, and they were unable to compete with other races in Kota Bharu. Chapter 4 (The Settlement) explained that this area was previously a Malay elite settlement. The change in transportation routes showed that Malay settlements cannot compete with the modern economy because they must conform to other races, as explained in sub-topic 5.4.2 (The Effect of Change and Transformation of Malay Settlements). Due to this disparity, they eventually fall behind in all aspects of their economy and lives. The action to be performed is to get the Malay community involved in river activities again. Unfortunately, no significant efforts were made. Instead, the government developed Kota Bharu using colonial systems and guidelines. Therefore, the Malay settlements had to forget the glory of their settlements and continue to be marginalized in the city.

Organic pathways were destroyed in Malay settlements due to security fences.

The transformation process begins abruptly after they have enjoyed living in an urban area. Residents in Kota Bharu have built fences in residential areas since the number of vehicles has increased. The main purpose is to keep people safe. Fences now surround the

majority of settlements, destroying the Malay settlement pattern. Traditionally, organic pathways are served as the public's main route; however, they have been destroyed.

The Fifth Principle - Successful Human Settlement cannot be achieved.

Most settlements along the riverbanks are constantly changing. The first was because of flood disasters, which forced them to modify settlements periodically, as described in Chapter 4. While the second is due to the needs of the occupants. The population's current needs, such as the addition of family members, have prompted them to renovate their houses (refer to sub-topic 2.5.1.1, 2.5.1.2 and, 5.5.1). They must adapt to the growing number of family members and provide a more comfortable internal space. The population's attempt to adapt to urbanisation has also contributed to the house's transformation. They converted the space into a small-medium business and a parking area. Malay settlements cannot cope with the rapid pace of urbanization, and they remain one step behind because urbanization is not in their favors. Figure 6.1 shows the conclusion for the first objective.

6.3.1.2 Demise of Settlements by the Urbanization and Natural Calamity

The location of the Malay settlement near the city has shaped their thinking.

The area is becoming increasingly vulnerable to urbanization as the economic sector shifts from agriculture to non -agriculture. As the population grew, the city expanded to include Malay settlements. Finally, there are no borders between cities and villages (refer Figure 3.1 and Appendix B). The minds of the people were changed as a result of this situation. Their thinking was also in sync with the desire to enjoy the living in the city. Although the dominance of the urban experience, they cannot venture deep into the city to improve the standard of living. Limited employment opportunities hinder their inability to advance in life. Through education, they were forced to migrate to big cities. Now, they have

an image associated with city life. Still, they were trapped in an urbanization system created by the colonialists in other cities, especially those in favor of the Chinese.



Figure 6.1: The finding on the 1st Objective (Source: Abdullah, 2021)

The contribution of migration to the transformation of Malay settlements.

The migration of the younger generation has improved their parents' economic situation. Their parents in the village keep the money sent from their child in the city monthly. They started repairing their settlements after having the money. Their children also began to provide ideas and insights through internet references. As a result of urbanization, the effects of migration result in changes in settlements. Sometimes, the money is used to purchase furniture and to repair certain spaces, as described in sub-topic 5.1.2, 5.5.1 and, Table 5.2.9).

Floods always threaten the quality of the environment and settlements.

The settlement situation of the Malays was made worse by the floods. The impacted solution required years to recover fully. It will face another flood disaster if the repair process is not completed quickly. The economic strength of the family plays a role in the recovery process. When the Monsoon season arrives, if they cannot repair the settlement quickly, the risk of damage increases. This process was carried out in all Malay settlements. It showed the government's inability to deal with the flood disaster. Malay settlements are viewed as being directly threatened by floods and urbanization. The situation worsens after the population increases every year. Ultimately, these settlements are seen as 'fortresses' in the face of all these pressures. Some can survive, while others are destroyed, as described in sub-topic 5.5 (5th Principle: Successful Human Settlement).

The floods indirectly strengthened the Malay community.

They do not consider the flood disaster to be a disaster. Instead, it has been considered an 'annual event'. Governments who failed to plan for flood disasters cultivated this area effectively. This doctrine has been successful in 'brainwashing' the Malay population for a long time annually (refer to sub-topic 5.7). However, natural events used by the Malay community to relate to local values are regarded as annual events. This includes surveying the Kelantan River water level and dealing with floods. As a result, there are community relations in the Malay settlement areas and the spirit of 'gotong-royong'. Each family formed its duties and functions to ensure the safety of the community through observation of their neighbourhood. This neighbourhood security does not occur in urban areas. Therefore, Malay settlements do not need security guards to maintain the security of settlements. However, this concept has gradually eroded. The effects of urbanization lead to the displacement of relatives and family members. However, it exists because the original

settlement is still inhabited by relatives and large family members. Figure 6.2 shows that the finding for the second objective of the study.

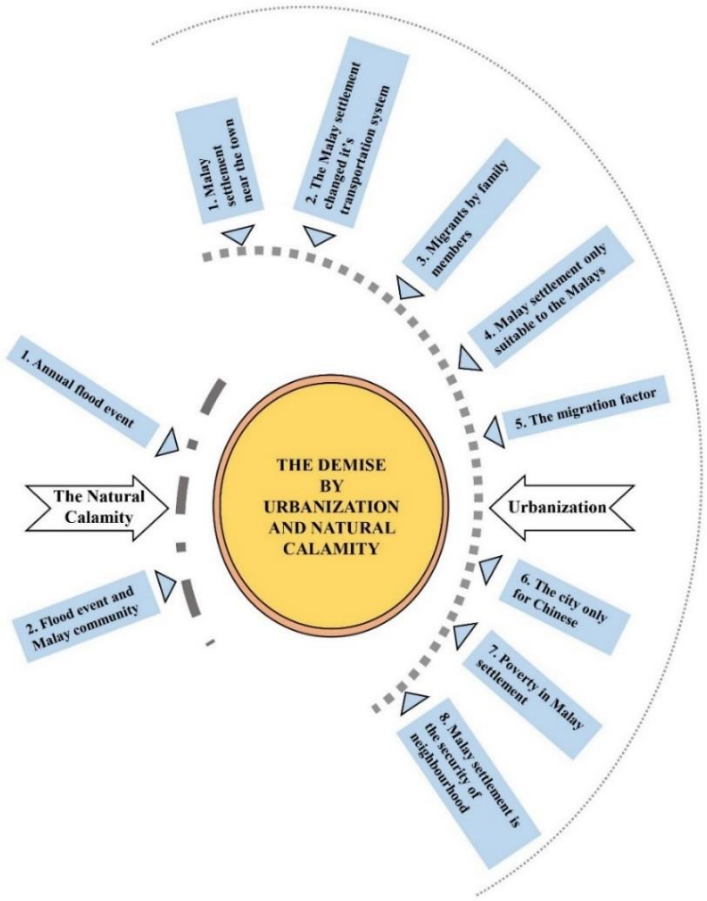


Figure 6.2: The conclusion of 2nd objective (Source: Abdullah, 2021)

6.3.1.3 Demise by the Destruction of the Malay Settlement

Destroying Malay buildings

Natural disasters that destroyed Malay buildings resulted in population displacement, and the Malay community was forced to move and start a new life. It is very difficult for them to consider relocating to a new place close to the city that provides various facilities. As described in Chapter 5 (The 5th Principle: Successful Human Settlement), the threat to the government aggravated this event. Activities and culture were also destroyed due to the

destruction of Malay settlements, and it only affected the physical settlement and caused the Malay settlement to lose its 'spirit of place'.

The destruction of Malay settlements resulted in the loss of traditional arts.

Traditional art forms influence the culture and customs of the Malay population. The gradual destruction of Malay settlements affected Malay arts and cultural activities. The communities that perform this work have migrated due to rapid urbanization. Because the settlements have produced talents, who have elevated traditional Malay artisans, the destruction of Malay settlements will also result in the loss of Malay identity and community. As a result in Table 5.35 and Table 5.37, locals find it difficult to learn these skills, prompting them to migrate to other cities to search for works.

The loss of Malay culture

Malay culture is disappearing as a result of urbanization. The thinking of the Malays has changed due to the urbanization process in Malay towns. After that, it has a huge impact on the destruction of culture. The Malays have been influenced by technology as a result of urbanization. However, technology cannot increase cultural activities and the Malay income level. Supposedly, with the development of technology, the standard of living of the Malay community can be improved, and the sale of local products can help improve the local economy. Now, the settlement area that has been destroyed will to some extent, eliminate the identity of the Malay community in Kota Bharu. For Malays in Kota Bharu, the destruction of a settlement means the loss of a 'living museum' as described in Chapter 5.

There is no planning to preserve Malay settlements.

The glory of a Malay settlement, as is its destruction, is closely linked to the government. Not only floods and urbanization damaged Malay settlements. It also occurred due to the inability of the government to preserve Malay settlements, as discussed in sub-topic 5.5.4,

5.6, 5.5.5, 5.5.6 and, Table 5.35. Researchers found that the issue of conservation of Malay settlements did not provide economic development benefits to governance. Meanwhile, conservation in Malaysia is focused on architectural aspect rather than the community conservation. Kota Bharu Municipal Council (Majlis Perbandaran Kota Bharu Bandaraya Islam), the Local Authority, does not have a specific agency to implement the building and community conservation process. One-Stop Center 3.0 is used exclusively by most Local Authorities for new development applications. The new development is considered more important because of its contribution to the state's economic growth.

It can determine the causes of the loss Malay's identity in Malaysia, which is constantly threatened by disasters and the effects of urbanization. The study could help the National Heritage Department in formulating planning to conserve Malay settlements along the river banks. The concept of conservation of the Malay community should be the priority of the government in order to maintain Malay culture.

Creating a new class of society between Malays and Chinese.

After the Paloh Garden Apartments were occupied, a new social class formed between Malays and Chinese. The project will increase the Chinese population in the study area. The Chinese settlements will eventually be considered the elite in the settlement areas. Researchers found that future Malay settlements would have a significant community gap. The settlement of Chinese in the future will increase in the study area. Because of their geopolitical strategy, this settlement area will eventually become a Chinese settlement with careful planning (refer to Table 5.32, Figure 5.29 and Figure 5.30**).**

Destruction of Malay settlements by the government.

Initially, the Malays were able to adapt to the floods. Then, they can adapt to the rate of urbanization as it happens. Apart from the floods, the government's refusal to plan for the future of Malay settlements is the most severe problem. They did not take any significant action to address the Malay settlement issue. The government used the Malay settlement as a tool to advance their political careers. The government is responsible for most of the destruction in the case study area, as described in Chapter 5 (The 5th Principle). They are unconcerned and have no intention to restore the glory of the Malay settlement. They only consider urbanization to achieve development that does not benefit the Malays. This destruction proves the government's oppression and greed. (refer to the subtopics 5.5: 5th Principle: Successful Human Settlement, subtopics 5.5.2: The Floodwall and Urbanization, subtopics 5.5.3: The Flood Wall and the Evolution of the Settlement Patterns, subtopics 5.5.4: The First Agenda in Kampung Masjid Settlements in 2013, subtopics 5.5.5: The Second Agenda in Jalan Atas Paloh Settlements in 2013, subtopics 5.5.6: The Demise of the Malay Settlement in 2020, subtopics 5.6: Urbanization and Destruction of Malay Culture). The government's agenda is to develop the state's economy, not develop Malay settlements. It has a significant impact on the survival of the Malays in the city.

The Chinese occupied the destroyed Malay settlements.

The destruction of Malay settlements suffered several drawbacks due to this predicament. This happens as a result of two factors. The first is the destruction of their settlements. Governments, especially politicians, can either maintain or destroy a settlement with their authority. Unfortunately, the government has been targeted most of Malay settlements. This fact showed that the destruction had no beneficial consequences for the Malays. The second point is that the Chinese eventually developed their land. This situation

occurred in the case study area. As discussed in (refer to sub-topic 5.5.6), their patience and wait-and-see approach eventually developed in this area. Many Chinese companies monopolized development along the Kelantan River to expand the area in the future. For researchers, this phenomenon is considered a weakness in helping improve the quality of Malay settlements.

The Flood Wall and the agenda of eliminating Malay settlements.

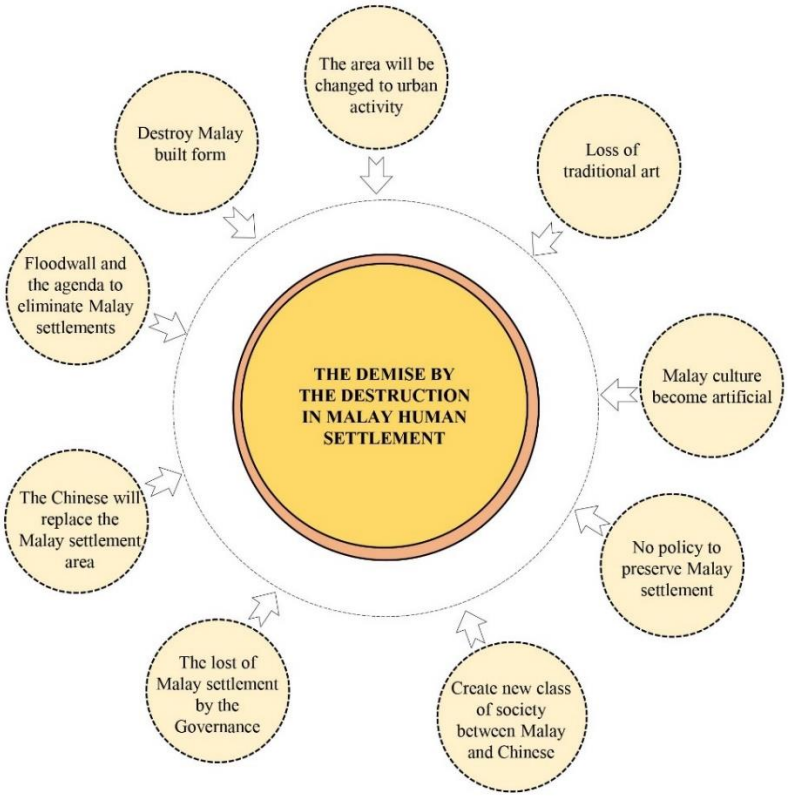


Figure 6.3: The finding of 3rd objective (Source: Abdullah, 2021)

The construction of a flood wall project can solve the flooding issues in the study area. However, the main point of the construction of this project is to eliminate the settlement of Malays. It took a long time for the Malays to experience this incident. The project will run for twelve years, from 2010 to 2021. It took a long time to complete this grand agenda.

As a result, they were forced to leave the settlement. However, the resilience of Malay culture is highly dependent on the wisdom of the government in facing rapid urbanization. This process resulted in poverty, destruction of settlements, economic gaps, and employment opportunities and even eroded the viscosity of Malay culture in the digital era of the Industrial Revolution 4.0. Figure 6.3 shows the conclusion of the third objective.

6.4 Research Contributions

There were four major research contributions in the field of Malay settlement along the river fringe:

i. Malay Settlement Theory

The theory of this study contributes to the settlement of Malays on the banks of the river at Kota Bharu. It combines theoretical findings from previous research on Malay settlement and urbanization. Meanwhile, examining the review of the literature revealed a scarcity of hypotheses on Malay settlement and urbanization. Previous literature reviews discovered most theories about architecture include elements of traditional architecture, conservation, carpentry, and sculpture, as described in Chapter 1. It discusses many elements specific to the context of the building. In addition, while many studies on traditional architecture have been conducted in Kota Bharu and Kelantan, none have been conducted on the aspects of Malay settlement and urbanization destruction. Although the theory of urbanization explores the effects of urbanization on Malays, it ignores the topic of Malay settlements located along the rivers. Therefore, this study contributes to the proliferation of knowledge about Malay settlements and urbanization by focusing on the destruction of Malay settlements along the river fringe in Kota Bharu, Kelantan.

ii. Research Methodology in Architecture

The purpose of this study is to examine Social Research in Architecture. In addition, it also uses research methods to develop anthropological architectural studies. In Malaysia, there is still a scarcity of research on this methodology, especially in architecture. Architects and urban designers have yet to explore research methods based on place-based concepts and current issues in Malaysia. The contribution of this research to the discipline of architecture is very significant because various disasters and destructions constantly threaten the settlement of the Malays. This research also leads to establishing a higher standard for Malays in the settlement.

iii. Malay Community

This study contributes to the Malay community and as reference material for Headman in the case study area. They will keep the data as a record for future reference in their Malay settlement area. In addition, it also refers to a specific agency that will propose recommendations for future Malay settlement development. Long-term planning is essential to preserving the Malay population and preventing changes in activity and culture, urban migration, and promoting economic growth.

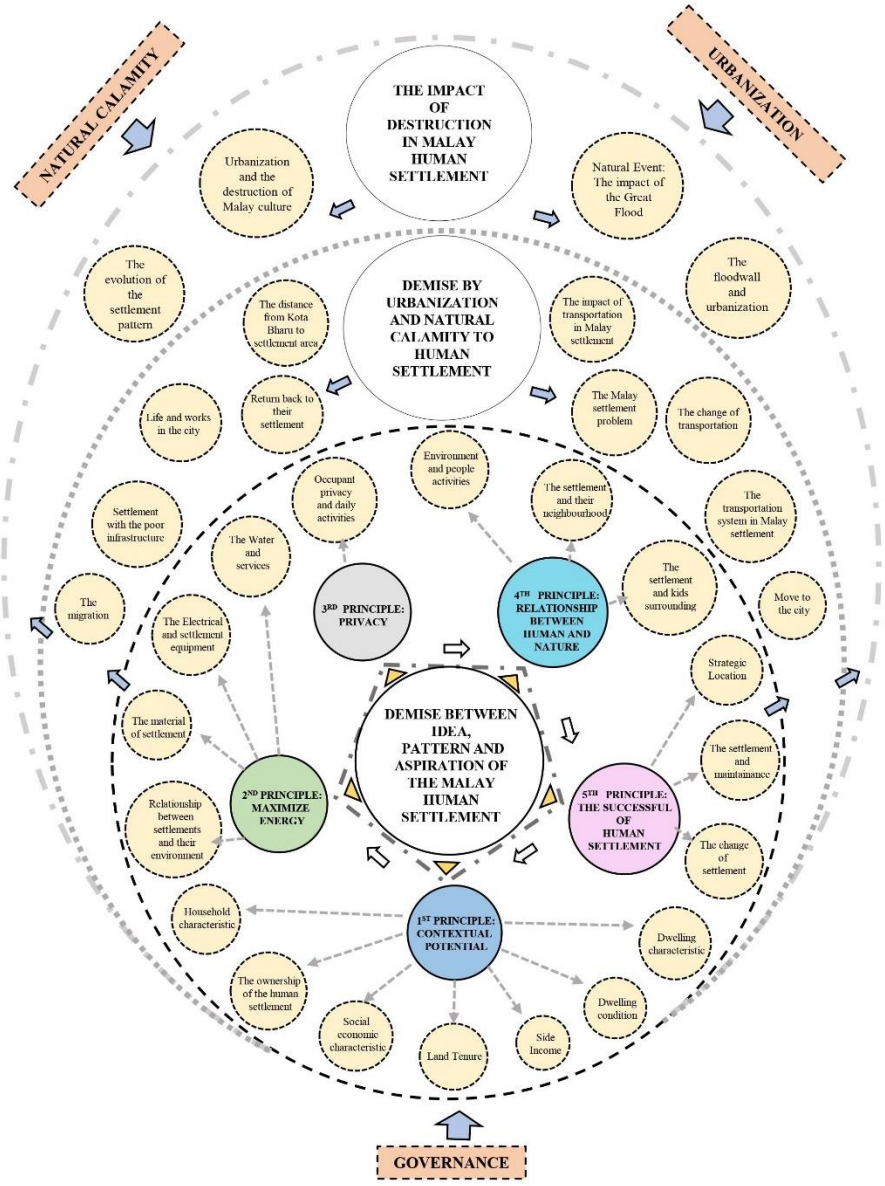


Figure 6.4: Research contribution to the Malay settlement theory

(Source: Abdullah, 2021)

6.5 Recommendations

Several recommendations have been offered to improve the quality of Malay settlements. It is divided into four main sub-topics; each corresponds to the objectives and the findings of the study. The first sub-topic discussed strategies in neighbourhood and settlement, whereas the second sub-topic discussed economy and opportunity. The third sub-topic discussed cultural and character-related aspects strategies. Finally, the effective government was discussed in the fourth sub-topic.

6.5.1 Neighbourhood and Settlement

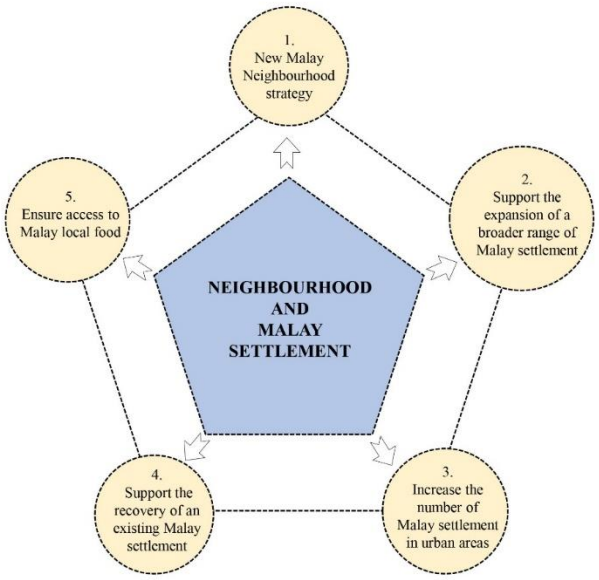


Figure 6.5: The neighbourhood and settlement strategy (Source: Abdullah, 2021)

Aim: The Malay settlement will be a safe and complete neighbourhood with facilities to meet the needs of all residents (Figure 6.5). This finding was obtained by analyzing the Five Principles of Human Settlement (refer to the subtopic 5.1, Principle 1: Contextual Potential/ subtopic 5.2: 2nd Principle: Minimization of the Energy/ subtopic 5.3: 3rd Principle: Privacy and, Appendix H).

Strategy 1- Create a Malay Neighbourhood strategy with better public transport for daily life. This finding was obtained by analyzing the Five Principles of Human Settlement (refer to the subtopic 5.1, Principle 1: Contextual Potential/ subtopic 5.2: 2nd Principle: Minimization of the Energy/ subtopic 5.3: 3rd Principle: Privacy and, Appendix H).

Action:

a. Plan and establish mixed neighbourhood centre facilities in the neighbourhood, including Malay shops, services, jobs, and housing, as outlined in the Local Plan.

b. Ensure appropriate transit, space negotiation areas, and covered walkways in the existing and future neighbourhoods.

The Malay neighbourhood must provide the people's daily necessities without relying entirely on vehicles. Malay neighbourhoods should have a variety of agricultural and non-agricultural land uses, including public buildings, grocery stores, workplaces, residential types, and open spaces to increase household size. Existing Malay settlements close to the city of Kota Bharu should be developed.

Pedestrians and bicyclists should be able to connect through Malay neighbourhoods, public transport, and covered walkways. Pedestrian walkways should be added to existing communities and connected by roads.

Strategy 2- Increase Malay settlements in urban areas.

Action:

a. Increase the plot ratio, number of units and building size, and the appropriate height level in accordance with Local Authority laws and regulations to increase the permissible density for Malay settlements. The appearance and size of buildings influence human to interact with the urban environment. The height, shape, entrances, and distances between buildings of various scales often determine how well a new settlement fit into its

environment. Malay settlements can be improved in urban areas by reviewing the plot ratio in the planning. Residential units with three- to five-bedroom must be prioritised for Malay families.

b. Proactively approach market development opportunities with the cooperation of Malay -owned development company partners.

Residential units with higher densities can help developers and save cost on public infrastructure. The city will continue to grow to accommodate new settlements. Most residents in this area preferred to live in terraced houses during the questionnaire when given the choice (sub-topic 5.5.6). The Malay community conservation in Kota Bharu will be aided by redevelopment and the establishment of settlements that provide jobs opportunities for Malays. The city can contribute to housing availability by identifying targeted locations for development, redevelopment, or housing, assisting land acquisition processes, land banking, providing incentives, and working with Malay private organizations to achieve development goals. Create an entity to identify Malay developers and consultants who specialize in community development and conservation.

Strategy 3- Support Malay home buyers and the low-income group.

Action:

a. Improve building inspection and enforcement with rental housing programs in the Kota Bharu area. Malay private sector investors act as investors to help provide funding to maintain damaged homes according to certain codes. This is an important issue for the conservation of Malay settlements. For example, residents of rental homes are often hesitant to report bad conditions for fear of their landlords filing building codes violations. Malay settlements should have a building code to foster a safe environment in the community. The code requires buildings to comply with basic construction standards for safe construction,

property preservation, and better living conditions. Inspections need to be carried out regularly to ensure that the Malay community is clean and safe.

Collaborate with organizations such as Kota Bharu Municipal Council (MPKB), Tenaga Nasional Berhad (TNB), Air Kelantan Sendiri Berhad (AKSB), Perbadanan Muzium Kelantan, and others to provide incentives for the rehabilitation, maintenance, and improvement of accessibility, and sustainability of Malay settlements. Regulatory and technical advancements in the building industry have changed how residential construction can be done for energy saving, environmental health, and other issues. While this can be an upfront cost, owners and residents will reap the benefits in the long term.

b. Conduct a review of first-time homeowner programs, low-tax additional financing, and similar rehabilitation and ownership programs.

The study area involved a Malay settlement that has been treated unfairly and inappropriately for over 50 years. The current settlement will continue to decline without investment in maintenance. Reinvestment and the construction of new settlements must provide a variety housing options for people of all ages, income levels, abilities, and contribute to the development of a safe and healthy settlement area. Collaboration between Fire Department and other agencies ensures the building housing safety. Efforts to collect data to identify opportunities for the Malays to keep their ability. Historic conservation can help to improve the quality of settlements in the study area by encouraging the rehabilitation, maintenance, and adaptive reuse of high-quality old buildings with the assistance of the Kelantan Tourism Department. However, historical preservation applies to only a small fraction of settlements. Special area plans guide the process of conservation, preservation, and restoration in a Malay neighbourhood, even in the absence of a conservation area or

historic area. Finally, conservation and recovery will help achieve the sustainability of Malay settlements.

Strategy 4- Ensure access to affordable, nutritious, and Malay local food.

Action:

a. Locate appropriate public and private spaces for communal gardens.

Make a community park out of the open space around the neighbourhood. The area has the potential to grow into a neighbourhood centre, complete with food production space, parks, recreational areas, food sales or distribution spaces, and connectivity to roads or public transportation. It is necessary to identify locations for more community parks in the city to plan for future Malay settlements.

b. Create farmers' markets for Malay entrepreneurs to increase access to fresh food.

Having access to healthy food is a fundamental strategy for living according to Malay Neighbourhood Comprehensive Plan. Several low-income residents in the study area had difficulty purchasing affordable, nutritious food during the floods. Food must be both healthful and affordable so that low-income people can buy them regularly. This food must be nutrient-dense, implying it should be included in a healthy, well-balanced diet. Finally, culturally local foods must exist, reflecting the cultural norms of those who consume them.

Additional farmers' markets and Malay markets should be prioritised. Expanding this business to further locations in Kota Bharu will reach a significant number of people, most of whom do not have regular access to healthy food. Food stalls are recommended as a business style because small start-up food businesses can cater to neighbours' food and nutrition needs.

c. Encourage initiatives that support high-quality food to the emergency food system, especially during flood disasters.

A The low-income Malay population will benefit from a study to create innovative food sources. The government should encourage alternative food distribution methods such as food pantries and food banks, emphasising the disaster-prone Malay population.

6.5.2 Economy and Opportunity

Aim: The Malay economy will flourish and offers numerous business opportunities (Figure 6.6).

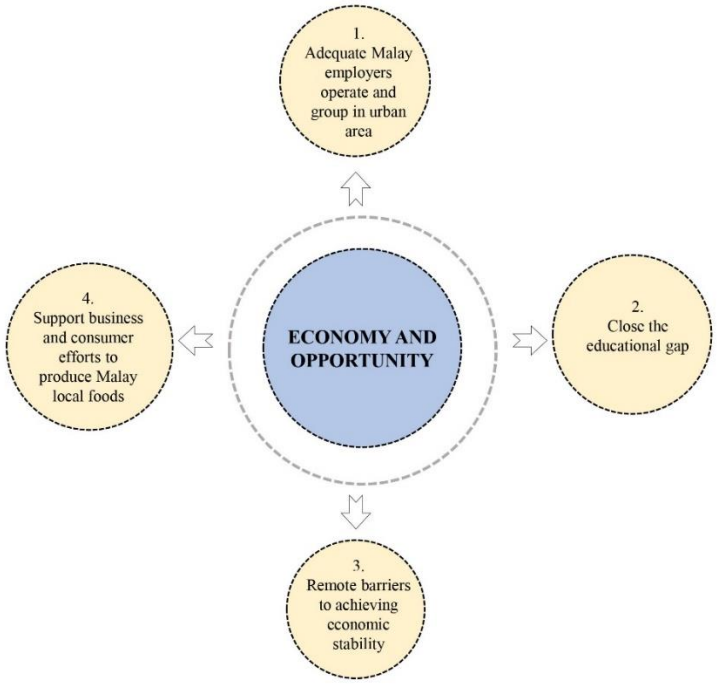


Figure 6.6: Economy and opportunity strategy (Source: Abdullah, 2021)

Strategy 1-Increasing the Amount of Malay Traders in Urban Areas.

Action:

a. Business opportunities for Malay people in the city.

b. Business incentives in specific geographical areas.

c. Facilitate Malay businesses in the development of brownfield sites.

Providing adequate business sites for Malay traders in the city is one of the government's most critical roles in the development of the Malay economy. Business opportunities will benefit the Malay community in addition to providing employment and preventing migration. The establishment of Small and Medium Enterprise sites can help in the maintenance of commercial areas and Malay settlements in the city, ensuring the business areas are easily accessible to Malay settlements and have good facilities.

Strategy 2- Reserve Sites for the Malays

Action:

Comfortable areas for Malay settlements to do business and work should be provided. In addition, the government should consider future changes to settlement areas that would affect the development.

i. Layer tools and incentives

These settlements must have various incentives to facilitate development. Identifying strategic geographical areas and prioritising incentives in these Malay areas should be a priority for urban governance. There needs to be a strong strategy to encourage the Malays to work in their settlements. The river area needs to be developed to foster business opportunities, create employment opportunities and attract tourist.

ii. Brownfields

Brownfields are properties that have been abandoned or unused for a long time due to pollution, making redevelopment difficult. Malay commercial and industrial areas are potential areas on the banks of the river, including Malay settlements. This area can be developed to provide allow the Malays to start their SME businesses, visit tourist attractions, and job creation. In addition, it can serve as a barrier to the city.

Strategy 3- Close the educational gap.

Action:

a. Increase in the availability of high-speed internet service to the Malay settlement area.

i. Internet Service

The importance of education and technology becoming more intertwined in addressing the digital gap is growing. Online teaching and learning are becoming more common in education. Parent and guardian engagement with schools and educators is a critical in supporting Malay students' achievement as they transition to the online environment. The government should continue to expand access to high-speed internet (4G and 5G) services in these areas. External funding, corporate partnerships, and the potential of becoming a public internet service are all on the table. In addition, public libraries with Internet access should be established in the Malay village.

Strategy 4- Remove barriers to achieving economic stability.

Action:

a. Continue support for the Malay neighbourhoods.

When faced with the unexpected financial challenges of natural disasters, many urban Malay settlements will be destroyed if they do not have a support system. Some families cannot achieve economic stability and prosperity due to challenges in providing food and shelter. Finding a job to support a family might be challenging as well. Work schedules can change daily routines such as raising children, commuting to work, or preparing meals. Therefore, the Malays in this area must develop a holistic approach to support the people in overcoming these issues. This includes childcare opportunities and job training.

b. Coordination of job training and Malay settlement programme in collaboration with partners.

Neighbourhood centres can help individuals overcome barriers to economic opportunity by providing spaces for residents where they can learn and interact with many resources, such as accessing food classes, workshops, or actual job training.

Strategy 5- Support business and consumer efforts to produce and purchase Malay local food, products, and services.

Action:

a. Fostering Malay food innovation locally.

b. Maintain the Kubang Pasu Market program.

c. Expand the Malay Night Market program.

Increased Malay food production can help reduce dependence on other food sources, it also benefits Malay entrepreneurs, suppliers, distributors, and retailers. In addition, unemployed residents may benefit from the improvement of the food sector. Many jobs in the food industry do not require higher education, but some do offer opportunities for employment.

6.5.3 Malay Districts for Food Productions and Innovation

The area is well-positioned to develop a strong local food infrastructure. The government should look for opportunities to collaborate and provide incentives to make it easier for Malays to develop food products. The existing Kubang Pasu market must be transformed into a food innovation market. Collaborate with a group of local food-related businesses to share Malay ideas, talent, vendors, and infrastructure. Other areas will establish their innovation markets and work with growers, processors, and buyers to develop food banks for Malay settlements in Kota Bharu with government assistance.

6.5.4 Malay Culture and Character

Aim: To be a resilient and creative Malay settlement that values and builds its cultural and historical assets (Figure 6.7).

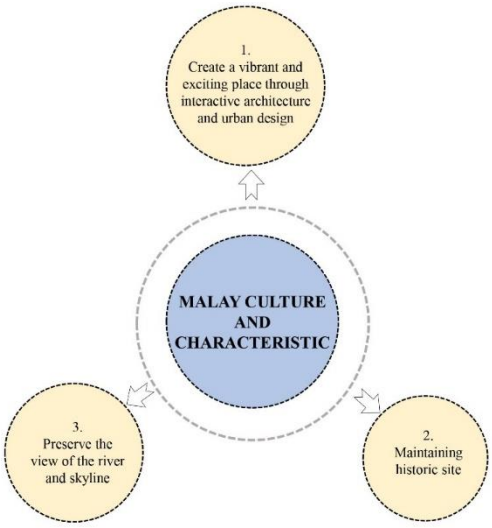


Figure 6.7: Malay culture and characteristic strategy (Source: Abdullah, 2021)

Strategy 1- Create a vibrant and exciting place through innovative architecture and urban design.

Action:

a. Prioritize settlements based on who will use the city's public spaces.

Malay settlements are diverse; some are formal, while others are informal. These places are highly influenced by their design, reflecting the ideals of each settlement. A place can evoke a sense of belonging or a sense of isolation and empathy, depending on the success of its design. The area is a dynamic settlement that offers necessities for everyone. The diversity and combination of its land uses offers a wide range of living, shopping, working, and playing by providing the foundation for this diversity. As this settlement grows, a high settlement atmosphere will require a diverse range of lively and interesting places. Malay

Placemaking is a community-based approach to public areas planning. It is a process in which users consider the space's design, how it is used, and how it might be used in the future. This approach has the potential to result in more functional areas with a sense of belonging by the Malay community.

b. Emphasize high-quality human-scale design in new buildings and public spaces.

Human-scale design means an understanding of the scale, shape, rhythm, texture, materials, details, and other aspects of buildings and public spaces that contribute to their comfort, approachability, and usability by all. A settlement group designed to experience it from the outside can help a neighbourhood or district attract residents, visitors, customers, and employees. Every redevelopment must consider the existing context, and designers must consider how the new building will fit into the current environment when developing a new building concept. The Malay context is critical in established neighbourhoods where redevelopment or improvement occurs adjacent to historic buildings or architecture. Various development plans and drafts in the Malay villages should be evaluated and updated to ensure that they remain to produce an attractive building, high quality, and resilient structure effectively.

Strategy 2- Maintaining historic sites and uniquely illustrating the Malays settlement, culture, and history.

Action:

a. Implement the Malay neighbourhood conservation program as a future conservation program.
b. Identify strategies for maintaining the historic place that contributes to the area's character or is associated with the Malay culture.

Malay settlements have their own history and culture, it is important to preserve the residents', visitors', and future generations' experiences in places contributing to that history. Historically, architectural conservation efforts have focused on buildings with unique architectural features. However, the historical and cultural value of Kota Bharu is fading as the community grows and its population diversifies. One of the biggest challenges for Kota Bharu in cultural conservation is striking a balance between conservation and new development. Malay settlements must be balanced to encourage the development of quality protection that enhances the attractiveness of the existing environment. The preservation of these communities' historic resources and cultural centres can result in significant economic growth. Sustainable heritage tourism is a fast-growing economic sector in many cities, as visitors spend more money on travel and experiences, making many trips to immerse themselves in the city's various history and cultures. Heritage tourists often stay longer and spend more money than other tourists. This event represents an unattainable prospect for the Malay settlement and community.

Strategy 3- Preserve the view of the river, the skyline of the city centre, and Kota Bharu that determine from a location accessible to the public.

Action:

a. Adhere to the Maximum Building Height

A study of the scenery in the city centre was conducted during the city's expansion. As a result, the main views of the river and other sights in Kota Bharu were identified, and a strategy to preserve the most important views was recommended. Numerous measures, such as maximum building heights and building setbacks for new development, are then incorporated into the Zoning Code.

b. Conduct a study of the river, the city centre skyline, and Kota Bharu from within and outside the city's boundaries, and implement zoning restrictions to maintain this view.

There are numerous important views of the river and skyline outside the downtown area. It is a long iconic view best seen from Kota Bharu from various vantage points along the river. While some of the views are stunning, such as the river's relationship with nature and Malay settlement, they are important, and they are unlikely to recover once they are gone.

6.5.5 Effective Government

Aim: The Malay settlement will have the facilities and public services needed to operate efficiently and reliably with the support from all residents (Figure 6.8)



Figure 6.8: Effective Government strategy (Source: Abdullah, 2021)

Strategy 1- Working on the solution for the Malay community.

Action:

a. Collaborate with communities in Malay neighbourhoods to improve the river quality and infrastructure.

While intergovernmental cooperation is important for solving many problems, having too many government agencies can complicate cooperation and lead to bureaucracy.

Transportation, water quality, and urban growth are all issues that are best addressed at the provincial level. The government should conduct a field study and take more effective action. The Malay settlement must collaborate with other agencies to address the problem of urbanization and flooding. The main partners in addressing clean water quality and urban growth are the Jabatan Pengairan dan Saliran (JOS), Air Kelantan Sendirian Berhad (AKSB) Mahlis Pembandaran Kota Bharu (MPKB), the Perbadanan Menteri Besar Kelantan (PMBK). These settlements should keep collaborating with the government on critical issues such as clean water quality and agricultural land loss. They must collaborate to address various problems, including affordable housing, social services, clean air, green space, and the issue of Malays' economic development. Housing, transportation, and access to safe drinking water can all be addressed with the government. It could serve as a pilot project for Malay neighbourhood conservation project with the majority Malay population.

Strategy 2- Ensure transparency and accountability in governance.

Action:

a. Provide information on Malay settlement and community development operations and initiatives from various sources.
b. Consult with the Malay population before making decisions about Malay neighbourhoods and settlements.
c. Allow Malays to participate in planning and decision-making.
d. Remove all forms of bureaucracy from the Malay development governance system.
e. More transperancy and trust in carrying out responsibilities are required.

A transparent and accountable government is important to instil trust in the Malay community and successfully implement programs and policies that improve people's lives. Malay residents should be allowed to give opinions and make suggestions for community

development in their area. The government must have clear ideas and strategies to develop Malay settlements so that the incident that happened in Atas Paloh Village and Malay settlements in Malaysia does not recur. In addition, disseminating information and communicating with Malays must be improved to build trust and cooperation between the government and the people.

The case of Atas Paloh Village is one of the examples of what has happened to Malay settlements in Malaysia. This will continue to recur unless the government provides adequate support and strategy, as happened in Kuala Kangsar, Kuala Terengganu, Penang, Kuala Lumpur, and Johor Bharu.

6.6 Further Research Area

The research findings explained the disappearance of Malay settlements along the river fringe. The findings discussed various issues concerning the impact of natural disasters and urbanization on Malay settlements. However, this study does not cover all aspects of Malay settlement and urbanization. It is hoped that this study could be extended more widely to include the following recommendations:

i. This case study focused on Malay settlements along the river fringe in Kota Bharu. The study area was selected based on several factors such as location, history, human settlement relationship with the river itself, urbanization impact, flood disaster impact, and current issues encountered during the study (Refer to Chapter 4). Further studies can be carried out in areas with Malay riverside settlements, such as Kuala Terengganu, Kuantan, Kuching, Penang, and several cities in Malaysia threatened by the destruction of the Malays settlement. While the research methods remained unchanged, the study area should be adapted to reflect the local cultural context. Since this study is not generalized to other areas in Malaysia, it can only assess the

threat to Malay settlement. At the same time, the purpose and goal of the study remained the same; to focus on conserving the Malay neighbourhood community along the river fringe.

ii. Future studies will be directly focused on policy development for the Malay settlement, especially in the Malay neighbourhood conservation. This further research is critical because most conservation projects in Malaysia focus on the physical aspects of the building rather than the Malay community. Therefore, it is vital to prevent people migration, provide jobs, and maintain community activities.

iii. Further research on the Malay settlement's preparation for future global issues. For example, food security and smart agriculture in the Malay community in the city. These types of studies are important for preparing the community for potential threats and disasters in future. At the same time, it should incorporate the concept of Malay neighbourhood in the peri-urban and urban areas.

6.7 Conclusion

This chapter focuses on the findings, particularly the plight of Malay settlements on the river fringe, facing many threats and pressures. Since independence, the Malays and their settlements have been constantly under pressure. Malay settlements in the current era of Industrial Revolution 4.0 are violently suppressed by urbanisation and the frequent occurrence of natural disasters. The fate of the Malays is closely related to their settlement and land use planning.

Kota Bharu has undergone many changes in the past 200 years, between 1820 and 2021 (Figure 4.7, sub-topic 4.3.2). The urbanisation pace started from the river banks and spread to the central part of the city. Therefore, the study on Malay settlements significantly impacts the centre of knowledge since it started from the river fringe, not from the city centre. The

compactness of Atas Paloh Vilage and the surrounding area is proof that the sprawl started from the river bank to the city. Then, Malay settlements adapted and mixed with the Chinese arrivals. Most Chinese settlements are concentrated in urban areas due to the help of colonials who wanted to monopolise wealth in Kota Bharu. However, the spread from the river banks has stopped after the introduction of road connections. When this process ceased, urbanisation from the city had spread to Malay settlement areas rapidly because of the opportunities available in the city, as analysed in Chapter 5. Malay settlements eventually came under pressure from the city, in addition to flood disasters every year.

From boat-building techniques to house-building, Malay settlements began to create lives and hone skills by taking inspiration from the river. Most of the primary materials used wood, making their carpentry skills very high. Then, the built environment of the Malay community grew independently of the British. The Malay community strongly inculcated ties between religion and culture in their lives. Roads began to be built after the arrival of the British. Consequently, the Malays lose their aspirations for the river, forcing them to change their lifestyle according to the wishes of the colonists. Unbeknownst to them, these changes affected their identity and economy. Studies found that the separation from the river forced them to start a new life. Among the effects are:

i. Losing boat-making skills.
ii. Losing timber house-building skills.
iii. Rivers are no longer the primary transportation system.
iv. Agricultural land is decreasing due to development and causing agricultural activities to decrease.
v. The river is no longer a platform for lifting arts and cultural activities.
vi. Losing employment and economic opportunities for the Malays.

It was evident that at this time, the Malays had to compete with the Chinese, who had the experience of living in the city. With the help of the colonialists, the Chinese lived a comfortable life compared to the Malays.

The study found that the Malays began to become poor. Due to colonial planning and the lack of efforts to revive river activities, the skills they previously possessed were no longer of benefit. Eventually, they had to work in the city, and their way of life also changed. Poverty ultimately harms their settlements, especially in internal space and external outlook. After a long process, their settlement eventually suffered damage. The researchers discovered that they could not maintain their houses with the savings they had earned from working. Due to the building materials made from timber and the loss of skilled craftsmen, they had to repair the damage at the most minimal cost. Eventually, their settlements became worse, and some converted them to raising animals as a side income (refer to sub-topic 5.1.7). In addition, the poor infrastructure system has also given a negative image of Malay settlements.

Therefore, the researcher found that poverty also contributes to the destruction of Malay settlements. Currently, they are no longer thinking about comfort; but more about meeting the necessities of life alone. The results show that most houses were built from wood and were vulnerable to destruction despite having high architectural value. Surrounded by a dirty environment and the density of settlements in Kota Bharu, the private space in the house is also experiencing a similar situation, which affects the emotions and mental state of the occupants. Most windows were closed during the day for privacy reasons since they were too close to their neighbours' houses. However, the community in Kota Bharu still cares

about the neighbourhood. Although the neighbourhood aspect is getting looser, this settlement area is still inhabited by relatives with a safe environment.

The annual flood disaster forced the government to build a floodwall to prevent more destruction of settlements in Kota Bharu. It is a quality effort by the government but has an unexpected agenda. Most Malay settlements have been demolished to make way for other projects in the area. The floodwall planning in 2010 finally gave a nightmare to the residents here. This government planning took place in several phases, as described in Chapter 5: The 5th Principle. Researchers found that the principle was unachievable since this settlement is located strategically in Kota Bharu. Despite having a high aesthetic value in the context of architecture, this settlement faces challenges from the government.

Urbanisation is a global phenomenon that requires special attention from the government. The erosion of the cultural strength and identity of the Malays caused by urbanisation is unplanned. The government is primarily responsible for the survival of Malays in Malaysia. Their settlement should have various facilities and a suitable ecosystem to ensure their survival. The government needs to provide good infrastructure, employment opportunities, and a safe community environment. In addition, the river needs revitalisation to develop the economy of the Malay community as a tourism asset that can provide employment opportunities. Malay settlements should be colonies that benefit the local community. Starting from the preservation of settlements and the Malay community according to their wishes, it maintains their identity (Figure 6.9). Unfortunately, the government does not focus on the conservation aspect of the Malay community as a platform to create economic and job opportunities for a better quality of life for the Malay community.

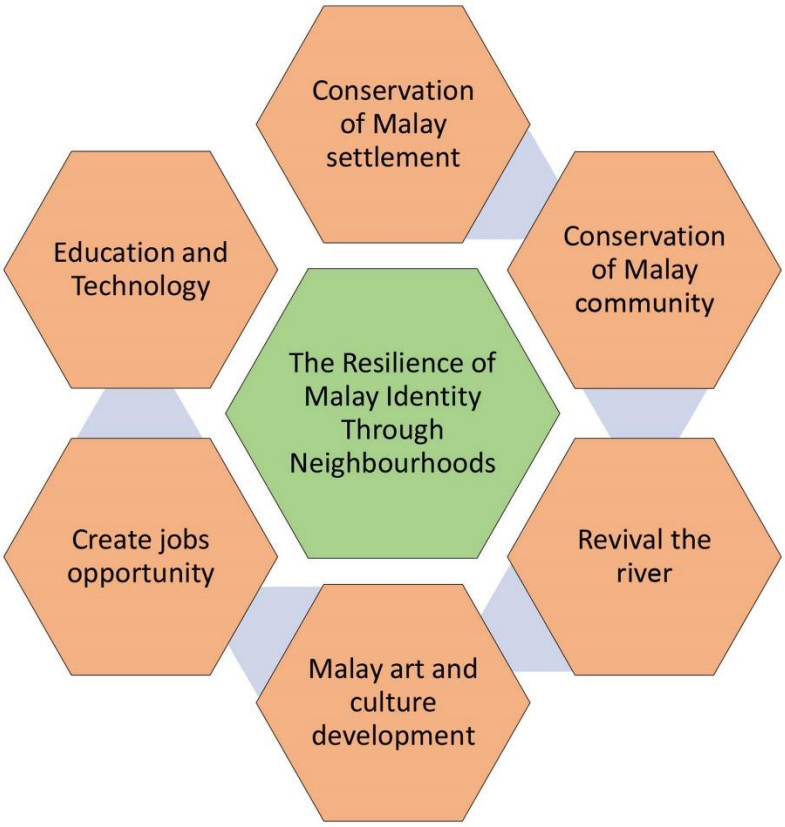


Figure 6.9: The Malay Resilience (Source: Abdullah, 2022)

The results found that Malay settlements cannot cope with the rapid urbanisation pace. The researcher was able to summarise the objectives of the study as follows (Figure 6.10, Figure 6.11 and Figure 6.12):

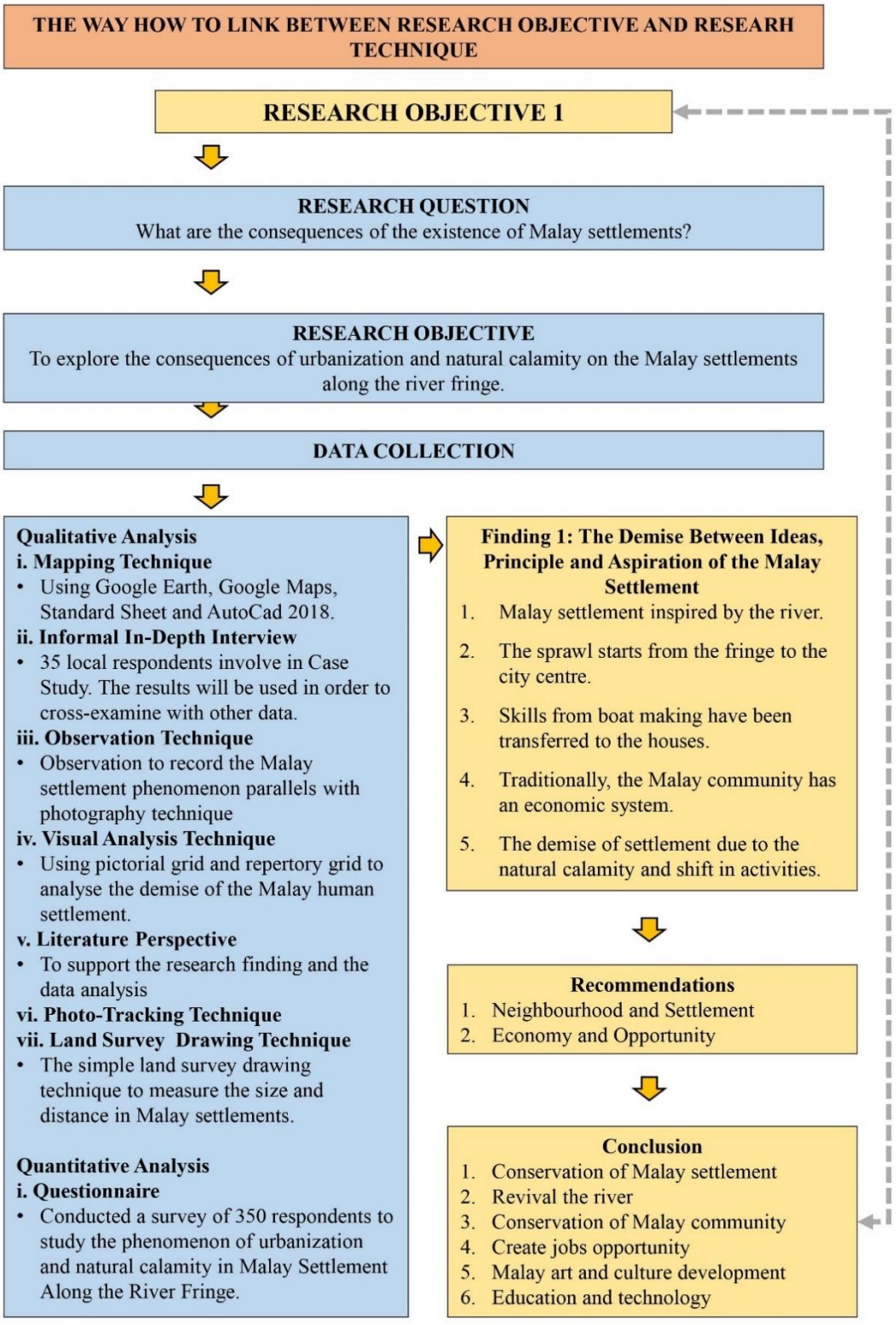


Figure 6.10: The conclusion of the Research Objective 1. The figure shows how Research Objective 1 is answered through the results of the study, findings and conclusions

(Source: Abdullah, 2022)

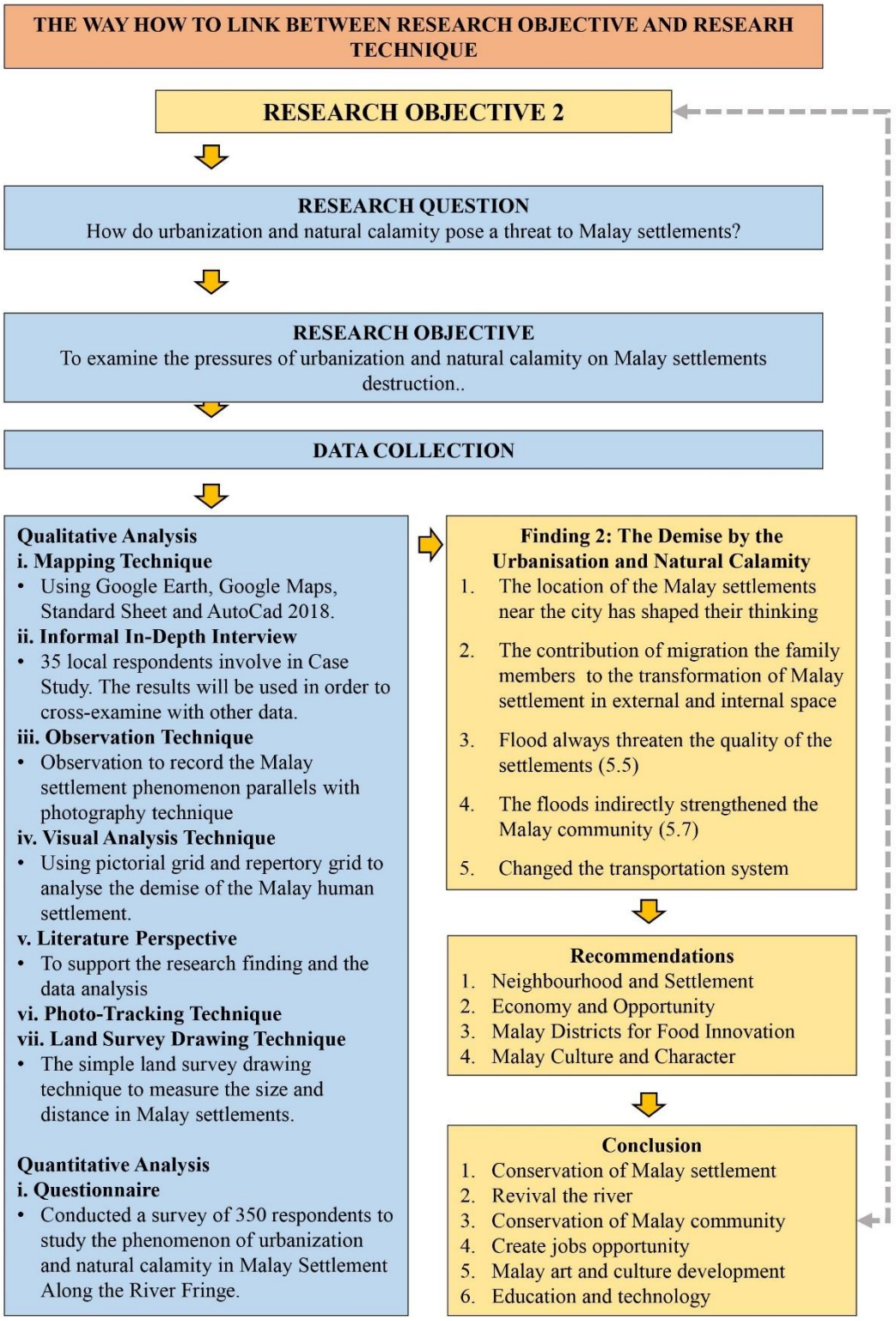


Figure 6.11: The conclusion of the Research Objective 2. The figure shows how Research Objective 2 is answered through the results of the study, findings and conclusions

(Source: Abdullah, 2022)

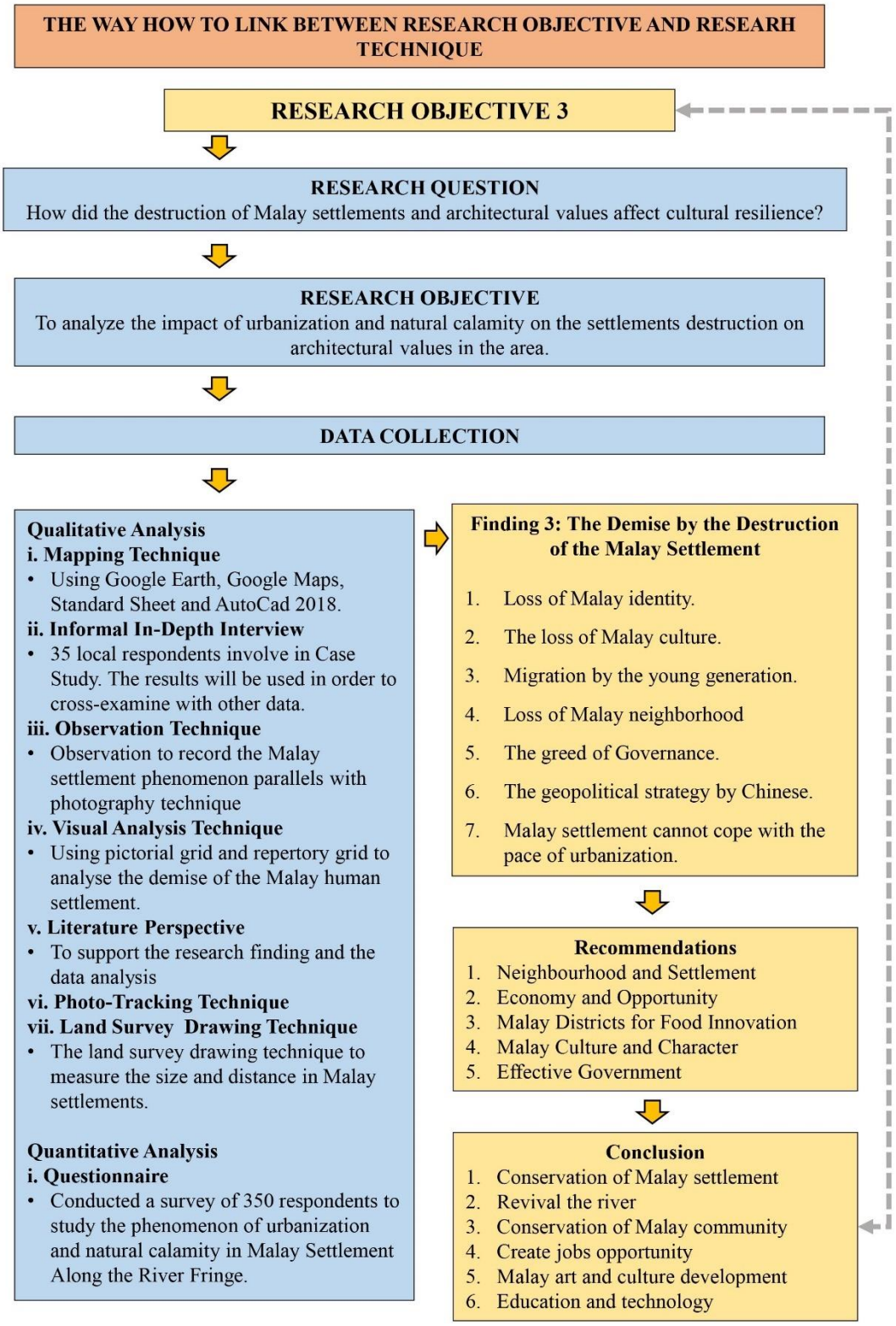


Figure 6.12: The conclusion of the Research Objective 3. The figure shows how Research Objective 3 is answered through the results of the study, findings and conclusions

(Source: Abdullah, 2022)

Particular strategies are needed to help the Malays compete in all aspects (Figure 6.13), especially in the urban experience. All of these components played critical roles in pressing Malay settlement. The Malay settlement in this area cannot compete with urbanization even though it is located in Kota Bharu and the Industrial Revolution 4.0 was introduced.

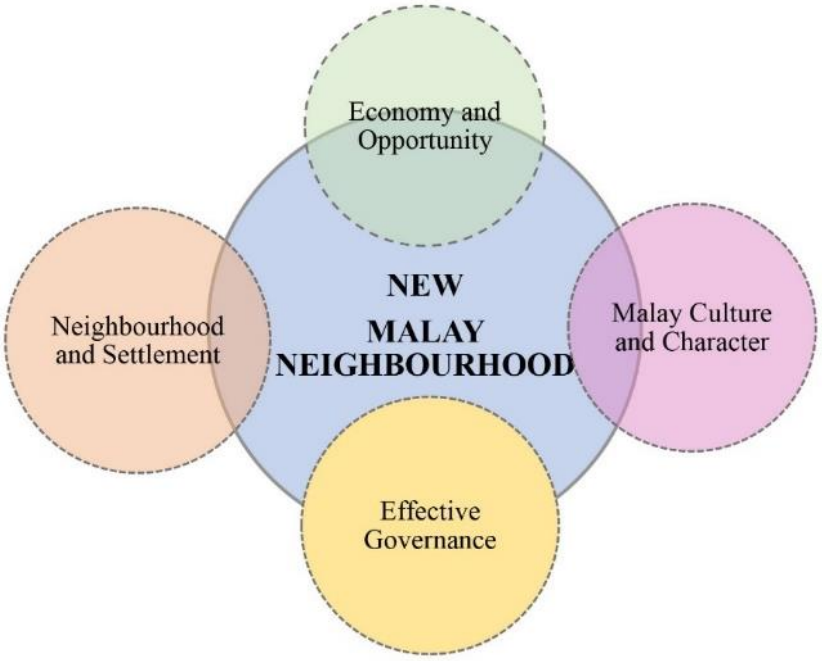


Figure 6.13: The research recommendations (Source: Abdullah, 2021)

Meanwhile, urban development worked against them due to the increased cost of human settlement. Finally, other races, particularly the Chinese, dominated strategic areas of the city. The Chinese, who have always dominated the city through economic means, managed to influence the government. After an extended time, they gradually absorbed the Malay settlement area. Therefore, urbanization is merely a tool for economic dominance over Malay settlements. As a result, Malay settlements were eventually destroyed and subtly became Chinese property. Finally, the Chinese geopolitical domination of the city will

persist in the future as its population increases. In future elections, Kota Bharu will remain under Chinese dominance in perpetuity. Starting from the separated relationship between rivers, researchers found that the Malays had to accept various pressures and threats from natural disasters, urbanisation, and the government itself until today. Eventually, they were trapped in poverty that affected the interior and exterior of residential spaces until the demise of Malay settlements along the river fringe in Kota Bharu.

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APPENDICES

Journal Publications

1. **Abdullah, A.**, Wahid, J., Muhammad, S.A., Khairuddin, M.R., Ibrahim, I.L.H. (2023). The Malay Community Dilemmas in the New Urban World. In: Swasto, D.F., Rahmi, D.H., Rahmawati, Y., Hidayati, I., Al-Faraby, J., Widita, A. (eds) Proceedings of the 6th International Conference on Indonesian Architecture and Planning (ICIAP 2022). ICIAP 2022. Lecture Notes in Civil Engineering, vol 334. Springer, Singapore. https://doi.org/10.1007/978-981-99-1403-6_11.
2. **Abdullah, A.,** Wahid, J., Al-Ansi, N.A., Ariffin, E.N.E.M. (2023). Beyond Sustainability: The Force of Urbanisation on the Malay Community in Kelantan. In: Swasto, D.F., Rahmi, D.H., Rahmawati, Y., Hidayati, I., Al-Faraby, J., Widita, A. (eds) Proceedings of the 6th International Conference on Indonesian Architecture and Planning (ICIAP 2022). ICIAP 2022. Lecture Notes in Civil Engineering, vol 334. Springer, Singapore. https://doi.org/10.1007/978-981-99-1403-6_10
3. **Abdullah, A.**, Wahid, J., Khalil, K. F., & Boudiaf, B. (2022). Towards the Future of the Malay Community in Kelantan. *Environment-Behaviour Proceedings Journal*, *7*(19), 45-52. https://doi.org/10.21834/ebpj.v7i19.3203.
4. **Abdullah, A**., Wahid , J. ., Abdulkarem Al-Ansi , N. ., & Mohd Ariffin , E. N. E. . (2022). The Malay Settlement: A Vanishing World?. Environment-Behaviour Proceedings Journal, 7(20). https://doi.org/10.21834/ebpj.v7i20.2967
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6. **Abdullah, A.**, Wahid, J. (2022). Returning to Nothing: The Lost of Malay Settlement in Pasir Mas, Kelantan. Local Wisdom Scintific Online Journal 14 (1): 48-28, 2022. ISSN: 2086-3764.
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8. **Abdullah, A.**, Wahid, J., Wan Mohamad, W. S. N., Khairuddin, M. R., Ibrahim, I. L. H., & Hasim, A. H. (2021). Remembering the Malay Settlement: A Case of Rumah Tiang Dua Belas Kelantan. *MAJ - Malaysia Architectural Journal*, *3*(2), 1–9. Retrieved from https://majournal.my/index.php/maj/article/view/3
9. Wahid,J., **Abdullah, A**., Salleh., B. & Karsono., B. (2021). Poving Into Urban Linkage Theory: The Case of India Street, Kuching Sarawak. International Journal of Social Science Research (IJSSR) eISSN: 2710-6276 Vol. 3 No. 3 September 2021.
10. Wahid, J., & **Abdullah, A.** (2021). Urbanization, Migration and the Demise of the Malay Settlement. In *E-Proceedings Of Extended Abstracts The 1ST International Symposium On Cultural Heritage (ISyCH) 2021*.
11. Wahid J, **Abdullah A.**, Salleh B, Arar M, (2021), Classification of Malaysian Architecture Revisited, RUAS (Review of Urbanism and Architectural Studies) Universitas Brawijaya.
12. **Abdullah A.**, Wahid J., Khairuddin M.R, Ibrahim I.L, (2020), Community Sustenance: Is Globalization Affecting Cultural Resilience in Kampung Laut? (International Journal of Creative Future and Heritage Volume 8, Issue 2, September 2020).

Assalamualaikum dan Selamat Sejahtera,

Saya merupakan seorang Pensyarah di Jabatan Senibina dan Ekistik, Universiti Malaysia Kelantan (UMK). Kini sedang menyambung pelajaran di peringkat PhD di Universiti Malaysia Sarawak (UNIMAS). Saya ingin memohon jasa baik pihak Tuan/ Puan untuk menjawab soalan Kaji Selidik bagi membantu pengajian saya. Segala jasa baik dari pihak Tuan/ Puan amat saya hargai.

Terima Kasih

1. *LATAR BELAKANG SOSIO-EKONOMI PEMILIK*

NAMA KAMPUNG:_____

NO RUMAH: _____

LOT TANAH:_____

TAHUN RUMAH DIBINA: _____

PEMILIK:

- ☐ RUMAH SENDIRI
- ☐ RUMAH SEWA

BERAPA BIJI RUMAH DALAM LOT TANAH?

- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ LEBIH DARI 5 (NYATAKAN):_____

BERAPA LAMA TINGGAL DI SINI?

- ☐ KURANG 5 TAHUN
- ☐ 6-10 TAHUN
- ☐ 11-20 TAHUN
- ☐ LEBIH 20 TAHUN

BAGAIMANA ANDA MEMILIKI RUMAH INI?

- ☐ MEMBELI DARI PEMAJU PERUMAHAN
- ☐ MEMBELI DARI INDIVIDU
- ☐ DIWARISI TURUN TEMURUN
- ☐ LAIN-LAIN (NYATAKAN):
  _____

DI MANA ANDA TINGGAL SEBELUM INI?

- ☐ BERASAL DARI KAMPUNG INI
- ☐ KAMPUNG LAIN
- ☐ KUARTERS KERAJAAN
- ☐ SETINGGAN
- ☐ LAIN-LAIN (NYATAKAN):
  _____

PEKERJAAN

- ☐ KERJA KERAJAAN
- ☐ KERJA SWASTA
- ☐ KERJA ISTANA
- ☐ KERJA SENI TRADISIONAL
- ☐ KERJA SENDIRI/ BERNIAGA DI RUMAH
- ☐ KERJA SENDIRI/ BERNIAGA DI BANDAR
- ☐ PENCEN
- ☐ TIDAK BEKERJA
- ☐ LAIN-LAIN (NYATAKAN):
  _____

PENDAPATAN BULANAN:

- ☐ BAWAH RM 499
- ☐ RM 500- RM 999
- ☐ RM 1000 – RM 1499
- ☐ RM 1500 – RM 1999
- ☐ RM 2000 – RM 2499
- ☐ RM 2500 – RM 2999
- ☐ RM 3000 – RM 3499
- ☐ RM 3500 – RM 3999
- ☐ RM 4000 KE ATAS

ANDA MEMBELA HAIWAN TERSEBUT DI KAWASAN KEDIAMAN ANDA:

- ☐ LEMBU
- ☐ KAMBING
- ☐ BIRI-BIRI
- ☐ AYAM
- ☐ BURUNG
- ☐ TIADA

MENGAPA?

- ☐ HOBI/ MINAT
- ☐ MENAMBAH PENDAPATAN
- ☐ LEBIHAN WANG
- ☐ BERNIAGA
- ☐ LAIN-LAIN
  (NYATAKAN):_____

BILANGAN KELUARGA YANG TINGGAL DALAM RUMAH:

- ☐ 1 KELUARGA
- ☐ 2 KELUARGA
- ☐ 3 KELUARGA
- ☐ 4 KELUARGA
- ☐ LEBIH DARI 5 KELUARGA
  (NYATAKAN)_____

JUMLAH BILANGAN ISI RUMAH:

- ☐ 1 ORANG
- ☐ 2 ORANG
- ☐ 3 ORANG
- ☐ 4 ORANG
- ☐ LEBIH DARI 5 ORANG
  (NYATAKAN)_____

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JUMLAH BILIK TIDUR YANG TERDAPAT:

- ☐ 1 BILIK TIDUR
- ☐ 2 BILIK TIDUR
- ☐ 3 BILIK TIDUR
- ☐ 4 BILIK TIDUR
- ☐ LEBIH DARI 5 BILIK TIDUR
  (NYATAKAN)_____

SELAIN ANDA, SIAPA YANG TINGGAL DI RUMAH:

- ☐ SAUDARA
- ☐ IBU BAPA
- ☐ ANAK YANG TELAH BERKAHWIN
- ☐ TIADA

2. *PERKIHIDMATAN YANG TERDAPAT PADA KEDIAMAN:*

SUMBER ELEKTRIK

- ☐ TNB METER
- ☐ DISAMBUNG DARI RUMAH JIRAN

SUMBER AIR

- ☐ METER
- ☐ DISAMBUNG DARI RUMAH JIRAN
- ☐ PERIGI/ BORING

SISTEM TANDAS

- ☐ TANDAS DI LUAR RUMAH (GALI LUBANG)
- ☐ TANDAS DI DALAM RUMAH (SEPTIC TANK)
- ☐ SUNGAI

KELENGKAPAN RUMAH

- ☐ TV
- ☐ PETI SEJUK
- ☐ MESIN BASUH
- ☐ KETUHAR
- ☐ DAPUR GAS
- ☐ TELEFON
- ☐ PERMAINAN VIDEO
- ☐ ASTRO
- ☐ INTERNET
- ☐ TIADA DARI SEMUA DI ATAS
- ☐ LAIN-LAIN
  (NYATAKAN):_____

KENDERAAN UNTUK KE BANDAR:

- ☐ BOT/ PERAHU
- ☐ BUS
- ☐ KERETA
- ☐ GRAB CAR
- ☐ TEKSI
- ☐ MOTORSIKAL
- ☐ BASIKAL

KENDERAAN YANG ANDA MILIKI:

- ☐ BASIKAL
- ☐ MOTORSIKAL
- ☐ KERETA
- ☐ BOT/ PERAHU
- ☐ LAIN-LAIN
  (NYATAKAN):_____

JUMLAH BILANGAN KERETA YANG ADA DI RUMAH ANDA:

- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ TIADA
- ☐ LEBIH DARI 5
  (NYATAKAN):_____

JUMLAH BILANGAN MOTORSIKAL YANG ADA DI RUMAH ANDA:

- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ TIADA
- ☐ LEBIH DARI 5
  (NYATAKAN):_____

TEMPAT SIMPANAN KENDERAAN:

- ☐ PORCH KERETA
- ☐ DI BAWAH KEDIAMAN
- ☐ LUAR PAGAR KEDIAMAN

KEMUDAHAN SISTEM SALIRAN :

- ☐ BAIK
- ☐ TIDAK BAIK

1. *BENTUK FIZIKAL KEDIAMAN:*

BILANGAN TINGKAT KEDIAMAN:

- ☐ 1 TINGKAT
- ☐ 2 TINGKAT
- ☐ 3 TINGKAT

DINDING RUMAH

- ☐ KAYU
- ☐ BATU BATA BERSIMEN
- ☐ DAUN NIPAH
- ☐ ZINK
- ☐ PAPAN LAPIS (PLYWOOD)
- ☐ CAMPURAN BATA BERSIMEN DAN KAYU

BUMBUNG

- ☐ ATAP KAYU BERLIAN
- ☐ ATAP SENGGORA
- ☐ ZINK
- ☐ CONCRETE ROOF TILE
- ☐ ASBESTOS
- ☐ METAL DECK
- ☐ ATAP DAUN NIPAH

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Appendix A: The questionnaire form.

TIANG RUMAH

- ☐ KAYU
- ☐ KONKRIT
- ☐ ZINK
- ☐ BESI

TINGKAP RUMAH

- ☐ NACO
- ☐ TINGKAP ALUMINIUM DAN KACA
- ☐ TINGKAP KAYU SEPENUHNYA
- ☐ TINGKAP KAYU DAN KEKISI ANGIN

LANTAI RUMAH

- ☐ KAYU
- ☐ KONKRIT BERSIMEN
- ☐ PAPAN LAPIS (PLYWOOD)
- ☐ CAMPURAN KONKRIT DAN KAYU

ANDA PERNAH MENGUBAHSUAI KEDIAMAN?

- ☐ YA
- ☐ TIDAK

APAKAH PERUBAHAN YANG DILAKUKAN PADA KEDIAMAN ANDA?

- ☐ KECILKAN SAIZ RUMAH
- ☐ TAMBAHAN RUANG DALAM RUMAH
- ☐ MENGUBAH SEPENUHNYA DARI BENTUK ASAL
- ☐ TIADA

RUANG MANAKAH YANG PERNAH ANDA UBAHSUAI?

- ☐ RUANG TAMU
- ☐ RUANG KELUARGA
- ☐ DAPUR
- ☐ RUANG MAKAN
- ☐ BILIK TIDUR
- ☐ TANDAS
- ☐ TEMPAT LETAK KERETA
- ☐ TIADA
- ☐ LAIN-LAIN (NYATAKAN):_____

SIAPA YANG MENOLONG ANDA MENJALANKAN KERJA UBAHSUAI?

- ☐ KONTRAKTOR
- ☐ GOTONG ROYONG
- ☐ SENDIRI
- ☐ TUKANG KAMPUNG

KENAPA ANDA MENGUBAHSUAI KEDIAMAN ANDA?

- ☐ PERLUKAN LEBIH RUANG (PERTAMBAHAN BILANGAN ISI RUMAH)
- ☐ KECILKAN RUANG (ISI RUMAH BERKURANGAN)
- ☐ REZEKI WANG YANG LEBIH

BERAPAKAH KOS UBAHSUAI KEDIAMAN ANDA?

- ☐ BAWAH RM 5000
- ☐ RM 5000- RM 10 000
- ☐ RM 10 000 -RM 15 000
- ☐ RM 15 000 – RM 20 000
- ☐ MELEBIHI RM 20 000

PENYELENGGARAAN KEDIAMAN:

- ☐ SETIAP 6 BULAN
- ☐ SETAHUN SEKALI
- ☐ 2- 4 TAHUN
- ☐ TIADA

KENAPA ANDA PERLU MENYELENGGARA KEDIAMAN ANDA:

- ☐ MENCANTIKKAN KEDIAMAN
- ☐ MENGELAKKAN KEROSAKAN PADA MASA AKAN DATANG
- ☐ MASALAH BANJIR
- ☐ MASALAH HUJAN LEBAT
- ☐ TIADA
- ☐ LAIN-LAIN (NYATAKAN):_____

APAKAH JENIS PENYELENGGARAAN YANG ANDA BUAT?

- ☐ MENGECAT
- ☐ MEMBAIKI STRUKTUR YANG ROSAK
- ☐ MENUKAR KOMPONEN YANG ROSAK
- ☐ TIADA
- ☐ LAIN-LAIN (NYATAKAN):_____

SIAPA YANG MELAKUKAN KERJA PENYELENGGARAAN TERSEBUT:

- ☐ SENDIRI
- ☐ TUKANG RUMAH
- ☐ KONTRAKTOR
- ☐ GOTONG ROYONG
- ☐ TIADA

KEADAAN KAWASAN KEDIAMAN:

- ☐ TEPI SUNGAI
- ☐ BERSELUT
- ☐ TANAH LAPANG/ TANAH RATA
- ☐ KEBUN

SEKIRANYA DIBERI PILIHAN UNTUK ANDA BERPINDAH, APAKAH JENIS KEDIAMAN YANG ANDA INGINKAN:

- ☐ RUMAH TERES 2 BILIK TIDUR
- ☐ RUMAH TERES 3 BILIK TIDUR
- ☐ APARTMENT 4 TINGKAT DAN MEMPUNYAI 3 BILIK TIDUR
- ☐ APARTMENT 10 TINGKAT DAN MEMPUNYAI 3 BILIK TIDUR
- ☐ RUMAH YANG TERLETAK DI KAMPUNG
- ☐ RUMAH YANG TERLETAK DI BANDAR
- ☐ TIDAK AKAN BERPINDAH
- ☐ LAIN-LAIN (NYATAKAN):_____

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BAGAIMANA ANDA MENDAPAT ILHAM UNTUK MENGHIAS RUMAH?

- ☐ DARI KAWAN
- ☐ DARI TELEVISION
- ☐ DARI INTERNET
- ☐ DARI MAJALAH
- ☐ ILHAM SENDIRI

PENILAIAN TERHADAP KEDIAMAN:

ADAKAH ANDA MEMPUNYAI MASALAH UNTUK MENYUSUN PERABOT?

- ☐ YA
- ☐ TIDAK

TERDAPAT ASAP DARI DAPUR SEMASA MEMASAK:

- ☐ YA
- ☐ TIDAK

TERDAPAT BAU DARI LUAR RUMAH:

- ☐ YA
- ☐ TIDAK

PENGUDARAAN DALAM RUMAH:

- ☐ BAIK
- ☐ TIDAK BAIK
- ☐ TIDAK TAHU

PENGCAHAYAAN DALAM RUMAH:

- ☐ BAIK
- ☐ TIDAK BAIK
- ☐ TIDAK TAHU

TAHAP KEBISINGAN DALAM RUMAH:

- ☐ SENYAP
- ☐ PERTENGAHAN
- ☐ TERLALU BISING

2. *KEGUNAAN RUANG DALAM KEDIAMAN*

RUANG YANG DIDIAMI PADA JAM 6 PAGI HINGGA 8 PAGI:

- ☐ DAPUR
- ☐ RUANG TAMU
- ☐ BILIK TIDUR
- ☐ BERANDAH
- ☐ RUANG KELUARGA

RUANG YANG DIDIAMI PADA JAM 9 PAGI HINGGA 12 TENGAHARI:

- ☐ DAPUR
- ☐ RUANG TAMU
- ☐ BILIK TIDUR
- ☐ BERANDAH
- ☐ RUANG KELUARGA

RUANG YANG DIDIAMI PADA JAM 1 TENGAHARI HINGGA 2 PETANG:

- ☐ DAPUR
- ☐ RUANG TAMU
- ☐ BILIK TIDUR
- ☐ BERANDAH
- ☐ RUANG KELUARGA

RUANG YANG DIDIAMI PADA JAM 2 PETANG HINGGA 5 PETANG:

- ☐ DAPUR
- ☐ RUANG TAMU
- ☐ BILIK TIDUR
- ☐ BERANDAH
- ☐ RUANG KELUARGA

RUANG YANG DIDIAMI PADA JAM 6 PETANG HINGGA 8 MALAM:

- ☐ DAPUR
- ☐ RUANG TAMU
- ☐ BILIK TIDUR
- ☐ BERANDAH
- ☐ RUANG KELUARGA

RUANG YANG DIDIAMI PADA JAM 9 MALAM HINGGA 10 MALAM:

- ☐ DAPUR
- ☐ RUANG TAMU
- ☐ BILIK TIDUR
- ☐ BERANDAH
- ☐ RUANG KELUARGA

ADAKAH ANDA MEMPUNYAI RUANG DAPUR DAN RUANG MAKAN YANG BERASINGAN?

- ☐ YA
- ☐ TIDAK

ADAKAH ANDA MEMPUNYAI RUANG MAKAN LAIN?

- ☐ YA
- ☐ TIDAK

TABIAT/ CARA MAKAN:

- ☐ DI ATAS LANTAI
- ☐ ATAS MEJA
- ☐ KEDUA DI ATAS

TEMPAT MAKAN SELAIN DARI RUANG MAKAN:

- ☐ DAPUR
- ☐ RUANG TAMU
- ☐ BERANDAH
- ☐ LAIN-LAIN (NYATAKAN):_____

DI MANAKAH ANDA MELAKUKAN MAJLIS KESYUKURAN SEPERTI "DOA SELAMAT"?

- ☐ DI RUMAH
- ☐ LUAR RUMAH
- ☐ MASJID/ SURAU
- ☐ RUMAH JIRAN
- ☐ DEWAN

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Appendix A: The questionnaire form.

3. KEMUDAHAN LAIN:

ADAKAH KAWASAN KEDIAMAN ANDA MEMPUNYAI KAWASAN UNTUK KANAK-KANAK BERMAIN?

- ☐ YA
- ☐ TIDAK

KAWASAN KANAK-KANAK BERMAIN?

- ☐ DALAM RUMAH
- ☐ KAWASAN RUMAH
- ☐ TAMAN PERMAINAN KANAK-KANAK

PERNAH BERLAKU KEMALANGAN DI KAWASAN SEKITAR KEDIAMAN ANDA?

- ☐ YA
- ☐ TIDAK

JENIS KEMALANGAN YANG BIASA TERJADI DI KAWASAN KEDIAMAN ANDA?

- ☐ KENDERAAN
- ☐ PERGADUHAN DENGAN JIRAN
- ☐ PERGADUHAN PUAK REMAJA
- ☐ TIADA

JARAK KE BANDAR: _____KM

JARAK KE MASJID (TIDAK TERMASUK SURAU): _____KM

JARAK KE KLINIK:_____KM

JARAK KE KAWASAN REKREASI:_____KM

JARAK KE SEKOLAH: _____KM

KENAPA ANDA GEMAR TINGGAL DI SINI?

- ☐ TIADA PILIHAN LAIN
- ☐ JIRAN YANG BAIK
- ☐ BERDEKATAN KEMUDAHAN AWAM
- ☐ HUBUNGAN YANG RAPAT ANTARA SAUDARA
- ☐ BERDEKATAN DENGAN BANDAR
- ☐ LAIN-LAIN (NYATAKAN):_____

7. KEJIRANAN:

SIAPAKAH JIRAN ANDA?

- ☐ ORANG LUAR
- ☐ KAWAN
- ☐ SAUDARA
- ☐ LAIN-LAIN (NYATAKAN):_____

BERAPA KERAP ANDA MELAWAT JIRAN ANDA:

- ☐ SETIAP HARI
- ☐ SEKALI SEMINGGU
- ☐ SEMASA ADA KELAPANGAN
- ☐ LAIN-LAIN (NYATAKAN):_____

ADAKAH ANDA SELESA DENGAN JIRAN ANDA?

- ☐ YA
- ☐ TIDAK

MASALAH YANG MELIBATKAN JIRAN ANDA?

- ☐ YA (NYATAKAN):_____
- ☐ TIADA

ANDA PERNAH MENJEMPUT TETAMU UNTUK MAKAN MALAM?

- ☐ YA
- ☐ TIDAK

BAGAIMANA ANDA MELUANGKAN MASA?

- ☐ MENONTON TV
- ☐ MELAWAT JIRAN DAN KAWAN
- ☐ MEMBELI BELAH
- ☐ AKTIVITI REKREASI
- ☐ MEMBELI BARANG KEPERLUAN RUMAH
- ☐ AKTIVITI KEAGAMAAN/ KULIAH
- ☐ WARUNG KOPI
- ☐ LAIN-LAIN (NYATAKAN):_____

8. HIJRAH KE BANDAR:

AHLI KELUARGA ANDA YANG PERNAH BERHIJRAH KE BANDAR

- ☐ ADA
- ☐ TIDAK

TUJUAN BERHIJRAH

- ☐ BELAJAR
- ☐ BEKERJA
- ☐ MENGIKUT KELUARGA
- ☐ LAIN-LAIN: NYATAKAN_____

AHLI KELUARGA YANG BERHIJRAH KE BANDAR

- ☐ AYAH
- ☐ IBU
- ☐ ANAK
- ☐ ISTERI
- ☐ SUAMI

PEKERJAAN DI BANDAR

- ☐ KERJA KERAJAAN
- ☐ KERJA SWASTA
- ☐ KERJA SENDIRI
- ☐ BERNIAGA
- ☐ LAIN-LAIN: NYATAKAN_____

MEREKA TERUS MENETAP DI BANDAR

- ☐ YA
- ☐ TIDAK

Borang Kaji Selidik: 2020
Azli bin Abdullah: Fakulti Senibina dan Ekistik, Universiti Malaysia Kelantan & Universiti Malaysia Sarawak
012-967 5054
azli.ab@umk.edu.my / Penyelia: Professor Ar Dr Julaihi bin Wahid (UNIMAS)

TARIKH: / / 2020
NO:.....

NEGERI YANG MEREKA TINGGAL

- ☐ KUALA LUMPUR
- ☐ SELANGOR
- ☐ JOHOR
- ☐ PERAK
- ☐ PULAU PINANG

LAIN-LAIN: (NYATAKAN)_____

TEMPOH MENETAP DI BANDAR

- ☐ KURANG 3 TAHUN
- ☐ 3 TAHUN – 5 TAHUN
- ☐ 6 TAHUN – 10 TAHUN
- ☐ 11 TAHUN – 15 TAHUN
- ☐ 15 TAHUN KE ATAS

ADAKAH MEREKA BERJAYA MENETAP DI BANDAR?

- ☐ YA
- ☐ TIDAK

ADAKAH MEREKA PULANG SEMULA KE KAMPUNG?

- ☐ YA
- ☐ TIDAK

JIKA YA, KENAPA MEREKA PULANG KE KAMPUNG?

- ☐ TIADA PELUANG PEKERJAAN DI BANDAR
- ☐ GAJI YANG MURAH
- ☐ KESEMPITAN HIDUP DI BANDAR
- ☐ TIDAK SESUAI DENGAN CARA HIDUP DI BANDAR
- ☐ MASALAH PERNIAGAAN
- ☐ MUSIM PERAYAAN
- ☐ MUSIM CUTI
- ☐ HARI MINGGU
- ☐ MELAWAT KAUM KELUARGA

ANDA MERASAKAN KEHIDUPAN BANDAR SESUAI DENGAN ANDA

- ☐ YA
- ☐ TIDAK
- ☐

MENURUT ANDA, APAKAH PELUANG YANG ADA DI BANDAR?

- ☐ PEKERJAAN
- ☐ PENDIDIKAN
- ☐ PELUANG PERNIAGAAN
- ☐ LAIN-LAIN: (NYATAKAN)_____

ANDA BERASA SELESA TINGGAL DI SINI

- ☐ YA
- ☐ TIDAK

JIKA DIBERI PELUANG, ADAKAH ANDA MAHU BERHIJRAH KE BANDAR?

- ☐ YA
- ☐ TIDAK

9. MASALAH DI KAWASAN KEDIAMAN:

ISU UTAMA YANG ANDA HADAPI

- ☐ MASALAH KECURIAN
- ☐ MASALAH DENGAN JIRAN
- ☐ MASALAH AIR
- ☐ MASALAH ELEKTRIK
- ☐ MASALAH BANJIR
- ☐ MASALAH GEJALA SOSIAL
- ☐ LAIN-LAIN (NYATAKAN):_____

PERNAHKAH RUMAH ANDA DI MASUKI PENCURI?

- ☐ YA
- ☐ TIDAK

ANGGARAN KERUGIAN:

- ☐ BAWAH RM 2000
- ☐ RM 2000 – RM 5000
- ☐ RM 5000 – RM 10, 000
- ☐ RM 10, 000 – RM 15, 000
- ☐ RM 15, 000 KE ATAS

ADAKAH ANDA MERASAKAN KAWASAN KEDIAMAN ANDA SELAMAT?

- ☐ YA
- ☐ TIDAK

TAHAP BEKALAN AIR:

- ☐ BERSIH
- ☐ TIDAK BERSIH

PERNAH MENGALAMI MASALAH TIADA BEKALAN AIR:

- ☐ YA
- ☐ TIDAK

BERAPA KERAP MENGALAMI MASALAH BEKALAN AIR?

- ☐ SETIAP MINGGU
- ☐ SETIAP BULAN
- ☐ SETIAP TAHUN
- ☐ LAIN-LAIN (NYATAKAN):_____

PERNAH MENGALAMI MASALAH TIADA BEKALAN ELEKTRIK:

- ☐ YA
- ☐ TIDAK

BERAPA KERAP MENGALAMI MASALAH BEKALAN AIR?

- ☐ SETIAP MINGGU
- ☐ SETIAP BULAN
- ☐ SETIAP TAHUN

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012-967 5054
azli.ab@umk.edu.my / Penyelia: Professor Ar Dr Julaihi bin Wahid (UNIMAS)

TARIKH: / / 2020
NO:.....

Appendix A: The questionnaire form.

☐ LAIN-LAIN
(NYATAKAN):_____

PERNAH MEMBUAT LAPORAN PADA AGENSI YANG TERLIBAT MENGENAI MASALAH YANG DIHADAPI?

☐ YA
☐ TIDAK

ADAKAH TERDAPAT APA-APA TINDAKAN DARI AGENSI TERSEBUT?

☐ YA
☐ TIDAK

10. BENCANA BANJIR

PERNAH MENGALAMI PERISTIWA BANJIR?

☐ YA
☐ TIDAK

BERAPA KERAP BERLAKU BANJIR:

☐ SETAHUN SEKALI
☐ SETAHUN DUA KALI
☐ SETAHUN TIGA KALI
☐ TIADA
☐ LAIN-LAIN
(NYATAKAN):_____

ADAKAH KEDIAMAN ANDA MENGALAMI KEROSAKAN?

☐ YA
☐ TIDAK

ADAKAH ANDA MENGALAMI KERUGIAN:

☐ HARTA BENDA
☐ TERNAKAN
☐ NYAWA
☐ PERNIAGAAN TIDAK BEROPERASI
☐ LAIN-LAIN
(NYATAKAN):_____

ADAKAH ANDA MERASA SELAMAT PADA MUSIM TENGKUJUH?

☐ YA
☐ TIDAK
☐

ADAKAH ANDA MERASA TIDAK SELAMAT TINGGAL BERHAMPIRAN DENGAN SUNGAI?

☐ YA
☐ TIDAK

APAKAH KESAN PEMBINAAN BENTENG BANJIR?

☐ MASIH BERLAKU BANJIR
☐ TIDAK BERLAKU BANJIR
☐ PARAS AIR BANJIR DAPAT DIKURANGKAN
☐ AIR SUNGAI SEMAKIN KOTOR
☐ LAIN-LAIN
(NYATAKAN):_____

NILAI KERUGIAN SEMASA MUSIM BANJIR:

☐ RM 5000 KE BAWAH
☐ RM 5000- RM 10 000
☐ RM 10 000- RM 15 000
☐ RM 15 000 – RM 20 000
☐ RM 20 000 KE ATAS

ANDA MENDAPAT BANTUAN DI MUSIM BANJIR?

☐ YA
☐ TIDAK

APAKAH BENTUK BANTUAN DIPEROLEHI?

☐ KEWANGAN
☐ MAKANAN ASAS
☐ PERUBATAN
☐ PAKAIAN
☐ TEMPAT TINGGAL
☐ TIADA
☐ LAIN-LAIN
(NYATAKAN):_____

BANJIR 2014, RUMAH ANDA DINAIKI AIR?

☐ YA
☐ TIDAK
☐

KETINGGIAN PARAS AIR DI RUMAH ANDA?

☐ 1 METER KE BAWAH
☐ 2 METER
☐ 3 METER
☐ 4 METER
☐ 5 METER
☐ LEBIH 5 METER

AKTIVITI YANG DILAKUKAN PADA MUSIM BANJIR 2014

☐ TIADA
☐ BERNIAGA DI RUMAH (ONLINE)
☐ BERNIAGA DI RUMAH
☐ BEKERJA
☐ MEMBANTU JIRAN
☐ LAIN-LAIN
(NYATAKAN):_____

PENGANGKUTAN DI MUSIM BANJIR:

☐ SAMPAN
☐ BOT
☐ MOTORSIKAL
☐ BASIKAL
☐ KERETA
☐ LAIN-LAIN
(NYATAKAN):_____

11. BENCANA COVID 2019

KATEGORI ZON DI KAWASAN ANDA:

☐ MERAH (41 KES KE ATAS)
☐ KUNING (1 – 40 KES)
☐ HIJAU (0 KES)
☐

SEMASA PKP, ANDA MENGALAMI KERUGIAN?

☐ YA
☐ TIADA

APAKAH KESAN PKP PADA KEHIDUPAN ANDA?

☐ TIDAK DAPAT MENJALANKAN PERNIAGAAN
☐ TIADA SUMBER PENDAPATAN
☐ MENJALANKAN PERNIAGAAN (ONLINE)
☐ MASIH BEKERJA
☐ TIDAK BEKERJA
☐ LAIN-LAIN
(NYATAKAN):_____

APAKAH KESAN PKP PADA KELUARGA ANDA?

☐ TIADA
☐ BEBAN KEWANGAN
☐ MASALAH KELUARGA MENINGKAT
☐ RUMAH TIDAK SELESA
☐ EMOSI TIDAK STABIL
☐ LAIN-LAIN
(NYATAKAN):_____

APAKAH KESAN PKP PADA KAWASAN KEJIRANAN ANDA?

☐ TIADA
☐ MASALAH KEKOTORAN SAMPAH
☐ TIADA AKTIVITI MASYARAKAT
☐ MASALAH BEKALAN MAKANAN
☐ MASALAH SUMBER AIR'MASALAH ELEKTRIK
☐ HUBUNGAN ANTARA JIRAN SEMAKIN RENGGANG
☐ TIADA PELANCONG
☐ LAIN-LAIN
(NYATAKAN):_____

ADAKAH ANDA MERASA KAWASAN KEDIAMAN ANDA SELAMAT SEMASA PKP?

☐ YA
☐ TIDAK

BANTUAN DARI AGENSI BERKAITAN SEMASA PKP:

☐ YA
☐ TIDAK

BENTUK BANTUAN:

☐ TIADA
☐ MAKANAN
☐ PERUBATAN
☐ KEWANGAN
☐ LAIN-LAIN
(NYATAKAN):_____

12. SENI TRADISIONAL

AHLI KELUARGA YANG MENJALANKAN KERJA SENI TRADISI:

☐ ADA
☐ TIADA

PERKERJAAN TRADISI YANG DIJALANKAN:

☐ BATIK
☐ MENGUKIR
☐ TUKANG RUMAH TRADISIONAL
☐ MENEMPA TEMBAGA
☐ MENENUN SONGKET
☐ MENGAYAM TIKAR MENGKUANG
☐ MENUANG TEMBAGA
☐ MEMBUAT WAU
☐ LAIN-LAIN
(NYATAKAN):_____

BERAPA LAMA BERKECIMPUNG DALAM BIDANG TERSEBUT:

☐ 5 TAHUN KE BAWAH
☐ 5 TAHUN – 10 TAHUN
☐ 10 TAHUN – 15 TAHUN
☐ 15 TAHUN – 20 TAHUN
☐ 20 TAHUN KE ATAS

☐ LAIN-LAIN
(NYATAKAN):_____

MASIH AKTIF MENJALANKAN KERJA SENI TRADISI:

☐ YA
☐ TIDAK

JIKA TIDAK, MENGAPA:

☐ TIADA SAMBUTAN
☐ TIADA PELAPIS BERMINAT
☐ MASALAH KESIHATAN
☐ TIADA PROMOSI DARI AGENSI
☐ HARGA BARANG MENTAH YANG MAHAL
☐ BAHAN MENTAH SUKAR DIPEROLEHI
☐ LAIN-LAIN
(NYATAKAN):_____

KAWASAN PENEMPATAN INI TERKENAL DENGAN KERJA SENI TRADISI:

☐ YA
☐ TIDAK

MENDAPAT TARIKAN PELANCONG :

☐ YA
☐ TIDAK

SIAPA AKAN MEWARISI KERJA TERSEBUT:

☐ ANAK
☐ ISTERI
☐ SUAMI
☐ RAKAN
☐ TIADA
☐ LAIN-LAIN
(NYATAKAN):_____

Appendix A: The questionnaire form.

PERNAH MENDAPAT BANTUAN DARI AGENSI:

- ☐ TIADA
- ☐ KERAJAAN
- ☐ SWASTA
- ☐ NGO
- ☐ LAIN-LAIN (NYATAKAN):_____

BENTUK BANTUAN:

- ☐ KEWANGAN
- ☐ PROMOSI
- ☐ PEMBELAJARAN.KHIDMAT BIMBINGAN
- ☐ LAIN-LAIN (NYATAKAN):_____

ADAKAH ANDA MENGGUNAKAN TEKNOLOGI DALAM PEKERJAAN TERSEBUT:

- ☐ YA
- ☐ TIDAK

JIKA YA, MENGAPA?

- ☐ LEBIH CEPAT
- ☐ MUDAH
- ☐ MURAH
- ☐ LEBIH BERKUALITI
- ☐ LAIN-LAIN (NYATAKAN):_____

JIKA TIDAK, MENGAPA?

- ☐ TEKNOLOGI YANG MAHAL
- ☐ TIADA KEPAKARAN
- ☐ TIDAK BERMINAT
- ☐ LAIN-LAIN (NYATAKAN):_____

ADAKAH ANDA MERASAKAN INDUSTRI SENI TRADISI INI AKAN BERKEMBANG PADA MASA AKAN DATANG?

- ☐ YA
- ☐ TIDAK

JIKA YA, MENGAPA?

- ☐ PERMINTAAN TINGGI
- ☐ PELUANG PEKERJAAN
- ☐ PENDAPATAN YANG LUMAYAN
- ☐ MENDAPAT BANTUAN DARI AGENSI BERKAITAN
- ☐ RAMAI GOLONGAN PELAPIS BERMINAT
- ☐ LAIN-LAIN (NYATAKAN):_____

JIKA TIDAK, MENGAPA?

- ☐ TIADA PERMINTAAN
- ☐ PENDAPATAN TIDAK LUMAYAN
- ☐ TIADA PELUANG PEKERJAAN
- ☐ GOLONGAN PELAPIS BERHIJRAH KE BANDAR
- ☐ TIADA BANTUAN DARI AGENSI BERKAITAN
- ☐ GOLONGAN PELAPIS TIDAK BERMINAT
- ☐ LAIN-LAIN (NYATAKAN):_____

BAGI ANDA, SIAPAKAH YANG MEMBANTU INDUSTRI SENI TRADISI DI TEMPAT ANDA?

- ☐ PERSEORANGAN
- ☐ NGO
- ☐ AGENSI KERAJAAN
- ☐ AGENSI SWASTA
- ☐ LAIN-LAIN (NYATAKAN):_____

GOLONGAN MUDA MEMINATI SENI TERSEBUT:

- ☐ YA
- ☐ TIDAK

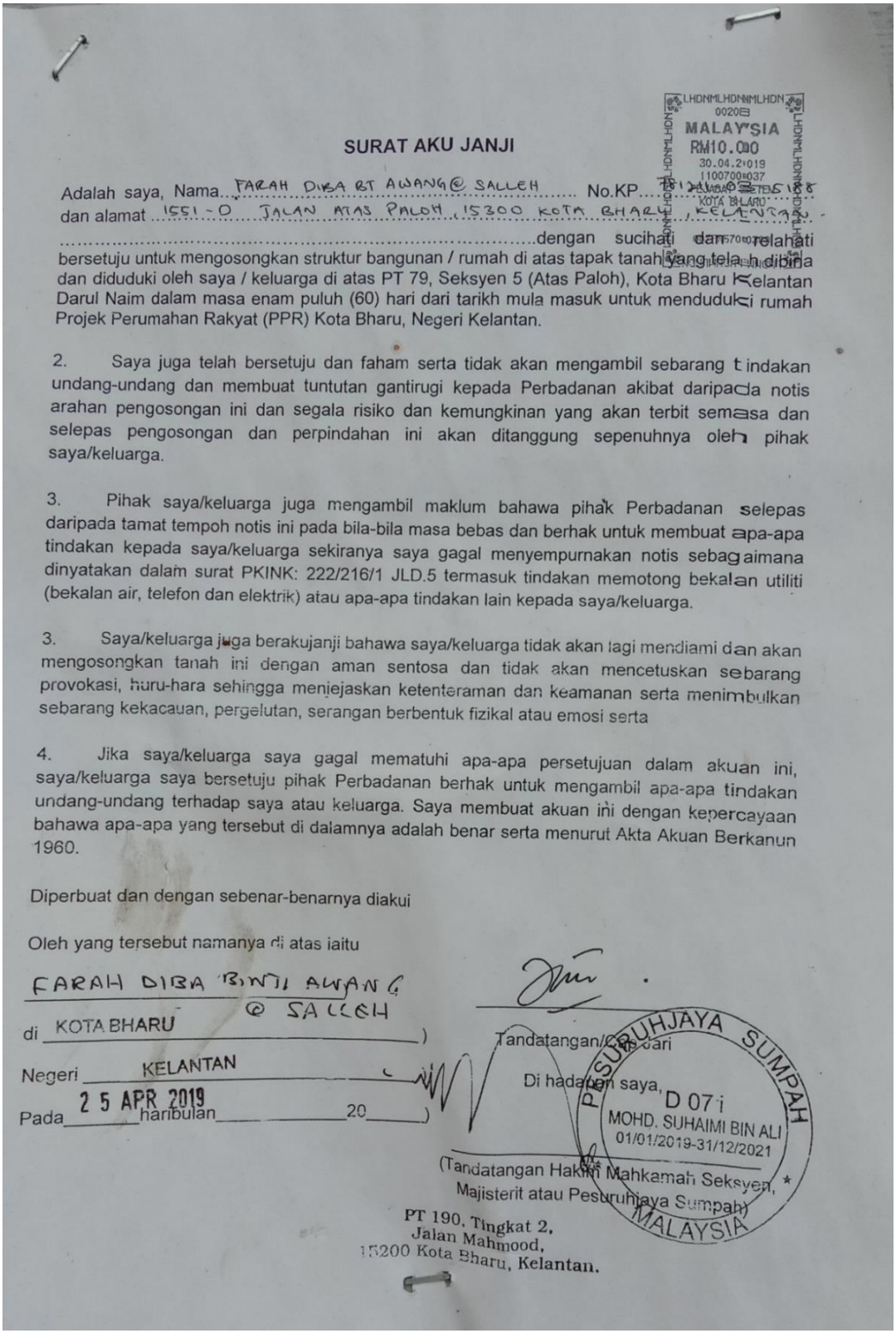
Borang Kaji Selidik: 2020
Azli bin Abdullah: Fakulti Senibina dan Ekistik, Universiti Malaysia Kelantan & Universiti Malaysia Sarawak
012-967 5054
azli.ab@umk.edu.my / Penyelia: Professor Ar Dr Julaihi bin Wahid (UNIMAS)

TARIKH: / / 2020
NO:……..

Appendix A: The questionnaire form.



Appendix B: The case study area.



SURAT AKU JANJI

Adalah saya, Nama FARAH DIBA BT AWANG @ SALLEH No.KP [illegible]
dan alamat 1551-0 JALAN ATAS PALOH, 15300 KOTA BHARU, KELANTAN.
.....dengan sucihati dan relahati bersetuju untuk mengosongkan struktur bangunan / rumah di atas tapak tanah yang telah dibina dan diduduki oleh saya / keluarga di atas PT 79, Seksyen 5 (Atas Paloh), Kota Bharu Kelantan Darul Naim dalam masa enam puluh (60) hari dari tarikh mula masuk untuk menduduki rumah Projek Perumahan Rakyat (PPR) Kota Bharu, Negeri Kelantan.

2. Saya juga telah bersetuju dan faham serta tidak akan mengambil sebarang tindakan undang-undang dan membuat tuntutan gantirugi kepada Perbadanan akibat daripada notis arahan pengosongan ini dan segala risiko dan kemungkinan yang akan terbit semasa dan selepas pengosongan dan perpindahan ini akan ditanggung sepenuhnya oleh pihak saya/keluarga.

3. Pihak saya/keluarga juga mengambil maklum bahawa pihak Perbadanan selepas daripada tamat tempoh notis ini pada bila-bila masa bebas dan berhak untuk membuat apa-apa tindakan kepada saya/keluarga sekiranya saya gagal menyempurnakan notis sebagaimana dinyatakan dalam surat PKINK: 222/216/1 JLD.5 termasuk tindakan memotong bekalan utiliti (bekalan air, telefon dan elektrik) atau apa-apa tindakan lain kepada saya/keluarga.

3. Saya/keluarga juga berakujanji bahawa saya/keluarga tidak akan lagi mendiami dan akan mengosongkan tanah ini dengan aman sentosa dan tidak akan mencetuskan sebarang provokasi, huru-hara sehingga menjejaskan ketenteraman dan keamanan serta menimbulkan sebarang kekacauan, pergelutan, serangan berbentuk fizikal atau emosi serta

4. Jika saya/keluarga saya gagal mematuhi apa-apa persetujuan dalam akuan ini, saya/keluarga saya bersetuju pihak Perbadanan berhak untuk mengambil apa-apa tindakan undang-undang terhadap saya atau keluarga. Saya membuat akuan ini dengan kepercayaan bahawa apa-apa yang tersebut di dalamnya adalah benar serta menurut Akta Akuan Berkanun 1960.

Diperbuat dan dengan sebenar-benarnya diakui

Oleh yang tersebut namanya di atas iaitu

FARAH DIBA BINTI AWANG @ SALLEH

di KOTA BHARU)

Negeri KELANTAN)

Pada 25 APR 2019 haribulan 20)

Tandatangan/Cap ibu jari

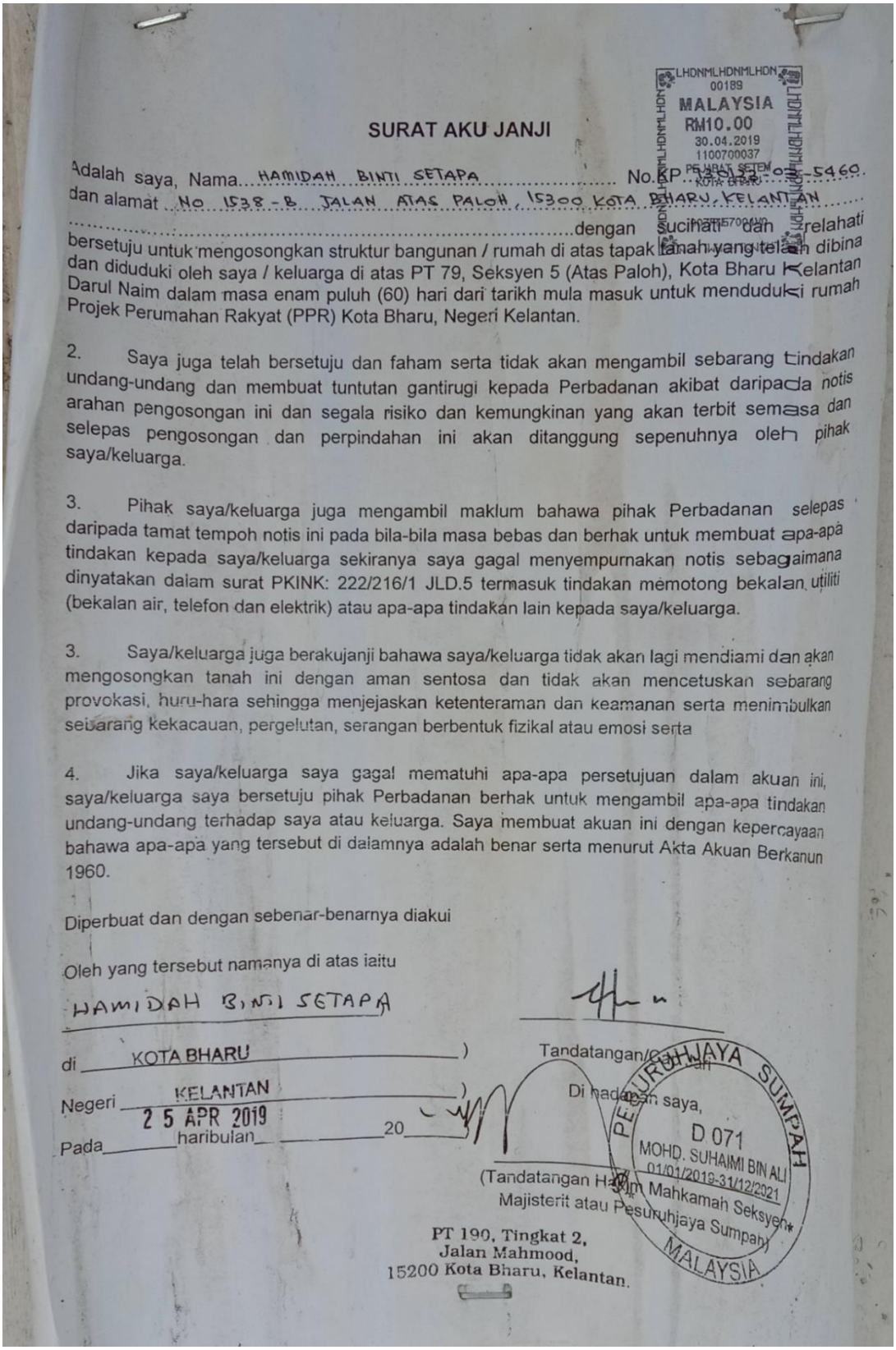
Di hadapan saya,

D 07 i
MOHD. SUHAIMI BIN ALI
01/01/2019-31/12/2021

(Tandatangan Hakim Mahkamah Seksyen, * Majisterit atau Pesuruhjaya Sumpah)

PT 190, Tingkat 2,
Jalan Mahmood,
15200 Kota Bharu, Kelantan.

Appendix C: The 'Aku Janji' letter by PKINK to the residents.



SURAT AKU JANJI

MALAYSIA RM10.00 30.04.2019

Adalah saya, Nama HAMIDAH BINTI SETAPA No.KP [illegible]-5460.
dan alamat No 1538-B JALAN ATAS PALOH, 15300 KOTA BHARU, KELANTAN
.....dengan sucinati dan relahati bersetuju untuk mengosongkan struktur bangunan / rumah di atas tapak tanah yang telah dibina dan diduduki oleh saya / keluarga di atas PT 79, Seksyen 5 (Atas Paloh), Kota Bharu Kelantan Darul Naim dalam masa enam puluh (60) hari dari tarikh mula masuk untuk menduduki rumah Projek Perumahan Rakyat (PPR) Kota Bharu, Negeri Kelantan.

2. Saya juga telah bersetuju dan faham serta tidak akan mengambil sebarang tindakan undang-undang dan membuat tuntutan gantirugi kepada Perbadanan akibat daripada notis arahan pengosongan ini dan segala risiko dan kemungkinan yang akan terbit semasa dan selepas pengosongan dan perpindahan ini akan ditanggung sepenuhnya oleh pihak saya/keluarga.

3. Pihak saya/keluarga juga mengambil maklum bahawa pihak Perbadanan selepas daripada tamat tempoh notis ini pada bila-bila masa bebas dan berhak untuk membuat apa-apa tindakan kepada saya/keluarga sekiranya saya gagal menyempurnakan notis sebagaimana dinyatakan dalam surat PKINK: 222/216/1 JLD.5 termasuk tindakan memotong bekalan utiliti (bekalan air, telefon dan elektrik) atau apa-apa tindakan lain kepada saya/keluarga.

3. Saya/keluarga juga berakujanji bahawa saya/keluarga tidak akan lagi mendiami dan akan mengosongkan tanah ini dengan aman sentosa dan tidak akan mencetuskan sebarang provokasi, huru-hara sehingga menjejaskan ketenteraman dan keamanan serta menimbulkan sebarang kekacauan, pergelutan, serangan berbentuk fizikal atau emosi serta

4. Jika saya/keluarga saya gagal mematuhi apa-apa persetujuan dalam akuan ini, saya/keluarga saya bersetuju pihak Perbadanan berhak untuk mengambil apa-apa tindakan undang-undang terhadap saya atau keluarga. Saya membuat akuan ini dengan kepercayaan bahawa apa-apa yang tersebut di dalamnya adalah benar serta menurut Akta Akuan Berkanun 1960.

Diperbuat dan dengan sebenar-benarnya diakui

Oleh yang tersebut namanya di atas iaitu

HAMIDAH BINTI SETAPA

di KOTA BHARU)

Negeri KELANTAN)

Pada 25 APR 2019 haribulan _____ 20____

Tandatangan/Cap Jari

Di hadapan saya,

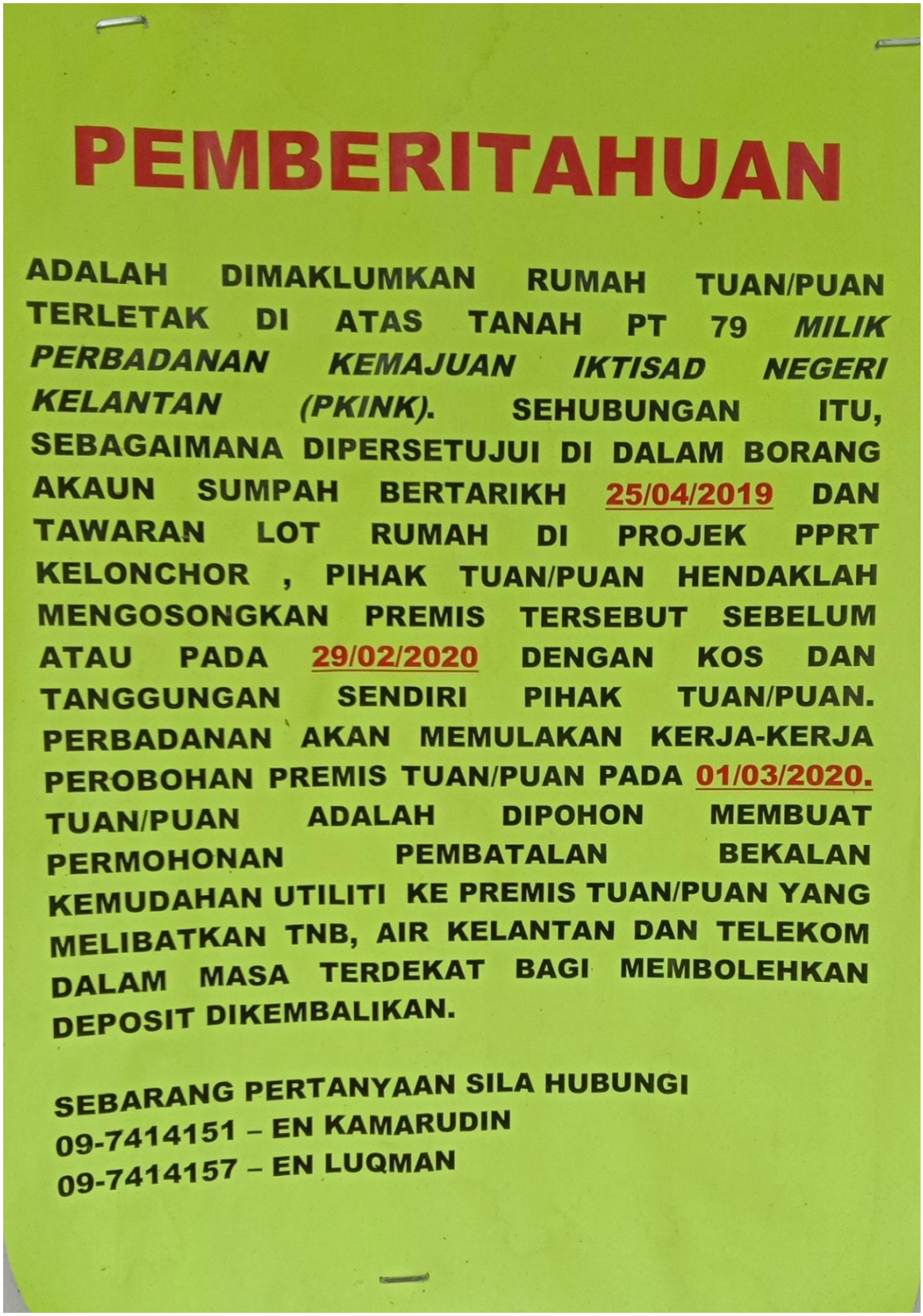
D 071
MOHD. SUHAIMI BIN ALI
01/01/2019-31/12/2021
Hakim Mahkamah Seksyen*

(Tandatangan Hakim Majisterit atau Pesuruhjaya Sumpah)

PT 190, Tingkat 2,
Jalan Mahmood,
15200 Kota Bharu, Kelantan.

PESURUHJAYA SUMPAH MALAYSIA

Appendix C: The 'Aku Janji' letter by PKINK to the residents.

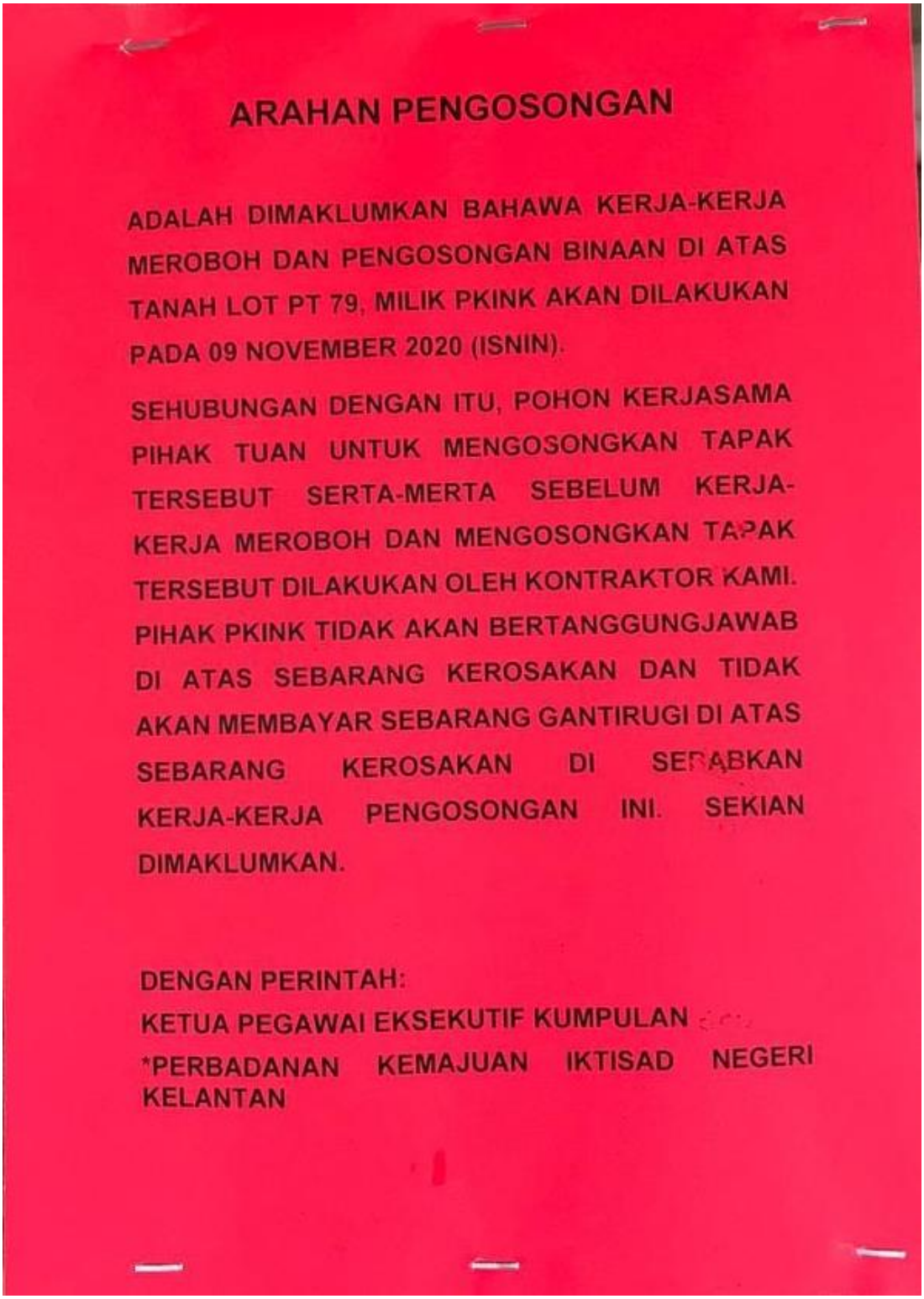


PEMBERITAHUAN

ADALAH DIMAKLUMKAN RUMAH TUAN/PUAN TERLETAK DI ATAS TANAH PT 79 *MILIK PERBADANAN KEMAJUAN IKTISAD NEGERI KELANTAN (PKINK)*. SEHUBUNGAN ITU, SEBAGAIMANA DIPERSETUJUI DI DALAM BORANG AKAUN SUMPAH BERTARIKH 25/04/2019 DAN TAWARAN LOT RUMAH DI PROJEK PPRT KELONCHOR , PIHAK TUAN/PUAN HENDAKLAH MENGOSONGKAN PREMIS TERSEBUT SEBELUM ATAU PADA 29/02/2020 DENGAN KOS DAN TANGGUNGAN SENDIRI PIHAK TUAN/PUAN. PERBADANAN AKAN MEMULAKAN KERJA-KERJA PEROBOHAN PREMIS TUAN/PUAN PADA 01/03/2020. TUAN/PUAN ADALAH DIPOHON MEMBUAT PERMOHONAN PEMBATALAN BEKALAN KEMUDAHAN UTILITI KE PREMIS TUAN/PUAN YANG MELIBATKAN TNB, AIR KELANTAN DAN TELEKOM DALAM MASA TERDEKAT BAGI MEMBOLEHKAN DEPOSIT DIKEMBALIKAN.

SEBARANG PERTANYAAN SILA HUBUNGI
09-7414151 – EN KAMARUDIN
09-7414157 – EN LUQMAN

Appendix D: Notice to vacate residence by PKINK to residents.



ARAHAN PENGOSONGAN

ADALAH DIMAKLUMKAN BAHAWA KERJA-KERJA MEROBOH DAN PENGOSONGAN BINAAN DI ATAS TANAH LOT PT 79, MILIK PKINK AKAN DILAKUKAN PADA 09 NOVEMBER 2020 (ISNIN).

SEHUBUNGAN DENGAN ITU, POHON KERJASAMA PIHAK TUAN UNTUK MENGOSONGKAN TAPAK TERSEBUT SERTA-MERTA SEBELUM KERJA-KERJA MEROBOH DAN MENGOSONGKAN TAPAK TERSEBUT DILAKUKAN OLEH KONTRAKTOR KAMI. PIHAK PKINK TIDAK AKAN BERTANGGUNGJAWAB DI ATAS SEBARANG KEROSAKAN DAN TIDAK AKAN MEMBAYAR SEBARANG GANTIRUGI DI ATAS SEBARANG KEROSAKAN DI SEBABKAN KERJA-KERJA PENGOSONGAN INI. SEKIAN DIMAKLUMKAN.

DENGAN PERINTAH:
KETUA PEGAWAI EKSEKUTIF KUMPULAN
*PERBADANAN KEMAJUAN IKTISAD NEGERI KELANTAN

Appendix E: Evacuation instructions by PKINK to residents.

PERBADANAN KEMAJUAN IKTISAD NEGERI KELANTAN

KENYATAAN MEDIA
PENGOSONGAN TANAH MILIK PKINK DI LOT PT 79, SEKSYEN 5, JALAN ATAS PALOH, JAJAHAN KOTA BHARU, KELANTAN DARUL NAIM.

1. Tanah PT 79, Seksyen 5, Jalan Atas Paloh, Jajahan Kota Bharu, Kelantan Darul Naim adalah hak milik penuh Perbadanan Kemajuan Iktisad Negeri Kelantan (PKINK). Berdasarkan beberapa siri bancian yang dibuat, terdapat penempatan setinggan yang terdiri daripada 53 keluarga telah mendiami dan menyewa premis di tanah tersebut.

2. Hasil perbincangan secara mendalam dan terperinci secara bersama, 52 orang ketua keluarga penduduk setinggan telah bersetuju untuk berpindah dan diberikan keutamaan untuk ditawarkan rumah di Projek Perumahan Rakyat (PPR) Jalan Kelochor, Kota Bharu yang telah siap dibina dan sedia untuk diduduki bagi memberi laluan pembangunan yang akan dijalankan di kawasan tersebut.

3. Sehingga kini, 36 ketua keluarga telah ditawarkan untuk menduduki PPR Jalan Kelochor, 31 keluarga telah berpindah dari kawasan setinggan tersebut dan 5 keluarga dalam proses perpindahan. Manakala baki 16 keluarga lain sedang dalam peringkat rayuan setelah permohonan pertama gagal kerana tidak menepati syarat-syarat yang ditetapkan untuk menduduki PPR.

4. Sebelum proses pembersihan kawasan dibuat, PKINK telah mengadakan beberapa siri perbincangan dengan penduduk tempatan dan telah mengeluarkan notis pemberitahuan kepada penduduk di kawasan setinggan yang terlibat supaya mengosongkan premis sebelum atau pada 29 Februari 2020 bagi membolehkan kerja-kerja pembersihan kawasan dibuat. Namun

Appendix F: Media statement by PKINK.

begitu, berikutan Perintah Kawalan Pergerakan (PKP) yang dilaksanakan oleh Kerajaan Malaysia pelaksanaan kerja-kerja pembersihan kawasan terpaksa ditangguhkan.

5. Notis pengosongan kali kedua telah dikeluarkan pada 23 Julai 2020 bagi membolehkan kerja-kerja pembersihan tanah dilakukan bermula 2 September 2020. Sehingga kini PKINK hanya merobohkan 31 premis yang telah dibina tanpa kebenaran setelah mendapat persetujuan bertulis dari penduduk yang terlibat.

6. Kerja-kerja pembersihan kawasan yang dijalankan adalah mengikut garis panduan dan tatacara keselamatan yang ditetapkan setelah mengambil kira nasihat pihak berkuasa tempatan. Penduduk setinggan juga diberi kelonggaran untuk merobohkan sendiri premis mereka sebelum kerja-kerja pembersihan kawasan dilakukan. Aktiviti pembersihan kawasan yang dijalankan juga telah menyelesaikan masalah pencemaran akibat dari sampah sarap dan saliran kumbahan sedia ada yang dibina tanpa kebenaran dan secara tidak sempurna.

7. Sebagai sebuah badan korporat yang bertanggungjawab dalam menerajui pembangunan dan pertumbuhan ekonomi Negeri Kelantan, PKINK sedar akan kesulitan yang dialami oleh penduduk yang terlibat. Oleh itu, inisiatif pemberian bayaran *ex gratia* berjumlah RM1,000.00 diberikan kepada ketua keluarga yang bersetuju untuk berpindah dengan bayaran secara berperingkat. Bayaran RM500.00 dibayar sebelum berpindah dan baki RM500.00 dibayar setelah selesai berpindah.

8. Sehubungan dengan itu, PKINK menafikan kenyataan sebagaimana video tular bahawa PKINK telah menzalimi penduduk di kawasan setinggan di kawasan tersebut kerana ruang perbincangan telah dibuka dan peluang berteduh yang diberikan sebelum ini. Semoga Allah S.W.T. merahmati dan memberkati segala usaha-usaha yang kita lakukan demi kesejahteraan Ummah.

PERBADANAN KEMAJUAN IKTISAD NEGERI KELANTAN
23 September 2020/ 5 Safar 1442

Appendix F: Media statement by PKINK.

PEJABAT PENASIHAT UNDANG-UNDANG
NEGERI KELANTAN
Tingkat Bawah, Blok 5,
Kota Darulnaim,
15050 Kota Bharu,
KELANTAN.

Tel. P.P.U.U.N : 09-7482132
: 09-7448881
Tel. S.U.K : 09-7481957
Faks P.P.U.U.N : 09-7447160
Faks T.P.R : 09-7481592
Portal Rasmi : www.agc.gov.my

Ruj Kami : PU. KN SM 25/01/2021
Tarikh : 3 Februari 2021

Tetuan Harmy Yusoff & Azli
Peguambela & Peguamcara
Pekeliling Business Centre
No.18, Jalan 65C Off Jalan Pahang Barat
53000 Kuala Lumpur
Malaysia **Emel/Poslaju**
(u.p:Encik Mohamed Harmy Bin Tan Sri Dato' Yusoff)

Tuan,

DALAM MAHKAMAH TINGGI MALAYA DI KOTA BHARU
SAMAN PEMULA NO: DA-25-12-12/2020
ANTARA
MOHD NAQIB BIN MD HASSAN & 16 YANG LAIN **...PEMOHON-PEMOHON**
DAN
PERBADANAN KEMAJUAN IKTISAD NEGERI KELANTAN
& 4 YANG LAIN **...RESPONDEN-RESPONDEN**

Dengan segala hormatnya merujuk kepada perkara di atas yang telah ditetapkan untuk **Pengurusan Kes** pada **21.2.2021** dan perbualan telefon antara saya dan Encik Mohamed Harmy pada 2.2.2021.

2. Kami mengesahkan bahawa pihak tuan tiada bantahan untuk pihak kami memfailkan Afidavit Jawapan pada atau sebelum tarikh pengurusan kes akan datang.

4. Kerjasama pihak tuan diucapkan ribuan terima kasih.

Sekian, terima kasih.

"PRIHATIN RAKYAT:DARURAT MEMERANGI COVID-19"

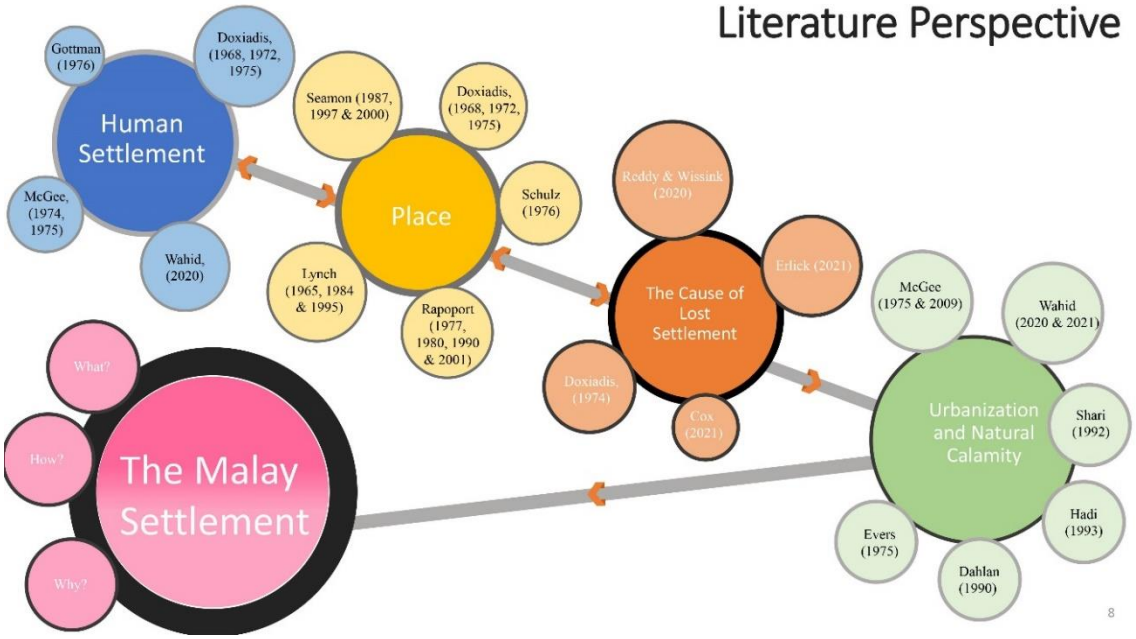
"BERKHIDMAT UNTUK NEGARA"

Saya yang menjalankan amanah,

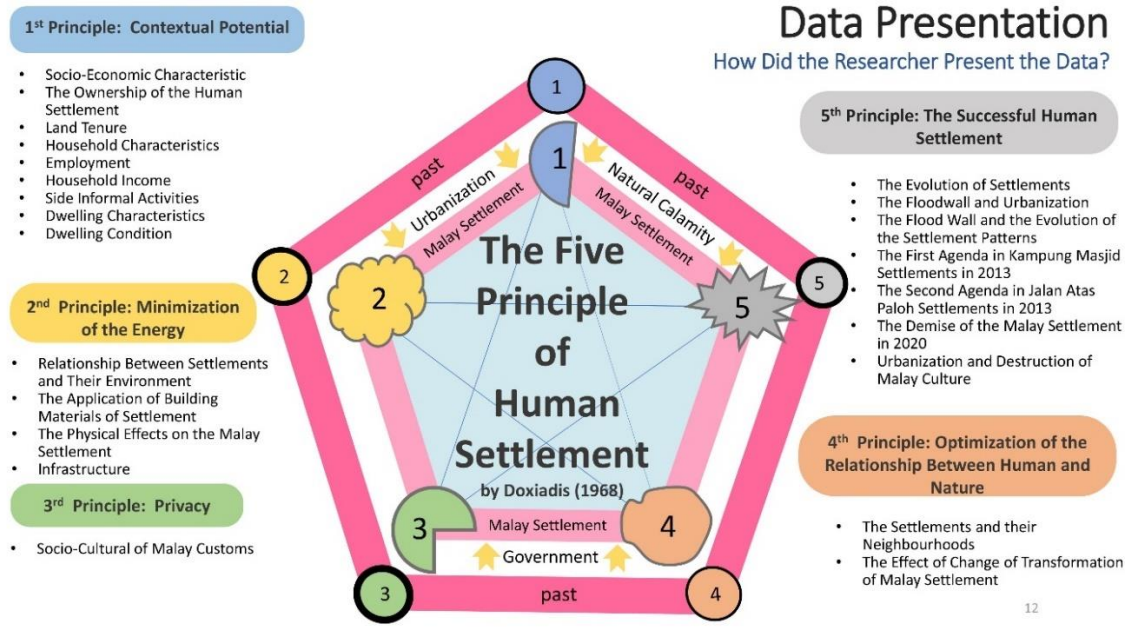
(NIK HABRI BIN MUHAMAD)
Penolong Penasihat Undang-Undang
Negeri Kelantan
b.p: Penasihat Undang-Undang
Negeri Kelantan.

"BERTEKAD MENEGAKKAN KEADILAN"

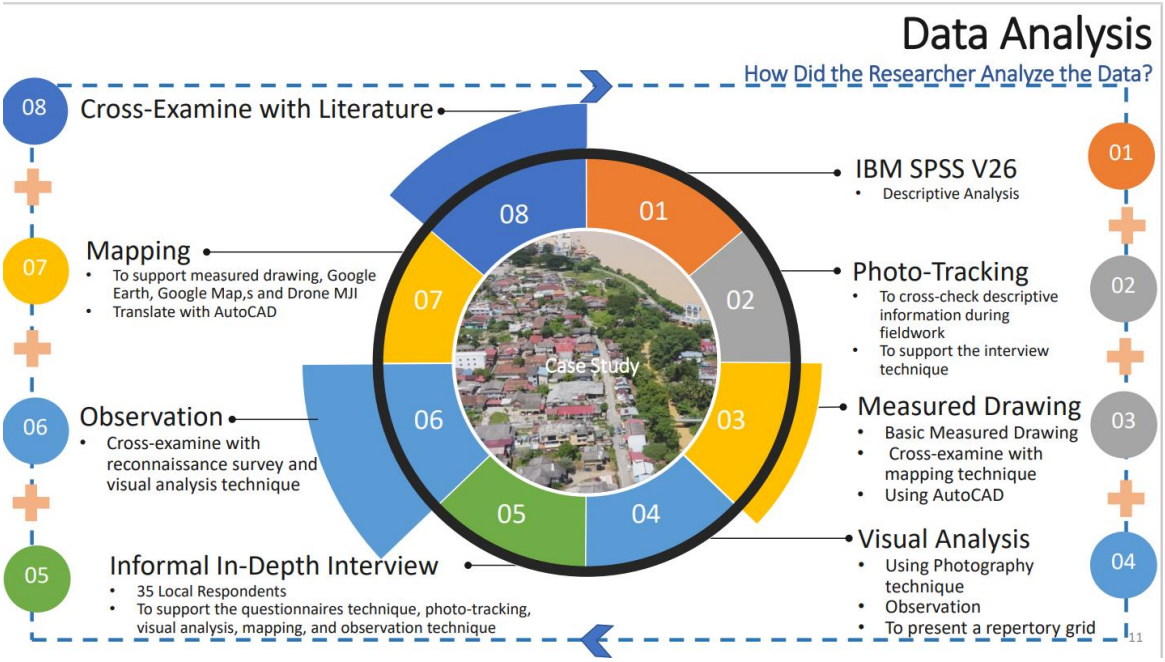
Appendix G: Court hearing application by the residents.



Appendix H: The summary of theoretical framework (Viva Voce's slide presentation on 19.01.2023)



Appendix I: The questionnaire design with the Five Principle of Human Settlement by Doxiadis in the analysis approach (Viva Voce's slide presentation on 19.01.2023).


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How Did the Researcher Analyze the Data?
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Cross-Examine with Literature
07
Mapping
To support measured drawing, Google Earth, Google Map,s and Drone MJI
Translate with AutoCAD
06
Observation
Cross-examine with reconnaissance survey and visual analysis technique
05
Informal In-Depth Interview
35 Local Respondents
To support the questionnaires technique, photo-tracking, visual analysis, mapping, and observation technique
01
IBM SPSS V26
Descriptive Analysis
02
Photo-Tracking
To cross-check descriptive information during fieldwork
To support the interview technique
03
Measured Drawing
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Cross-examine with mapping technique
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04
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Observation
To present a repertory grid
Case Study
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