# Evolution of Urban Village in Bahrain

## A Study on Historical Events and Morphological Constraints

Wafa Al-Ghatam[1]

**Abstract:** This paper aims to review the evolution of villages in Bahrain and the context they evolved in before and after being absorbed into urban centres. The paper attempts to pinpoint how the cumulative processes of urban growth and urban intervention have influenced the city's spatial structure and the development of villages in Bahrain. It sets the historical scene for the formation of Bahraini's old settlements of villages and cities. It starts by discussing the urban development of Bahrain before examining the physical manifestation of Manama and Muharraq and their villages. The paper traces realisation and evolution through literature and historical records. It is divided into two parts, the first of which starts with a review of previous studies that have examined urban development in Bahrain. The second part focuses on the villages' development and their main morphologic features. In addition, it briefly presents the current situation of urban villages in Bahrain. The paper's aim is twofold: to contextualise the research both in terms of its historical background and to reveal the different actors involved in the role of urban form in the social life of the urban villages of Manama and Muharraq.
**Keywords:** Urban Village, Urban Evolution, Island Development, Urban Form.

### 1. Part One: Bahrain Main Islands Urban Developent

The Kingdom of Bahrain is an archipelago comprising 33 islands located in the Arabian Gulf between the Kingdom of Saudi Arabia and Qatar. The two main islands are Bahrain and Muharraq. Bahrain[2] has a distinctive coastal strip, where villages have existed on the north, east, and west sides of Bahrain's biggest island and around Muharraq's island coastline. The northern coast is fully encircled by shallow water made up of coral reefs, as demonstrated in Figure 1, which prevents access for boats along the coast. This was a critical element of the ancient pattern of settlement in Bahrain. Since antiquity, the inhabitants of the islands have always been able to identify the few rare channels that naturally cut into these coral reefs and sometimes even to enlarge them to allow boat traffic to pass and create moorage areas as close as possible to the coastline (UNESCO, 2005). Figure 1 presents one of the earliest pieces of cartographic evidence of cities and villages in Bahrain from 1825. Notably, this is more of a simple pictographic representation than an actual map; yet, it clearly highlights the location of the villages and cities with their names and the connections and roads between them – gardens, forts, and coral reefs, as well as the depth of the shoreline. The roads (blue lines) and the locations of the villages (yellow and red dots) on Bahrain island were retraced for maps in 1934 and the 1970s, as demonstrated in Figures 1 and 4 for Muharraq island. The historical maps provide proof of the existence of a linear network on Bahrain island that has

1. University of Bahrain.
2. Bahrain was proclaimed a Kingdom in 2002.

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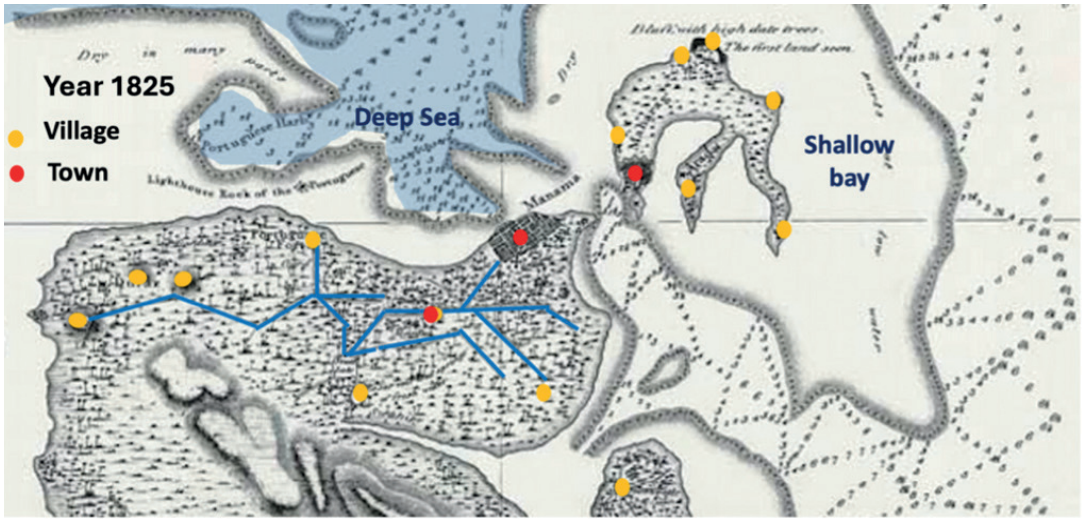
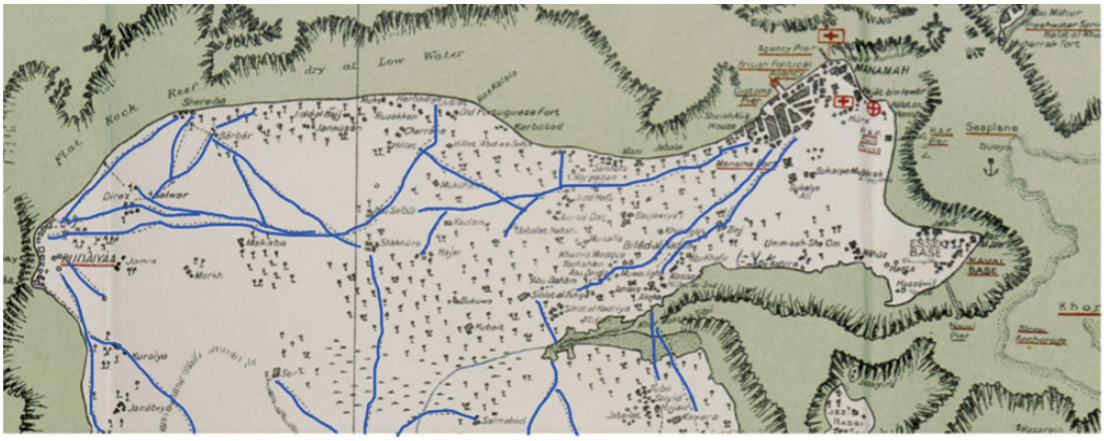



a. Bahrain map Year 1825




b. Bahrain Year 1937


c. Bahrain map Year 1956

Figure 1. *Evolution of Bahrain's Road Network from Historical Maps. Figures 1a to 1c trace the roads and settlements on Bahrain Island from 1825 to 1956, examining the interconnectedness between cities and villages facilitated by road networks. They reveal a consistent linear network connecting villages to Manama, indicating a pre-urban superstructure centred on the port city. This suggests the presence of a market centre in Manama, facilitating trade and connecting villages through cost-efficient routes.*

existed since the 19th century. They indicate a pre-urban network superstructure with historical traces between settlements and main towns. Sometimes these routes connect to villages directly, while others require more steps and roads to reach them. Historically, Bahrain was a market centre within the world trade network, a point of transhipments of Eastern goods and a hub of intensive agricultural villages from the first millennium BC. During the medieval and late Islamic periods, villages appeared in two clusters, one along the north coast and another along the west coast (Larsen, 1983). Bahrain occupies a strategic position in the Arabian Gulf. The major expansion of its settlements occurred during the height of an organised maritime trade network centred on Hormuz between the 13th and 16th centuries.

In the late Islamic period, the Portuguese arrived in Bahrain. A distinct period of land abandonment in the southern region began, marking the onset of a long period of settlement retreat that only reversed during the past century (Larsen, 1983). Historical records indicate continuous settlement along the north coast of Bahrain island, where the most copious artesian springs are located. Population and the concomitant areas of agricultural land use on the island spread outward from this artesian centre and, for reasons that remain obscure, exhibited periodic retreat. These centrally located clusters of villages were supplied by artesian water via qanat systems, as demonstrated in Figure 2. These qanats transported water directly to the agricultural areas, where they emptied into bifurcating canal networks. Belgrave (1968) claimed that the various qanat systems visible on the western coastal plain were introduced to Bahrain during the Sasanian period (600 AD).

### 1.1. *Bahrain Island*

#### 1.1.1. How Water Shaped Urbanization and Routes in Bahrain

Bahrain began to adopt the characteristics of a modern market economy in the 14th century, when Manama was mentioned for the first time as a market centre of an extensive settlement (Rentz and Mulligan, 1960: 941-944). Manama demonstrated a street network system of a coastal port connecting a semi-circular array of villages on Bahrain island with the market (Larsen, 1983: 94-95). The farmers in preindustrial times marketed their harvest in Manama and there was a network of trails converging on the urban centre of Bilad Al Q-adeem Souq (or Al-Khamis Souq). Considering the lack of motorised shipping in the past allows one to better approximate the near-constant transportation costs. In theory, this study's historical overview identified the presence of a market centre for Bahrain in Manama due to cost minimisation strategies, linking the villages with a central market.

The northern coast of Bahrain island is fully encircled by shallow water made up of coral reefs, as demonstrated by one of the earliest pieces of cartographic evidence of cities and villages in Bahrain from 1825 shown in Figure 1a, which prevents access for large boats along the coast. This was a critical element of the ancient pattern of settlement in Bahrain. Since antiquity, the island's inhabitants have always been able to identify the few rare channels that naturally cut into these coral reefs and sometimes even enlarge them to allow boat traffic to pass and create moorage areas as close as possible to the coastline (UNESCO, 2005). Notably, Figure 1a is more of a simple pictographic representation than an actual map; yet it clearly highlights the location of the villages and cities with their names and the connections and roads between them; gardens, forts, and coral reefs; and the depth of the shoreline.

In addition, the roads and the locations of the villages and cities on Bahrain island on the map of 1825 in Figure 1a were retraced for maps in 1937 and then 1956, as demonstrated in Figures 1b and 1c. The historical maps provide proof of the existence of a linear network on Bahrain island that has existed since the 19th century. They indicate a pre-urban network superstructure with historical traces between villages and Manama as a port city and main

market of Bahrain. In theory, this study's historical overview identified the presence of a market centre for Bahrain in Manama due to cost minimisation strategies, linking the villages with a central market. This could be worthy of future research studying Bahrain human settlements past and present. Sometimes these routes attach to villages directly, while others require more steps and roads to reach.

The mouth of a shallow bay and the cultivatable soils found in the surrounding coastal area of Bahrain, along with the artesian water, have been presented as the main natural factors in the location of villages and agricultural activities. In a geoarchaeological study, Curtis Larson (1983)[3] identified the variables in how historical land use and population density were largely a function of available water sources and distance from main market centres. Figure 2 presents aerial photographs taken in 1956 that show the earlier expanded irrigation and cultivation associated with the location of villages on the coastline of Bahrain (Larsen, 1983: 20). The close approximation to the modern village patterns suggests a comparable preindustrial village pattern. Figure 6 presents a record of the number of villages on the main island with respect to their distance from Manama; as anticipated, the greatest number of villages can be found within 5 kilometres of the city – a reflection of population distribution.

This indicates that Manama's layout evolved alongside the development of irrigation systems, land division, and tenancy arrangements as depicted in a 1937 map. Two main irrigation methods existed: the falaj, utilizing underground channels, and water lifting from wells using goat skins. The absence of topographical barriers facilitated parallel water channels, shaping the city's future street network (Larsen, 1983). These channels also delineated agricultural plots, evolving into pathways connecting the city to palm groves and remote villages. Manama served as a market hub where farmers from distant villages traded their produce, contributing to its growth as a converging point for road networks (Larsen, 1983: 119).

Reflecting on the placement of Manama city on the farthest north-eastern tip of Bahrain Island, numerous theories exist regarding its establishment. However, what remains evident is that this location, nestled between the significant islands of Muharraq and Bahrain, provided the only viable anchorage for large boats, alongside agricultural resources supporting various settlements' sustenance needs. The availability of low-salinity water likely played a pivotal role in the city's growth, distinguishing it from neighbouring urban centres. Additionally, its strategic importance cannot be understated, as it overlooks two crucial sea borders: one facilitating commerce from the Shatt Al-Arab region and the eastern Arabian Peninsula, and the other facing Muharraq island. These maritime gateways, with their potential for harbour construction, further cemented the city's prominence by accommodating fishing and trade vessels.

### 1.1.2. Reclaiming Land for Urban Growth: Manama's Expansion

The sea, from then on, became the primary source of people's livelihood and a potential area of expansion, offering – in contrast to desert areas – the advantage of being close to existing urban centres (Belgrave, 1968). The naturally high sandbanks surrounding Bahrain's northern and western coasts made reclaiming land from the sea economically feasible. Land reclamation dates as far back as the 1930s on the island of Muharraq, when the city was thriving and land was becoming scarce on the small island. The sea dried out over two to three years when garbage was deposited to become land.

Over the course of the last eight decades, Bahrain has embarked on a monumental endeavour of land reclamation, augmenting its territorial expanse by thousands of hectares

3. A geoarchaeological study in 1983 on the life and land use of Bahrain Islands.


Figure 2. *Modern and abandoned irrigation systems: the position of springs, wells, canals, and garden areas, as mapped by the Italian consulate in 1971 from a map drawn in 1956 (Source: Larsen, 1983: 91).*

enveloping its islands and urban hubs. This transformative process, driven by various factors, has led to a significant disconnection from the sea. Coastal villages and towns have been relocated several kilometres from the original shoreline. Furthermore, beyond the physical transformation of the coastline, land reclamation has fundamentally altered its functional role, relegating the sea to a distant vista mainly observable from private lands.

Figure 3 provides a comprehensive visual representation of the dynamic transformation of Bahrain's land boundary spanning the last four decades. It vividly contrasts the territorial delineations observed in 1964 with the remarkable expansions resulting from significant land reclamation endeavours in 2002 and 2007. The progression of these expansions can be delineated into distinct phases: an initial gradual initiation in the 1930s, followed by a period of exponential growth post-1964 and during the 1990s to 2002, characterized by the strategic creation of artificial islands. However, in juxtaposition with the established urban fabric, the emergent zones frequently exhibited a low-density configuration, characterized by isolated public edifices set amidst verdant surroundings. This development paradigm, indicative of an economically inefficient utilization, was particularly notable during the 1960s. Moreover, by the year 2007, the landscape of Bahrain had undergone further extensive development, marked notably by the proliferation of major highways and bridges, particularly in the bustling urban centres of Manama and Muharraq.

### 1.1.3. Charting Change: Expanding Roads Networks, Infrastructure and Housing

In 1912, Manama Port was built in front of Manama Souq on the northern side, along with warehouses for goods; however, this soon became outdated and inadequate for the needs of the growing country. It was then that Salman Port was built in southwest Manama, which entered began its operation in 1967. In the early 1930s, Bahrain's airport started operating in the middle of Muharraq Island. In 1936, the Sheikh Hamad Causeway, which connected Manama and Muharraq, was opened. The transformation of social and economic life in Bahrain started at the beginning of the 20$^{th}$ century, followed by the discovery of oil in the early

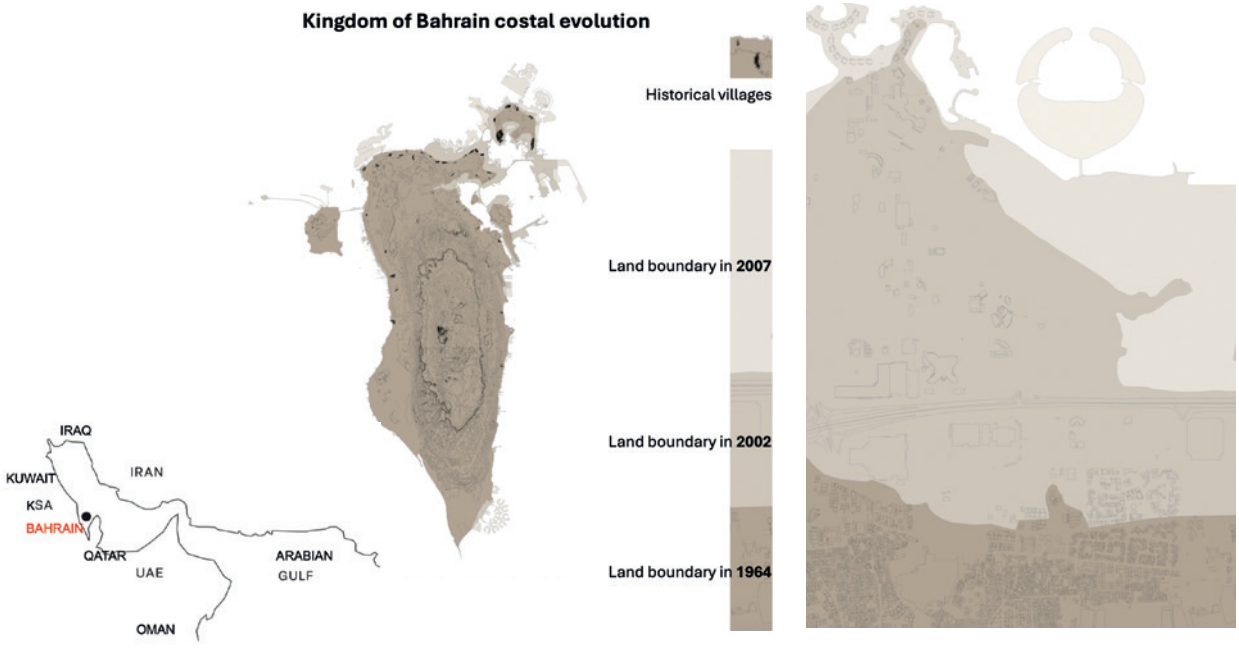



Figure 3. *Evolution of Bahrain's Land Boundary: 1964, 2002, and 2007. The map illustrates Bahrain's land boundary in 1964, juxtaposed with significant land reclamation boundaries in 2002 and 2007. Additionally, historical city and village centres are delineated in black, providing context to the spatial evolution (Source: Bahrain Authority of Culture, 2007).*

1930s. The population density between 1941 and 1971 indicates that the rural areas gradually declined due to immigration towards the towns and new urban areas (Al-Nabi, 2012: 27).

As the expatriate workforce, largely employed in government sectors such as healthcare, defence, law enforcement, the oil industry, and education, expanded, public housing initiatives grew in tandem. In the 1960s, urban policy incorporated public housing as part of its framework, leading to the development of apartment complexes (Al-Nabi, 2012). The State took on a central role as the primary provider of social amenities and housing, underlining a welfare policy aimed at fostering social justice and improving living standards. Across Bahrain, numerous programs were launched to address the housing needs of both expatriates and locals. However, despite these efforts, the historic core, renowned as a bustling commercial and service centre, gradually transitioned into an enclave dominated by low-income rental housing.

Widening roads in the old city and the development of the network linking the cities with the other settlements took place as early as the arrival of the first car in 1914. At the city level, a shift in road pattern from the irregular form to straight arteries and a grid layout was an evident sign of this influence. By 1961, road development was pursued on a minor scale in and around Manama and was primarily meant for the passage of non-motorised vehicles and pedestrians. Major road networks were then constructed in the early 1960s, including the Sheikh Salman Highway, to connect the airport in Muharraq to Manama and the outlying settlements of Awali in the southeast, mainly for Bahrain Petroleum Company (BAPCO) workers. Similarly, the road between Manama and Budaiya in the west was constructed, along with the road that connects Muharraq with Hidd to the south of the airport. Bahrain has experienced significant social and economic changes due to several concurrent developments (Al-Nabi, 2012). Highways have been constructed by pushing back the coastline and extending Bahrain in belt-like forms. Ring roads, following the oval form of the old core, were built in response to the traffic congestion that arose in the city centre where most public services, banks and commercial activities were located.

Until the early 1980s, palm trees continued to dominate the landscape of Bahrain despite the collapse of agriculture. The decline in the date trade in the 1930s led to the sale of agri-

cultural land at low prices, with parcels often sold to wealthy merchants, increasing private property ownership (Rumahi, 1976: 52). The rise of the monetary economy further shifted land use, with date groves transformed into private gardens and housing. At the same time, the pearl fishery in Bahrain had started to decline with the rise of cultured pearls in Japan during the 1920s, and this trend continued even after the first oil discovery in 1932.

By 1990, as demonstrated in Chart 1 and Figure 4, the shift in land use from degrading agriculture to urbanisation had become irreversible. Chart 1 demonstrates a notable shift in the size of agricultural land concerning urban intervention between 1930 and 2007. After 1969, the agricultural green area began to diminish, while urban development in towns surged rapidly. By 1968, a demographic map indicated that 96% of population centres were distributed across the islands, with the remaining 25% of the population dispersed among 89 small villages (Al-Nabi, 2012).

Figure 4 depicts Bahrain's growth and major urban development endeavours spanning from 1939 to 2007. Initially, between 1939 and 1950, the majority of the green built area was devoted to agriculture. However, after 1971, there was a gradual shift from agricultural to residential and commercial land use, with a significant surge in urban construction during the 1990s. Thus, most interstitial spaces and vacant land in Bahrain and its satellite municipalities may owe their existence to this shift in land use. A simple comparison between the earliest and latest maps reveals an inversion of the landscape, from palm trees surrounding buildings to buildings surrounding palm trees. However, such an inversion was just a transitory stage towards the complete urbanisation of the northern region, in which the dying farms turned into a potential land pocket for growth.

Between 1989 and 2001, significant cooperation occurred with the United Nations Human Settlements Programme (UN-HABITAT) to study the preparation of land-use master plans for many parts of Bahrain. The collaboration took place between foreign consultants, the Bahrain Economic Development Board (EDB), and Skidmore, Owings, and Merrill (SOM). Despite the recommendations of the National Land Use Plan 2001 (Ministry of Housing, 1988) to protect the remaining fertile land and relocate urban development to the south, the small settlements within the green band gradually continued to expand at the expense of farms. In 2006, the National Planning Development Strategies 2030 in Bahrain embarked on preparing a comprehensive national master plan that would address and integrate economic, social, physical, and environmental developments. However, as planning in Bahrain is market-led, many of these master plans and bylaws are continually changing in line with market demand (Al-Ansari, 2009).

Between 2001 and 2007, real estate became the principal driving force for urban development; most current developments privatise the coastline, making it inaccessible to the pub-

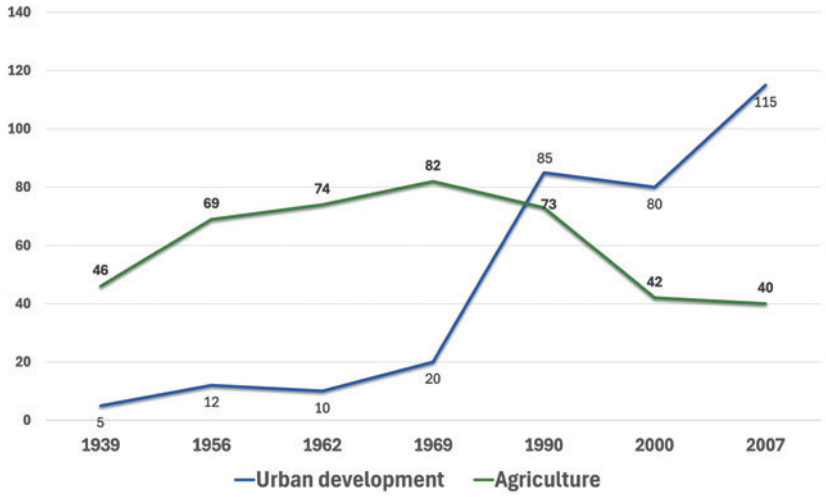



Chart 1. *Urban intervention and development area size in Bahrain between 1939 and 2007: After 1969, the agricultural green area started to shrink and the new urban development of towns rapidly increased. In 1968, the topographic map reveals that there were 96 centres of population within the islands with the remaining 25% of the population scattered over 89 small villages (Source: Al-Nabi, 2012: 28).*

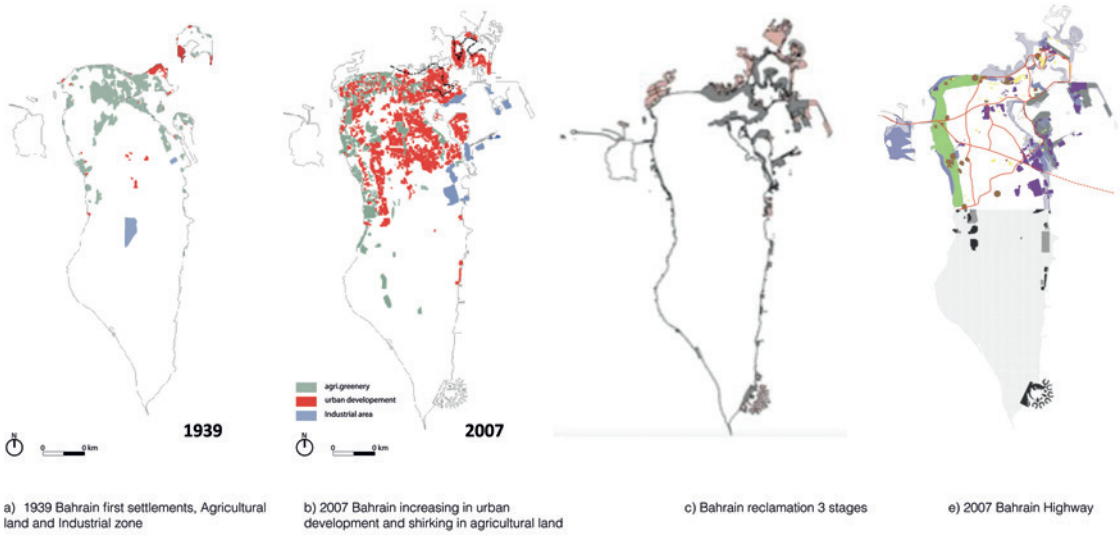



Figure 4. *Bahrain's Urban Development 1939-2007: Bahrain's evolution and significant urban development initiatives from 1939 to 2007. Initially, between 1939 and 1950, the predominant land use was agricultural. However, after 1971, there was a transition towards residential and commercial development, with a notable increase in urban construction during the 1990s (Source: Thematic maps ETH, Gugger Bahrain Lessons, 2010).*

lic. This situation has reached its climax, with only 8% of the total coastline areas of Bahrain now being public (Loughland & Zainal, 2009). This privatisation of the coastline also made it more difficult for local fishermen to access the sea. Although its contribution to the national gross domestic product is marginal, this had a significant sociocultural impact. In just half a decade, society moved from living at the rhythm of the sea to one that is nearly completely detached from it (Al-Ansari, 2009; Banchini & Al-Sayeh, 2010).

The relatively rapid complexity of planning involved with these megaprojects, new towns, and gated communities marked a departure from cities' former incremental slow urban growth and their relation to their direct social and economic-driven urban system. This in turn marked a new era for mid-20th century planning approaches. Al-Sayeh claimed that with this superficial idea of modernisation, there was little need to deal with or integrate with the rest of the urban fabric (Al-Sayeh, 2016).

### 1.2. *Muharraq Island*

The second main island in Bahrain is Muharraq, which is smaller than Bahrain island. Figure 5 presents maps of Muharraq in 1812 and the 1930s. The 1812 map depicts Muharraq island with the shape of a crescent containing two towns, namely Muharraq and Hid, with two small islands containing Arad village in the middle and Bu Maher Island south of Muharraq town, in addition to four villages in the north coastal line of the island (Busaiteen, Dair, Semaheej, and Galali). The 1930 map depicts Muharraq island made up of three tips: the southwestern tip represents a small peninsula of Muharraq town; the Hidd town tip to the southeast, which is similar to 1812; and Arad Island merging with Muharraq to form the third tip in the south-central part of the island. Muharraq town is separated from the Arad peninsula by a shallow bay that is mostly dry during low tide. Bu Maher island merges on the south side of Muharraq town and occupies some coral reefs and a fort. On the island's north side remain three villages, namely Dair, Semaheej, and Galali. Muharraq's old town has a defined position on the peninsula and is surrounded by the sea from three sides. The only free side allowing Muharraq town to extend was the north, occupied by the main cemetery, Busaiteen village, and the former British military base and residence in the 1930s. The city does not have many open sides except for some limited small parts, such as the north-eastern corner and the coastal side up to Busaiteen

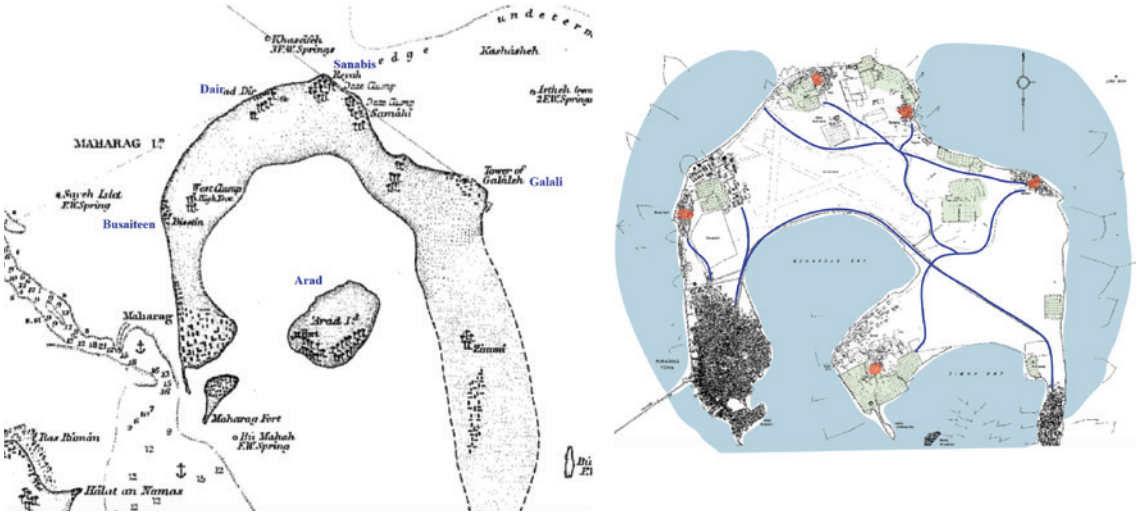



Figure 5. *Muharraq in 1817 (left side) and the 1930s (right side): The 1817 map depicts Muharraq island with significant villages (blue font); Arad village is on a separate small island to Muharraq island (source: Jarman, 1996). The 1930s map reveals that Arad Island has merged with Muharraq's larger island (Source: Bahrain, Idart Al Misahah [in English survey department; later transferred to Ministry of Housing, urban development department]).*

village. The city's position might justify its growth deficiency compared with Manama. When examining historical maps of Muharraq, one is struck by the fluidity of the coastline (Yarwood, 1988: 76). A large area of the reef is exposed at high tide, which may have sometimes made the coastline slightly ambiguous. These shallows provided the basis for the gradual process of land reclamation, which allowed the town to grow.

In Muharraq, the Souq is a long thin shape along the former west coast – that is, facing Manama – as demonstrated in Figure 6. This arose on the coastline for three reasons: "[A]nother suitable land was taken up; it was a major route linking the outlying areas to the Manama ferry boats (by passing the alleys of the town) and ships could unload there. The attenuated form arose because it was easier to extend along the coast before expanding by reclamation into the sea" (Yarwood, 1988: 78). Some caution is required in identifying the most important routes in Muharraq. The modern pattern is deceptive because several new links have been added over the last 40 years, which obscure the significance of the historical pattern (Yarwood, 1988). As Figure 5 indicates, Sh[4]. Hamad Road and Sh. Isa Road were widened between 1983 and 1985 along their entire length. Before this, smaller schemes were also undertaken, and it initially ended by the northern courtyard of Sh. Hamad house.

This was partly demolished around 1960, and the road was extended to meet up with Sh. Isa Road. The original layout gave importance to Sh. Muhammed Road as a north-south link, but after the road extension schemes, Sh. Isa Road became far more critical as such a link. Sh. Isa and Sh. Muhammed roads were crucial links between the villages to the north (which contained the summer palaces of the rulers). Sh. Hamad Road and Sh. Abdullah Road linked the central palaces to the coast, and hence the ferries to Manama. There is also a ring road, mainly along the former beaches (Al-Khalifa Road / Sh. Abdullah / Bu Maher Road / Road 1123) but also Wali – Al-Ahd road, which was a route from Dair and Semaheej villages to the Souq and then to the Manama ferry along with the northern limit of the built-up areas, as it was in the 1920s (Yarwood, 1988: 79-80).

Furthermore, Muharraq town differed from Manama town in its identity, entity, structure, development, and history. Muharraq represented the national capital of Bahrain. It was the capital of fishing in the period of Bahrain's prosperity, as it had central markets and shipbuilding slipways. After the two cities were connected, consequences included the diminishing of many city

4. The initial 'Sh.' indicates Sheikh, a title of a ruler/leader of tribe in Arabic.

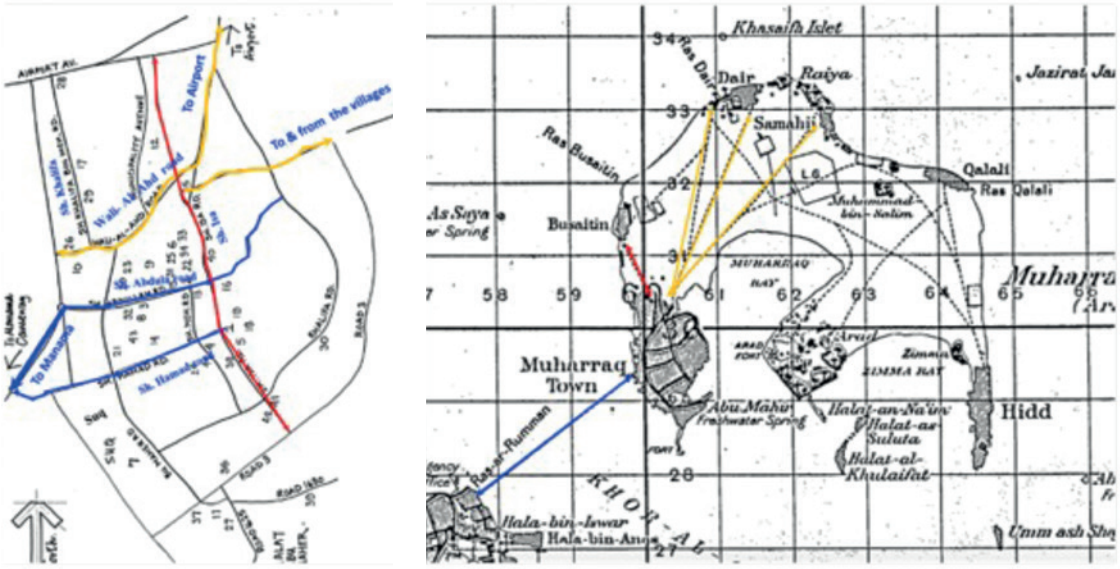



Figure 6. *Muharraq's main routes and links since the 1930s or earlier (Source: Yarwood, 1988; modified by the author).*

functions, which in many cases led to their extinction. If this connection affected the morphology of the city, then its timing in the urban and economic growth period (which relates to the economies of oil and trading) contributed to making Muharraq just a residential suburb near Manama.

### 1.2.1. Concentration and Diffusion of the Urban Centres in Bahrain in the 1970s

A human geography study in 1975 observed a large number of settlements concentrated around Manama and Muharraq within a 5-km circular radius (Figure 7). These two towns together formed 58.5% of the population of Bahrain (1971) and had more than 63.2% of the total housing units on the islands. By count, all settlements within the 5-km radius accounted for 70.2% of the whole Bahraini population. By extending the circle to a radius of 8 km, this figure reached 81.7% of the total population. The study raised the question of whether this concentration is an elementary characteristic of settlement in Bahrain. The suggested methodology for answering this question used Peter Haggett's formula of locational analysis in human geography (1965) by measuring the degree of concentration and diffusion between the urban centres of Bahrain.

Figure 7 presents the 1970's urban centres in Bahrain in the map used for the human geography study. Haggett divided his location analysis into two main parts. First, models of locational structures were organised around identifying five distinct regional geometric structures: movement – interaction among points; networks – lines of linkages among points; nodes – the convergence of lines of linkage; hierarchies – differentially sized nodes; and surface – spaces separating hierarchical nodes. The second part was a locational analysis with mathematical procedures (Haggett, 1965). The mathematical formula of this concentration and diffusion was as follows: $Rn = 2D \sqrt{N/A}$, where D is the average distance between urban centres, A indicates the area of the urban centres, and N is the number of urban centres. For Bahrain, the concentration degree varied between 0 to 2.15, where zero indicates highly concentrated centres of distribution, 2.15 means a highly ordered distribution, and 1 indicates a disordered concentration distribution between urban centres. By measuring each urban centre within the three main inhabited islands in Bahrain of Manama, Sitrah, and Muharraq as key administrative units, the study obtained the following findings: for Bahrain island, which includes Manama, the degree of the urban centre's concentration-diffusion Rn reached 0.733, demonstrating an inclination toward concentration. Simultaneously, it was characterised by some randomness in the distribution. The convergence distribution distance demonstrated in the area surrounding Manama

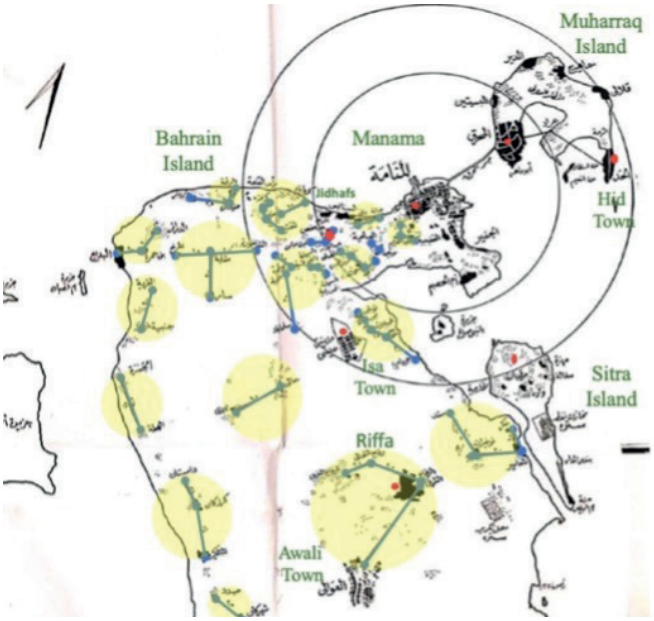



Figure 7. *Map of Bahrain in 1971: The figure reveals that the large concentration of villages and town centres around Manama and Muharraq are within the 5-8-km diameters. The red dots indicate the seven towns in Bahrain (population > 5,000) while the rest are villages. Sitra and Jidhafs were originally a number of small villages next to each other that merged. The yellow circles indicate the closest distance between the villages. Isa town was the first public housing project, and Awali town was the first privately planned town for the Bahrain Petroleum Company (Source: ALECSO, 1975: 304).*

was between one quarter to one half a kilometre. On the western side of Bahrain, the figure was between 1 to 2.5 kilometres, while in the south it increased to 3 to 6 km. These differences in distances between various localities might confirm the feature of relative randomness in distribution between the centres on the largest island. On Muharraq Island, the Rn measure reached 2.01, which indicates close to orderliness in approximately seven centres. They were all located at semi-equal distances that ranged between 1.5 and 2.5 km, while simultaneously all centres lay around the perimeter of the island. For Sitra island, the Rn was 1.64, indicating a mixture of regularity and randomness in distribution and distances. By measuring the distances between eight village centres, the study found that the average distance of the nearest neighbour was half a kilometre for five of them, while it was 1.5 km for the other three.

## 2. Part Two: The Urban Village

The first part of the paper underscores the pivotal roles of agriculture, fishing, and pearling in shaping Bahrain's economy since 1937. It also examines the interconnectedness between cities and villages facilitated by road networks. The decline of agriculture in the 1930s prompted the conversion of palm groves into private gardens and housing, while the pearl industry suffered from the rise of cultured pearls in Japan during the 1920s. Additionally, urban development initiatives such as land reclamation, road construction, and public housing expansion were implemented to accommodate labor migration. These transformations signify Bahrain's transition from a pearl-driven economy to a modern hub of commerce and culture, illustrating how remote villages became absorbed into urban centers. The second part of the paper is divided into two sections, which present the features of the village layouts: The first section is based on a geographical study conducted in the 1970s; followed by a study by Al-Nabi on the urban development of the surrounding villages before 1950 and after 1970. Then, it explores the recent physical features of the village arrangement and the most current social data available.

### 2.1. *Village Morphology Study from the 1970s*

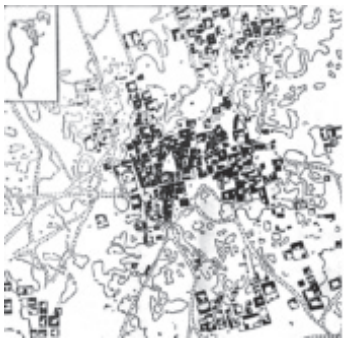
As mentioned earlier, the position of water resources for irrigation and the shallow shoreline are the main natural factors for the emergence of villages in Bahrain (ALECSO, 1975; Larsen,

1983). In Bahrain, villages mainly serve the fishing and agriculture industries. Agricultural villages are characterised by their small size, which does not exceed 0.2 km$^2$. Their houses are mainly courtyard houses, often with small and narrow rooms. A small narrow alleyway separates the houses and they comprise of a compact system of blocks surrounded by palm groves and agricultural land, as demonstrated in Figure 8b. These palm groves act as soft barriers between the villages and their surrounding context and allow for more control of the village's waterfront (Al-Ansari, 2009).

The second type, fishing villages, is marked by relative detachment from agricultural territories, with houses characterised by wide courtyards with several rooms. A wide street exists between the houses along with a dispersed system of blocks nearby the shoreline. Most villages in Bahrain are a combination of the two types, to serve both agriculture and fishing activities, since most are positioned on cultivated land with a water source as well as near the coast, as demonstrated in Figure 8c. Two main orientations of streets in the villages have been noted, one extending towards the two different sides of a shoreline or field areas located at the periphery of the village, by crossing the centre of the village, as demonstrated in Figure 9a, and another street extending from the shoreline at the edge of the village, crossing it in the centre, and then extending towards the main road that connects to other villages or the main city, as seen in Figure 9b.

The new road network had a significant effect on village layout extensions, mostly on the distance between the new main roads and the location of the village, as observed by the geogra-

**a. Arad village as a peninsula surrounded with the sea from three sides**

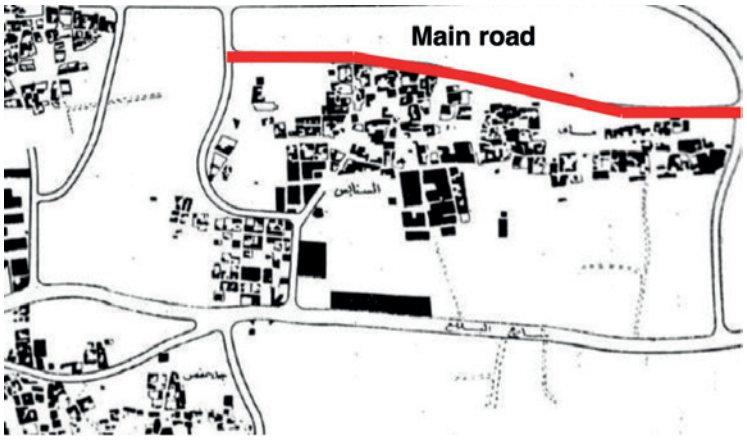


**b. A compact arrangement**


**c. A dispersed arrangement**

Figure 8. *Bahrain village morphology in the 1970s study: the village examples in (a) an agricultural village, this map indicates Arad village in Muharraq to illustrate the features of agricultural villages (Source: Survey and Land Registration Bureau, Bahrain). b. A village with a concentrated or compact arrangement of buildings (c) are more discrete or have dispersed arrangements of buildings, while the houses are larger than those of other villages, with a wide street extending along the shoreline (Source: ALECSO, 1975: 306, redrawn by the author).*


**a. Mahuz village in 1956 extended a street to connect with the main road a few km away**




**b. Sanabis village 1970's extended a line with the main road that passes by in the periphery**

Figure 9. *Two types of village extension depending on the distance between the village and the new main road. a. The village extends linearly towards the new main road (Source: Survey and Land Registration Bureau, Bahrain). b. The village extends linearly in line with the main road, which crosses the village in the centre (Source: ALECSO, 1975: 306, redrawn by the author).*

phy study in 1975 (ALECSO, 1975). For instance, some new main roads crossed the village into their centres. Later, new buildings from the village extended linearly around the road. Subsequently, the village took on a more rectangular shape. A number of village streets are connected with this main road, as demonstrated in Figure 9a. On the other hand, some villages were relatively far from the new roads, and they were later extended with new buildings towards the new road but connected by one or two roads from the village, as demonstrated in Figure 9b. In addition, with the decline in agriculture, the surrounding properties of the agricultural fields, which are away from the main streets, became relatively cheap. These affordable properties allowed for the vast expansion of the village to occur (ALECSO, 1975: 315). The ongoing extension of villages raises expectations that more newcomers from the cities or surrounding areas may be attracted to settle due to the cheap price of renting and reasonable properties.

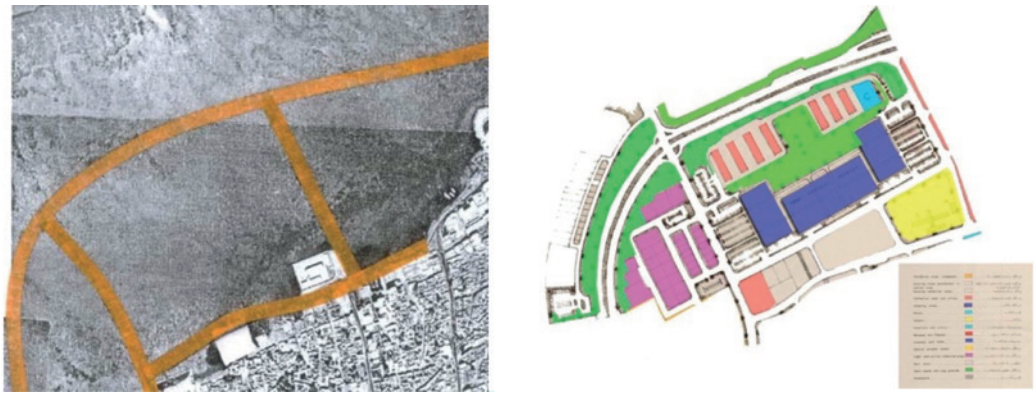
### 2.2. *The Urban Village Today*

In 2012, the Information Affairs Authority published a book titled *The History of Land Use and Development in Bahrain*, which was written by Al-Nabi. It was documentary account of 30 years of work by Al-Nabi as a chief town planner for the Kingdom of Bahrain, from 1971 to 2011. Al-Nabi declared that village planning was not a priority in the Bahraini plan-

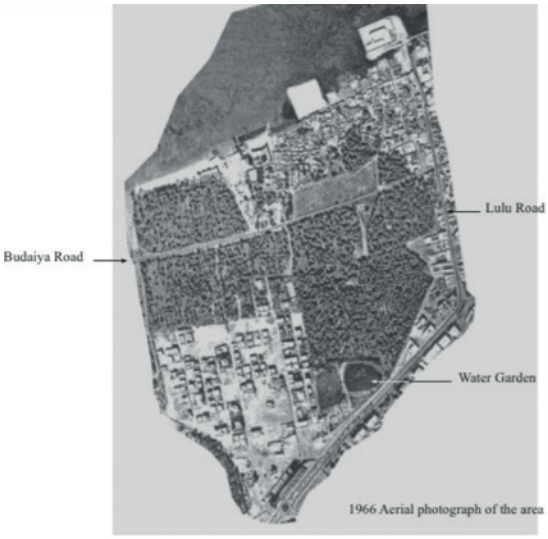
ning department before the 1960s. Essentially, the villages were covered by Master Plan 1988 mainly because of the availability of some government-owned land adjacent to those villages (Al-Nabi, 2012). Most of the constructions from the Master Plan were used for public buildings and services, such as public housing, schools, and health centres, as seen in Figure 10. The book indicates that the land uses and functions of the villages' areas differ significantly between commercial use, residential use, and mixed use, as proposed in 1988.

Figure 11 depicts the transformation of village landscapes in Bahrain from the 1950s to the current urban layout. Initially situated near shallow shores and surrounded by agricultural fields, villages evolved due to shifts in the economy. With the decline of the date trade in the 1930s, agricultural land was sold at discounted rates, leading to increased private property ownership and the conversion of former date groves into private gardens and residential areas. State-led land reclamation efforts further altered the coastline, prompting the strategic relocation of coastal villages several kilometres away from their original shorelines. This multifaceted reclamation process unfolded in distinct phases: commencing with a gradual initiation in the 1930s, accelerating into rapid expansion post-1964, and culminating in the meticulous development of mixed-use buildings and artificial islands from the 1990s through 2007.

In 2008, the northern area municipality launched a proposal to demolish several urban villages and replace them with a new urban development plan, including new street net-



**Reclamation location and proposal project northern side Naim village for a central market**




**Aerial Photograph of Naim, in 1966**

**Detail plan of south Naim village urban planning proposal**

Figure 10. *Villages neighbouring the old city, such as Naim in Manama. Orange indicates a residential area, yellow indicates a school, green indicates public parks, blue indicates hotels, pink indicates commercial areas and offices, grey indicates a post office, and purple indicates shopping areas (Source: Al-Nabi, 2012: 55, 78).*

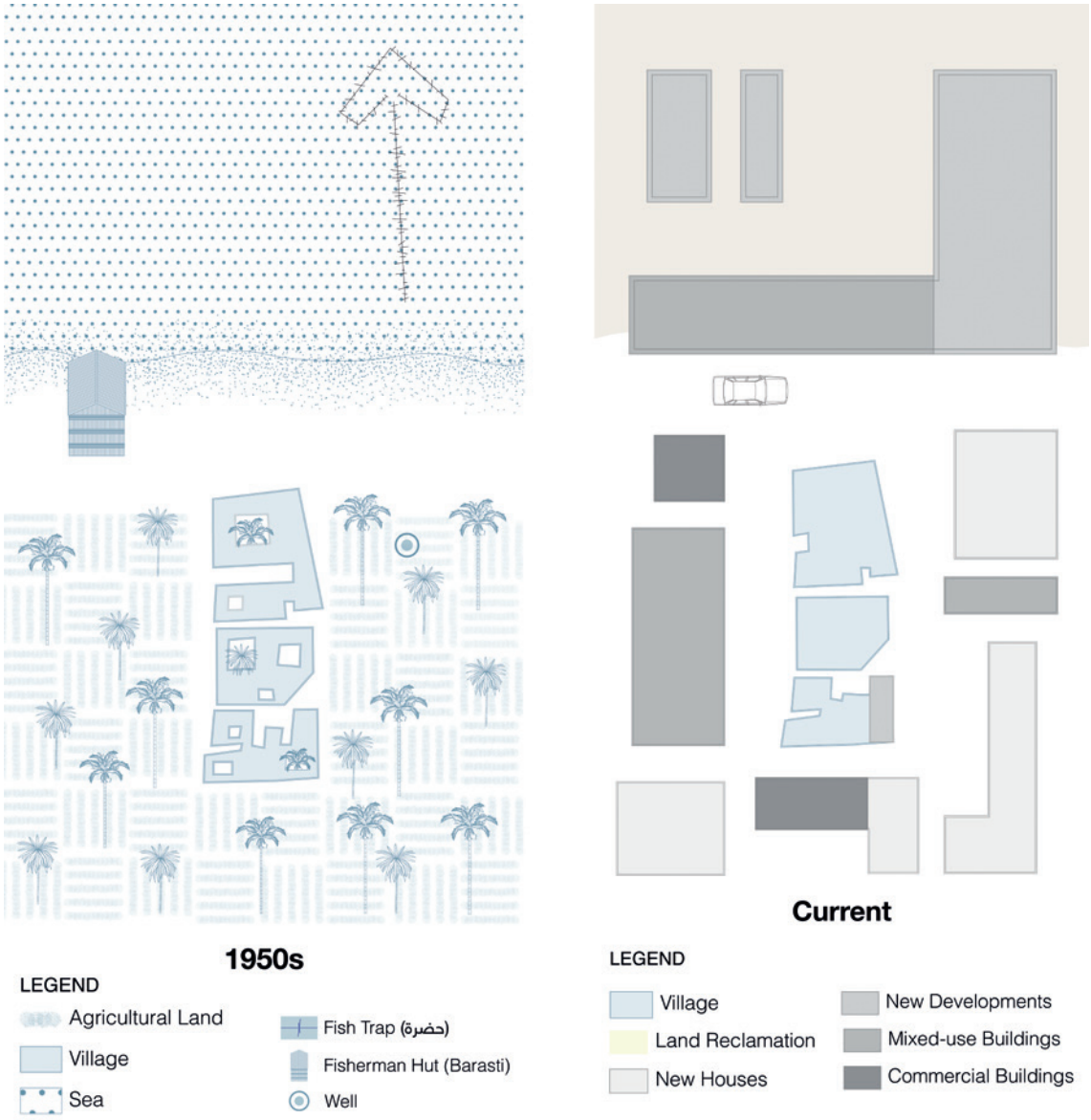



Figure 11. *The Evolution of villages in Bahrain: Transitioning from coastal idylls to urban hubs: Originally, villages in Bahrain were near the shallow shores, surrounded by agricultural fields. The decline of the date trade in the 1930s led to the sale of agricultural land at low prices, mainly to wealthy merchants, increasing private property ownership. The rise of a monetary economy transformed date groves into private gardens and housing. The relocation of coastal villages several kilometres away from their original shorelines was initiated due to state-led land reclamation efforts, which aimed to fundamentally change the function of the coastline, considering the sea as Bahrain's state-owned property. This reclamation process unfolded in phases: a gradual start in the 1930s, followed by rapid expansion after 1964, and culminating in the strategic development of mixed-use buildings and artificial islands from the 1990s to 2007.*

works, new types of housing, and various commercial services, such as supermarkets, as demonstrated in Figure 12. This was considered the solution to upgrading villages, especially with their narrow streets, which created difficulties for traffic and restricted contemporary life, without consideration of any social aspects. However, the community refused these proposals.

## Summary

This paper has presented historical evidence about the nature of urban growth and urban development in Manama and Muharraq in Bahrain. The cited 1975 study revealed a key ele-

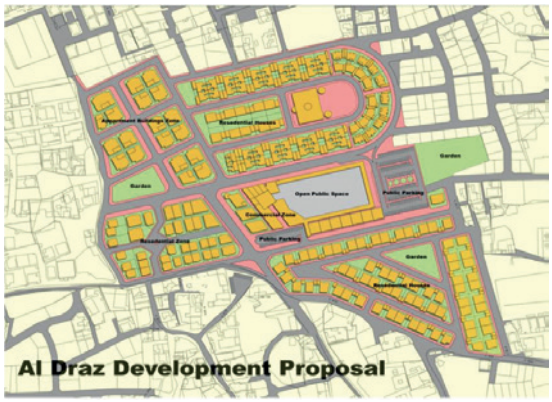
ment related to the distance between the city and villages, indicating significant differences in distance between the settlements in Manama compared with Muharraq Island. Manama's old centre emerged closer to the villages on Bahrain island, possibly due to its function as one of the main markets and a port for world trade networks. Furthermore, the study found that some suburban villages, such as Bilad Al-Qadeem, became important internal markets that mediated between the Manama Souq and the remote villages in the west of Bahrain (see Figure 10). As Larson (1985) claimed, the arrangement of villages and the evolution of their hierarchy are clearly affected by natural factors. There is a correspondence between the number of springs and the number of villages, which downplays the role of the market centre as the dominant variable in the arrangement of villages. This suggests that Bahrain's trading centre may have developed from pre-existing concentrations of semi-differentiated villages near artesian springs (Larsen, 1983: 20). The 1970s geographical study wondered how remote villages would respond to the upcoming rapid urbanisation process: 'Have they evolved into nothing more than simple settlements "implanted" in a context they have no economic or cultural connection to? Or might they expand and grow to form a new town centre?' (ALECSO, 1975: 320). This question has not been adequately addressed to date.

Furthermore, it has been suggested that the two cities have a significant difference. First, the nature of the spatial arrangement of Manama as a whole varies compared with that of Muharraq. There is a sharp division on Muharraq island due to the large void in the middle created by Bahrain International Airport, which almost splits the island into three zones: north, southeast, and northwest. This might affect the degree of buildings' compactness as a whole. By contrast, Manama had wide agricultural fields and palm groves as its backyard. Furthermore, the geometric grid of the old cities differed in length and shape. Second, Manama functions as a commercial centre for Bahrain, while Muharraq is dominated by residential use. Third, the reclamation process surrounding Muharraq and Manama has occurred in all directions along the natural coastlines. However, the urban development for filling these reclamation properties has differed in function between residential, commercial, and mixed uses. These functions impact the shaping of the density and block sizes of the new developments that surround the villages.

Notably, not all villages have a similar morphology of space arrangements, specifically in relation to the building or block size and the degree of their compactness to dispersed distribution. These morphological differences seem to be related to the village's function between fishing activities or/and farming activities, where village composition and distance to the surrounding natural seating of the shoreline and the density of the agricultural land play a role in their spatial arrangement. It was found in the 1970s that there are two forms of villages in Bahrain – one circular in shape and another linear or rectangular in shape. Usually, the linear village layout informally extends along the shoreline and serves as a fishing village; those located away from the coastline tend to be circular in shape and surrounded by palm groves and agricultural fields; and some combine fishing and farming as they are based on both.

The study also demonstrated how the villages extended in relation to the new street networks, which depends on whether the main street crosses the village or crosses near the village. Moreover, the connectivity of the village with new street networks is not always the same. Some villages are surrounded by main roads with links, while others have no such connections. In addition, the urban interventions and urban planning development of land uses of the area surrounding the villages differ significantly between commercial, residential, and mixed use. Therefore, these physical characteristics and backgrounds of the village and their context are essential in making these villages understandable within the urban context of Bahrain. Next, the study attempts to provide a configurational account of Manama and Muharraq by analysing space syntactically. It investigates the spatial characteristics of how the villages' spaces are embedded within the broader urban context.


**Al Diraz village on the west coast of Bahrain**




**Al Diraz village development proposal 2008**


**Karzakan village on the west coast of Bahrain**


**Karzakan village development proposal 2008**

Figure 12. *An urban planning development proposal for several villages on the northern sides of Bahrain: the northern municipality proposed demolishing urban villages to make way for a new urban development plan, including new streets, housing, and commercial services like supermarkets and parking (Source: Northern area Municipality, 2008).*

## References

Al-Ansari, F. (2009), *Public Open Space on the Transforming Urban Waterfronts of Bahrain: The Case of Manama City*, Doctoral thesis, Newcastle: Newcastle University School of Architecture, Planning and Landscape.

Al-Nabi, M.N. (2012), *The History of Land use and Development in Bahrain*, Information Affairs Authority, Kingdom of Bahrain.

Al-Sayeh, N. (2016), 'Bahrain: On History, Coastlines, Renders, and the Image of Public Space'. IV Culture and Politics as interface, in Katodrytis, G., Syed, S. (eds.), *Gulf Cities as Interface*, Cambridge: University of Cambridge: 265-282.

Banchini, L., Al Sayeh, N. (2010) *"RECLAIM," Official Catalogue of Bahrain's*, National Participation at the 12th International Architecture Exhibition, la Biennale de Venezia. Manama, Ministry of Culture.

Belgrave, J.H.D. (1968), *Welcome to Bahrain*, 6th edn, London: The Augustan Press.

Gugger, H. (2010), *Bahrain Lessons: teaching and research* (Series lapa Lessons, 4), Al-Sayeh, N. (ed.), Lausanne: Laboratoire de la Production d'Architecture.

Haggett, P. (1965), *Locational Analysis in Human Geography*, London: Edward Arnold Ltd.

Haggett, P. (1966), *Locational Analysis in Human Geography*, New York: St. Martin's Press.

Larsen, C. (1983), *Life and Land Use on the Bahrain Islands: The Geoarchaeology of an Ancient Society*, Chicago: University of Chicago.

Loughland, R., Zainal, A. (2009), *Marine Atlas of Bahrain*, Manama: GEOMATEC Bahrain Centre for Studies and Research.

Yarwood, J.R. (1988), *Al Muharraq: Architecture, urbanism and society in a historic Arabian town*, Ph.D. Thesis, Sheffield: University of Sheffield.