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Analysing the Landscape Aesthetics in the Urban Context of the Kingdom of Bahrain

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Abstract
Urban development in the Kingdom of Bahrain has been a rapid phenomenon. To overcome the urban challenges and progress in an effective manner, the Kingdom of Bahrain has undertaken several measures for sustainable development. Landscape aesthetics plays a vital role in achieving urban sustainability and affects human perception and behavior in the Kingdom of Bahrain. The residents of the Kingdom of Bahrain have predominantly enjoyed beach fronts due to its geographical location. However, recent urbanisation has resulted in the development of design elements that are not associated with the sea. This research aims to analyse the change in landscape aesthetics due to urbanisation and the impact of social and cultural factors on it. The methodology adopted in this research includes site visits, documentation, and surveys. The study contributes to understanding the changing landscape aesthetics in the Kingdom of Bahrain. It analyses the effect of social and cultural factors on the changing landscape aesthetics in the Kingdom.
Keywords: landscape aesthetics; urbanisation; urban sustainability; social factors; cultural factors.

1. Introduction

Due to globalisation and the urban transformation of cities worldwide, green spaces have attained a crucial role in the modern lifestyle. They provide a respite from the hustling, bustling city life. According to the United Nations Conference on Trade and Development (UNCTAD), the urban population in developing countries has increased to 79.7% in the year 2022 (UNCTAD, 2024). These statistics are expected to increase in the coming years. Thus, green spaces in urban development serve as a means of connection to the natural environment. Several studies have concluded that green spaces contribute to the well-being and health of the residents. Green spaces play a vital role in enhancing urban environmental aspects, such as reducing air and noise pollution, reducing the impact of fluctuations of heat and cold, etc. (Bertram & Rehdanz, 2014). Moreover, green spaces contribute to diverse ecosystems with a variety of plants and animal species. They protect residents' social and psychological well-being, which, in turn, develops their quality of life (Abbas, 2021). Green spaces include public parks, gardens, street plantings, water bodies, and backyard gardens. These enable physical activity, social activities, and mental relaxation (Kwon et al., 2021). In recent years, the inclusion and design of open public spaces have received more attention. The rapid urbanization of cities has led to the establishment of urban spaces with little or no contact with nature (Amen, 2021; Amen et al., 2023; Jacob, 2023; Moretti, 2023). The urban lifestyle demands that residents stay indoors most of the time of their day. Hence leading to depression, physical inactivity, and social detachment. Moreover, the development of cities has resulted in several negative environmental factors such as increased pollution, traffic congestion, degradation of natural resources, climate change, rising sea levels, etc. Urban areas release 71 to 76 percent of carbon dioxide (UN-HABITAT, 2024). To promote citizens' well-being and enhance urban residents' quality of life, open green spaces have been an important topic in urban development. Diverse concepts have also been developed to address and develop open green spaces. One of the key concepts in developing open green spaces is 'Sustainability'. "Providing access to safe and inclusive green and public spaces" forms a constituent of the 11th goal of the Sustainable Development Goals (SDGs) to be achieved by 2030 (*11- Sustainable Cities and Communities*, 2024). However, open spaces have been transformed and changed over time. The use of open spaces in the past has been altered at present. Moreover, the development of new technologies, cultural change, and climatic factors have influenced the design and function of open public spaces. One example of such a case is the Kingdom of Bahrain in the Arabian Gulf. A country with a rich cultural heritage and significant moral values has transformed into a highly urbanised country to attract and accommodate users worldwide. This research focuses on analysing the variation in the landscape aesthetics of the Kingdom of Bahrain to be in line with urbanisation. since urban expansion has a significant impact on the social, economic, and environmental aspects, such that urban expansion creates boundaries between users and nature in general and the sea in particular in the Kingdom of Bahrain. The main objectives of this research are as follows:

- Analyse the landscape aesthetics prior to the discovery of oil and urbanisation in the Kingdom of Bahrain
- Identify the change in landscape aesthetics due to urbanisation
- Highlight the impact of social and cultural factors on landscape aesthetics in line with urbanisation

2. Background

The Kingdom of Bahrain is an archipelago of 36 islands located in the Arabian Gulf. It is a small island with a total land area of 786.5 km^2 (IGA, 2024). It is located on the south-western coast of the Persian Gulf. In the 1900s, the economy of the Kingdom of Bahrain was based on fishing, pearl diving, trading, and transportation. Due to its significant geographical location and abundant natural resources such as freshwater springs and pearls, Bahrain has always been the center of ancient trade routes. The Kingdom of Bahrain has enjoyed a diverse culture by being at the crossroads of civilisations since ancient times. It served as the maritime link between great civilisations, and hence, there was an exchange of ideas, cultures, practices, and technologies which shaped the Bahraini culture and heritage (MTT, 2019). Since the sea served as a crucial component as a constituent of culture. The two main cities Of Manama and Muharraq characterised the prime urban fabric. The residences were located near the sea with an organic layout of streets in response to the climatic and cultural conditions (Alraouf, 2014). Figure 1 below demonstrates the main settlements in the cities of Manama and Muharraq, located close to the sea.

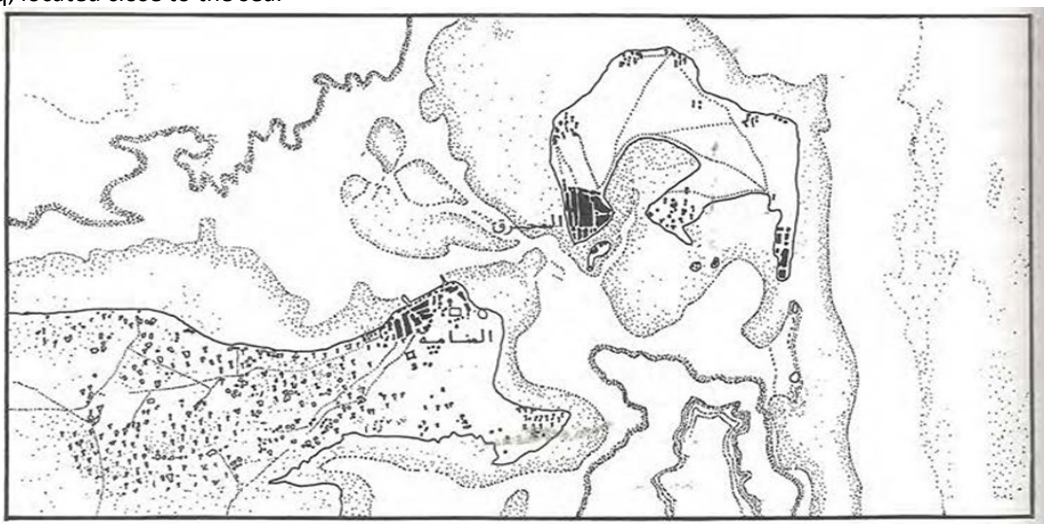

Figure 1: Settlement groups in the cities of Manama and Muharraq in 1904 (Waly, 1990)

The social and cultural activities revolved around the sea, and festivities were celebrated along the coastlines. Two primary festivities include the Al-Rakbah, the official day of boarding for the dhows (boats) and departure for pearl diving. Large crowds gathered along the seashore, where the pearl divers would bid farewell to their family and tribe members. The women folk would prepare songs (Mrad) and sing folklore upon their departure, expressing hopes that the men in their families would return safely. Another major festivity would occur upon the arrival of the pearling crew. The women and children would gather along the seashore, singing songs and celebrating the safe return of their family members. A black flag upon the dhow would indicate the demise of certain members of the crew. The day of the return, also known as Al-Quffal, would be both a celebration and a tragic day for the citizens (Bahrain Authority for Culture and Antiquities, 2024). Moreover, the Kingdom consisted of many agricultural fields prior to urbanisation, and the residents enjoyed rich gardens of palm trees, figs, grapes, pomegranates, peaches, local melon, papaya, and almonds. Dense-aligned foliage of trees would shade the roads (Al-Nabi, 2012).

The Kingdom of Bahrain witnessed a drastic change after the discovery of oil in 1930. The beginning of the 20th century was the turning point for many Arabian Gulf countries. Cities started to develop due to the discovery of oil, as oil contributed to a major cultural transformation around the world. As a result, the sudden revolution became the focus of attention and concern, but there was limited interest in urban sustainability and cultural and social transformation in the Arab Gulf countries (Al Khalifa, 2015). Following the Industrial Revolution, cities witnessed significant changes in their population, form, and structure. Scholars and researchers interested in city transformation analysed the transformation from organic and traditional urban forms to modern, industrial, and

functional structures. In addition, research, exploration, and investigation have been done on issues like pollution, global warming, and the social and cultural deterioration of cities and regions, which are all collective effects of the industrial boom that struck the majority of the world's cities (Zimmermann, 2013).

Cities in the Gulf region have been particularly impacted by the economic, environmental, and social challenges that arose from the industrial revolution, urban sprawl, and rapid modernisation. Within a short span, small traditional towns were transformed into ultra-modern cityscapes, beginning with the discovery of oil in the early 1930s and continuing through the globalisation trend that started in the 1970s (Elgahani & Furlan, 2018). As a result, cities were forced to prioritise urbanisation over many other crucial factors, most notably the accessibility and availability of green spaces and seafront. Many green and agricultural areas suffered severe damage or were completely destroyed when modern, fashionable structures were built on their property. In addition to burying the sea for the purpose of urban expansion in response to population density. Furthermore, the planning strategy hardly ever included the idea of open spaces, except for a few significant projects and neighbourhood parks (Shubbar & Furlan, 2019). As the Kingdom faced a major influx of multi-national populations, the main concern was the accommodation and modernisation of the country. Several cities were developed with high-rise buildings and commercial complexes to accommodate more residents and fulfil the needs of the diverse population. The urban development mainly focused on fulfilling the growing housing demands, and open spaces were neglected. The dynamics of the spaces changed, shifting from local traditional styles to modern, urbanised ones (Alraouf, 2014). The green spaces were replaced by rapidly growing town planning, resulting in a lack of green spaces and, in some areas, the complete disappearance (Al-Nabi, 2012).

Many initiatives have been launched to protect green spaces since the 1970s (Al-Nabi, 2012). Even though some parks and other open areas have been built, they are still regarded as being too few and having poor connections with one another. Without considering their relationship to and impact on the city and environment, including people's needs, the provision of public amenities, and accessibility and connectivity to the nearby parks and open spaces, they are primarily dispersed randomly throughout the master plan. Furthermore, a sizable portion of the sea has been reclaimed for urban expansion to respond to population density (Shubbar & Furlan, 2019). The seashores that once formed an integral factor of the social and cultural life of the residents have become privatised. Several major urban development projects have been developed along the sea, such as Diyar Al Muharraq, Amwaj Islands, Dilmunia, Reef Island, etc. These projects have been undertaken to enable economic diversification to promote tourism, cater to growing housing needs, and enhance urbanism in the global market. However, such developments have limited access to the sea, established gated communities, and threatened environmental sustainability. Figure 2 below demonstrates the expansion of land from the year 1952 to 2014.

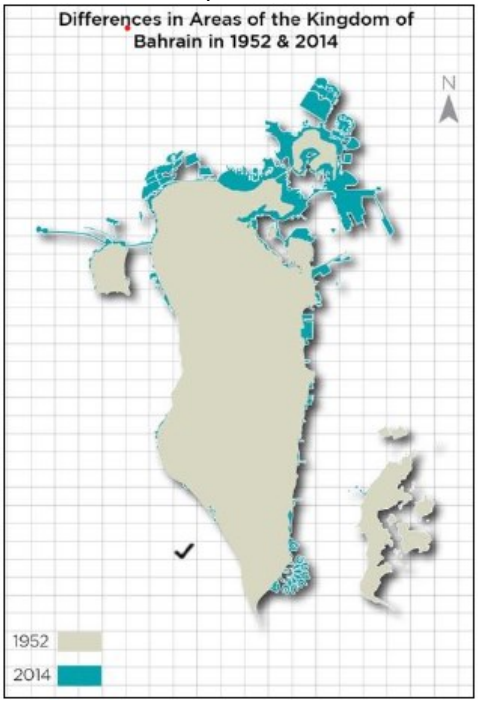

Figure 2: Comparison of Bahrain's map between 1952 and 2014 (Shubbar & Furlan, 2019)

The Kingdom of Bahrain has the fewest main resources in the region, which motivates the government to explore alternate economic sources and strive for economic diversification. Being the smallest and densest state in the Arabian Gulf, Bahrain faces certain environmental challenges nowadays, emphasising the significance of the urban sustainability debate (Al Khalifa, 2015).

In 2008, vision 2030 was developed by the Bahraini government. This vision addresses the deficiencies in housing, zoning, and natural resources. Furthermore, the vision addressed the issues of inadequate public open space, inadequate transportation infrastructure, and inadequate public employment (IGA, 2021). Additionally, the principles of Bahrain National Strategic Planning were created in tandem with this vision, with the overall goals being to guarantee the sustainable development of strategic resources, to create a safe and fulfilling environment, to achieve sustainable quality growth, to provide adequate infrastructure, to improve government performance and efficiency, to provide appropriate and accessible social services, and to improve performance and efficiency overall (EDB Bahrain, 2023). Hence, the Government of Bahrain has undertaken measures to increase green spaces and incorporate them into urban planning.

2a. Impact of culture upon public open spaces general

Open public spaces have a direct effect on the citizens of a city. They improve social relations among the residents, enhance mental well-being, and overall improve the quality of life of its users. Park designers and planners have had to adapt to the new needs of their patrons. In the 90s, Europe and North America experienced rapid industrialisation and mass migration into urban areas, which resulted in congested urban areas and lower quality of life in cities (Shubbar & Furlan, 2019). Planners and landscape designers observed that these parks or green spaces provided individuals with both physical and psychological respite from the unhealthy surroundings of industrialisation (Assali, 2015). Urban parks played a crucial structural role in forming the urban form in addition to improving and beautifying the urban environment (Skrydstrup, 2016).

Urban parks are public spaces in urban areas reserved for recreational, aesthetic, cultural, and educational purposes. Parks are used by people of all ages throughout the day, week, and year, genders, and backgrounds. In order to develop green spaces that fulfil people's needs for recreation and fresh air, planners and landscape designers must collaborate with legislators and involve the public in their governments. Consequently, providing aesthetically pleasing recreational spaces will enhance the quality of life in cities (Alsuwaidi & Furlan, 2017).

Historically, the green spaces surrounding cities in the Kingdom of Bahrain were utilised for agricultural purposes, which led to the development of parks or open spaces to meet users' needs. These green spaces were later developed as recreation and social gathering areas. However, modern urban projects generally lack open green spaces and promenades. The private urban development projects utilise the concepts of leisure parks for marketing purposes. The provision of open green spaces is still very low in developed urban areas, and accommodating green space in these congested areas later is also difficult due to urban density. The reclaimed lands provide the flexibility to accommodate various spaces within the project. They are generally designed with iconic shapes to attract customers and contain various theme parks (Wiedmann, 2016). For example, Hadiqat Al Diyar in Diyar Al Muharraq

This research aims to analyse the modifications in the urban open spaces in the Kingdom of Bahrain and their impact on the cultural and social aspects of the country. It aims to contribute to the field of landscape architecture by analysing the impact of social and cultural practices on landscape design. The main objectives of this research are as follows:

- Analyse the landscape aesthetics prior to the discovery of oil and urbanisation in the Kingdom of Bahrain
- Identify the change in landscape aesthetics due to urbanisation
- Highlight the impact of social and cultural factors on landscape aesthetics in line with urbanisation

3. Methodology:

The research has been conducted using qualitative research methodology. It was conducted through a literature review of documentation, research papers, national reports, and related documents. However, the documentation of landscape architecture in the Kingdom of Bahrain is very limited, and not much research has been conducted in this regard. Then, case studies were analysed to delve into the details of the landscape aesthetics of the two main cities of Manama and Muharraq. These included site visits, study of maps, landscape observations, and pictures. The data obtained from the case studies were compared and analysed to determine the variation in landscape aesthetics between the two cities. Figure 3 below demonstrates the summary of the methodology adopted in this research.

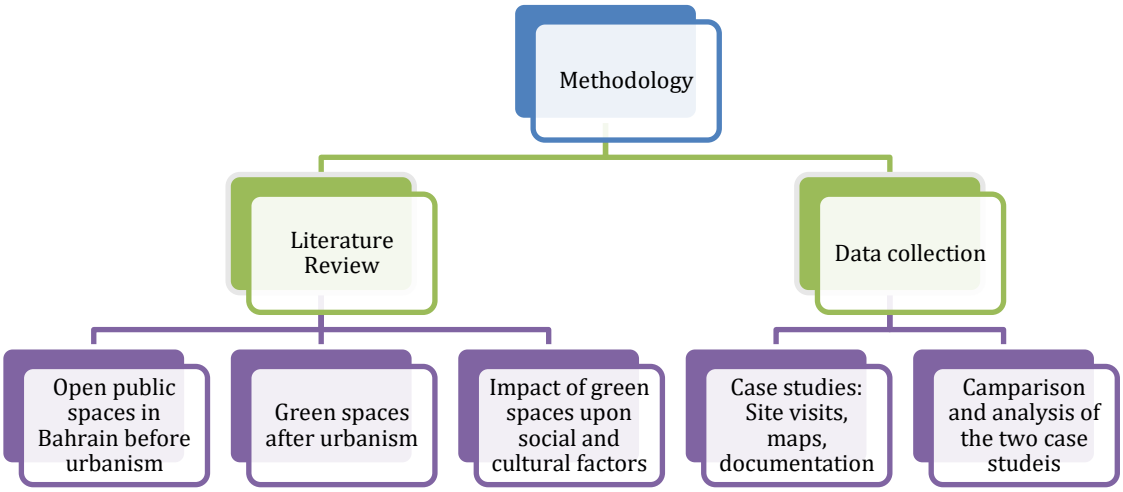

Figure 3: Summary of the methodology (Developed by authors)

3a. Case studies selection criteria: The twin cities of Manama and Muharraq:

The twin cities, Manama and Muharraq, have been selected as case studies for this research. These cities enjoyed prominent positions in Bahrain's history and represent rich Bahraini heritage. Muharraq was prominent because of its defensive location and hence was the capital city of the Kingdom of Bahrain until 1923. Manama served as the mercantile capital and was the gateway to Bahraini islands. Old settlements in these cities were scattered and mainly located near the coastline (Al-Ghatam, 2009).

However, after the discovery of oil, the cities underwent rapid urbanisation. The narrow pedestrian pathways were invaded with automobiles; open public spaces were converted to provide areas for car parking, migration of residents to newly developed cities and towns, overcrowding of old neighbourhoods by the foreign labour force, sea fronts were privatised and used for mega projects. All these aspects deteriorated the twin cities' national identity and overall urban structure (Shubbar & Furlan, 2019). This research analyses the impact of urbanisation on the landscape design of the two cities.

4. Analysis

4a. The case of Manama City:

Manama is the capital of the Kingdom of Bahrain and one of Bahrain's oldest and largest cities. The city was founded sometime in 1783 based on historical maps and documents. From 1818 to 1905, the city expanded from a small 8000-person village to a 25,000-person town in less than a century (Elghonaimy & Mohammed, 2019). Manama was established by the British as a regional capital after the Protectorate Treaty was signed in 1892 (Alraouf, 2010). Manama played an important role in trading in the Gulf and was considered a trading center. Trades were passed by Manama to rest and showcase their products. Manama was known at that time as a “Place to rest” (Elghonaimy & Mohammed, 2019).

Manama is famous locally and regionally for its historic gate, "Bab Al Bahrain", which is regarded as the most significant landmark still existing in the old urban fabric of Manama. Bab Al Bahrain was constructed in the 1930s and developed in the 1940s in the capital, Manama. This historic structure was built directly facing the sea, making it a port for traders. As a result of urbanisation and urban development, the sea in the area gradually disappeared with the urban development of Manama and land reclamation, as shown in Figure 4. Overall, the user felt that a barrier had been built between them and the sea. Manama's traditional souq (marketplace) has been renovated and is now located in the old part of the city, with Bab Al Bahrain serving as a gateway to the souq. The souq is characterized by its traditional architecture of narrow pathways and small shops (Alraouf, 2010).

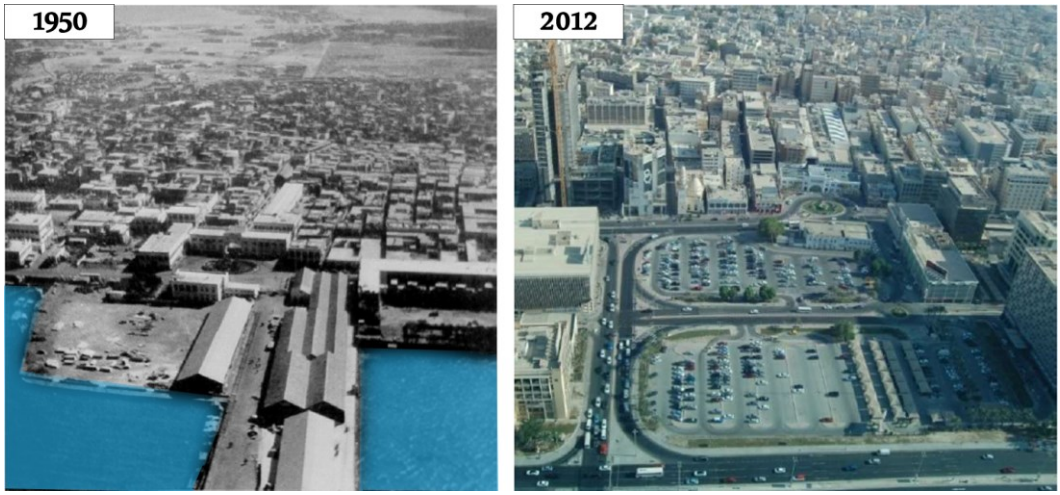

Figure 4: The stages of the sea reclaimed from the north 1950-2012 (Battis-Schinker, 2023)

A garden or open space was a part of Bab Al-Bahrain, a customs Square Garden designed in the late 1940s in line with the town's development. Stanely Hills, the director of the Public Works Department, said that while the Customs Square Garden is not a major part of the project, it deserves to be mentioned here because it is an essential component of the Square, which has become more distinctive because of the construction of the Offices. Moreover, Shaikh Sulman Square was formerly known as Customs Square and is now known as Bab al-Bahrain Square. Bab al-Bahrain Square is a bustling roundabout on Government Avenue that features a green traffic island made of the former Customs Square Garden (Battis-Schinker, 2023). The Bab Al Bahrain square has a very limited landscape with only a few trees and some shrubs. Most of the square is covered with hardscape to facilitate the movement of motor vehicles in the busy area.

Figure 5: Bab al-Bahrain Customs Square in 1950s (Toorani, 2013)

In line with oil discovery in the 20th century, and with population density, development, and urban expansion throughout this period, Manama has been expanded across the sea through reclaimed land. Moreover, the land reclamation process and shoreline remodeling has resulted in the shoreline of Manama's waterfront physically shifting toward the sea. Today, the shoreline of Manama is 1.5 km in some places farther than it was in the early 1930s (Al Ansari, 2009). While maintaining its traditional conservationist style, the old town continues to be the center of busy cultural, economic, and social life (Mohamed, 2023). In addition, residents of Manama began to migrate to new and modern cities, leading to the dominance of impoverished expatriates who turned to the old city center. This further degraded this old core (Alraouf, 2010).

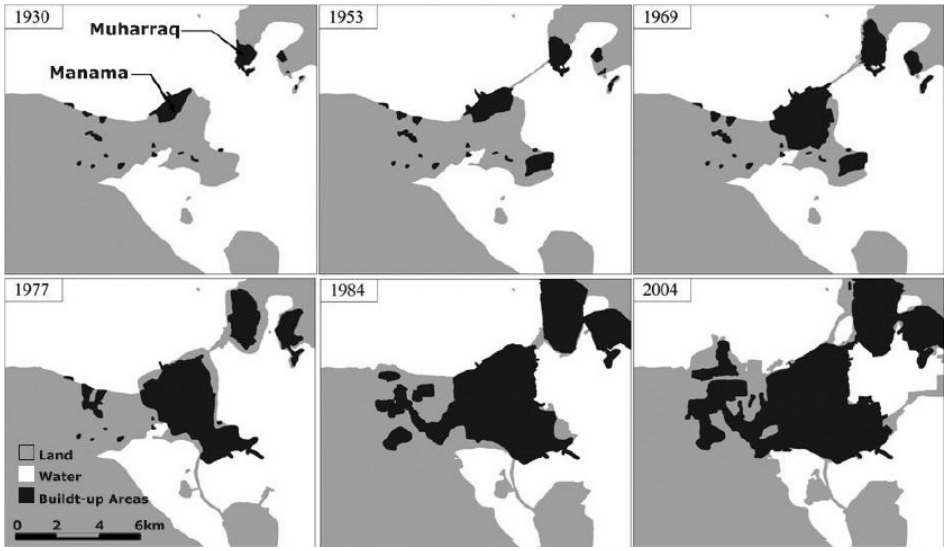

Figure 6: Expansion of Manama through Urban Growth and Land Reclamation (Salman, 2016)

The analysis of the landscape spaces demonstrated that the city of Manama lacks open public spaces. The highly dense urbanisation, new business development, and housing complexes outsize Manama increasing society's dependence on cars as an alternative to walking or using public transportation. Moreover, the population and new urban development led to reduced plot size and fewer green open spaces; this made Manama suffer from a lack of green spaces, negatively affecting it in many aspects, including social and economic (Assali, 2015). The figure below highlights the Manama city, which includes the old Manama (Bab Al-Bahrain) and the existing green spaces in Manama.

Figure 7: Open Public Spaces & Seafront in Manama (Google map analysed by authors)

On the opposite side of Bab al Bahrain, where the land has been reclaimed, there is King Faisal Corniche, which was constructed as a public area overlooking the sea with a direct link with old Manama city through an elevated pedestrian bridge, which presents an opportunity to visit old Manama (Shubbar & Furlan, 2019). Moreover, 3.1 km away from Bab Al Bahrain, there is a Water Garden constructed in 1948 and renovated in 2023, preserving all the existing trees and water bodies. 2.4 km away from Bab Al Bahrain, there is Andalus Garden, constructed in 2007 with an Islamic traditional style; it covers an area of 2.7 hectares.

Regarding seafront areas, in the east direction, 4.9 km from Bab Al-Bahrain, Marina Beach and Garden is located on Al-Fateh Street, facing the sea on the other side and having a direct physical connection to the sea. In addition, there are 2 main public beaches in reclaimed land: Moya Marine Sports and Water Garden City Beach. However, all the seafront projects have controlled accessibility and charge an entry fee to users.

Figure 8: Public open spaces in Mamama (Source: researchers)

Moreover, several reclaimed lands facing the sea in Manam were expropriated as investment projects, such as Alreef Island, the Avenues, and Bahrain Bay, making the waterfront non-public spaces. In contrast, there are scattered public green spaces in Manama. In addition to Bab Al-Bahrain Square, which is considered a social open space with a small green area and waterbody from the 1940s, Manama has other public green spaces: King Faisal Corniche, Water Garden, Andalus Garden, Marina Beach and Garden, and some local parks in the city. In contrast to the seafront investment project, there are some freely accessible beaches in the city of Manama, as shown in Figure 7.

4b. The case of Muharraq City:

The city of Muharraq, located in the northeast, served as the capital of the Kingdom of Bahrain from 1810 until 1932. It is now the third-largest city in the Kingdom of Bahrain (Shubbar & Boussaa, 2022). Muharraq was developed as an organic, traditional city that responded to the region's climatic conditions and geographical context. Due to its proximity to the sea, it served as a hub for cultural, professional, and social activities. It thrived in the 19th Century as the global center for pearl diving and trade. However, the pearling industry thrived until the 1930s, when cultured pearls were introduced into the commercial market, jeopardising the pearling trade of Bahrain globally (El Rashidi, 2019).

After the discovery of oil, the city of Muharraq lost its connection with the sea due to land reclamation and modernisation of the seafront. The urban fabric transformed to accommodate road networks, increasing population, motor vehicles, and parking spaces. The land area increased significantly due to land reclamation. Figure 9 below demonstrates the increase in the total land area of Muharraq till 1951 (Waly, 1990). However, recent projects have further increased the land area of Muharraq with major urban developments in the reclaimed land such as Diyar Al Muharraq, Dilmunia, Amwaj Island, New Hidd, etc. The area of the city of Muharraq was less than 20 square kilometers in 1976 but increased to 57.46 square kilometers in the year 2009, comprising 7.59% of the Kingdom's whole area. The land area of Muharraq city increases by 2% annually due to land reclamation (Elghonaimy & El-Ghoneimy, 2017).

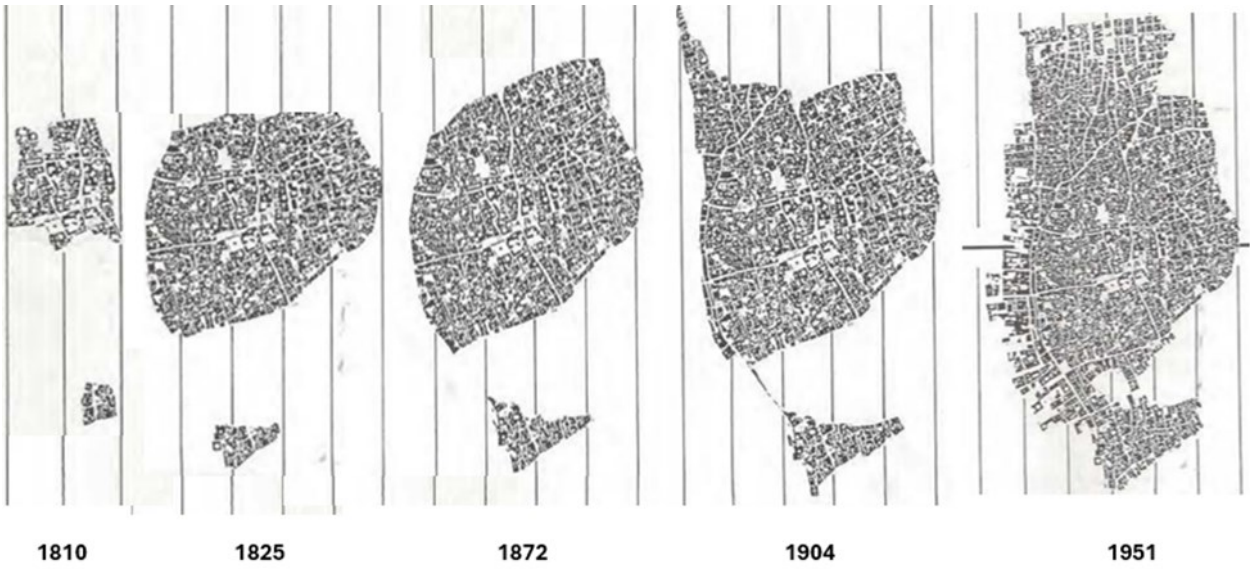

Figure 9: Urban development of Muharraq from 1810-1951 (Waly, 1990)

Rapid urbanisation has altered the cultural and social lifestyle of the residents, who have very limited access to the sea. *"The geographical retracing of national boundaries has been accompanied by a more profound social transformation and a decline of sea culture in favour of a more generic urban lifestyle."* (Al Ali et al., 2010)

Most of the traditional urban fabric of the city of Muharraq has been lost during urbanisation. The city's traditional core has been replaced by foreign workers residing in the traditional houses. This has led to the deterioration of the traditional urban fabric (Shubbar & Boussaa, 2022). Despite years of negligence, policies and laws are implemented by the Ministry of Culture and National Heritage under the supervision of Her Excellency Sheikha Mai Bint Mohammad Al-Khalifa to preserve the traditional heritage of the old core of Muharraq. As a result of these initiatives, old houses, pearling paths, and old neighbourhoods have been renovated and preserved to sustain the national identity of the region. These places now serve as major tourist attractions, and the Pearling Path has been listed as a cultural site by UNESCO (Alraouf, 2014).

The analysis of the landscape spaces demonstrated that the city of Muharraq lacks open public spaces. The highly dense city with almost a population of 100,000 lacks open green spaces. Figure 10 below highlights the Muharraq Governorate region, which includes the traditional city of Muharraq and its expansions such as Hidd, Diyar Al Muharraq, Amwaj, Busaiteen, etc. The map on the left in the figure below shows the existing green spaces in the main traditional city of Muharraq.

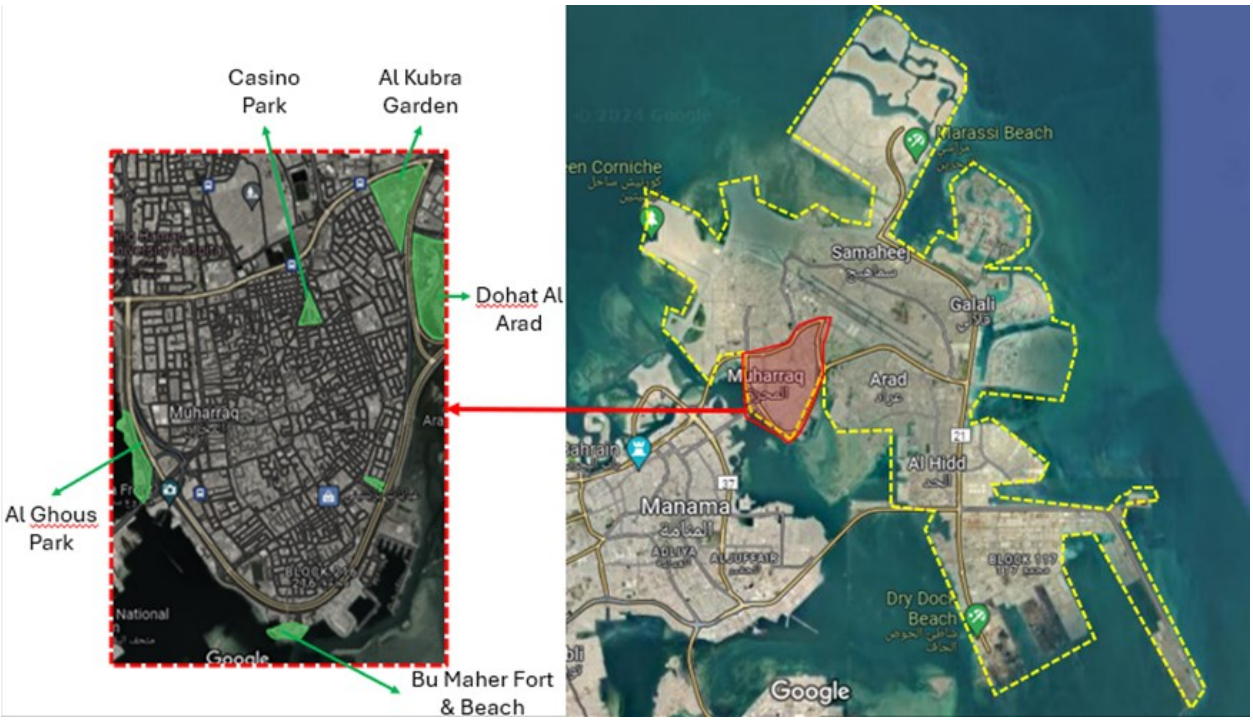

Figure 10: Open Public Spaces & seafront in Muharraq (Google map analysed by authors)

As the image above demonstrates, the main open green spaces are Dohat Al Arad, Bu Maher Fort Beach, Al Ghous Park, Khalifa Al Kubra Park, Casino Park, and some local parks in the city. The Bu Maher Fort Beach is the only freely accessible beach in the city of Muharraq. It serves as the starting point of the pearling path. Dohat Al Arad and Al Ghous Park do not provide physical access to the sea. The sea only serves as a view for the park's visitors. Khalifa Al Kubra has been renovated and reopened recently opposite the Bahrain International Airport. However, Dohat Al Arad and Al Kubra Park charge an entrance fee. The landscape aesthetics of these parks include walkways, a variety of vegetation, and multiple facilities for the users, such as dining spaces, picnic spots, boat rides, etc.

In contrast to the public spaces found in the traditional city of Muharraq. Under the revitalisation of the Muharraq program, 17 public squares have been designed along the Pearling Path (Pearling Path - Muharraq, 2024). These open spaces create a microclimate responding to the site's urban and climatic context. They are compact and can be found by users walking through the pearling pathway. The size of these spaces is quite small, as there is no land available for larger-scale open spaces due to the very dense urban fabric. Each public square is named after the pearling path elements that were found in Bahrain. They offer a cool area of respite along the pathway, which is hot and humid. The public squares are designed to contain only one type of tree, which is the Delonix Regia. The canopy of the flame is perfect to provide shade from the scorching sun and allow seating facilities in the square. Some squares also contain a miniature play area for the children with one or two games as shown in Figure 11 below.

Figure 11: Public squares in Pearling Path Muharraq (Authors)

However, certain courtyards in the pearling path have various plants such as palm, plumeria, banana trees, etc. Moreover, the third type of aesthetics of open squares includes water bodies along with vegetation, which creates a diverse and enriching journey along the traditional city. Figure 12 demonstrates the diverse open public squares along the pearling path in the traditional city of Muharraq.

Figure 12: Public squares in Pearling Path Muharraq (Authors)

On the contrary, the recent urban developments on the reclaimed land, such as the Diyar Al Muharraq, East Hidd project, etc., have been designed to accommodate open public spaces for each residential block. As there is no or only limited sea access for activities. The areas closer to the sea are used for either public beaches that charge entrance fees or for the construction of hotels and luxurious residences with high real estate value due to their seafront views. The function of the sea, serving all the residents equally and with no discrimination, has been changed into using the sea as a means of economic growth, privatisation, and VIP sea culture. However, the urban development is designed to mimic the traditional Bahraini neighbourhoods. A recent urban project, East Hidd, was designed to contain courtyard houses connected with a central public open space, which consists of a mosque, community shops, and pathways containing vegetation to enhance public interaction. Figure 13 below demonstrates the conceptual diagram of recent urban developments in Bahrain.

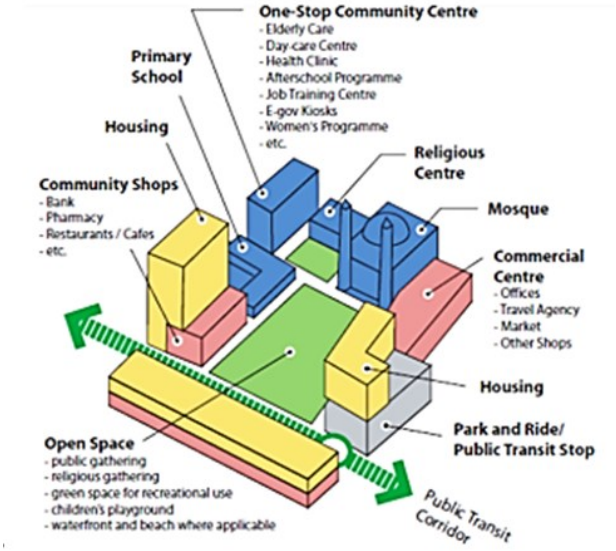

Figure 13: Conceptual diagram of recent urban developments in Bahrain (Al Khalifa, 2015)

The open public spaces are multifunctional. They contain sports fields, children's play areas, pathways, and sometimes walking tracks. They also contain a variety of vegetation and public seating areas. The public spaces are designed to respond to the context of the site. Some of the design features include alternating pavement materials according to the spaces' functions, a variety of vegetation, shaded spaces, and water features.

5. Result

The analysis of the Twin Cities demonstrated that both cities generally lack open green spaces. However, efforts to overcome this problem can be seen more in Muharraq than in Manama. The development of public squares along the Pearling path allows residents and visitors to have resting spaces during the long journey in the hot climate of Bahrain. Moreover, it was observed that the number of users of public spaces in both cities varies from Bahraini nationals to expatriate labourers to tourists. The public parks offer various activities for the users, such as walking, jogging, picnicking, boating, and playing areas for children, etc., in both the cities. However, some of these parks are in densely populated areas, which makes it difficult for visitors to access them due to the lack of parking spaces and traffic congestion. Examples of such parks include Andalus Park in Manama and Casino Garden in Muharraq. Others that are easy to access and convenient are controlled for their working time duration and entrance fees, such as Dohat Al Arad in Muharraq and Water Garden in Manama.

While most of Manama's seafront areas are privatised, some public beaches are available along the Bahrain Bay area. In Muharraq, there is only one open public seafront, Bu Mahar Beach. Green open spaces and seafronts in both cities have limited access to sea facilities. Rapid urbanisation has altered the urban fabric of the two cities. For instance, Manama has lost its national identity with the development of high-rise buildings, commercial plazas, parking lots, and modern urban fabric. Though the city of Muharraq has undergone a similar process, the efforts to preserve its national identity have been fruitful. Due to this, the residents are much more aware of the traditional heritage in Muharraq than in Manama.

However, the cultural and social aspects have undergone drastic change. The lives of older generations revolved around the sea, and their social, cultural, professional, and economic aspects depended upon it. The current lifestyle of the people of Bahrain is very urban, with very limited access to the sea. The sea is used for entertainment purposes to boost tourism and attract real estate investments. But this has led to social fragmentation of social life. The traditional communities enjoyed strong social bonds due to their traditional fabric and simple lifestyles. Whereas the current urban fabric has contributed to the formation of isolated communities. However, measures have been undertaken to revoke the national identity by designing and planning new urban developments with the concept of traditional norms, as demonstrated in Figure 13. This design has been implemented in some recent urban developments, and the results of this planning could be analysed in the coming years.

6. Research Limitations and future recommendations

The research adopted the case study methodologies. For future research, surveys and interviews can be conducted to analyse the social viewpoint of the residents and the impact urbanisation has had on their lifestyle. Moreover, future studies can analyse the landscape aesthetics in recent urban developments and compare them with traditional cities to solve urban and social challenges.

7. Conclusion

Urbanisation is a global phenomenon affecting cultural, social, economic, and environmental aspects leading to significant environmental degradation. Many cities worldwide, generally, especially in the Gulf region, need to provide open green spaces to lessen their ecological footprints and enhance their quality of life. This research focused on analysing the change in landscape aesthetics due to urbanisation and its impact on social and cultural factors in the twin cities of Manama and Muharraq. The relevant literature review discussed the urban landscape of the cities of Manama and Muharraq in the past, including green open spaces and seafronts, and their connection to the history of Bahrain. The study further discussed the current condition of open public spaces and seafront in Manama and Muharraq and the changes that have occurred to the open spaces and seafront because of the urban development they witnessed.

The findings showed that both cities suffered from a lack of open space and public seafronts. As a result, open public spaces must be integrated into urban development to reduce the effects of urbanisation and fulfil society's needs. Moreover, The Kingdom of Bahrain is adapting old traditional urban practices for new urban developments to create more sustainable spaces and strengthen social bonds. However, to connect to traditional fabric, seafronts must be more accessible and connected to societies.

Conflict of Interests

The Authors declare that there is no conflict of interest.

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