

**T.C.  
BAHCESEHIR UNIVERSITY  
GRADUATE SCHOOL  
DEPARTMENT OF ARCHITECTURE**

**ANALYZING THE URBAN TRANSFORMATION OF BENGHAZI  
THROUGH EXPLORING ARCHITECTECTUAL IDENTITY**



**MASTER'S THESIS**

**STUDENT NAME SURNAME: ALABEEDI, AHMED NADER YUNIS**

**ISTANBUL 2023**

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**BAHCESEHIR UNIVERSITY**

**GRADUATE SCHOOL**

**MASTER THESIS APPROVAL FORM**

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This thesis has been approved by the Graduate School which has fulfilled the necessary conditions as Master thesis.

.....

**Institute Director**

This thesis was read by us, quality and content as a Master's thesis has been seen and accepted as sufficient.

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**I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.**

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## **ABSTRACT**

### **TITLE OF THE THESIS**

### **ANALYZING THE URBAN TRANSFORMATION OF BENGHAZI THROUGH EXPLORING ARCHITECTECTUAL IDENTITY**

**Name, Surname: ALABEEDI, AHMED NADER YUNIS**

**Master's Program in Architecture**

**Supervisor: Asst. Prof. Dr. NESLIHAN**

**AYDIN YONET**

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This thesis explores a series of theoretical analysis ideas that evaluate the urban development of Benghazi through its architectural identity. The research is structured around four main sections. The first is that the idea of architecture, which is the main focus of the thesis, is the representation of architectural identity. The second is the change of Benghazi's architectural style over the historical process. The third chapter deals with post-war urban deterioration in Benghazi and architectural problems. In the last section, effective approaches that can be used to sustain Benghazi's architectural identity are discussed. The study concluded that a more comprehensive and holistic approach is needed to conserve Benghazi's architectural identity. In the process of conserving Benghazi's architectural identity, recording the relevant structures accurately, identifying their features, taking photographs, and accurately drawing the original plan were determined as prior necessary steps.

**Keywords: Benghazi, Architectural identity, Architectural style, Urban deterioration, Urban development**

# ÖZ

## TEZ BAŞLIĞI BENGAZİ'NİN KENTSEL DÖNÜŞÜMÜNÜ MİMARİ KİMLİK ÜZERİNDEN ANALİZ ETMEK

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Bu tez, Bingazi'nin kentsel gelişimini mimari kimliği üzerinden değerlendiren bir dizi teorik analiz fikrini araştırmaktadır. Araştırma dört ana bölüm üzerinde şekillenmiştir. Birincisi, tezin ana odağı olan mimarlık düşüncesinin mimari kimliğin temsili olduğudur. İkincisi, Bingazi'nin mimari tarzının tarihsel süreçteki değişimidir. Üçüncü bölüm, Bingazi'deki savaş sonrası kentsel bozulmayı ve beraberindeki mimari sorunları ele almaktadır. Son bölümde de, Bingazi'nin mimari kimliğini sürdürülebilmek için kullanılacak etkili yaklaşımlar tartışılmaktadır. Çalışma, Bingazi'nin mimari kimliğini korumaya yönelik olarak daha kapsamlı ve bütüncül bir yaklaşıma ihtiyaç olduğu sonucuna varmıştır. Bingazi'nin mimari kimliğini koruma sürecinde, ilgili yapıları doğru bir şekilde kayıt altına almak, özelliklerini tanımlamak, fotoğraf çekmek ve orijinal planını doğru şekilde çizmek öncelikli gerekli adımlar olarak belirlenmiştir.

Anahtar Kelimeler: Bingazi, Mimari kimlik, Mimari tarz, Kentsel bozulma, Kentsel gelişim

*To my parents, the main source of inspiration and love!*



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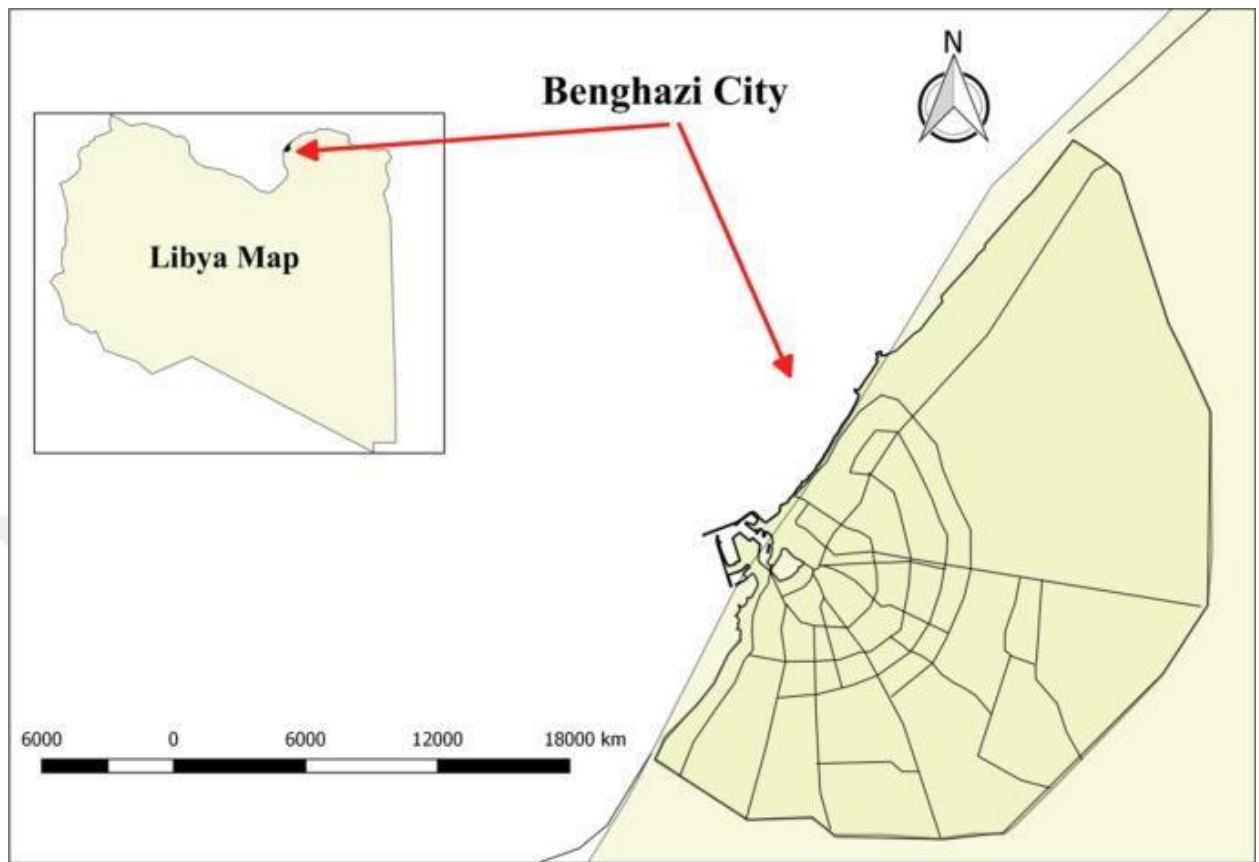
# **Chapter 1**

## **Introduction**

This opening chapter seeks to offer some helpful background information about the thesis. It is composed of four main parts. It begins by considering the statement of the problem. After mentioning the purpose and objectives of the thesis, it focuses on the research questions. Then, it sheds some light on the importance of the research by highlighting the main reasons that motivated me to conduct the study. The last part of this chapter gives a clear idea of the organization of the whole thesis.

### **1.1 Statement of the Problem**

The thesis research study will take place in Benghazi, which is the center of the Benghazi governorate (or Sha'biya in the old naming<sup>1</sup>); one of the 22 regions of Libya (Aita, 2018). This city is also well known for its oil production which brings strong trade links to Libya with the Eastern Mediterranean and Eastern European countries (Barani and Kahraman, 2019). Figure 1 shows the geographical position of this city. Figure 1 shows the official borders of Benghazi. Actually, the Benghazi Region geographically lies between 19°50'- 25° east longitude and 28°00'-32°55' north latitude, in the northern part of Libya, located on the Mediterranean coast (Eltrapolsi 2022).



*Figure 1: Benghazi Location Map*

*Source: <https://link.springer.com/article/10.1007/s40098-022-00622-2>*

The war started in this city in 2011 because it is the economic and administrative center of Libya. Benghazi is the capital city of East Libya, which faced a challenging period during the war (May 2014 - July 2017) (Safour and Elmazek, 2018). During this time, many parts of the city were largely destroyed. Eltrapolsi (2022) added that the recent war in Benghazi has caused massive damage or total destruction in a lot of urban areas and buildings, specifically in the downtown, resulting in architectural devastation that is unfamiliar to those who inhabit the area. Figure 2 shows Jamal Street in the Benghazi city center before the war and after the war in 2014 as an example of a destroyed area.



*Figure 2. Jamal Street in the Benghazi city center before war and after the war in (2018)*

*(Source: [36TUhttps://alkhaleejonline.net-Destroyedbywar.BenghazicityU36T](https://alkhaleejonline.net-36TUhttps://alkhaleejonline.net-Destroyedbywar.BenghazicityU36T))*

It can be gathered from Figure 2 the civil war and foreign intervention in Libya in 2011 could result in a lot of damage and disorder from the war in Benghazi City. Today, there is still no political stability in the city. The consequences of war have increased the vulnerabilities of the city in various dimensions (Abmdas and Demirel 2018). Such consequences and political unrest have affected and will affect the urban identity shaped by the sum of characteristics that are natural and cultural properties. The urban identity can naturally change in time as well as have been changed on purpose because of the recent damaging war. Therefore, Benghazi's identity can represent a particular architectural movement which is reflected in its particular way of forming buildings, spaces, and the social life it creates.

## **1.2 Purpose and Objectives of the Study**

The overarching aim of the thesis is to examine the complex process of the urban transformation of Benghazi by exploring its architectural identity. This study will contribute to the process of sustaining the original urban identity after the war. More specifically, the following four research objectives can be taken into account:

- making a useful contribution to the broad field of architectural identity, and more particularly to Benghazi's architectural identity;

- gaining more insights into the poorly studied dimension of the new urban aspects connected with the Benghazi environment due to the war by analyzing a number of useful and relevant examples;

- identifying the potential factors or forces that affected this environment negatively after the war; and

- exploring a variety of workable strategies that can contribute to sustaining Benghazi's architectural identity.

### **1.3 Research Questions**

The process of collecting data was started by following three research questions:

- 1- What are the ways that can determine whether the architectural identity of Benghazi's environment has already been lost after the war?

- 2- What are the main urban aspects in determining the indicators related to Benghazi's architectural identity?

- 2- What are the key factors or forces that affected Benghazi's environment negatively after the war?

- 3- What are the practical strategies that can be used to sustain Benghazi's architectural identity?

### **1.4 Significance of the Study**

I am highly motivated to conduct the present research because it can be seen as one of the most important studies that has aimed at analyzing the urban transformation of Benghazi by exploring its architectural identity. More specifically, two main reasons could be considered to build a rationale behind the significance of conducting the study. First of all, this study is original and novel, as little exploratory evidence has been published or documented on the urban transformation of Benghazi from an architectural identity perspective. According to Safour and Elmazek (2018, p.2) architectural character is “a set of characteristics and values that are expressed by the building, which provides its identity”. However, they went on to argue that the urban character is a group of complex elements that characterize the place which includes physical and non-material components of the composition. Both the architectural character and urban character are considered to be a reflection of the cultural identity of the society. Yet, little research has explored the complex and chaotic nature of the architectural identity of urban Benghazi after the war (May 2014 - July 2017). With no doubt, such a destructive war has caused difficulties in Benghazi not only at the architectural level but also at the social, economic, cultural and environmental levels (Brzoska and Fröhlich 2016). The dearth of published research on such difficulties sheds some light on the value of exploring the urban transformation of Benghazi from an architectural identity angle in more depth.

Second, there is a strong need to maintain the architectural and urban identity of Benghazi simply because this city can be seen as a civilized city in the world. A number of merits were suggested by Safour (2013) to maintain the architectural urban identity of the historical areas. The following benefits are of particular importance in the research study:

- preserving the continuity of architectural and urban identity of the historical-vernacular areas by protecting the distinctive visual characters of the areas and protecting their values;
- preserving the continuity of the elements of heritage, and inherited values; and
- avoiding disharmony between the historical-vernacular urban fabric and the newly planned areas.

I believe that there is an urgent need to categorize a clear and comprehensive trend that distinguishes the architecture of Benghazi from other Libyan cities. The current identity reflects that this city suffers from an identity crisis due to war and the effect of Western architecture that does not express the culture of Libyan society and does not fit with the local environment. No wonder, this gives concern and cause to investigate some more ways that can protect the urban architectural identity of Benghazi more effectively.

### **1.5 Structure of the Thesis**

The thesis involves six main chapters. The **first chapter** aims at setting the scene by focusing on (a) statement of the problem, (b) research general purpose, and specific objectives, (c) research questions, (d) research importance and (e) thesis organization.

**Chapter Two** seeks to offer a critical look at a variety of theoretical issues concerned with the complex nature of exploring the urban transformation of Benghazi through examining its architectural identity: the concept of architecture as a manifestation of urban identity, the historical development of the architecture of Benghazi in broad terms, the urban decay of Benghazi and relevant architectural problems after the war and some viable strategies that can be employed to sustain Benghazi's architectural identity.

**Chapter Three** considers a number of methodological issues. It begins by focusing on the reasons that motivated me to position the study within the field of qualitative research. Then, it sheds some light on the reasons for choosing the qualitative case study as a suitable research approach. After that, it seeks to discuss how semi-structured interviews were employed to gather valid and reliable data. Finally, it shows how the data obtained could be analyzed systematically by means of the qualitative content analysis technique.

**Chapter Four** aims to present the findings gained from analyzing the qualitative data that came from answering the three research questions.

**Chapter Five** offers a detailed discussion of the findings presented in Chapter 4, drawing out key insights from particular data sources and comparing and integrating findings from different sources. It also compares the findings with previous research discussed in the literature.

The last chapter (**Chapter six**) gives final remarks by focusing on the values of the research study, restating the topic being researched, and considering some values connected with the contribution of the research study. After that, a number of practical recommendations are provided to explore the urban transformation of Benghazi by examining its architectural identity. It also considers the limitations inherent in the thesis study and offers a variety of suggestions for further research.

## Chapter 2

### Literature Review

In this chapter, I intend to consider a variety of theoretical points related to the investigation of the urban transformation of Benghazi by examining its architectural identity. It involves four main parts. First of all, it concentrates on the concept of architecture as a manifestation of urban identity. Secondly, it sheds some light on the historical development of the architecture of Benghazi in broad terms. Thirdly, it considers the urban decay of Benghazi and relevant architectural problems, after the war. Finally, it discusses a number of workable strategies that can be employed to sustain Benghazi's architectural identity.

#### 2.1 2.1 The Concept of Architecture as a Manifestation of Urban Identity

Architecture is an important tool to determine and reflect the urban identity of a city. For example, Dovey (2010, p. 45) argued that "The question is not whether architecture constructs identities and stabilizes meanings, but how and in whose interests". Rifaioğlu and Güçhan (2007, p. 2) defined the identity of a particular city as "a concept which forms through time and includes physical, natural, historical and socio-cultural characteristics" associated with such a city. It seems evident that understanding and appreciating the local identity becomes an important issue in the conservation of its architectural identity. In the twentieth century, the notion of architectural identity occurred in the urban studies domain. In this regard, Kevin Lynch (1960, p. 8) viewed architectural identity as "the identification of an object, which implies its distinction from other things, its recognition as a separable entity. It is not in the sense of equality with something else but with the meaning of individuality or oneness". It can be gathered (said) that the architectural identity of each city is characterized by a genuine sense of uniqueness, vividness, and dynamism. This urban identity is formed by the entire values and characteristics of a city. It is common sense that the architectural identity goes through a vibrant process of urban transformation that involves strategies and activities for maintaining environmental quality and life balance (Beyhan and Gürkan 2015). To establish a useful link between architecture

and the unique urban identity, Rossi (1982, p. 29) regarded cities as “gigantic man-made objects, a work of engineering and architecture that is large, complex, growing over time and characterized by their own history and thus by their own form”. However, the urban identity and its associated architecture could be affected negatively by a variety of external factors. These factors can result in the decay or destruction of urban identity. According to Azlitni (2009), the urban and architectural features of cities and towns are a direct response to a number of local and international factors. Indeed, it is the interplay of a group of factors such as political, social, economic and environmental. The result of this interplay is changeable and renewable from time to time, which distinguishes one culture from another.

A main external factor is related to globalization which has affected all life domains, especially architecture. In this respect, Clammer (2003, p. 43) stressed that cities can be “most immediately and directly influenced by globalization, in terms of consumption patterns and tastes, fashion, architecture, media and new forms of material culture”. To explain this point more clearly, Rifaioğlu and Güçhan (2007, p. 3) focused on the direct effects of “international architecture”. A global city invites global capital investments: transport, tourism, and cultural events through an international identity, and also has a "global profile" (Paul, 2004). The main negative effect of this global profile is that it can be a dominant factor that changes and destroys the unique features of local places (Rifaioğlu and Güçhan, 2007). In a globalized world, architectural identity becomes a fundamental subject about a society’s culture as a way of life as realized in its built environments. The issue revolves around the ability of architecture to convey meaning and serve as a valuable reference to any defined community undergoing urban and socio-cultural transformations (Al-Mohannadi, et al. 2020). Ben-Ali (2016) discovered that rising tensions between the global and local architecture in Benghazi due to globalization and new technologies could result in the standardization of constructed environments, robbing human habitats of cultural and regional or local identity. Ben-Ali’s point is worthwhile exploring in the research study.

In addition to globalization, wars, and catastrophes can be seen as external factors that can have negative effects on urban identity and its relevant architecture.

The political dimension of globalization as an international phenomenon could ignite a number of conflicts, stressing the role of social media. Cities wear down in time due to socio-economic and cultural changes that are experienced during the historical process. Particularly, the economic crisis and the change in the social structure after wars and conflicts in ruined regions in cities (Beyhan and Gürkan 2015). When it comes to Benghazi, the 2011 revolution in Libya made this city a field of fighting that made the urban identity of this vulnerable (Rossi 2013; Daw, et al. 2016). Barani and Kahraman (2019) used written and visual documents such as master plans, satellite images, and national/international reports to discover the vulnerabilities of Benghazi after the war. They maintained that cities, such as Benghazi, can be rich in violence and power because conflicts and wars can result in instability and insecurity in cities that lead to risks in different dimensions. These factors not only influence the demographic, economic, social, and environmental structure of the city but also create pressures on the urban identity. Barani's and Kahraman's (2019) research figured out there is a strong need to investigate the urban transformation of Benghazi from an architectural identity angle more thoroughly. The coming part is about the architectural history and urban transformation of the Old City of Benghazi in broad terms.

### **2.3 The Historical Development of the Architecture of Benghazi**

Geographically speaking, the city of Benghazi is positioned on the Mediterranean coast almost halfway between Tripoli in the west and Alexandria in the east. This strategic site of the city boasts a mixture of traditional and modern architectural styles that shape its image and terrain (Ben-Ali, 2016). These architectural styles were shaped by the Greek, Roman, Arab, Ottoman, and Italian cultures throughout history. In his early study that aimed at investigating the urban geography of Benghazi, Bulugma (1964) claimed that the Benghazi "center was almost certainly founded by Greek settlers from the Jebel at some time before 515 B.C.". In spite of the fact that the historical area of Benghazi creates complexity in ownership and makes it difficult for authorities to manage, it is a sustainable place because of the following two main reasons:

- It is a sustainable urban composition in terms of compact patterns, high density; and
- It also has a mixed social composition and produces vital life sources through the diversity of residents (Safour and Elmazek 2018).

Figure 3 shows the mix of architectural compositions with different historical stages.



*Figure 3: A Blend of Architectural Compositions with Distinct Historical Periods of the (1950s)*

Throughout history, Benghazi was invaded by many of the world's colonial powers such as Greeks, Romans, Knights of Saint John, Ottomans and Italians for strategic, political and economic reasons. Figure 4 Below is an overall example of the historical development of architecture in Benghazi.



**Arab  
Architecture**

**Ottoman  
Architecture**

**Italian  
Architecture**

**Contemporary  
Architecture**

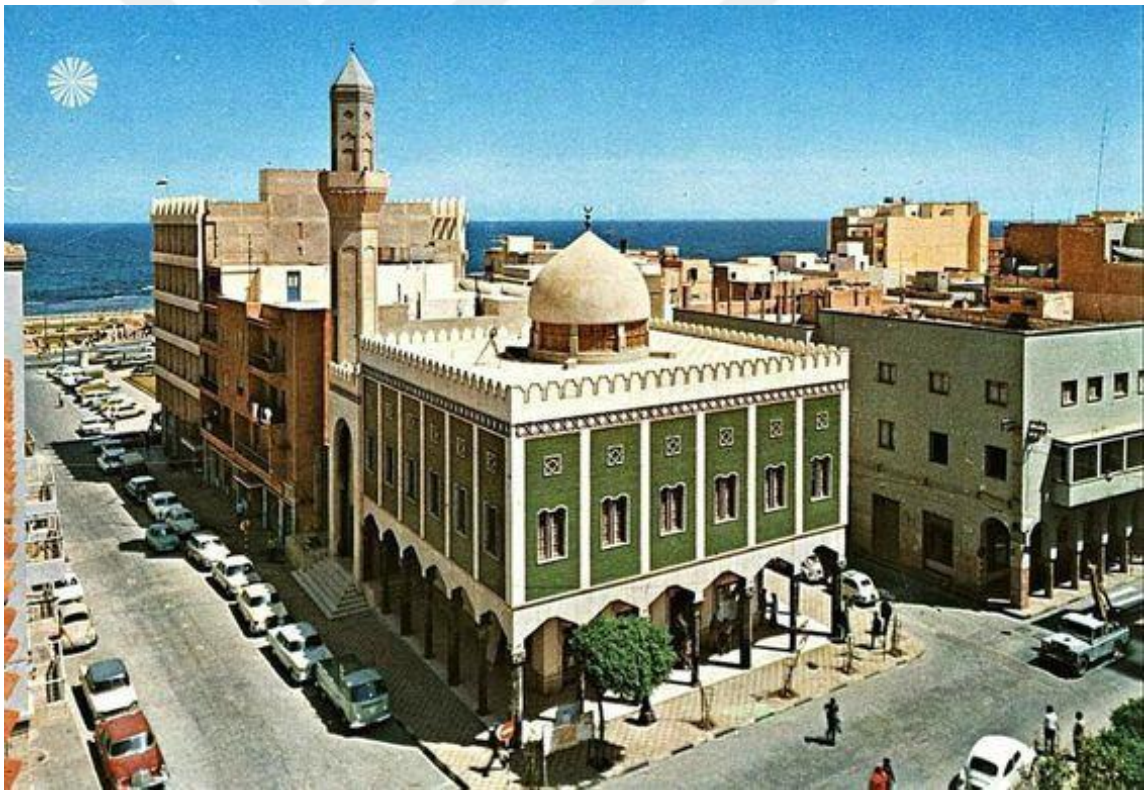
*Figure 4: An Overall Example of the Historical Development of Architecture in Benghazi*

It can be established from Figure 4 that Benghazi’s architectural identity encompasses a blend of traditional and modern architectural styles that shape its image and terrain. Put differently, its architecture has been influenced by a number of cultures such as the Arab, Ottoman, and Italian cultures. These have influenced the streetscapes, buildings, and public places in the city. In addition, there are remnants of Greek and Roman architectural designs that complement the city’s general landscape (Bulugma 1964). In order to establish a better understanding of the historical development of the architecture of Benghazi, it is important to study it from different architectural perspectives including Arab, Ottoman, Italian, and modern periods.

### **2.3.1 Arab Architecture of Benghazi**

Generally speaking, the Libyan society is part and parcel of the Islamic Arab culture. It is part of the values and principles derived from religion, customs, and social traditions that have had the greatest impact on formulating the urban structure of the city of Benghazi. In other words, the quick spread of Islam in the Northern African

countries played a crucial role in showing the Arab influence on Libyan cities, particularly Benghazi. According to Bulugma (1964), the name of the city came after Marsa Ibn Ghazi as early as the second half of the 16th century. The new name is no doubt that of a Moslem Saint of whom nothing is known except that this tomb is thought to be somewhere in the main cemetery. It seems clear that the Arab influence on the architecture of the city has been crystal clear. Wright (2012) stated that the Islamic architecture in Benghazi focused on worshiping places, namely mosques to highlight the importance of the Islamic faith. The architecture of such mosques found its roots back to the Umayyad Dynasty. The Attic Mosque has a remarkable design in Benghazi. Such mosques are either square or rectangular in shape and are enclosed within a courtyard. Figure 5 below shows the remarkable design of Bilal Ibn Rabah Masjid in Benghazi during the Arab rule.



*Figure 5: A remarkable Design of a Mosque in Benghazi during the Arab Rule  
(Bilal Ibn Rabah Masjid)*

*Source:*

<https://i.pinimg.com/originals/a0/1c/62/a01c62d27153bab613117f2b5e547223.jpg>

McLaren (2006) argued the Abbasid Dynasty could have had a direct impact on the architecture of Benghazi, especially with the central-dome mosques. It is worth mentioning that the Abbasid architecture was financed by the rich trade that flourished in the city. Demissie (2012) considered how Benghazi gardens were designed in accordance with the heavenly paradise, which is the actual reward of a strong belief in Allah. Ben-Ali (2016) pointed out that a lot of urban space has been set aside for these gardens. Famous gardens are themed with flowers, shades, and gardens, which add beauty to the natural environment. To show the positive influence of Arab architecture on Benghazi, Azlitni (2009, p. 140) emphasized that “The only architecture that has had a positive impact on people’s hearts and become an integral part of their daily lives is the authentic Arab Islamic architecture. Libyan society is an integral part of the Islamic Arab society”. Nevertheless, Edwards (2006) claimed that the Arab architecture of Benghazi could be critiqued as simple and fragile because many buildings gradually get destroyed, especially when having severe climatic conditions (see, Hasan 2021). Edwards’ claim is worthwhile examining in the research study because it sheds some light on the urban transformation of Benghazi by focusing on its architectural identity.

### **2.3.2 Ottoman Architecture of Benghazi**

Historically speaking, the Ottomans ruled Benghazi in the 16<sup>th</sup> century. Bulugma (1964, p. 42) mentioned that it is taken for granted that the Turks were militarily able to take over Egypt in the year 1517. This fact made the Turks willing to spread their domain to other parts of North Africa. The Ottoman influence on the architecture of the city was very important. In this respect, Ben-Ali (2016, p. 23) pointed out that the Ottoman people influenced the city’s architecture through unique artistic designs. The builders incorporated signature elements such as hemispherical domes and enclosed courts, which were characteristically unique to Ottoman architecture. Hoag (2012) mentioned that Ottoman architecture employed a blend of brick and stone. Figure 6 below shows Ahmad Rafik’s House, which can be considered the biggest house in the Old City during the Ottoman era.



Housh Ahmed Rafik, one of the biggest Ottoman house in the Old City

*Figure 6: Ahmad Rafik's House in the Old City during the Ottoman Era (1566-1600)*

The mosques were viewed as domed, central-plan structures that stood majestically above other structures. Freely (2011) called them “tekkes”, which were constructed to accommodate houses of notable residents. Ben-Ali (2016, p. 23) added that remnants of Ottoman architecture are a reminder of the city’s rich history [...] while the ancient Ottoman styled mosques were the most characteristic monuments of the Ottoman architecture, secular buildings were also built. In addition, Ottoman architecture in Benghazi is characterized by its adaptation to the local environment as well as the Islamic character. Since the entry of Ottomans to Libya in 1551, they were concerned with fortifying cities and castles, turning many of the churches into mosques (Azlitni 2009). A good example is Jami’ Al-Atiq, as clearly shown in Figure 7.



*Figure 7: Jami' Al-Atiq, Benghazi (Early Fifteenth Century)*

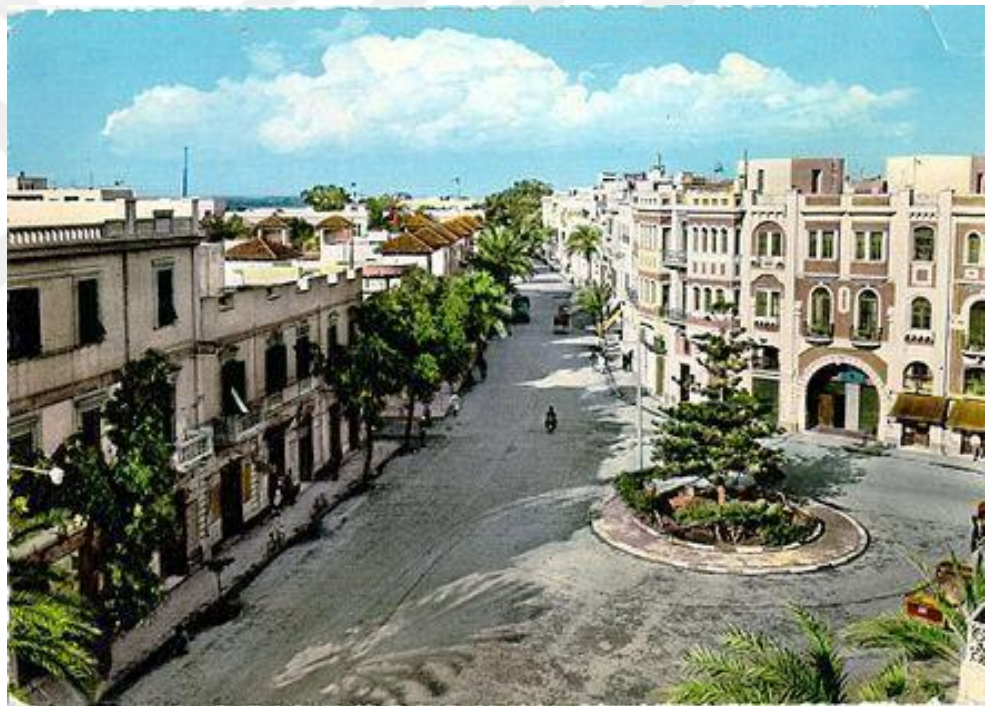
*This Ottoman-style Mosque – AlAtiq- is one of the few buildings of the pre-colonization era that survived WWII and the following renewal programs in Benghazi.*

*Source: ([https://archiqoo.com/locations/atiq\\_mosque\\_benghazi.php](https://archiqoo.com/locations/atiq_mosque_benghazi.php))*

It seems evident that the Ottomans gave much importance to the architecture of mosques, especially when they changed churches into mosques. However, some transformation in architecture shows how the identity of Ottoman architecture in Benghazi has undergone a variety of changes, most influenced by Western designs, especially the Italian culture as explained in the following section.

### **2.3.3 Italian Architecture of Benghazi**

From a historical perspective, the Italians ruled Benghazi in 1911. Bulugma (1964, p. 42) pointed out that “The early changes and modifications by the Italians to Turkish Benghazi were mainly military character. Defense requirements immediately necessitated the construction of a strong city wall”. Raza (2013) stated that the Italians were not concerned about the social, economic, and physical well-being of the Libyan people. It seems clear that they chose the best lands to settle in. On the other hand, Libyan people were dismissed to far areas. Accordingly, the Italians built those buildings that could achieve their own fascist goals that are manifested in establishing Italy’s new identity as a colonizing power, which was to go along with Italy’s return to architectural distinction in Libya. In Benghazi, the Italian buildings resembled European ones, especially Italy, as shown in (Figure 8).



*Figure 8: Italian Buildings in Benghazi (Tree Square, 1938)*

In Figure 8, the Italian buildings in the Tree Square reflect continuity. Architecture connects the two different and heterogeneous realities of space. Relationships and resonances within the building form interact to provide human beings with their private and public worlds. These interesting buildings are interconnected, reflecting “form & function”, and this is not just the sum of the parts, but the sum of their interrelationships and interactions, where the city was

distinguished in its planning by the principle of unity, where the buildings' appearance is one interconnected and cohesive unit.

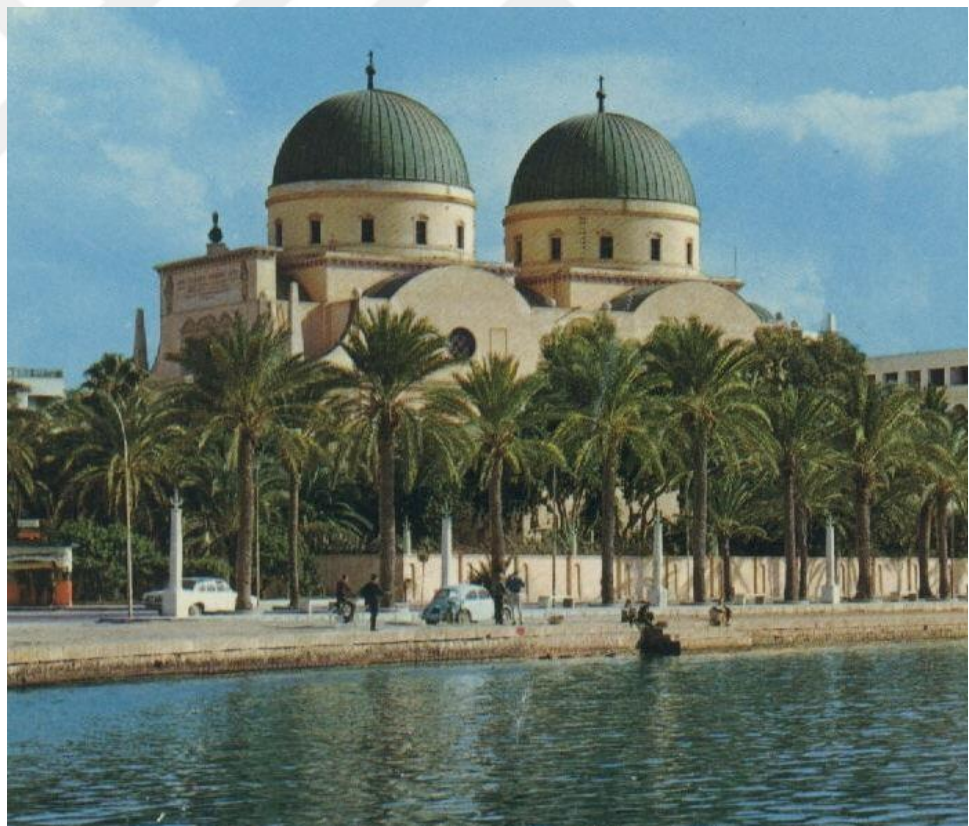
It is worth mentioning that throughout the Fascist period, Italian architects were mainly influenced by “rationalist” architecture, which was based on the theories of Le Corbusier, Ludwig Mies van der Rohe, and Walter Gropius. These Italian architects were inspired by the scale, structure, and symmetry of ancient Roman architecture but without ornamentation. The buildings were mainly iconic and could reflect distinct historical, political, demographic, sociological, and economic factors that make up what we perceive as the brand image of Benghazi (Černikovaitė & Karazijienė, 2020). Figure 9 shows an iconic building during the Italian era.



*Figure 9: An iconic Building During the Italian Era (1930)*

Castillo (2011) stated that the Italian architecture in Benghazi was embodied in religious buildings. Because Italians were Catholic believers, they focused on

building churches. This is why no concrete efforts were made to preserve or maintain the existing mosques or establish new ones. A main disadvantage of this new trend is that it reveals how mosques are fitting but the churches are not fitting to the modern identity. Meaning that the majority of the population is Muslim since the Arab rule, that's why churches has been neglected to fit the modern architectural identity. A good example is the neo-classical Benghazi cathedral. Figure 10 shows a Roman Catholic church called Basilica Nevertheless, Bernhard (2012) mentioned that some important Italian design buildings that stand up to date are commercial and public buildings, such as public halls. Interestingly, three main types of urban areas are identified by Etrapolsi (2022, p. 121) during the Italian Colony: the dual city (which left the pre-existing city intact while making it obsolete), the isolated village (which housed Italians living far from cities and indigenous people), and the imperial city (which dispersed its native population into new “quarters” while the existing city was seized).



*Figure 10: Roman Catholic Church: Basilica (1960)*

*Source: [https://en.wikipedia.org/wiki/Benghazi\\_Cathedral#/media/File:La\\_Cattedrale\\_di\\_Bengasi.jpg](https://en.wikipedia.org/wiki/Benghazi_Cathedral#/media/File:La_Cattedrale_di_Bengasi.jpg)*

### 2.3.4 Modern Architecture of Benghazi

In broad terms, the modern architectural identity in Libya reflects an explicit influence of Western architecture. Various big projects were awarded to some architecture firms. These firms applied the architecture ideas in such countries with input from decision-makers regardless of local participation (Alzahrani 2022). Vines (2013) argues that understanding the modern architectural model is quite challenging because it is problematic to distinguish the constructed heritage from the new buildings in Benghazi. Benghazi lost its local image and ability to meet local needs and uniqueness because it experienced changes in cultural architecture with local indigenous architecture being replaced by foreign designs. Modern technology and lifestyle have brought new challenges, which could not be fully met by either the traditional or contemporary approaches, while informal interventions are in some cases independent, random, and a cause of different urban problems (Mohamed 2013). These changes are due to attempts to free from the past by adopting international social aspects without prior consideration of changes in society, as clearly shown in (Figure 11).



*Figure 11: Modern Buildings in Benghazi Sede-Khalifah (A private land subdivision about 20km north of Benghazi city Source: Google Earth, 01. 2012)*

Aita (2018) highlighted the effect of Libya's oil discoveries in the late 1950s on the urban identity of Benghazi. In his words:

Following Libya's oil discoveries in the late 1950s, urbanization developed rapidly. The 1st generation master plan of 1966-1988 aimed at reorganizing the city along a circular-radial network of streets and with a new distribution of land-use focusing on the encouragement of trade and administrative services.

Kamat (2014) mentioned that international architects, planners, and contractors who undertook major architectural projects in Benghazi after the 1980s used new technology and foreign architectural designs that could have direct effects on the local identity of the architecture of Benghazi. In this period, the modern architecture of Benghazi shows how the City Centre is characterized by several roads, expressways, and interchanges which occupy a large area with no walls and gates around the old city of Benghazi (Vines, 2013). Ben-Ali (2016, p. 3) added Historical and vernacular architecture was based on mainly on traditions and local social order; however, modern architecture is influenced by technology and global trends. In Benghazi, the mixture of vernacular and modern architecture has influenced the city's current planning. The main reason behind this mixture is that the notion of architecture is mainly based on historical events, design, and construction of buildings and archaeological structures. It is a multidisciplinary field based on mathematics, science, art, technology, social science, politics, history, and philosophy (Al-Zrigat 2020). It is enlightening to explain the concept of vernacular architecture that shows how urban-architectural units come together in a given territory with coordination of form, volume, usage, coloring, the rhythm of masses, and harmonies between materials and building systems. Vernacular architecture is affected by the relationship between individuality and culture, innate unity, and mutual and environmental behaviors (Asadpour, 2020).

*Figure 12* shows how the urban and architectural development in Benghazi in the period (2000-2006) has been associated with the development of the economy and

social life. The main objective of the development plans adopted by different institutions, both public and private was the construction of all areas of residential and community facilities. They concentrated on solving the problem of quantity at the expense of quality requirements. Hundreds of thousands of housing units, thousands of school and healthcare buildings, and other services have been built in all towns and villages.



*Figure 12: Modern Residential Buildings in Benghazi (2006)*

Azlitni (2009, p. 138) critiqued the architectural identity of Benghazi as being incoherent or inconsistent, as clearly mentioned in the following extract:

What distinguishes the Libyan cities today like many other cities around the world is the lack of coherence and harmonious character, which caused architectural and urban confusing and inconsistent features, and consequently the absence of a clear identity

Azlitni's criticism is worth exploring in more depth in the research study. The following section focuses on the major architectural features of the urban identity of Benghazi after the war.

#### **2.4 The Urban Decay of Benghazi and Relevant Architectural Problems after the War**

Cities with their growing population are both centers of violence and power. Political conflict and more severe wars bring instability and insecurity to cities (Barani and Kahraman, 2019). The civil war in the city of Benghazi started in 2011. In 2011, all Libyan cities witnessed political conflicts because of control of power and wealth (Daw et al., 2016). These days, there is still no political stability in the city because of chaos. The war has had damaging results represented in the vulnerabilities of the city in many dimensions (Brzoska and Fröhlich 2016). Aita (2018, p. 56) stated that "Benghazi's urban areas were damaged severely during the battle of Benghazi of the 2nd Libyan civil war. The damages were related to the intensity of the battles that took place".

The cities are normally affected by the war to the extent of their vulnerabilities the demolition of historic buildings and the destruction of the infrastructure as a whole (Khan, 2013). According to Barani and Kahraman (2019, p. 169), the negative effects of the war on the architecture of Benghazi as clearly explained in the following quotation:

In the case of the city of Benghazi, the city center contained both many historical and symbolic buildings, and the major service centers/buildings were destroyed. Many buildings were destroyed in densely populated neighborhoods. The infrastructure of the city was severely damaged.

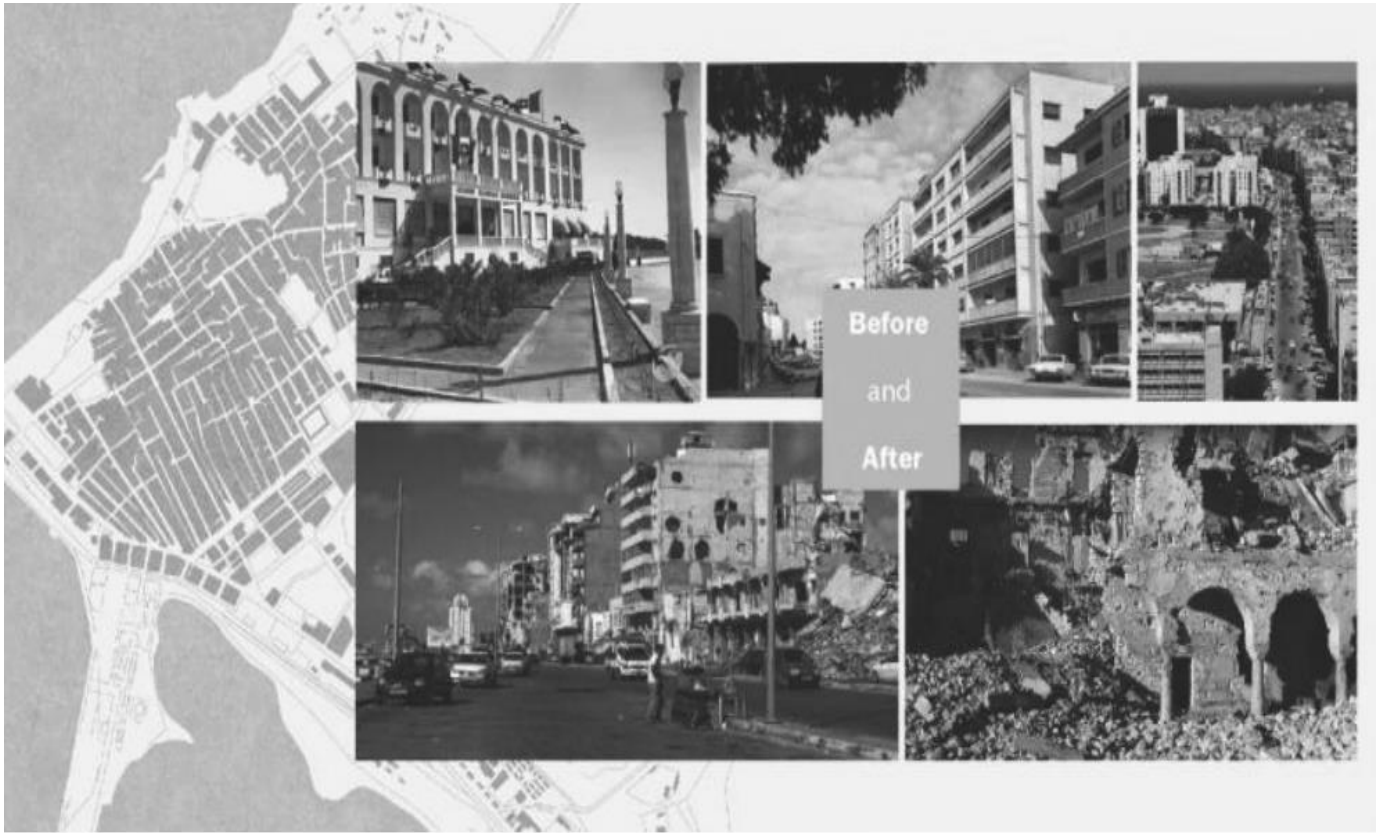
Aita (2018, p. 57) also contended that "The damage ground verification confirmed the continuous presence of war remnants in the branches of Old Benghazi..." Indeed, the

urban identity was severely damaged by the war. Figure 13 below is a clear example of a destroyed building because of the war.



*Figure 13: A Destroyed Building during the War in Jamal Street (2019)*

Etrapolsi (2022) mentioned that the current war in Benghazi has caused massive damage or total destruction in a lot of urban areas and buildings, specifically in the downtown, resulting in architectural devastation that is unfamiliar to those who inhabit the area. Figure 14 gives images of the war destruction in Benghazi in current years.



*Figure 14: Images shows the War Destruction in Benghazi in Recent Years (2012-2016)*

Finally, such damages give the cause to look for some practical strategies that can play a crucial role in maintaining the architectural identity of Benghazi.

## **2.5 Workable Strategies for Sustaining Benghazi Architectural Identity**

The city of Benghazi has been under the pressure of political conflicts and instabilities for more than seven years due to war (Barani and Kahraman, 2019). To deal with the damaging effects of the war, it has been essential to preserve historic cities and heritage buildings and revive them. The policy of reuse and rehabilitation of these legacies by selecting the right contemporary functions is a successful step on a secure path to save what can be saved from the heritage (Hmood, 2019). After all, heritage preservation requires a multifaceted strategy. To maintain heritage architecture, it is necessary to maximize the rich potential of natural resources, cultural

variety, and human resources via creativity and innovation (Nasir, et al. 2022). The process of heritage preservation focuses on restoring monuments that are all notable historical, archaeological, artistic, scientific, social, or technical buildings and constructions, including their fixtures and fittings.

However, the conservation of the local identity becomes the main problem in achieving effective conservation actions in a historical context (Rifaioğlu and Güçhan, 2007). It can be said that established that architectural identity is a complex issue that needs to be explored more thoroughly and effectively. Some particular international organizations dealing with the conservation of cultural heritage have focused on the concept of identity, parallel to urban morphologists, and have presented their intentions through charters and declarations. It seems clear that urban conservation projects can play a vital role in defining and enhancing Benghazi's unique features by focusing on the socio-cultural, economic, administrative, historical, and physical characteristics of the city, as shown in Figure 15. Briefly explain this conservation project shown in the image.



*Figure 15: An Urban Conservation Project in Benghazi (2018)*

Another important issue was raised by Aita (2018) in relation to the reconstruction and recovery effort that should be made when considering the perspectives of the future development of the city in its mainly radial mode.

Particularly, the preservation of central green zones and the limitation of polluting



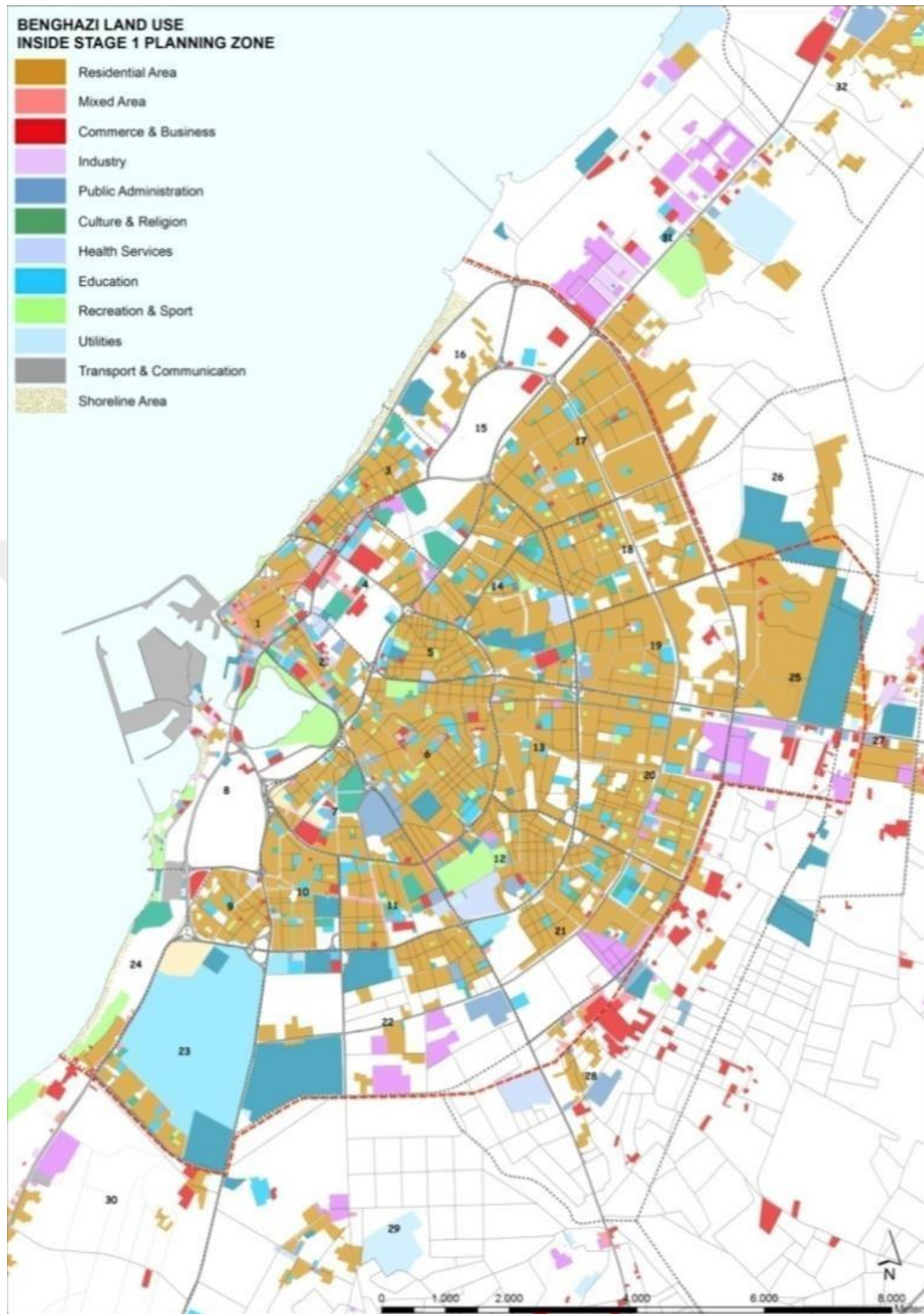
industries should be major concerns, as well as the (re-)organization of the housing environment. Figure 16 shows the encroachment on agricultural land in Al Guarsha district. As a result of urban sprawl, the district was divided into residential parcels that caused damage to the natural environment around the city.



*Figure 16. The changes in the land use of the Al Guarsha district due to urban sprawl from 2011 to 2019 (Source: Landsat satellite images via Google Earth)*

Safour and Elmazek (2018) regarded rebuilding the city of Benghazi after the war as an opportunity to achieve a sustainable urban planning approach through its three dimensions: the environment, which affords the ecological balance; social, which ensures the stability of society; and the economic, which provides economic growth. In the research study, I am influenced by Barani's and Kahraman's (2019) call is of vital importance because it shows that the city urgently needs both recovery in many dimensions and a planned urban development movement ... to deal with the vulnerabilities of Benghazi. Accordingly, they established a workable framework that takes into account the present and future vulnerabilities by adopting various planning tools, procedures, policies, and strategies that not only have the potential to deal with chronic pressures, and existing problems in the city but also create opportunities for preparing the city for further risks and shocks. It can be gathered that this framework is enlightening and inspiring because it highlights the importance of protecting the architectural identity of Benghazi. Hmood (2019) also suggested a number of strategies to preserve the architectural identity of Benghazi: consolidation, reproduction, reconstruction, preservation, deterioration perversion, rehabilitation, and restoration. In particular, the strategy of rehabilitation is essential because it focuses

on maintaining the architectural identity of Benghazi. To do so, a number of stages can be considered: documentation, collection of enough data and information about each heritage, documentation by photos, architectural plans, tables, etc. In addition, it would be important to employ the approach adopted by the United Nations Program for Human Settlements (2014) to ensure the quality of rehabilitation strategy. This approach depends mainly on summarizing and improving urban planning theories to help build a new sustainable relationship between urban populations, urban space and increase the value of land. The following 5 standards can be taken into consideration: adequate space for streets and an efficient street network; high density, with 150 people/hectares; mixed land-use, at least 40% of floor space should be allocated for economic use; social mix and limited land-use specialization. Importantly, this approach should adopt the land use plan of Benghazi, as displayed in Figure 17.



*Figure 17: Land Use Plan of Benghazi by Alemarah office (2015) Source: <https://wakeupbenghazi.wordpress.com/tag/land-use/>*

This chapter discussed a number of theoretical issues related to the complexity of exploring the urban transformation of Benghazi by examining its architectural

identity. It started with explaining the notion of architecture as a real representation of urban identity. Then, it moved to focus on the historical development of the architecture of Benghazi: Arab, Ottoman, Italian, and modern. After that, it shed some light on the urban decay of Benghazi and relevant architectural problems after the war. Finally, it focused on some helpful strategies that can be used to protect the architectural identity of Benghazi.



## **Chapter 3**

### **Field Study**

This chapter aims to offer a number of methodological points closely connected with exploring the architectural identity of the urban transformation of Benghazi. It consists of six main parts. First, it explains how the research study is positioned within the qualitative domain. Second, it builds a rationale behind employing a case study as a workable research approach or strategy. Third, it focuses on the population and sampling. Fourth, it sheds some light on some ethical considerations. Fifth, it takes into account the data collection tools that are used to gather valid and credible data. Finally, it discusses the techniques employed to analyze the data gathered.

#### **3.1 Research Domain (Qualitative Research)**

To investigate the architectural identity of the urban transformation of Benghazi thoroughly, I decided to position the study within the paradigm of qualitative research. Three main reasons have motivated me to do so. First of all, this research can be seen as a small-scale study that involves a small number of participants. According to Bryman (2012, p. 408), while quantitative research is concerned with “uncovering large-scale social trends and connections between variables,” qualitative research is more interested in exploring “small-scale aspects of social reality.” Whereas quantitative researchers rely on numbers, quantifications, and statistics, qualitative ones mainly depend on exploring themes and concepts (challenges and strategies) (Denzin and Lincoln 1994).

Second, this paradigm can offer me plenty of opportunities to find a better understanding of the complex nature of the architectural identity of Benghazi because it is complementary and comprehensive. It is naturalistic because it deals with real actors or humans (the participants) in a real-life context. Bryman (2012) stated that while quantitative researchers conduct research in a contrived context, qualitative researchers investigate people in natural environments. Using qualitative research

methods in architectural research is advantageous because there is no limitation to using any methodological tool, there is a holistic detailed investigation, and data can be collected over the period, place, and time convenience (Ben-Ali, 2016).

Finally, because qualitative research is constructivist in nature, it highlights the interpretive merit that encourages the researcher to understand relevant phenomena by interpreting findings in a developmental way. Here, Richards (2003) claimed that constructing reality socially crystallizes in an interpretive way while investigation is in progress. One advantage of the interpretive nature of qualitative research is that it can establish a vital link between participants as social actors (participants) and the research study (Flick 2006). Therefore, the phenomenon under exploration (Benghazi's architectural identity) can be interpreted more meaningfully and authentically. Also, using mixed methods is very pragmatic and practical.

### **3.2. Research Approach (Case Study)**

In qualitative research, a number of approaches are used to establish a better understanding of the phenomenon under exploration. These approaches or traditions include case studies, action research, life history, and documentary research (Bryman 2012). This part shows how a case study can be used as a feasible way to explore the problem of Benghazi's architectural identity. It starts by defining it, considering the actual reasons behind using it, and the issue of sampling.

#### **3.2.1 Definition**

In qualitative research, a case study can be used as a principal approach or strategy. A workable definition of a case study was provided by Yin (2000, p. 13) who viewed it as "an empirical inquiry that investigates a contemporary phenomenon within a real-life context". In the present study, the contemporary phenomenon is Benghazi's architectural identity. Benghazi can be seen as a macro case and the participants are individual cases. In a similar vein, Zainal (2007) states that the case study approach explores particular contemporary issues in their real-life settings by helping the qualitative researcher closely examine the data within a specific context.

### **3.2.2 Building a Rationale**

Three causes stimulated me to make use of the case study approach. First of all, a number of recent research studies that have explored the architectural identity of Benghazi have also adopted the case study approach. For instance, Ben-Ali's (2016) empirical research also employed the case study approach to explore the tensions between the global and local architecture of Benghazi. Azlitni (2009) stressed that a case study provides the best mode of inquiry from an architectural viewpoint since it allows a researcher to undertake a site survey as well as develop a theoretical framework.

Second, a variety of types are associated with the case study approach: exploratory, collective, comparative, explanatory, illustrative, and cumulative. In the thesis research, two key types were taken into consideration:

- exploratory, for it explores a particular phenomenon in real-life contexts (see, for example, Yin 2000); and
- comparative, because it enables to compare and contrast a host of themes within individual cases (see, for instance, Jensen and Rodgers 2001).

Finally, the case study approach provides me with a number of data-gathering instruments that play a key role in making sure that the data gained is credible (Bryman 2012). In the research study, I seek to use semi-structured interviews as the main data collection tool. However, the case study approach may be associated with some problems. A possible shortcoming is that this approach may allow for generalizations that could be subjective because the researcher needs to be part and parcel of the research process (Stake 1995; Stake 2005). In case the current researcher faces this concern, he would focus on the thematic framework that could draw while analyzing the data.

### **3.3 Sampling and Population**

Because the qualitative field is characterized by flexibility and leeway, it is possible to use non-probability sampling. According to Creswell (2014, p. 204), “a nonprobability sample (or convenience sample), in which respondents are chosen based on their convenience and availability” could be more appropriate. Bryman (2012, p. 710) added that a convenience sample can be “selected because of its availability to me. So, I will depend on the convenience sample that will help identify those participants that will be interviewed.

The accessible population of this research, which represents the target population, is 17 participants (7 females and 10 male) from the city of Benghazi.

### **Giving Reasons Behind Choosing the Participants**

The following four reasons stimulated me to interview these participants:

- 1- They were available and accessible. All of them volunteered to participate in the study
- 2- They are all Libyan (in, Benghazi)
- 3- They are academicians in the architecture and planning field.
- 4- Most of them showed a lot of interest and motivation to participate in the current research because they thought that it could be useful for them to witness the restoration of Benghazi.

The following table (**Table 3.1**) provides data on the participants related to age, gender, and specialties.

**Survey Participants Table:**

Participants	Age & Gender	Specialties
A1	47-Male	(M.D in Urban design from Benghazi University)
A2	52-Male	(PHD in City planning)
A3	45-Male	(PHD in Urban design and planning)
A4	38-Male	(PHD in urban design and planning)
A5	42-Female	(Master in urban studies and planning)
A6	40-Female	(Master in urban studies and planning)
A7	38-Male	(Master in urban studies and planning)
A8	58-Male	(PHD in City planning Benghazi University)
A9	52-Male	(PHD in City planning Benghazi University)
A10	48-Female	(Master Degree in Urban design Benghazi University)
A11	40-Female	(Master degree & Assistant prof. in urban design department)
A12	38-Male	(Master degree & Assistant prof. in urban design department)
A13	37-Male	(Master Degree in Urban design Benghazi University)
A14	55-Male	(PHD in City planning Benghazi University)
A15	39-Female	(Master degree & Assistant prof. in urban design department)
A16	32-Female	(Master degree & Assistant prof.in urban design department)

A17	58-Female	(Dean of the department of design and city planning Benghazi University)
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### 3.4 Data Collection Tools

In the thesis study, I employed semi-structured interviews as a main tool to gather some credible data about the actual problem under exploration. Before justifying the actual reasons behind choosing this data collection instrument, it would be essential to take into account a number of ethical concerns.

#### 3.4.1 Ethical Issues

As a qualitative researcher, I was fully aware of the value of achieving particular ethical issues when employing semi-structured interviews. The fictional numbers were given to participants so that anonymity is provided in this study (see Cohen et al, 2000; Robson, 2002). In this regard, such numbers as A1 and A2 are pseudonyms. Participants were also clearly informed at the beginning of the study that their names would be anonymous when writing up the study. Another key ethical issue was confidentiality which could be achieved by stressing that all the data gained would be only used for research purposes (Gray, 2004). Because respondent confidentiality

could be a potential challenge while presenting rich, detailed accounts of information, participants were interviewed individually. In addition, at the beginning of the interviews, participants were clearly informed that all the data gained would be confidential, private, and used only for research purposes. Finally, one benefit of guaranteeing both anonymity and confidentiality in the research study is that participants' responses would be honest and frank, especially when it comes to sensitive questions (Bryman, 2004). Put differently, they were sincere when voicing their personal opinions of the complex nature of Benghazi's architectural identity.

### **3.4.2 Semi-structured Interviews**

Semi-structured interviewing can be seen as one of the most broadly employed instruments to gather credible data in qualitative research. Whereas quantitative interviewing seeks to collect objective information by means of close-ended questions as in questionnaires, qualitative interviewing focuses on the respondent's subjective views and conceptions via open-ended questions (see Bryman, 2012). Importantly, two types of interviewing can be considered in qualitative research:

- a) unstructured interviewing in which the interviewer asks questions that are not prepared in advance; and
- b) semi-structured interviewing where I ask a number of predetermined questions that give some leeway for other relevant questions to arise spontaneously (see Walliman, 2001).

In the research study, to conduct semi-structured interviews with professional architects and planners, it is practical to employ convenience sampling. It can function as an availability sample that rests on easily reachable participants (Cohen, et al. 2000, p. 102). Bryman (2012, p. 212) explains that this kind of interviewing is associated with a context in which the interviewer has a series of questions that are in the general form of an interview schedule but is able to vary the sequence of questions. The questions are frequently somewhat more general in their frame of reference than that typically found in a structured interview schedule. In the following section, two main

reasons will be discussed for employing semi-structured interviews in the research study.

### 3.4.3.1 Main Reasons

Due to their open-ended questions, semi-structured interviews help investigate the participants' personal beliefs about the complex nature of the architectural identity of Benghazi. Such subjective views can reveal key concepts or events (Gray, 2004). It is worth mentioning that semi-structured interviewing gives the opportunity to follow up on the participants' subjective opinions in more depth. Denscombe (2003, p. 174) describes it as in-depth interviews.

Another main reason is that semi-structured interviewing is flexible, for it offers an interview guide that includes the topics and questions according to a particular order. Robson's (2002, p. 411) components of the interview guide are of interest in the research study:

- 1- introductory comments
- 2- list of topic headings and the key questions under these headings
- 3- set of associated prompts
- 4- closing comments

One advantage of this guide is that it encourages the interviewer to (a) get prepared, (b) interact with the interviewee more competently, and (c) get more freedom to express her views on her own terms. Importantly, Bryman (2012, p. 498) stresses that to make the interview guide more workable and effective, it should not be too structured in its application and should allow some flexibility in the asking of questions. **Appendix 3.1** shows the interview guide of the thesis.

Nevertheless, semi-structured interviewing is not a perfect data collection tool, because it may be disadvantageous. One key demerit is that semi-structured interviewing is time and energy-consuming owing to preparation, piloting, and above all transcription (Grinnell, 1988). Bryman (2012, p. 484) added that "the problem with

transcribing interviews is that it is very time-consuming. Also, transcription yields vast amounts of paper, which you will need to wade through when analyzing the data”. In the thesis process, computer technologies were used efficiently to minimize the time-energy-paper consumption.

### **3.5 Data Analysis**

In the research study, I employed the content analysis technique to analyze the data gathered. This technique can be fruitfully employed to examine virtually any type of communication (Abrahamson, 1983). According to Bryman (2012), content analysis is an approach to the analysis of documents and texts that seeks to analyze content in terms of predetermined categories and in a systematic and replicable manner. Before building a rationale behind adopting this technique, it is useful and important to provide a summary sense of the data obtained and their types. The data were in the format of interview transcripts. Such data can establish a rich corpus of textual materials (Silverman 2001).

Two reasons have motivated me to use this technique. First, content analysis is largely based on textual data. All the data will be analyzed in the form of a text: interview transcripts (Robson, 2002). Second, this technique is highly flexible because the qualitative researcher can apply it to a wide variety of different kinds of unstructured textual information (Bryman, 2012). In the research study, this variety can be manifested in such texts as interview transcripts (Mayring 2000). However, one disadvantage of this technique is that it highly depends on the subjectivity of analyzing and interpreting the data gained. Because of the abovementioned concerns, the analysis and interpretation data process of the thesis were based on objectivity.

Analyzed the qualitative data gained from semi-structured interviews following seven steps below:

- 1- Transcribing the interviews in their entirety
- 2- Regarding the interview transcripts as individual cases
- 3- Reading the transcripts many times
- 4- To define categories.

- 5- To define sub-categories.
- 6- After categorizing and sub-categorizing, define themes by coding
- 7- To identify similarities and contrasts among codes.

### **3.6 Limitation of the Field Study**

The number of participants is limited because they faced a number of contextual difficulties in convincing participants to actively participate in the study. The main reason behind their reluctance to participate could be closely associated with the sensitive nature of the research topic itself. Undoubtedly, it was stressed that all the data participants give will be confidential, anonymous, and used only for research purposes. However, some participants were reluctant to have a genuine go into the research study. Finally, because the current research is a qualitative study, it is somehow challenging to replicate or generalize the findings obtained to other architectural contexts. It is important to note that the role of a qualitative researcher could be biased mainly because he is subjectively engaged at every stage of the investigation process.

The major aim of this chapter was to address a variety of points connected with the research methodology in the research study. It began by discussing the main reasons that motivated me to position this study within the qualitative research domain. Then, it explained how the case study can be a suitable research approach to the research study by defining it and offering a rationale for selecting it. After that, this chapter gave a detailed discussion of the data-gathering tool used to collect valid and reliable data: ethical issues and semi-structured. Finally, I provided a rationale for the data analysis technique used in the study: content analysis.

## Chapter 4

### Findings

This chapter aims to present the key findings and insights gained from analyzing the data gathered in the research study. It also intends to analytically interpret such findings by giving quotations from the participants' interview transcripts. It consists of three main parts. The first part focuses on the ways of determining the loss of the architectural identity of Benghazi and the main urban aspects. The second part considers the key factors or forces influencing Benghazi's environment negatively after the war. The final part handles the potential practical strategies discovered to cope with sustaining Benghazi's architectural identity. It is important to stress that such findings will be compared with those gained from previous studies in Chapter Five.

The following table (**Table 4.1**) provides a summary sense of the key findings gained from analyzing the qualitative data.

#### Research Question Table:

<b>Research Question 1</b>	What are the Ways of Determining the Loss of the Architectural Identity of Benghazi? <ul style="list-style-type: none"><li>- conducting some substantial research</li><li>- evaluating the changes in Benghazi's architectural identity</li><li>- the architectural language</li></ul>
<b>Research Question 2</b>	What are the Key Factors or Forces Influencing Benghazi Environment Negatively after the War? <ul style="list-style-type: none"><li>- economic factors</li><li>- environmental factors</li></ul>
<b>Research Question 3</b>	What are the Practical Strategies for Sustaining Benghazi Architectural Identity?

	<ul style="list-style-type: none"> <li>- reproduction</li> <li>- rehabilitation</li> </ul>
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#### 4.1 Ways of Determining the Loss of the Architectural Identity of Benghazi

A beneficial theme that came out from answering the first research question was connected with identifying the ways that can be used to determine the loss of the architectural identity of Benghazi after the war. This identity is viewed as complex and challenging because it involves a variety of features that need to be understood from different perspectives to establish a better understanding of its complexity. This point can be substantiated by the findings gained from analyzing the interview data in the research study. For example, A1 pointed out that “Benghazi's architectural identity after the war is characterized by a mix of traditional and modern elements, sustainable urban planning, and the rehabilitation and restoration of historic landmarks. These urban elements reflect the city's heritage and contemporary needs and contribute to the unique architectural identity of Benghazi”. To show the negative effect of the war on Benghazi's architectural identity, A3 mentioned: “Because of the damages of war, and the effect this had on the historic city Centre, there is evidence of a loss of the architectural identity of the city, but this can be salvaged as we have witnessed in a previous post-war period (WWII)”. A2 also declared that “The war has had a significant impact on the architectural identity of Benghazi, but there are ongoing efforts to preserve and restore the city's cultural heritage and architectural identity”. A main effort is to identify the ways that play a key role in figuring out the main ways that determine the loss of Benghazi's architectural identity. A1 stressed that “Determining the loss of the architectural identity of Benghazi can be a complex and subjective process that may involve a range of factors, including the extent of damage to historic buildings, the level of destruction of cultural heritage sites, and the impact of post-war reconstruction efforts on the city's-built environment”.

Analyzing the data, it was discovered that such ways could be grouped into the following: conducting some substantial research and evaluating the changes in Benghazi's architectural identity and the architectural language. One advantage of identifying such ways or methods is that they may establish a clear framework for

understanding the complex and challenging nature of Benghazi's architectural identity after the destructive war.

In relation to conducting some substantial research, A1 declared that an important “way to evaluate the loss of architectural identity would be to conduct a comprehensive survey of the built environment”. He went on to argue that this research should be based on “an assessment of the condition of historic buildings and cultural heritage sites, as well as an analysis of the extent to which post-war reconstruction efforts have preserved or altered the city's architectural heritage”. A1’s point can be backed up by A2’s suggestion that this research should be thorough because it involves “a comprehensive analysis of various factors, including the destruction of historical landmarks, radical changes in the city, neglect of historical buildings, and loss of cultural values”. In addition, A5 clearly signals that this exploration should investigate in more depth “the shape and form of building, design principles, materials, relationship with the context, temporal organization, semantic organization, and spatial organization”.

With regard to evaluating the changes in Benghazi's architectural identity, A1 pinpointed that there is a strong need to “examine changes in the city's urban fabric, such as the loss of traditional building materials and design elements, the proliferation of modern buildings and infrastructure, and the impact of new developments on the city's historic character”. More evidence can be gained from A3’s interview, as clearly signaled in the following passage:

I think the loss of the architectural identity of Benghazi would be determined particularly by major transformations in the urban texture of the city center which has its distinctive network of streets and squares, its scale, and the relationship to the seafront and also the architectural language that has built up over different eras in the history of the city.

A5 added that identifying such changes should also cover “the destruction of historical buildings and erasing the architectural style of the city” (A5).

Concerning the architectural language, some participants claimed that this way might shed some light on the architectural identity of Benghazi. In this regard, A3 pointed out that “the architectural language that has built up over different eras in the history of the city”. A main advantage of language as a way is to figure out a variety of styles inherent in different languages: Ottoman, Italian, and Arabic. These styles reflect different cultures and traditions. In this context, participant A1 pinpointed that “Traditional elements include Ottoman, Italian, and Arab architecture, while modern elements include new buildings designed with unique styles and contemporary materials such as glass and steel”. This stance can be supported by the insights gained from participant A2’s interview: “The architectural identity of Benghazi after the war is a blend of traditional and modern styles, reflecting the city's history and culture while also incorporating contemporary needs and sustainable practices”.

After identifying the main ways that could determine the loss of the architectural identity of Benghazi after the war, it would be enlightening to explore the key urban aspects of the architectural identity of Benghazi. To reveal the paradoxical nature of this identity, A2 viewed it as “a blend of traditional and modern styles, reflecting the city's history and culture while also incorporating contemporary needs and sustainable practices”. A2’s view can be backed up by A1’s stance as expressed in the following excerpt:

The main urban aspects of the architectural identity of Benghazi after the war include a balance between traditional and modern architectural styles, sustainable urban planning, and the rehabilitation and restoration of historic landmarks. These urban elements reflect the city's heritage and contemporary needs and contribute to the unique architectural identity of Benghazi.

Participant A3 added that “I think the architectural identity of Benghazi at present is governed by commerce and commercial development, and the emphasis on cultural heritage has subsided as a consequence of the war and the shift away from the city center and its historic core”. Such features can be explained in more depth by identifying the key factors or forces that influenced Benghazi’s environment negatively after the war.

#### **4.2. Key Factors or forces Influencing Benghazi Environment Negatively after the War**

A key theme that came out from analyzing the data was that Benghazi's environment was affected negatively by a variety of factors or forces (Brzoska and Fröhlich 2016). These factors can be both economic and environmental. In this context, A4 stressed that "Economic forces can have a significant impact on the environment of Benghazi after the war, and in some cases, this impact can be negative". One advantage of this theme is that it shows the chaotic nature of the architectural identity of Benghazi from different perspectives.

At the economic level, nearly all participants identified a number of forces that have influenced Benghazi's environment negatively. For example, A1 explained six important economic forces:

- Overdevelopment: Economic forces may drive the rapid development of new buildings and infrastructure in Benghazi, which could lead to the overuse of natural resources and the destruction of green spaces.
- Unsustainable land use: Economic forces may drive the conversion of agricultural land or natural habitats into urban or industrial areas without adequate planning or consideration for the environmental impacts.
- Pollution: Economic activity, such as industrial production or transportation, can generate pollution that can negatively impact the air, water, and soil quality in Benghazi.
- Unsustainable tourism: Economic forces may drive tourism development that is not sustainable, leading to the overuse of natural resources, degradation of cultural heritage sites, and the displacement of local communities.
- Unsustainable resource extraction: Economic forces may drive the unsustainable extraction of natural resources, such as oil and gas, which can lead to environmental degradation and community displacement.
- Climate change: Economic activity, particularly the use of fossil fuels, can contribute to climate change, which can have negative impacts on the

environment, including more frequent and severe natural disasters, rising sea levels, and increased temperatures.

A1's useful insights can be backed up by A6's view that the destructive war could result in "pollution incidents which are industrial in their scope. Oil or energy facilities are deliberately attacked. Scorched earth techniques include the destruction of agricultural infrastructure, like canals, wells, and pumps, leading to transboundary impacts of contamination of rivers, aquifers or the sea". Participants (A10-A11-A12) also pointed out that "the continuous random spread of unplanned and disorganized buildings as well as the delay of reconstructing the city properly could have some negative economic effects on the architectural identity of Benghazi". However, A13 postulated that although the "economic forces have the potential to negatively impact the environment of Benghazi after the war, with careful planning and sustainable development practices, it is possible to mitigate these impacts and promote a more sustainable and resilient urban environment". In a similar vein, A2 highlighted the importance of "balancing economic development with environmental protection and sustainability [that] is crucial in ensuring a healthy and prosperous future for Benghazi and its inhabitants. It is essential to implement proper regulations and enforcement to prevent the negative impacts of economic forces on the environment".

At the environmental level, many participants figured out a number of forces that have influenced Benghazi's environment negatively. In this respect, A15 mentioned five significant environmental forces:

- Climate change: Environmental forces such as rising temperatures, changes in rainfall patterns, and more frequent and severe natural disasters can have negative impacts on the environment and infrastructure of Benghazi. This could include increased flooding, erosion, and damage to buildings and infrastructure.
- Desertification: Environmental forces such as desertification and soil degradation can negatively impact agricultural lands and natural habitats in Benghazi.

- Water scarcity: Environmental forces such as drought and reduced water availability can negatively impact the availability of water resources in Benghazi, leading to water scarcity and potentially exacerbating conflicts over water resources.
- Air pollution: Environmental forces such as dust storms and air pollution can negatively impact the air quality in Benghazi, leading to respiratory problems and other health issues.

Such forces have a detrimental impact on the environment because they are threatening and formidable because “the environmental factor has been neglected and understudied in most buildings in modern architecture” (A15). This is in line with A3’s point that “Bombing and other methods of modern warfare directly harm wildlife and biodiversity. Pollution from war contaminates bodies of water, soil, and air. Warfare releases greenhouse gas emissions. Even in peacetime, militaries consume extreme amounts of dirty energy”. More substantial evidence can be gained from A6’s interview, especially when she pointed out that:

Benghazi is strongly influenced by environmental factors with its many water bodies and extended coastline, and it is these natural features that have influenced the development of the city over time, so it is important to maintain a balance between the natural environment of the city alongside its built environment.

It can be surmised the environment of Benghazi is in real danger. Moreover, A2 proposed that “mitigating the negative impacts of environmental forces is crucial in ensuring a healthy and sustainable future for Benghazi and its inhabitants. It is essential to prioritize the environment and work towards sustainable development to ensure that the city can thrive while preserving its natural resources and biodiversity for future generations”. A1 also emphasized that “it is possible to mitigate these impacts and promote a more sustainable and resilient urban environment. This could include efforts to promote sustainable land use, reduce greenhouse gas emissions and promote renewable energy, protect biodiversity and natural habitats, and improve

water management practices”. The following section focuses on the practical strategies that can be used to enhance Benghazi’s architectural identity.

### **4. 3. Practical Strategies for Sustaining Benghazi Architectural Identity**

A useful pre-determined point that emerged from answering the third research question was associated with exploring a variety of viable strategies or ways that could be used to foster and sustain Benghazi’s architectural identity. In this respect, A5 declared that there is an urgent need to identify those “strategies that inspire the bridging of architecture opposed to optimum use of universal techniques and humanistic architecture of the future, as it relates to understanding the relationship between the building, the user, and place while integrating cultural strategies to respond to the modern needs of the user while focusing on the sense of place through relationship memory and architectural historical and heritage”. Two main strategies have been discovered: reproduction and rehabilitation.

When it comes to reproduction, many participants highlight its potential role in maintaining Benghazi’s architectural identity after the war. For instance, A1 viewed reproduction as an essential strategy that can be employed to “preserve historic buildings and cultural heritage sites damaged during the war, helping to maintain the authenticity and continuity of the city's architectural identity”. The following passage from A2’s interview illustrates this finding:

Reproduction can be a useful tool for sustaining Benghazi's architectural identity, but it should be balanced with preservation and innovation to ensure that the built environment continues to evolve and meet contemporary needs. Preservation of existing structures and incorporation of new and innovative designs can help prevent stagnation and ensure that Benghazi's architectural identity remains relevant and sustainable. Furthermore, reproduction should be done with careful consideration of the historical and cultural context of the buildings being reproduced.

It can be gathered that reproduction is a main source of innovation. In addition, A3 stressed that reproduction should be based on “reviving the usage of buildings and their place in the urban setting, is not sustainable. I think the architectural identity of

the city relies equally on how buildings are used and the livelihoods they support, as it does on the architectural and historical qualities of the buildings”. However, A1 gave a caveat that “reproduction should not be seen as a substitute for the preservation of original buildings and cultural heritage sites. Efforts should be made to preserve and restore existing buildings and sites wherever possible, rather than relying solely on reproduction to maintain the city's architectural identity”. Yet, A5 highlighted making sure that reproduction should be “on the right path or course of action taken to physically make the decision for the sustained architecture identity”.

In relation to rehabilitation, a number of participants highlight its potential role in maintaining Benghazi’s architectural identity after the war. The following passage from A’s interview illustrates this finding:

Rehabilitation and restoration are important strategies for sustaining Benghazi's architectural identity and preserving its cultural heritage. Rehabilitation can help extend the life of existing buildings while still maintaining their historical and architectural significance. Restoration can help bring back important cultural and historical landmarks that have been lost, which can help preserve the city's architectural identity.

It can be established that there is a close relationship between rehabilitation and cultural and historical landmarks that should be restored properly to preserve Benghazi’s architectural identity. In a similar context, A1 pointed out that rehabilitation as a workable strategy “can help to bring historic buildings and sites back to their original condition, and in some cases, enhance their original design with modern materials and technologies, while still preserving their original character and architectural identity. This approach can help to ensure that the city's architectural identity is maintained, even as it evolves to meet contemporary needs and trends”. Interestingly, A3 gave an important piece of advice that rehabilitation of the urban fabric and its buildings “should be part of a wider program to revive communities and promote ownership, enhancing the quality of urban life and working towards a more sustainable development”. A3’s point matches well with A1’s suggestion that rehabilitation “must be done carefully, and with consideration for the city's cultural

heritage and architectural identity. This may involve using traditional building materials and techniques, and working with local artisans and craftsmen to ensure that the restoration work is done in a way that is respectful of the original design and materials”. To this end, A2 emphasized that investing in rehabilitation and restoration efforts can help “maintain and celebrate Benghazi's unique architectural identity while promoting sustainable and livable environments for its inhabitants. By preserving and restoring the built environment, Benghazi can continue to be a vibrant and culturally rich city that reflects its unique history and identity”. A6 also indicated that rehabilitation “can only occur through returning to our cultural heritage and architectural values”.

Finally, the aim of this chapter was to report on the key findings that came out from analyzing the qualitative data in an interpretive way. It started by showing the ways of determining the loss of the architectural identity of Benghazi (conducting substantial research, identifying key changes, the architectural language) and the major urban features. Then, it moved to present the key factors or forces influencing Benghazi’s environment negatively after the war: economic and environmental. Finally, it took into consideration the major strategies identified to wrestle with coping with sustaining Benghazi’s architectural identity: reproduction and rehabilitation.

## Chapter 5

### Discussion

This chapter aims to offer a critical discussion of the key findings gained from analyzing the data gathered in the present study. To do so, I will show my stance by comparing and contrasting such findings with those considered in previous research. In order to show more involvement, the findings will be interpreted analytically and thematically. The discussion will be in line with answering the three research questions:

- 1- What are the ways that can determine whether the architectural identity of the Benghazi environment has already been lost after the war and what are the main urban aspects?*
- 2- What are the key factors or forces that affected Benghazi's environment negatively after the war?*
- 3- What are the practical strategies that can be used to sustain Benghazi's architectural identity?*

Since the research study is mainly qualitative, four main themes can be discussed: (a) creating a better understating of the messy nature of Benghazi's architectural identity, (b) explaining the loss of Benghazi's architectural identity after the war, (c) illustrating the key features of Benghazi's architectural identity as a challenging phenomenon and (d) maintaining Benghazi's architectural identity as a strategic process. The final part of this chapter shows how it is crucially important to consider some substantial changes in clarifying the complex dynamics of Benghazi's architectural identity.

#### **5.1. Establishing a Better Understanding of the Unpredictable Nature of Benghazi's Architectural Identity**

According to Rifaioğlu and Güçhan (2007), the notion of architectural identity is an elusive phenomenon whose meaning has changed according to the needs and

requirements of different disciplines such as urban morphologists, conservators, sociologists, philosophers, phenomenologists and so forth. Some of the findings in the study substantiate Rifaioğlu's and Güçhan's point that Benghazi's architectural identity is not a straightforward issue but a vague concept because it involves a variety of contradictions and confusions. Rossi (2013) indicates that gigantic man-made objects, a work of engineering and architecture that is large, complex, growing over time and characterized by their own history and thus by their own form. Some evidence can be gained from participants' interviews (for example, see A1 and A2). A5 pointed out that "the architectural identity of the city completely changed and suddenly Benghazi as a city became identicalness, through the destruction of the historical buildings that represent the unique architecture that this city is known for". He also went on to claim that Benghazi's architectural identity is regarded as "an immutable or historically continuous entity within certain existing areas of architectural design, heritage conservation, architectural history, and literature". Such findings match well with those gained from Baddeley's (2011), Sampaio's (2016) Brzoska and Fröhlich's (2016). This is a key insight in the current research. Therefore, Benghazi's architectural identity may be seen as a distinct form of collective identity that hinges on multiple actors' perceived uniqueness and meanings of place rather than organization (Jones and Svejnova, 2017).

It is obvious to note that the instability and insecurity in Benghazi's architectural identity due to the war can "create risks in different dimensions that not only influence the demographic, economic, social, environmental structure of the city but also create pressures on the urban macro form" (Barani and Kahraman, 2019). That is to say, the city of Benghazi has been under the pressure of political conflicts and instabilities for more than seven years due to war. The results of war have increased the vulnerabilities of the city in a variety of dimensions (Grünwald 2016). With no doubt, such dimensions could add more complexity to the notion of Benghazi's architectural identity. The following quotation from Bahaa's A1's interview could back up this finding to some extent:

*Benghazi's architectural identity after the war is a mix of traditional and modern elements that reflect the city's history, cultural heritage, and contemporary needs. Traditional elements include Ottoman, Italian, and Arab architecture, while modern*

*elements include new buildings designed with unique styles and contemporary materials such as glass and steel.*

In a similar vein, A2 stressed that the architectural identity of Benghazi after the war is “a blend of traditional and modern styles, reflecting the city's history and culture while also incorporating contemporary needs and sustainable practices”. This matter could be seen as a key contribution to the research study for it offers more opportunities to grasp the chaotic nature of Benghazi’s architectural identity. After all, although architecture has since the past shaped every place’s identity, interaction with the outside world cannot be ruled out, and it is on record that such interaction may lead to tension between local and external architecture (Bennett and Barker 2011). Safour and Elmazek (2018, p. 2) added that an urban character is a group of complex elements that characterize the place which includes physical and non-material components of the composition. Both the architectural character and urban character are considered to be a reflection of the cultural identity of the society.

## **5.2. Explaining the Loss of Benghazi’s Architectural Identity After the War**

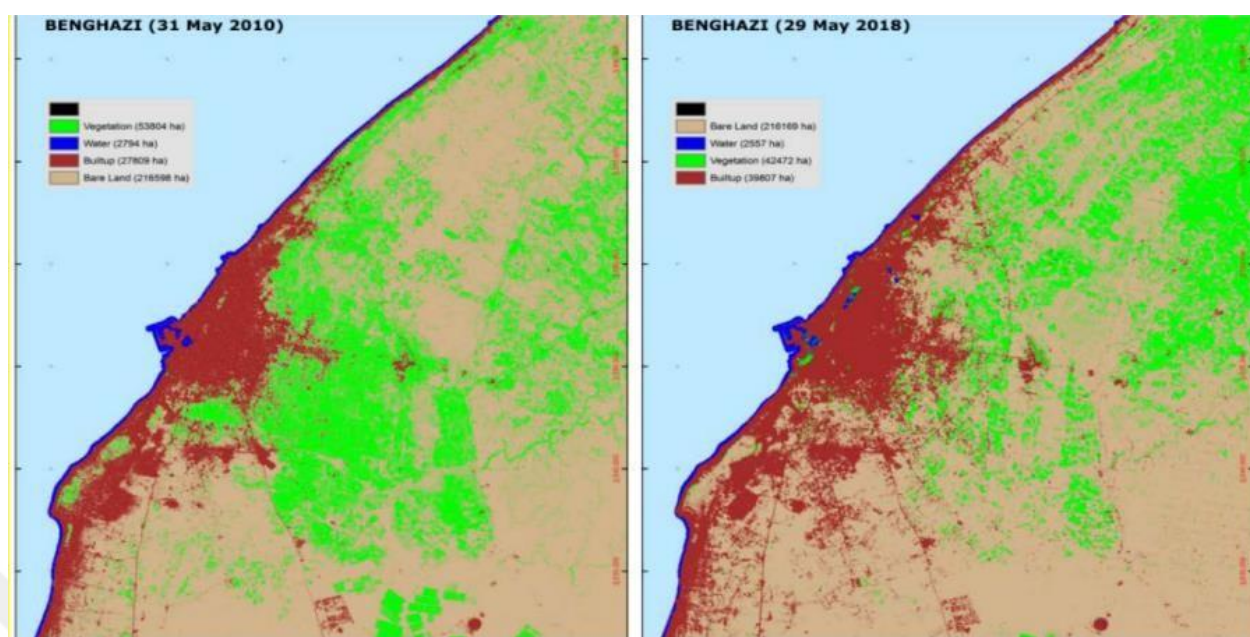
Barani and Kahraman (2019, p. 165) claimed that “Benghazi has been under the pressure of political conflicts and instabilities for more than seven years due to war. ... The city has faced with many problems including demographic fluctuations; the destruction of urban areas, urban infrastructure, and architectural structures; environmental degradation, and serious pressures on the limited agricultural areas around the city”. Barani and Kahraman's study stress the loss of its architectural identity. In light of this, exploring viable ways to conserve the architectural identity is the starting point of the thesis. A useful example is provided by A1, especially when he pointed out that “Determining the loss of the architectural identity of Benghazi can be a complex and subjective process that may involve a range of factors, including the extent of damage to historic buildings, the level of destruction of cultural heritage sites, and the impact of post-war reconstruction efforts on the city’s-built environment”. A1’s point can be substantiated by previous literature. In this regard, Aita (2018) indicated that Old Benghazi had been severely damaged during the conflict, while it contains many of the historical sites constituting the identity of the city and of Libya.

Most of the old beautiful seaside streets (Ahmad Rafiq Al-Mahawi and 23rd of July streets) with arch-covered walkways had their buildings destroyed or severely damaged.

In the thesis, the main way to determine the loss of Benghazi's architectural identity is associated with conducting some substantial research (see, for example, A1, A2, and A5). This finding can be supported by insights from extant literature. Aita's (2018) useful report gives some evidence because it shows how damage assessment, which is mainly based on intensive research, includes three assessments:

- A first damage assessment was conducted between August 2015 and April 2016, during the battles. The satellite imagery analysis, complemented by key informant observations, showed that the damage increased greatly between the two assessment dates (the number of damaged structures more than doubled), and was still concentrated in the same fighting areas.
- A second damage assessment was performed in 2017. It is stated that both satellite assessments noticed sizeable numbers of other structures with possible damage, missing assets and changes due to urban reorganization.
- The ground verification assessment showed that the severe damages were concentrated in the municipal branches of Old Benghazi as shown in Figure

18



*Figure 18. Urban Development in Benghazi Before and After War (Source: Barani and Kahraman, 2019)*

It can be undertaking some useful research that can be enlightening in determining the actual loss of Benghazi's architectural identity. A main contribution of this research is it provides Benghazi city with various planning tools, procedures, policies, and strategies that not only have the potential to deal with chronic pressures and existing problems in the city but also create opportunities to prepare the city for further risks, and shocks (Barani and Kahraman, 2019). It is important to clearly signal that Barani's and Kahraman's insights are based on a comparative study, which considers five major dimensions of vulnerabilities in the city including disturbances in the demographic, economic, social, spatial, and environmental structure of the city. It is important to mention that such dimensions play a vital role in underlining the urban elements that reflect the city's heritage and contemporary needs, which add value to the unique architectural identity of Benghazi (See, for instance, A1 and A3).

### **5. 3. Illustrating the Key Features of Benghazi's Architectural Identity**

As discovered earlier by Barani and Kahraman (2019), what makes Benghazi's architectural identity a complex phenomenon is that it may involve a number of variables, such as demographic, economic, social, spatial, and environmental. The research study, also found that Benghazi's architectural identity has been mainly influenced negatively by economic and environmental forces or factors (see, for example, A1, A5, and A4). Some useful evidence can also be gained from A3's interview, as expressed in the following passage:

*The drive to rebuild and make good all that has been damaged by war and the economic implications that come with this can have a negative impact on the 'characteristic' architectural and urban environment of the city... Benghazi is strongly influenced by environmental factors with its many water bodies and extended coastline, and it is these natural features that have influenced the development of the city over time.*

A2's insights are backed up by findings gained from existing research. In this respect, Aita (2018) stated that during the conflict, the port of Benghazi was closed, and importations were made through the port of Tobruk. So the wholesale and logistics activities of Benghazi merchants were displaced to the northern neighborhoods of the city.

At the environmental level, Barani and Kahraman (2019) also discovered that urban sprawl in the city consequently stirs up the pressures on the natural environment in the city. According to Dericioglu (2018), the war has affected Benghazi's architectural identity negatively because it has resulted in a number of urban problems, including inadequate housing provision, overpopulation, random housing development, and damage to the natural environment. To this end, in the present study, A1 proposed that although "environmental forces can have a significant impact on the environment of Benghazi after the war, with careful planning and sustainable development practices, it is possible to mitigate these impacts and promote a more sustainable and resilient urban environment". The coming section reveals how maintaining Benghazi's architectural identity is a dynamic strategic process.

#### **5.4. Maintaining Benghazi's Architectural Identity as a Strategic Process**

Safour and Elmazek (2018) pinpointed that there is a strong need to rebuild and maintain Benghazi's architectural identity because the disaster caused by the war is the opportunity to achieve a sustainable urban planning approach through its three dimensions: the environment, which affords the ecological balance; social, which ensures the stability of society; and the economic, which provides economic growth. In the thesis, Safour and Elmazek may find support because it has been discovered that two main strategies could be used to attain sustainable urban planning of Benghazi's architectural identity: reproduction and rehabilitation. Some evidence was gained from A1, A3, and A5. The following passage from A2's interview adds more support:

Balancing economic development with environmental protection and sustainability is crucial in ensuring a healthy and prosperous future for Benghazi and its inhabitants. It is essential to implement proper regulations and enforcement to prevent the negative impacts of economic forces on the environment. Encouraging sustainable practices such as renewable energy, waste reduction, and green transportation can also help mitigate the negative impacts of economic forces on the environment. By prioritizing environmental protection and sustainability, Benghazi can achieve long-term economic growth and development while preserving its natural resources and biodiversity for future generations.

Here, it can be gathered that there is a strong need to establish a clear connection between sustainability and architectural/urban identity when explaining the process of sustainability. In this regard, A2's beneficial insights match well with Barani's and Kahraman's (2019) suggestion that within the principle of preserving the limited resources of the city, the city urgently needs both recovery in many dimensions and planned urban development movement. Therefore, a framework considering the present and future vulnerabilities of the city should be developed as a part of its planning process. A main advantage of this framework is that it can avoid inconsistencies in the correlation between the architectural heritage and the newly

planned areas, whilst also preventing visual pollution and conflict between buildings (Safour 2013).

With regard to reproduction as a practical strategy to maintain Benghazi's architectural identity, it has been found out that nearly all participants agreed on the effectiveness of strategy. Some evidence can be obtained from existing literature. For instance, Elias (1989, p. 4) regards restoration as "a set of procedure which guarantee the protection of the architectural and historical characteristics of the important old areas and buildings, such as repairing, removing erosion and sedimentation signs, and securing acceptable standards for the protection of open spaces and squares. These emphasize the importance of urban preservation and the need for the functional continuity of these areas and buildings". Elias' point is partly consistent with A1's interesting stance that the restoration strategy should "include efforts to promote sustainable land use, reduce greenhouse gas emissions and promote renewable energy, protect biodiversity and natural habitats, and improve water management practices". In her recent study, Hmood (2019, p. 4) also regarded reproduction as a viable strategy to sustain Benghazi's architectural identity.

Concerning rehabilitation as another useful strategy to sustain Benghazi's architectural identity, it has been discovered that many participants found this strategy efficient and workable. Some substantial evidence can be gained from previous literature (Grünewald 2016). In this respect, Safour and Elmazek (2018) stressed the importance of rehabilitation because it aims at preserving the continuity of the architectural and urban character of the historical places and applying an in-fill approach to the existing urban pattern, especially for the war-damaged areas. In addition, Hmood (2019) declared that keeping up with the architectural and urban heritage is achieved through the process of rehabilitation and reuse within a different age other than the one that produced these inheritances. Aita (2018) stated that some districts in Benghazi have experienced substantial and severe damage within the historical branch of the city (Old Benghazi) They require reconstruction and rehabilitation plans.

## Chapter 6

### Conclusions and Recommendations

Examining the architectural identity of different cities throughout history is enlightening because it can offer architects useful lessons that play a key role in establishing more constructive general knowledge of architecture and practice that make architectural identity a free human right for many cities worldwide. It is important to stress that historical events and wars have a direct effect on the architectural identity of several cities. The current study aimed at clarifying the complex dynamics of Benghazi's architectural identity that has been affected negatively after the war in 2011. These findings can be regarded as a strong need to make some helpful changes in the processes of explaining the chaotic nature of Benghazi's architectural identity and maintaining it effectively after the destructive war. The results of the thesis are categorized in the following three points:

- 1- explaining the loss of Benghazi's architectural identity after the war (conducting some substantial research and evaluating the changes in Benghazi's architectural identity and the architectural language);
- 2- illustrating the key forces of Benghazi's architectural identity by discovering both economic (overdevelopment, unsustainable tourism, unsustainable land use and unsustainable resource extraction) and environmental (air pollution, water scarcity, desertification, climate change); and
- 3- maintaining Benghazi's architectural identity as a strategic process (reproduction and rehabilitation).

### **Recommendations**

In the current research study, three important recommendations can be made, relying on discussing the findings gained from analyzing interviews. The main purpose

of such recommendations is to establish a better understanding of the chaotic nature of Benghazi's architectural identity.

- a- it would be necessary to explain the process of preserving Benghazi's architectural identity by means of registering, describing, and taking photos to preserve its unique features, and measuring its size to draw its plan precisely. A good way is to undertake a comprehensive field survey of its architectural or urban characteristics;
- b- inspired by Safour and Elmazek (2018), it would be enlightening to adopt a comprehensive sustainable plan as a contemporary tool for the development of urban planning in Benghazi, prepare guidelines for a sustainable urban design plan, and adopt the principle of neighborhood development and transit-oriented development for the new areas and ensure that the neighborhoods include different forms of housing patterns; and
- c- there is an urgent requirement to identify a variety of workable strategies other than rehabilitation reproduction. These may include consolidation, reconstruction, and deterioration perversion. The main benefit of such strategies is that they may be effective in improving the physical and social environment of the city of Benghazi through leadership, functionality, economic stability, and the provision of basic services at the lowest cost.

After giving some useful recommendations, it would be useful to mention the main limitation inherent in the research study. Actually, the lack of adequate research literature in this critical area could be seen as a major shortcoming. Little empirical research has been published on the complexity of Benghazi's architectural identity.

An overarching aim of the suggestions for future research is to develop a more vivid and insightful understanding of the complex nature of Benghazi's architectural identity:

- Establishing a workable framework considering the present and future vulnerabilities of the city.
- The workable framework must be developed as a part of the planning process.
- It would be important to devise appropriate sustainable planning tools, procedures, policies, and strategies in order to create opportunities to prepare the city for further risks and shocks.
- A variety of creative and comprehensive planning strategies are needed to deal with the vulnerabilities of Benghazi.
- Further studies must be focused on creating a safer and more qualified environment for inhabitants in Benghazi by planning (well-planned and offering equality of opportunities and quality services for all).
- Preserving the idea of maintaining the architectural identity and the awareness of such subject.

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