EVOLUTION OF THE CASTLE TOWNS IN SOUTHWESTERN ANATOLIA AND A FRAMEWORK FOR THEIR PRESERVATION

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ABSTRACT

EVOLUTION OF THE CASTLE TOWNS IN SOUTHWESTERN ANATOLIA AND A FRAMEWORK FOR THEIR PRESERVATION

This study aims to develop a framework for understanding the evolution of historic castle towns and their landscapes to guide their holistic preservation. Kale Tavas (Tabae), Honaz (Chonae), and Beçin Castles in Southwest Anatolia were studied. Historic Landscape Characterization method was supported with studies at settlement and network scales, time-depth studies based on primary sources, and comparative studies with similar castle towns on the same network and abroad.

Understanding the evolution of the castle towns together with their landscapes is indispensable: topography composed of low and high elevation zones, landform constituted of mountains, mesas, plateaus, plains, valleys, brooks; and land cover defined by agricultural areas, shrublands, Mediterranean woodland and residential areas. The period at which the castle towns had developed should be defined: 16th century for Kale Tavas, 9th century for Honaz and 13th century for Beçin. The commercial route linking each castle to its network should be understood west-east axis at the north of the Toros Mountains. At castle scale, land use, solid-void, relations of lot and buildings should be understood.

Completion of listing of the castle towns as archeological sites and development of a legal status for their landscapes; presentation of the vista points both from the castle and from the landscape, the traces, and remains of ditches, *zaviye*s, bridges, caravan and migration routes, possible tent positions and settlement pattern; avoiding of reconstructions and utilization of this heritage data in the management and development of the landscape are necessary for the holistic preservation and presentation of castle town.

ÖZET

GÜNEYBATI ANADOLU'DAKİ KALE KENTLERİN EVRİMİ VE KORUNMALARI İÇİN BİR ÇERÇEVE

Bu çalışma, tarihi kale kentlerin ve içinde bulundukları peyzajlarının gelişimini anlamak ve bütüncül olarak korunmaları için rehber niteliğinde bir çerçeve geliştirmeyi amaçlamaktadır. Çalışma kapsamında Güneybatı Anadolu'daki Kale Tavas (Tabae), Honaz (Chonae) Kalesi ve Beçin Kalesi incelenmiştir. Tarihi Peyzaj Karakterizasyon yöntemi, yerleşim ve ağ ölçeğinde yapılan incelemelerle, birincil kaynaklara dayalı zaman-derinlik analizlerle ve aynı ağ üzerinde konumlanan kalelerle birlikte yurt dışındaki benzer kale kentlerle yapılan karşılaştırmalı çalışmalarla desteklenmiştir.

Kale kentlerin peyzajlarıyla birlikte evrimini anlamak kale kentleri için büyük önem taşımaktadır. Peyzajı; alçak ve yüksek kotlardan oluşan topografya, dağlardan, platolardan, mesalardan, ovalardan, vadilerden ve derelerden oluşan yeryüzü şekilleri ve tarım alanları, çalılıklar, Akdeniz ormanlık alanları ve yerleşim alanlarının oluşturduğu arazi örtüsü tanımlamaktadır. Bununla birlikte, Kale kentlerin en gelişmiş olduğu dönem tanımlanmalıdır. Bu çalışma kapsamında Kale Tavas'ın en gelişmiş olduğu dönem 16. yüzyıl, Honaz'ın 9. yüzyıl ve Beçin'in ise 13. yüzyıldır. Kale kentleri kendi ağına bağlayan ticaret yolu da değerlendirilmelidir. Bu çalışmadaki kale kentleri birbirine bağlaya ticaret yolu Toros Dağları'nın kuzeyindeki batı-doğu doğrultusunda uzanan tarihi kervan yoludur. Kale ölçeğinde ise arazi kullanımı, dolu-boş, parsel düzeni ve yapıların ilişkisini ortaya koyan analizler yapılmalıdır.

Kale kentlerin arkeolojik sit alanı olarak tescil çalışmalarının tamamlanması ve peyzajlarının yasal statüsünün geliştirilmesi önem taşımaktadır. Bu bağlamda kale kentlerin bütüncül olarak korunmaları ve sunulmaları için bakı noktalarının hem kaleden hem de peyzajdan sunumu, hendek, zaviye, köprü, kervan ve göç yolu, olası çadır konumları ve yerleşim dokusunun izleri ve kalıntılarının araştırılması, koruma ve sunum yaklaşımında rekonstrüksiyondan kaçınılması ve bu çalışmada ortaya konan miras verilerinin peyzajın yönetim ve gelişim planlarında kullanılması gerekmektedir.

to Can…

TABLE OF CONTENTS

LIST OF FIGURES

Figure **Page**

Figure **Page**

Figure **Page**

Figure **Page**

Figure **Page**

Figure **Page**

LIST OF TABLES

Table **Page**

LIST OF ABBREVIATIONS

Abbreviations	Explanations
COE	Council of Europe
DEM	Digital Elevation Model
EWT	European Walled Towns
GIS	Geographic Information System
ICCROM	International Centre for The Study of The Preservation and Restoration of Cultural Property
HLA	Historic Landscape Assessment
HLC	Historic Landscape Characterization
HUL	Historic Urban Landscape
ICOFORT	International Conference on Fortifications and World Heritage
ICOMOS	International Council of Monuments and Sites
LCA	Landscape Character Assessment
NPS	The National Park Service
UNESCO	The United Nations Organization for Education, Science and Culture
WHC	World Heritage Committee
WHL	World Heritage List

CHAPTER 1

INTRODUCTION

Defence is one of the oldest and the most natural need for human beings. Castle towns have been means of defence and secure sheltering for communities until the end of the Medieval Era. Castle towns were usually at strategic locations: road junctions, trade routes, straits between mountains, promontories extending to the sea, the islands far from the shore, and bridgeheads (Sevgen 1959, 5). They were in close interaction with their natural surroundings, which played a major role in their formation. Historic castle towns are part of their surrounding landscapes possessing natural and man-made elements. Most of these castle towns are located on a natural elevation where they can dominate their surroundings according to the conditions of the topography (Toy 1956, 88). There are different types of castle structures. These can be classified according to functions and location. Castles are divided into two as coastal and inland, according to their location. Some castles were built only for military purposes, while others were used as settlements as well as defence functions. While castles sometimes controlled these roads for security purposes, sometimes they could be places to stay for travellers on caravan routes. In addition, they are a part of roads and other castles observation towers bridges, and khans. Castle towns are enclosed settlements, this characteristic makes them self-sufficient presenting harmony with nature, and accommodating the local way of life including production like rural settlements.

Castle towns are cultural assets in terms of meeting the requirements of these two vital functions in harmony with nature and carrying traces of different layers of history with all tangible and intangible heritage values. The main aim of this dissertation is to understand the evolution of historic castle towns; Kale Tavas, Honaz, and Beçin in Southwestern Anatolia; together with their physical, cultural, social, and economic contexts, and a present a framework for their holistic preservation.

1.1. Literature Review

The previous studies (Table 1) on evolution of historic towns do not necessarily emphasize the castle towns. Their scopes include the evolution of historic towns and sometimes their preservation. The surroundings are sometimes included. There also some other studies emphasizing only the castle itself. These studies are evaluated with their aim, method, and content in the below.

1.1.1. Studies on Evolution of Historic Towns

Historical town is a research topic that has been studied extensively since the 1950s and its methods have been largely consistent. However, studies have dealt with the historical environment from different perspectives. Within the scope of this study, studies that deal with the evolution of the historical settlement with different tools and different perspectives were reviewed.

The aim of these studies is to search and present the development and transformation of towns where different civilizations had settled and formed an urban pattern. These studies concentrate on the physical organization, settlement pattern, and on buildings or building groups, and later on their role as settlement inputs. In addition, these studies are generally descriptive and make limitical comments on the reasons for these physical developments. The studies related with Ottoman geography are generally based on the analysis of written historical sources such as *kadı sicilleri* and *Tahrir*, *Temettuat,* and *Avarız* notebooks. Related presentations include documentation and description of physical entities. These studies document the present and lost architectural heritage of a town with the information coming from the historical documents and the settlement itself. They generally examine one settlement; Özcan (2005; 2006; 2007); Uluca (2006); Yüksel (2009); Bilici (1991); Urak (1994); Eyüpgiller (1995; 1996); Tanyeli (1996); Altınöz (2002). While Aktüre, (1975; 1978); Sevgen (1959); Tanyeli (1987; 1996); Madanipour (1996); Pinon (1999); Boran (1999) investigate more than one town. Although there are diagrams, maps and tables regarding population, profession types, etc., visual material is limited. In addition, conservation issue is not discussed in these studies. The outstanding qualities of these previous work are presented in the below.

Aktüre (1975; 1978) examined nine urban trade centers: Manisa, Kütahya, Çorum, Ankara, Afyon, Amasya, Tokat, Niğde, and Antalya in a specific time interval. The intention of her study was the analysis of the spatial transformation of the late Ottoman cities concerning the sociocultural developments and changes in these urban centers. She claimed that population, production areas, quantity of products, etc. had a direct influence on the physical form of these cities. Parameters were determined according to a basic hypothesis for the structural analysis of the pre-modern Anatolian city. This hypothesis was based on Sjoberg's city model of a pre-industrial city and Grunebaum-Lapidus city model of an Islamic city. Her study is important for determining a way of understanding the relationship between social-economic background and physical structure of Anatolian settlements.

Tanyeli (1987) determined the evolution process of the urban structure of Anatolian Turkish city form in the Pre-Ottoman Period. He discussed how Anatolian urban centers were built based on historical documents. These urban centers were Alanya, Antalya, Kastamonu, Konya, Sivas, Amasya, Erzurum, Afyon, Kayseri, Kırşehir, Tokat, Ankara, Kütahya, Eskişehir. The structures of the urban centers were grouped into two basic city models: the multi-partial city model and the fortress city model. This dissertation is important because there is limited information about the evolution of the urban structure especially in the Pre-Ottoman Period. Nevertheless, the research was not supported by maps and visual materials. This makes this study difficult to understand.

Bilici (1991) concentrated on a single town in the Turkish Period: Kastamonu. He analyzed the town and its monuments monographically and constituted a catalogue with drawings and descriptions of these monuments. The architectural inventory of the settlement was formed; however, this is only a descriptive study.

Urak (1994) focused on a single town: Amasya. She analyzed the settlement and its monuments monographically and constituted a catalogue with drawings and descriptions of these monuments. Finally, they were classified according to their structural and spatial characteristics. This dissertation is valuable in terms of preparing the inventory of the tow. Nevertheless, only descriptions of the assets are provided. Although the conservation problems were mentioned in the dissertation, the conservation proposal was not discussed.

Eyüpgiller (1995) concentrated on a single town, Kastamonu; and analysed the settlement elements; monuments, and houses belonging to different periods in detail. Apart from other studies about the historical development of an urban center, not only

monuments but also traditional buildings were investigated in detail in his study. Nevertheless, limited maps regarding the historic periods of the settlement make it difficult to understand the settlement as a whole.

Madanipour (1996) states that the urban form comprises both physical and social dimensions. According to him, there is a dynamic relationship between the physical urban fabric and its social dimension. Town form is a result of the interrelations of the characteristics of people who had built, used, and valued the urban fabric. This study is valuable because it emphasizes the importance of social features for urban development studies.

Pinon (1999) examined the typologies of the urban fabric of Ottoman settlements. Especially, he concentrated on lot of organizations and road systems of Ottoman settlements. Although there are similarities between Ottoman settlements, each settlement should be investigated as a unique issue instead of categorizing them.

Boran (1999) concentrated on the architectural features of castles dated to in the Ottoman Period. The aim of this study was to catalogue the Ottoman castles and introduce their architectural and historical values. The significant castles have been chosen and their historical development was presented by old maps, gravures, and photographs. Although this study is important regarding documentation of the castles, they were evaluated as a single structure, their environment was not the subject of this study.

Altınöz (2002) presented the development of physical changes of a historic urban center: Bergama. Moreover, these studies were focused on the documentation and information management of cultural heritage and examined the modern digital tool and techniques for how urban evolution is documented, presented, and how related information is managed. The method tool utilized in these studies was GIS. This study is important because it is one of the pioneering studies that propose a comprehensive method to investigate a historical settlement.

Özcan (2005; 2006; 2007) focused on Pre-Ottoman city models. This dissertation presented general information about Seljuk cities but also focused on the impacts of the defense system and product distribution system on the urban spatial organization. This study generalized cities according to city models like Tanyeli's dissertation.

Yüksel (2009) concentrated on a single town: Tire between the 14th and 16th centuries. This study asserted the influence of the socio-economic background on the physical structure of an urban center, particularly the role of trade activities, trade relations, trade roads, and urban networks in the making of the town. This study claimed

that the social and economic constructs of urban centers played a crucial role in their making. On the other hand, it was asserted that architectural “monuments”, which were “urban artifacts” affected and even generated their making, Nevertheless, limited physical organization maps make it difficult to understand the settlement.

1.1.2. Studies on Castles

In earlier years, castles were researched as single structure, while network studies have gained importance recently.

Sevgen (1959) concentrated on the castles of Anatolia. This study aimed to catalogue the castles and introduce their architectural and historical values. The important castles were selected, and their historical developments were presented. In addition, each castle's description was supported by old maps and photographs. It is essential to document these structures. The importance of this documentation and inventory study is that it is the first study about the castles in Anatolia.

Tanyeli (1996) discussed an Ottoman castle town: Anavarin. She analyzed the town based on earlier achieve documentation studies. This study consists of information about the construction process of the structure. It pointed out how the Ottoman administration system affected the construction of a castle.

Pekin and Yılmaz (2009) concentrated on the castles of Anatolia. This study aimed to catalog the structures as a cultural heritage. 100 castles were introduced with brief explanations and photos. The importance of this documentation and inventory study is that there are limited studies about the castles in Anatolia.

Secondly, studies that examined the castles on a certain historical route were selected to review (Cesur 2009; Buyruk 2011; Burak 2021)

Cesur (2009) concentrated on the coastal castles of Western Anatolia. This dissertation aimed to catalogue the structures and discuss their preservation problems. A case study approach was undertaken. The tools of conservation at architectural and environmental scales were realized using conventional tools. The presence of a communication network between coastal castles and their harbours and related transportation routes was deciphered. This study indicated that when the defense requirements of the castles which was the reason for their existence, disappeared deliberately or naturally, they were unmaintained in the process. This thesis revealed the

conservation problems of the castles. These conservation problems were extensive tourism, the destruction caused by development, the destruction caused by functional and natural conditions, unqualified interventions, and restoration projects. In this framework, the importance of documentation and inventory studies, and public awareness was indicated. Comprehensive conservation studies and planning were considered indispensable for the sustainability of these castles. On the other hand, suggestions regarding the natural elements of the landscape of the castles were limited.

Buyruk (2011) focused on the caravan route connecting Sis (Kozan) from the Mediterranean which is one of the most important roads of Çukurova. In this study, the castles protecting the caravan route were identified, and classified according to their characteristics, and their drawings were made. The data obtained from the castles were supported by various sources and the subject was integrated. In addition to general information about the castle, artifacts other than the castle found on the caravan route were introduced as a catalogue section, the main subject of the study, the castles on the caravan route were first introduced geographically and historically with historical plan drawings and photographs.

Burak (2021) examined the historical process of the Genoese Republic on the Black Sea coast. Thus, it was aimed to understand the place and importance of the Genoese trade route passing through the Black Sea coast. After the analysis of the masonry techniques of Amasra Castle was completed, a comparison was made with the measurements taken in the Black Sea coastal castles. The historical and architectural features of the castle on the same network, and their preservation status were examined, and an inventory study was put forward. Historical maps and photographs were used while examining the castles. castle walls have been documented using traditional methods. At the same time, monumental structures in the castles were also revealed. There is no map produced within the scope of the study. Although the study approach is to evaluate castles through network contexts, the natural features of castles are out of the scope of the study.

1.1.3. Studies with a Contextual Scope

In recent years, the holistic approach to historic towns and castles has become widespread. First, studies dealing with landscape characterization are to be evaluated.

Different countries have developed different methods to examine the landscape features in their regions[1] such as HLC, NPS, HLA, HUL, and LCA. These studies considering of historic rural and urban landscapes identifying many historic attributes (Creighton 1998; Taylor 2009; Tülek and Atik 2014; Yüncü 2015; Çorakbaş 2017; Aksoy and Çorakbaş 2021).

Creighton (1998) analyzed the Medieval Castles and their relations with their landscapes in Yorkshire and the East Midlands. The study area investigated the topography, rural settlement types, patterns of land use, and military approach in time. The architectural features and archaeological information of the castles, site maps, and fortification wall plans were documented in the form of inventory sheets. This thesis is a pioneering study as it has a holistic perspective since it was done in a period when the landscape concept was not extensively discussed yet.

Taylor (2009) emphasized that the sense of place is an integral part of the landscape. This article examines some related notions of landscape and memory, and how one thinks about cultural landscapes. While this study reveals the relationship between landscape and intangible heritage from a conceptual framework, Asia was chosen for the field study. While the study does not provide visual data, it underlines the necessity of including intangible heritage in landscape studies.

Tülek and Atik (2014) focused on the walled towns with their cultural landscapes. This study claimed that understanding walled towns with their heritage and cultural landscape value was important for their integrated management and protection. In this context, Alanya Castle was examined at different scales. This paper aimed to evaluate Alanya castle town, with ecological, cultural, economic, and social dimensions, and to discuss how such a defence case can be analyzed in a systematic and multidimensional way as a heritage landscape, and also as a historic settlement. This study is valuable because of its holistic approach to the subject. Nevertheless, the conservation problems were not indicated in this study.

Yüncü (2015) concentrated on the urban and rural environment in Cappadocia. The case-based study proposed a method to characterize the historic dimension. The historic landscape characterization was made using GIS. How the landscape characterization methods have developed and how different countries have been using

[1] The theoretical background of the subject of landscape and network are interpreted in detail in Chapter 2, the section 2.2.

these methods were presented. In the study, primarily natural areas are emphasized and presented. However, cultural characteristics information is limited.

Çorakbaş (2017) concentrated on the documentation of intangible cultural characteristics of the Istanbul Land Walls World Heritage Site. The main goal is to create a method for establishing the relationship between intangible cultural heritage and tangible cultural heritage and to transform the new information that will emerge with this new method into an alternative field management approach for incorporating all these data into the site management process through the analyses carried out in the GIS and its database.

Aksoy and Çorakbaş (2021) emphasized that in the international heritage documents the monumental aspects of the historical assets such as Outstanding Universal Value are underlined. There is no statement regarding the preservation of the Land Walls and their landscapes. It was expressed that this situation will lead to the disappearance of the historical vegetable gardens that developed together with the Land Walls.

Next studies dealing with the change of landscape over time have become widespread in the 2000s (Vuorela et al. 2002; Crow and Turner 2009; Millican et al. 2017; Amici et al. 2017; Koparal et al. 2022).

Vuorela et al. (2002) proposed to document the landscape change of Ruissalo Island in Finland by systematic map assessment utilizing GIS. Physical landscape characteristics were examined: land uses and land cover maps of the island of Ruissalo in Finland from between 1690 and 1998. Analysis of landscape change based on map sequences was aided by the evaluation of landscape information from maps and the use of supporting information from different sources: historical aerial photos or maps.

Crow and Turner (2009) aimed to map the landscape character in the Eastern Mediterranean by using HLC method. The historic patterns of fields, forests, lanes, and rural settlements of the case studies were characterized. This study presented the change of a historical settlement as part of a historical landscape. GIS was used to integrate data with other archaeological and historical sources using high-resolution satellite imagery and archive maps. The study mainly highlights and presents natural areas. Information on cultural features is limited.

Millican et al. (2017) concentrated on the landscape changes in Scotland by using HLA method. This study stated that HLA is an essential tool and source of information about the historical depth of a specific landscape and a landmark for all future measurements of the landscape. HLA was evaluated together with HLC in this study. This

study claimed that it was difficult to assess the potential impacts of climate change or develop sustainable land management and conservation strategies without understanding which landscapes have been influenced by humans. Furthermore, this study focused on the natural environment and did not include an assessment and proposal for the built heritage.

Amici et al. (2017) focused on the landscape changes in a Mediterranean throughout history. The paper aimed to analyze land use changes and landscape structure through the analysis of historical maps and to assume the main processes contributing to the pattern of change. This change was determined by comparing aerial photographs using GIS. The results showed that the main reason for the significant land use changes is the abandonment of traditional rural. This study proposed that the integrated methodology should support decision-making in landscape planning, as well as the classification of effective biodiversity conservation approaches. On the other hand, this study concentrated on the natural environment, there was no evaluation and proposal about built cultural heritage.

Koparal et al. (2022) stated that HLC is a state-of-the-art technique for understanding landscapes. HLC analysis was executed for a specific region in the Mediterranean which had a complex place with a deep history. HLC methods were applied by utilizing GIS. In addition, the changing of land cover and land use of cultural landscape in the historical process was presented. The interaction of the change in the landscape with the cultural characteristics such as the local way of life, and urbanization was emphasized. Thematic maps prepared using historical aerial photographs and base maps were presented.

Table 1. The table of the literature review

AUTHOR(S) AND DATE OF STUDY	AIM		METHOD				CONTENT							
				Mapping										
	Understanding of Historical Evolution of Settlement Pattern	Understanding of Providing Knowledge for Conservation Planning Decision Making Process	Analysis of Archieve Documents	General	Detailed	Utilisation of Advanced Tools	Location	Period	Historical Background	Socio-Economic Background	Physical Organization	Network	Emphasis of Monuments	Emphasis of Traditional Buildings
Sevgen, 1959*							Anatolia	Historical Process						
Doğan Kuban, 1968							Anatolia settlements	Historical Process						
Aktüre, 1975							Manisa, Kütahya, Çorum, Amasya, Tokat, Niğde, Antalya	Between 17th-19th centuries						
Aktüre, 1987							Ankara, Tokat, Afyon	the end of the 19th centuries						
Aktüre, 1994							Anatolia settlements	Bronze Age						
U. Tanyeli, 1987*							Alanya, Antalya, Kastamon, Konya, Sivas, Amasya, Erzurum, Afyon, Kayseri, Kırşehir, Tokat, Ankara, Kütahya, Eskişehir	Between 11th-15th centuries						
U. Tanyeli, 1999							Anatolia settlements	Between 5th-20th centuries						
Edwards, 1991							San Andres Island/Nicaragua	Historical Process						
Bilici, 1991							Kastamonu	the end of the 18th century						
Urak, 1994							Amasya	Turkish Period						
Eyüpgiller, 1995							Kastamonu	Historical Process						
Eyüpgiller, 1996							Kastamonu	from 1925 up to today						
Foss, 1996*							Lycia, Lydia	Byzantine Period						
Eyüpgiller, 1999							Kastamonu	Historical Process						
G. Tanyeli, 1996*							Anavarin/Greece	16th century						
Pinon, 1999							Anatolia and Balkan	19th century						
Boran, 1999*							Anatolia and Balkan	Ottoman Period						
Akın, 2001							Balkan	Ottoman Period						
Altınöz, 2002						GIS	Bergama	Historical Process						
Özcan, 2005, 2006, 2007							Anatolia settlements	Seljuk Period						
Uluca, 2006							Gazimağusa, Kaleiçi	Historical Process						
Yüksel, 2009							Tire	Between 14th-16th centuries						
Cesur, 2009*							Aegean coast of Anatolia	Historical Process						
Creighton, 1998*							Yorkshir, England	Historical Process						
Taylor, 2008							Asia	Historical Process						
Tülek and Atik, 2014*							Alanya	Historical Process						
Yüncü, 2015						GIS	Cappadocia, Anatolia	Historical Process						
Çorakbaş, 2017*						GIS	İstanbul, Land Walls	Historical Process						
Aksoy and Çorakbaş, 2021						GIS	İstanbul, Land Walls	Historical Process						
Crow and Turner, 2009						GIS	Mediterranean	Historical Process						
Koparal et al., 2022						GIS	Urla, Anatolia	Historical Process						
Vuorela et al., 2002						GIS	Ruissalo Island, Finland	Historical Process						
Millician et al., 2017						GIS	Scotland	Historical Process						
Amici et al., 2017						GIS	Mediterranean	Historical Process						
Buyruk, 2011*							Adana, Anatolia	Historical Process						
Burak, 2021*							Amasra, Anatolia	Historical Process						

	✓
	×

* castle studies

1.2. Problem Statement and Aim of the Study

Castle towns have been evaluated as historical structures (Sevgen 1959; Creighton 1998; Buyruk 2011; Burak 2021) or archaeological sites (Lewis and Langhorne 1978; Ünal 2006; Ersoy 2009, 2012 and Beyazıt 2012, 2016) until recent years. Accordingly, the related conservation studies were limited with the building scale or archaeological findings within the castle walls. These conservation studies have generally focused on the monuments and housing units in the castle. The traces and remains reflecting the historic life patterns and traditions have been evaluated in a limited amount. Preservation of castle towns has been considered since 1860 (Viollet le Duc 2013, 73). On the UNESCO World Heritage List alone, 192 of 900 cultural properties are cited as historic towns/cities. The conservation studies on the coastal castles are more than the inland castles. This is since coastal castles are more visible and more interesting in terms of tourism. Most of the above-mentioned World Heritage properties are coastal castles (110/192). In Turkey, there are 43 castles registered as first-degree archaeological sites[2]. Generally, the close by environments of these castles were registered as third-degree archaeological site[3].

On the other hand, cultural landscape has been emphasized as a heritage concept in international documents between 1960-1990 (WHC 1990; UNESCO 1992; 2003; COE, 1995; 2000). Different countries have developed different methods to examine the landscape features in their regions[4]. Until today, 102 properties with 4 transboundary properties have been inscribed on the World Heritage List and officially recognized as cultural landscapes. Almost half of them involve a historical settlement. World Heritage Convention (WHC) underlines that a historic settlement should be preserved together with its surroundings (49/102). Although the castle towns, which have benefited from the advantages of their natural environment throughout history, are the most impressive elements of their landscapes, conservation studies have not thoroughly evaluated their settings. Hence, a limited part of the listed cultural landscapes includes a castle structure or a castle town (28/102). From Turkey, there is one which is Diyarbakır Fortress and

[2]In the first-degree archaeological site, construction is not possible, seasonal agricultural activities are possible (Madran and Özgönül 1999).

[3] In the third-degree archaeological site, construction can be allowed according to new regulations in line with conservation decision (Madran and Özgönül 1999).

[4] These methods will be discussed in the section 1.1.2.1.

Hevsel Gardens Cultural Landscape on the WHL (UNESCO 2023). In addition, there are 17 castles in Turkey whose contexts have been also considered, while proposing them to the tentative list of the World Heritage List as a cultural property[5].

Within the scope of this study, according to the inventory research of the buildings from the literature and the official website of General Directorate of Cultural Assets and Museums, it is determined that approximately 121 castle walls were repaired out of about 200 castles examined. 43 castles are registered as archaeological sites. 24 archaeological excavations were realized in 2022. 34 castles can be visited as museums, about 50 of these castles have not been subject to any intervention.

The castle towns cannot be reused for the specific purpose for which they were originally built. They are abandoned. The main design purpose of castle towns was security. So, this presents obvious challenges for accessibility today and meeting current usage requirements are difficult. The abandonment of castle towns gave way to a rapid loss of both their tangible and intangible qualities: the loss of physical, economic, socio-cultural integrity of the castle with its landscape. In addition, abandonment of castle towns themselves and an increase in new constructions in close by environment caused loss of the integrity of the cultural landscape and vanished the spirit of the castle towns.

Furthermore, the intensity and scale of modifications of the cultural landscape have increased dramatically in the last two decades, associated with human population growth and processes such as urban sprawl, industrialization, changing way of life, and mass migration (Foley et al. 2005). Consequently, the attention on the topic of the change of landscape over time is seen to be intensified (Cousins 2001; Vuorela et al. 2002; Levin et al. 2013; Amici et al. 2017; Hearn 2021).

The ICOMOS Charter on Cultural Routes indicated the importance of understanding the relationship between the cultural routes and buildings such as chapels, monasteries, fountains, bridges, and boundary crosses on them. Castle structures are also one of the structures on these cultural routes. In addition, this document claims the requirements of a profound knowledge of the historic, natural, and cultural characteristics

[5]Zerzevan Castle and Mithraeum, The Bodrum Castle, Mamure Castle, Alanya, Trading Posts and Fortifications on Genoese Trade Routes from the Mediterranean to the Black Sea which consists of eight forts (Yoros, Foça, Çandarlı, Çeşme, Amasra, Akçakoca, Sinop, Güvercinada together with the city walls in Kuşadası) and one tower Galata, Early Period of Anatolian Turkish Heritage; Niksar, the Capital of Danishmend Dynasty, Historic City of Harput, Archaeological Site of Assos, Tushpa/Van Fortress, the Mound and the Old City of Van, İznik (UNESCO 2023)

of their surroundings for the protection and conservation of the Cultural Routes (ICOMOS 2008).

International studies on castles tend to tent to emphasize their defense qualities rather than cultural landscape ones. An international association, the European Walled Towns (EWT) was set up in 1989 as a forum to promote the interests in walled towns in Europe. Turkey is already a member of EWT.

Fortunately, in recent years, international conservation studies on castle towns and their landscapes have increased. The most important study is the guideline prepared by ICOMOS in 2021 Guidelines on Fortifications and Military Heritage[6] (ICOFORT). The International Conference named 1st International Conference on Fortifications and World Heritage at New Delhi, India in Feb 2015 was organized by ICOFORT, ICOMOS, and UNESCO. The main aim of this organization was to increase knowledge and awareness of military structures, landscapes, and monuments and to encourage the preservation and maintenance of fortifications, military structures, fortress landscapes, and other objects and sites connected with military heritage.

The other study is a document about the legacy of walled cities, which are world heritages, prepared by ICOMOS and the World Heritage Convention in 2019. The conservation strategies of castle towns as part of the urban areas were discussed.

Castle towns are significant for comprehending intangible heritage qualities such as construction process, improved defence strategies, victories, defeats, and even painful memories of wars. The priority of understanding these heritage values and transferring them to future generations has been emphasized in the documents above, which propose a holistic approach. In addition, the Convention for the Safeguarding of the Intangible Cultural Heritage document (UNESCO 2003), which emphasizes the importance of preserving intangible heritage, is a basic guide for understanding the intangible qualities that may be evaluated in the content of castle towns.

Thanks to these studies' awareness on these structures, and their landscapes, networks historical and architectural significance, and attempts for their conservation and maintenance have increased.

[6]The ICOMOS International Scientific Committee on Fortifications and Military Heritage was established by the ICOMOS Executive Committee in Paris, on the 8 th of February 2005, but the works on the Committee organization started a few years before. It was in Spain during the 13th General Assembly, which was hold in Madrid, 1-5 December 2002.

Castle towns have unique tangible and intangible values in terms of crowing a cultural landscape and stimulating the recalling of memories of ancient ways of habitation and commerce. The identification and evaluation studies on castle towns and their landscape play a crucial role in order to preserve the cultural landscapes as a whole.

The castle towns, which have benefited from the advantages of their natural environment throughout history, are the most impressive element of their landscapes, however, the castle towns had begun not to be preferred due to transportation difficulties in time. Although castles had been important settlements, they were abandoned because the criteria for selecting settlement locations changed based on industrialization, changing the way of life. Accessibility became more important than safety. Not only the importance of these settlements and populations declined over time, but also, they were abandoned completely with the development of technology and defence systems which made castle towns face with lack of maintenance and destructive effects of natural conditions followed by ruin. This threat the integrity of the castle towns and their landscape. Thus, the majority of the castle towns and their landscapes are in ruins today, except for a small part of the castle walls. Today, the tendency to conserve castle towns today is to reveal the archaeological layer. In addition, the general approach of the presentation of the castle towns is the reconstruction of the fortification walls and important monuments in the castle. However, such a comprehensive structure can only be conserved by a multidisciplinary understanding of all these layers, functions, and the related landscape.

Furthermore, in the conservation studies of castle structures, only the inside of the fortification walls or their immediate surroundings are taken into consideration. The conservation borders of castle towns generally are the same as the border of the fortification walls. For this reason, the preservation works of castle structures are carried out like a single structure. For this reason, the most common preservation is the repair or reconstruction of fortification walls and monuments inside the walls. Conservation studies related to castle towns are generally similar to the conservation approach of a historical settlement. Additionally, the conservation borders of castle towns generally are the same as the border of the fortification walls. However, the conservation border and buffer zone should be reconsidered considering the borders and elements of the cultural landscape: archaeological ruins, historical graveyards, old paths, pastoral farming and animal husbandry zones, pastures and shrublands, and Mediterranean woodlands. So, the evaluation of castle towns as a whole with their landscape, and network together with all

tangible and intangible values should be the primary criterion in the preservation aimed evaluation of castle towns.

Although the idea of considering the castle structure and the castle town as a whole has started to take place in international documents in recent years, the studies are quite limited. This gap in the literature causes conservation implementations to take place from the same narrow perspective.

This thesis aims to fill the gap in the literature and to be a guide for the holistic preservation of castle towns, with the framework put forward for the conservation aimed evaluation of castle towns together with their natural environment with all inputs with a multidisciplinary approach.

In addition, depending on the cartographic materials and other historic documents, the constitution of inventory, determination of characteristics and phases of evolution, and evaluation of the conservation problems of these castle towns within the context of their landscapes are considered, moreover, it is intended that to analyze how the historic castle towns and their landscape changed physically parallel to socio-economical dynamics in this dissertation.

1.3. Research Questions

The purpose of this thesis is to clarify the following questions:

- When how and why did the castle towns and their cultural landscapes emerge and how did they evolve and change?
- How is the network of castle towns established?
- What are the elements in the original cultural landscapes of the castle towns?
- What are the conservation problems of the castle towns?
- For the integrated conservation and presentation of the castle towns with their cultural landscapes, and networks what should be the basic consideration?

1.4. Assumptions

- There are similarities in the landscapes of castle towns: elevated positions, commercial routes, and fertile agricultural lands in the surroundings.

- The voids in the castle towns are limited as a result of limited urban land.
- The castle towns present the characteristics of archaeological sites since they were abandoned, and their inhabitants have moved to new settlements established at lower elevations in the nearby sites.

1.5. Materials and Methodology

The generally qualitative and limited quantitative research methods were used in this study. This method is based on tools of architectural restoration and urban city planning. Historical research, documentation, comparison, and evaluation were realized. A case study approach was undertaken: Kale Tavas, Beçin, and Honaz castle towns in Southwestern Anatolia together with their landscapes. Geographic Information Systems (GIS) software is used to map the characteristics of castle towns. The method design of the thesis is presented in detail in Chapter 2.

The main historical sources referenced in this study are as follows according to their subjects. Studies on the history of the castle and the castle towns: general history of the castle: Eyice 2001; Toy 1985; David 1977; medieval castle history: Pirenne 2014; the Seljuk Period: Turan 1965; Baykara 2006; Tankut 2007; the Ottoman Period: Sevgen 1959; Batmaz 1996; Boran 2002; Stein 2007. The main historical sources for each studies castle towns are listed respectively:

Kale Tavas, for Antiquity Louis, 1954; Sevin 2013; for the deciphering of the *temettuat* and the *avarız* notebooks for the 19th century: Kütükoğlu 2002, 2007; Baykara 2007; and excavation reports (Ersoy 2009, 2010, 2012; Beyazıt 2016, 2017).

Beçin, for Antiquity Sevin 2013; the Emirates Period: Wittek 1944; the Ottoman Period Darkot 1958; Arel 1968; Akarca 1981; excavation reports: Ünal 2006, 2012.

Honaz, for Antiquity Sevin 2013; for the Byzantine Period: Foss 1977; Ramsay 1890, 1895; Choniates 1984; for the Emirate Period, Baykara 1988, 2007; for the deciphering of the *Avarız* notebook, Özçelik 2005.

For historical networks, for Antiquity French, 1980, 1998, 2012, 2016; for the Seljuk Periods and the Ottoman Periods; Yavuz, 1976; Tuncer, 2007; Halacoglu, 2014; Kuban, 2017.

In this dissertation, the following travellers were consulted for general castle history, in-depth history of case studies, historical landscape, and historical network

information and mapping: Strabo, 2005; Kiepert, 1890; Arundel, 1834, Ibn-i Batuta, 1971; Evliya Çelebi, 2005; Katip Çelebi, 2009.

1.6. Limits of the Study

Within the scope of this study, three castle towns located in Southwest Anatolia on this road were studied: Kale Tavas (Figure 1a), Honaz (Figure 1b), and Beçin (Figure 1c). Furthermore, the case studies were compared with other three castle towns on the same road: Gilevgi (Figure 1d), Alara (Figure 1e), and Adanda (Figure 1f). All the abandoned castle towns to be investigated within the scope of this dissertation are inland and had been used as a settlement as well as for military function in Anatolian Seljuk Period. Additionally, these were compared with similar examples from abroad on the World Heritage List (WHL): The Moorish Castle in Portuguese (Figure 1g) and the La Couvertoirade Castle in France. (Figure 1h). These two castles abroad were chosen to provide a comparison with the conservation approach proposed by the study. At the same time, the method of this thesis was compared with the pioneering studies. The following studies, which are similar to the subject and method of the thesis evaluated in this thesis, were selected: articles, books, projects, and Ph.D. thesis.

The detail of the assessment at the settlement scale varied depending on the data obtained from the research. The settlement analysis is only carried out in detail for Kale Tavas because it is a castle town with the most information on settlement scale among the examples studied and it continues to be used as a settlement until the nearest date. For this reason, clear historical aerial photographs of a date before it was abandoned, and a cadastral map of the same year were obtained. Topography, landform, and land cover analyses of Kale Tavas, Honaz, and Beçin were carried out utilizing GIS. While the settlement analysis for Kale Tavas was made in GIS with more detailed thematic maps, the settlement analysis for Honaz and Beçin was depicted according to data obtained from the field survey and literature research. Comparative study examples for Gilevgi, Alara, and Adanda are presented with descriptive, graphic maps by combining landscape and settlement analysis. Since the historical aerial photographs of these six castle cities were obtained, land use change analyses of the areas covered by the historical aerial photographs could be made. Heritage characteristics, conservation status, and

presentation strategies are described based on information obtained mostly from World Heritage List in the abroad examples The Moorish Castle and La Couvertoirade.

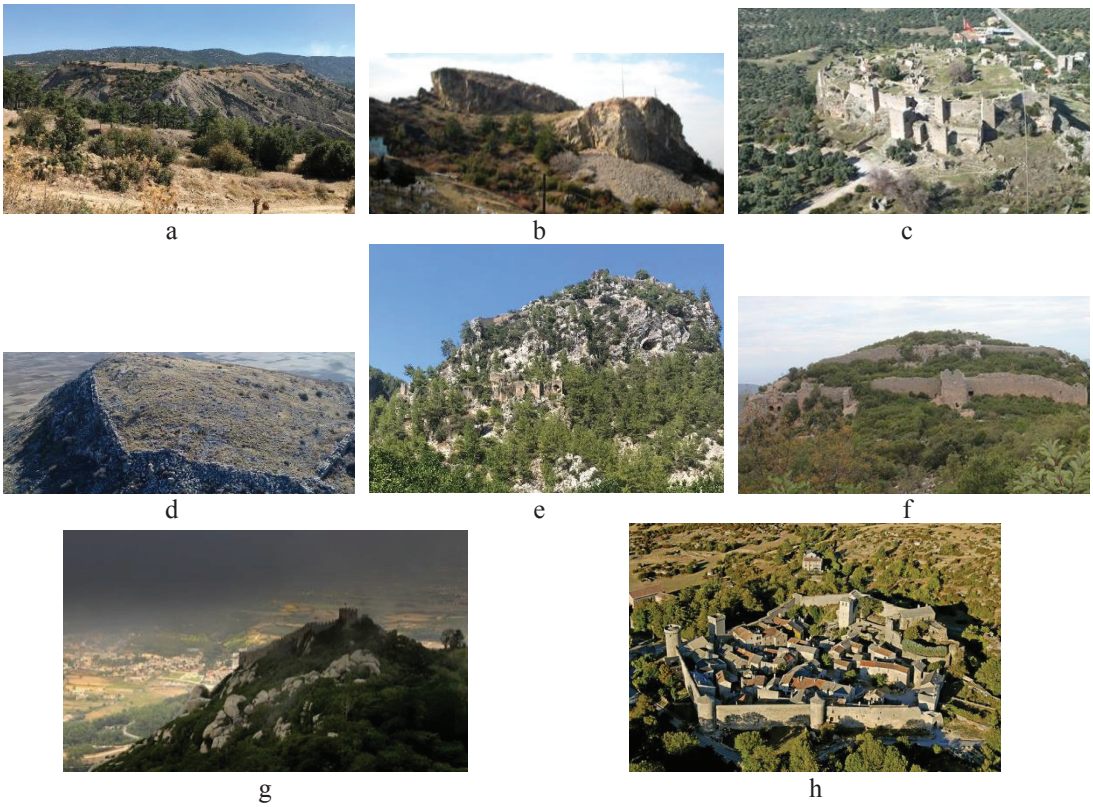


Figure 1.a. Kale Tavas, Denizli, 2019, b. Honaz Castle, Denizli, 2020, c. Beçin Castle, Muğla d. Gilevgi Castle, Antalya, e. Alara Castle, Antalya, 2021, f. Adanda Castle, Antalya, g. Moorish Castle, Portuguese, h. The aerial view of the La Couvertoirade is in Occitanie, France
(Source (c): kulturportali.gov.tr 2020, Source (d): Source: elmali.bel.tr 2020, Source (f): Pekin and Yılmaz 2008, Source (g): whc.unesco.org 2021, Source (h): whc.unesco.org 2021)

1.7. Significance of the Study

According to the literature survey, the evolution of castle towns with their cultural landscape has not been examined yet. Thus, it is important to decipher the relationship between castle towns and their landscapes, their transportation, and their commercial network, in order to create an integrated conservation approach. The assessment method

developed in this study can be used as a guide for evaluating the evolution, authenticity, and integrity of castle towns holistically.

In addition, the evolution of the settlement pattern of the selected castle towns of Southwestern Anatolia and their vicinity have not been evaluated in terms of their historical and conservation values yet. Thus, this dissertation will be important for the conservation of these historical settlements. The holistic conservation and presentation approach of heritage values is essential to achieve a positive impact on visitors and the local communities of the castle towns.

Moreover, the documentation of the current situation of these structures is important because only Kale Tavas, Beçin, and Alara Castles themselves were conserved and presented as archaeological sites. As this study suggests, if these studies are carried out in archaeological geo-prospection comprehensively, the heritage values of all the studied castle towns will become visible with their contexts, while these examples shed light on other castle towns.

This study intends to contribute to the preservation scopes of historical castle towns and their landscapes. The objective of this dissertation is to develop a framework for understanding the evolution of historic castle towns as a part of their cultural landscapes to guide their holistic preservation.

1.8. Content of the Study

This study is composed of six chapters. These are introduction, theoretical and historical background, design of the methodology, results, discussion, and conclusion.

In the first chapter, preliminary studies about the subjects of this dissertation are evaluated in terms of their subject. Firstly, the previous studies about the evaluation techniques of historic environments including castle towns, and the second is the evaluation technique of historic environment aimed at understanding as a whole. In addition, the problem definition, aims, assumptions, research questions, and limits of the study are presented. Finally, the significance of the study is introduced.

In the second chapter, the theoretical and historical background of the castle, and cultural landscape are presented. Moreover, the historic development of a historical network regarding castle towns is introduced. Castle and castle town examples from Turkey and abroad were evaluated in terms of protection and presentation strategies.

In the third chapter, the design of the methodology of this study is presented. Methodology stages are explained step by step in detail in order to guide future studies, explanations are supported with examples and visuals.

In the fourth chapter, during the study process, the results obtained considering all research, field surveys, and evaluations of the case studies are revealed. The results are presented under the four headings for each case study: natural evolution, cultural evolution, settlement characteristics, and cultural heritage values and preservation problems.

In the fifth chapter, the methodology of the dissertation is discussed with to methodology of the different studies. Therefore, the case studies are compared with comparison studies in Turkey and abroad.

The last chapter is the conclusion. All outputs of the study are revealed. The problems and aims are indicated the gaps it fill in the literature are stated. It is stated how this study fills the gaps in the literature and the implementations on the conservation aimed evaluation of the castle towns and their landscapes that is the subject of the study. Finally, suggestions and further studies about the subject of the study were put forward.

CHAPTER 2

THEORETICAL AND HISTORICAL BACKGROUND

In this section, historical background of the castles and castle towns, evaluation techniques of the cultural landscape concept, historic development of the network regarding castle towns, historic values of castle towns and conservation and presentation strategies of castle towns will be presented.

2.1. Castle

The shelter is one of the most natural needs of human beings. For this reason, the existence of shelters providing security has been known since the Palaeolithic age. Since the earliest ages of history, human beings have surrounded their house with protective material to protect themselves, their family, and their food. However, later, the idea of protecting a town or a city was considered more beneficial than protecting individual houses. Thus, the concept of a fortification wall emerged and, small villages in secluded places were surrounded by high walls against exterior attacks.

The word "castle" in Turkish is "*kale*", meaning a defense structure built on top of a hill. The word "*hısn*" in Turkish means castle towns (Eyice 2001, 234). The word castle comes from the Latin word castellum, which is a shortened form of the word castrum, meaning "fortified place" (Angold 1985, 2).

2.1.1. Function

Castles were built for defense purposes in strategic locations such as important main roads, road junctions, and bridgeheads between mountains throughout history. Their natural surroundings played a major role in their formation (Sevgen 1959, 5). Castles, which are the most important defense structures of the Middle Ages and the New Age, are strong structures built for the protection of cities, important passages, ports, and straits (BOA 2016, 10). Castles were designed to be most compatible with the climate and

topography characteristics they were in (Boran 2002, 880). Although it was difficult for these settlements to meet basic needs such as transportation, water, and food, they continued to live in these areas due to the importance of security (Batmaz 1996,8). Some types of castles were those built purely for military purposes, the more common types. The other type was the castle town called "Castron", which fulfilled both defense and habitation necessities (Angold 1985, 1–37; Foss 1996 145–205). Especially during conquest times, these settlements were used densely. Moreover, if the castle towns were part of a commercial network, these settlements continued their presence even after the time of the conquest. Castle towns were enclosed settlements. This characteristic made them self-sufficient presenting harmony with nature and accommodating local ways of life including production like rural settlements. Thus, these castle towns had not only tangible values in terms of their land use, functions, spatial characteristics, structural and architectural elements, construction technique, landscape, and geographical features; but also, intangible values such as way of life, production techniques, and traditions.

2.1.2. Positioning

Castle towns also benefited from the natural characteristics of the land. They were established on steep, difficult-to-reach areas before the development of the artillery and that generally they could only be reached from one side (Eyice 2001, 236). Based on the relationship of the castles with the surrounding water or land; they can be classified as inland castles and coastal castles.

- **Inland Castles:** They were located on natural elevations with full vista of the surrounding flat areas, important main trade routes, and also secondary roads, e.g. Gilevgi Castle (Figure 2). These sites, which were already a natural castle as a geographical feature, were perfectly safe. They could be on a steep hill, e.g. Afyon (Figure 3) and Tokat Castles (Figure 4). These castles were built on the top of a steep hill located on a plain (Köker 2020, 15). Inner castles could be located also on plateaus. Beçin Castle is on a steep plateau elevated 175 m. from the surrounding flat terrain. Such plateaus on crests of mountains with vistas and accessibility difficulties had been settled throughout history (Figure 5). In addition, inland castles could be located near water sources like Alara Castle. It is located near the valley surrounding the Ulugüney Brook, which runs in the northwest-southeast direction. Access to these castles is usually provided by steep

tunnels or stairs from a single point. In addition, at the border of a castle town, there could be a village on its skirt. The needs of the castles were mostly supplied by these villages, e.g. the Honaz Castle. If the castle was located on a caravan route, there could be a caravanserai on the skirt of the hill crowned by the castle, e.g. Alara Castle.

Figure 2.The view of the fortification wall of Gilevgi Castle, Antalya
(Source: Elmalı Municipality 2020)

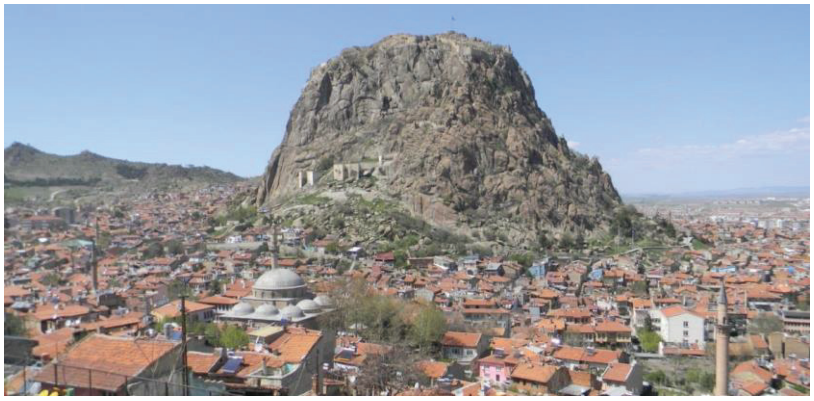


Figure 3. Afyon Castle
(Source: Köker 2020)

Figure 4. Tokat Castle
(Source: Köker 2020)

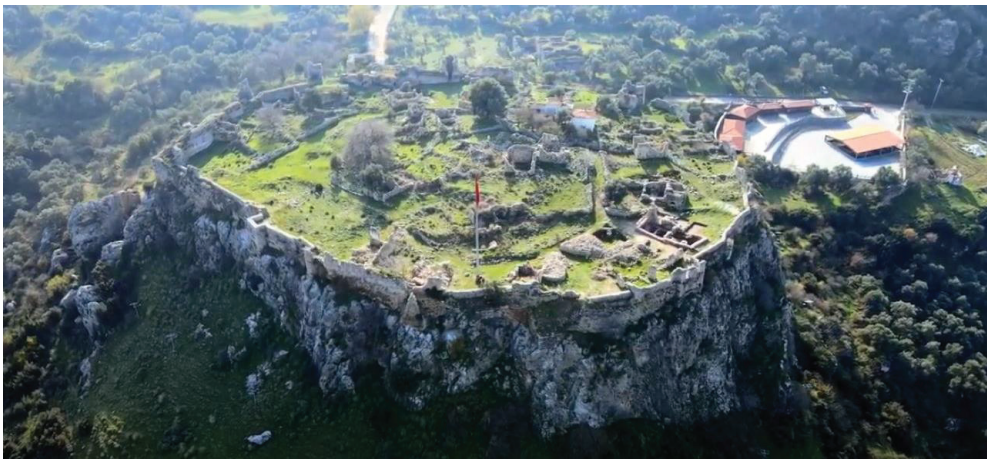


Figure 5. The view of Beçin Castle the plateau from the north direction
(Source: Milas Municipality 2019)

- **Coastal castles:** They are located on the side of a river, sea, cape, or islet. They have a relationship with water. In addition to their defence function, they are commercial transfer points of the area where they are located. A coastal castle was in places that were suitable for port construction (Cesur 2009, 32). Castles on the waterfront could also function as outposts to prevent threats from the sea. Alanya (Figure 6a), Amasra, and Sinop Castles are the examples of the coastal castles in Anatolia, and Selanik (Figure 6b), İşkodra, and Akka Castles are the coastal examples in the Balkans.

a b

Figure 6.a. Alanya Castle, b. Selanik Castle
(Source (a): Tülek and Atik 2014: 236, Source (b): BOA 2016, 12)

2.1.3. Historic Development

Abroad, the earliest fortifications originated in the Indus Valley, Egypt, and China where settlements were protected by large walls. Northern Europe was slower than the East to develop defensive structures and it was not until the Bronze Age that hill forts were developed (Foss 1996, 27). The castle was a simple wooden palisade, perhaps with earthworks, surrounding a camp, sometimes with a permanent wooden tower in the center which was constructed especially in Germany, England, France, and North Africa in the Roman Period, (Eyice 2001, 237). This evolved into a wall encircling an open space or courtyard (bailey) and a natural or artificial hill that had a wooden tower built on top of it. Some castle elements had symbolic meaning besides their defence function, e.g. tower and ditch. Some grand castles in England had long winding approaches intended to impress and dominate their landscape in the 13th century (Figure 7). Castles were influenced by earlier forms of elite architecture, contributing to regional variations. Importantly, while castles had military aspects, they contained a recognizable household structure within their walls, reflecting the multi-functional use of these buildings called chateau (Creighton 2012, 27–29).

Figure 7. The Castle of the Teutonic Order in Malbork
(Source: whc.unesco.org 2021).

Palaces or chateaux built on a high area were called a castle, especially in Europe in the Middle Ages (Toy 1985, 22) (Figure 8 a,b). However, the castles in the context of this study are built for military purposes on a mountain or at a high altitude. They have high fortification walls and include towns within them.

a

b

Figure 8.a. Hoşap Castle, Van, b. Wartburg Castle, Germany
(Source (a): kulturportali.gov.tr 2021, Source (b): whc.unesco.org 2021)

In Anatolia, towards 5500 BC, a settlement was found in Hacılar, surrounded by a 2-2.5 m thick rectangular mudbrick wall with a stone masonry foundation. This was a small castle protecting a neighborhood (Eyice 2001, 236). The oldest known castle in Anatolia is thought to be in Soğuktepe, near Mersin, which can be dated back to 3600 BC. (Naumann 1998, 247).

The most perfect of the Urartian castle architecture examples are in Çavuştepe, near Van. There are parts of an Urartian castle dated to 1000 BC as the forerunner of the Van Castle, which was an important fortification in every period of history (Figure 9) (Eyice 2002, 236).

Figure 9. The view of Van Castle
(Source: kulturenvanteri.com 2021)

During the Greek and Roman periods, generally defensive castles were built in Anatolia (Akarca 1981, 120).

Before and during the Seljuk conquests of the Byzantine cities, they were fortified castle towns that served as bishopric centers that primarily served their defense and religious needs (Foss 1996, 310). Castle in the Byzantine period, most of the city is surrounded by walls and had an inner castle. These walls may have been built during the Byzantine period, or they may have been built before (Tankut 2007, 14).

In order to understand the castles in the Anatolian Seljuk period, it is necessary to examine the political situation at that time.

Byzantine-Sassanid wars (5th-7th century) and Arab invasions (7th century) caused Anatolia to become poor and insecure (Köprülü 1981). Due to the invasions, the Byzantines left the defenceless plains settlements and began to settle in small sites in high elevations. These were called cistron or castle towns (Tangut 2007, 7). This situation led to an increase in the importance of castle towns (Cahen 1979 cited in Tuncer 2007). When the Turks started to come to Anatolia in the 11th century, security in Anatolia still could not be ensured. After 1071, the Byzantine resistance was broken, and the Turks began to spread to Anatolia. Among The first Turks who settled in Anatolia were not only nomads who made a living from animal husbandry but also there were people who had an urban experience (Tankut 2007, 3). After the establishment of the Seljuk state, villagers, traders, craftsmen, and religious leaders began to migrate and settle in Anatolia (Sevin 2013). Meanwhile, cities like Sivas at the crossroads had become important (Tuncer 2007). The cities of the period were castle towns consisting of an inner castle where the administrative functions were located and an outer castle where the trade and accommodation functions were located (Tankut 2007, 3). Many of the Seljuk Period castles replaced the former castles. Anatolian Seljuks built new castles for two reasons: the Crusades and the ongoing struggle between the *Beylik*s. (Sevgen 1959, 6)

There were two kinds of city life for the Turks who settled in Anatolia.

Setting in the Byzantine Cities: The majority of the people who came to Anatolia continued to live in the Byzantine cities with small or big alterations, e.g. Kale Tavas, Honaz, Beçin, Alara, Adanda, Niksar, Ankara and Çankırı. Some of these cities were founded in the ancient period, while others were established in the Byzantine period. Although the city characteristics of the Byzantine period continued, the cities became smaller. When the Turks came in the 11th century, Byzantine cities had generally strong defences. Turks joined the castle city life with enough soldiers and their families to defend

the fort cities and their surroundings (Baykara 2006, 277). It can be said that the rural land around the castle towns developed more during the Turkish period (Tanyeli 1987).

Establishing their settlements: Byzantine cities could be in ruins. However, if the location of this city was suitable for a new city, the Turks built a new city by the ruins. As an example, Denizli, which was established by Laodicea, can be given as an example (Baykara 2006). Although there were no significant changes in castle architecture during the Ottoman period, there were some differences in usage. During the Ottoman period, each castle had a *dizdar*, *kethüda,* and castle soldiers, as well as ammunition and war equipment. At the same time, those used as settlements continued to be used as such. Although some of the castles used as settlements continued their function, there were castles used only for security and storage purposes during the Ottoman period, e.g. Alara Castle (Figure 10).

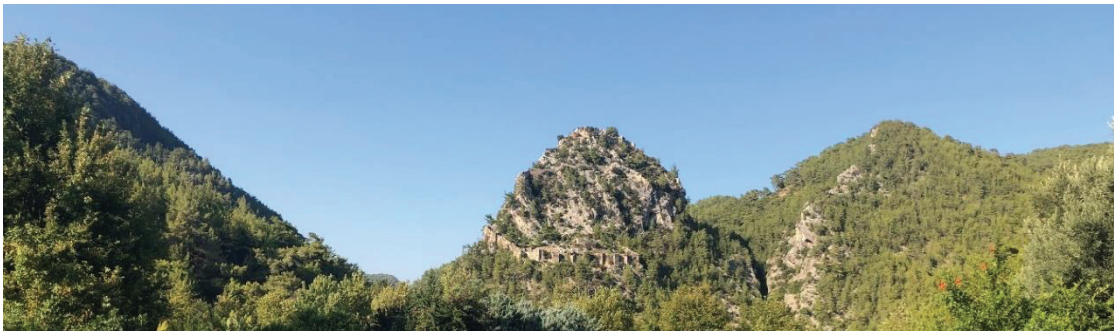


Figure 10. The view of the mountain range surrounding Alara Castle, 2021

2.1.3.1. Elements of the Castle Town

Since the earliest ages of history, the castle architecture technique has developed in parallel with the progress of military service and war methods. Although there had been significant changes in the structure of the castles over time, some important principles such as the trench, the double wall system, and the protection of the doors with double bastions have been used from very ancient times until recent times (Eyice 2001, 236).

Elements specific to castle towns are described below, respectively (Figure 11).

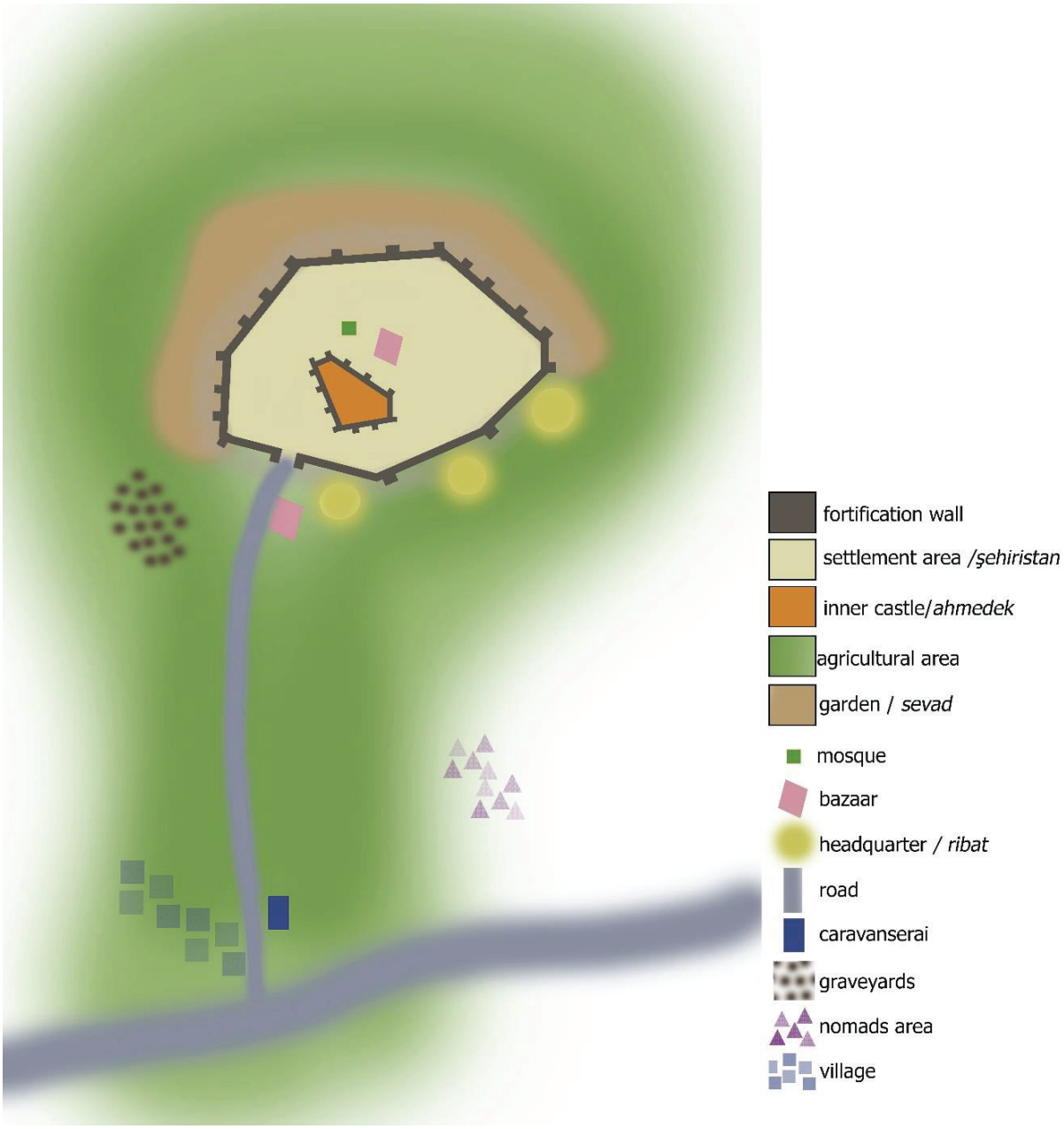


Figure 11. Elements of a castle town
(This drawing is reinterpreted from the settlement pattern of Tankut 2007, 16)

1. Fortification Wall: It could date back to the ancient period (e.g. Adanda) or the Byzantine period (e.g. Honaz) (Baykara 2006, 277). The castle towns were surrounded by thick walls were fortified with bastions. Bastions were lined up on the wall line so that they could view each other (Boran 2002). *Dendan*, loophole (*mazgal*), *barbata* or *dendan* was some other terms used was part which constituted the uppermost edge of the walls in the form of teeth. It was as high as an average man. It acted as a trench (*siper*). The gaps within the *dendan* were called *mazgal*. The form of the *dendan* varied according

to periods and countries (Toy 1985; Eyice 2001, 235). The most important part of the castle architecture was the tower or bastions. Towers were generally located on two sides of the castle gate to control the road and see far away or the other watchtowers. One of the towers of the castle was built higher and stronger than the others. That tower was called *Balahisar*, *Erk,* or *Baskule* (Eyice 2001, 235). Since the earliest ages of history, the castle architecture technique had developed in parallel with the progress of military service and war methods. Although there had been significant changes in the structure of the castles over time, some important principles such as the trench, the double wall system, and the protection of the doors with double bastions have been used from very ancient times until recent times (Eyice 2001, 236) (Figure 11).

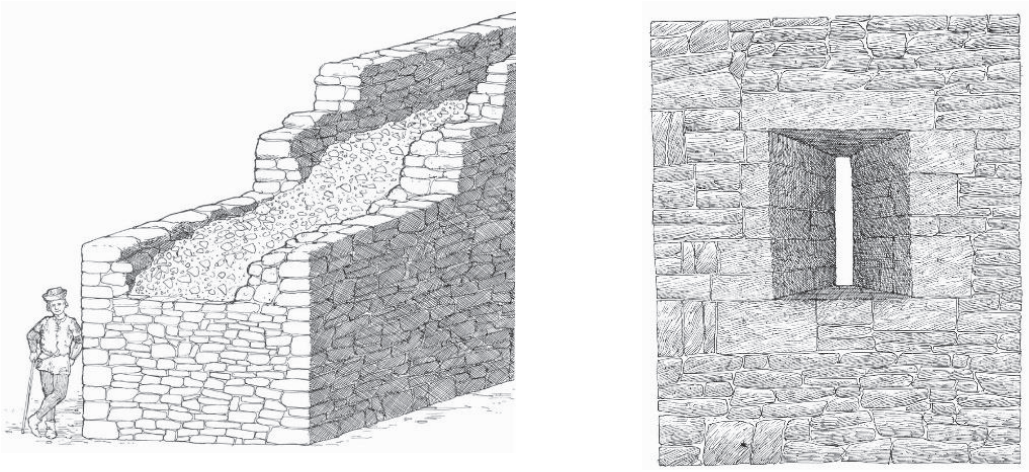


Figure 12. The illustration of fortification construction and loophole
(Source: Macaulay 1977, 42)

2. Settlement Area / *Şehiristan*: A large amount of the settlement area of a castle town was within the fortification walls. When the surface area of the castle was limited, this area had a dense lot organization (Pirenne 1969, 85; Macaulay 1977; Baykara 2006, 288) (Figure 11). Whereas a castle had a large settlement area, buildings were generally independent. The commercial area generally was located in this area. In addition, the distribution of monumental public buildings in castle towns was homogeneous. Only commercial functions were located close to the entrance or outside of the castle due to the trade relations with the nomads and caravans (Tanyeli 1987, 28).

2a) Residential Zone / *Mahalle*: Since the total area of the castle town was small, there was dense construction (Baykara 2006, 288). Although most of the residential and commercial areas are within the walls, residential areas can be found outside the castle in cases where the population increases. Castle towns consisted of well-defined

neighbourhoods especially the Seljuk period (Tankut 2007, 102) (Figure 11). These neighbourhoods were places where Turks of nomadic origin socialize. Apart from the residences, there were mosques, baths, and fountains in the residential areas (Tankut 2007, 102).

Although most of the residential and commercial areas are within the walls, residential areas can be found outside the castle in cases where the population increases (Pirenne 1969, 90). Apart from the residences, there were religious buildings: mosques or churches, baths, and fountains in the residential areas (Sidney 1985; Tankut 2007, 102).

Wealthy families often live in centrally located residential areas. Although there is not enough information about the residential buildings in the city of the castle, it was generally thought to be a two-story with a courtyard (Tankut 2007, 100).

2b) Commercial Zone / *Çarşı*: The commercial area was mostly inside the castle town The shops inside the castle gathered around the mosque in all directions to benefit from the density created by the mosque (Tankut 2007, 56) (Figure 11). The bazaar was an important element of the castle town. Sellers from the surrounding villages come to the markets set up in predetermined places every day. In addition, a bazaar could be held on certain days outside the city towns (Tanyeli 1987, 165).

2c) Monuments: Mosque, bath, tomb, madrasah are monuments located in castle towns.

Mosque: Mosque was considered the most important social center in the castle town since the Seljuk period (Tankut 2007, 42). The fact that most of the bazaar was gathered around the mosque is proof that the mosque was an important social gathering area besides its religious feature (Baykara 2006, 283) (Figure 13).

Figure 13.The foundation wall of the Pazaryeri Mosque in Kale Tavas, 2018

2d) Elements for Food and Water Supply: It was difficult for castles to meet the basic need for water. Thus, each castle also had masonry warehouses to store food, and wells or cisterns to meet especially water needs (Figure 14). In the castles, there were usually cisterns made of stone and brick or directly carved into the rock in which the rainwater was collected (Eyice 2001, 242).

Figure 14. The cistern structure in the Kale Tavas
(Source: Beyazıt 2016).

2e) Bath: The bath was constructed on the exterior border of the castle town in the Roman period, while the bath could be part of the residential area in the Seljuk period (Tankut 2006, 57).

2f) Roads: Road organization in Turkish cities had an organic structure, thus the number of dead-end streets is also numerous. The abundance of dead-end streets is thought to be related to privacy (Tanyeli 1987) as well as to property status (Kuban 1968,55).

2g) Squares: The square is an open space that is formed spontaneously by the expansion of a street around the market, mosque, or fountain, or by the intersection of several roads (Kuban 1968, 166). It was another element of the city. It is difficult to talk about the defined square in the cities of the Turkish period. It is thought that the squares were used by a limited number of people (Tankut 2007, 96).

2h) Inner Castle/*Ahmedek*: Inner Castle or *Ahmedek*, which was surrounded by a fortification wall from all sides (Figure 11), was the last defense of the city (Figure 15). When the castle was captured by foreign forces an elevated and enclosed part was provided for the last defense. This part was called "*ahmedek*"[7] (*ehmedek*) and later the

[7] According to Baykara; *Ahmedek* and inner castle mean the same thing. Tanyeli emphasizes that these two concepts had the same meaning during the Ottoman Empire (Baykara 2006). However, in the

inner castle (Eyice 2001, 240). The area enclosed by the castle wall was always small and usually had an inner castle. In peacetime, the inner castle was used for administrative and military purposes.

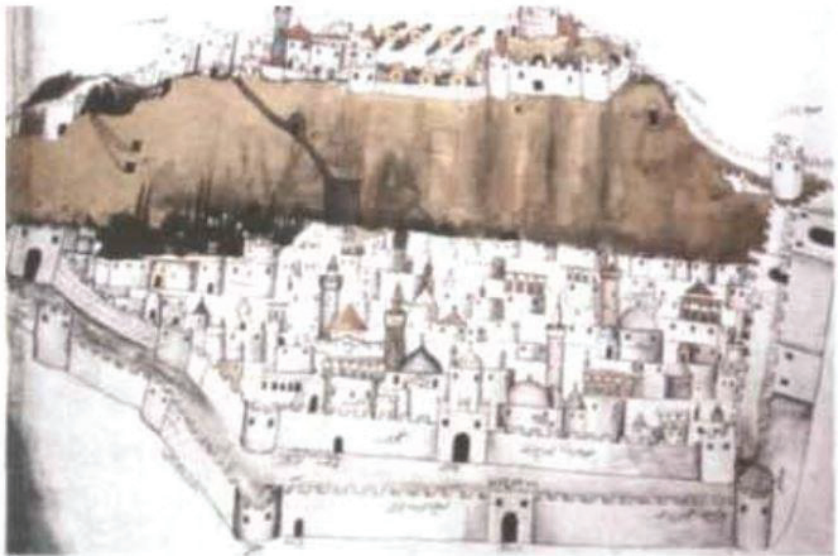


Figure 15. The relationship between the inner castle and the whole *şehiristan* of, Van Castle
(Source: Boran 2002, 882)

3) Suburb /*Varoş*: Some places are legally included in the city, which are settled with the development of city life, and the castle was filled just outside the walls (Figure 11). These areas are referred to by the word "*zahir*" or "*taşra*", which comes from "*taş*" (Baykara 2006, 275). The commercial area could also be seen outside the castle depending on the development level of the city. On the other hand, it is stated that there were merchant colonies in those areas in the Middle Ages in Europe (Pirenne 1969, 90). The bazaar area and agricultural areas were also located on the "*varoş*" of the city (Tanyeli 1987, 30; Pirenne 1969, 35-49).

4) Graveyards: Graveyards were generally located outside the castle town (Figure 11, Figure 16)

Seljuk period, those that were located in the castle independently were called the inner castle. Those that were adjacent to the outer castle wall were called *Ahmedek* (Tanyeli 1987, 162).

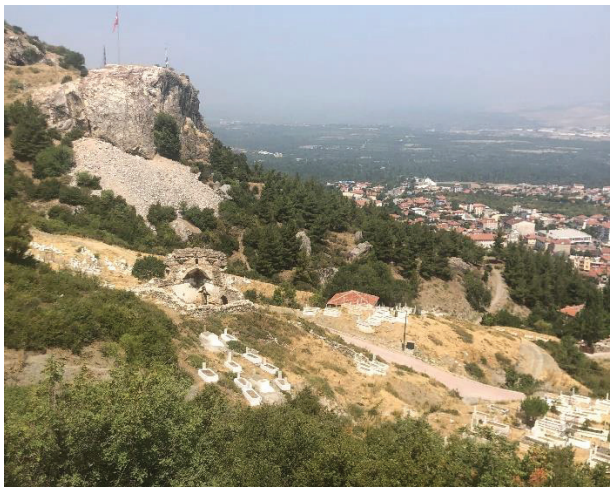
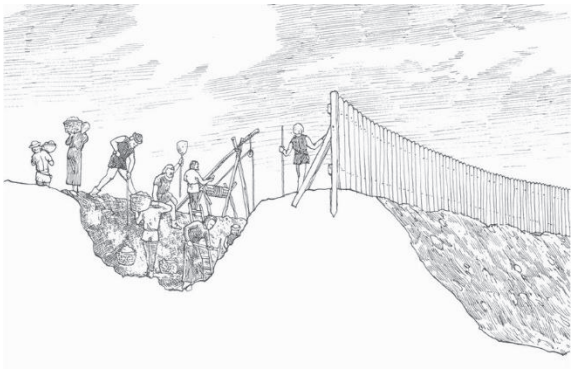


Figure 16. The Ottoman graveyard located outside of Honaz Castle, 2020.

5) Ditch: It was a natural or man-made pit surrounding the castle city to make it difficult to reach the castle city (Kaufmann and Kaufmann 2018, 64). Entrance to the fortress cities was provided only by bridges over the ditches (Eyice 2001, 235) (Figure 17a,b). The ditch around the castle was filled with water if possible (Figure 11). To protect the entrance of the castle and to provide passage over the ditch, a lift-up bridge descended to the opposite side of the ditch. It was connected to a chain system. When lifted, the bridge acted as a curtain in front of the gate (Sevgen1959, 16). Apart from this, there were ditches around the castles such as Rhodes, Famagusta, and Sinop, which were by the sea. There are no ditches in the castles built in mountainous regions (BOA 2016,10).

a



b

Figure 17.a. Halep Castle, b. The illustration of a ditch construction
(Source (a): kulturenvanteri.com 2022, Source (b): Source: Macaulay 1977, 24)

6) Gate: Since ancient times, it has been given importance that the gates were between two bastions. Although the castle town had generally a single gate, it is also observed that castle towns with more than one gate. In that situation, castle gates were

named according to their location. For example, the name of the Gates of Diyarbakır Castle was Mountain Gate, Urfa Gate, and Mardin Gate (Sevgen 1959, 8).

7) Bridge: In some large castles, the connection of the main entrance with the outside was provided by a masonry bridge, so a large masonry tower was built on top of the bridge and the passage was ensured to be through this control tower.

8) Headquarters / *Ribat*: Ribat was the military structure built near the entrance to protect the castle, just outside the city wall (Yiğit 2008, 76).

9) Garden / *Sevad*: A green zone called "*sevad*" began at the end of the settlement. This was a garden consisting of fruit trees and vineyards. It was the area that surrounds the castle town like a green belt (Baykara 2006, 276) (Figure 11).

10) Agricultural Area and Shrubland: At the end of the *sevad*, the other green area begins. These are the places where they meet the main food needs of the city, apart from "*sevad*". These were divided into two: agricultural areas and pastures and shrublands for livestock farming. The inhabitants of the castle town migrated to these green zones or plateaus surrounding the castle during the summer months (Baykara 2006, 276) (Figure 11).

Within the borders of the Ottoman Empire, there were castles with both defense and shelter functions: Adakale in Romania and Shkodra in Albania (BOA 2016, 14) (Figure 18).

Figure 18. İşkodra Castle / Albenia
(Source: whc.unesco.org 2021)

Despite the disappearance of security concerns, most of the castle towns continued to be used until the 19th and even the beginning of the 20th century. But the castles in places far from the center, where transportation was very difficult, were abandoned before such as Adanda Castle (Figure 19).

Figure 19. The view of Adanda Castle
(Source: Pekin and Yılmaz, 2008)

Although castle towns had been important because of their strategic location, the importance of the castles declined in the 19th century. Criteria for selecting settlement locations changed based on economic and scientific reasons. As new weapons changed the definition of safety, ease in accessibility was given privilege. Thus, castle towns were abandoned due to natural, economic, or security reasons. Some of the castle towns were abandoned because they were not as safe as before, so the castle walls could be demolished with new weapons. Many castles were either demolished or devastated after abandonment. Kale Tavas is an example of a castle city abandoned for natural reasons. Because of natural disasters and almost the entire city was devastated. In addition, the castle wall of some castle towns, where life continues, were demolished and used in repairs and new constructions in the castle towards the end of the 19th century: e.g. the coastal walls of the castles in some port cities were demolished and the stones belonging to the castle were used in the construction of the docks (BOA 2016, 9). On the other hand, there are also castle towns where life continues despite all these conditions: e.g. Sığacık Castle is in İzmir, Turkey, La Couvertoirade is in Occitanie, France (Figure 20).

Figure 20. The aerial view of the La Couvertoirade is in Occitanie, France (Source: whc.unesco.org 2022)

2.2. Evaluation Techniques of Cultural Landscape

Since the 1990s, different countries have utilized different approaches for the characterization of cultural landscape. They mainly aim to preserve, maintain, and manage cultural landscape areas in rural or urban areas. The methods of HLC and HLA concentrate on historic cultural landscape different from NPS and LCA. Moreover, these methods often established terminology for cultural landscape and advised the need to define the boundaries of the area. The methods consist of stages that take place at the desk, while the other part is the field study. In addition, all collected data needs to be mapped and digitized. Geographic Information Systems (GIS) is a very sophisticated and comprehensive tool for analyzing and evaluating data.

On the other hand, although the concept of the cultural landscape is not new; there is no reference for it in the Turkish legal framework. Madran and Özgönül (2005) is an early study pointing out this gap. In turn, there is almost no documentation work or application work referring to this concept. The inscription of Pergamon, and Diyarbakır fortress and Hevsel gardens cultural landscape on the World Heritage List (UNESCO 2015) are important (Figure 21). In addition, studies conducted abroad have been reflected in Turkey with academic studies. Especially in recent years, the number of theses dealing with cultural landscape has been pleasingly increasing. These studies are Danacı 2012; Arkun 2012; Durusoy 2013; Yüncü 2015; Avcı 2016 and Sarıbekiroğlu 2017.

Figure 21. Diyarbakır fortress and Hevsel gardens cultural landscape (Sources: whc.unesco.org 2022)

2.2.1. Evolution of the Cultural Landscape Concept

The landscape is a unifying notion for humankind and natural sciences. The definition of landscape has varied slightly over time. The common definition highlights the aesthetic and visual qualities of scenery in the 16th and 17th centuries (Elerie and Spek, 2010) (Figure 22). The meaning of landscape was a forest with animals, huts, fields, and fences. Then, the definition is broadened in the 19th century by German and French geographers and historians and the cultural landscape is referred to as an area determining a cohesive system of natural, and anthropogenic features, and genetic processes that distinguish it from its neighbours. As the landscape is the result of individual features, structures, processes, and associations, different aspects of it can be the subject of study by many disciplines (Elerie and Spek, 2010).

Figure 22. Stourhead Garden, England
(Source: nationaltrust.org.uk)

Cultural landscape as a term was developed by Professor Carl Sauer and the Berkeley School of human geographers in the USA in the 1920s and 1930s (Fowler 2003). Sauer emphasized the distinction between natural and cultural landscapes in his work. He highlighted the importance of human role in the formation of the cultural landscape. Sauer described the natural landscape as the natural landscape being transformed by humans which is the last and, for us, the most fundamental morphological factor. Human culture makes use of natural forms. In many cases, it alters them, and in some cases, it destroys them (Sauer 1925).

With the effects of the second world war, conservation in the 1960s and 1970s focused more on important and large monuments and archaeological sites, while cultural landscape continued to be considered by some experts. The definition of the cultural landscape was that cultural landscape is a distinctive product of the relations between a human community, indicating cultural preferences and options, and a natural environment. It is the heritage of many periods of the natural evolution of human labour (Wagner and Mikesell 1962).

By the 1990s, the landscape was not only considered by academic circles but also by international and national platforms such as international conventions, charters, recommendations, and other related legal instruments. In this way, the interest in the concept of landscape increased, and this concept was taken into consideration together with man-made elements and associated cultural process values. The pioneer of these studies was UNESCO Expert Meeting on Cultural Landscapes held in La Petite, France in October 1992. The expert group acknowledged that cultural landscapes are the: "combined works of nature and man" designated in Article 1 of the convention. It is

defined that they demonstrate the evolution of human society and settlement over time, in the context of the physical limitations and/or advantages of their natural environment and the successive social, economic, and cultural forces, both external and internal. In this context, cultural landscapes of universal value were characterized according to the following three categories: designed landscape (Figure 23a), organically evolved landscape (Figure 23b) consisting of a relict (or fossil) landscape and a continuing landscape, and associative landscape (Figure 23c).

a b c

Figure 23.a. Designed cultural landscape, Wallenstein Garden, Prague, 2023,
b. Evolved cultural landscape, Karlův Bridge, Prague, 2023,
c. Associative cultural landscape, Kay-Nah-Chi-Wah-Nung, Mounds
(Source (c): www.heritagetrust.on.ca, 2020).

After that, landscape and cultural landscape are defined by European Council of the Integrated Conservation of Cultural Landscape Areas as Part of Landscape Policies 1995, Article 1, as:

> Landscape: the formal appearance of the numerous relationships existing in a given period between the individual or society and a topographically defined area, the appearance of which is the result of the action, over time, of natural and human factors and of a combination of both" and "Cultural landscape Areas: specific topographically delimited parts of the landscape, formed by various combinations of human and natural agencies, which illustrate the evolution of human society, its settlement and character in time and space and which have acquired socially and culturally recognized values at various territorial levels, because of the presence of physical remains reflecting past land use and activities, skills or distinctive traditions, or depiction in literary and artistic works, or the fact that historic events took place there (EOC, 1995).

In the 1990s, the World Heritage Committee adopted cultural landscapes as an additional category of property as part of its strategy to broaden the scope of World Heritage listings (Figure 24).

Figure 24. Rice Terraces of the Philippine Cordilleras
(Source: whc.unesco.org 2019)

Finally, the definition of landscape is rearranged re-taking into account the human scale, “Landscape is the human perception of an area whose character is the result of the action and interaction of natural and/or human factors” (Council of Europe 2000) (Figure 25).

Figure 25. Vineyards of Barolo in Italy
(Source: whc.unesco.org 2019)

In 1992, the World Heritage Convention was the first international legal instrument to recognize and protect cultural landscapes. However, in recent years, efforts to preserve and maintain cultural landscapes have become more significant.

Between 1992 and 2007, twenty-two world heritage regional thematic expert meetings on cultural landscapes were organized by the World Heritage Centre in different countries. Moreover, until today, there were 102 properties with 4 transboundary properties inscribed on the World Heritage List and officially recognized as being cultural landscapes. Such recognition is an acknowledgment of the importance of human-environment interactions, especially those of a more traditional type (Aplin 2007). In addition, terms that are the elements of the cultural landscape such as "biological diversity", "ecosystem integrity", "sustainability", "spiritual relation to nature", "collective memory", "landscape", "landscape policy", and "landscape management" are gradually dispersed, and not only tangible inputs but also intangible values of heritage were discussed. In the Convention for the Safeguarding of the Intangible Cultural Heritage, UNESCO, 2003, intangible heritage is defined as:

> The intangible cultural heritage of a community, group, or even an individual is composed of the customs, representations, expressions, knowledge, and skills, as well as the tools, objects, artifacts, and cultural spaces that belong to that community, group or individual and are recognized as part of their cultural heritage. This intangible cultural heritage, which is transmitted from one generation to the next, is constantly recreated by communities and groups in response to their environment, their interaction with nature, and their history. It provides them with a sense of identity and continuity and promotes respect for cultural variety and human activity (UNESCO 2015).

In addition, the cultural landscape has been redefined in the studies carried out in recent years considering the concrete and intangible values it has: cultural landscapes are at the interface between culture and nature, tangible and intangible heritage, and biological and cultural diversity. The network represents interwoven relationships, the essence of culture and human identity, and symbolizes the growing recognition of the fundamental links between local communities and their heritage, and between humanity and its natural environment. (Rössler 2006).

The concept of landscape is not only the setting in which all the actions of life take place, but also the storehouse of meanings and spiritual values that nurture men's

existence. Therefore, landscape and memory are inseparable because the landscape is the nerve center of men's personal and collective memories (Taylor 2009). Both tangible physical identity and intangible identity related to the distinctiveness of our lived-in world and human experiences are undistinguishably interwoven with place meaning and significance for people and the symbols, images, and meanings associated with places/landscapes (Taylor 2009). Thus, since 2008, a total of 508 elements corresponding to 122 countries have been protected as intangible heritage by World Heritage Center.

Landscape can mean a small patch of urban wasteland as well as a mountain range, an urban park as well as a vast plain. It results from how different components of our surroundings with nature (geology, soils, climate, flora, and fauna) and culture (the historical and current land use, human interventions), interact and are perceived by people. The way it is perceived by its community transforms a landscape. This is not just about visual perception, or how one sees the land, but also how he hears, smells, and feels his surroundings, and the feelings, memories, or associations that the land evokes. Landscape character, which is the pattern that arises from combinations of different components, can provide a sense of place. Landscape character is what makes an area unique and different. It is defined as a distinct and distinguishable pattern of inputs that occurs constantly in a landscape (Swanwick 2002).

The types of elements which are possible to exist in a cultural landscape have been clarified after much research. Basically, there are natural and man-made elements, which are composed of tangible and intangible sub-categories (Table 2).

Table 2. The elements of the cultural landscape

	Tangible	Intangible
Natural	• topography, (plateau, valley, brook, hill, coast, open field, woodland, meadow, forest, heathland, ditch, wasteland, mesa) • hydrology (river, sea) • geomorphology (limestone, sandstone) • land cover (vegetation, trees/woodland) • skyline	• spiritual qualities • sensory impressions • quality of light • spiritual connection
Man-made	• Land use • Visual Relationships • Local production • Monuments • Residential Area • Agricultural Areas • Archaeological Area • Tracks	• memory • local dialect • traditions activities • contemporary activities • oral traditions • sense of place • living expressions • performing arts • social practices • rituals • festival events • knowledge • practices concerning nature • cuisine

When the studies and definitions related to the cultural landscape are taken into consideration, the cultural landscape is a natural area, but includes the contribution of people who have lived in that area throughout history, making benefit of its opportunities and learning how to cope up with its difficulties, and presenting wholeness which can be perceived in a single glance by a pair of the human eye due to its natural difficulties providing spatial borders (Etlacakuş 2015, 14).

These developments reflect the growing understanding that material and spiritual, material, and immaterial; natural spiritual, and cultural factors are interwoven in the physical heritage of many countries.

While the topic of the cultural landscape is discussed theoretically in international documents, the following studies provide a method for the process of preservation and sustainability of cultural landscapes. In this context, different countries have developed different methods to examine the landscape features in their regions. Although these methods show similarities with each other, differences in methods stem from landscape characteristics can also be seen. Some of them are focused on urban landscapes, while others have designed methods for rural landscapes.

- **The National Park Service (NPS)**

The National Park Service (NPS), within the United States Department of the Interior, establishes national policy and sets standards for all aspects of historic preservation. In the 1980s, the NPS began revising policies and guidelines for managing cultural landscapes included in the legal and governmental framework for historic preservation (Figure 26). In the mid-1990s, the National Park Service developed two tools for research, planning, and stewardship activities for cultural landscapes: The Cultural Landscapes Inventory (CLI) and the Cultural Landscape Report (CLR) (Page et al. 1998). NPS began to issue bulletins describing how to identify, understand, and manage cultural landscapes. Beginning in 1987, there have been several National Register Bulletins about various cultural landscapes: designed landscapes, rural landscapes, battlefields, cemeteries, and historic mining properties.

. 

Figure 26. The view of Blue Ridge Park Way
(Source: nps.gov 2019)

National Park Service 'Cultural Resource Management Guideline described four types of cultural landscapes which are historic sites, historic designed landscapes, historic vernacular landscapes, and ethnographic landscapes (Page et al. 1998).

Guidelines for Evaluating and Documenting Rural Historic Landscapes Bulletin defines a rural historic landscape, explains its features, and suggests practical methods for survey and research. Finally, the bulletin discusses the information needed to register these assets in the National Register.

A rural historic landscape is defined in this bulletin: a geographical area that historically has been used by people, or shaped or modified by human activity, occupancy, or intervention, and that possesses a significant concentration, linkage, or continuity of areas of land use, vegetation, buildings and structures, roads and waterways, and natural features (McClelland et al. 1999).

In addition, oral history is often essential for this method. Local farmers, foresters, mining engineers, and extension agents are often valuable sources of information about the agriculture, silviculture, or mining of a region. Onsite interviews with local farmers may provide insight into how a farm has been managed and what changes have occurred in the past 20 to 50 years (McClelland et al. 1999). In addition, the landscape characteristics are land uses and activities, patterns of spatial organization, response to the natural environment, cultural traditions, circulation networks, boundary, vegetation related to land use, buildings, structures, and objects, clusters, archaeological sites, small-scale elements.

Computerized Geographic Information Systems (GIS) is thought to be useful for this method in analyzing data regarding rural land uses and vegetation. Aerial photographs, historic maps, and current maps can be compared to determine the nature and extent of land use changes through time. GIS can create a standard scale for maps and photographs having different scales. Topographic information can be plotted with rural landscape characteristics to determine spatial organization and visual relationships by using typical operations such as map overlays, distance calculations, and interpolation.

- **Landscape Character Assessment (LCA)**

Landscape Character Assessment (LCA) in its modern sense appeared in the UK in the late 1980s after two decades of efforts to produce objective, measurable landscape evaluations; all with the intention of providing a clear answer to why it is necessary to conserve a “beautiful” landscape and how to define that “beauty” (Swanwick 2002). The beginnings of this development may be observed in the 1940s and 1950s when the first protected areas were established in England and Scotland (Figure 27).

Two different stages are suggested in this method: characterization and making judgment. There are practical steps involved in initiating a study, identifying areas of distinctive character, classifying, and mapping them and describing their character. In planning a Landscape Character Assessment, the following should be considered:

•the purpose and aims of the valuation.

• the scale and level of detail required.

•how decisions will be made to inform related decisions.

• the time accessible to undertake the task.

• the nature of the productions needed.

The natural factors of LCA are geology, landform, soils, vegetation, trees and woodland, whereas cultural and social factors are land use, settlement patterns, patterns of field enclosure and time depth providing the historic dimension of the landscape. Broadly, classification approaches take forms. It is the stakeholder judgment about boundaries based on the collected data, the utilization of GIS for the manipulation of map data, and computer classification techniques to devise the classes of landscape character and suitable boundaries (Swanwick 2002).

Figure 27. LCA of Ayrshire
(Source: Swanwick 2002)

There is a growing awareness that the designation of only nationally important monuments and/or sites will not protect typical or commonplace aspects of the historic environment which are critical for the local character of the area and, perhaps, most valued by those who live and/or work in the area. Focusing only on the ‘finest’ assets as

to be designated and thus protected would therefore pass on an incomplete picture of the overall character of the locality.

Understanding the 'time depth' aspects of landscape require expert analysis. The age of enclosures can be interpreted from field shape and pattern, but only by a trained eye. In England, the method of Historic Landscape Characterization (HLC) developed by English Heritage in Scotland, the method of Historic Land-use Assessment (HLA) developed by Historic Scotland provide a much greater understanding of the historic dimension of landscape character (Swanwick 2002).

- **Historic Landscape Characterization (HLC) and Historic Landscape Assessment (HLA)**

Historic Landscape Characterization (HLC) was developed between 1992-1994 and pioneered in Cornwall (Fairclough et al. 2019; Herring 1998) (Figure 28). It was devised for many reasons, but mainly because issues relating to the landscape were a major gap in current archaeological resource management, and because it was impossible to expand the historic coverage to wider landscape assessment. Following this initial project, since 1994, the Cornwall method has been adopted and adapted by many county councils and similar areas, and about half of England has been mapped (Aldred and Fairclough 2003).

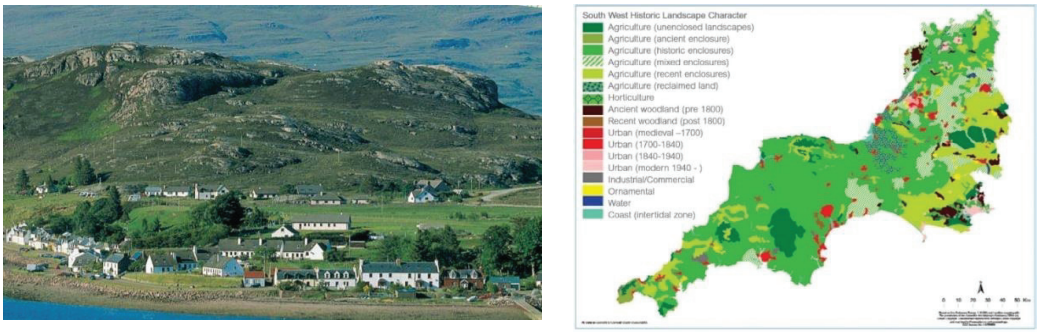


Figure 28. The historical landscape characteristics of Cornwall,
(Source: Aldred and Fairclough 2003)

Historic landscape characterization is a multidisciplinary method that enables us to describe the "beauty" of the cultural landscape in an objective, measurable, and repeatable manner. The emphasis is on identifying the time depth of individual elements in the modern cultural landscape (Štular 2004). In addition, HLC is a powerful vehicle to consider the inter-relationships between heritage, topography, wildlife, and visual

and other perceptions of landscape, in a manner that more closely reflects the public's experience of the surroundings than the artificial academic and professional silos into which these topics are conventionally divided.

The approach is based on an archaeological view of the landscape, in other words on the landscape as material culture and, at the same time, as an artifact. HLC treats landscape as a perception of the environment. The method is therefore oriented towards the following elements (Fairclough et al. 2002): time (time depth), the role of the human being, the dynamics of changes.

Most HLC studies aim to characterize the distinctive historic dimension of today's urban and rural environment within a given area. Achieving this through the HLC process is relatively straightforward. It begins with the systematic identification and description of many of the historic attributes of the contemporary rural and urban landscape (Clark et al. 2004). Some of the attributes of HLC are; current land use, Past land use, field geomorphology, boundary type (Woodland, Industrial land, Military), resources type (e.g. woodland, water, minerals), the name of the places (current and past), settlement types, communication types, topographical, geological, soil, hydrological and mapping.

The additional understanding of the area's evolution brought about by the HLC results in a much more comprehensive and helpful description (Clark et al. 2004).

HLC is not a stand-alone tool. To be effective, it needs to be used in conjunction with other datasets, such as other parts of Sites and Monument Records (SMRs), or Historic Environment Records (HERs) as they are increasingly known (Clark et al. 2004). The results are incorporated within a geographical information system (GIS) which allows maps to be prepared at the level of detail appropriate to the particular purpose. Types of landscapes are characterized based on how they were formed, their current and earlier land uses, and their physical appearance.

HLC identifies the contribution of the past to the landscape. All areas have some element of historic character, which needs to be identified. HLC is not concerned exclusively with sites or monuments, although these do contribute to the character, but considers the whole of the area. In addition, HLC can contribute to historical and archaeological research and public understanding. The landscape does not exist in isolation from people, and it is vital to the success of HLC that there is public participation throughout the process.

HLC is not just intended to promote understanding of the archaeological and historical character of places, but also to explain how such character needs to be

considered within a bigger depiction of land use change where often the key issues are driven by quite distinct pressures that focus on areas or aspects of the rural, urban or marine environment. In this way, by informing decisions about future change in light of historic change, HLC can enhance the quality and sustainability of new development and land management.

HLC can contribute significantly to people's quality of life, both by promoting an understanding of their local environment and by ensuring that new development and land use respects, maintains, and enhances the historic qualities that people value in the landscape, whether at the national, regional, or local level.

A similar method the Historic Land-use Assessment (HLA) has also been adopted for Scotland, and the approach has been tested in Wales.

2.2.2. Evaluation of Cultural Landscape Characterization Methods

The cultural landscape characterization methods described above vary according to the countries in which they originate. However, these methods mainly aim to preserve, maintain, and manage cultural landscape areas in rural or urban areas. All the methods utilize the GIS tool. The methods of HLC and HLA more concentrate on the historic cultural landscape different from NPS and LCA. Moreover, these methods often established terminology for cultural landscape and advised the need to define the boundaries of the area. In addition, oral history is often essential for these methods: HLC, HLA, and NPS (Table 3, Table 4).

Table 3. The comparison of the landscape assessment methods.

	Urban Area	Rural Area	GIS Tool	Historical of Settlement	Boundry	Oral Sources
NPS	✔	✔	✔	x	✔	✔
LCA	✔	✔	✔	x	✔	x
HLC	✔	✔	✔	✔	✔	✔
HLA	✔	x	✔	✔	x	✔

Table 4. Current literature on cultural landscape

	AUTHOR(S) AND DATE OF STUDY	AIM		METHOD		
		describing the landscape concept as a geographical area	consider the concept as a value for its preservation and sustainability	Analysis of landscape inputs		Mapping
				tangible	intangible	
INTERNATIONAL LEGAL DOCUMENTS	Unesco, Recommendation Concerning the Safeguarding of the Beauty and Character of Landscapes and Sites, 1962					
	Unesco, Recommendation on the Safeguarding of Traditional Culture and Folklore , 1989					
	WHC, Report of the Expert Group on Cultural Landscapes, 1992					
	CoE, Recommendation on the Integrated Conservation of Cultural Landscape Areas, 1995					
	CoE, European Landscape Convention, 2000					
	CEMAT, 2003					
	Unesco, Convention for the Safeguarding of Intangible Cultural Heritage, 2003					
	CoE, The Steering Committee for Culture, Heritage and Landscape (CDCPP)					
	Guidelines for Evaluating and Documenting Rural Historic Landscapes					
	Unesco, Recomendation on the Historic Urban Landscape, 2011					
	Operational Guidelines for the Implementation of the World Heritage Convention, 2013					
CASE STUDIES	National Park Service, Guidelines for Evaluating and Documenting Rural Historic Landscapes 1989,1999					
	National Park Service, Guide to Cultural Landscape Reports, 1998					
	Landscape Characterisation programme,Fairclough, G., Lambrick, G., & Hopkins, D., 2002					
	Landscape Character Assesment Guidance for England and Scotland, 2002; Swanwick, C.					
	Historic Landscape Characterisation Taking Stock of the Method, 2002; Aldred and Fairclough					
	Scottish Natural Heritage, 2003					
	Historic Landscape Characterisation in Ireland, 2013					
	World Heritage Papers: Cultural Landscapes: the Challenges of Conservation, 2002					
	World Heritage Papers: World Heritage Cultural Landscapes 1992-2002, 2003;Fowler"					
	Using Historic Landscape Characterisation, 2004; Clark, Darlington and Fairclough					
	Unesco, International Expert Workshop on Integrity and Authenticity of World Heritage Cultural Landscapes, 2007					
ARTICLES	Sauer, 1925: Morphology of Landscape					
	Roberts, 1994;					
	Farina, 2000					
	Darlinghton, 2002					
	Dyson and Hons, 2003					
	Bakker, 2004					
	Jokilehto, 2006					
	Stephenson, 2007					
	Aplin, 2007					
	Elerie and Spek, 2010					
	Taylor, 2012					

	✓
	×

2.3. Historic Development of the Network Regarding Castle Towns

Roads and road networks have always played an important role in the social, economic, military, and political life of states (Halaçoğlu 2014, 7). A city cannot exist unless it interacts with its surrounding area and with other towns. Roads and the road system have always been of great importance in all states throughout history, as it is today. Because trade, economic activities, communication, and military issues could be realized with a regular network (Erder and Faroqhi 1980, 269).

In accordance with its unique position between east and west, Anatolia had a dense network since ancient times. These roads were compatible with the mountainous topography (Cramer 1971).

The most important condition of long-term possession of a piece of land depends on the continuous development of the road system and the construction of castles that can provide security at the dominant points of these roads. The roads have either gained more importance or lost their former importance depending on the political developments over time. For example, the most important reason for the domination of the Hittite Empire in Central Anatolia (BC 2nd century), which lasted more than 400 years, was due to the fact that it had developed an effective road system (Sevin 2013, 7). The oldest roads in Anatolia are from the Urartians (861 590 BC). A strong state was established in the middle of the 9th century, with the capital of Tuşba, that is, the Van Castle. In addition, Harput Castle, Adil Cevaz Castle, Şeytan Castle, İspir Castle, Doğu Beyazıt Castle, Hoşap Castle, and Oltu Castle were constructed Urartian Period. They all have similar construction techniques and architectural features, such as organic plan shapes and straight and high fortification walls. It is known that in this period, infrastructure facilities such as accommodation units, bridges, and roads were built to reach places that were very difficult to reach.

One of the oldest and most important road networks in Anatolia is the road system of the Persian state called the Royal Road by Herodotus (Heredot 1973). The Persians were in full control of the Mediterranean ports, thanks to this road stretching from the Aegean Sea in the west to India in the east in 547-333 BC. The most important reason for the long-term domination of the Persian Empire over large lands is the great caravan route starting from the western Anatolian coasts and extending to the east and south-west Iran

(Heredot 1973). On this route, Meydancık Castle, Mennan Castle, Mamure Castle in Mersin, Gameras Castle in Tire that have survived from that time.

In Hellenistic period, many new cities were established and developed on the old network in western Anatolia. The construction of the network of roads linking the cities was realised during the Hellenistic period (Sevin 2013, 12).

The first road system of the Roman Empire in Anatolia was built in the 120-126 BC. The Roman Road lie down from Ephesus to the northeast and ended in Malatya (Figure 29). However, making İznik one of the capitals of the empire had increased the importance of the roads and the towns from the northwest to the southeast (Sevin 2013, 12). The route of this road extended from the Troy (Troy), Edremit (Adramytteion) and passed Smyrna, Ephesus (Ephesus), then followed the valley of Cine Stream (Marsyas) to the Marmaris (Marmaris), Dalyan (Kaunos) and Fethiye (Telmessos) (French 2012). In addition, Selinus (Gazipaşa) and Cestrus (Macar Castle) were the focal points on the coast for routes from Lamos and Julio-Sebaste (Adanda Castle and Asar Tepe) in the Cilicia (Figure 29). However, these routes lost their importance because series of routes in the west-east direction were established. They had ensured the communication of goods between the Mediterranean and the Anatolian Plateau in the Seljuk Period. (Hopwood 1991, 306).

Figure 29. The Royal Road before the 10th century.
This map is reinterpreted from the Royal Road in the Roman Period
(Source: Sevin 2001, 13; French 1998, 34)

In the Byzantine period, the changes of road system began when Izmit (Nicomedia) was announced as the capital of the east by the Diokletianus. Istanbul (Constantinople) was declared as the capital in 330s and the roads connecting this region to the east gained a special importance. Byzantine roads were completed during Justinian Period. Byzantine Empire dominated the Cilicia region for a long time. The desire to visit Jerusalem as the result of a strengthening of Christianity enabled the development of the road (Hadji Road) extending from Istanbul (Constantinople) to Izmit (Nicomedia), Ankara (Angora), Aksaray (Garsaura) and Antioch (Antiokheia). The settlements on this road developed, but settlements in the western and southwestern Anatolia lost their importance (Sevin 2013, 12).

In the Roman and Byzantine period, many of the medieval castle towns were established on the important routes. Castle towns were the most important elements of important networks due to their defence and shelter functions.

The military and commercial road, known as the King's Road, the Roman Road, and the Byzantine Road network, respectively, was named as the Silk Road in the Middle Ages. The fact that the Silk Road, which provided the transition between the Mediterranean world and the east throughout centuries, passed through Anatolia (Figure 30). Monumental accommodation structures and bridges were constructed along this route.

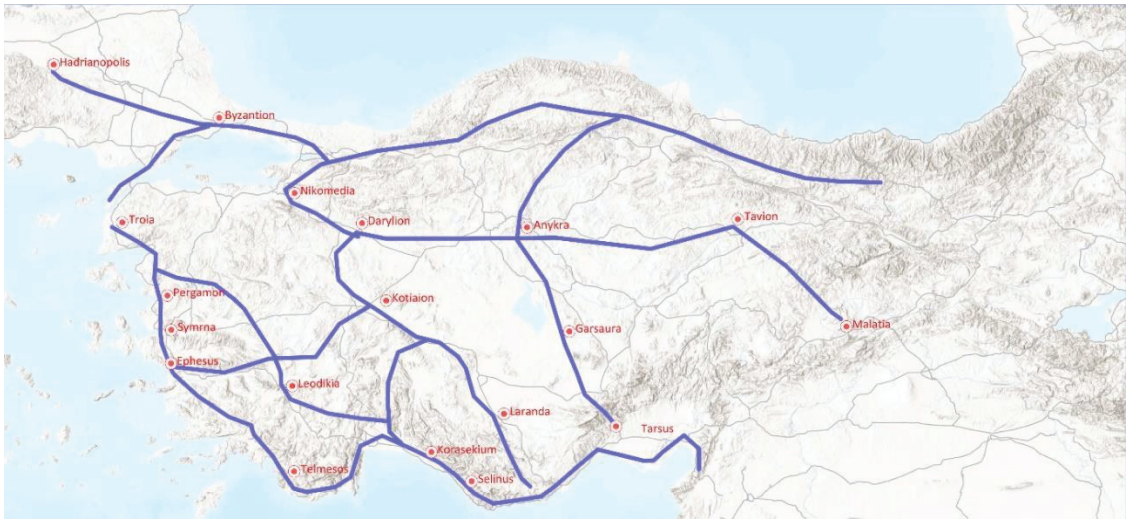


Figure 30. The road system in the Roman Period.
This map is reinterpreted from the Royal Road in the Roman Period
(Source: Sevin 2001, 13; French 1998, 34)

Seljuk sultans and important statesmen had a caravanserai built on major trade routes at almost every 30-40 kilometres (Yavuz 1997, 80). These caravanserais are living witnesses that represent the socio-economic characteristics of their period and the importance of these roads (Turan 1946, 471). Caravan roads crossed Anatolia from east to west, from south to north, and from southwest to northeast, connecting trade centers both inside and outside the boundaries of the Anatolian Seljuk Period (Figure 31) (Yavuz 1997, 80). Although the Seljuk caravanserais were mostly built for commercial purposes, they also had a military function as the armies were stationed near these caravanserais (Halaçoğlu, 2014: 11). They were also used by the nomads (Turan and Kırpık 2007). Alaeddin Keykubat, who gave importance to foreign trade, had new roads built. He had inns and caravanserais built on these roads to enable caravans and merchants to have easy transportation (Turan and Kırpık 2007). In order to connect the capital Konya to the north and south, connection with Sinop and Antalya was established. For this reason, trade has also developed in Antalya and Alanya. Export and import of goods from and to Europe was possible from Antalya, Alanya and Yumurtalık. After the end of the insecure situation of Anatolia in the late Byzantine period and the beginning years of the Seljuk state, the number of villages in Anatolia increased and new neighbourhoods were established (Baykara 2006, 277). The security was ensured. In addition, inns, caravanserais, roads castles were established until the 1243 Kösedağ War. These infrastructures were later used in the Emirates Period (Turan and Kırpık 2007). Although there were castle towns (Adanda Castle, Macar Castle) that were not used with the change of roads in the Emirate Period, most of them were castle towns that were built from previous periods and continued to be used in the Emirate Period. On the other hand, new castles were built on the changing trade routes and newly built roads of the Emirate Period (Alara Castle, Niğde Castle, Kov Castle).

When trade developed in cities, the necessity of building new khans between cities was lost (Tuncer 2007, 13). What Ibn Batuta stated in his travel book proves that accommodation was not only made between inns in cities, but also spread to provinces, districts, and sub-districts. In the 14th century, Ibn Batuta stayed in Kale Tavas one night while traveling from Muğla to Denizli. He mentioned that “they stayed in Denizli for a while due to the insecurity on the roads. They were in Tavas in one day and one night with the caravan. They stayed outside Kale Tavas at night and arrived at the castle in the morning. They stayed at a guest house in the vicinity of the castle” (Ibn Batuta 1971). Moreover, in order to provide security, *zaviye*s were built on secondary roads (Kuban

2017, 333). As a result, the elements of the network were not only roads, inns, caravanserais, *zaviye*s and bridge but also castle towns and settlements.

These roads themselves were not only economically important, but the cities on the roads were developing. Others were secondary settlements. Antalya and Konya were considered were primary cities, Denizli, Manisa, Aydın and Isparta as secondary cities. Their products are sold in major bazaars (Baykara 2006, 277).

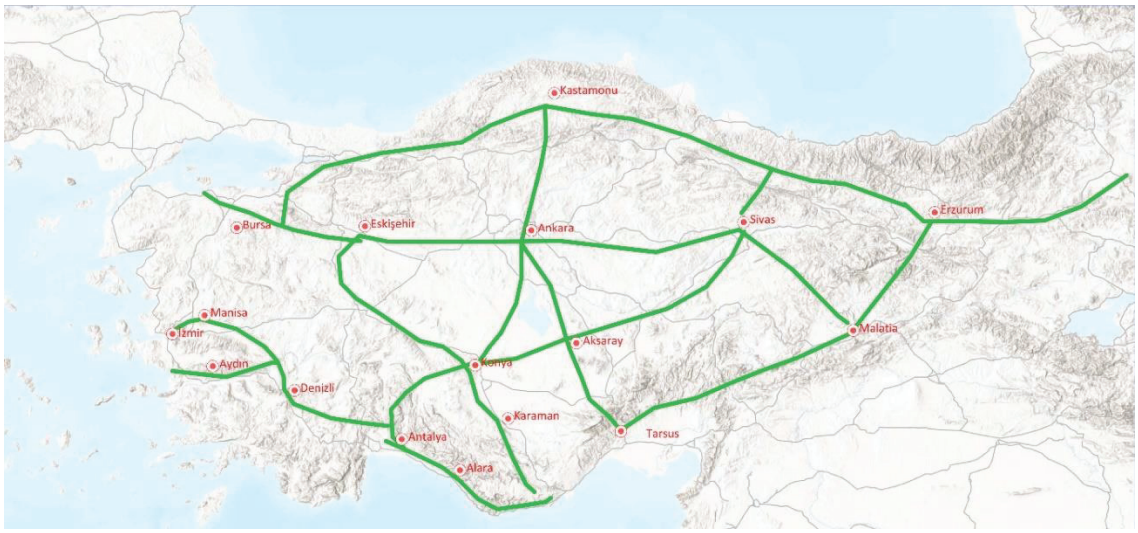


Figure 31. The road system in 13th century.
This map is reinterpreted from the road system in the 13th century
(Source: Tuncer 2007)

Many routes in Anatolia were used from ancient times to the Ottoman period without changes. However, in addition to the pilgrim route, the new roads, especially the northern caravan route to Erzurum via Düzce, Bolu and Tokat the caravan route to Ankara via Beypazarı, and the roads to Istanbul were new roads. (Taeschner 2010, 346). Aydin, Manisa, Akhisar, Isparta and Muğla were the other leading major cities on the main caravan route and surrounded by fertile agricultural land (Yıldırım and Oban 2011). However, the castle for defence purposes were constructed in Rumeli in the Ottoman Period; Anadoluhisari, Rumelihisarı and Kilitbahir and Babakale. In addition, an *Ayan* castles were built especially in western Anatolia in 17th century (Arel 1991, 3). Cin Cin Castle is one example of the *Ayan* castle. On the other hand, in the decline period of Ottoman Empire, the ancient route was not maintained, and Anatolia lost its importance as a commercial and cultural bridge between east and west (Baykara 2006, 842).

2.4. Heritage Values of Castle Towns

Castle towns have been a mean of both defending and secure sheltering for communities from prehistory until the end of Medieval era. They have united with their surrounding landscapes. They are part of a network composed of roads and other castles/castle towns/observation towers etc. Therefore, castle towns have unique tangible and intangible values in terms of crowning a cultural landscape. All these values are described in the Guidelines on Fortifications and Military Heritage (ICOFORT 2021). This document is important to establish basic principles for interventions and methods of research that are specific to the conservation and value of fortifications and their surrounding cultural landscapes. In this document, the values of castle structures were defined. The following of values are interpreted within the scope of this study.

- **Territorial and geographical value:** The castle towns as a territorial organization are important components of the ancient defence systems. While some fortified structures may be independently standing as isolated elements, majority of the castle towns form part of a larger system that shape the surrounding cultural landscapes. The natural features of the place chosen for the construction of the castle, for example, the top of a mountain, hill, or a different landform such as mesa, plateau and butte distinguish this heritage typology from other components of the built environment (ICOFORT 2021).
- **Strategic Value**: The determination of this value may also take into account the strategic advantages of the position and how the design responds to the spatial distribution of weapons, the type of barrier or attack intended, the reach of the defensive range, and the topography and ecosystems of the area to be defended (ICOFORT 2021).
- **Cultural Landscape Value:** It allows a better understanding of the context of the castle towns, considering respect for their land, their dominant location, the role of military construction, visual and physical qualities in relation to the surrounding area, traditional production activities and traditional ways of life in the environment.
    - **Historic value:** Castle towns represent approaches and worldviews specific to their periods of development and use. These ideas can be resolved by evaluating

the historic landscape and its relationship to contemporary cultures (ICOFORT 2021).

- **Memory Value:** Castle towns can play a significant role in the collective memory. They have traces of events such as war, defence and cooperation that constitute the collective memory of the communities (ICOFORT 2021).
- **Educational Value:** Castle towns can provide an inspiring environment connected to the cultural experience of military heritage. On the other hand, they witnessed the local way of life and even the painful memories of being a defensive structure (ICOFORT 2021).
- **Human and Anthropological Value:** Both castle towns and their cultural landscapes may also contain archaeological information which is important to their understanding and can provide information about the past use of these places which is not available in the historical sources. Moreover, castle towns were built not only to protect one human group from another but also be a home for their inhabitants (ICOFORT 2021).
- **Architectural and Technical value:** The castle towns were generally located at the places which are difficult to access. These structures have a durable architecture as well as symbolic. In addition, the monuments in the castle towns are important in terms of having the architectural features of their periods. Moreover, the assessment of the technical value requires a deep understanding of the evolution of weapons and warfare so that innovative advances in response to changes in military science and engineering can be identified and tested (ICOFORT 2021).
- **Social/Economic Value:** The social value of castle towns should be enhanced by appropriate conservation measures. Local productions should be encouraged to support local communities and the recognition of new knowledge and new values should increase (ICOFORT 2021).

2.5. Conservation and Presentation Strategies of Castle Towns

Castles have been indelible landmarks since the first settlements. A settled lifestyle needed defence against other rivals (ICOFORT 2021). In addition, the height has determined positions of advantage when facing the enemy, adding an aesthetically imposing silhouette to the landscape.

Castle towns were abandoned a long time ago due to the change in living conditions and continued to be used as a defensive structure for a while. Most of the castle towns have become completely useless due to the lack of defence needs. Castle towns and fortifications vanished or in ruins today. Although many castles are no longer in existence, many still survive. The conservation approaches of castles are non-intervention, conserve as it is, or partially or totally reconstruction (Lepage 2002).

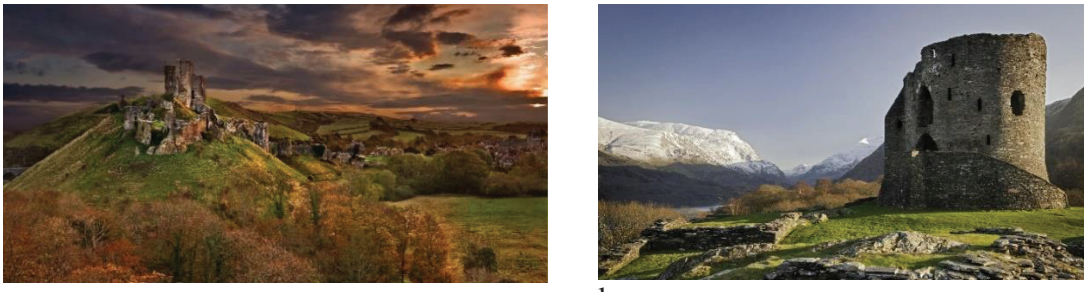
The fortification walls, which are the most impressive elements of the castle towns, and the monuments inside the town are completely or partially destroyed. The most common intervention is the reconstruction of fortification walls (kulturenvanteri.com 2021).

Preservation of castle towns requires multidisciplinary and comprehensive studies, as well as enormous investments. Furthermore, work is needed to bring about awareness of the importance of conserving their authenticity and integrity and planning for their conservation using the best practices of management. For this reason, most of the castle towns do not have the conditions that visitors can reach.

Several castles in Europe are presented in ruins by conserving them as they are, while taking measures for durability and safety (Corfe Castle in UK; Dolbaran Castle in UK and Montearagon Castle, Aragon, Spain) (historicengland.org 2022) (Figure 32a,b). Some ruined castles exhibited in Turkey are usually archaeological sites (Beçin Castle, Dara Castle, Pydnia Castle). However, there is a large number of castles that have not been protected, maintained and cleaned and are not exhibited (Casergrad Castle, Crotia; Montaigle Castle Ruins, Belgium; (historicengland.org 2022) (Adanda Castle, Turkey; Cincin Castle, Turkey) (kulturenvanteri.com, 2022) (Figure 33a,b).

The non-intervention conservation approach is generally observed in castles that are not located on today's networks (Gilevgi Castle, Montaigle Castle, Adanda Castle, Casergrad Castle). Some of these castles are lost in vegetation (Adanda Castle, Casergrad Castle) (Figure 33a). It is thought that the castles, which are located at a very high altitude

and are difficult to access, are not exhibited due to the difficulty of intervention works and the concern of visitor safety (Alara Castle).



a b

Figure 32. a) Corfe Castle, b) Dolbaran Castle
(Source: historicengland.org 2022).

a b

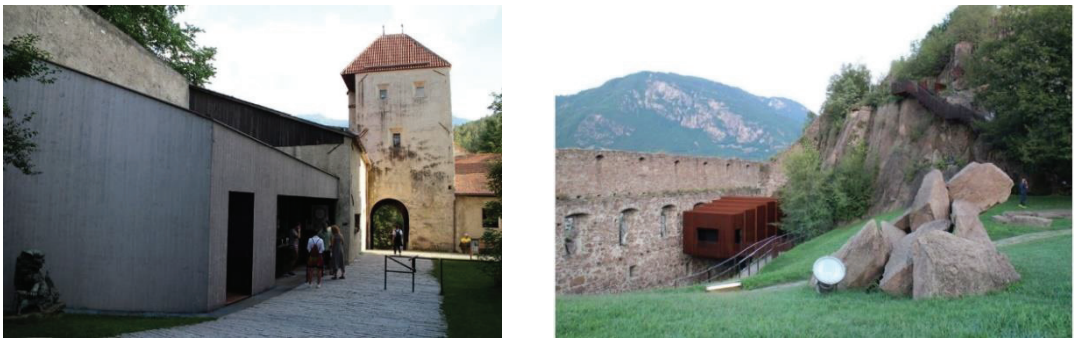
Figure 33a) Casergrad Castle, Figure 34b) Montaigle Castle
(Source: historicengland.org 2022)

It is observed that even the castles which are closed to visitors, have undergone reconstruction in Turkey. These reconstructions ruined the authenticity of the castles (Bayburt Castle, Tokat Castle, Şavşat Castle, Softa Castle) (Pekin and Yılmaz 2009; Kenar, 2021).

Castles or castle towns are sometimes restored defining new functions. These functions can be recreational/cultural purposes, such as archaeological parks (Archaeological Park of Poggibonsi), museums (Doria's Castle), sets for cultural events (Old Castle Celje), art installations/art performances (Klenová Castle), film sets (Potštejn Castle), thematic parks (Zumelle Castle) and stops for trekking routes (Šalek Castle), as well as for educational purposes (Bečov Castle), residential purposes (Castle of Sant'Ambrogio di Torino) and commercial purposes (Velenje Castle) (Özmen 2022, 4).

The related interventions may sometimes be, renovation, or addition of a contemporary building.

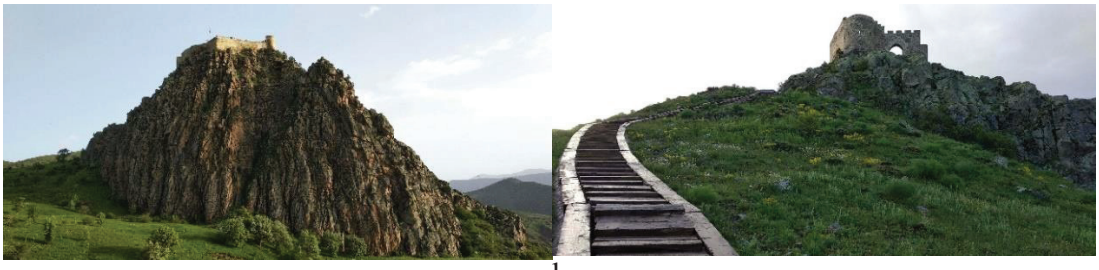
The Bruneck Castle in Italy was restored as a museum. Contemporary buildings were added for the requirements of the museum function: temporary exhibition hall and the ticket office with the museum shop. In addition, the rearrangement was carried out for adapting a new use to the obsolete buildings (Figure 35) (Özmen 2022).



a b

Figure 35.a. Addition of the ticket Office of the Bruneck Castle, b. Addition of the screening room and the walking paths of Castle Juval
(Source (a): Özmen, 2022, Source (b): Özmen, 2022),

In Turkey, there are 20 castles that have been restored as open-air museums[8] for presenting themselves. There are also castles which are archaeological sites (Kov Castle, Kale Tavas, Zil Castle, Zerzevan Castle, Çavuştepe Castle). The addition of structures to facilitate tourist access to various parts of a castles such as stairs, bridges, walkways, elevators etc. is the most common intervention (Figure 36, Figure 37)



a b

Figure 36. a) General view of Kov Castle, b) The stairs of Kav Castle

[8] Anavarza Castle in Adana, Kahta Castle in Adıyaman, Erzurum Castle in Erzurum, Gaziantep Castle in Gaziantep, Ani Castle in Kars, Gözne Castle, Kız Castle, Mamure Castle in Mersin, Beçin Castle, Bodrum Castle, Marmaris Castle in Muğla, Şanlıurfa Castle in Şanlıurfa, Çavuştepe Castle, Van Castle, Hoşap Castle in Van, Alanya Castle in Antalya, Rumeli Hisarı in İstanbul, Troya in Çanakkale.

a b c

Figure 37.a. General view of Afyon Castle, b. The renewed and addition stairs of Afyon Castle, c. The additional stairs of Afyon Castle
(Source: Köker 2020)

On the other hand, there are castles that have been restored as commercial centers (Kütahya Castle) (Figure 38a). In some of these applications, the authentic space organizations and original materials cannot be distinguished, which ruins the integrity and authenticity (Zil Castle, Afyon Castle, Alanya Castle, Boyabat Castle) (Figure 38b,c,d).

a b c d

Figure 38.a. Kütahya Castle, b. Zil Castle, c. Alanya Castle, d. Boyabat Castle
(Source: kulturenvanteri.com 2021)

CHAPTER 3

DESIGN OF THE METHODOLOGY

The method proposed in this study makes use of the tools of the disciplines of architectural restoration, planning and landscape architecture. In this dissertation, a method for a holistic conservation approach for castle towns was developed by combining different tools. This method consists of historical research, documentation, comparison, and evaluation (Figure 39).

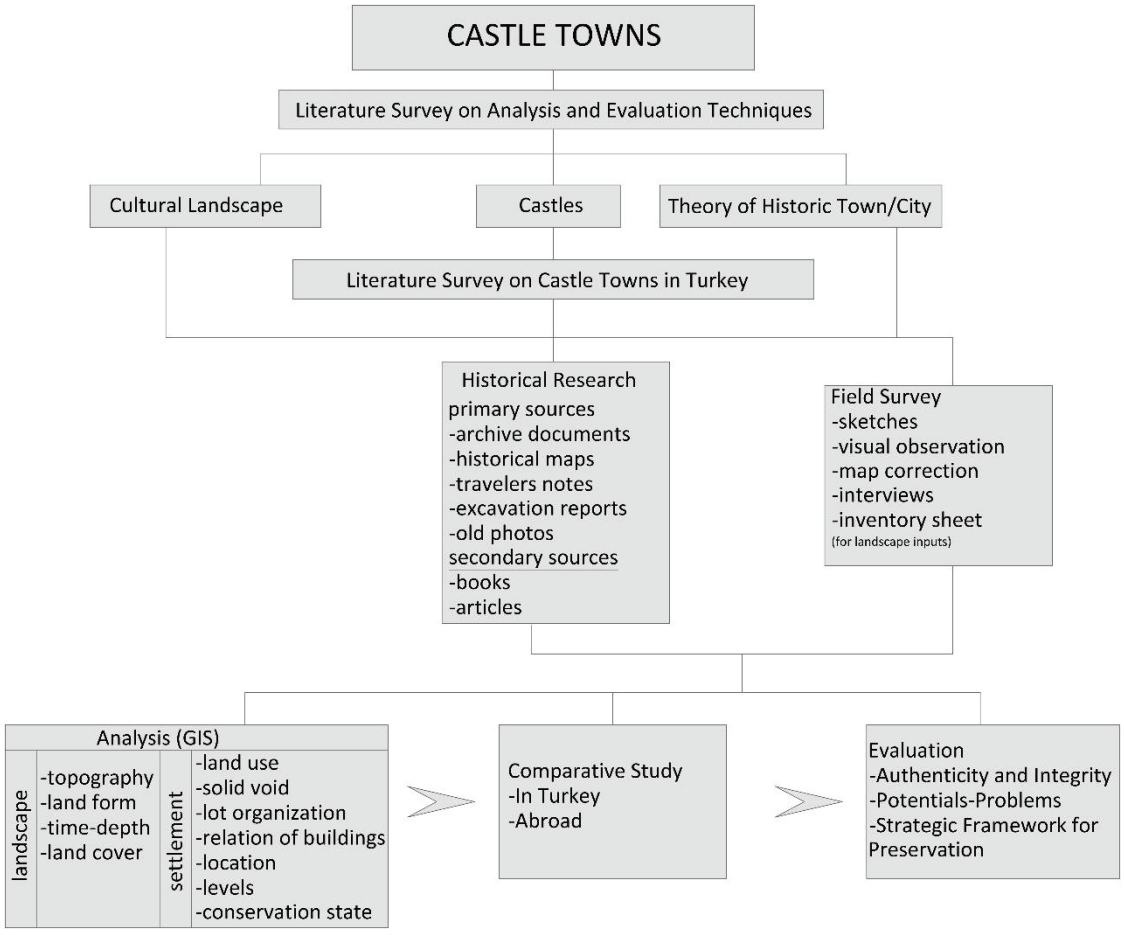


Figure 39. The flowchart of the study

3.1. Historical Research

Understanding the historical development and use of an area, its changes over time, and any ethnographic values and affiliations is necessary to identify its significant characteristics and features. Historical documents are classified as primary and secondary sources. Historical aerial photos, historical orthographic photos, and historical maps are the basic tools for studies focusing on the historical cultural landscape characterization method. These documents are described in the below.

3.1.1. Tools of Historical Research

Historical aerial photos, historical orthographic photos, and historical maps are the basic tools for studies focusing on the historical cultural landscape characterization method.

- **Maps:** Maps have been defined as symbolic representations of geographic reality, presented by selected features or characteristics (Levin et al., 2010 cited in Harlow, 1997).
- **Historic Map:** The historical map prepared by historians or travellers provides information about the old distribution of the settlement and its vicinity. In addition, the toponomy of the settlements (mountain, river, hill, plain) and the old caravan and traveller road information provide from these maps.
- **Base Map:** Current maps or cadastral maps can be used as base maps in GIS. In this study for Kale Tavas, the cadastral map requested from the Municipality of 1940s was used to analyzing of the settlement scale. The information about buildings and street borders, monuments borders and inclination lines, and conservation borders of the settlement provide from the base map.
- **Archive Documents:** Primary historical sources can be qadi recorded, *tapu tahrir temettuat* or *avarız* notebooks, and old photos such as historical aerial photos, historical orthographic photos, and historical maps. In this study primary official letters, *tahrir* notebooks were used for all case studies, *tapu tahrir temettuat* or *avarız* notebooks were used for Kale Tavas and Honaz. Excavation reports were utilized for Kale Tavas and Beçin. Another set of primary sources reached were historical aerial photographs of

case studies belonging to different years[9] requested by the Ministry of National Defence General Directorate of Mapping. They were compared with current maps to determine the nature and extent of land use changes over time. These documents and photographs provide information not only on the manner and date of occurrence of important events for the settlement history but also on the daily life, sources of income, and traditions of the people living there.

- **Lot information:** In this study, the lot information of the settlement has been reached through the lot inquiry application from the website of the General Directorate of Land and Cadastre (parselsorgu.tkgm.gov.tr 2019). Information regarding past land use, lot size, locations, construction areas, and construction techniques of all the buildings have been obtained in this process for Kale Tavas, Honaz and Beçin.
- **Orthophotos:** An orthophoto is therefore an aerial photo converted into orthogonal projection by considering data on the relief and the absolute orientation of aerial photos. The terrain area on an orthophoto is displayed on a unified scale. In the process of this research, aerial photos of the settlement were requested from the Ministry of National Defence General Directorate of Mapping, 20 km^2 orthophoto image of Kale Tavas and its vicinity with 30 cm resolution captured in 2017, 25 km^2 orthophoto image of Beçin and its vicinity with 30 cm resolution captured in 2018, was obtained.

3.2. Documentation

Data acquisition via field surveys, interviews, and/or questionnaires are essential tools for documentation. Furthermore, the formation of the maps and analyzing these data is another phase of the documentation.

3.2.1. Field Survey

Current topography, natural features, land use, circulation system/network, views and vistas, vegetation should be investigated in the field survey. In addition, information

[9] These photos are from 1946, 1949, 1953, 1954, 1960, 1965, 1972 and 1992 for Kale Tavas; 1938, 1953, 1964, 1972, 1974 and 1992 for Beçin; 1953, 1960, 1965, 1971, 1981 and 1992 for Honaz, 1953, 1960, 1963, 1971, 1981 and 1992 for Gilevgi, 1954, 1964, 1971, 1975, 1986 and 2005 for Alara, 1958, 1964, 1971, 1975, 1975 and 1988 for Adanda.

about intangible features such as the local way of life of a settlement and the tradition of their case studies were gathered from those interviews.

In this study, the field surveys of Kale Tavas were carried out in 19-20 September 2018, Honaz on 8 August 2018, Beçin on 18 August 2019 in the landscape and settlement scale. In addition, Alara on 27 August 2021, Adanda on 28 August 2021 in the landscape scale. During the field survey at the cultural landscape scale, the geographic difficulties, and natural and man-made elements; past agricultural areas, pasture, shrub lands, and roads were observed and identified.

In-depth interviews were carried out with the six former inhabitants who used to live in the settlement before its abandonment and their relatives on 14 June 2019. The number of interviewees is nine whose majority is older than seventy-five. This limitation stems from the fact that many of the immigrants are already dead because Kale Tavas was abandoned a long time ago. On the other hand, since the other studied castle towns were abandoned before Kale Tavas and there is no information where the inhabitants went to, no interviews could be made. The scope of the interviews consists of answers to open-ended questions about daily life in Kale Tavas (Appendix A). Answers were recorded to fully document the local dialect. As a result of these, information on the traditional land use of the settlement, the spatial organization of housing units, and construction techniques and production techniques were detailed. In addition, the interviews have provided access to important information about the intangible values of the settlement such as daily life habits, traditional way of life, source of income, rituals, stories, local words, and dialect. This information helped understand the spirit of the place. How the migration took place, how the migrants live in their new place today and the adaptation processes were also learned.

3.2.2. Formation of the Maps

The method of presenting information coming from historical documents and field work also may differ. Cultural landscape studies require mapping with a holistic method. This holistic perspective cannot be achieved by only conventional methods. The powerful data integration and analysis functions of GIS are very suitable for the evaluation of the heritage of cultural landscape and settlement studies. ESRI ArcGIS Pro software was used. GIS can create a standard scale for thematic maps and visual material such as aerial

photographs, historic maps, and current maps having different scales. In addition, GIS provides a comprehensive tool for both the mapping and analysis of landscape character and for evaluating the impacts of change through viewshed modelling and 3D imagery. In scope of this dissertation, the topography, landform, and land cover analyses were carried out on the cultural landscape scale. Different zones such as land use, natural and man-made elements, and intangible qualities such as migration routes were mapped on the base map and historical air photos were taken into consideration for the evolution of the case study (Figure 40).

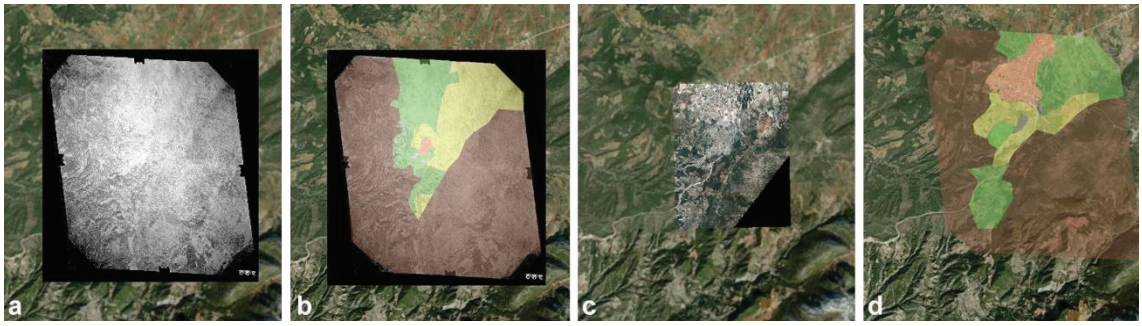


Figure 40. a) GIS map with aerial photo of Kale Tavas, b) Land cover mapping of the 1940s of Kale Tavas, c) GIS map with current orthophoto of Kale Tavas, d) Land cover mapping of the current situation of Kale Tavas.

Formation of maps in GIS consists of different phases. The first phase is data gathering. At this stage, historical and current documents related to the case study are collected through historical research and fieldwork. Then the collected visual data such as aerial photos, orthophotos, historical or current maps is georeferencing which is the converting a raster dataset from a nonreal-world projection system in GIS to a real-world projection system. “European Datum 1950 UTM Zone 35N” projection system was used in this study.

The second phase is data management. In this stage, it determines the results aimed to be obtained from this study and the questions to be answered so that the collected data can be used for these purposes. Then, attribute tables are designed to create different maps and all gathered data are entered into these tables. The field name of attribute table was formed as: location, levels, field morphology (form, size and height), current usage, original usage, position, in relation with neighbours (independent, juxtaposed), preservation status, construction date (Figure 41).

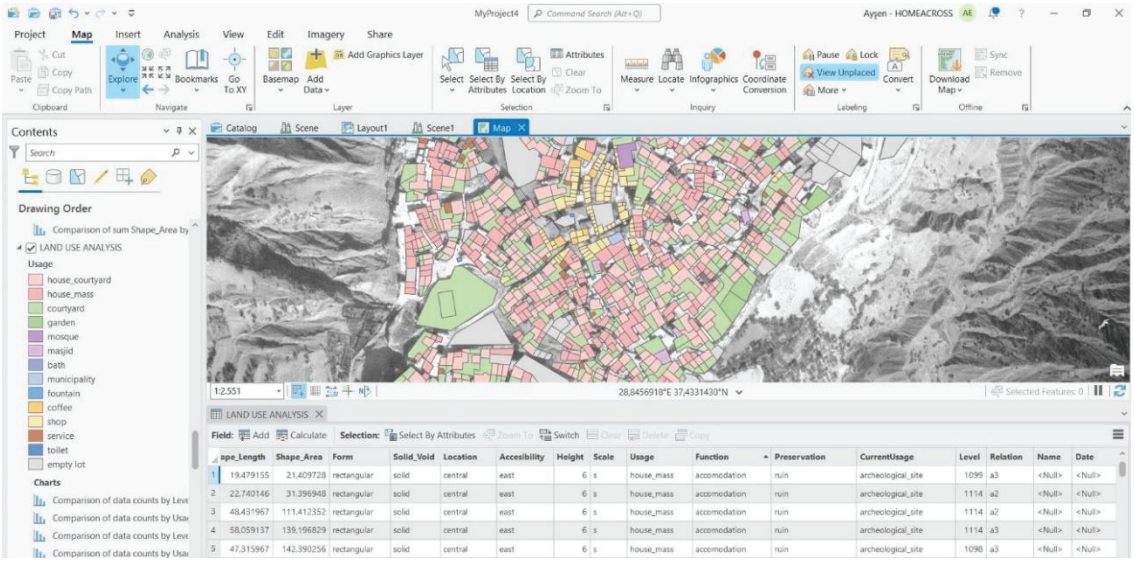


Figure 41. The GIS working file showed the attribute table of this dissertation.

The last phase is data outcome. In this stage, the data is analysed regarding designed query. Finally, the thematic maps and charts are revealed. In this study, the maps of topography, landform, and land cover in cultural landscape scale. In this study, the settlement analyzes for Kale Tavas were revealed by using the map created in GIS by overlaying the aerial photographs of the 1940s and the data obtained from the lot query. These analyses are land use, solid void organization, relation of buildings, location, level, and conservation state in the settlement scale were carried out (Figure 42).

- **Topography Analysis:** It determines the elevations of the landscape. In this study, topography is the most significance natural inputs that forms the opportunities and boundaries of castle towns and their landscapes.
- **Landform Analysis:** It shows the geographical difficulties such as hill, mountain, valley, plain, butte expressed by the landscape elevations.
- **Land Cover Analysis:** It expresses how the elements of the landform are used. In this study, the land surface is covered by natural and man-made elements. Natural elements are Mediterranean woodland and vegetation while, man-made elements are agricultural fields, shrub lands and settlement.
- **Land Use Analysis:** It identifies the functions of buildings and spaces in the settlement.

- **Solid Void Organization Analysis:** It reveals the solid void ratio in castles with limited surface area. At the same time, specified of the solid void zone is important in terms of understanding spatial organization of the castle town.
- **Relation of Buildings Analysis:** It presents how housing units and monuments mostly relate to each other and to the street.
- **Location Analysis:** It is carried out to understand which type of building is more concentrated in which direction and how the sun and vista affect the occupation in the settlement.
- **Level Analysis:** It reveals the relationship between the functions of the buildings located at different heights and the terrain levels.
- **Conservation State Analysis:** It shows the current conservation status. It reveals the intervention method to the structures and the usage situation.

The settlement analysis was made based on the data before the settlement was abandoned. However, the conservation situation analysis evaluates the current situation of the settlement.

Finally, the relation of these analyses was revealed regarding defined query such as the relation to average areas with different land usage, the comparison of building counts by relation, the comparison of counts of building function by relation, the comparison of counts of land use by relation, the comparison of counts of land use by relation and the locations of the urban activities.

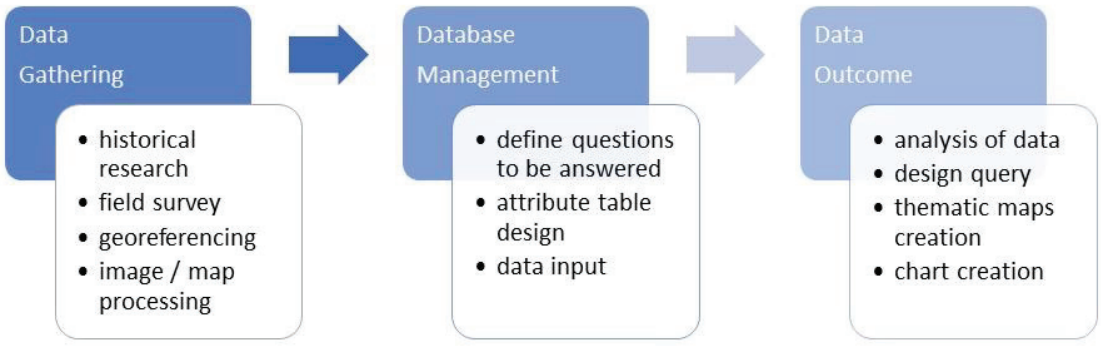


Figure 42. The GIS flowchart of this study.

In this study, in cultural landscape scale, topography, landform, and land cover analysis were carried out using Digital Elevation Model (DEM). Aster Global Digital

Elevation Models were used obtained from the NASA Earth Data website. Thanks to the DEM map in GIS, landscape elements such as mountains, hills, low and high plains, and valleys are subdivided according to their height, and boundaries are determined according to the slope lines. In addition, the boundaries of the cultural landscape of the study area were determined using DEM through viewshed modelling and 3D imagery of GIS (Figure 43). The cultural landscape is defined as perceived in a single glance by a pair of human eyes due to its natural difficulties in providing spatial borders. Determining these boundaries of geographical elements without slope lines may be both difficult and not accurate.

Figure 43. The DEM image of Kale Tavas in GIS.

In the settlement scale, land use analysis, solid void analysis, lot analysis, relation analysis, location analysis, level analysis, and conservation state analysis were made at the settlement scale for Kale Tavas. At the same time, it provides information about how the settlement was in the past, with the 3D rendering of the land use analysis in GIS, which was created using historical maps and historical aerial photographs from the 1940s (Figure 44). All the analyses were carried out utilizing GIS.

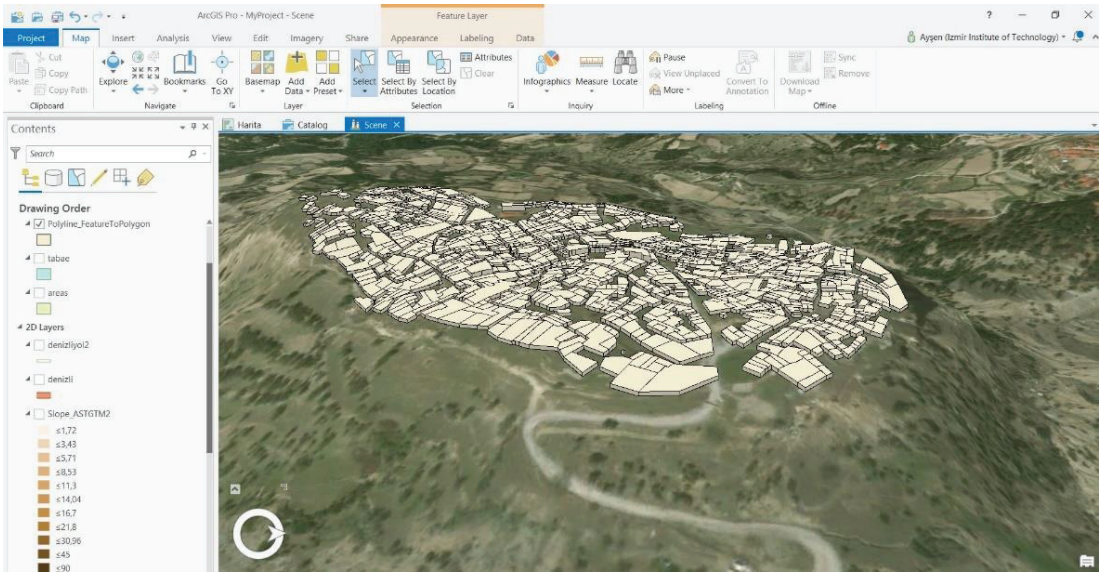
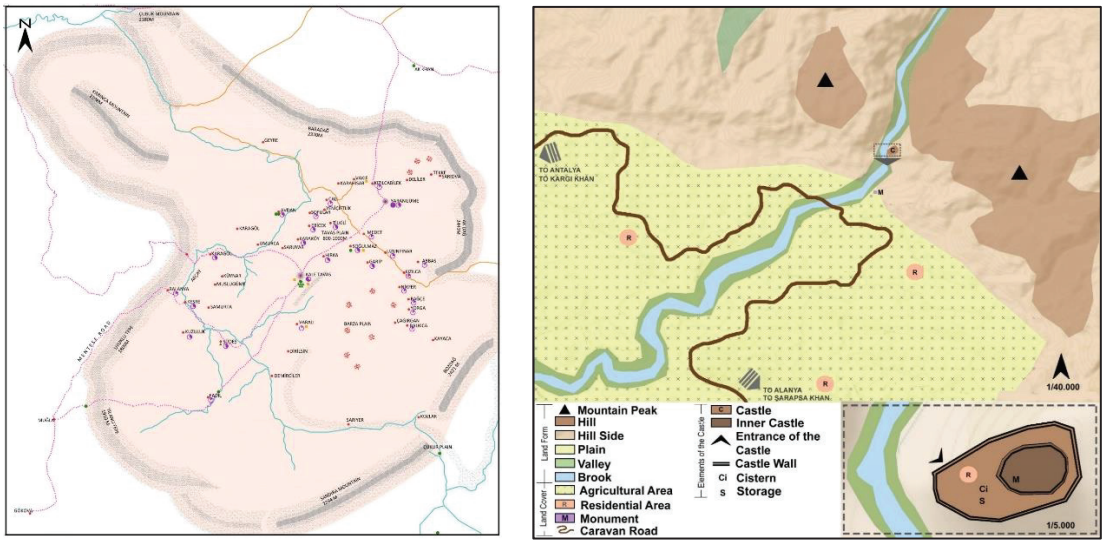


Figure 44. 3D Model of Kale Tavas created utilizing GIS.

However, conventional tools e.g. AutoCAD and Photoshop were used for time-depth mapping because GIS is not a competent program for maps that require abstract expression. The information of population, the geographic difficulties such as mountain, river, plain and their current and historical toponomy were presented with the time-depth maps (Figure 45a). In addition, the landform, landcover and elements of comparative castle examples from Turkey: Alara, Gilevgi and Adanda were presented via a single map for each castle (Figure 45b). These maps were prepared by using graphical program.



a b

Figure 45. a) A time-depth map of a studied case studies, b) the map of land cover, landform and elements of a comparative study example from Turkey.

3.3. Comparison

In this study, the selected comparative study examples differ according to the subject to be compared. While comparing the evolution of cultural landscape features, similar examples on the same historical trade route were evaluated with the same method applied to the case studies. Kale Tavas, Beçin and Honaz were compared with each other in settlement and landscape scales. Additionally, the case studies were compared with the castle towns from Turkey: Alara, Gilevgi and Adanda and from abroad: the Moorish Castle in Portuguese and La Couvertoirade in France in landscape scale (Table 5). Alara, Gilevgi and Adanda castle were compared regarding the natural characteristics such as elevations, topographies, landforms, locations of castle towns were compared with case studies and each other. Additionally, cultural characteristics such as land covers, the historical process, accessibility, authenticity and integrity authenticity and preservation of castle towns are compared with each other in landscape scale. These comparisons are presented both with thematic maps created in GIS and with bar charts. While information about comparative studies in Turkey is based on literature research and fieldwork, information on abroad is based on literature research.

3.4. Evaluation

The value of a cultural landscape is related to the extent to which it has been able to preserve the integrity of all the elements that make it a cultural landscape over time. It is important to consider how changes affect the landscape as a whole and the degree to which they impact or obscure the landscape's character and integrity. In the settlement scale the change in the lot layout of the settlements over time and the reasons for this change were evaluated. At the same time, the case studies were compared with comparative studies and with themselves the historical process in terms of settlement characteristics.

It has been evaluated how natural and man-made elements have been changed over time in the cultural landscape scale for case studies. The percentages of change in the areas of natural and manmade elements such as Mediterranean woodlands, agricultural areas, shrublands and residential areas the land cover analysis were determined in GIS, and the transformations over time were revealed. Natural and cultural factors leading to

these changes are discussed by using historical and contemporary aerial photos. The physical and cultural effects and results of this transformation have been revealed together with the historical process. Significance of an existing characteristics of landscape and inputs was determined by relating to its historic context.

Table 5. The table of the case studies and comparative studies.

Design of the Historical Landscape Characterization Process																				
Identification								Documentation			Formation of the GIS Model									
											Cultural Landscape			Settlement						
	Castle Towns	Location	Historical Research	Historic Map	Parcel information	Orthophotos	Base Map	Historical Aerial Photos	Elevation Map	Field survey	topography	landform	land cover	land use	solid-void	lot	relation	location	level
Case Studies	Kale Tavas	South west Anatolia / Denizli	primary and secondary sources	19th century	land use	current situation	before and after abandonment	before and after abandonment	DEM	visual assessment and interviews	from DEM data	from DEM data field survey	from DEM data field survey	parcel information field survey basemap ariel photos	parcel information field survey basemap ariel photos	parcel information field survey basemap ariel photos	parcel information field survey basemap ariel photos	parcel information field survey basemap ariel photos	parcel information field survey basemap ariel photos
	Beçin	South west Anatolia / Muğla	primary and secondary sources	19th century	land use	current situation		After abandonment	DEM	visual assessment	from DEM data	from DEM data field survey	from DEM data field survey						
	Honaz	South west Anatolia / Denizli	primary and secondary sources	19th century	land use	current situation		after abandonment	DEM	visual assessment	from DEM data	from DEM data field survey	from DEM data field survey						
Comparative Studies in Turkey	Gilevgi Castle	South Anatolia / Antalya	primary and secondary sources	19th century				after abandonment		visual assessment		from visual assessment	from visual assessment						
	Adanda Castle	South Anatolia / Antalya	primary and secondary sources	19th century				after abandonment		visual assessment		from visual assessment	from visual assessment						
	Alara Castle	South Anatolia / Antalya	primary and secondary sources	19th century				after abandonment		visual assessment		from visual assessment	from visual assessment						
Comparative Studies in Europe	La Couvertoirade	France / Occitanie	secondary sources																
	Moorish Castle	Sintra/Portuguese Republic	secondary sources																

CHAPTER 4

RESULTS

In this chapter, the evaluation of the network of studied castle towns, the case study and comparative study castle towns are presented in the below.

4.1. Evaluation of the Network of Studied Castle Towns

In this study, six castle towns on that caravan route running the west-east axis at the north of the Toros Mountains have been studied. This commercial route linking each castle town to its network. The first studied castle town on this network is the Adanda Castle. Then, there is the Alara Castle located at a distance to be taken by a caravan in a day. The next stop, after passing Evdir Han, is Gilevgi Castle, which is close to an important historical settlement: Elmalı. These three castle towns are in Antalya. After the Gilevgi, the Caravan Road reaches Honaz Castle and Tavas Castle in Denizli, and finally to Beçin Castle in Muğla. These castles are in ruins today, and only some of their parts are observable. There was one caravanserai between the Adanda and Alara Castle which was a Melleç Tol Khan. There were six caravanserais between the Alara and Gilevgi Castle Towns: Alara Khan, Pazarcık Khan, Tol Khan, Köprüsuyu Khan, Evdir Khan, Gediği Khan. The whole road between Alara and Gilevgi was not a caravan route. The caravan route was passing through Korkuteli. With the development of trade in the Anatolia, the number of commercial settlements increased. however, the secondary roads used to reach those settlements also gained importance. Elmalı was one of these settlements. Gilevgi was located on this secondary road that extends from the caravan road passing through Korkuteli to Elmalı. There were three khans between Gilevgi and Honaz: only one of the khans is known: Akhan. Then there was no khan between Honaz and Kale Tavas. Finally, there were two khans between Kale Tavas and Beçin: Çam Khan and Belen Khan (Tuncer, 2007: 100). There were 34 bridges within the network. There were three bridges between Antalya and Denizli. These bridges, in the order of their location, are as follows: Belkıs, Serik and above the Düden River (Tuncer, 2007: 133) (Figure 46).

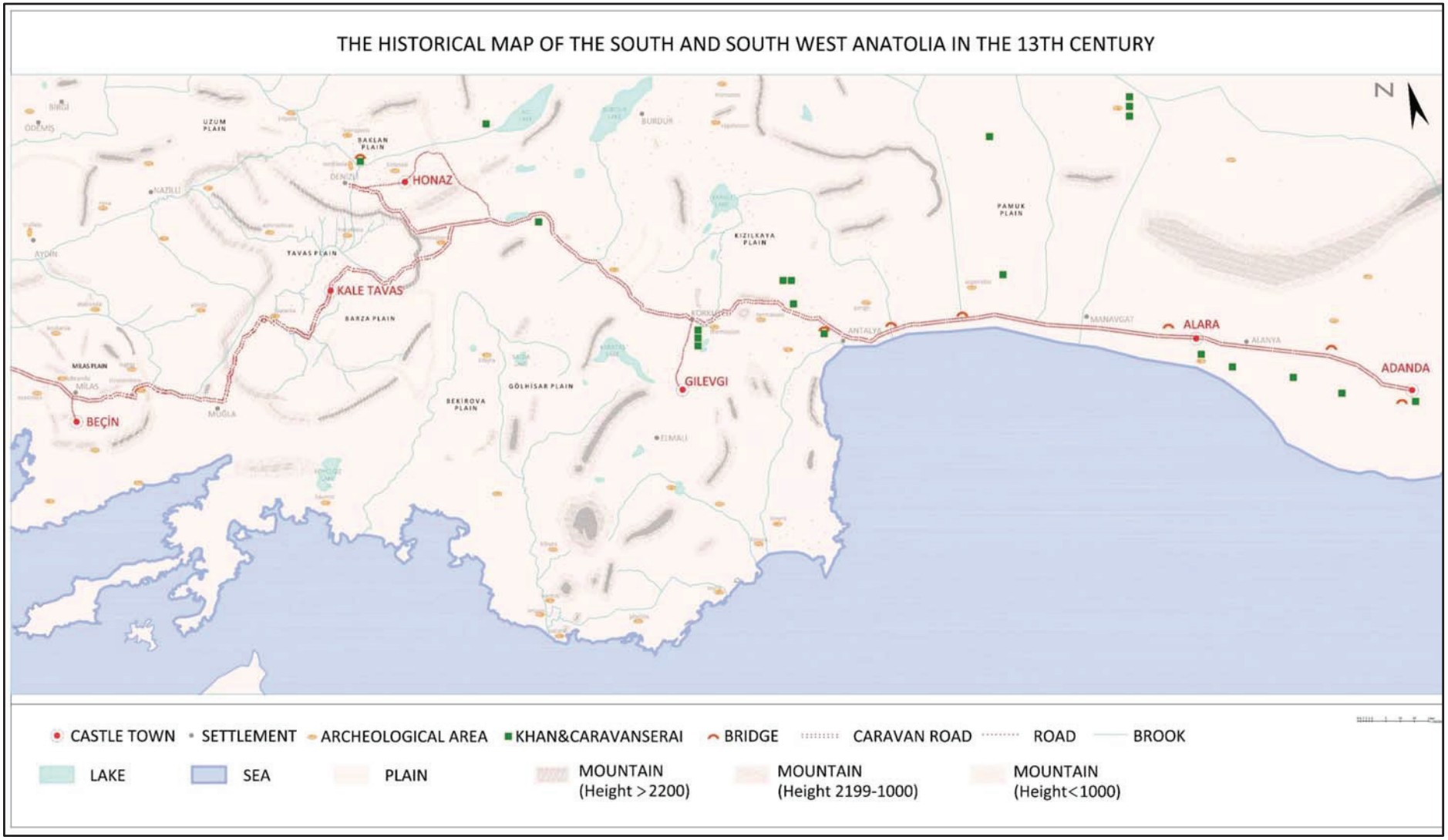


Figure 46. The historical map of the South and the Southwestern Anatolia

4.2. Case Studies

In this section, the evolutions of the case study castle towns and their cultural landscapes are presented in the below.

4.2.1. Kale Tavas

Physical, social, economic, cultural evolution of Kale Tavas Cultural Landscape and Kale Tavas town are identified.

4.2.1.1. Natural Evolution of Kale Tavas

The natural characteristics of Kale Tavas cultural landscape are analysed with respect to concepts of topography and landform, in a retrospective perspective. Then, natural characteristics of Kale Tavas town are presented.

4.2.1.1.1. Topography

The landscape of Kale Tavas is composed of low elevation areas surrounded by high areas. The highest areas are over 2530 m., but most of area is below 1000 m., with significant amount (15%) below 500 m (Figure 47).

The topography of the Tavas region has undergone different geological stages in history. Kale Tavas is located on the Lower Miocene[10] shallow marine limestone unit of the steep cliffs where the edges. The sloping land around the top surface of the rocky area has two different elevations (Gökçen 1982; Hakyemez 1989).

Kale Tavas is within the first-degree earthquake zone; it is under the seismic effect of the Menderes Horst and graben, the Eastern Mediterranean subduction zone, and the Gökova Bay Faults. For this reason, severe earthquakes have occurred in the region in

[10] Miocene Epoch, earliest major worldwide division of the Neogene Period (23 million years to 2.6 million years ago) that extended from 23 million to 5.3 million years ago. It is often divided into Early Miocene Epoch (23 million to 16 million years ago), Middle Miocene Epoch (16 million to 11.6 million years ago), and the Late Miocene Epoch (11.6 million to 5.3 million years ago) (britannica website 2023).

history: the Menderes Valley 6.9 magnitude in 1899, the Burdur 7.0 magnitude in 1914, Mediterranean 6.8 magnitude in 1952, Fethiye 7.1 in 1954. Considering that the settlement was abandoned due to landslides in the 1950s, it is thought that the severe earthquake in 1952 triggered the landslide in the region (Beyaz and Arsay 2016, 796).

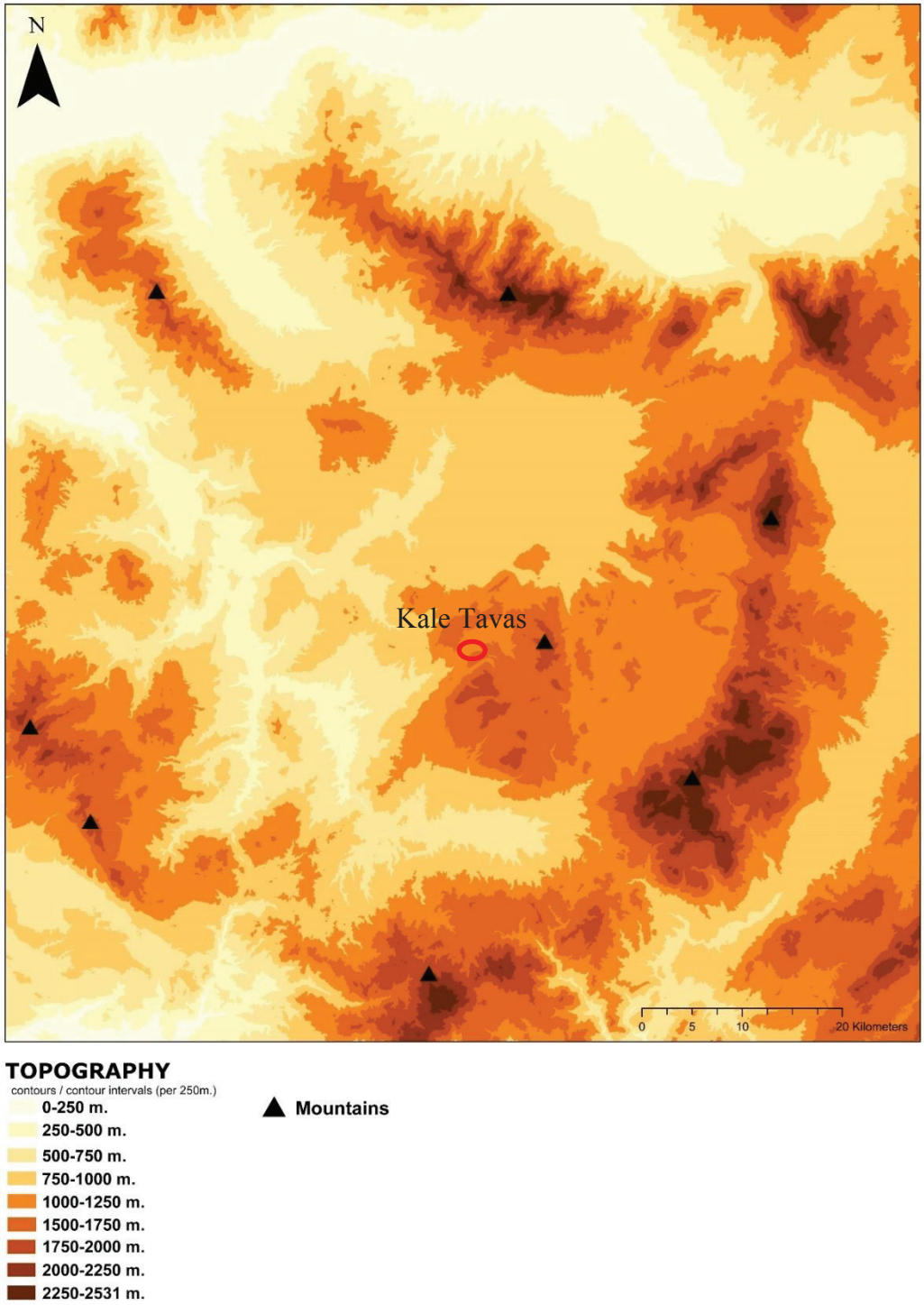


Figure 47. The Topography Map of Kale Tavas

4.2.1.1.2. Landform

The topography of Kale Tavas region is evaluated in five different levels: 0-500 m, 500-1000 m, 100-1050 m, 1050-1500 m, 1500-2600 m. The landforms covering the topography are mountains, hill, mesa, ditch, plain, valley and brook (Figure 50).

Before the Miocene period, the bedrock was limestone, defining a hollow area. The hollow meandering area, it was filled with water during the Miocene period. At the end of this period, its floor dried up as the climate became arid (Beyaz and Arsay 2016, 795). Precipitation in these arid regions often comes in the form of sudden, heavy rainfalls. Because water evaporates quickly in these normally dry environments, plants and other ground cover are scarce. Left exposed to the action of running water, the bare sides of the softer rock layers of the higher area were eroded away in time, and as a result, some geographical formations such as butte, mesa[11], plateau and plain were formed. Kale Tavas is positioned on the mesa.

The upper layer of the area is limestone, and the lower layer is clay soil, which is a natural feature that helps it to accumulate water. As water drains through the cracks of limestone, water accumulated on clay layer. While this natural structure is advantageous for water accumulation, it causes a threat to the stability of the area (Beyaz and Arsay 2016, 793).

The lower Miocene limestones form the sides of the settlement. In this steepness, landslides have occurred. These landslides and interventions made to the ground structure such as cisterns, wells, underground openings, galleries, underground storages, etc. gave way to weakening of the elevation area. There is a structure that was carved and filled with rocks to hold water underground. In Kale Tavas, there is an underground water system extending in the north-south direction at the west of Cevher Paşa Mosque (Beyaz and Arsay 2016, 795). Since Kale Tavas was insufficient in terms of potable water resources, the water stored in this water system was used for all daily needs.

The highest points refer to the peaks of the mountains surrounding the area which are Babadağ Mountain (2370 m.) at the north and Sandıra Mountain (2294 m.) at the south, Karınca Mountain (2308 m.), Uykulu Mountain (1800 m.), Kesir Mountain (1910

[11] Mesa is flat-topped hill or mountain with steep sides that is lower and bigger than butte and smaller in area than a plateau. The base of these landforms is often gently sloped, contrasting with the almost-vertical sides leading down from the top. Rock material that has been eroded from the sides is carried downward, forming this sloping base (nationalgeographic.org).

m.) at the west direction and Karadağ (1756 m.), Akdağ (2249 m.) and Bozdağ (2421 m.). These mountains are surrounded by the visual boundaries of the lower height plains and settlements. Some settlements are located at the hill skirt of these mountains.

The heights of the between hills is 1050 and1500 m. The average height of the mesa in the cultural landscape of Kale Tavas is also between 1050 and1500 m. However, the mesa has different geographic features than hills (Figure 48). It is enveloped by a natural ditch. The average height of the ditch is about 1000-1050 m. This ditch was formed as a result of the drying up of the stream surrounding the mesa. Most of the cultural landscape consists of flat plains at lower altitudes (Figure 49). The height of plains from sea level is 500-1000 m. Tavas Plain is located at the north of the landscape. Barza plain is located at the southeast (Figure 49).

The cultural landscape of Kale Tavas has a variety of vista points. Since, it was situated on the "mesa" that rises from the Tavas plain, it is open from all directions. The view from the castle to landscape consists of the historical Muğla- Milas road, Barza and Tavas plains, valleys, the fertile agricultural areas and the one side of the mountains Babadağ, Karınca and Akdağ Mountains, that form the border of the landscape in all directions. The view from the lower level is the unique view of the mesa where the castle was before located on it.

Figure 48. The view of the "mesa" from the north direction, Kale Tavas cultural landscape

Figure 49. The view of Tavas Plain from the southwest direction

The lowest landforms in the topography are valleys. They are lower than 500 m. These valleys surround the Yenidere brook, which runs in the northwest southeast direction.

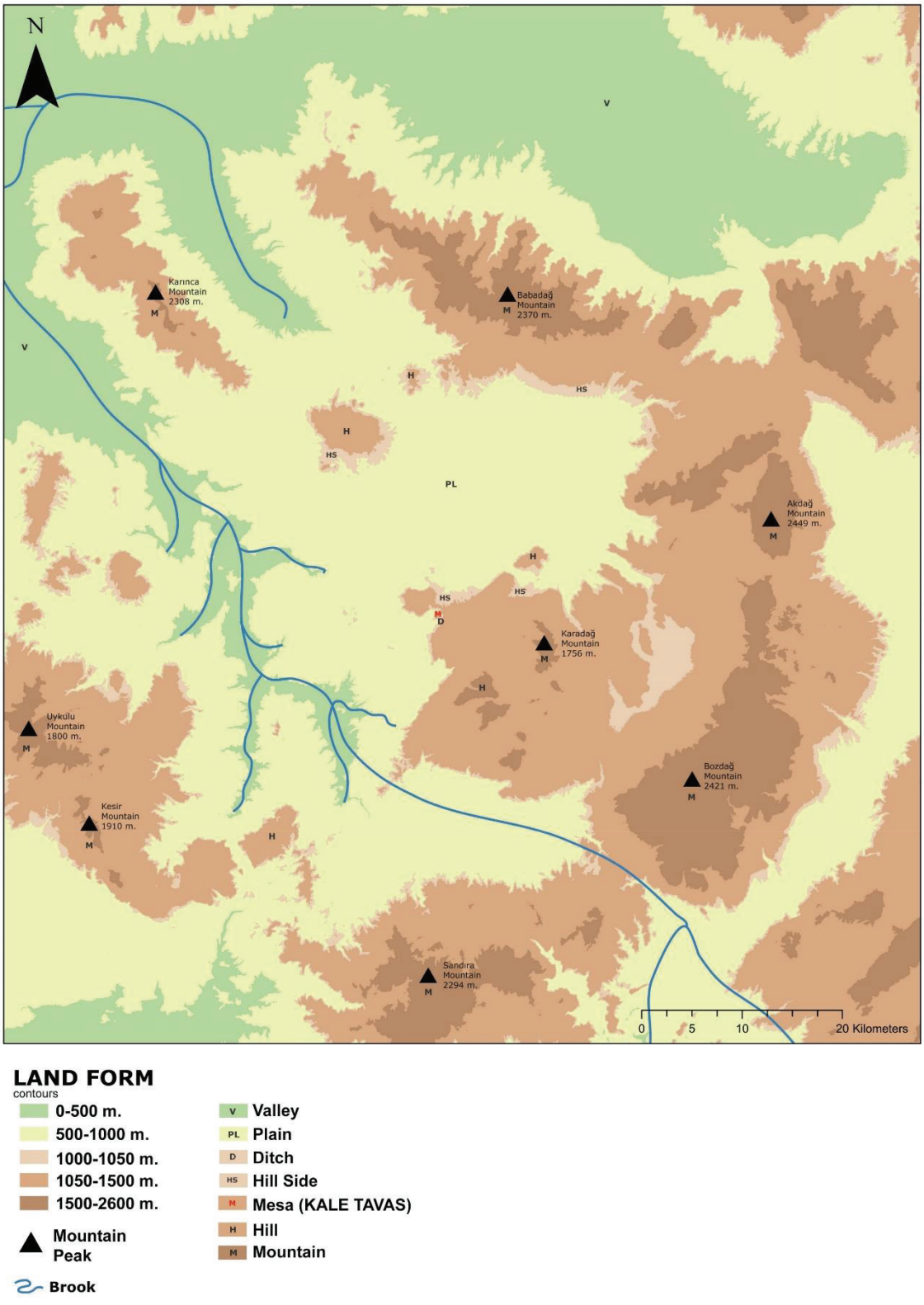


Figure 50. The Landform Map of Kale Tavas

4.2.1.2. Cultural Evolution of Kale Tavas

The cultural characteristics of Kale Tavas cultural landscape are presented with respect to concepts of time-depth and land cover, in a retrospective perspective.

4.2.1.2.1. Time-depth of Kale Tavas

The social, economic and cultural evolution of Kale Tavas is presented for each historical period in the below.

- **Ancient Period**

Kale Tavas was a historic settlement unit which was located at the historic region named Karia (Robert 1954) (Figure 51). Kale Tavas was called Tabai (Livius 1957; Strabon 2005; Robert 1954; Sevin 2013), Tabae (Kütükoğlu 2002; Ersoy 2009; Baykara 2007), Tabanos or Tabenon (Laflı 2013). These names are derived from "taba" which means rock. Tabae was one of the important settlements of Caria which was on the passage connecting the inner western Anatolia and south- western Anatolia (Beyazıt 2016) (Figure 52). Although the date of establishment of Tabae is not known precisely, it is thought that the settlement dates back to the Middle-Late Bronze Age (2000-1200 BC), as a result of the small ceramic finding (Ersoy 2009). Tabae consisted of blends of Pisidia and Phrygia people (Strabon 2005). According to Livius, these people were brave (Livius 1957).

Figure 51. The map of Asia Minor, Drawn by Mitchell, Samuel Augustus, 1875. (Source: David Rumsey Map Collection 2014)

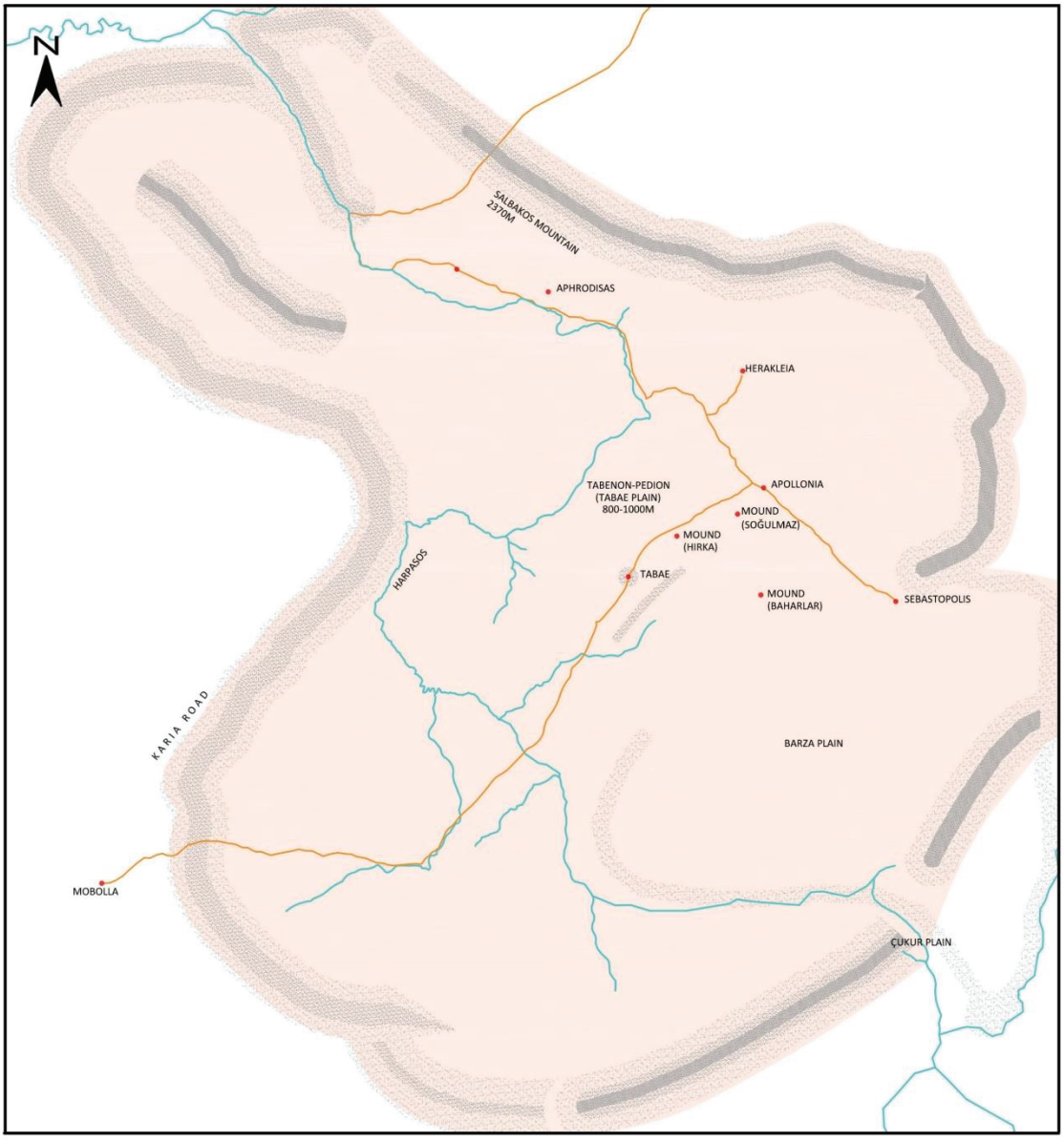


Figure 52. The Map of the Cultural Characteristics of Tabae and its vicinity in the Ancient Period Pre-Turkish Period

- **Classical Period**

Tabae participated in the land of Rome during the Galatian military expedition of Consul Manlius Vuslo, starting from Ephesus, passing through Meander and continuing south, after being defeated by Roman armies. Tabae had to pay compensation because of its resistance. Tabae was rewarded for supporting beside Rome after the War of Mitriades the first. Because of its good connection with Rome, it was named after a memorial in Rome (Wittek 1944). The name Tabae was mentioned for the first time in this memorial (Texier 1970). In the Roman Period, Tabae was the only city that could produce silver coins with the name of "Tab" and "Tabhn" (Figure 53). In addition, Tabae was located on the road between Denizli and Finike (Wittek 1944). In the Byzantine Period, Tabae was one of the centers of bishopric in the 7th century (Wittek 1944).

Figure 53 The silver and bronze coins belonging to Roman Period
(Source: Laflı, 2013).

- **Seljuk Period**

After the War of Malazgirt, the Turks spread from east to west in Anatolia. They were settled in the lands left by the Rums who moved to the Balkans to take precaution against these invasions (Turan 1965 cited in Kütükoğlu 2002). The Mongolian invasion of the 13th century caused a second Turkish invasion. The Caria region was fully Turkified; there were 200,000 tents in Denizli region in this century (Köprülü 1981 cited in Kütükoğlu 2002). However, Tabae was one of the castles that the Byzantine population, continued its existence, when Turks came (Baykara 2007). The castle and its surroundings were domineered by Turks completely under the supervision of the Seljuk Ruler Mirza Bey in the early 12th century. From this date onwards, the castle was called Kale Tavas (Baykara 2007). Nevertheless, Seljuks lost their power because of Kösedağ War (1243). Tabae had been a settlement where Turkish soldiers and their families had lived in. (Baykara 2007).

- **Emirate of Menteşe (1365-1402)**

In the beginning of the 14th century, Kale Tavas was an independent center that had four castles, and approximately 600 villages. It had an army of 4000 cavalries and 10,000 infantries (Kütükoğlu, 2002). However, Tavas joined the lands of Emirate of Menteşe approximately in 1365. Tavas was an important settlement of Menteşe.

In the 14th century, traveller Ibn Batuta stayed in Kale Tavas one night, while traveling from Muğla to Denizli. He described the site as in the following (Parmaksızoğlu 1971): "They stayed at the outskirts of Denizli for a while due to the insecurity in the roads. They were in Tavas in one day and one night with the prepared caravan. They stayed in Tavas at night and entered the castle in the morning. They stayed in a guest house in the suburb of the castle". It is thought that the guest house mentioned by Ibn Batuta was one of the two *Zaviye*s (Baykara 2007).

- **Early Ottoman Period (1390-1424)**

Menteşe was captured by Yıldırım Beyazıt. Thus, Tavas entered the Ottoman domination in 1390-1391. The domination of the Ottomans in Anatolia was threatened by the invasion of Timur in between 1402 and 1414 (Baykara 2007, 57). Nevertheless, Kale Tavas re-entered Ottoman rule in 1424 by Murat the second. After that, the lands of Emirate of Menteşe were called as the County of Menteşe of the Ottoman Empire (Baykara 1994, 156).

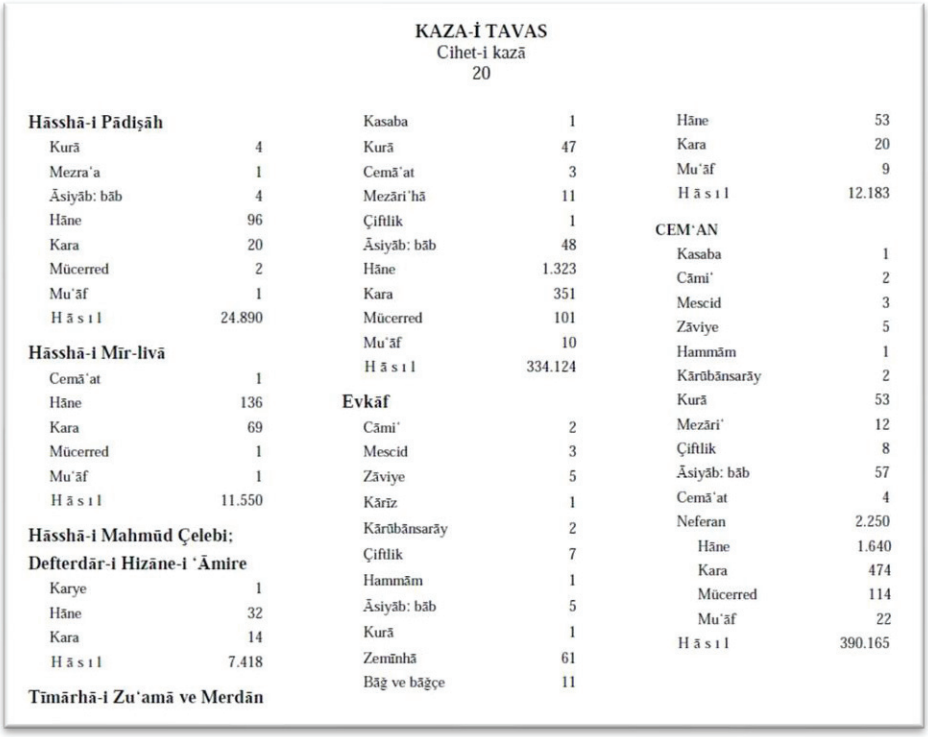
After the conquest of the surroundings, the population of the region increased and spread to the surrounding plains.

- **Classical Ottoman Period (1424- end of the 18th century)**

Before its conquest, Kale Tavas was used for defensive purposes by the soldiers and their families. Then, it continued its presence and importance as a settlement after the time of conquest (Baykara 2013, 23). The population of the settlement increased in the 16th century. The surrounding of Kale Tavas was called Tavas district. It consisted of 36 villages and the center of the *kaza* which was known as Nefs-i Tavas in the *Tahrir* Notebooks was Kale Tavas (Kütükoğlu 2002, 10) (Figure 54). An increase in the population of Tavas district was observed in parallel to the whole of the Ottoman Empire in the 16th century (Kütükoğlu 2002, 11). According to the Account of the Vilayet of Anatolia, dated 1530, numbered 166 (Department of the Ottoman Archives 1995); the

population of Kale Tavas was approximately 2250. Kale Tavas was part of an important commercial network between Denizli-Muğla (Figure 55).

The district was quite crowded in the 16th century in the Sanjak of Menteşe (Kütükoğlu 2002, 52).



KAZA-İ TAVAS
Cihet-i kazā
20

Hāsshā-i Pādişāh	
Kurā	4
Mezraʿa	1
Āsiyāb: bāb	4
Hāne	96
Kara	20
Mücerred	2
Muʿāf	1
H ā s ı l	24.890
Hāsshā-i Mīr-livā	
Cemāʿat	1
Hāne	136
Kara	69
Mücerred	1
Muʿāf	1
H ā s ı l	11.550
Hāsshā-i Mahmūd Çelebi; Defterdār-i Hizāne-i ʿĀmire	
Karye	1
Hāne	32
Kara	14
H ā s ı l	7.418
Tīmārhā-i Zuʿamā ve Merdān	
Kasaba	1
Kurā	47
Cemāʿat	3
Mezāriʿhā	11
Çiftlik	1
Āsiyāb: bāb	48
Hāne	1.323
Kara	351
Mücerred	101
Muʿāf	10
H ā s ı l	334.124
Evkāf	
Cāmiʿ	2
Mescid	3
Zāviye	5
Kārīz	1
Kārūbānsarāy	2
Çiftlik	7
Hammām	1
Āsiyāb: bāb	5
Kurā	1
Zemīnhā	61
Bāğ ve bāğçe	11
Hāne	53
Kara	20
Muʿāf	9
H ā s ı l	12.183
CEMʿAN	
Kasaba	1
Cāmiʿ	2
Mescid	3
Zāviye	5
Hammām	1
Kārūbānsarāy	2
Kurā	53
Mezāriʿ	12
Çiftlik	8
Āsiyāb: bāb	57
Cemāʿat	4
Neferan	2.250
Hāne	1.640
Kara	474
Mücerred	114
Muʿāf	22
H ā s ı l	390.165

Figure 54. The Tahrir information of Kale Tavas
(Source: Account of the Vilayet of Anatolia dated 1530)

In 17th century the population of Kale Tavas decreased. The population of Kale Tavas was 63 while the population of Yarengüme which was a village of Tavas located 26 km at the northeast of Kale Tavas was 135 according to Avarız Registry dated 1676 (Kütükoğlu 2002, 17).

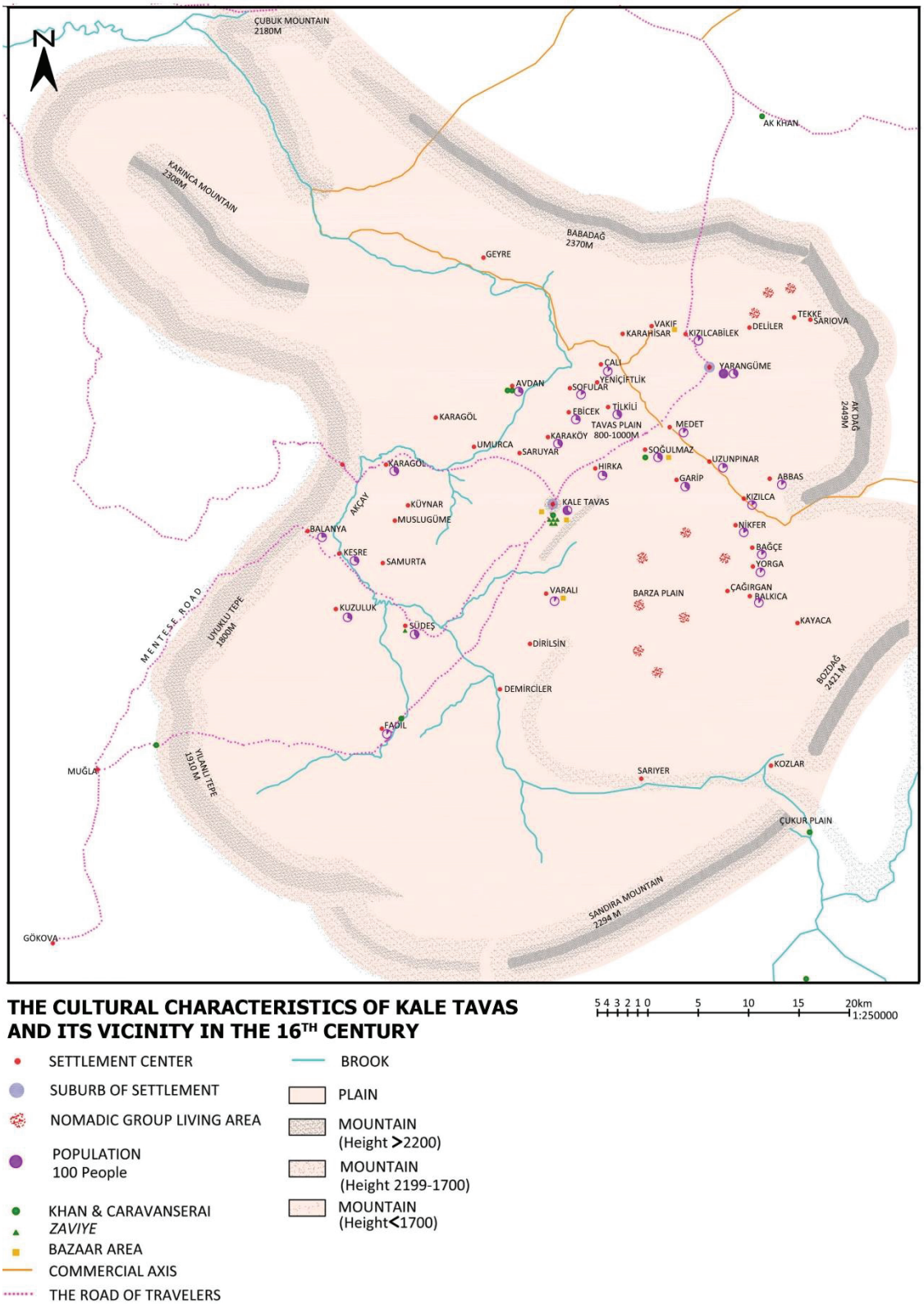


Figure 55. The Map of the Cultural Characteristics of Kale Tavas and its vicinity in the 16th century

- **Ottoman Modernization Period (the beginning of the 19th Century-1923)**

Tavas and Denizli were settlements of Aydın Province in 1867-1883, and Denizli became a settlement of İzmir in 1883. In addition, Tavas became a *kaza* of to Denizli (Kütükoğlu 2002, 11). A decrease in the population of the whole region was observed in the 19th century. In the 1830 census, Kale Tavas had 364 houses and 819 male population. According to census dated 1844, Kale Tavas was the fifth place of the Sanjak of Menteşe with its population (478), the most crowded settlement was Yarengüme (1281) (Kütükoğlu 2007, 25) (Figure 57).

The importance of the settlement declined in the 19th century and the center of *kaza* shifted from Kale Tavas to Yarengüme in the 1868. Kale Tavas was in village status between 1868 and 1895. In addition, Kale Tavas became the center of *Nahiye* in 1895 again because of its historical and strategical values (Aydın 2013, 61). In addition, population movement from Kale Tavas to Yarengüme accelerated in the end of the 19th century.

Transition from nomadic lifestyle to settled was realised in this period (Kütükoğlu 2007). Main source of income was agriculture, sheep and goat farming and production of textile. The main agricultural products were grain and cotton. The *ağırşak*s[12] found in the archaeological investigations proves that textile production was the major source of livelihood of the region in the Ottoman Period (Ersoy 2010) (Figure 56).

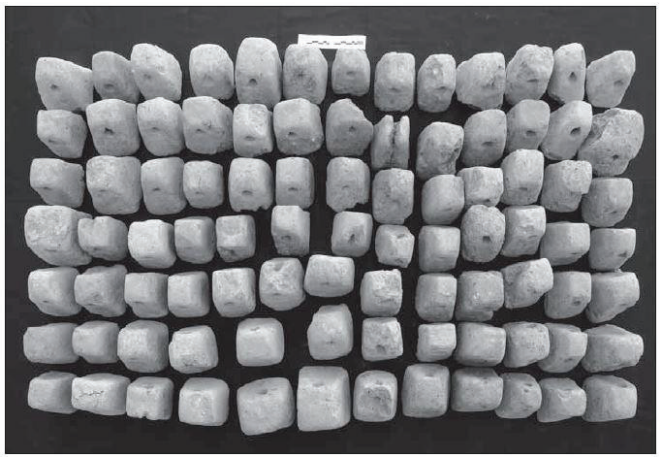


Figure 56. The *ağırşak*s found in the archaeological investigations photo
(Source: Ersoy 2010, 134)

[12] *Ağırşak* is a material weight in the shape of a hemisphere in the center of the hole, made of wood, bone, or mine, attached to the lower end to aggravate the spindle for spinning.

Traditional activity patterns at cultural landscape scale include seasonal migration of inhabitants for agriculture, animal husbandry in the prairies and commerce by the caravan route (Etlacakuş and Turan 2019, 470). The inhabitants of Kale Tavas used to call this activity *düven*[13] work (Interview with KÜ and PH 2019). Tavas and Barza Plain have always been fertile agricultural areas. Grains yards; especially, wheat, barley and cotton yards; were present.

The fact that Kale Tavas was located on a hill that is isolated from its surroundings and difficult to reach causes impossibilities which led to the development of methods of coping with them and should have strengthened the relationship among people. Spiritual connection comprises of native traditions, stories about the name of the settlement and the way of the settling, dialect, and the names of local objects. In addition, recreation activities were folk songs, folk dances, and wedding ceremonies (Etlacakuş and Turan 2019). In addition, some historic activities are related with history of construction techniques in the rural settlement, e.g. using *yuğğu* stone[14] to compress the roof after the rain and before snow. Some other historical activities were weaving and making ice. In addition, cuisine traditions such as *biber tatarı*[15]*, patlıcan musakka*[16]*, irenk*[17]*, kırık çürük*[18]*,* dried vegetables and fruits such as apple, grape and pear and plum called *bezirme* were famous (Interview with AK 2019). Continuation of the presence of the congregation in most of its mosques and sustaining of the spirit of *Zaviye*s are spiritual values of Kale Tavas.

[13] a sled-shaped vehicle used for separating the stalk and grains of crops in harmony, drawn by animals in front of it, with sharp flint stones on the lower face.

[14] It is a circular stone which used to compact the soil covering the roof after rain and snow.

[15] A dish made pepperoni and yogurt with garlic.

[16] A dish made with fried eggplant and meat.

[17] A kind of tomato paste prepared for the winter, obtained from tomato juice.

[18] A juicy meat dish.

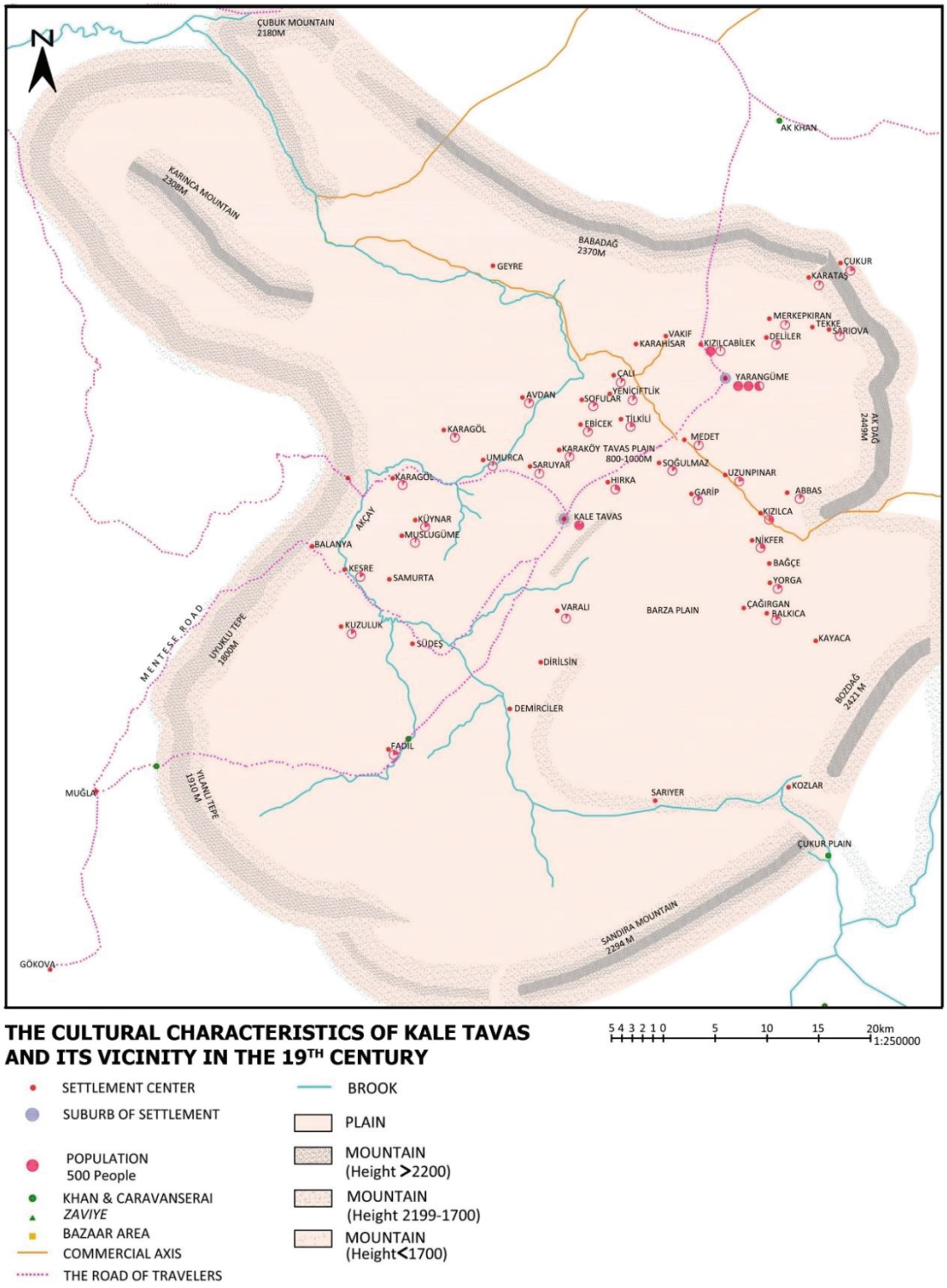


Figure 57. The Map of the Cultural Characteristics of Kale Tavas and its vicinity in the 19th century

- **Abandonment Period (1950-2000)**

Until the end of the 1950s, the town was settled, however, it was abandoned due to natural disasters. Two mosques, a bath and a few fountains continued their functions (Ersoy 2012, 430). In addition, the name of Kale Tavas changed as Kale and the name of Yarengüme changed as Tavas (Baykara 2007, 22). At the end of the 1960's inhabitants were replaced in a newly established town located three kilometres far from Kale Tavas. They carried the material of their old buildings to build their new homes (Figure 58).

After the replacement, weaving and animal husbandry were still the main sources of income of the former inhabitants. However, the location of the prairie, pastures and shrub lands shifted towards Tavas which is located at the southeast of Kale Tavas.

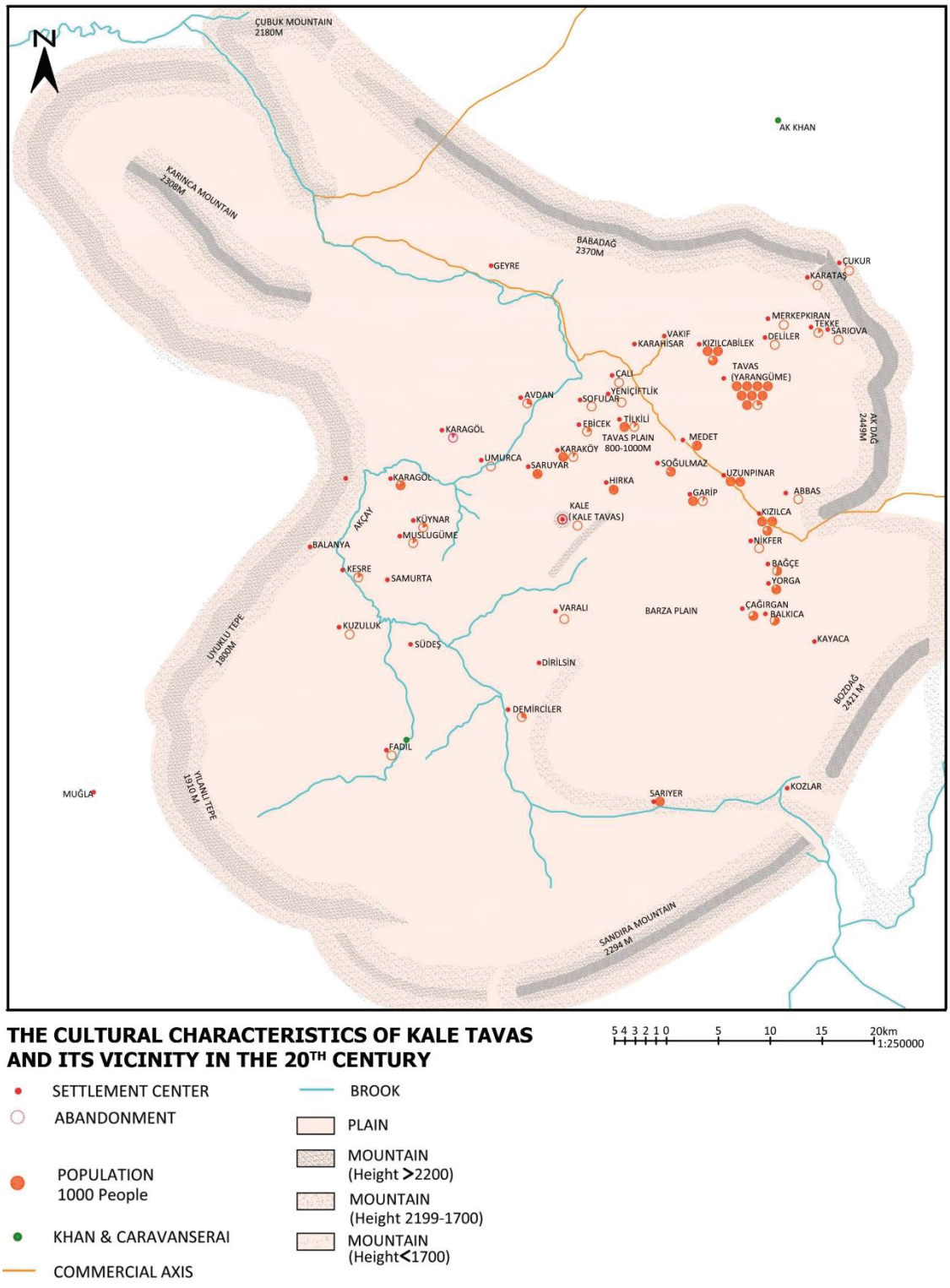


Figure 58. The Map of the Cultural Characteristics of Kale Tavas and its vicinity in the 20th century

- **Scientific Excavation Period (After 2000)**

The archaeological studies of Kale Tavas (Tabae Ancient City) were started in 2007[19]. After 2016, the excavation has been carried out in two different sections; Tabae ancient city and Kale Tavas graveyard (Beyazıt et al. 2017, 329). In addition, the oral history studies are also carried out by the same excavation team.

4.2.1.2.2. Land Cover

The land cover of Kale Tavas and its cultural landscape shows differences in time-depth.

The mountains are natural areas and are generally covered with Mediterranean woodlands. (Figure 64). The sides of Babadağ Mountain to the north and Sandıra Mountain to the south, Kesir Mountain to the west and the lower hills to the east facing the settlement of Kale Tavas constitute the visual boundaries of Kale Tavas cultural landscape. On the other hand, lower level of the hill sides of these mountains are covered with cultivated green areas such as shrublands for livestock farming and agricultural fields. Within these boundaries, plains cover fertile agricultural fields. Tavas plain has not been rich in terms of water sources: wheat, tobacco and chickpeas have been grown throughout the history.

Barza and Tavas Plains were cultivated by the farmers who lived in the villages at the skirts of the mountains bordering the area. Kale Tavas has opportunity of viewing the road; hence, this feature makes it a safe place even without its citadel walls. The only access to the area it controlled was provided through the historic caravan route passing by a bridge at the east direction. The cliffs surrounding the edges of the bridge provided a controlled entrance and exit. In addition to the settlements located on the plain, there was a settlement on the "mesa" which was Kale Tavas. It had a peculiar form, which emerged as a result of changes in the landforms over time. The settlement used to view the road from all its sides viewing. It controlled the plain and at the same time, it was hard to access because of its high altitude. These all created the sense of safety in was Kale Tavas.

[19] by Prof.Dr. Bozkurt Ersoy and his team and continued in 2013. The excavation studies are continuing by Asst.Prof.Dr. Mustafa Beyazıt.

In the Middle-Late Bronze Age, there were a lot of mounds in this basin such as Medet, Solmaz, Baharlar and Hırka. There are settlements at these positions today (Beyazıt 2016, 64). In addition, Tabae was in close relation with the ancient cities around the settlement; Hierapolis (Pamukkale), Laodikeia (Ladik), and Aphrodisias (Geyre) and Sebastopolis (Kızılca). Tabae was located on the famous way to Mobolla (Muğla) (Figure 52) and that way provided a commercial relation between the mentioned ancient settlements (Robert 1954, 140). It is known that agriculture and livestock activities were common way of life in these settlements (Laflı 2013, 48).

After the 12th century, the conquest of surroundings itself, the population of the region increased and spread around the surrounding plains. In addition, the surrounding of Kale Tavas called Tavas district consisted of 36 villages (Kütükoğlu 2007, 12). Although some settlements are located at the hill skirts of the mountains, most of them are located on Barza plain in a scattered manner. They are known Barza villages: Nikfer, Bahçe, Yorga, Balkıca, Derinkuyu, Çağırgan, Gümüşdere and Horasanlı. All the rural settlements located on the plain are historic settlements. The historic cores of the rural settlements are generally located at the center of the settlements.

In addition, it is known that nomadic communities settled in and around the Barza Plain during the 16th century. According to the same achieve documents, there were four communities in the border of Tavas (Department of the Ottoman Archives, 1995). Some of the names of the communities of the 16th century became village names later; e.g. Merkepkıran, Çukur and Yahşili (Kütükoğlu 2007, 15) (Figure 55). Moreover, Evliya Çelebi described the site as follows in 1670: The vineyards and gardens of the people were located at the skirts of the Kesir Mountain at the west of the castle. People spent six months of the year in these fertile vineyards and gardens (Kahraman and Dağlı 2006).

Agricultural areas were located at Delibağ and Kazas (Interview with KÜ 2019) at the hill skirt of the Kesir Mountain located at the west of the settlement (Aydın 2013, 60). There was no agricultural area on the mesa. The inhabitants of Kale Tavas migrated to these lower zones every summer for agricultural activities following specific routes (see section 4.2.1.2). The authentic prairies, pastures and shrublands were located at the Kepezaltı and Boncuklu (Interview with AS 2019) at the east of the settlement (Figure 59).

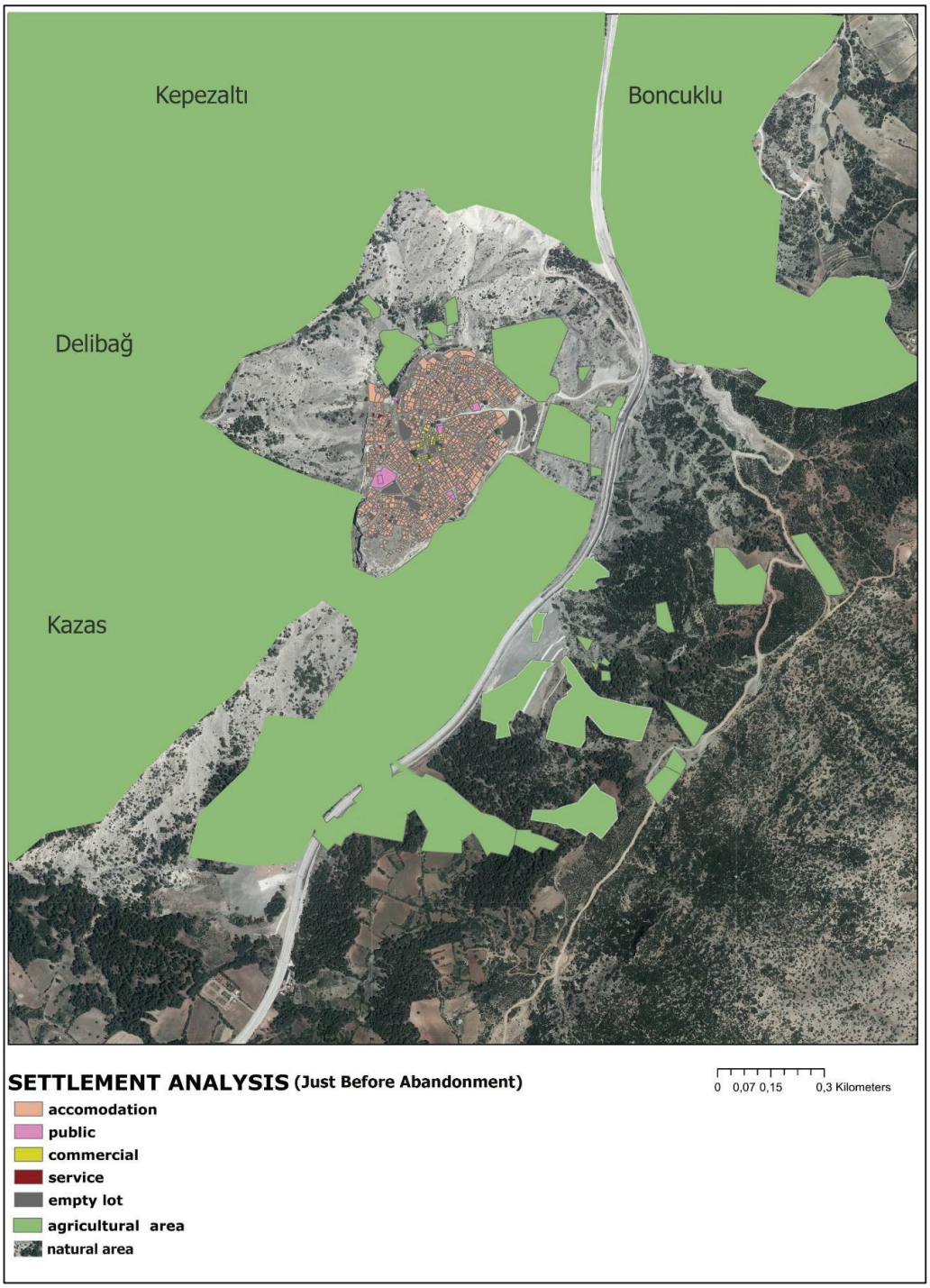


Figure 59. The Map of Settlement and its Closed Environment Analysis, Kale Tavas just before abandonment

In the 19th century, the agricultural lands in the surrounding plains decreased, and the settlements and population in these plains increased (Figure 57) (see section 2.1 and 4.2.2.1). During the relocation at the end of the 1950s, the people of Kale Tavas who could not buy the new houses built by the administration moved the building materials at the place of departure and built new houses with these materials to the lots specified by the administration in their destination towns. So, almost all of the building materials of

other buildings were relocated to the new location called “1003-1005-1008 Evler” located three kilometres far from Kale Tavas (Figure 62). It is still possible to observe reused materials in the new settlement (Figure 60).

Figure 60. A courtyard gate in Kale constructed with the replaced building material (Source: Etlacakus and Turan 2019, 470).

The cultural landscape of Kale Tavas was transformed after replacement (Figure 61). Especially, agricultural areas diminished in size with their transformation into residential areas and changing lifestyles over the years. Decrease in agricultural areas due to increase in construction resulted in the loss of the integrity of the cultural landscape and vanished the spirit of the settlement. In addition, the former inhabitants continued to migrate to the agricultural lands every summer, but the agricultural lands were also relocated to Oğlupınar and Gülpınar (Figure 62) (Interview with KA 2019).

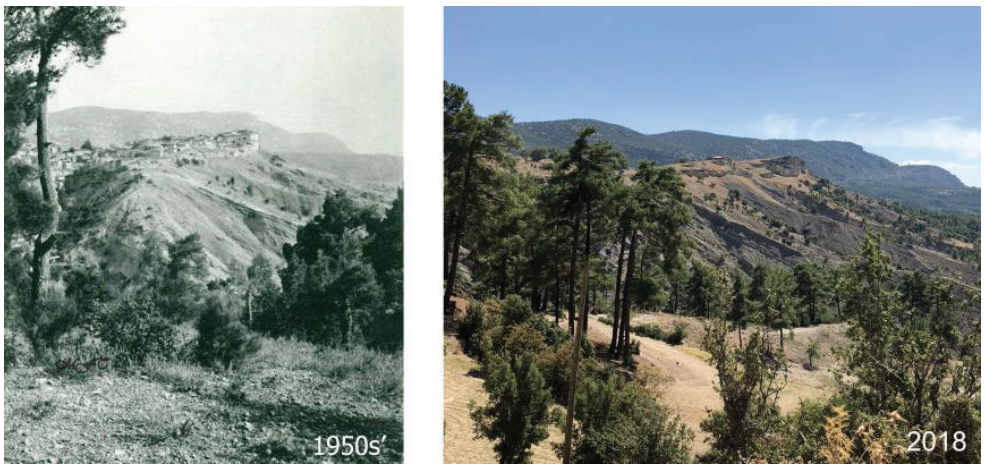


Figure 61 The view of Kale Tavas from the west direction of different years (Source: Etlacakuş and Turan 2019, 472)

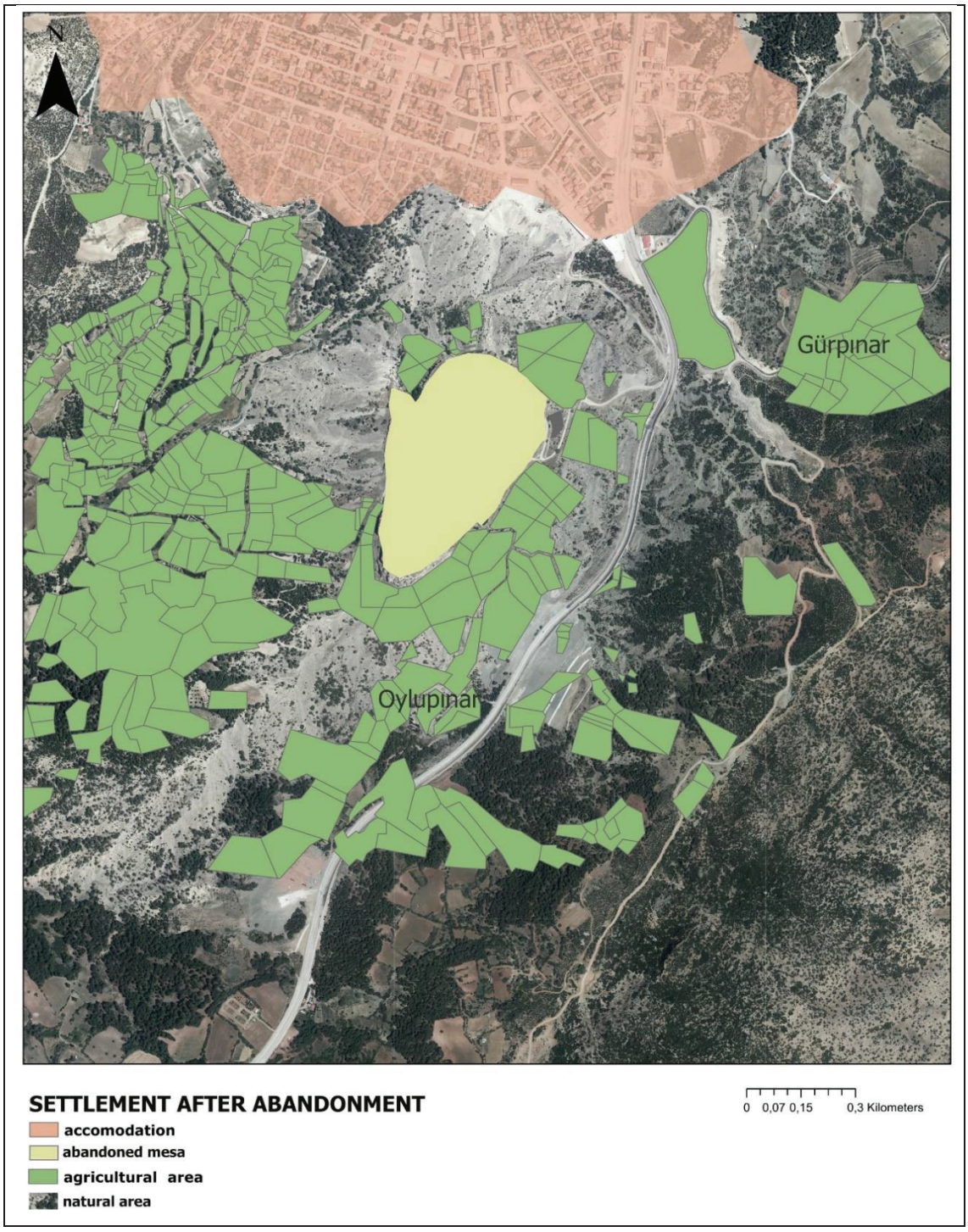


Figure 62. The Map of the Settlement and its Closed Environment, Kale Tavas After Abandonment

In 1946, the mountains were natural areas and are generally covered with Mediterranean woodlands (53%). The plain and hillside were used mainly for agricultural areas (33%) and shrublands (14%). The only mesa was used residential purposes (1%). Natural elements have decreased in amount over time, the residential areas have increased. After Kale Tavas was abandoned and moved to Kale neighbourhood in the

1950s, the mesa turned into an archaeological site in the 1990s (1%). The new construction of mass housing has rose (25%) on the plain and hill side, and agricultural areas and pastures have been critically reduced (25%) in the 21st century (Figure 63).

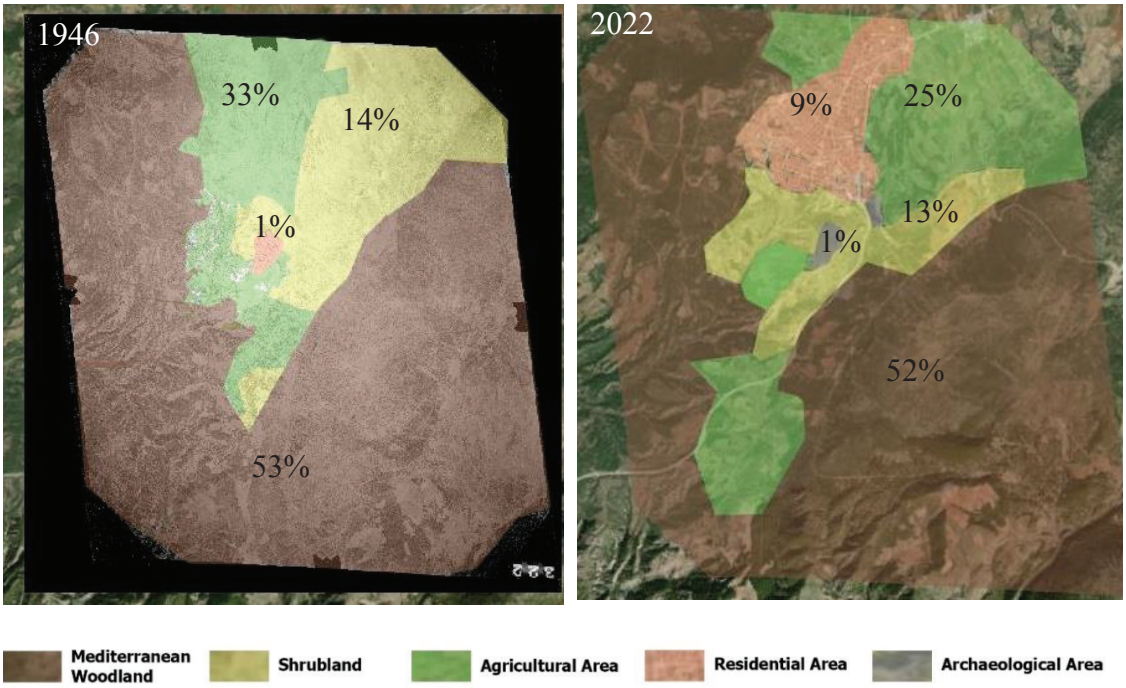
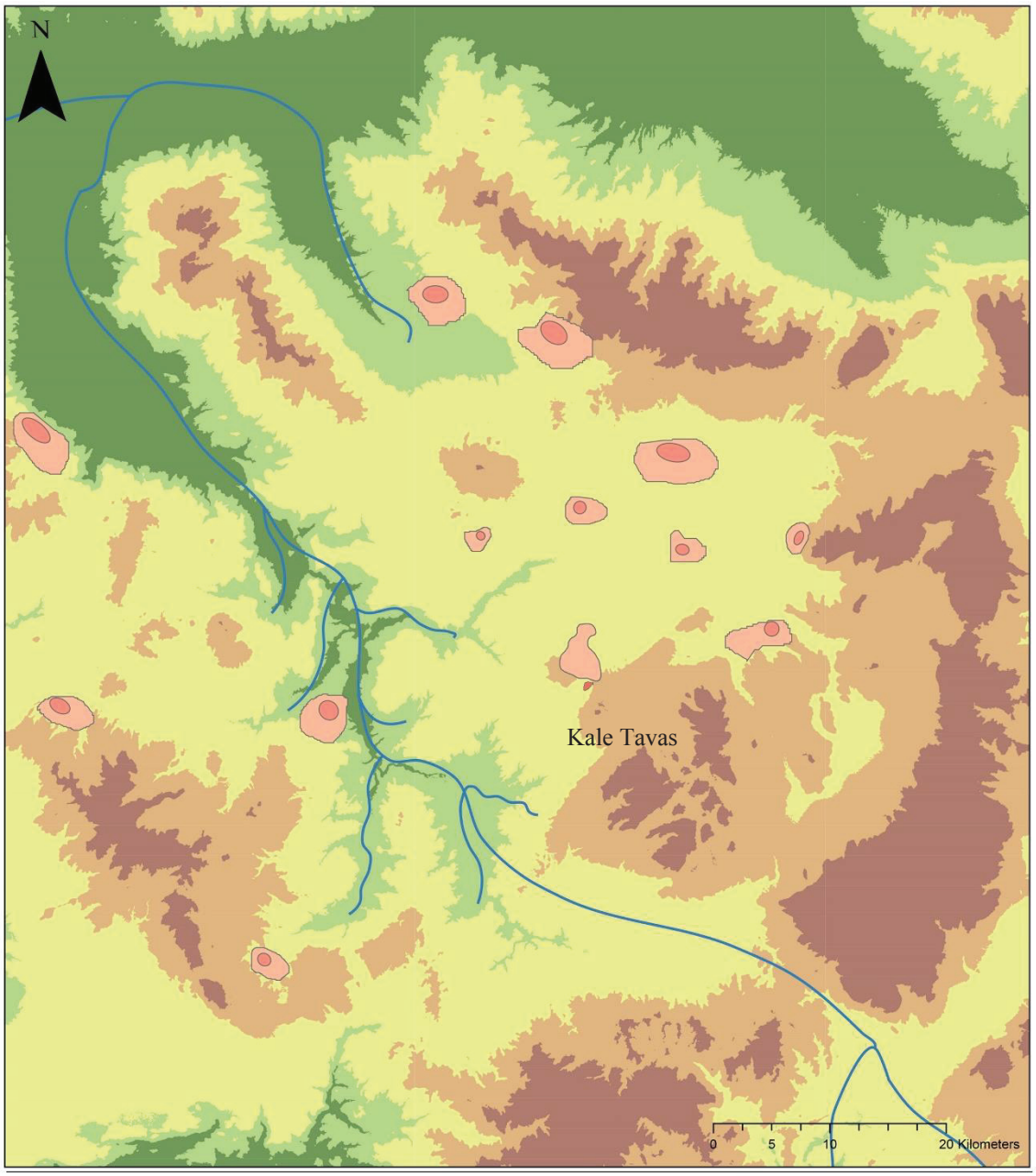


Figure 63. The landscape changes of Kale Tavas between 1946 and 2022.



LAND COVER

- Agricultural Field (0-381 m.)
- Agricultural Field (381-600 m.)
- Agricultural Field (600-1050 m.)
- Shrub Lands (1050-1400 m.)
- Woodlands (1400-2600 m.)
- Historical Rural Settlement Center (600-1050 m.)
- Rural Settlement (600-1050 m.)
- Brook

Figure 64. The Map of the Land Cover of Kale Tavas After Abandonment

4.2.1.3. The Settlement Characteristics of Kale Tavas

In this part, streets and pathways, lot size and form of buildings and their relationship with neighbours, and definition and distribution of building types in the settlement of Kale Tavas are identified.

4.2.1.3.1. Land Use

According to scientific excavations, there were a bath, theatre, three cisterns, three fountains, graveyard, ceramic finds and coins belonging the Roman Period in the ancient settlement (Beyazıt 2016). Moreover, the foundations provided information on the lot organization of residential areas and spatial organization of housing units in addition to monumental structures. There are architectural remains of Roman baths, fountains, a chapel within niche carved in the rock, and some cisterns constructed in the Roman Period. The remains of the bases provide information on the lot organization of residential areas and spatial organization of housing units. Graveyards are settled in settlement itself and in the southeast hill side of Kale Tavas. The inscriptions on gravestones give information about this long history of the settlement the original stone covering is observed at the entrance of Kale Tavas. In addition, while climbing to the settlement, service structures located in some terraces on both sides of the road are observed. It is thought that the *Zaviye*s mentioned in the archive sources can be located on these terraced zones.

Today, traces of historical residential and public areas, monuments, graveyards, archaeological remains, tracks of monuments, niche carved in the rock, demolished, and abandoned areas are present in the archaeological site of Kale Tavas.

Before the abandonment in 1950's, there were 1086 buildings in the settlement. There were four basic land uses: accommodation (house, courtyard, and garden), public (mosque, masjid, fountain and municipality building), commercial (shop and coffee house), service units (an independent service units related to housing units and toilet near the commercial and public spaces) and empty lots (Figure 59, Figure 65). Today, there is the archaeological site, the Cevherpaşa Mosque, which was reconstructed and the minaret of Pazaryeri Mosque, which was demolished.

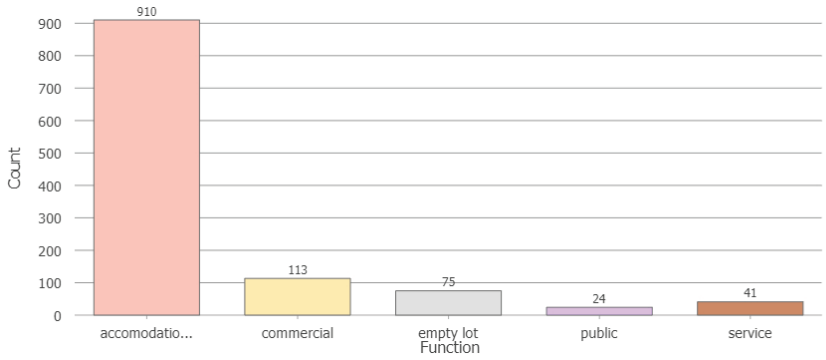


Figure 65. The comparison of data counts by function

Housing units constituted most of the settlement. In addition, there were two mosques, seven masjids, one baths, 11 fountains[20], one municipality building, 106 shops[21], seven coffee houses, 39 independent service buildings as a part of the housing units, two toilets located at the commercial and public space, and 75 empty lots in the settlement. In addition, agricultural areas at lower elevation surrounded the settlement (Figure 66).

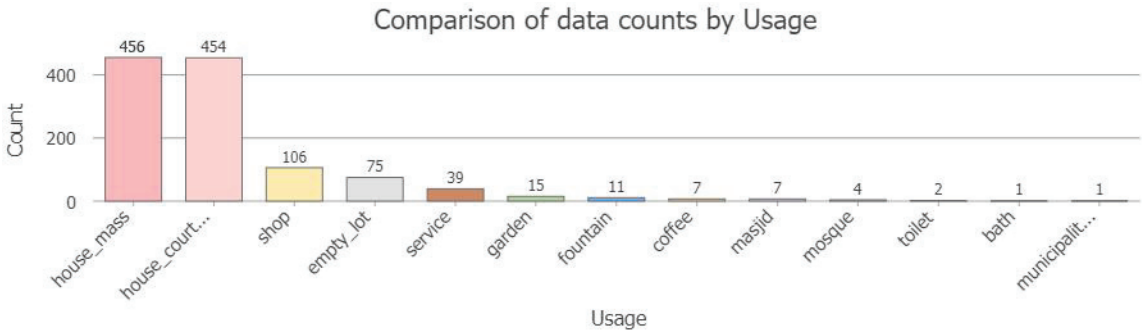


Figure 66. The comparison of data counts by usage before abandonment, Kale Tavas

[20] The name of the fountain to the west of the settlement was called *yavansu*, meaning tasteless water, by its former inhabitants. It is thought that its name derives from the taste of water.

[21] It is known that it was a blacksmith who produced agricultural tools, and the burnt materials can still be observed in the area.

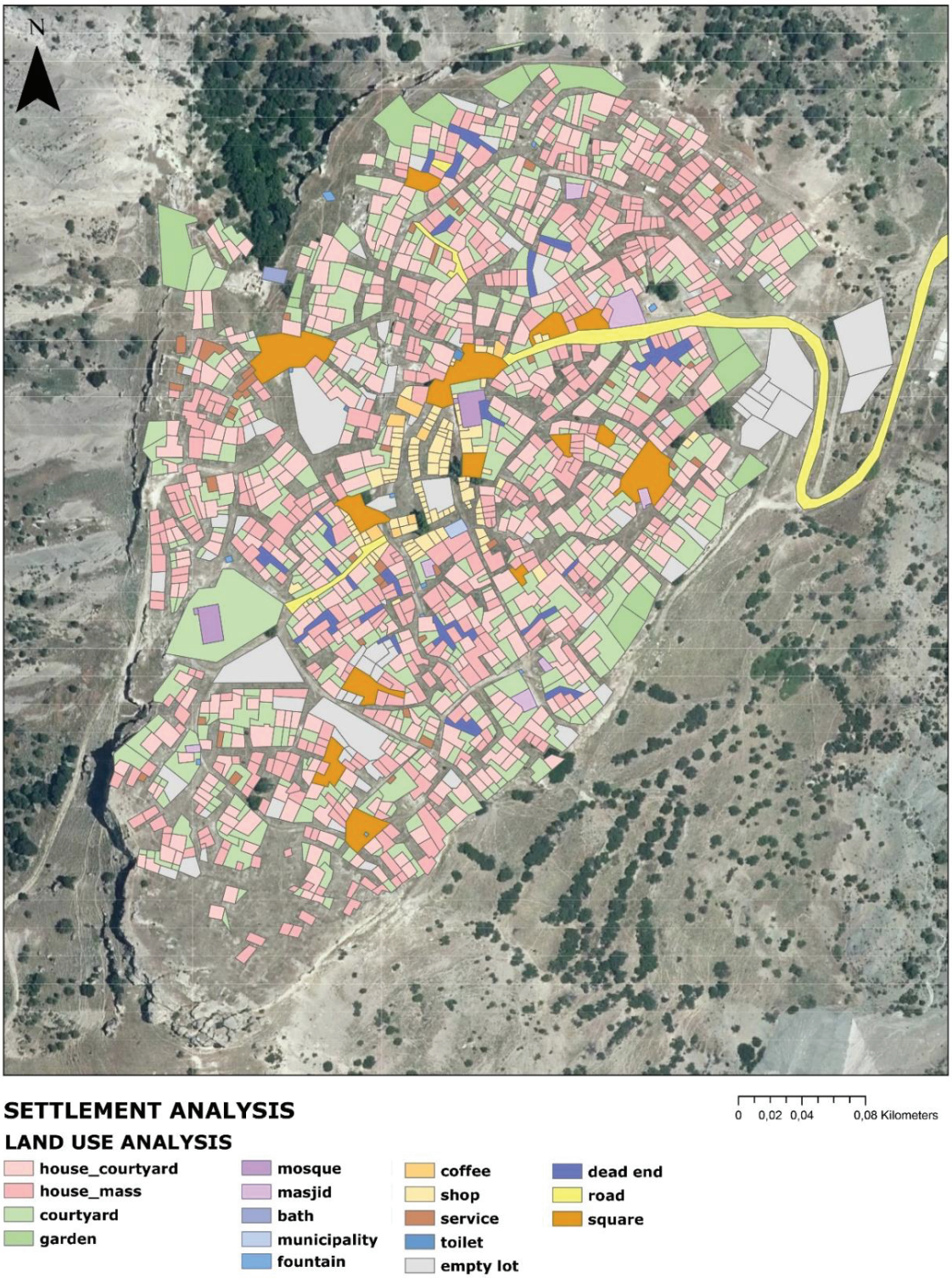


Figure 67. The Land Use Map, Kale Tavas

In addition, three different circulation elements are recorded in Kale Tavas: street, dead end street, and square. The streets in the settlement were generally narrow. They could have steep slope due to the topography and density of urban lots. In relation with the way the residential lots come together, dead-end streets and sometimes small squares between the building groups were formed (Figure 67).

There were 910 housing units. 454 of them were with courtyard, and 456 of them with only main mass. While the average area of the houses without courtyard in the settlement is 53.3 m2 that of, the houses with courtyards are 70 m2. The average areas of the courtyards are approximately 70 m2. There were three different lot organizations of housing units. These are only mass, mass with courtyard or garden and mass with courtyard and service units. The majority of lot organizations consisted of only mass (456 / 910). All the components of a housing unit were under a single roof. The other lot organization was housing unit consisting of a mass with a courtyard or a garden (415 / 910). The last lot organization was a mass with a courtyard and a service building (39 / 910). In general, housing units were enriched with a garden, when they were located at the outer ring of the settlement. These gardens could have replaced the empty lots, which were formed after the landslides. The monuments had courtyards, but coffeehouses and shops consisted of only a single mass.

The monuments, shops, service buildings had a single storey. The construction technique of the residential area was hybrid system (Figure 69). The stone masonry base supported the timber frame construction of the upper floor and timber frame roof. This system represents the typical construction technique of the Ottoman House (Kuban, 1995: 47-60). Only one stone masonry wall continued as a service wall until the roof in a typical Ottoman house. However, according to visual sources, more than one stone masonry wall could be observed at the upper floors stemming from the frequency of adjacent buildings. In addition, all of the monumental buildings were constructed with stone masonry (Figure 69). Majority of houses had a single floor with one or two rooms, and they had terrace roof with earth covering. In addition, timber posts were observed in front of the external walls. These posts prove that housing units had terrace roof with earth covering (Interview with PR 2019). These houses were called as *dam* house. While the majority lived in these houses, a few wealthy families had two storied houses with high storey heights in large lots (Interview with ŞY 2019). The houses had small courtyards called *haynatı*[22]. It

[22] *Haynatı* is an open space on the ground floor. It is for used for sheltering animals, domestic fowl raising, storage and circulation.

generally had a storage space called *gaydırma*. Between the wooden beams above this warehouse space called *anlık*, tools such as sickles, harrows and hoes used in agriculture were stored. There was a semi-open space in front of the room(s) called *ayazlık*. If ayazlık was closed, it was called *alan*. This was generally recorded in bigger housing units. There was a fireplace located generally in the closed space. The sitting place located in front of the fireplace was called *bucaklık* (Interview with PH and ŞY 2019).

According to historical photos, majority of buildings had hipped roof with over and under tiles which is thought as a period intervention to flat roofs.

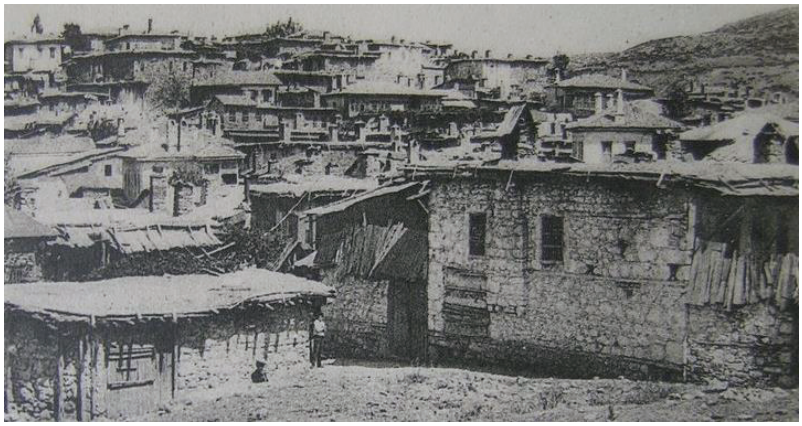


Figure 68. The old photos of the residential area
(Source: Kale Municipality 2018)

Figure 69. The photos of ruined housing units after the abandonment in 1989.
(Source: Kütükoğlu 2007, 254-255)

In the Ottoman Period, housing units and monuments of various civilizations had very tight relation with each other.

According to the Account of the Vilayet of Anatolia, dated 1530, numbered 166 (Department of the Ottoman Archives 1995), the population of Kale Tavas was

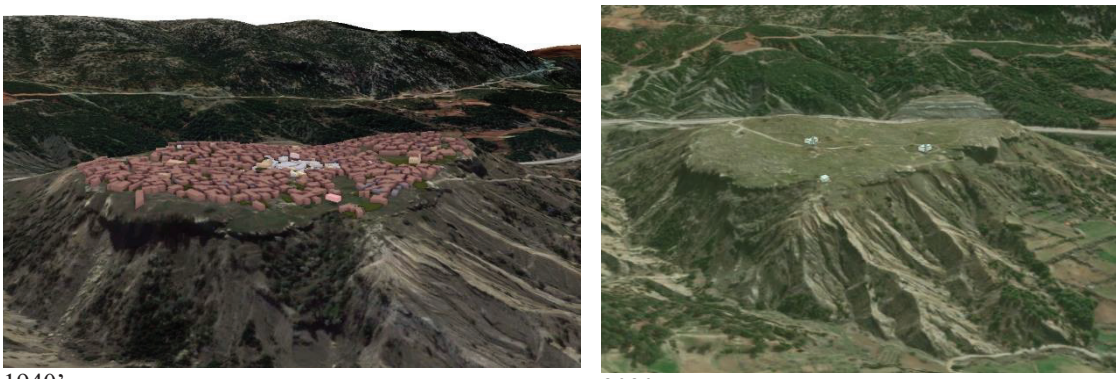
approximately 2250 which consisted of two mosques, three masjids, five Zaviyes, one bath, two caravanserais, 1640 houses, 8 hamlets, eight farms and four communities located at the Kale Tavas in the 16th century. There were four *Zaviye*s located at Kale Tavas. These were Cevherpaşa *Zaviye*, Ayande Hatun *Zaviye*, Saru Zeydi *Zaviye* and İlyas Bey *Zaviye* (Kütükoğlu, 2002: 146). Evliya Çelebi mentioned that "Tavas was square planned with 3000 steps around the castle, an iron gate on the east side and a deep horn in front of the door in 1670 (Dağlı and Kahraman 2005). Katip Çelebi visited Kale Tavas in 17th century and mentioned that there was a bazaar in the settlement established once a week (Katip Çelebi 2009). In this period, two mosques (Cevherpaşa Mosque and Pazaryeri Mosque) and a bath were constructed in the Kale Tavas (Appendix B). Although there is no inscription panel, it is thought that Cevherpaşa Mosque and Cevherpaşa Bath were constructed in the 15th century according to their architectural characteristics and historical documents (Ersoy 2009). Pazaryeri Mosque was repaired in 1867-1868. In addition, Tekke Önü Masjid was constructed in the 18th -19th century (Ersoy 2012).

4.2.1.3.2. Solid-Void

When the castle was one of the important settlements of Tavas region, it is known to be a denser settlement. The density of buildings in the settlement just before abandonment was low. Buildings composed of housing units, and public and service buildings constituted the solids. Courtyards, gardens, empty lots and roads constituted the voids of the settlement (Figure 70). The solid areas cover up the whole of the lot (62 657 m^2 / 24%) while, the void areas cover up the whole of the lot (207 880 m^2 / 76%). This low-density settlement may be due to landslide.

Figure 70. The Map of Solid-Void Before Abandonment, Kale Tavas

It was observed in aerial photographs taken in 1946, 1949, 1953, 1954 and 1960 that all the buildings in the settlement were almost standing before replacement (Figure 71, Figure 72). Furthermore, the solid-void proportion was approximately equal in the settlement. The lots of the houses frequently consisted of an open space and a main mass. Green areas, ruined lots, empty lots and roads constituted the voids; while housing units, public and service buildings constituted the solid area of the settlement.



1940's 2020

Figure 71. 3D Model of Kale Tavas in 1940 and 2020.

The relocation was carried out gradually. In the air photograph taken in a 1965, it was observed that some of the buildings in the settlement were completely destroyed, and some of the buildings had no roofs or walls. It was observed that the buildings in the settlement were extinct to a great extent, only 10-15 houses were standing, and only the basements or a few walls remained in 1972. It was observed from the aerial photography in 1992, that the settlement had no structure other than the Cevherpaşa Mosque and the minaret of the Pazaryeri Mosque just like today. Thus, replacement continued in between the 1970s and the 1990s, and the stock was destroyed.

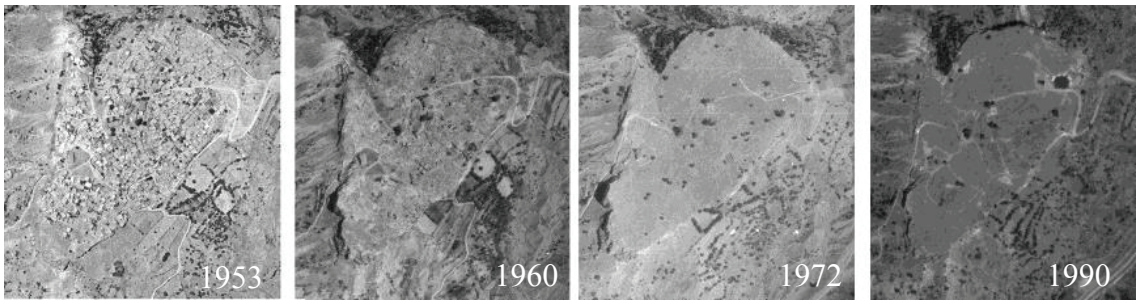


Figure 72. The aerial photos of replacement process of Kale Tavas
(Sources: Ministry of National Defence General Directorate of Mapping Archieve,2018)

4.2.1.3.3. Lot Organization

Kale Tavas was characterized by the homogeneity in the positioning and relationship of its buildings before abandonment. The historical settlement consisted of organic lot organization with limited voids and compact relationship with neighbours.

The lot sizes of the buildings varied between approximately 5 m^2 and 300 m^2 in the settlement (Figure 73). While buildings with large areas were monuments (Cevher Paşa Mosque: 302 m^2), small areas were generally shops (6 m^2) and fountains (4.5 m^2). Lot sizes of open areas were larger than closed spaces. Apart from monuments, the buildings in the settlement generally had small lots approximately 50 m^2. In addition, the housing unit with courtyards (average 70 m^2) had larger lot areas than only mass housing units (average 53.3 m^2) (Figure 74). There is no agricultural land within the residential area, because of the limitations of topography and water. Cultivation of plants in the gardens is just for daily needs, not for an economic purpose. The fact that the gardens have large lots (average 337.9 m^2) proves that they were residential lots in the past, as mentioned above. Moreover, the location and lot sizes of empty lots prove that they consisted of more than one building lot that were previously integrated with unknown reasons: possibly a landslide. There were different landform in Kale Tavas:

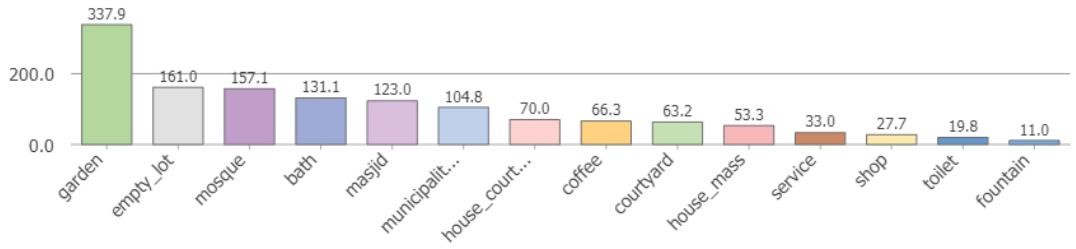


Figure 73. The comparison of average areas of different land usage

Figure 74. Map of the Lot Sizes, Kale Tavas

4.2.1.3.4. Relation of Buildings

The housing units and monuments were interwoven to each other very tightly. There were four different relations with neighbours: independent building, building juxtaposed by another building on its one side, building juxtaposed by buildings on its two sides and buildings surrounded by others on its more than two sides. Buildings surrounded by others on its more than two sides was the common relation type (Figure 75). According to relation analysis, building juxtaposed by buildings on its two sides is

the common relation type (718/1086), on the other hand, independent relation type was rare (36/1086): 15 residential building, the independent monument and structures were (Cevherpaşa Mosque) and fountains and two service buildings. On the other hand, monuments (mosque and masjid) were generally juxtaposed by other buildings on their two or three sides (Figure 78).

The common relation type for the residential building is building juxtaposed by buildings on its two sides (409/910). The other common relation type is the buildings surrounded by others on its all sides (309/910) (Figure 76). Residential buildings with a relation distribution courtyard and houses with only a mass are almost equal (201-203) (Figure 77). It is understood that housing units and monuments had very tight relation with each other. Only monuments had independent relation type.

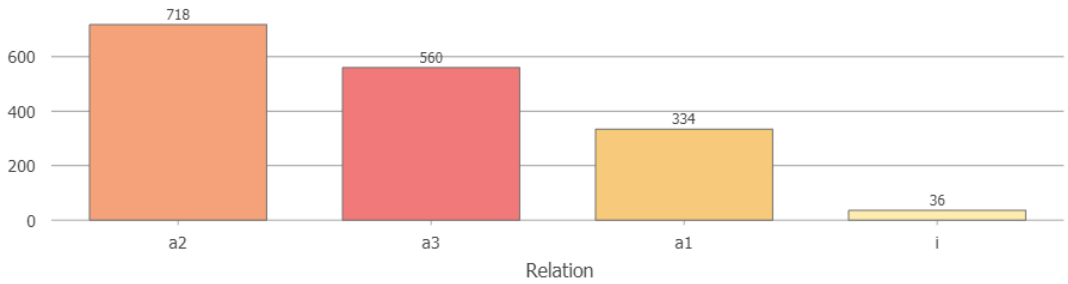


Figure 75. The comparison of building counts by relation.

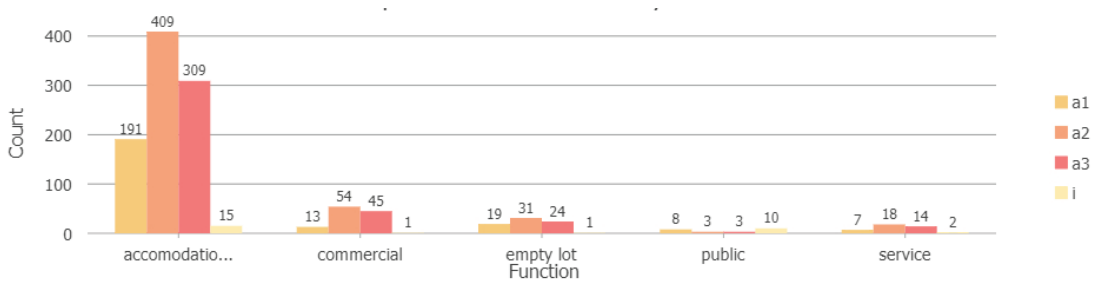


Figure 76. The comparison of counts of building function by relation.

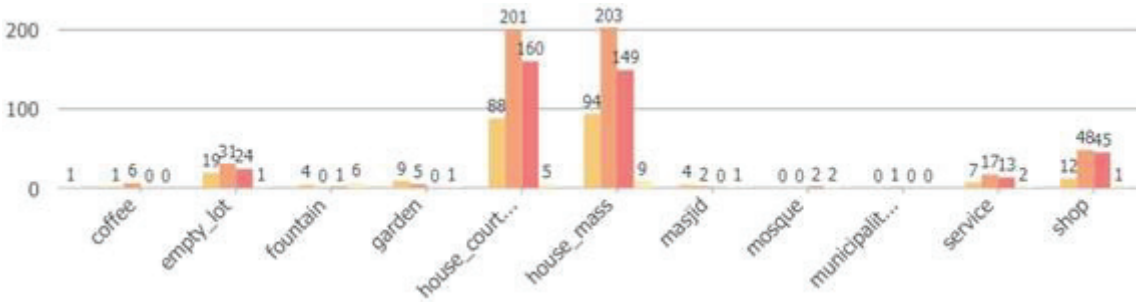


Figure 77. The comparison of counts of land use by relation

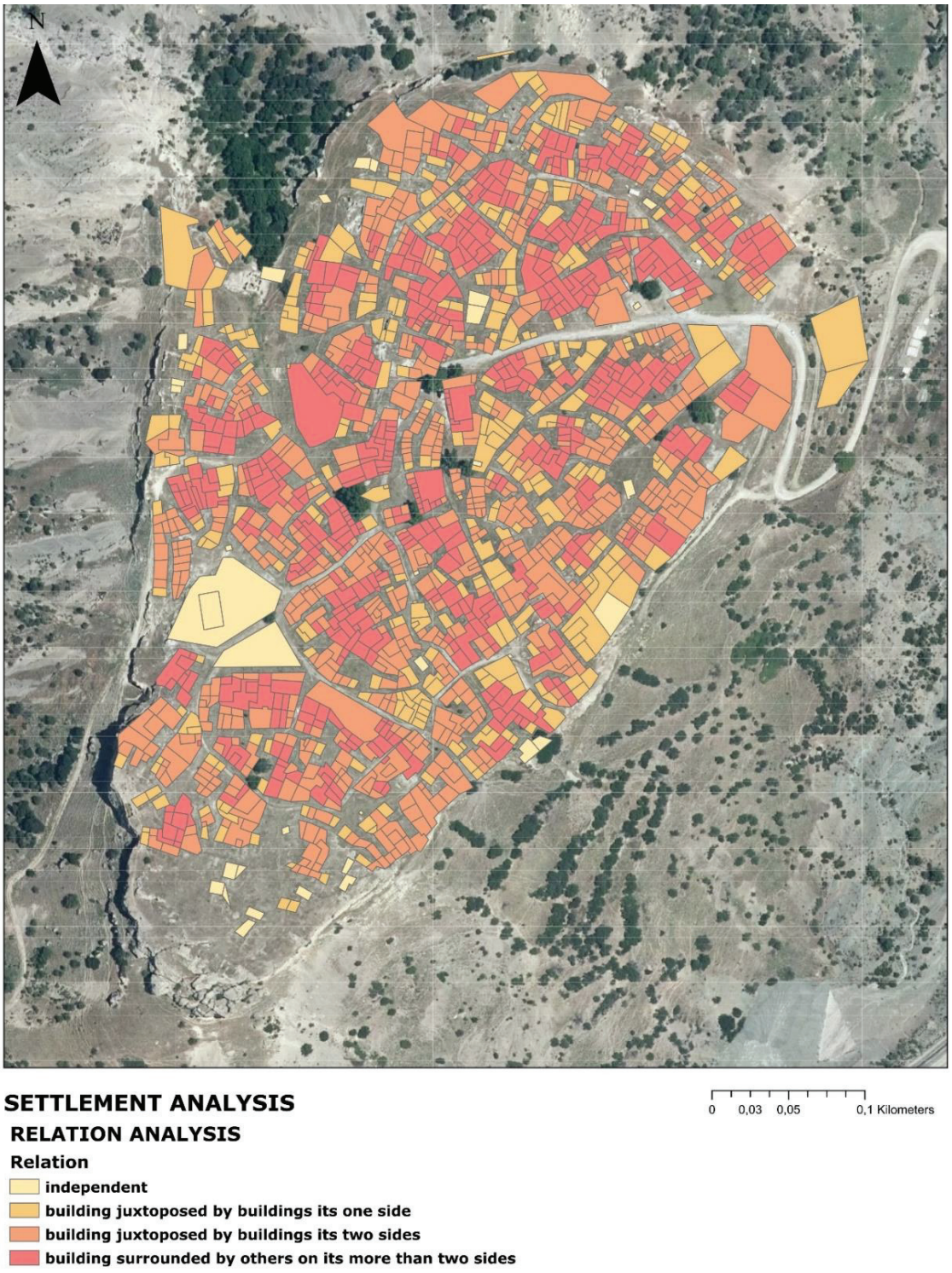


Figure 78. The Map of the Building Relations, Kale Tavas

4.2.1.3.5. Location

Almost all of the commercial buildings and most of the public buildings were located in the center (Figure 79, Figure 82). There were also plenty of housing units in the center. For this reason, the average lot size in the center (57,9m^2) was smaller than that in the zone circumscribing it (68 m^2) (Figure 80). Housing units with or without a courtyard surrounded this dense central zone all around homogeneously (Figure 81).

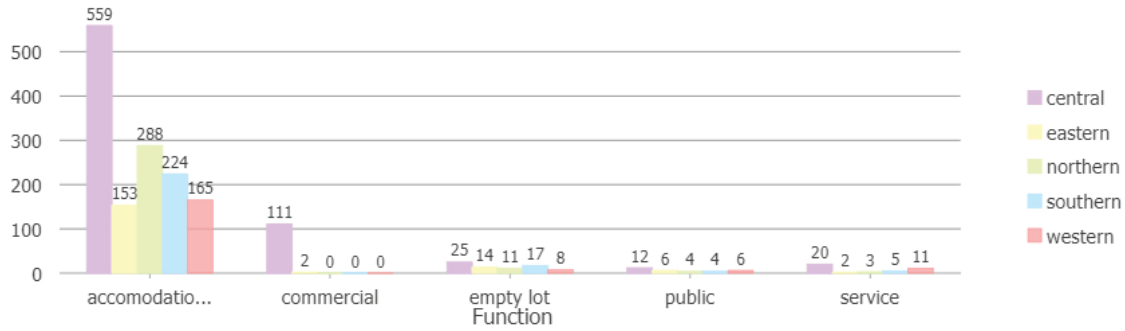


Figure 79. The locations of the urban activities, Kale Tavas.

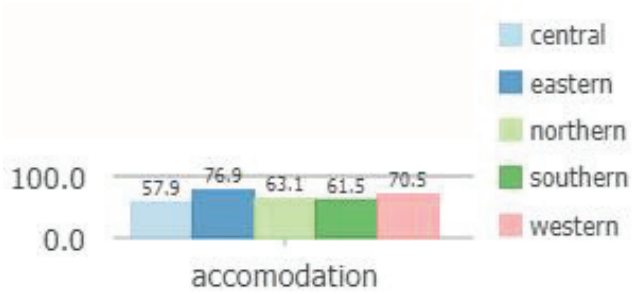


Figure 80. The comparison of average of area of housing units of location, Kale Tavas.

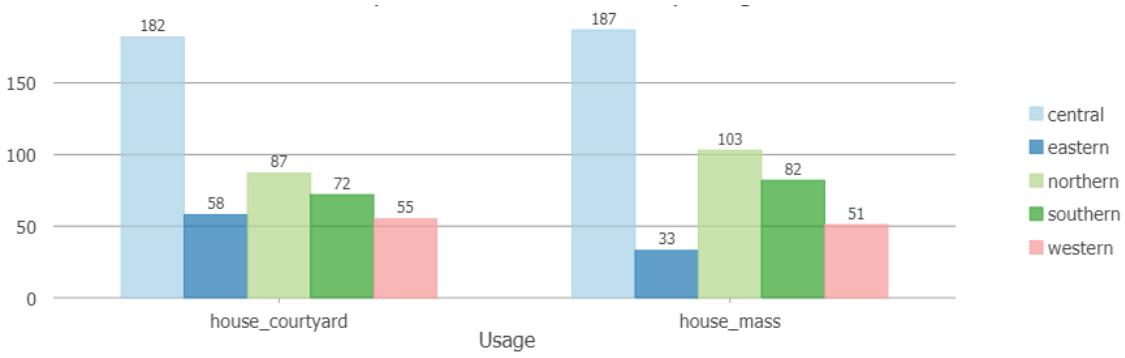


Figure 81. The locations of the housing unit type, Kale Tavas.

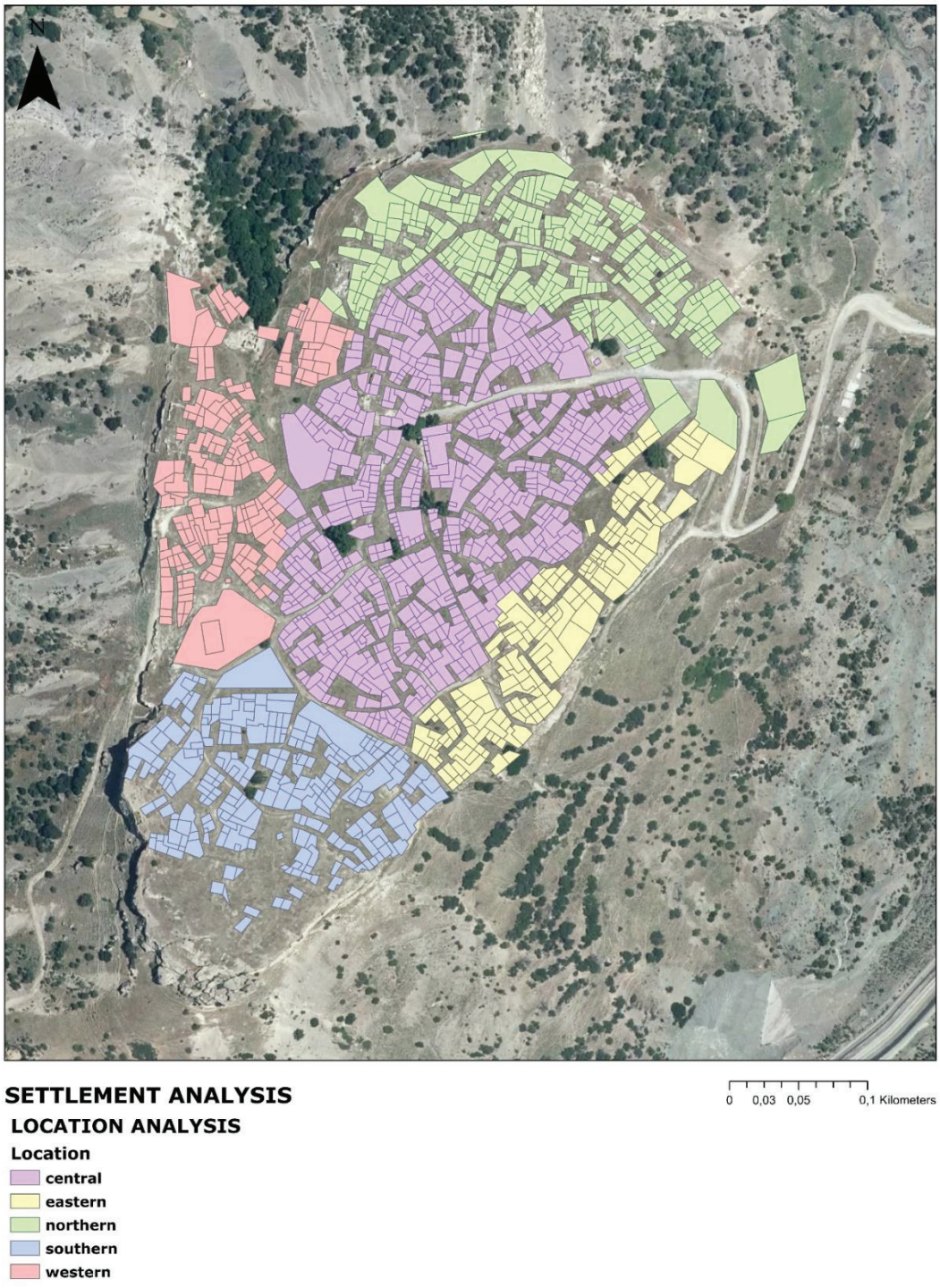


Figure 82. The Map of the Locations of Lots

4.2.1.3.6. Levels

The settlement had a rugged terrain. Heights of land range from 1085 m. to 1115 m. It is observed that the site ascends towards the northeast direction and reaches 1105 m.-1115 m. The fact that this area is relatively higher suggests that the inner castle could be located in this zone, when the settlement was used as a castle (Figure 85).

The land rises 18 meters from west (1088 m.) to east (1106 m.) and 7 meters from north (1098 m.) to south (1105 m.) (Figure 83, Figure 84).

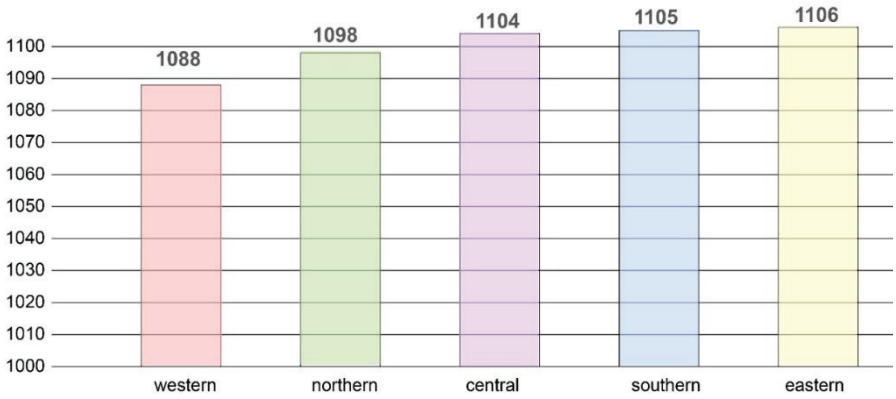


Figure 83. The relation of mean levels with location

In addition, the presence of buildings on the outer ring of the settlement at lower altitudes proves that there was a landslide in the settlement (Figure 84).

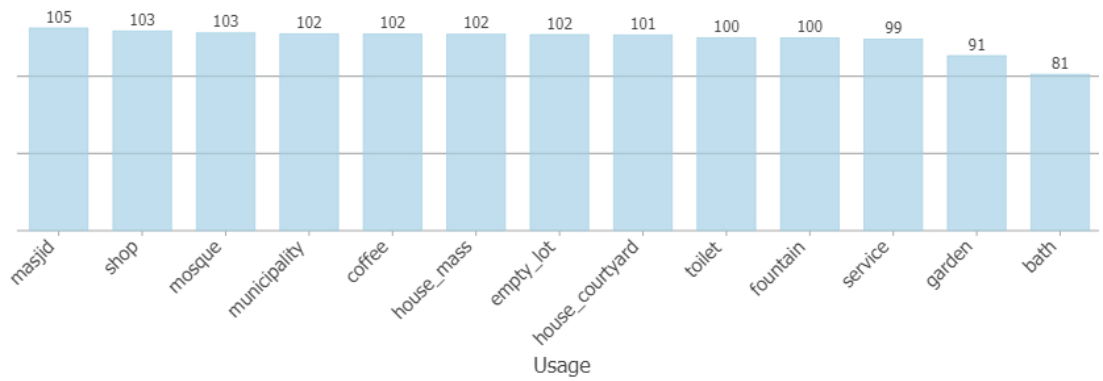


Figure 84.The means for levels for each land use

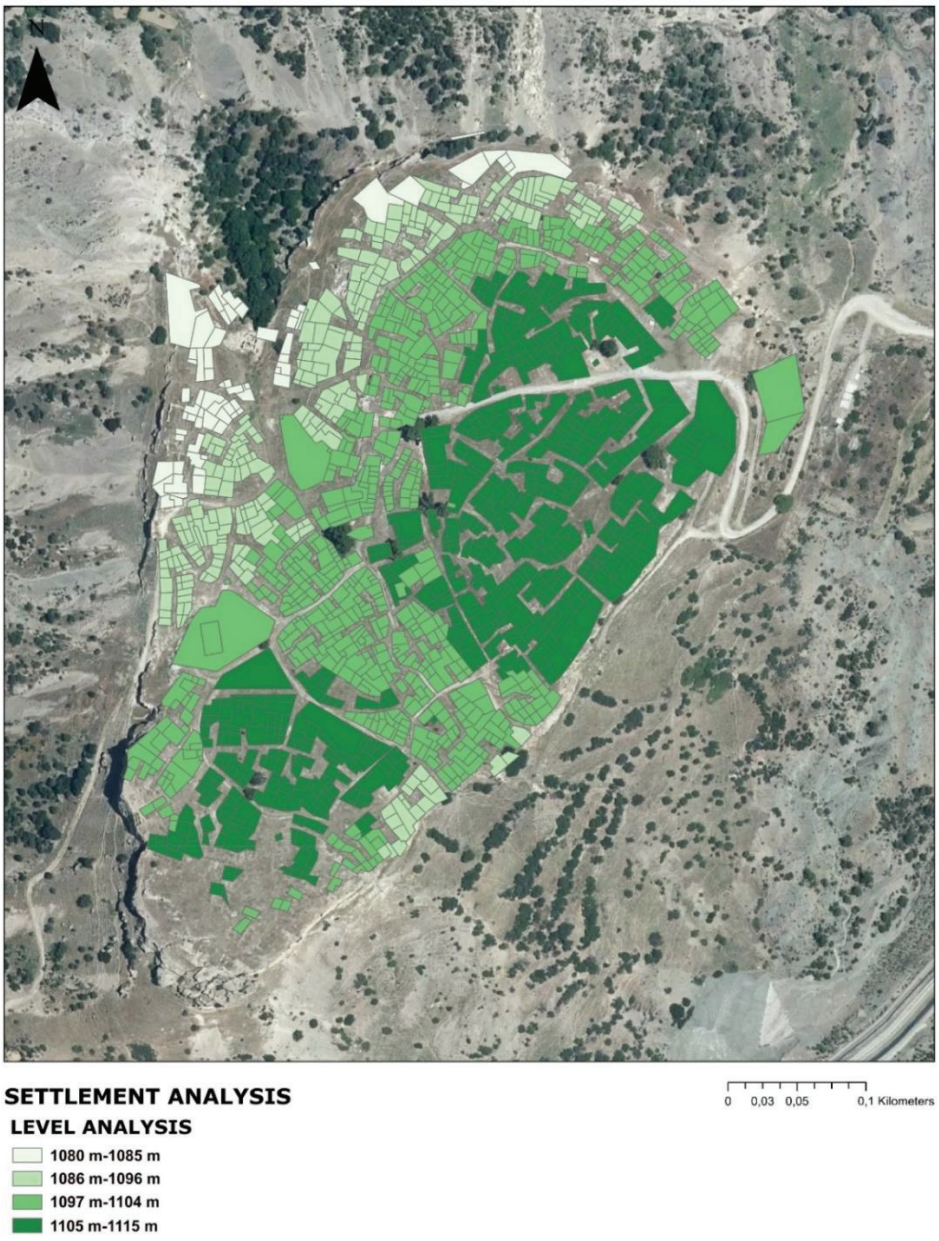


Figure 85. The Map of the Levels of settlement zone, Kale Tavas

4.2.1.3.7. Conservation State

Until the end of the 1950s, the city was used as a settlement, however it was abandoned due to natural disasters and almost the entire city was devastated except for two mosques, a bath and a few fountains (Ersoy, 2012: 416). Almost all of the building material of other buildings were relocated to a new place known as “1003-1005-1008 Evler” at three kilometres to Kale Tavas. These materials were reused at the service buildings or sold as debris (Beyazıt, 2016: 66). Thus, today, the settlement has no structure that has sustained

its integrity except the Cevherpaşa Mosque and the *minaret* of the Pazaryeri Mosque. Cevherpaşa Mosque was restored and a part of basement of Pazaryeri Mosque was restored. All of the other buildings and structures are in ruins (Cevher Paşa Bath and fountains) or completely lost (

Figure 86). After abandonment, Kale Tavas was listed in the 1985 by the High Conservation Council. In addition, the archaeological studies of Tabae Ancient City, which started in 2007, are still in progress.

Figure 86. The Map of the Conservation State, Kale Tavas

4.2.1.4. Cultural Heritage Values and Preservation Problems of Kale Tavas

The cultural heritage values and preservation problems of Kale Tavas will be evaluated in the below.

- **Values**

The multi-layered castle town has cultural heritage value. Kale Tavas was a safe place for its inhabitants due to its strategic location and natural features. Moreover, the mesa was used as a residential area throughout history until the replacement. Prairies, agricultural lands and villages at the mountain skirts in the area under its control, and the caravan route providing access to this enclosed area were all elements of the cultural landscape of Kale Tavas. They are essential in the way of proving that the history of the area dates back more than four thousand years ago: Middle Late Bronze Age. Different states such as the Byzantine Empire, the *Beylik*s of Menteşe, and the Ottoman Empire have lived in Kale Tavas, and had left their traces here. The archaeological remains are important since they document the history of the site goes back to four thousand years.

There are architectural remains of Roman baths, fountains, a chapel with niche carved in the rock, and some cisterns constructed in the Roman Period. The remains of the bases provide information on the lot organization of residential areas and spatial organization of housing units. Graveyards are in settlement itself and in the southeast hill side of Kale Tavas. The inscriptions on gravestones give information about this long history of the settlement. In addition, the scientific excavation has been continuing since 2007. These archaeological studies are important in terms of revealing the tangible characteristics in the settlement. Moreover, the oral history studies are essential to reveal and document of the social and cultural features of Kale Tavas. In addition, Kaledavaz Symposium was held between 2-3 April 2012 with the cooperation of Pamukkale University and Kale Municipality (Tok and Aydemir 2012). This symposium and its book are important in terms of researching the tangible and intangible values of the region and transferring the information to future generations. These are document value of Kale Tavas.

Before abandonment, living on the isolated hill surrounded by steep ditches should have evoked the sense of a safe place. In addition, the feeling of loneliness should

have been apparent to its inhabitants. Although it is abandoned, the hill is still a focal point with its physical form. These are rarity value of Kale Tavas.

Prairies, agricultural lands, and villages at the mountain skirts were all elements of the cultural landscape of Kale Tavas. The tight relation of these elements provides the integrity value of Kale Tavas.

The Cevherpaşa Mosque was reconstructed in 2006. After the mosque started to be used again, the inhabitants traditionally perform Friday prayers and Eid prayers in this mosque. This ritual is the memory value of Kale Tavas.

Spiritual connection comprises of local traditions such as preparation of winter food in common courtyards (e.g. *irenk* and *bezirme*), collecting the snow underground in winter and selling it in the bazaar as snow candy (*kar helvası*) in summers; stories about the name of the settlement[23]; and the way of the settling, dialect and the names of local objects such as *düven* and *yuğğu* stone even day such as *mor pazar*[24] and *solmaz günü*[25]. In addition, there were entertainment activities such as singing local songs, making folk dances, and organizing wedding ceremonies (Interview with PR, 2019).

After abandonment, agricultural activity decreased compared to the past on the plains, however, it continues. Moreover, animal husbandry, weaving, dialect, local words as mentioned above, and cooperation of the former inhabitants still continue. The cooperation and traditions stemming from the impossibility of departure location were transformed. These provide traditional value to Kale Tavas.

- **Problems**

There are conservation problems caused by the abandonment of the castle. These are listed below.

The replacement of this castle town to the plain under its control gave way to a rapid loss of both its tangible and intangible assets. All building materials in the departure location to the destination location caused to lose all of authentic castle town characteristics of the settlement. Although the seasonal migration and weaving activity, continued in the years after replacement, today they are lost in the destination town. The loss of physical, economic, socio-cultural integrity of the castle with its landscape is the major preservation problem detected.

[23] The name Tavas or Davas can also name after *tavı az* means unfavorable state stemming from the lack of fertile agricultural land in the castle.

[24] It means Monday in English and *Pazartesi* in Turkish.

[25] It means Monday in English and *Pazartesi* in Turkish.

Although the communication between the inhabitants continued after the replacement, the authentic spirit of place had disappeared. In addition, the former inhabitants had better infrastructure opportunities in their destination towns. So, cooperation became less critical.

In addition, the fact that all the building materials in the settlement were replaced and that there was nothing except archaeological remains, a mosque and a minaret of mosque in the area, caused the departure settlement to transform into an archaeological area. In addition, abandonment of the settlement, its agricultural areas and prairies have ruined the integrity of the cultural landscape.

The scientific excavation studies have concentrated on the monuments of Roman Period. The investigation of other periods and traces deciphering daily life is of great importance for understanding the castle town. In addition, the presentation technique of the archaeological site does not give any clue that Kale Tavas was used intensively until very recently. In the related presentations, the archaeological potential of the castle should be evaluated together with the cultural landscape values.

The conservation boundary of Kale Tavas does not cover all landscape elements that need to be protected, thus the irregular construction that causes the landscape to disappear continues. This causes the silhouette and natural vegetation of the castle town, which have a unique view, to disappear.

This study proposes to protect the landscape border, which is determined based on the definition of the cultural landscape, within the buffer zone (Figure 87).

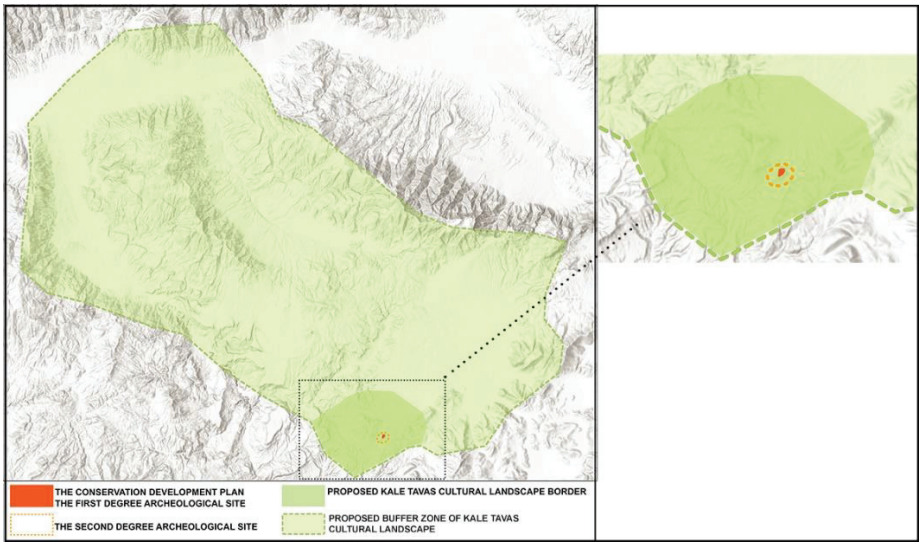


Figure 87. The legal and proposed conservation borders of Kale Tavas Cultural Landscape

4.2.2. Honaz

Physical, social, economic, cultural evolution of Honaz Cultural Landscape and Honaz town are identified.

4.2.2.1. Natural Evolution of Honaz

The natural characteristics of Honaz cultural landscape are analyzed with respect to concepts of topography and landform, in a retrospective perspective. Then, natural characteristics of Honaz town are presented.

4.2.2.1.1. Topography

The landscape of Honaz is composed of low elevation areas surrounded by high areas. The highest areas are 2517 m., but the majority of the area is between 250-500 m. (18%). A small portion is between 500-750 m (16%) (Figure 88).

The topography of the Honaz region has undergone different geological stages in history. Honaz is located at the north hill skirt of the Honaz Mountain which is a part of the Western Taurus (*Batı Toroslar*) is made up of over laid a number of tectonic units. Different tectonic units in the Mount Honaz region show effects of Late Cretaceous[26], Middle Eocene[27] tectonics (Aral 1989, 37).

The Denizli region is seismically active and is located at the point of intersection of the faults that bound the graben and this region is within the first-degree earthquake zone it is under the seismic effect of the Menderes and Denizli Horst and Graben. The earthquakes that took place in the region caused population changes in the settlements and even the destruction of the settlements. Earlier earthquakes occurring in this region damaged important settlements such as Hierapolis, Laodicea and Colossae. The destructive effects of the earthquakes are well documented by the archaeologic evidence in Roman and Byzantine (Piccardi 2007; Hancock and Altunel 1997). The most well-

[26] Cretaceous Period began 145.0 million years ago and ended 66 million years ago (britannica website 2023).

[27] Middle Eocene Epoch, second of three major worldwide divisions that began 56 million years ago and ended 33.9 million years ago (britannica website 2023).

known and the strongest one was called Neronian earthquake of A.D. 60 (Piccardi 2007). Although 15 earthquakes ranging from 5.0 to 6.0 magnitude occurred in the Denizli area from the years 1900 to 2008, these earthquakes can cause damages (Hançer 2013, 403). Additionally, the earthquake that took place in Honaz in 1651 caused the complete destruction of some villages such as Gün, Akdere, Damık, Karaoğlan, Ulubağ, Kozcalar and Kızılca Kaklık with a high population density.

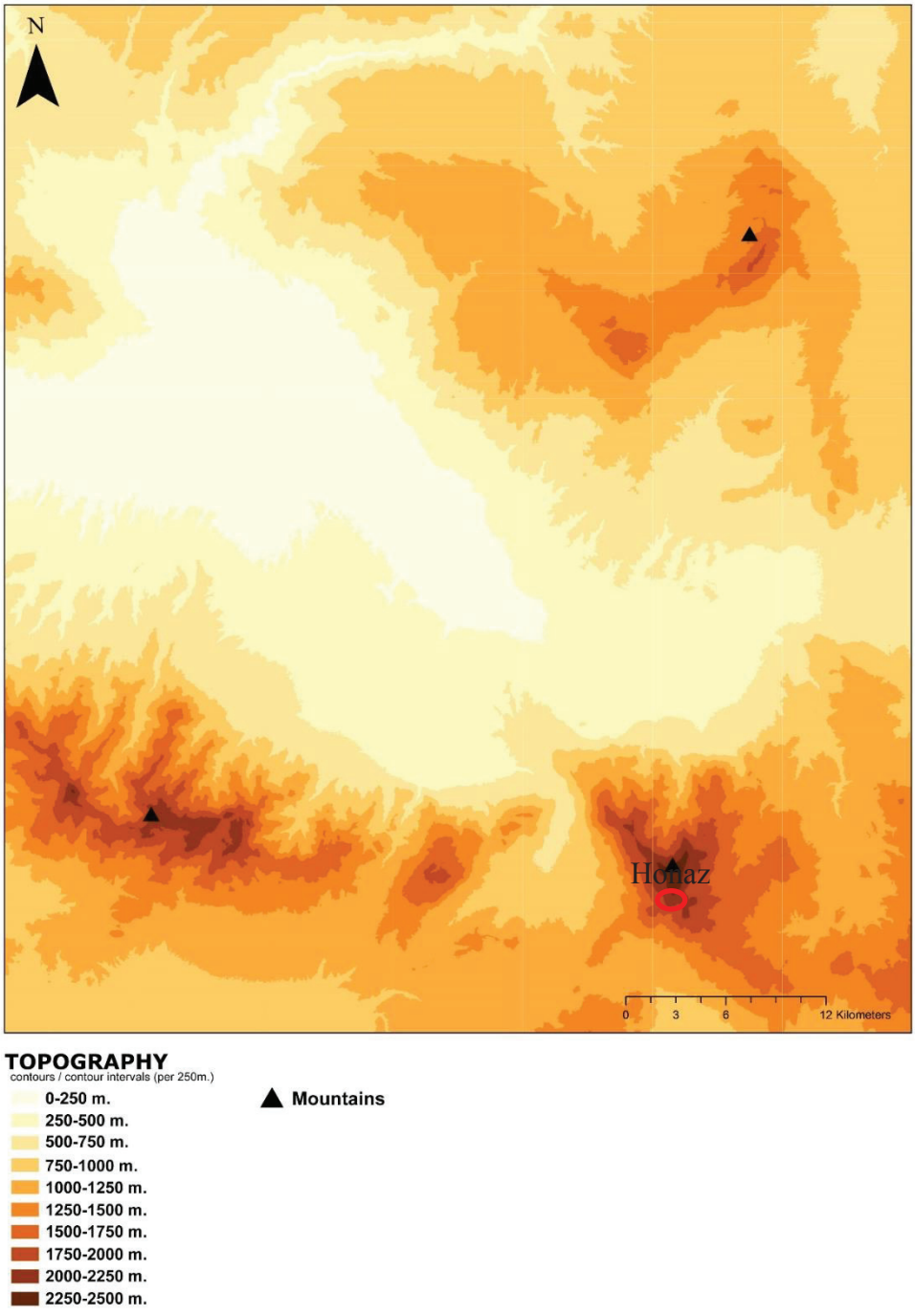


Figure 88. The Map of Topography of Honaz

4.2.2.1.2. Landform

The topography of Honaz region is evaluated at five different levels: 0-400 m, 400-740 m, 740-1000 m, 1000-1500 m, 1500-2600 m. The landforms covering the topography are mountains, hill, hill side, high plain, lower plain, valley, and brook (Figure 92).

Honaz Mountain is part of the Menderes massif is in turn tectonically overlain by the Lycian nappes made up of Mesozoic dolomites and limestones and ophiolite (Gündoğan et al. 2008, 53). Honaz Castle is located on a slightly sloping plain on the durable rocky an almost inaccessible steep hill. The three sides of the Honaz castle are surrounded by deep cliffs, so the entrance to the castle could only be from the east. It was hard to access the castle because of its high altitude (Figure 89).

Figure 89. The hillside of the Honaz Mountain where Honaz Castle was located, 2020

The highest points refer to the peaks of the mountains surrounding the area which are Babadağ Mountain (2370 m.) and Honaz Mountain (2571 m.) at the south and Çubuk Mountain (2296 m.) at the west and Çökelez Mountain (2017 m.) at the east direction. These mountains constitute the visual boundaries of the lower height plains and settlements (Figure 92). Some settlements are located at the hill skirts of these mountains. The average height of hill sides is about 1000-1500 m.

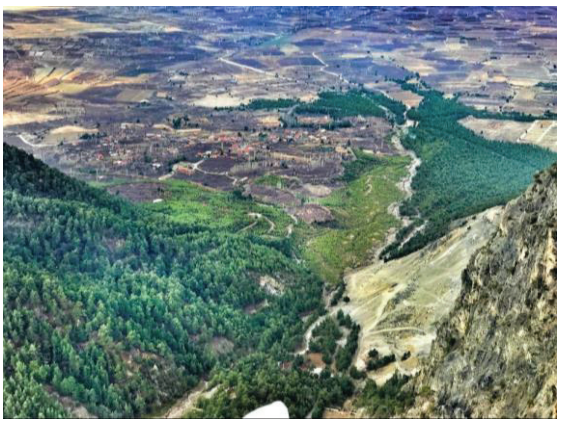
The lower areas are separated as high plain and low plain. The average of the high plain is 740-1000 and average of low plains is 400-740 (Figure 90).

Figure 90. The view of Baklan Plain from Honaz, 2020

Honaz is surrounded by mountains and plains (Figure 8). Baklan plain is located at the north direction. The average height of the plain is above 740 m. (Figure 92).

The lowest landforms in the topography are valleys. The average height of valleys is lower than 10 m. These valleys surround the Akçay brook along the west-east direction. This valley, which was called Lycos in the past, was described as a very wet place by the traveller Francis Vyvyan Jago Arundell in the 19th century (Arundel 1834, 142).

The cultural landscape of Honaz has different vista points. The view from the castle area to landscape consists of the historical road, Barza plain, valleys, graveyards, the fertile agricultural areas and the one side of the Çökelez and Sazak mountains and at the back the grand Honaz Mountain that form the border of the landscape (Figure 91a). The view from the lower level is the Honaz Mountain. Since, the hillside where the castle was formerly located is completely empty (Figure 91b).



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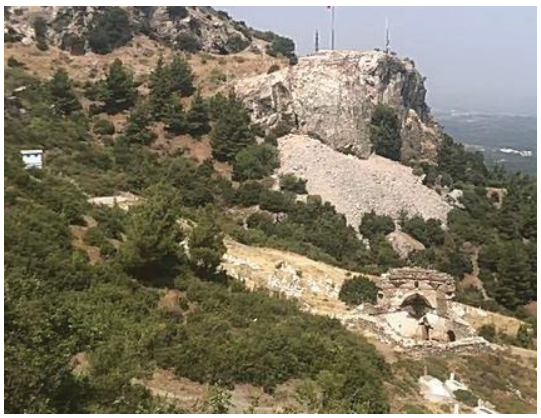
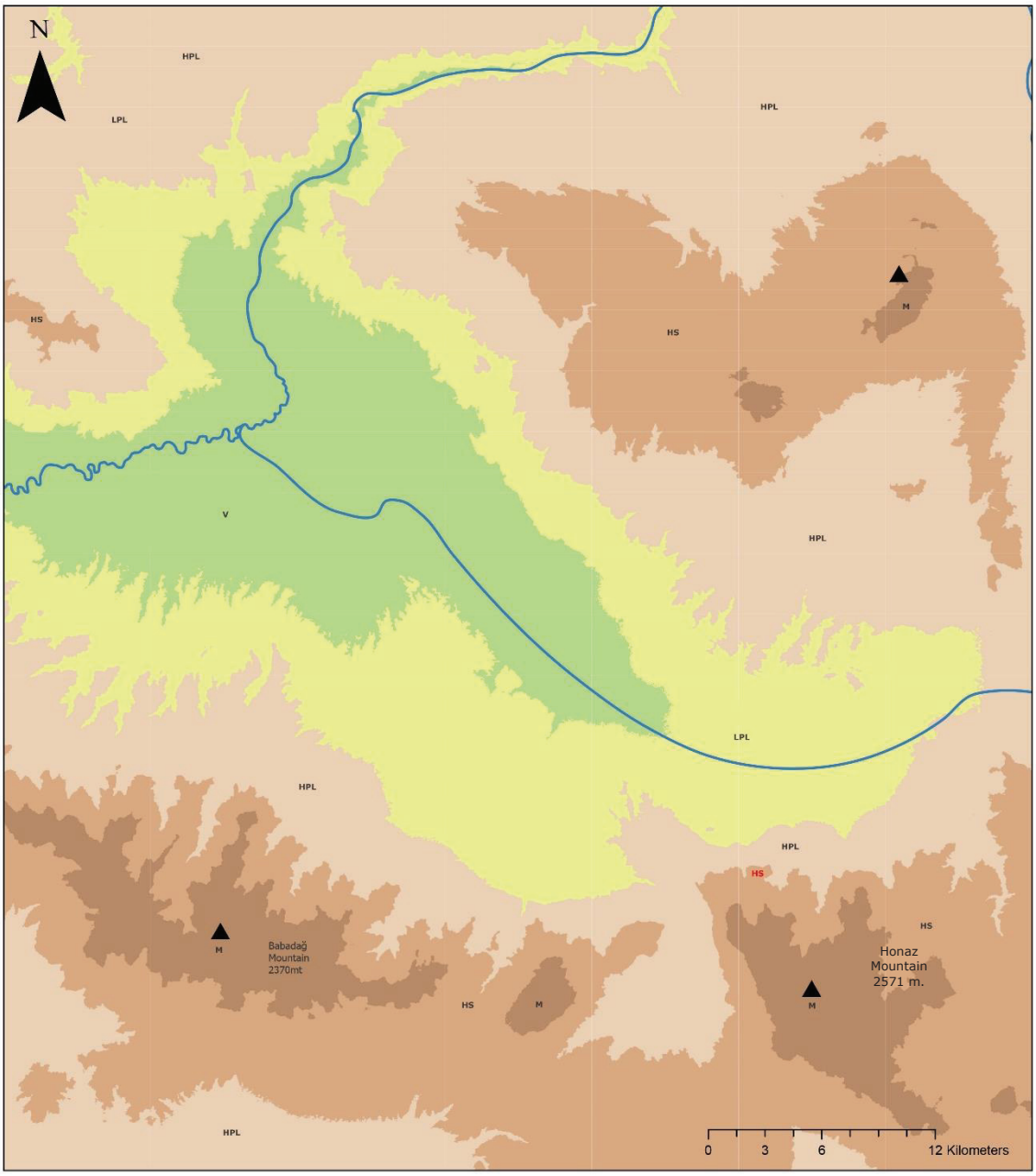


b

Figure 91. a) The view of Honaz landscape from Honaz hillside,
b) The view of Honaz and Sultan Murad Mosque from the Barza Plain



LAND FORM

- 0-400 m.
- 400-740 m.
- 740-1000 m.
- 1000-1500 m.
- 1500-2600 m.
- Mountain Peak
- Brook
- V Valley
- LPL Lower Plain
- HPL High Plain
- HS Hill Side
- HS Hill Side (Honaz)
- M Mountain

Figure 92. The Map of Landform, Honaz

4.2.2.2. Cultural Evolution of Honaz

The cultural characteristics of Honaz cultural landscape are presented with respect to concepts of time-depth and land cover, in a retrospective perspective.

4.2.2.2.1. Time-depth of Honaz

The social, economic, and cultural evolution of Honaz is presented for each historical period in the below.

- **Ancient Period**

According to the finds 6km northeast of Honaz, the history of the region is thought to date back to the Bronze Age (Kılıç 2015, 1-2).

Honaz was a historic settlement unit which was located at southwest border of the historic region named Phrygian (Foss 1977, 484) (Figure 93). Honaz was called Chonae (Foss 1977; Strabon 2005; Sevin 2013), Khonai (Ramsay 1890, 93), Hkonai (Ünal 2006, 103) in that period. Chonae was located five kilometres north of Collosae, one of the Phrygian settlements of the antient period.

Figure 93. The map of Asia Minor, Drawn by Mitchell, Samuel Augustus, 1875 (Source: David Rumsey Map Collection, 2014)

- **Classical Period**

Colossea was one of the twenty cities that formed the military administration of the coastal lands in the Thrakesian Theme, which separated from the Anatolic Theme in the 10th century AD (Foss 1977, 471). The Colossea site was in the Lykos River[28] valley next to other Chonai, Leodicea and Hierapolis sites on the same theme (Ramsay, 1890; 151). Collosae was in the open plain as a gate of high road along the Lykos valley with defenceless condition which was not disadvantage in the Roman and early Byzantine period. That road connected the Menderes valley to Ephesus, which was the most important export port of the Aegean region in the Roman period. Cities such as Tralles (Aydın), Leodikeia (Ladik), Colossea and Apamea (Dinar) on this road have grown and gained importance (Charlesworth 1924, 88). Colossea was mentioned as a bishopric at the council held in Constantinople in 692 AC (Bulletin 2 1897, 359). However, security became a more important issue and inhabitants were moving away from Colossae to safer city of Chonae (modern Honaz) 3 miles to the south on the north slopes of Cadmus Mountain between 692 and 787 A.C. when was the weakest time of the Byzantine empire stemming from dangerous and widespread Arab invasions (Ramsay 1897, 359). Chonae was a station for soldiers, and Chonae was the most powerful fortress in the Lykos valley, and it was the chief military centre of that valley in the Byzantine period (Bulletin 2 1897; 359). The population of Chonae increased and the city grew up. Finally, it became an archbishopric in 858 A.C. (Ramsay 1890, 91). The famous Archangel Michael church, which was one of the most famous pilgrimage centers of the empire, was also relocation to Chonae. The magnificent church, one of the most important values of Colossae, has also become one of the remarkable values of Chonae (Foss 1977, 473, 484). It is thought to be that the Archangel Michael church was located near the Colossea at the skirt of the Cadmos Mountain. In addition, the Byzantine historian Niketas Khoniates (1155-1217), who was born in Chonae, described the settlement as a prosperous and magnificent city (Khoniates 1995, 123). He also described that church as an extraordinarily large, charmingly beautiful work of art with all its features (Khoniates 1995, 123). Furthermore, Chonae Castle connected the other important castle located at the same region which was

[28] The ancient name of today's Akçay River pass by Honaz separated the Phrygia and Karia regions.

the Khoma with the central Byzantine Road (Ramsay 1890, 79). It was thought that Chonae and Khoma were the twin castes (Baykara 2007, 151) (Figure 94).

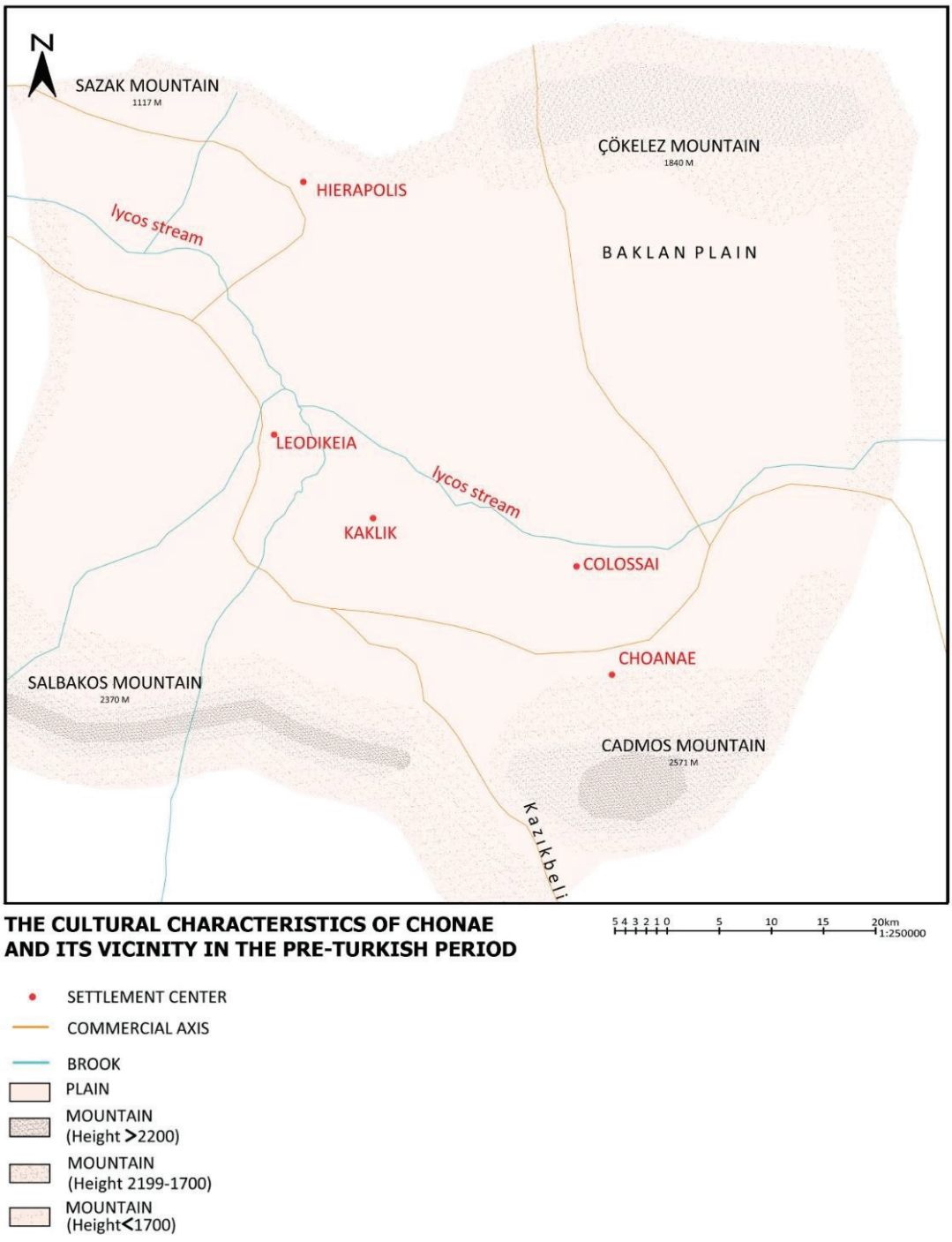


Figure 94. The Map of the Cultural Characteristics of Chonae and its vicinity in the Pre-Turkish Period

- **Seljuk Period**

After the Malazgirt War (1071), Laodikeia and its surroundings came under Seljuk rule between 1073 and 1075 (Baykara 2007, 150). Chonae changed hands many times because of the Crusades in the 12th century. It was permanently captured by Seljuk at the beginning of the 13th century. The Turks continued to use some of the existing names in a similar way. Chonae continued to be named Honas and later Honaz (Baykara 1988, 20). The Greek population in Honaz continued to live here. It is also understood from the inscriptions belonging to these years that Honaz maintained its importance as a settlement (Ülkütaşır 1949, 130). In this period, the name of Honaz was mentioned together with Ladik (former Laodicea) in the same region. It continued until the middle of the century. It is a state to which different provinces were attached. The Turkmen nomads spread over the Lycos valley (Ramsay 1895, 27). Even in the second half of the 13th century, it is thought that the Turkmen population of only those living in Denizli and its environs were 200 000 (Sümer 1979, 14 cited in Özçelik 2005, 20).

- **Classical Ottoman Period (1429-at the end of the 18th Century)**

Nefs-i Honaz was one of the *kaza*s of the Ottoman administrative system of Kütahya sanjak in 1429 together with Çal, Baklan, Denizli, Sarayköy and Buldan. Nefs-i Honaz was still used for defensive purposes and as a residential area. It has 24 villages in the first half of the century. Gün, Gözler, Eldenizli-i Sagir, Dere and Ovacık are large villages, while Eyneali, Eyücek, Karaoğlan, Tekeli, Kozcalar and Kızılca, Kaklık were small villages (Parlaz 2006, 144). The population of the region increased, and the settlement area spread to the skirt of the castle. Sultan Murat Mosque was built on the skirt of the castle during Murat's expedition to Denizli in 1479 (Baykara 2007, 152).

Nefs-i Honaz consisted of four quarters, namely Yenice, Belen, Kadı and Cemaati Kefere. Three of the existing neighbourhoods were Muslim and one was non-Muslim. Non-Muslims had 51 houses and 14 immigrants. The Muslim population, with a total of 290 houses, constituted the majority of the Honaz population (Parlaz 2007, 146).

According to *Avarız* Notebooks; the names of Akdere, Damık, Karaoğlan, Ulubağ, Kozcalar and Kızılca Kaklık villages, including Gün village, which had the highest population among these villages, which were included in the population records in 1623, were not included in the 1678 census (Parlaz 2007). While there 24 villages in 1623 in Honaz, this number decreased to 22 in 1678. In 1651, an earthquake of magnitude 8 occurred in Honaz and 700 people died in Honaz and its villages (Zachariadou 2001,

126). This severe earthquake may be the reason why some villages with high populations were destroyed. In addition, the villages of Gözeler, Irlıganlı, Kızıllar, Seyyidler and Toğanlu were referred to as newly established villages before 1678.

In this period, agriculture, animal husbandry and weaving were the most important livelihoods. Evliya Çelebi called the town as Honazabad in 1670: "a tannery was located at the head of Akgözpınarı (the former Lykos River), and the flour mills on the river are important for the economic life of the city" (Kahraman and Dağlı 2006).

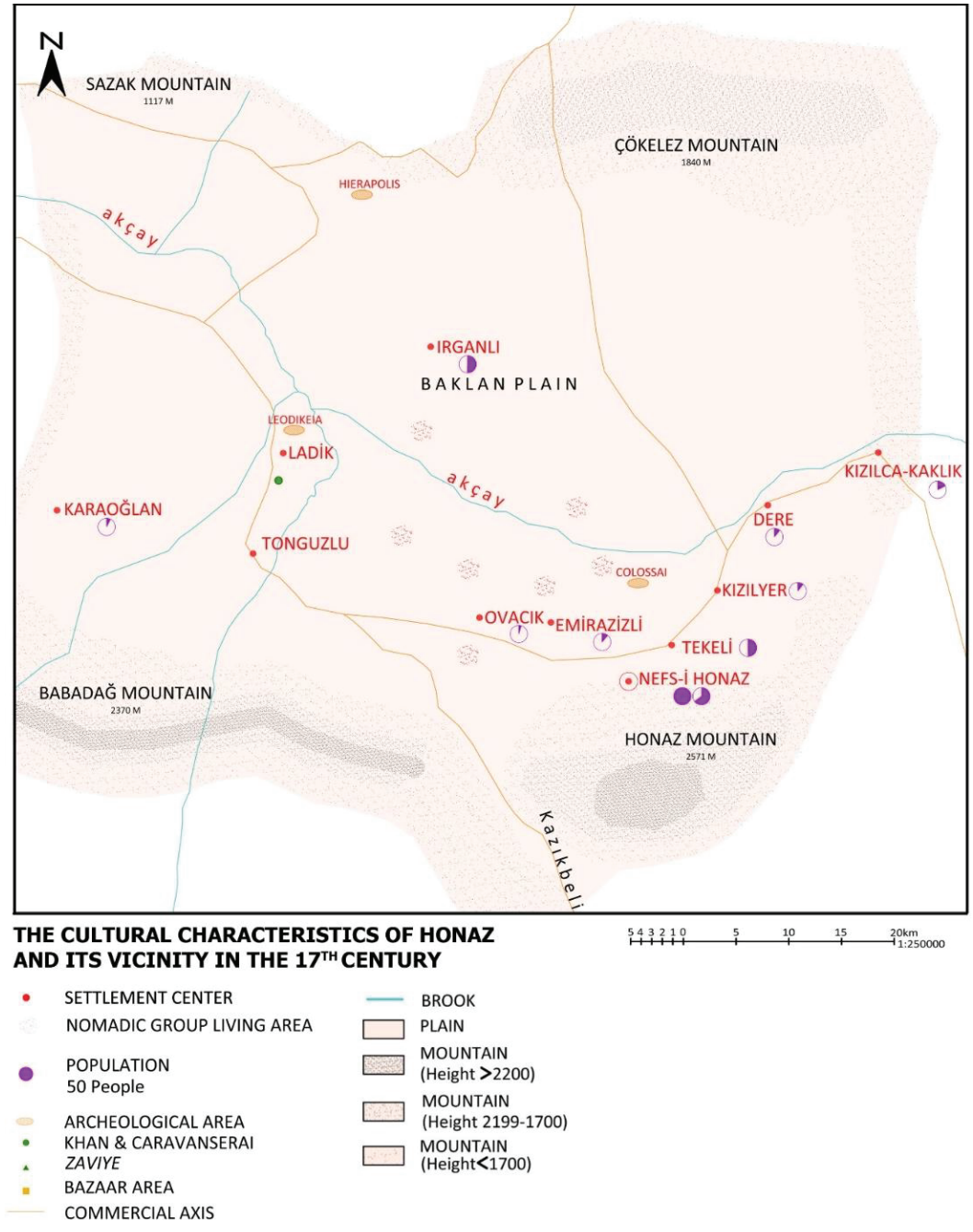


Figure 95. The Map of the Cultural Characteristics of Honaz and its vicinity in the 17th century

- **Ottoman Modernization Period (the beginning of the 19th Century-1923)**

Although Honaz had been an important settlement because of its strategic location, throughout the history, criteria for selecting settlement location changed based on economic reasons in the 19th century. Accessibility became more important than safety. In addition, the surface area of the castle was too limited. So, the inner castle was abandoned at the end of the 19th century and the settlement shifted towards the mountain slopes in the southeast direction (Figure 96).

Temettuat Notebooks in 19th century, present an increase in the number of villages and farms and the population of Honaz compared to the 17th century. According to the first modern census of the Ottoman Empire in 1831, the population of the Aşağı Neighbourhood and Hisar Neighbourhood, at the Honaz center was 2105. The population of non-Muslims living in the Hisar Neighbourhood was thought to be 265. Whereas Honaz had 18 villages and farms and their total population was 3060 (Özçelik, 2005; 29). The population of non-Muslims living in the Hisar Neighbourhood was thought to be 260 (Karal, 1997 cited in Özçelik, 2005).

After the declaration of The Rescript of Gülhane in 1839, Denizli was connected to the Aydın Province. After Denizli became a sanjak of Aydın, Honaz was transformed into a *nahiye* (township) of Denizli Sanjak (Kodal 2014, 33).

According to *Salname* of Aydın, in 1896, the total population of Honaz district was 10050 Muslims and 392 Greeks. There was a Muslim-Rum population of 10442 and 3194 dwellings in Honaz (Özçelik, 2005; 13).

In the 19th, century, there were 4 mosques and 6 masjids, 4 *zaviye*s and 10 hamlets in Honaz. Main source of income was agriculture, sheep and goat farming and production of textile. The main agricultural products were grain and cotton in this century (Özçelik, 2005).

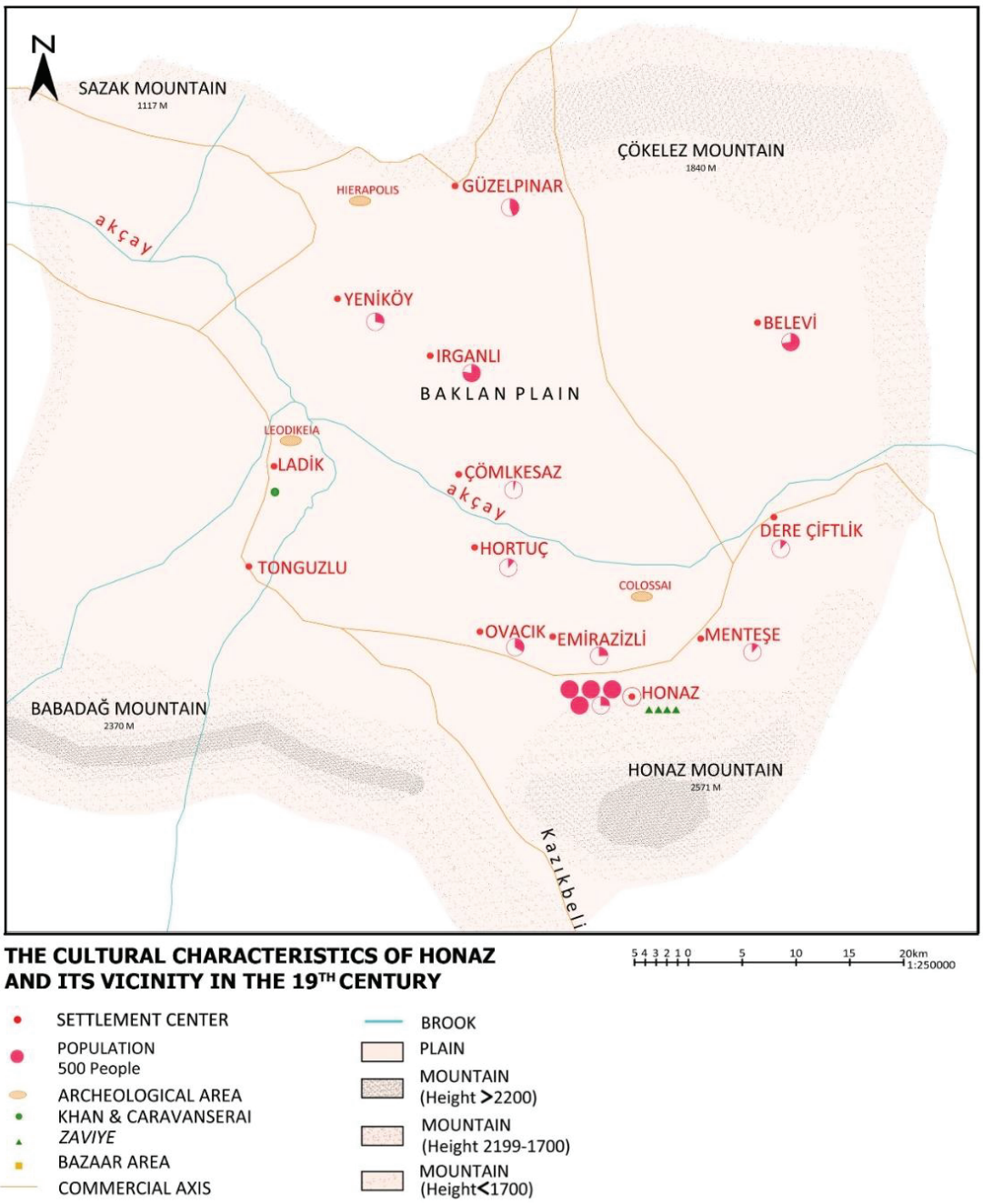


Figure 96. The Map of the Cultural Characteristics of Honaz and its vicinity in the 19th century

- **The Republic Period (1950-2000)**

After the proclamation of the Republic in 1923, one of the most important changes that affected the demographic structure of Honaz was the population exchange between Turkey and Greece between 1924 and 1930 (Haytoğlu 2006). In 1924, Rums moved from Hisaraltı neighbourhood of Honaz and Turks from Thessaloniki, Greece settled in Honaz with the population exchange (Han 1999). Although 82 of the 529 households that came

to Denizli between the years 1924-1930 were planned to be settled in Honaz, 70 households were actually settled. A church was located at the Hisar neighbourhood. It was converted to a mosque called Hisar Mosque in 1947 (Haytoğlu 2006).

The first official results regarding the population of Honaz in the Republican period can be obtained from the "1926 Province *Tahrir* (Census) Population". In this census, Honaz is one of the six townships of Denizli. It has been seen that a total of 2 270 people live in the center of Honaz District, and it has been revealed that the total population with its villages is 10 245 (Şakir 2014, 140).

While there were 37 villages in Honaz District in the 1950 General Population Census, this number decreased to 19 in 1955. Honaz lost a significant power with the separation of these seventeen villages, which made up about half of the population of Honaz District (Kodal 2017, 515).

Since the 1960 General Population Census, there has been a regular and continuous increase in the population status of Honaz District. This situation continued until Honaz subdistrict became a district. Honaz was turned into a district with its existing villages with the law dated 19.06.1987 and numbered 3392 (Kodal 2017, 525).

As seen above, there was a regular population increase in Honaz in the 20th century. As a result, the settlement, whose main livelihood has been agriculture and animal husbandry throughout history, has become irregularly urbanized. Agriculture and animal husbandry were partially abandonment.

Honaz castle towns has not been registered as a heritage site and archaeological studies has not started yet.

4.2.2.2.2. Land Cover

The sides of Babadağ Mountain and Honaz Mountain to the south and Çubuk Mountain to the west and Çökelez Mountain to the east constitute the visual boundaries of the settlement. Honaz Mountain (2571 m.), which gave its name to the settlement, is the highest mountain in the Aegean region. On the other hand, lower level of the hill sides of these mountains are covered with cultivated green areas shrublands for livestock farming and the agricultural fields. Within these boundaries, plains are covered with fertile agricultural fields. Baklan plain is rich regards the water sources throughout the

history. Even, Archangel Michael in Honaz was one of the important centres in terms of water sources (Foss 1996, 143).

Barza Plain was cultivated by the farmers who lived in the villages at the skirts of the mountains bordering the area. Honaz has opportunity of viewing the road; hence, this feature makes it a safe place. The only access to the castle was provided through the historic caravan route passing by a gate at the east direction.

Honaz (the former Chonae) had in close relation with the ancient cities around the settlement; Hierapolis (Pamukkale), Laodikeia (Ladik), Collosei. These settlements were located on the high road along the Lykos valley in the Roman and early Byzantine period connected to the Menderes valley to Ephesus (Charlesworth 1924, 88). The inhabitants of Collosae moved to Honaz for security reasons in the 8th century.

After the 12th century, the conquest of surroundings itself, the population of the region increased and spread around the surrounding plains (Baykara 1988, 20). Moreover, nomadic lifestyle was observed in this period (Ramsay, 1895; 27). Some of the names of the nomadic communities living in and around Honaz during this period are as follows according to archival sources: Güzelpınar, Sinekli, Tursunlu, Çakal, Torapan, Eşme (Özçelik 2005, 20). These names will be from the village names of Honaz in the 17th century. Moreover, Evliya Çelebi described the site as follows in 1670: Mount Honaz is an old castle with a pentagonal stone structure on the steep red rock, the castle opens to the outside with a door on the west. Although, it is small, it is a fortified castle due to its steepness. There are vineyards, gardens and orchards extending towards the plain (Kahraman and Dağlı 2006).

There is a passage called Kazıklıbel in the valley that separates Babadağ and Honaz Mountain from each other. That passage was a difficult passage to overcome, especially in winter, as it receives a northerly wind. For this reason, it is known as Kanlıbel, which means bloody passage in Turkish (Figure 97). Especially in winter, too many people and animals froze to death here (Özçelik 2005). It was also a border separating Denizli and Menteşe sanjaks (Özçelik 2005, 6).

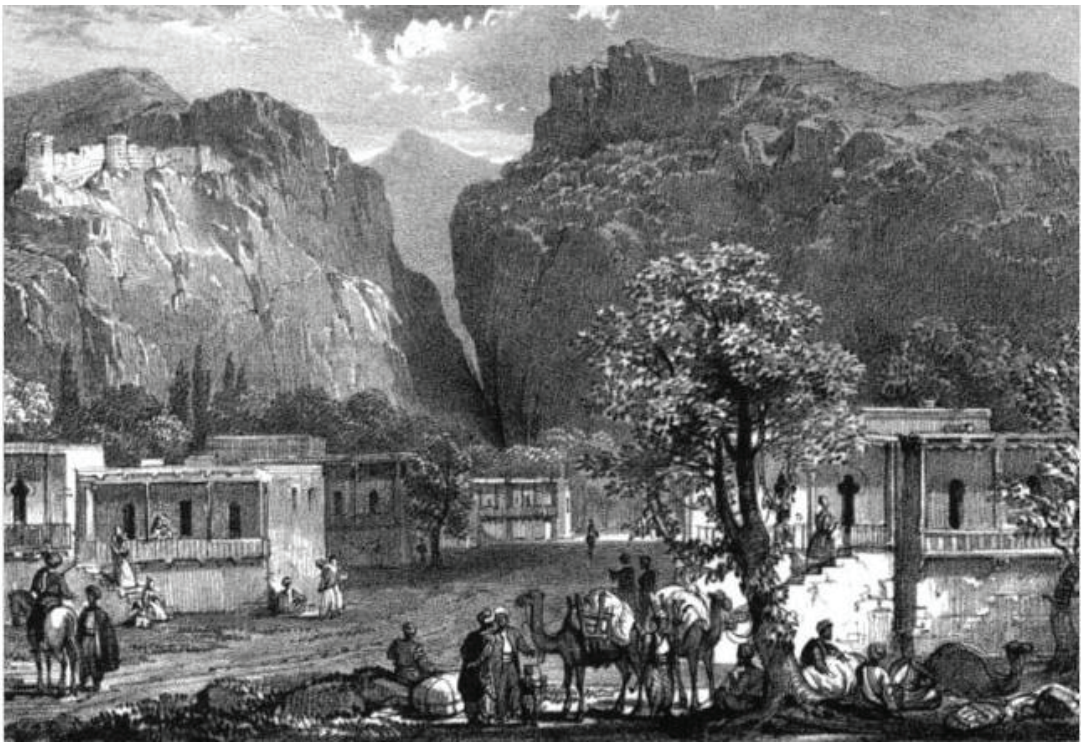


Figure 97. Engraving showing Kazıklıbel pass between Babadağ and Honaz Mountain and the settlement on the outskirts of Honaz and Honaz Castle in 1824, (Sources: Arundel 1834, 165)

In 1953, the mountains were natural areas generally covered with Mediterranean woodlands (45%). The plain and hillside were used mainly for agricultural activities (40%) and as shrublands (13%). Moreover, the hill skirt of the Honaz Mountain was used for residential purposes as well (2%). Natural elements have decreased in amount over time, the residential areas have increased. On the other hand, at the end of the 20th century, the population of Honaz and its surroundings has increased. Hence, the new construction of mass housing has rose (24%) on the plain and hill side, and agricultural areas and pastures have been critically reduced (31%). which are the main sources of income in the region. Furthermore, shrublands on the plain and hill side was totally demolished (Figure 92). Consequently, Honaz lost its rural characteristics to a large extent and started to urbanize.

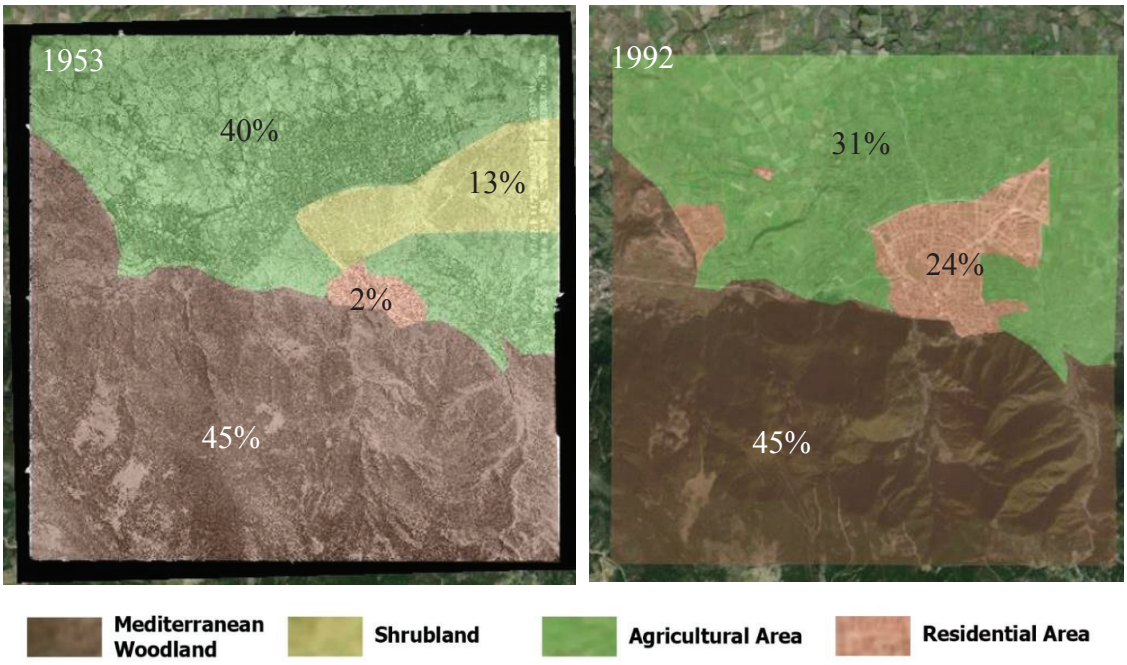


Figure 98. The landscape changes of Honaz between 1953 and 1992.

Today, some settlements are located at the hill skirts of these mountains. Most of them are located on Baklan plain: Irlıganlı, Pamukkale to the north, Kocabaş, Çal, Belevi and Karapınar to the northeastern, Babadağ to the west and Çardak to the east. The historic cores of the rural settlements are generally located at the center of the settlement. There is a settlement at the hill skirt of the Honaz Castle (Figure 99).

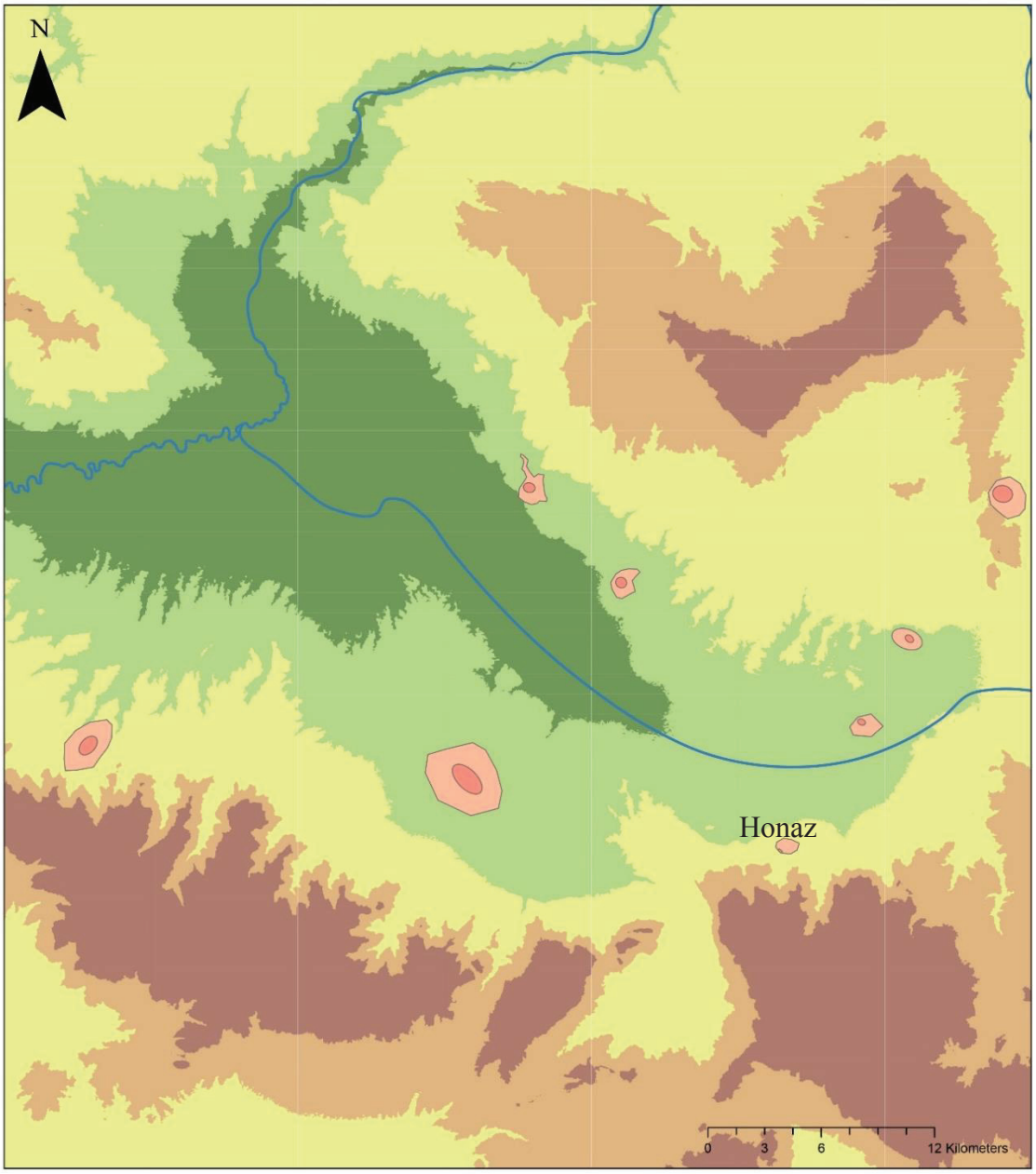


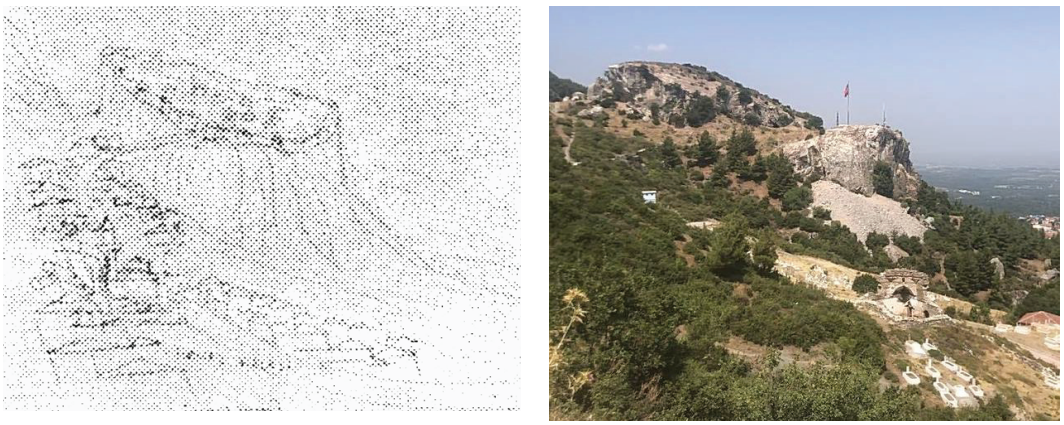
Figure 99. The Map of Land Cover, Honaz

4.2.2.3. The Settlement Characteristics of Honaz

Honaz Castle was located on a slightly sloping plain on the steep hill in the 8th century. Honaz, like all other important castle towns, had defence facilities like a fortress and a tower on the steep hill. Honaz had a strong defence facility, because the castle surrounded a small area, which was insufficient for sheltering of the population. For this reason, the settlement shifted towards the mountain slopes in the southeast direction. Since it had a small area, there could be a maximum of 150 or 200 houses in the castle (Figure 100).

Moreover, Evliya Çelebi described Honaz as follows in 1670: There are 400 earth-roofed houses inside, the houses face Denizli and are airy. In the inner castle, there was a lead-free old mosque, two lodges, a school, a qadi court. It is a thousand steps down from the castle to the suburbs (*varoş*). There were two Muslim quarters, the rest are non-Muslims. Although there were 200 houses, only 20 soldiers and their families lived in the inner castle. In addition, there were one mosque, one masjid, one bath and one khan and several merchant shops in the inner castle. There was a mosque, a small mosque, a bath, an inn, and a few shops in the outer castle (Kahraman and Dağlı 2006).

After the 19th century, the castle began to be used only for defense purposes. (Arundel, 1984; 160). As the population increased throughout history, the spread towards the skirts of the castle continued. These hill skirts are still used as residential areas today.



a b

Figure 100.a. The sketch drawing of Honaz in the 13th century, b. The general view of Honaz from the east direction, 2020
(Source (a): Baykara 2007)

Today, there is no information about the lot organizations in the old fortress of Honaz. It is assumed that the current settlement pattern on the skirts of Honaz Castle has not changed in the historical process. According to lot information for the 20th century, majority of the lot organizations are consisted of a mass and a courtyard or garden. In addition, housing units constituted the majority of the settlement area. Most of the housing units have two stories (Figure 101a). Moreover, the construction technique of the residential area was hybrid system. The stone masonry base supports the timber frame construction of the upper floor and timber frame roof. This system represents the typical construction technique of the Ottoman House. In addition, the timber posts were observed in front of the external walls. These posts show that housing units had terrace roof with earth covering (Figure 101b). Moreover, majority of buildings had the hipped roof with over and under tiles which is thought as a period intervention to flat roofs (Figure 101c).

a

b

c

Figure 101.a. The housing units located at the skirt of Honaz Castle, 2020, b. The housing units have terrace roof with earth covering, 2020, c. The housing units with hipped roof located at the skirt of Honaz Castle 2020.

According to lot information, there were two mosques on the hill skirt of the Honaz Castle. One of them was Sultan Murat Mosque located at the east of the castle. Today, the Mosque is in ruins. In addition, there are graveyards and tombs near Sultan Murat Mosque (Figure 102).

Figure 102. The view of the Sultan Murad Mosque and the graveyards located on the skirt of Honaz, 2020

According to the memories of those who came to Honaz with the population exchange in the late 1920s; the majority of the houses were covered with earthen flat roofs and only six of them had tiled roofs. Almost all of the houses had two floors, and there were warehouses, cellars and barns on the lower floors. The houses were built of stone, earth and wood. Houses and rooms were small (Haytoğlu 2006,56).

4.2.2.4. Cultural Heritage Values and Preservation Problems of Honaz

The cultural heritage values and preservation problems of Honaz will be evaluated in the below.

- **Values**

Honaz was a safe place for its inhabitants due to its strategic location and natural features. Shrublands, agricultural lands and villages at the mountain skirts in the area under its control, and the caravan route providing access to this enclosed area were all elements of the cultural landscape of Honaz. The traditional rural life on the outskirts of the castle still continues. Correlation between the castle town and the landscape in the vicinity for all relevant periods is indispensable for holistic conservation.

Chonae, known as the former Colossae in historical sources, is one of the historical settlements located on an important trade axis since the 5th century in Byzantine Period. At the same time, it was an important castle town in the Byzantine period, both as a strong and dominant settlement and in terms of being a religiously holy place. Although it was abandoned in the 19th century due to the difficulty of transportation and the limited area of the castle, life still continues on the skirts of the castle. Agriculture and animal husbandry, which is the main source of livelihood of the region, continues on a limited basis.

In addition, International Denizli and Surrounding History and Culture Symposium was held between 6-8 September 2006 with the cooperation of Pamukkale University (Özçelik et al. 2006). This symposium and its book are important in terms of researching the tangible and intangible values of the Honaz and Denizli and transferring the information to future generations.

- **Problems**

The loss of physical, economic, socio-cultural integrity of the castle with its landscape, and lack of any conservation and presentation measures are the major preservation problems detected. Honaz has not been registered and archaeological studies has not been started yet. In turn, listing and preservation planning should take into consideration this holistic scope. Also, in the related presentations, the archaeological potential of the castle should be evaluated together with the cultural landscape values.

The densely new housing construction of the new settlements located at the skirt of the castle gave way to the loss of shrubland on the mountain slopes and agricultural areas on the plain. This has led to the substantially abandonment of agriculture and animal husbandry, the main source of livelihood throughout history, and the uncontrolled industrialization and population growth of Honaz.

4.2.3. Beçin

Physical, social, economic, cultural evolution of Beçin Cultural Landscape and Beçin town are identified.

4.2.3.1. Natural Evolution of Beçin

The natural characteristics of Beçin cultural landscape are analyzed with respect to concepts of topography and landform, in a retrospective perspective. Then, natural characteristics of Beçin town are presented.

4.2.3.2. Topography

The landscape of Beçin is composed of low elevation areas surrounded by high areas. Beçin is located close to the seashore:16 km. The highest areas are 1700 m., but the majority of the area 48 % is between 350-700 m., with significant areas 32% below 175 m., which is the altitude of Beçin Castle. On the other hand, the abundance of low-level areas which are below 10 m. 7% suggests the possibility that the sea boundary may once have been located further inland (Figure 103).

The topography of the Beçin has undergone different geological stages in history. The Beçin region is part of the Menderes Massif (Ersoy 1991). The dominant units along the fault zone are Upper Paleozoic phyllites, Jurassic-Cretaceous marbles, Upper Palaeocene-Eocene and alluvial deposits (Aral 2008; Akbaş et al. 2011).

The Milas region is seismically active and is located at the point of intersection of the faults that bound the graben and this region is within the first-degree earthquake zone it is under the seismic effect of the Menderes Horst and Graben. The Milas Fault region has a quieter seismic history than Southwest Anatolia. Between 1900 and 2015, a total of 130 earthquakes, 126 earthquakes of 3M, 2 earthquakes of 4M and 2 of 5M, were detected in the study area (Kırkan 2019, 4). The two largest earthquakes that occurred in the study area between the mentioned dates were the earthquakes of 5.6 magnitude and 6.0 magnitude with the epicentre located 18 km southeast of Beçin on 23.05.1941. When we examine the historical earthquake records, Ambraseys (2009) mentions an earthquake

that affected Milas in 1631 AD. This earthquake, which may have been caused by the Milas Fault, caused damage in Peçin (Milas, Beçin town) (Ambraseys 2009 cited in Kırkan 2019).

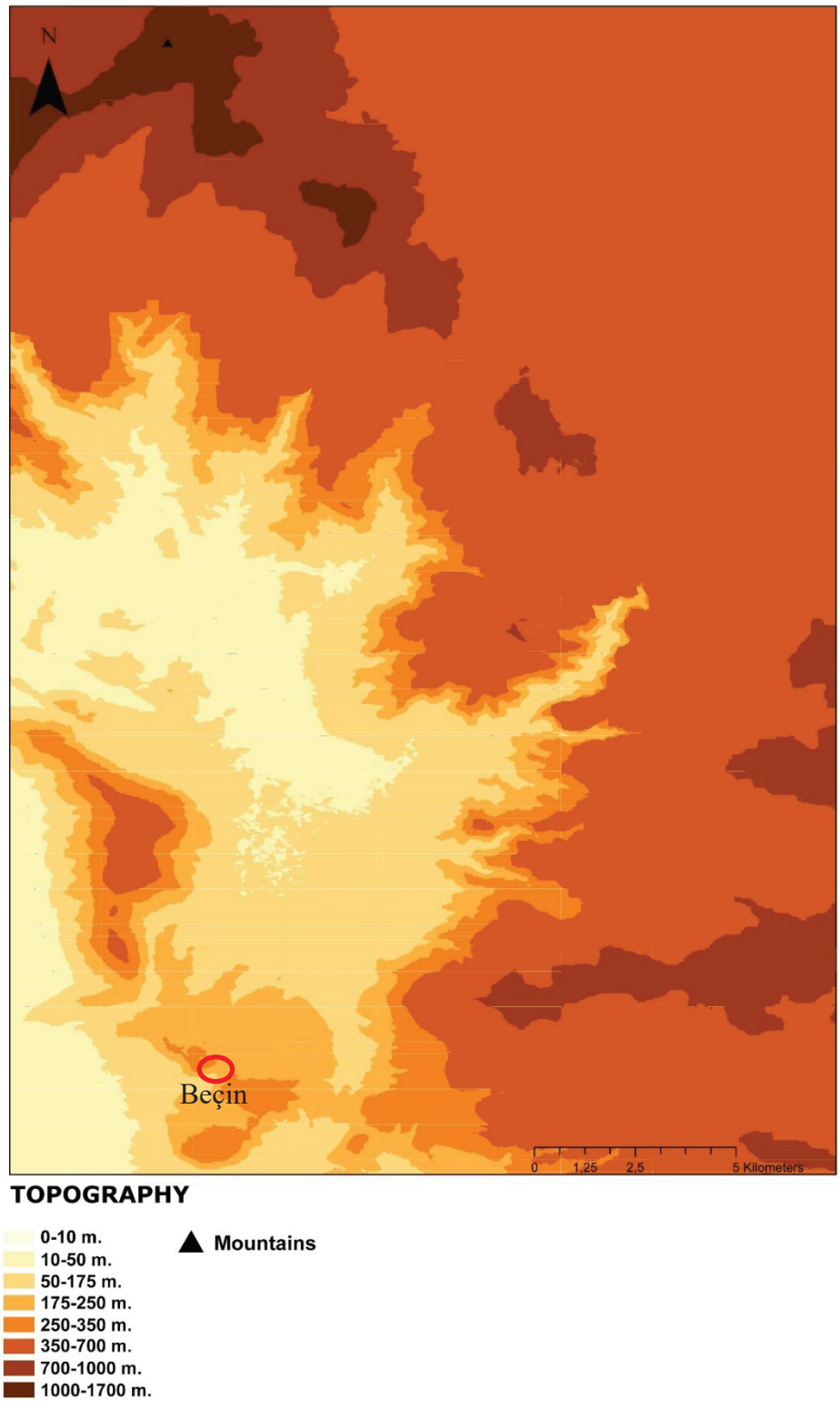


Figure 103. The Map of Topography of Beçin

4.2.3.3. Landform

The topography of the region is evaluated at five different levels: 0-50 m, 50-160 m, 160-500 m, 500-1000 m, 1000-1700 m. The landforms covering the topography are mountains, hill, hill side, plateau, plain, valley and brook (Figure 106).

Formations containing Upper Palaeozoic metasedimentary rocks are represented by massive marbles containing emery (Okay 2008, 29). So, Beçin Castle town is located on rock and durable grounds.

The highest points refer to the peaks of the mountains surrounding the area which are Akdağ Mountain (1250 m.) at the north and Marçalı Mountain (1250 m.) at the south, Beşparmak Mountain (Former Latmos Mountain) (1367 m.) at the west, and Gölgeli Mountain (1170 m.) at the east. These mountains constitute the visual boundaries of plateau (175 m.) (Figure 104), the lower height plains (100 m.) and settlements. Some settlements are located at the hill skirt of these mountains. The average height of hills is about 1000-1700 m.

The average height of the plateau in the cultural landscape of Beçin is about 175-185 m. (Figure 106).

Figure 104. The view of the plateau from the north direction, Beçin cultural landscape (Sources: Milas Municipality 2019)

Beçin is surrounded by mountains and plains (Figure 104). Milas plain is located at the north direction which has a tectonic origin and is filled with a thick alluvial mass. As a matter of fact, these alluvial caused the antique remains on the plain surface to remain under the soil. (Milas Municipality 2019). The average height of plain above sea level is about 10-50 m. (Figure 106).

The lowest landforms in the topography are valleys. The average height of valley is lower than 10 m. These valleys surround the Büyük Menderes brook along the west east direction which is the longest river of the western Anatolia and Çine brook along the northwest and southeast direction.

The cultural landscape of Beçin has different vista points. The view from the castle to landscape consists of the historical Muğla- Milas road, Milas plains, valleys, the fertile agricultural areas and the one side of the mountains that form the border of the landscape (Figure 105a). The view from the lower level is the unique view of the fortification walls of the castle rising above the plateau (Figure 105b).

a

b

Figure 105.a. The view of Beçin landscape from the Beçin Castle, b.The view of Beçin Castle from the Milas Plain, 2019

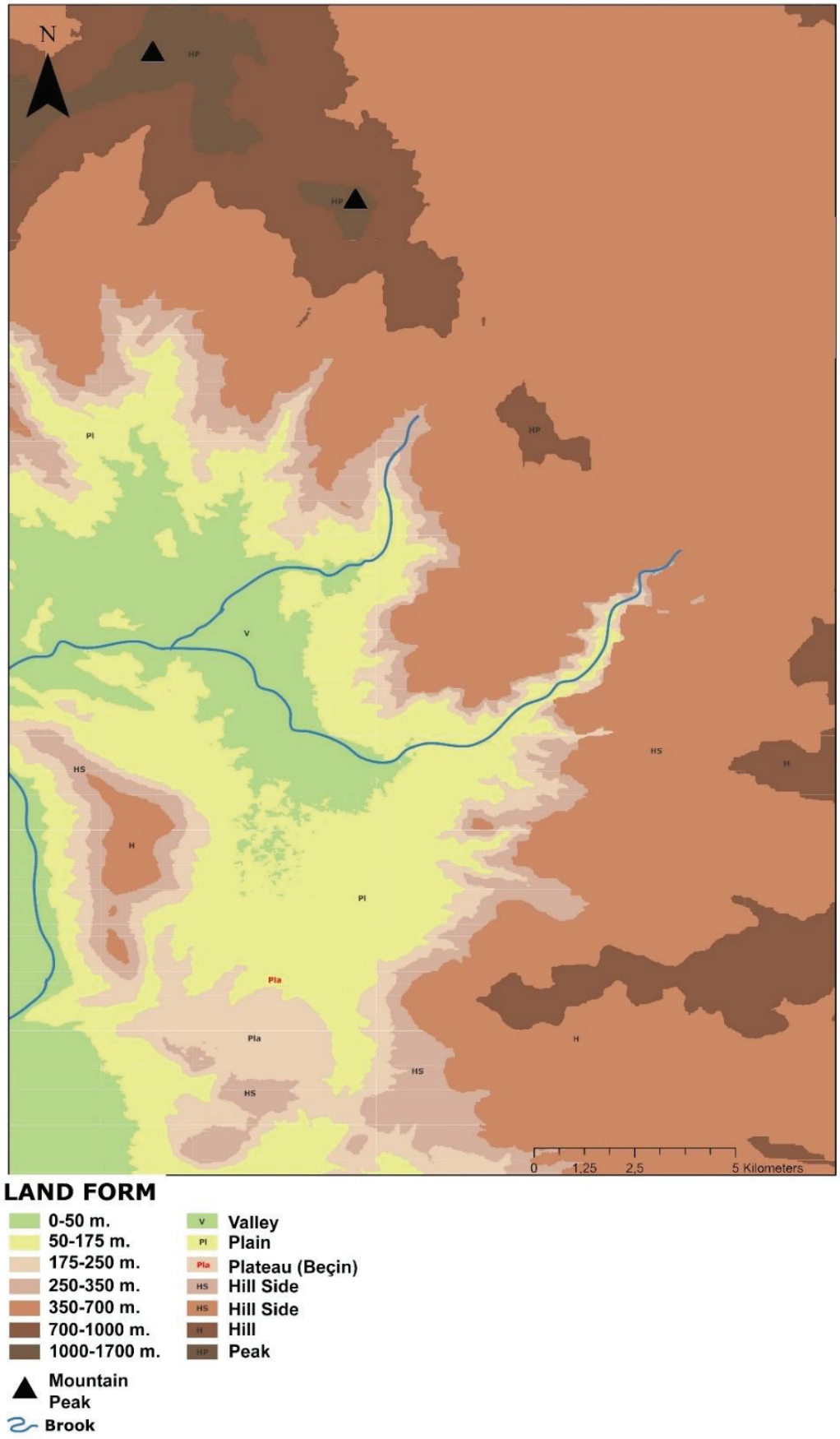


Figure 106. The Map of Landform, Beçin.

4.2.3.4. Cultural Evolution of Beçin

The cultural characteristics of Beçin cultural landscape are presented with respect to concepts of time-depth and land cover, in a retrospective perspective.

4.2.3.4.1. Time-depth of Beçin

The social, economic and cultural evolution of Beçin is presented for each historical period in the below.

- **Ancient Period**

Beçin was a historic settlement unit which was located at the historic region named Karia (Figure 107). The name of the city, which is referred to as İzmir in the ancient texts, was mentioned as Petzona and Peçin in the documents of Ilyas Bey in 1414 with the Venetians (Wittek 1944,93).

Figure 107. The map of Asia Minor, Drawn by Mitchell, Samuel Augustus, 1875. (Source: David Rumsey Map Collection, 2014)

Beçin is located on a steep elevated plateau at the south of Milas was called Mylasa (Strabon 2005; Sevin 2013) 5 km in distance. Although the date of establishment to Beçin is not known precisely, it is thought that the settlement dates back to the Bronze Age (3000 BC) as a result of the grave in the settlement. In the sounding pit opened for the flagpole in early 2007, a cube grave dating to the prehistoric period and potsherds

dating to the ancient period were found (Ünal 2012, 373). Before that, the settlement was thought to be dates back the geometric period. During the construction of the Milas-Ören highway in 1953, two graves were found. One of them dating to the Late Geometric Period, the other to the 4th century BC (Akarca 1971; Polat 2009, 134). In addition, some researchers claim that the stepped podium remains in the castle belong to the temple of Zeus Karios. Accordingly, the castle is one of the important religious centres of Caria (Pekin and Yılmaz 2009). Strabo described Mylasa, the capital of Caria, located on a steep slope at the foot of a rocky mountain, as the homeland and residence of the Carians (Strabon 2005). Beçin Castle had been a settlement since the 7th century BC. The Temple of Zeus Karios is thought to be in Beçin (Sevin 2013, 118).

The archaeological remains on the steep slope and the skirts of the north of the castle indicate that this area was used as a necropolis in ancient times. In addition to the east of the fortress, there are the remains of the foundation dating to the Hellenistic Period (4th century BC) and a temple remains in the southeast corner of the walls.

Although it was claimed that the settlement was not an important place during the antic and Byzantine periods (Akarca 1971, 2), it is thought that the castle on the eastern temple floor was the Mylassa castle before the Hellenistic period. (Figure 11) (Strabon 2005; Herodotus 1973; Cook 1961).

The structural and material characteristics in the settlement prove that the fortress has been used for defense throughout history. There are large rubble stones at the bottom of the castle walls that shrink upwards and in many parts of the castle wall, spolia materials are observed. Some parts of the tower walls date to the 4th century BC. The visible walls and towers are dated to the Byzantine period (Arel 1968).

The gate was thought as a part of the city walls that are not visible today. It was dated to 2nd century. The gate is found at the route of the sacred road[29] that was started in Beçin, went to Labranda, and ended in the Alinda. The name of it come from the embossment that has axe shape as Carian symbol and the tower with two lion head reliefs protects the gate (Akdeniz 2010) (Figure 108).

[29] The grandfathers of the people living there today remember this way (Usta, 2018; 130).

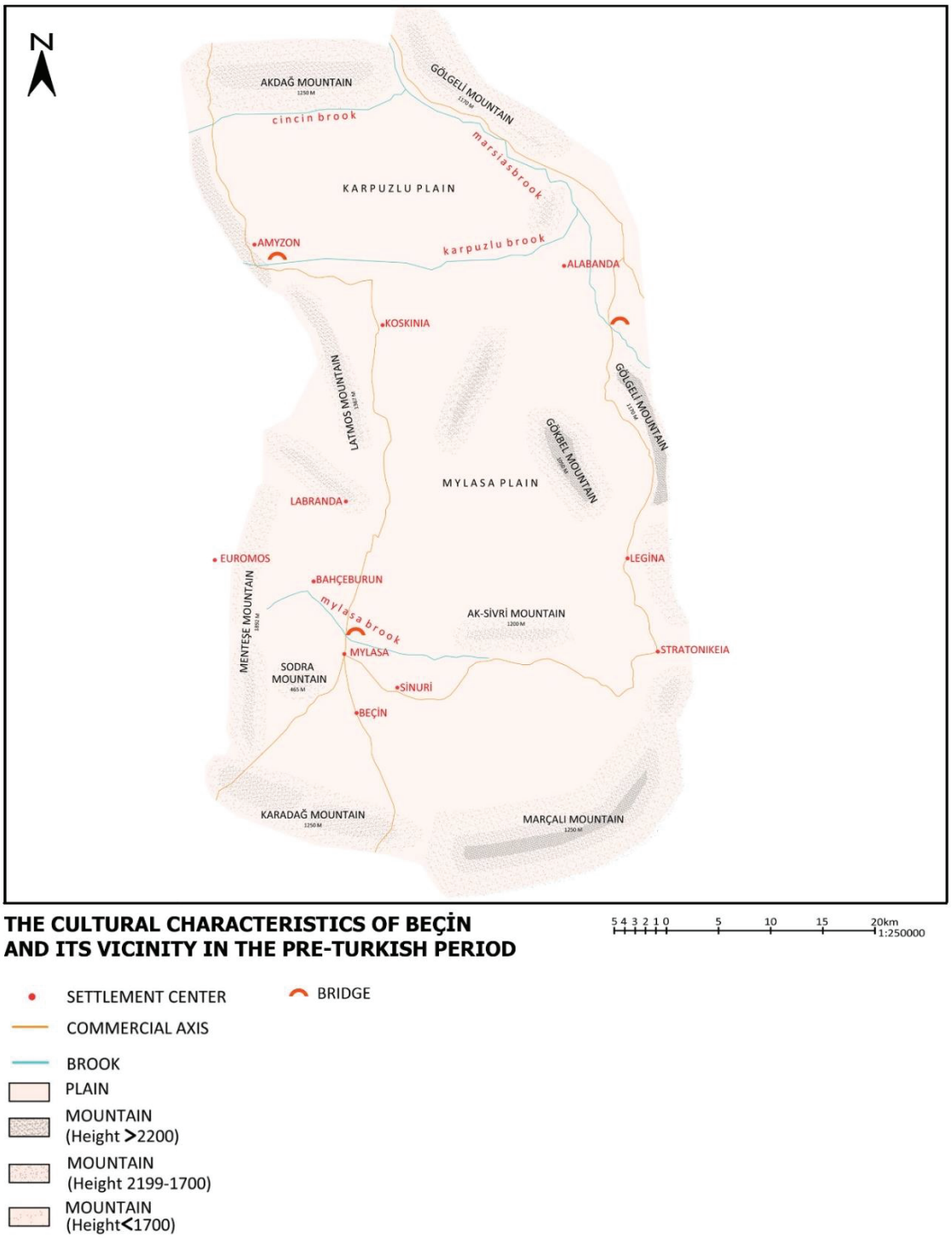


Figure 108. The Map of the Cultural Characteristics of Peçin and its vicinity in the Ancient Period Pre-Turkish Period

- **The Emirate of Menteşe (1270-1402)**

The Seljuks conquered the Caria region in 1261 under the leadership of Menteşe Bey. After the conquest of Menteşe Bey, he established the Emirate of Menteşeoğulları. Although the exact date of the conquest of the city is not known, it is believed that after 1270, the Menteşe forces were the first major attack on the Carian region (Darkot 1958). After Menteşe Bey, his son Mesut Bey and Orhan Bey took over the administration (1319-1337). (Darkot 1958). Orhan Bey made an operation to Rhodes but he could not succeed. After the that defeat, Beçin was the capital of the Emirate of the Menteşe after the Milas because of its security advantages. Becoming a cliff on three sides of Beçin, being located on a high plateau is a major factor in the transportation of the center (Arel 1968). Orhan Bey was introduced by Ibn-i Batuta as a founder of the city after his visit to the Beçin in 1300's. he also stated that, the ruler's mansion was located in Burçin (Beçin). In 1359, Gazi Ahmet Bey took control of all lands of the principality. Beçin continued to be the capital during that period, which was considered the brightest period (Wittek 1944). The castle was enriched with numerous monuments built during the period of Orhan Bey and Ahmet Gazi Bey (Arel 1968) (Figure 109).

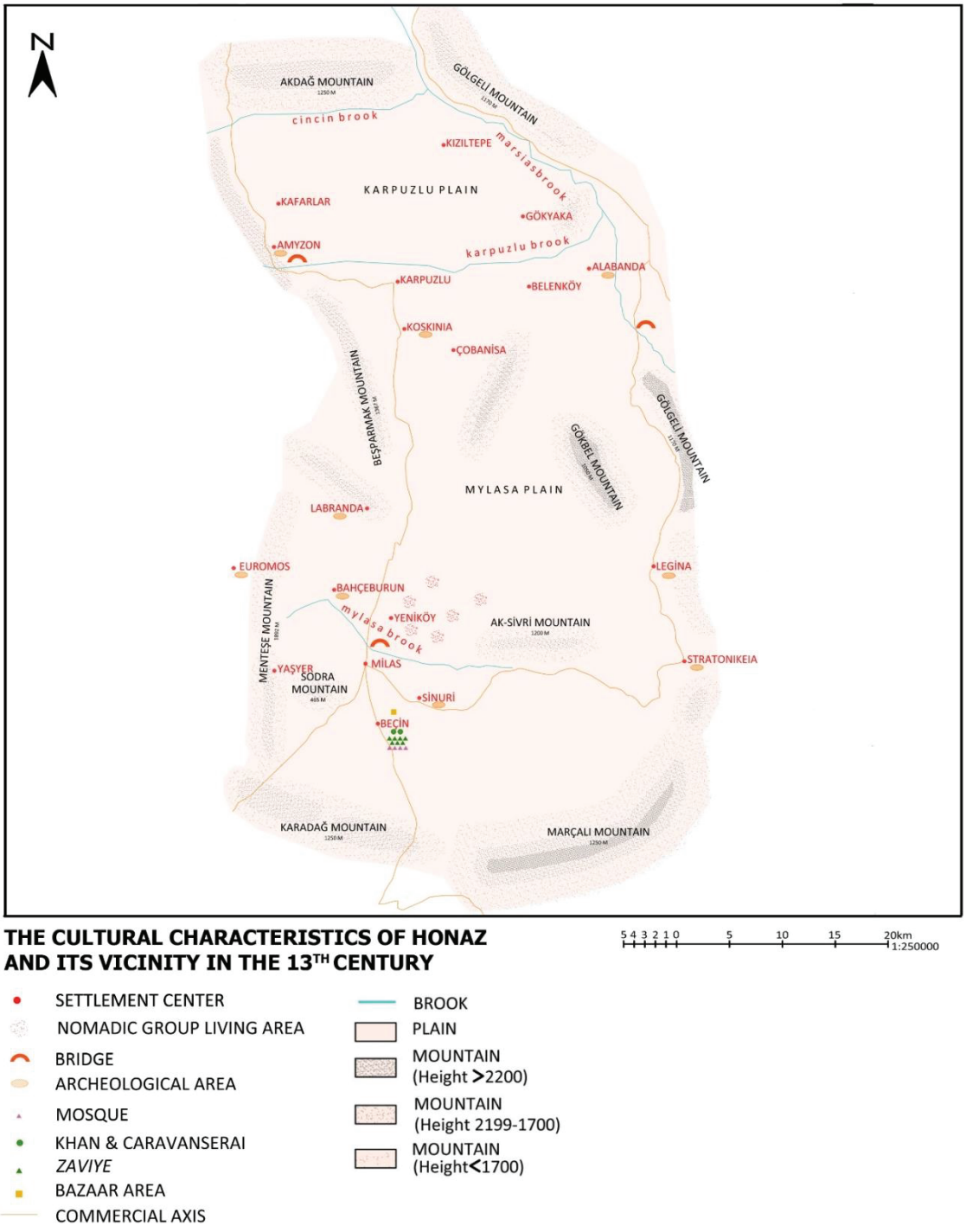


Figure 109. The Map of the Cultural Characteristics of Beçin and its Vicinity in the 13th Century

- **Ottoman Period (1390-1923)**

Menteşe was captured by Yıldırım Beyazıt. Thus, Beçin had entered the Ottoman domination in 1390-1391. Then, the Ottoman was threatened by the invasion of Timur (1402) and Yıldırım Beyazıt defeated. Timur returned its lands to the Emirates, since the Emirate of Menteşe fought against the Ottomans in the Ankara War (Arel 1968).

The settlement was built between the inner castle and the outer fortification walls. Also, the outside of the fortress was also resided during the İlyas Bey time. After İlyas Bey, the Emirate of Menteşe came under Ottoman rule in 1424. Thus, it became a place without ruler. Under Ottoman rule, it was not preferred as an administrative center of the Sanjak Bey and became an ordinary place. The settlement shifted to the Milas and became an abandoned city (Mete 2004). Wittek stated that the last trader grave in his foundation was dated 1444. This proves that the identity of the site changed after the 15th century (Arel 1968).

The decrease in population in Beçin in the 16th century also affected the economic structure negatively (Mete 2004). According to the Account of the Vilayet of Anatolia, dated 1530, numbered 166 (Department of the Ottoman Archives 1995) (Figure 110); Beçin was stated to be a *Kaza-i Peçin* of Menteşe Liva. The population of Beçin was approximately 1490.020 (Figure 25). Therefore, the name of Beçin was mentioned in Milas as a *kaza* in Muğla Foundation Books in 1754 (Uzunçarşılı 1929). In the beginning of the 17th century, during the Celali Rebellion, the inhabitants were completely withdrawn to the inner castle.

LİVÂ-İ MENTEŞE
ḲAZÂ-İ PEÇİN
Cihet-i ḳażâ
80

Ḫâṣṣhâ-i Mîr-livâ

Nefs	1
Mahallât	7
Müslimânân	6
Gebrân	1
Niyâbet	1
Ḳoru	6
Mukâṭa'a	1
Dalyan	1
Tîr	1
Cemâ'at	1
Kurâ	2
Âsiyâb	3
Ḫâne-i Müslim	507
Ḫâne-i gebr	7
Karu	144
Mücerred	92
Mu'âf	26
H â ṣ ı l	63.085

Ḫâṣṣhâ-i Pâdişâh

Tîr	149
Ḳurâ	7
Cemâ'at	20
Arğ-ı çeltük	1
Âsiyâb	18
Ḫâne	8.317
Karu	3.156
Mücerredân	614
Mu'âf	381
H â ṣ ı l	1.030.864

Ḫâṣṣhâ-i Ḳadrî Çelebi; Ḳâdı-'asker-i Anadolu

Kurâ	4
Âsiyâb	21
Ḫâne	998
Karu	410
Mücerred	163
Mu'âf	20
H â ṣ ı l	114.381

Tîmârhâ-i Zu'amâ ve Merdân

Kurâ	19
Cemâ'at	3
Âsiyâb	23
Ḫâne	500
Karu	189
Mücerred	102
Mu'âf	12
H â ṣ ı l	113.518

Mustaḥfiẓân-i Ḳal'a-i Peçin ve Bodrum

Kurâ	9
Âsiyâb	27
Ḫâne	113
Karu	39
Mücerred	15
Mu'âf	57
H â ṣ ı l	33.100

Evḳâf

Tedrîs	2
'İmâret	1
Kârûbânsarây	1
Câmi'	3
Mescid	2
Mülk	1
Tekye	1
Mu'allim-ḫâne	2
Zâviye	7
Sûfî-ḫâne	1
Türbe	3
Dekâkîn: bâb	5
Âsiyâb: bâb	4
Ser-ḫâne	1
Ḥammâm	2
Zemîn	330
Bâğ ve bâğçe	65
Çiftlik	8
Arğ-ı çeltük	2
Cemâ'at	2
Kurâ	5
Mu'âf	88
H â ṣ ı l	137.072

CEM'AN

Nefs-i şehr	1
Kurâ	39
Tedrîs	2
'İmâret	1
Câmi'	4
Mescid	6
Mu'allim-ḫâne	2
Zâviye	7
Kârûbânsarây	2
Ḥammâm	2
Dekâkîn: bâb	5
Cemâ'at	225
Arg-i çeltük	3
Âsiyâb: bâb	106
Neferan	16.326
Ḫâne-i Müslim	10.724
Ḫâne-i gebrân	14
Kara-i Müslim	4.074
Kara-i gebrân	4
Mücerred-i Müslim	986
Mu'âf	524
H â ṣ ı l	1.492.020

Figure 110. Account of the Vilayet of Anatolia, dated 1530
(Source: Account of the Vilayet of Anatolia dated 1530)

- **Republican Period (1923-1972)**

Beçin continued to lose its importance and population in this period. The decline process of the population continued after the 15th century, when it joined the Ottoman territory. Finally the settlement was completely abandoned in 1950's.

- **Scientific Excavation Period (After 1972)**

The archaeological site of Beçin has been excavated systemically since 1972. The archaeological studies of Beçin started in 1972 by Prof.Dr. M. Oluş Arık, and Prof.Dr. Hüseyin Rahmi Ünal and his team and continued between 1995-2009. Today, the excavation studies are continuing by Prof.Dr. Kadir Pektaş since 2009. The ruins uncovered and some restored have been visited as a historical site.

Today, most of the existing structures in Beçin have only foundations. The only building completely standing is Ahmed Gazi Madrasa. A number of buildings, such as the Great Bath, the Kepez Mosque, the tombs II and III, can also be considered in good

condition, except for the ruined tops. Most of the buildings were built with crushed stones. Domes and dome transition elements are made of bricks.

Beçin City is under protection by the Turkish Legislation for Preservation of Cultural and Natural Property, Law No. 2863. It was registered as an archaeological site by the 16.02.1997 dated and 3640 numbered decision of the related Regional Conservation Council.

Beçin was included in the UNESCO World Heritage Temporary List in 2012 with Criterion (ii):

"Beçin which was the capital city of Menteşeoğulları Sultanate is very important in Turkish cultural history in terms of its history and geography. The architectural remains of the city not only enlighten the Western Anatolian architecture of that period but also the form of the first Turkish settlements in that region" (whc.unesco.org 2021).

4.2.3.4.2. Land Cover

The mountains are natural areas and generally cover Mediterranean woodlands. The sides of Kazıklı Mountain to the north and Yaran Mountain to the south, Sodra Mountain to the west and the lower hills to the east facing the settlement, constitute of the visual boundaries of the settlement (Figure 114). On the other hand, lower level of the hill sides of these mountains covered with managed green areas such as: shrublands to livestock farming, the agricultural fields. Within these boundaries, plains cover fertile agricultural fields. Wheat, tobacco, and chickpea are grown in fertile agricultural areas (Figure 111).

Figure 111. The view of Milas Plain from Beçin, 2019

In the Geometric to Archaic Period, there were a lot of settlement in the Mylasa (Milas) and Karpuzlu Plains such as Mylasa, Sinuri, Pedasa, Labranda, Bahçeburun, Dirmil, Çömlekçi, Keramos, Iasos, Stratonicca, Lagina, Asarlık, Euromos. There are settlements at these positions today. In addition, Beçin had a relationship with these ancient cities was provided by the historical commercial route. In these settlements, it is known that agriculture and animal husbandry were a common way of life (Sevin 2013, 107).

There are settlements located in the north-south direction on the Milas plain within the area that forms the borders of Beçin. These settlements are Milas, Bahçeburun, Yaşyer, Pinarli, Selimiye, Ağaçlıyük, Çamköy, and Gereme. They have a high degree of fertility due to the richness of the water sources in the region (Aksan 2021)

Beçin is located on a steep plateau elevated 175 m. from the flat terrain. Plateau on top of mountains with vista and accessibility difficulties have been settled throughout the history. The settlement used to view the road and control the plain in all directions, especially Muğla-Ören road to the north. At the same time, it was hard to access Beçin because of the steep inclination; hence, these features made the area a safe place like a natural castle (Figure 112).

Figure 112. The aerial photo of the inner castle of Beçin (Source: ktb.gov.tr, 2022)

In 1938, the mountains were natural areas and are generally cover Mediterranean woodlands (43%). The plain and hillside were used mainly for agricultural areas (44%) and shrublands (12%). Moreover, Milas was used residential purposes (2%) which is included in the cultural landscape border of Beçin castle town. Natural elements have decreased in amount over time, the residential areas have increased. A decrease in Mediterranean woodlands is observed over the years (25%). The natural vegetation has turned into residential areas and pastures. At the end of the 20th century, the population

of Milas and its surroundings has increased. Thus, the new construction of mass housing has ascended (22%) on the plain and hill skirt, and agricultural areas and pastures have been critically reduced (28%). which are the main sources of income in the region (Figure 113). Therefore, Milas and its surroundings lost its rural characteristics to a large extent and started to urbanize.

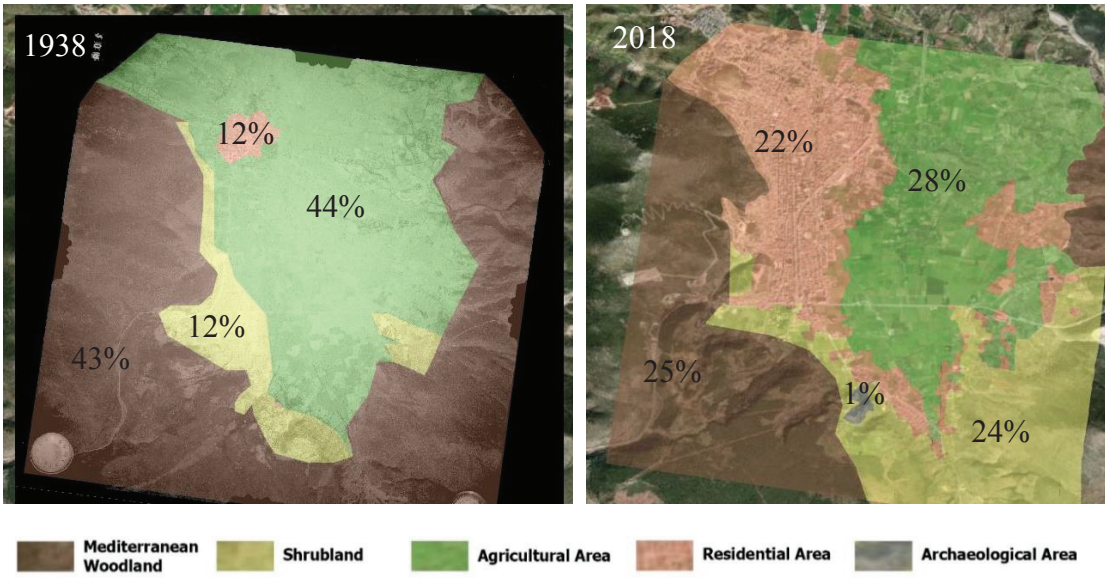


Figure 113. The landscape changes of Beçin between 1953 and 1992

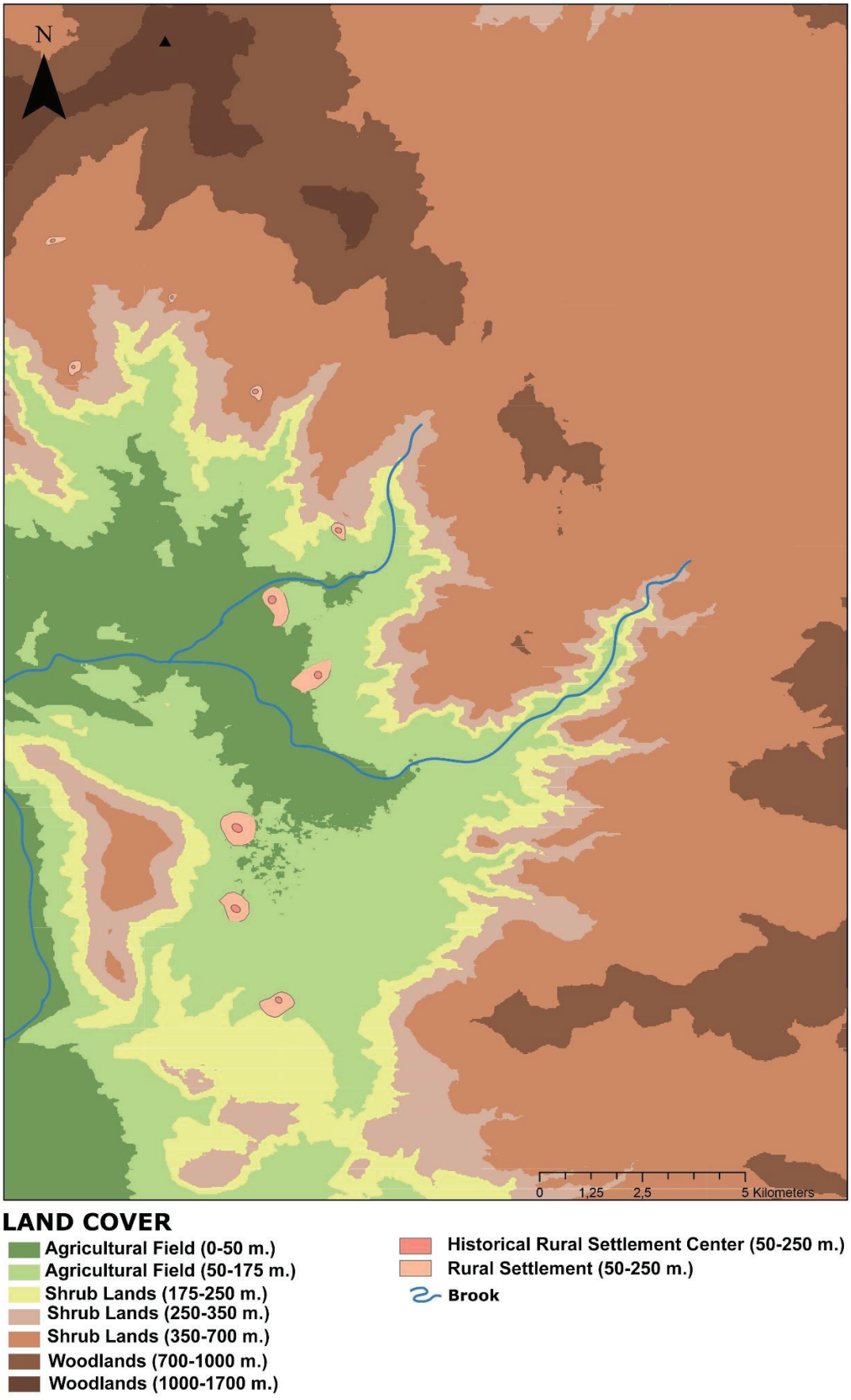


Figure 114. The Map of Land Cover, Beçin (Source: Etlacakuş, 2021)

4.2.3.5. The Settlement Characteristics of Beçin

Beçin Castle had been a settlement since the 7th century BC (Sevin 2013, 118). The small dimensions of the Byzantine Chapel within the city today prove that Beçin was a small settlement during the Byzantine period. This chapel is located east direction of the castle. There are two construction techniques in the walls: one wall was constructed with cut stone which were reused material, other mix roughly cut, or rubble stones are all framed bricks. The facade arrangements and wall construction technique are also observed on different Byzantine structures; therefore, it is possible to date this chapel to the 13th century (Ünal 2012).

In Emirates period Beçin Castle consisted of outer castle and inner castle. Since it was the capital of the Menteşe principality, numerous monuments and structures built during this period (Appendix C). Orhan Mosque, Ahmet Gazi Madrasah, Orhan Gazi Lodge, Kızıl Khan, Seymenlik Bath, Bey Bath and Yelli Complex, Ahmet Gazi *Zaviye,* Seymenlik *Zaviye*, a *Zaviye*, Bey Housing, Mültezim, Sofuhane, Emir Courtyard are some of the monuments and structures that have been preserved for this period. Additionally, graveyard is located at the south direction of the inner castle dated to the period from the second half of the 14th century to the middle of the 15th century. (Figure 24).

According to the Account of the Vilayet of Anatolia, dated 1530, numbered 166 (Department of the Ottoman Archives, 1995); Beçin consisted of four mosques, six masjids, seven *Zaviye*s, four baths, two caravanserais, 10.724 houses, 65 hamlets, eight farms and two communities (Figure 25). Furthermore, there were a *tahunhane*[30], a *mumhane*[31], a *başhane*[32] and a tannery in the settlement in 16th century (Mete, 2004).

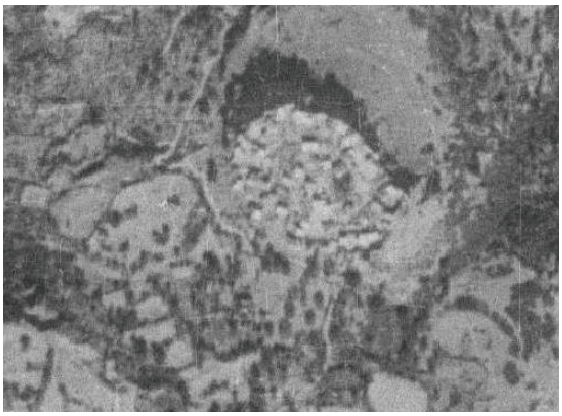
Beçin started to lose its importance and population in the 15th century when it joined the Ottoman territory. During the visit of Evliya Çelebi in 1671, Beçin was a suburb of Milas, which consisted of 20 houses, a khan and a bazaar in the castle. He also mentioned that there was a ditch with 10 fathoms[33] and a bridge with a spring around the settlement. Beçin was also used as a prison (Kahraman and Dağlı 2006). The diminishing process of the population continued until the beginning of the 20th century. Finally, the settlement was completely abandoned in 1950s. The aerial photos of 1938 and 2012

[30] a factory in which oil is extracted from sesame by milling.
[31] a factory in which candle is made.
[32] offal shop
[33] 1 Phantom is 1.83 meters long.

clearly show the abandonment process in the settlement and the rapid urban growth in the Milas plain (Figure 116). According to aerial photographs, old photographs and lot information, the built areas in the inner castle had a higher percentage compared to the outer castle. While the residences were in the inner castle, most of the monuments were independent from each other in the outer castle.

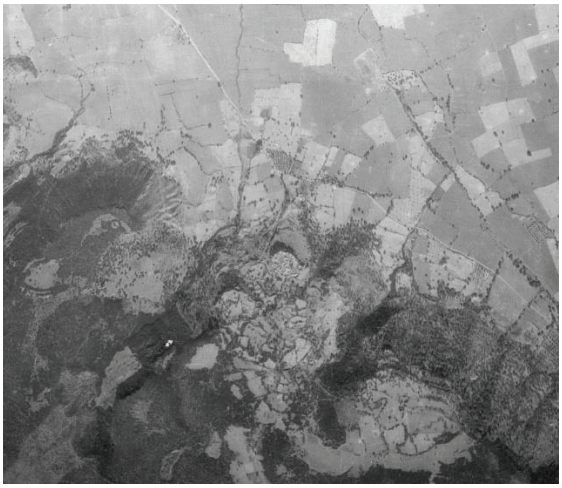
According to aerial photographs, old photographs, and lot information, Beçin's inner castle has a higher construction density from the outside of the castle. The historical settlement consisted of organic formed, small lots with voids and independent buildings. While the residences are located in the inner castle, most of the monuments are independent from each other in the outer of the castle. The historical settlement consisted of organic and small lot organization with voids and independent relationship with neighbours. The monuments are generally located outer of the inner castle; these are four mosques, three baths, six Zaviyes, two khans, three Madrasah and one chapel in the settlement. In the inner castle, there is only one bath and cistern. Housing units constituted the majority of the inner castle. There were 25 housing units consisted of one or two spaces: all of them housing unit with courtyard or garden. In addition, one coffee houses, and 27 empty lots in the inner castle. Until the beginning of the 20th century, the houses were gradually abandoned. Although there is limited information about the residential area of Beçin according to limited visual sources and similarities between other rural settlement, it can be said that the housing units were generally single storied and had stone masonry structures with terrace roof (Figure 115). Then, terrace roofs were then covered with half round ridge tiles. Stone masonry walls were constructed with cut stones and bricks the wall is covered with plaster.

Figure 115. The views of the house in the Beçin, left 2019, right
(Source: Arel 1968)



a) 1938 Beçin Castle

b) 2018 Beçin Castle



c) 1938 Milas

d) 2018 Milas

Figure 116. The aerial photos of Beçin and its vicinity in 1938 and 2018
(Sources: Ministry of National Defence General Directorate of Mapping Archive 2018)

4.2.3.6. Cultural Heritage Values and Preservation Problems of Beçin

The cultural heritage values and preservation problems of Beçin will be evaluated in the below.

- **Values**

Beçin was the capital of the Emirate of the Menteşe in the 14th century. Thus, Beçin has an outstanding value in terms of having baths, madrasas, mosques, fountains, tombs and *zaviye*s which are still intact, and which represent the architectural characteristics of the Anatolian settlements in the 13th and 14th centuries. The architectural remains of the Beçin city not only enlighten the Western Anatolian architecture of that period but also the form of the first Turkish settlements in that region.

Besides, the archaeological site of Beçin has been excavated systemically since 1972 which was registered as an archaeological site in 1997. The scientific excavations focused on the Emirate of Menteşe monuments, most of which were restored. Whereas the houses in the inner castle are in ruins. Furthermore, Beçin castle town has been in the tentative list of the World Heritage List as a cultural property since 2012.

Menteşe Symposium was held between 5-6 May 2013. This symposium and their book are important in terms of researching the tangible and intangible values of Beçin and transferring the information to future generations.

- **Problems**

The plateau in Beçin were used as residential area until abandonment in the beginning of the 20th century. Although the natural inputs of landscape of these castle town is preserved great extent, the loss of physical, economic, and socio-cultural integrity of landscapes with its landscape is the major preservation problem detected.

The scientific excavation studies have concentrated on the monuments *Beylik*s Period. The investigation of other periods and traces deciphering daily life is of great importance for understanding the castle town. However, the presentation technique of the archaeological site concentrates on a single building scale. In the corresponding presentations, the archaeological potential of the castle should be evaluated together with the values of the cultural landscape. In recent years, the increasing uncontrolled construction in the cultural landscape of Beçin causes the decrease of agricultural areas and pastures.

In the presentation of the archaeological site, ramps and roads were arranged for the visitors. While this road does not represent the original castle exit, it aims to present the monuments and structures in the castle**.**

4.3. Comparative Studies

In this section, the natural and cultural characteristic of the comparative study castle towns from Turkey and abroad are presented in the below.

4.3.1. Gilevgi Castle

Gilevgi Castle is located in the Mediterranean region, approximately one km at the east of Çobanisa-Gilevgi village in Elmalı district of Antalya province. During the archaeological research carried out in the recent years, a large number of ceramics dating the Late Roman period and the Byzantine period were found (Pekin and Yılmaz 2008).

The castle was built on a hill (1350 m.) in the middle of a plain (1130 m.) surrounded by mountains and controlling the road. It is thought that Gilevgi Castle was used as settlement in addition to its defense function. Gilevgi Castle is located on the road between the caravan road and Elmalı district, which was an important settlement famous with trade of grains and pulses. Thus, it is thought that the castle was controlled the road to Elmalı and accommodated the caravans.

Hills to the northeast, northwest and southwest direction constitute the visual boundaries of the castle town and plains and other settlements. There are valleys between these hill sides. Although water source is limited, there are fertile agricultural areas on the plain. Cotton and grain are the main agricultural products in this region. In addition, there are three villages located on this plain (Figure 117).

There is one entrance from the northeast. Although some building remains are found within the walls supported by rectangular towers on the west facade, there are no remains in the castle except the fortification walls (Figure 118).

Gilevgi castle towns has not been registered and archaeological studies has not been started yet. Moreover, Access to the castle is difficult and there is no direction and information board.

Figure 117. The view of the fortification wall of Gilevgi Castle, Antalya
(Source: Elmalı Municipality 2020)

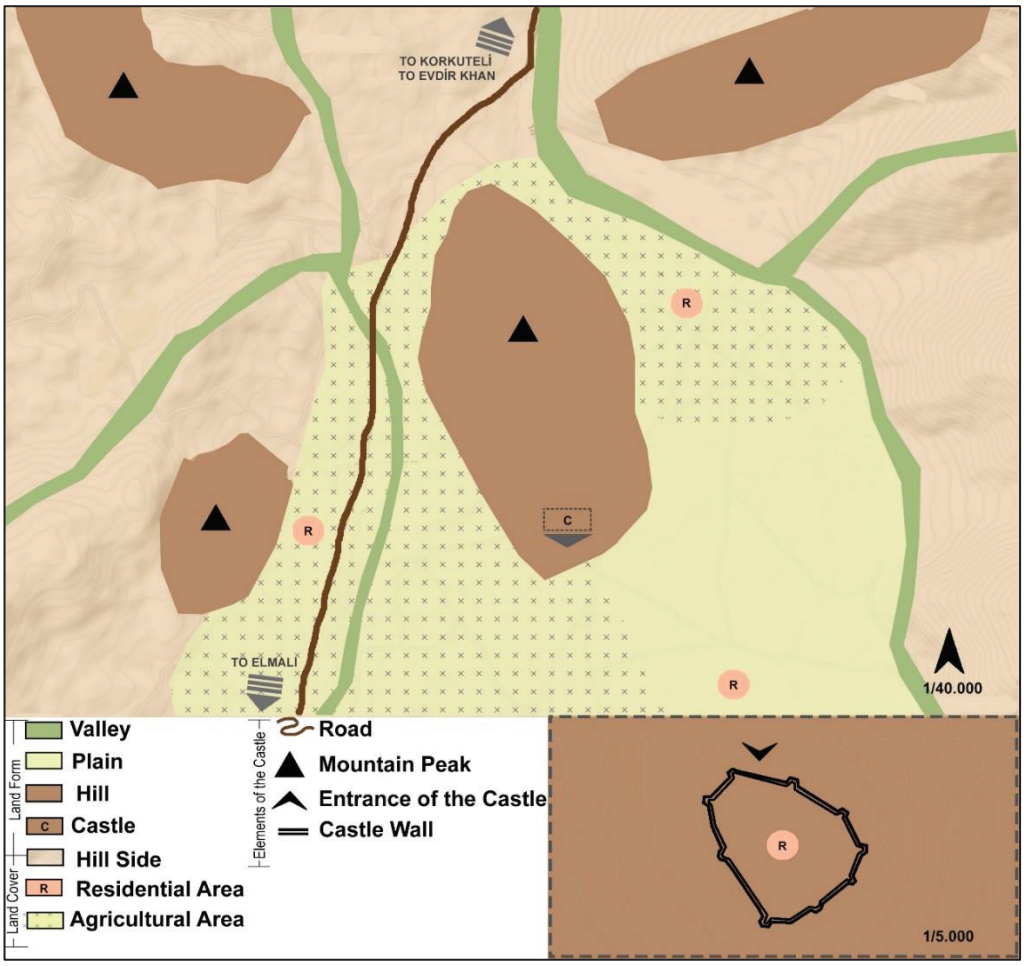


Figure 118. The map of Land Cover, Landform and Elements of the Gilevgi Castle

4.3.2. Alara Castle

Alara Castle is located at the southwest Anatolia, in Antalya province, seven kilometres from the sea. Alara Castle, which is thought to have been built before the 13th century, was taken after Alanya was conquered by Alaaddin Keykubat the First. Alara Khan was built nearby on the Silk Road by Seljuk Sultan Alaeddin Keykubad I in 13th century (Yavuz 1976, 81). During the construction of the Alara Khan, one km at the south of the Alara castle, repairs and additions were made to the castle (Lloyd and Rice 1964) (Figure 119). Alara Castle was used as a settlement in addition to its defence functions. Castle was built at the top of the hill (170 m.) for viewing the road and controlling the plain (30 m.) in all directions, especially the caravan road to the south. It is hard to access it because of the steep inclination; hence, these features made the castle a strong defense point and a safe settlement throughout the history (Figure 120).

Figure 119. The view of Alara Castle from Alara Khan, 2021

Figure 120. The view of the terraces located at the skirt of Alara Castle, 2021

Toros mountains to the north constitute the visual boundaries of the lower height plains and settlements (Figure 121). The castle is located near the valley surrounding the Ulugüney Brook, which runs in the northwest southeast direction (Figure 121). Ulugüney Brook feeds the agricultural fields on the plain (30 m.) at the south of the castle town. Cotton and grain have been grown in the fertile agricultural areas. There are four villages located along the valley on this plain (Figure 122).

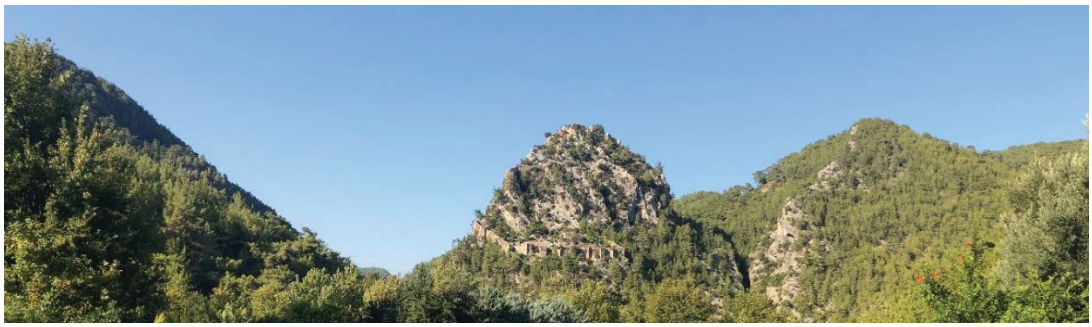


Figure 121. The view of the mountain range surrounding Alara Castle, 2021

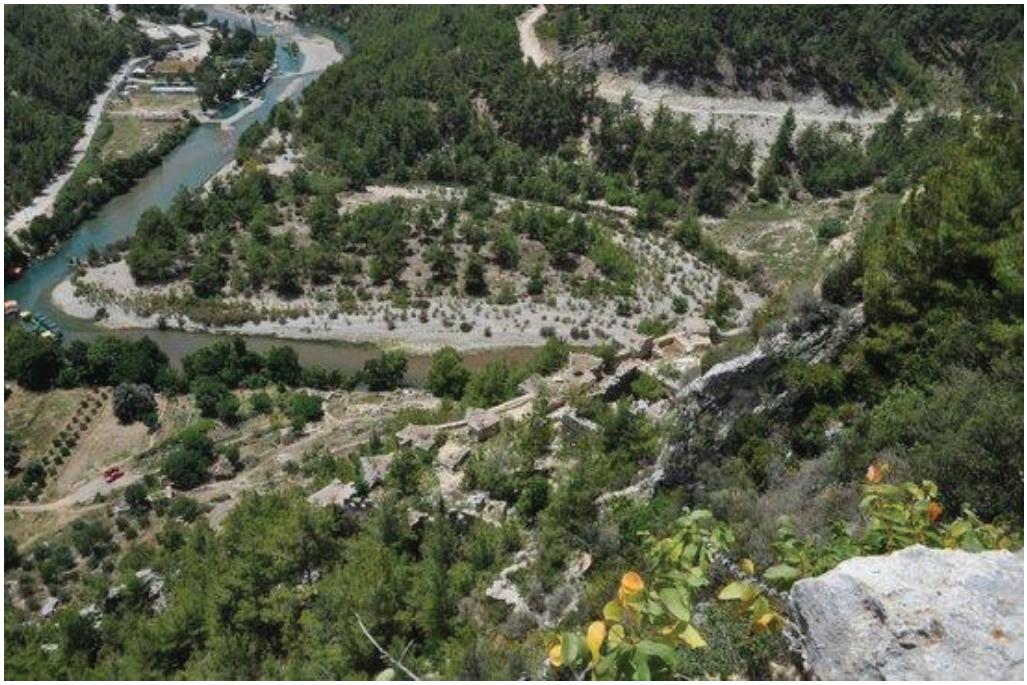


Figure 122. The view of the Ulugüney Brook from the Alara Castle
(Source: yolcu360.com)

Alara Castle was built on a steep hill rising from 200 meters to 500 meters. There is one entrance at the southeast. The access to the castle is through a dark tunnel with 120 steps (Pekin and Yılmaz 2008) (Figure 123). It is forbidden to reach the inner castle nowadays, as this corridor is dark, and the stairs are very steep. Water acquisition and transportation systems were important for the settlement throughout the history.

Figure 123. The entrance of the dark tunnel of Alara Castle, 2021

The Alara Castle has two parts as outer and inner castle. There is also a deep pit towards the middle of the tunnel. The tip of it is in the cellars, which they cross to get water. Tunnels were built inside the castle by carving the rocks (Figure B7).

While the inner castle was abandoned during the Ottoman period, the outer castle continued to be used. The population living in the village of Alara, located between the two fortification walls, was moved to the plain during the reign of Mehmet the 4th (Pekin and Yılmaz, 2008: 18). Thus, the castle, which had been abandoned since the 17th century, had demolished to a great amount. It is possible to observe the building remains such as Alara Bath and the small palace (Figure 124,Figure 125).

Figure 124. The view of Alara Castle from its skirt, 2021.

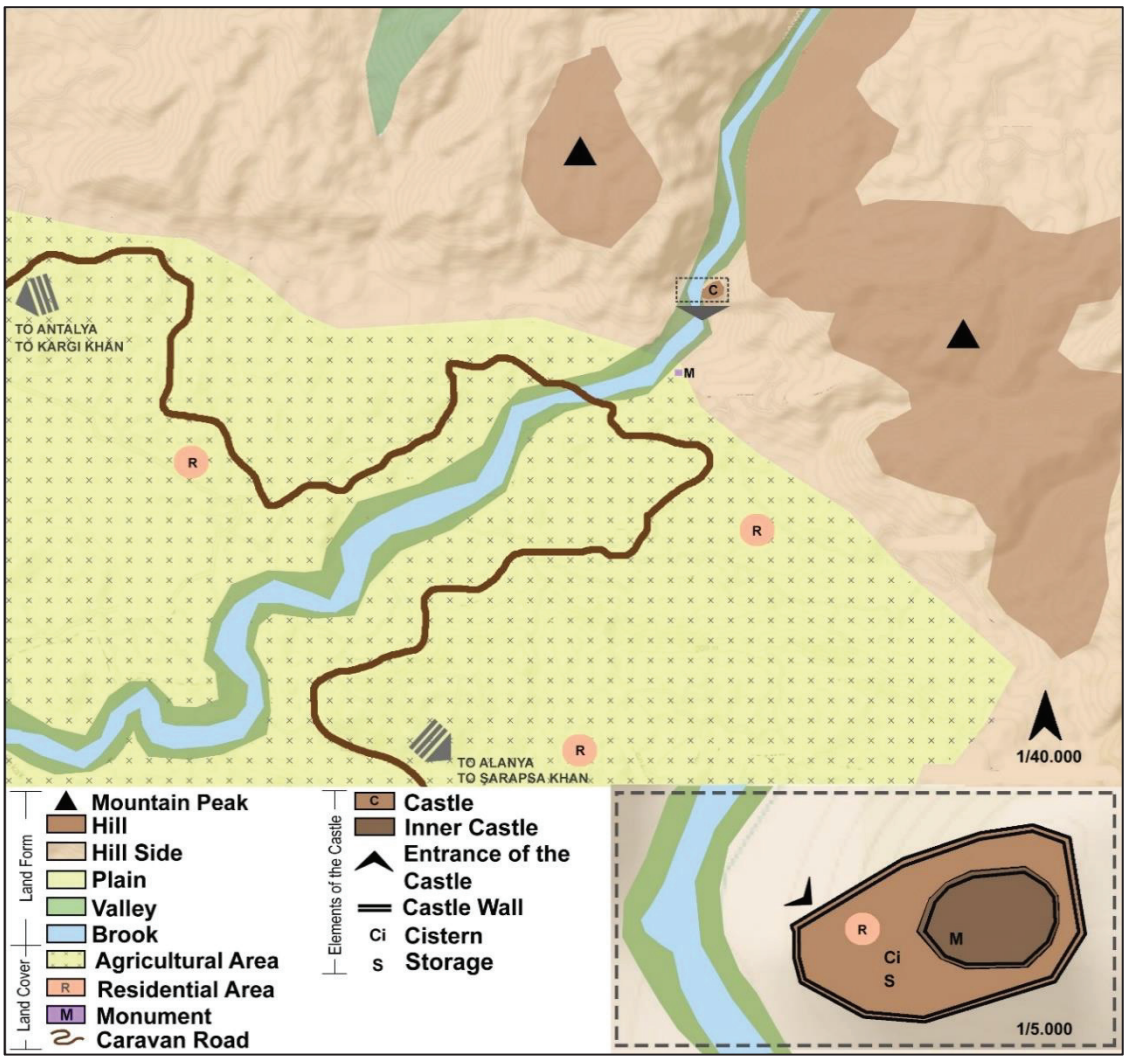


Figure 125. The map of Land Cover, Landform and Elements of the Alara Castle

4.3.3. Adanda Castle

Adanda Castle is located in the Mediterranean Region, in Gazipaşa district at the northeast of Antalya. It is located on a steep hill in the region known as Cilicia in ancient times. Adanda, which was called Lamos in ancient times, was the capital of the region in the Late Roman Period. The square-shaped towers in the Castle are of different sizes. The presence of spolia materials in the Castle, which was built with cut stone, shows the reconstruction activities carried out in the Castle in different periods. In addition, Selinus (Gazipaşa) and Cestrus (Macar Castle) which were close settlements of the Adanda were the focal points on the coast for routes from Lamos and Julio-Sebaste (Adanda Castle and Asar Tepe) in the Cilicia. However, these routes lost their importance because series of routes in the west-east direction were established. They had ensured the communication of goods between the Mediterranean and the Anatolian Plateau in the Seljuk Period. (Hopwood 1991, 306). With the decrease in the importance of this road, Adanda lost its importance and was abandoned.

Adanda Castle was built on a hill (500 m.) to control the caravan road between Anamur and Alanya and the Mediterranean coast. The castle, which is part of a historical city, was used as a settlement in addition to its defense function in late Roman Period (Pekin and Yılmaz, 2008, 10) (Figure 126).

Hills to the northeast, southwest direction constitute the visual boundaries of the castle town and the antique city Lamos (Figure 127).

The Adanda Castle has two parts as outer and inner castle. There is one entrance to the southwest direction. At the inner entrance of the castle, there is a large cistern, temples and mausoleums. Today, the castle is in ruins, however, it is possible to observe the building remains.

Adanda castle towns has not been registered and archaeological studies has not been started yet. The castle is located on the top of a very high mountain. Today, it is very difficult to reach it because its surrounding is covered with natural vegetation and location information cannot be reached clearly.

Figure 126. The view of Adanda Castle
(Source: Pekin and Yılmaz 2008)

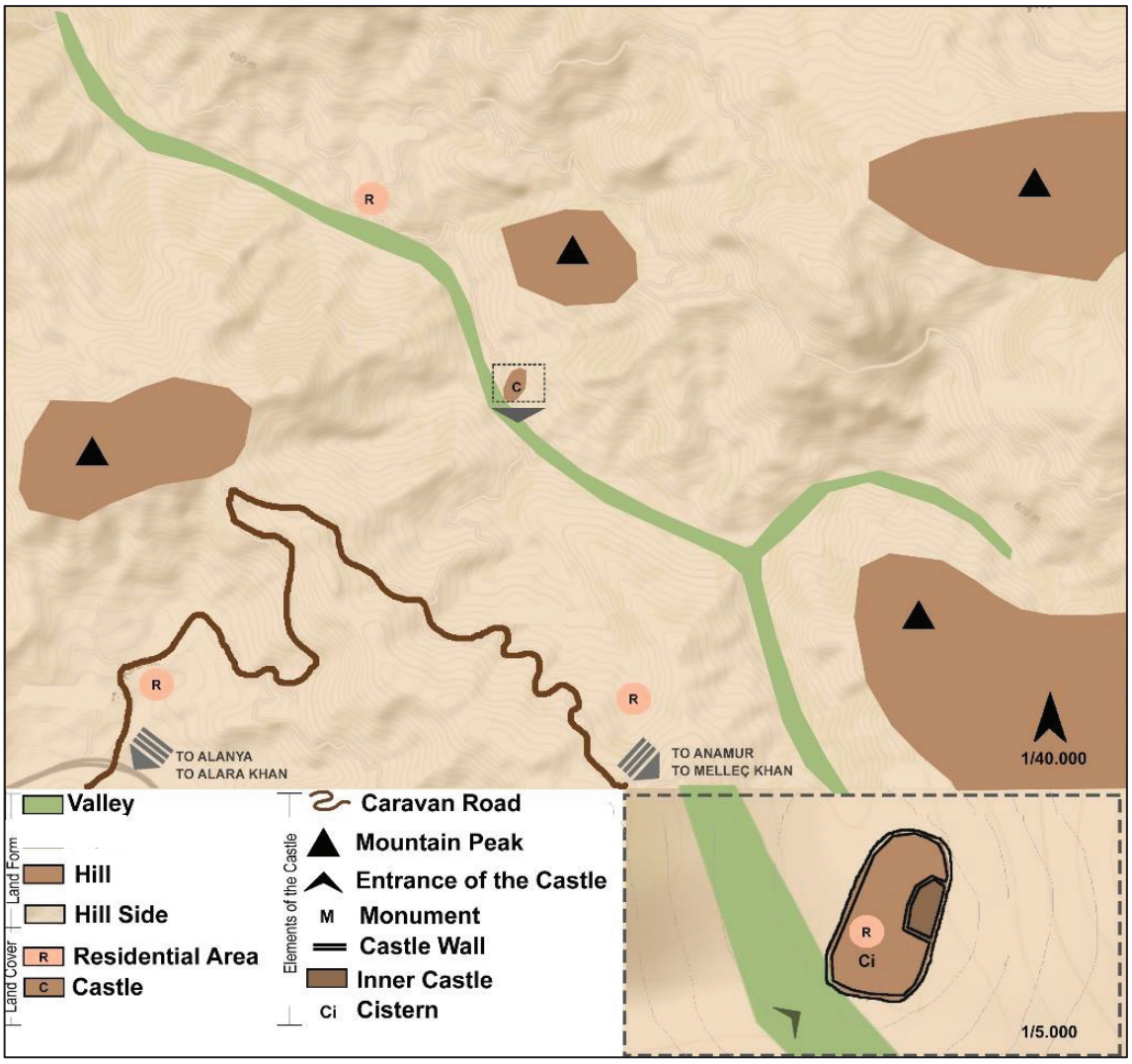


Figure 127. The map of Land Cover, Landform and Elements of the Adanda Castle

4.3.4. The Moorish Castle

The Moorish Castle is a medieval castle located in Sintra district of the central Portuguese. The castle is situated at the hilltop of the Sintra Mountain oriented southwest to northwest. It has a panoramic view surrounded by and including the natural and exotic vegetation. It was constructed by the Moors in the 8th and 9th centuries, during the period of Arab occupation of the Iberian Peninsula (Bronchud 2008, 4). The castle was located at an important strategic location throughout the history. It has been classified as a National Monument, part of the Sintra Cultural Landscape, a UNESCO World Heritage Site since 1995 with Criterion (ii, iv, v) (whc.unesco.org 2023) (Figure 128).

Figure 128. The view of the fortification walls of the Moorish Castle,
(Source: whc.unesco.org 2023)

The castle is located within the limits of the Sintra Natural Park, in the north hill side of the Sintra Mountains, where the slopes are at most 40%. The Serra da Sintra, known locally, consists of an eruptive massif with an abundance of granite, syenite, gabbro and diorite rock formations, with soils consisting of lithic, humic, cambic, and granite components (Figure 128).

Figure 129. The Moorish Castle rising from massif bad rock of the Moorish Mountain
(Source: WHC Unesco, 2023)

The Moorish Castle was the one of the major landmarks of the Sintra Cultural Landscape. The unique landscape is covered in complex of parks, gardens, palaces, country houses, monasteries, and castles, which create an architecture that harmonizes with the exotic and overgrown vegetation, creating micro-landscapes of exotic and dense beauty, agricultural buildings that have preserved their activity show a satisfactory condition (WHC Unesco, 2023) (Figure 130).

Figure 130. The view of the Sintra Cultural Landscape,
(Source: WHC Unesco 2023)

The archaeological finds and other artefacts were found from the Neolithic era through to the Middle Ages. It is thought to be The Moorish Castle is the Visigothic origin. It was used in the 9th century, during the Moorish occupation. The castle was abandoned in the 13th century. The Castle has an irregular plan and is composed of a double layer wall. There is a bailey, battlements and the reinforcement provided by five fortified towers (Lepage 2011, 309). The cistern, and the Royal Tower are some of the most fascinating architectural heritages. In addition, Sao Pedro de Canaferrim church was located inside the Moorish castle in the 12st. On the other hand, after the abandonment that church was moved to the town (Bronchud 2008, 6).

Lisbon earthquakes in 1755, triggered affected the stability of the castle and enormous destruction to the chapel and. Archaeological studies of the area began in 1979. The repair and maintenance work in the castle are carried out periodically. The settlement was relocated and expanded to hill skirt of the mountain over time caused the castle to be ruined in the 19th century (Tamari 1991).

In the 2009 establishment of an Archaeological Research Field to transfer knowledge about the human occupations of the castle. The project was preceded by archaeological excavations that revealed more than thirty medieval tombs, foundations of dwellings, and artefacts from the Neolithic that have deepened historical knowledge about the site. Today, the Historical Interpretation Centre of the Moorish Castle, installed. This center tries to collect the stories of this succession of overlapping peoples that lived here, from the Neolithic period through to the Middle Ages, through the archaeological finds and a wide range of interactive tools (whc.unesco.org 2023).

The whole park covers 210 ha, including the Tapada do Mocho and the Moorish castle and is enclosed by a stone wall. While the Sintra Cultural Landscape as the World Heritage property of has 946 ha and is surrounded by a buffer zone of 3,641 ha. (whc.unesco.org 2023) (Figure 131).

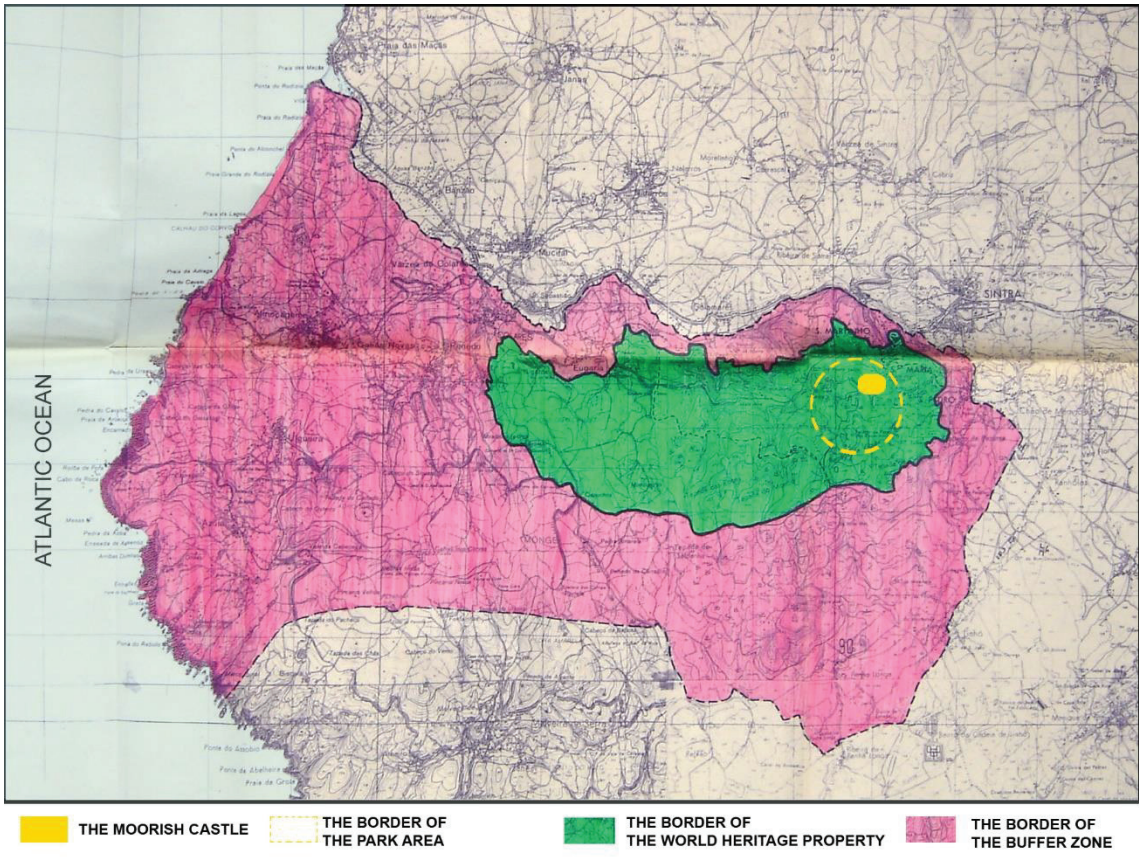


Figure 131. The conservation border map of the Sintra Cultural Landscape, (Source: WHC Unesco 2023)

4.3.5. La Couvertoirade Castle

La Couvertoirade is located in the southern part of central France. La Couvertoirade is a charming medieval village situated on the Larzac Plateau, in the valley of river Dourbie in France (Figure 132). It was originally a stopping place for pilgrims on the road to Santiago da Compostella (Mattalia 2023). The village was the holy place yielded to the Knights Templar in 1182. In 1312, the Order of the Temple was dissolved. All of their property went to the hospitallers who became the new masters of La Couvertoirade. The fortifications were reshaped in 1439 to protect the inhabitants from local thieves established in the Causses mountains.

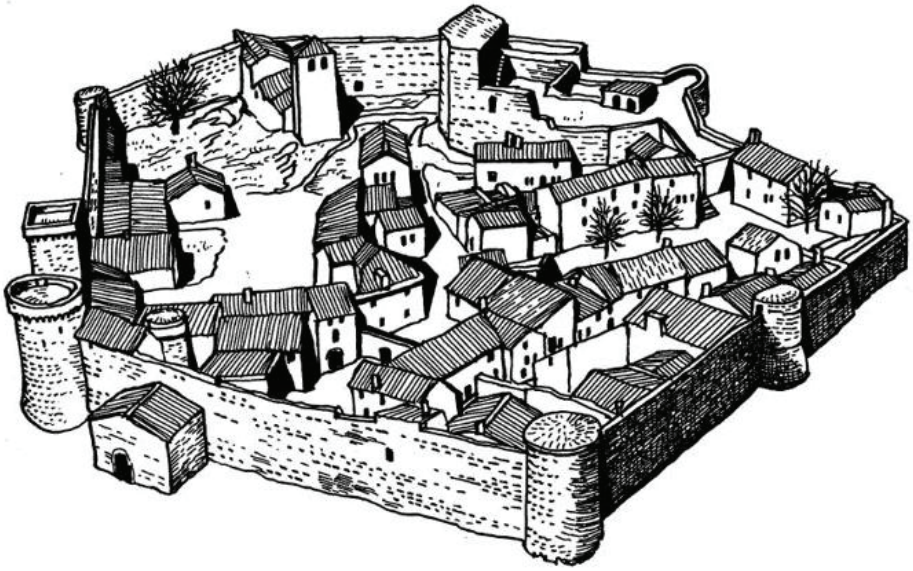


Figure 132. The schematic drawing of the La Couvertoirade
(Source, Lepage 2011, 322)

La Couvertoirade is defined as "the most beautiful village in France", the view over the typical roofs, typical houses of the Causse from the 15th century, small, cobbled streets but also the traces of the Knights Templar of the village are magnificent. (Lepage, 2011; 322) (Figure 133).

Figure 133. The relation and street pattern of the housing units of the La Couvertoirade (Source: wikimedia.org, 2023)

The architectural heritage of the town includes five buildings protected as historical monuments: the fortifications walls were listed in 1895, the Hôtel de Grailhe was listed in 1934, the Saint-Christol church and the cemetery were listed in 1945, the commandership was listed in 1945, and the parsonage was listed in 1945. It has been classified as a historic settlement, part of the Causses and the Cévennes which is the Mediterranean agro-pastoral Cultural Landscape, a UNESCO World Heritage Site since 2011 with Criterion (iii, v) (WHC Unesco, 2023) (Figure 134).

Figure 134. The aerial view of the La Couvertoirade (Source: WHC Unesco 2023)

La Couvertoirade was a Templar agricultural centre. On these lands, they forced the peasants to cultivate the crow, to breed horses (for the war) and sheep (for their meat, their skins and their milk) (UNESCO WHC website, 2023). The town had about 800 people in the middle of the 14th century. On the other hand, like other Larzac villages, the population fell rapidly in the 19th century, to as few as 362 by 1880. The population of the village has changed between 100 and 175 for the last 100 years (citypopulation website, 2023).

La Couvertoirade of population variability throughout history has also protected the villagers from famine, epidemics, and wars throughout history.

In the 19th century, although rural to urban migration increased, agricultural economic activities continued in La Couvertoirade. Then, starting from the 20th century, rural settlement has become an interesting place in terms of tourism. Today it is mainly inhabited by artisans. They work in enamel, pottery, weaving and other crafts (WHC Unesco, 2023). In addition, a GIS map showing public livelihoods and micro-landscape was launched (https://stats.agriculture.gouv.fr).

The area of La Couvertoirade is 18 983 m^2. While The Causses and the Cévennes which is the Mediterranean agro-pastoral Cultural Landscape property is 302 319 ha and is surrounded by a buffer zone of 312 425 ha. (WHC website, 2023) (Figure 135).

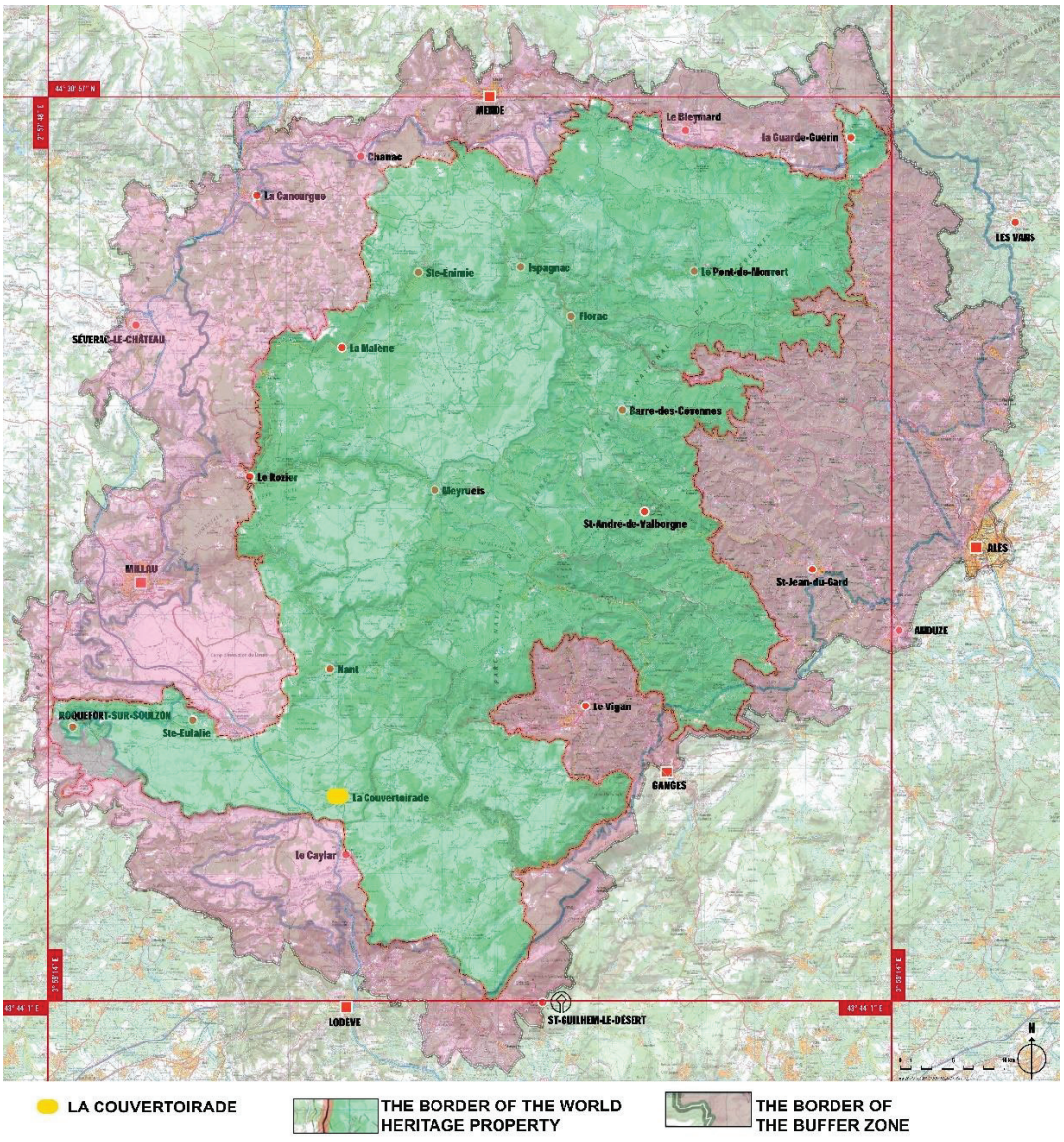


Figure 135. The conservation border map of the Causses and the Cévennes the Mediterranean agro-pastoral Cultural Landscape
(Source: WHC Unesco 2023)

CHAPTER 5

DISCUSSION

In this chapter, the methods and tools used in the preliminary studies and the natural and the cultural characteristics of studied castle towns are discussed in the below.

5.1. Discussion of the Methodology

In this section, the proposed methodology is compared with the methods and tools of the preliminary studies.

Historical Perspective: Identifying the significant characteristics and features of an area necessitates understanding its historic development and use, modifications over time, and any ethnographic values, and affiliations. All studies on historic settlements take into consideration the related historical information. The majority of preliminary studies (12/21; Creighton 1998; Altınöz 2002; Taylor 2009; Crow and Turner 2009; Cesur 2009; Buyruk 2011; Tülek and Atik 2014; Yüncü 2015; Millican et al. 2017; Çorakbaş 2017; Aksoy and Çorakbaş 2021; Burak 2021; Koparal et al. 2022) make use of evaluations of primary historic documents published by historians. Limited studies (8/21; Sevgen 1959; Aktüre 1975, 1987; Tanyeli1987; Creighton 1998; Boran 1999; Özcan 2006; Aksoy and Çorakbaş 2021; Burak 2021) are based on the analysis of primary written historical sources and achieve documents. These studies document the present and lost architectural heritage of a settlement with the information coming from the primary historical documents and also the settlement itself. Furthermore, these documents also give information about the population and production changes in the historical process. In addition, historical aerial photos, historical orthographic photos, and historical maps are the basic tools for studies focusing on the historical cultural landscape characterization method (8/21; Vuorela et al. 2002; Taylor 2009; Crow and Turner 2009; Levin et al. 2013; Yüncü 2015; Millican et al. 2017; Amici et al. 2017; Koparal et al. 2022). All of the examined studies used aerial photos but only three of them used

historical aerial photos (Crow and Turner 2009; Millican et al. 2017; Koparal et al. 2022), the others used contemporary ones.

In this dissertation, primary sources such as historic excavation reports of the Kale Tavas and Beçin were evaluated (Ersoy 2009, 2010, 2012; Beyazıt 2016, 2017). Another set of primary sources reached were historical aerial photographs of all case studies; Kale Tavas, Honaz and Beçin and comparative studies; Gilevgi, Alara and Adanda belonging to different years. They were compared with current maps to determine the nature and extent of land use changes over time. Historical maps, old photographs and *tahrir* documents obtained from different sources were used for all case studies. In addition, sources deciphering primary sources such as *avarız*, *temettuat*, and *tahrir* registers were also used (Kütükoğlu 2002, 2007; Özçelik 2005).

Documentation: Field surveys, interviews, and questionnaires are essential tools for documentation of tangible and intangible qualities. All the previous studies considered field surveys. The field surveys were carried out on a settlement scale compatible with the content considered. (7/21; Sevgen 1959; Aktüre 1975, 1987; Creighton 1998; Tanyeli 1987; Özcan 2005, 2006, 2007; Cesur 2009; Koparal et al. 2022). On the other hand, the landscape studies realized more comprehensive field surveys in landscape scale (7/21; Altınöz 2002; Taylor 2009; Crow and Turner 2009; Tülek and Atik 2014; Yüncü 2015; Millican et al. 2017; Koparal et al. 2022). Existing topography, grading natural features, climate, land uses, circulation system/network, (features of roads, paths, trails, steps, etc.) patterns of spatial organization, (overall pattern of the circulation networks areas of land use, natural features, clusters of structures, and division of property) vistas within the landscape and of the surroundings, and vegetation were investigated in these field surveys. However, only two studies made interviews during the field survey (Taylor 2009 and Yüncü 2015). The local way of life and the traditions regarding the related case studies were characterized through these interviews.

In this study, in order to understand the cultural landscapes with castle towns at their centers as defined, it is necessary to work on a number of scales. While looking at the historical settlement, the settlement and single building scales and the interior and immediate surroundings of the assumed castle wall were studied. While trying to comprehend the whole landscape, it has been studied at the scale of the landscape and within the boundaries of the cultural landscape. Finally, work has been done at network scale to grasp the interrelated castle towns and cultural landscapes as a whole.

Analysis: The method of analysis of information coming from historical documents and fieldwork also differs among studies. The studies realized in the 20th century analysed castles and castle towns with conventional documentation techniques such as historical research, photographic documentation, observation, graphic mapping, schematic drawings, inventory preparation (Sevgen 1959; Creighton 1998). Inventories included plan schemes and photos of the case studies (3/21; Sevgen, 1959; Creighton, 1998; Boran, 1999). Among this relatively older research, there are ones utilizing modelling approach (Sevgen 1959; Aktüre 1975, 1987; Tanyeli 1988; Özcan 2006) for analysing the spatial change of settlements or cities with schematic drawings and diagrams by considering several cases (4/21). Relatively recent work may also continue to rely on the conventional surveying and inventory techniques (Cesur 2009), and modelling approach (Özcan 2005, 2006, 2007). They may also limit the presentation of visual material: only photographs (Tülek and Atik 2014) or no visual material (Taylor 2009). HLC is the state-of-the-art scope for analysing the landscapes in terms of current and past land use (4/21; Taylor 2009; Crow and Turner 2010; Yüncü 2015; Koparal et al. 2022). The state-of-the-art tool used in landscape studies is GIS (8/21; Altınöz 2002; Crow and Turner 2010; Levin et al. 2013; Amici et al. 2017; Koparal et al. 2022; Yüncü 2015; Millican et al. 2017; Vuorela et al. 2002).

In this study, HLC was used for landscape scale as well, but the historical evolution of the landscape was presented in a more detailed manner compared to the state-of-the-art studies: historic population structure and production manners were included. Unlike HLC, in this study, information on historic population structure and production coming from archival sources was examined in detail. At the same time, this information was associated with the evolution of the cultural landscape and settlement scale.

While current HLC studies focus on the scope of a single scale, three different scales are considered in this study. Therefore, from the HLC content presented above, the prominent differences in this study are as follows: at the landscape scale, the information of population, settlement history, historical toponomy was presented with the time-depth maps. At the settlement scale, location analysis was carried out understanding the orientation of the building, the relation analysis was done to understand neighbour relations. In the network scale, network elements such as caravanserais, khans, castles, and bridges were presented together with the geographic formations such as mountains, lakes, and rivers.

In current studies, visual information is presented via maps obtained with GIS. In this study, the visuals included the abstraction of cultural landscape elements and historical development with the support of graphically powerful software, as well as GIS presentations, and the results were made easier to understand.

Comparison: Some studies (13/21; Tanyeli 1988; Özcan 2005, 2006, 2007; Cesur 2009; Tülek and Atik 2014; Yüncü 2015 and Millican et al. 2017; Tanyeli 1988; Özcan 2005, 2006, 2007; Cesur 2009) compared their case studies with the similar examples in terms of settlement development. Limited studies (Tülek and Atik 2014; Yüncü 2015 and Millican et al. 2017) compared the methodology.

In this dissertation, the selected comparative examples differ according to the subject to be compared. While comparing the evolution of cultural landscape features, similar examples on the same historical trade route were evaluated with the same method applied to the case studies. Different comparative examples were selected for the other comparison subjects such as function, settlement features, context, historical features, architectural features, and preservation status. These examples are both from Turkey and abroad.

Evolution: One quarter of the studies evaluated the evolution of historic settlements (5/21; Creighton 1998; Aktüre 1975, 1987; Tanyeli 1987; Özcan 2005, 2006, 2007 and Cesur 2009). The evolution of the landscape was presented with its changing land cover and land use aspects in another quarter of the studies (5/21; Vuorela et al. 2002; Crow and Turner 2010; Levin et al. 2013; Amici et al. 2017; Koparal et al. 2022). So, evolution of the cultural and natural qualities was considered only in half of the studies.

This dissertation emphasizes the importance of evaluating the cultural landscape in the historical process. The evolution of the castle towns and cultural landscape were considered with both their cultural and natural aspects. Association of the cultural evolution ongoing in the towns with the evolution of their natural contexts differentiates this study from the previous work.

Context: The castle town and cultural landscape studies carried out in the 20th century focused on the determined area itself. It has become important to evaluate the cultural entity in its context in the current studies. Limited studies determined the characteristics of castles in the context of a communication and transportation network (6/21; Creighton 1998; Cesur 2009; Buyruk 2011; Yüncü 2015; Burak 2021; Koparal et

al. 2022). In this dissertation, the castle towns were presented as part of the historical traditional network with relation of the other network elements.

Content: One third of the studies characterized the cultural landscapes with their land use qualities in time (8/21; Vuorela et al. 2002; Crow and Turner 2009; Tülek and Atik 2014; Yüncü 2015; Millican et al. 2017; Levin et al. 2013; Amici et al. 2017; Koparal et al. 2022). The heritage value of the cultural landscape in relation to the extent to which it has preserved its integrity was evaluated. The degree to which the changes in the cultural landscape add to or lessen its heritage value was revealed in these studies. Limited studies concentrated on the related intangible features and emphasized the necessity of in-depth interviews (Taylor 2009 and Yüncü 2015).

There are four studies (Altınöz 2002; Cesur 2009; Burak 2021; Aksoy and Çorakbaş, 2021) differing from other studies in terms of focusing on the conservation decision-making process. Cesur 2009 and Burak 2021 focused on the conservation of the castle structures. Altınöz 2002 concentrated on the settlement scale, Aksoy and Çorakbaş 2021 emphasized that the intangible inputs are indispensable issue of the conservation studies of the heritages. Preservation studies on cultural landscapes emphasize the vanishing cultural landscape and drastically increased land use change and underline the importance of management of biodiversity against the increasing human pressures on nature (Vuorela et al. 2002; Levin et al. 2013; Amici et al. 2017). Conservation and presentation of castles involve structure and material problems and alterations of castles that are listed as archaeological sites. Although these studies draw attention to the necessity of conservation of the elements such as agricultural areas, and shrublands as a part of the outer castle, suggestions regarding the border of cultural landscape conservation are limited (Cesur 2009).

This study is different from other studies, In the network scale of this thesis, the authenticity of the network elements and integrity of the historical roads in terms of relation of network elements were evaluated. In the landscape scale, land use change was analysed throughout history. In the settlement scale, the change in the lot layout of the settlements over time and the reasons for this change were evaluated. At the same time, the examples were compared with each other in terms of settlement characteristics. In this dissertation, authenticity, and integrity are evaluated. In addition, the conservation and presentation problems of case studies are revealed with its multi-scaled scope.

5.2. Discussion of Studied Castle Towns

The natural and cultural evolution of the case studies are compared with each other and also with similar cases in this section.

5.2.1. Natural Characteristics

The natural characteristics of the cultural landscape of castle towns are discussed considering their topography and landform.

- **Topography**

The main consideration in the positioning of the castle towns of Tavas, Honaz and Beçin was placement in an elevated site surrounded by low land. A similar positioning preference was made in the comparative examples. In turn, they dominate their landscapes. There is usually a clearly noticeable difference between the elevations of the positions of the towns and their surroundings: between 366 and 100 meters in the case studies and between 520 and 140 meters in the comparative examples (4 of 5, excluding La Couvertoirade). In the case of La Couvertoirade, safety is provided through the fortification walls; this mound reaches 809 meters at its crest. The common point of all case studies is that they are in a position where they can dominate their surroundings. The castle towns and their cultural landscapes have evolved on mountains, hills, hillsides, plateaus, mesas, valleys, plains, and brooks. In the comparative studies, the topography is composed of the same elements excluding the mesa.

The elevation levels of the Kale Tavas, Beçin, and Honaz are 1100 m, 175 m, and 750 m, respectively. Those of Gilevgi, Alara, Adanda, Castle of the Moorish Castle, and La Couvertoirade are 1350 m, 170 m, 820 m, 416 m, 780 m, respectively. Thus, they are in a similar range.

Kale Tavas is located on a mesa surrounded by a plain. The difference between the mesa and the plain is 110 m. Beçin is located on a plateau, and it dominates its plain; the difference between the plateau and the plain is 100 m. The difference between the elevation of the plateau and that of its surroundings is 200 m. in Honaz (Figure 136). Kale Tavas has the highest position because it is surrounded by the high-altitude plains, while Beçin is located at a low altitude because it is the closest castle city to the sea.

The highest difference is in Adanda Castle: 520 m. Alara castle has the lowest difference: 140 m. It is the steepest castle among the examined castles and closest to the sea. The highest castle among the studied castles is Gilevgi and the plains surrounding it are elevated as well: 1130 m. The difference between the castle and the plains is 220 m.

Among the comparative examples from abroad, the castle town with the lowest difference between its elevation and that of its surrounding is La Couvertoirade: 13 m. The difference between Moorish Castle's elevation level with its surroundings is 366 m.

As a result, there is usually a significant level difference between the castle town and its surroundings. The average heights of the castle and its surroundings decrease as they are close-by the sea. In addition, since the low height difference with its surroundings eliminates the difficulty of accessibility, it can be considered that this situation is a factor that La Couvertoirade is still used as a settlement.

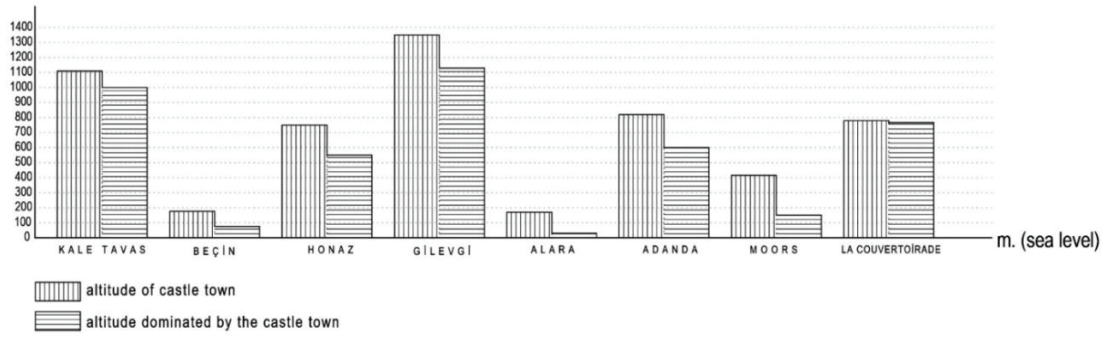


Figure 136. Altitudes of Castle Towns and their surroundings, bar chart

Kale Tavas is located on an easily eroding substance: limestone. This was the most important factor in the landslides Kale Tavas was exposed to throughout history and finally abandoned. Beçin and Honaz castle towns are located on rock and durable grounds. While Gilevgi, Alara and Adanda castles are also on durable hills or hillsides. La Couvertoirade is on unstable ground. Here, no landslides were observed because the height difference of La Couvertoirade with its surroundings is limited and it was exposed to earthquakes of lesser intensity. Whereas the Moorish is abundance of granite. The Moorish castle has witnessed devastating earthquakes in history.

- **Landforms**

The focal element of the cultural landscape crowned by a castle is a mesa in Kale Tavas, plateau in Beçin and the highest point of a hill in Honaz. The focal element is often the highest point of a hill in the comparative examples: Adanda, Gilevgi. As the last

option, the castle may be situated on the crest and skirts of a hill, giving way to level differences within the settlement area: Alara. The focal elements may widen the visual boundaries of the castle towns beyond their landscapes. Adanda have sea vistas, although they are about ten kilometres from the related coasts. Alara Castle surrounds its hill like a spiral, starting from the lower elevations (40 m.) to the summit. The highest point of the castle dominates the surrounding plains (30 m.) (Table 6). In the comparative examples, the focal elements are sometimes part of a mountain range, but this quality is not observed in the case studies.

The Moorish castle is located at the highest point of a hill. While La Couvertoirade is situated on a plateau. The Moorish Castle has ocean vista, although it is about eight kilometres from the close-by coasts. La Couvertoirade has limited vista because of its lower elevation location (Table 6).

Table 6. The landform elements of the castle towns.

	Castle Name	Kale Tavas	Beçin	Honaz	Alara Castle	Gilevgi Castle	Adanda Castle	Moorsh Castle	La Courvertiorade
Landform	Surrounding Mountains	Babadağ Mountain range	Honaz Mountain range	Kazıklı Mountain range	Toros Mountain range	Mountain range	Toros Mountain range	Sintra Mountain	–
	Natural Green Area	Mediterranean vegetation	Mediterranean vegetation	Mediterranean vegetation	Mediterranean vegetation	Mediterranean vegetation	Mediterranean vegetation	Mediterranean and Northern European flora	Mediterranean vegetation
	Hill	–	–	750 m.	170 m.	1350 m.	820 m.	416 m.	809 m. mound
	Mesa	1110 m.	–	–	–	–	–	–	–
	Plateau	–	175 m.	–	–	–	–	–	Larzac Plateau 780 m.
	Plain	200 m.	86 m.	550 m.	30 m.	1130 m.	–	150 m.	–
	Water	Karaçay Brook	–	–	Ulugüney Brook	Brook	–	Brook	–
	Valley	along the Karaçay Brook	–	–	along the Ulugüney Brook	between the two hills	–	between the two hills	between the two hills

In the surroundings of the case study castles and the comparative examples, there are natural green areas. In addition, all the cultural landscapes of the case study castle towns and comparative examples have been covered by Mediterranean woodland in every age, but the Castle of the Moorish is covered also by Northern European flora.

There was no change in the vegetation ratio in the landscape of the Castles over time except for Beçin whose vegetation has decreased by 40% since 1938. In addition, there are some bare areas detected in these landscapes, especially in Kale Tavas: 7%.

Planes are seen in the surroundings of Kale Tavas, Beçin and Honaz. While planes are also frequently seen in the comparative examples excluding Adanda in Turkey. In

abroad, planes are seen in the surroundings of The Moorish Castle. No plain is observed in the landscape of La Couvertoirade.

Among the case studies, a brook-valley system enriches the landscape of Kale Tavas only. While it is frequently observed in the comparative examples excluding Adanda. The brook valley system is also observed in the landscape of the Moorish castle. The pit formed by these stream beds acted as a natural ditch in Kale Tavas, and Gilevgi. Nevertheless, only their beds are observed today (Kale Tavas and Gilevgi).

Mountain series define the visual boundaries in Kale Tavas, Beçin and Honaz. Similarly, the border of the cultural landscapes is defined by mountain series in the comparative examples excluding Adanda (Table 6). Mountain ranges are the visual boundary for La Couvertoirade, while mountains and sea form the visual boundary for the Moorish Castle.

The cultural landscapes of castle towns have different vista points. The view from the castle to landscape consists of the road, plains, valleys, the fertile agricultural areas and the one side of the mountains that form the border of the landscape while the view from the lower elevation is the unique view of the majestic castle.

5.2.2. Cultural Characteristics

- **Time Depth**

Castle towns have had different administrative, commercial, and/or religious importance throughout history since they were safe areas where people met their defense and shelter needs thanks to their strategic location throughout history.

The history of the majority of the studied castle towns; Honaz, Alara, Adanda, the Moorish Castle and La Couvertoirade date back to Middle Ages. Kale Tavas, Beçin and Gilevgi were constructed in prehistoric periods.

Kale Tavas and Beçin castles had administrative and commercial importance. Kale Tavas was the center of *kaza* in the 16th century. Beçin was the capital of the Emirate of the Menteşe in the 14th century. Honaz had religious and commercial importance. It became one of the important Byzantine castle towns: it was one of the archbishopric centers in the 8th century. Among the comparative examples, Adanda had an administrative significance: the capital of its region in the Late Roman Period. Alara castle was built nearby the Silk Road by Seljuk Sultan Alaeddin Keykubad I in the 13th

century. All of the cases and the comparative examples (excluding Gilevgi) were located on the primary roads. Gilevgi was located on this secondary road that extends from the caravan road passing through Korkuteli to Elmalı. Although the security need disappeared and Kale Tavas and Beçin lost their strategic importance, their proximity to the important trade axes was a probable reason for their preference as habitation sites until the 20th century. The Adanda castle which was located on a mountain was the earliest abandoned among the case studies and comparative examples. Adanda was not used as a settlement because the trade routes changed in the 13th century and transportation was very difficult, however, it is thought that it continued to be used as a defence castle later.

The Moorish castle had commercial importance. It was located on the trade road. La Couvertoirade castle was a significant religious center. It was originally a stopping place for pilgrims.

- **Land Cover**

The lower level of hillsides of mountains surrounding the castle towns is covered with cultivated green areas such as shrublands for livestock farming and agricultural fields in all of the cases and in the majority of the comparative examples: Gilevgi, Alara, and The Moorish Castle. In addition, plain is the common element of all the case study castle towns and comparative examples located at relatively lower altitudes: 1130-30 meters. On these plains, residential areas are present. Products, especially those compatible with Mediterranean vegetation, are grown wheat, tobacco, and chickpea. Plains have been rich in terms of water sources Kale Tavas and in three of the comparative examples: Alara, Gilevgi and the Moorish Castle.

The land use of the plains has changed over time. Agricultural lands covered 33% of the landscape in Kale Tavas 62 years ago (Figure 138a1). This rate has gradually decreased over the years and has become 16% today due to the new settlement construction or expansion of the settlement (Figure 138a2). On the other hand, the agricultural lands covered 41% of Beçin (Figure 138b1), and 40% of Honaz (Figure 118c1), 47% of Gilevgi, 48% of Alara approximately 75 years ago. Nowadays, the ratio of agricultural land has declined 19% in Beçin (Figure 138b2), due to the same reason with Kale Tavas. Besides, in Honaz, new settlements did not diminish agricultural areas but gave way to the loss of shrubland on the mountain slopes which covered 13% of the landscape in 1953 (Figure 138c1,c2). However, in the comparative examples from abroad, the agricultural lands surrounded 40% of the castle of La Couvertoirade and 37%

of the Moorish castle in the 2000s. There is no change in the proportions of farmland surrounding the two castles, and they are actively used today.

Another usage of the plains and hillsides is residential. When castle towns were established, villages were located on the hill skirts of the mountains or the plains. While the areas covered by all-natural elements have decreased over time, the residential areas have increased 15 times in Kale Tavas. Besides, the new housing constructions have increased 15 times in Beçin, and 6 times in Honaz. The amount of decrease in agricultural areas and increase in residential areas of Gilevgi castle is 1%. For Alara Castle, the number of greenhouses in the agricultural area and the eating and beverage facilities have increased by 2% along the Ulugüney brook over the years. No changes in the distribution of surface areas of cover elements around Adanda castle is observed in years because the site is not settled. In addition, Gilevgi is located away from the main road (former historical trade route), the importance of the historical trade route provides to access to Adanda lost after the 4th century, so it was not a preferred place for settlement. Therefore, the increase in housing area over the years is small (Figure 139).

In addition, all the case study castle towns and comparative examples consist of inner and outer castles. There are agricultural fields and pastures on the plains on the outskirts of all case study castle towns and comparative examples except Adanda. Besides, since the castle's surface is small for case studies, the agricultural areas in the castles are limited, so it is stated in the historical sources that the people of the castle migrated seasonally to these agricultural areas outside the castle.

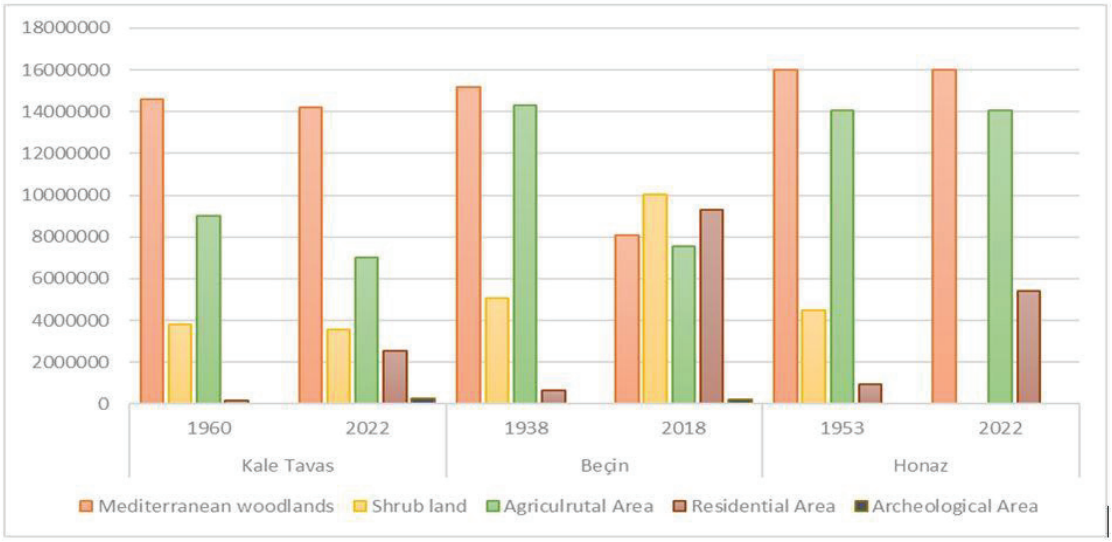


Figure 137. The surface area (m^2) of Land Cover elements of landscapes of Castle Towns.

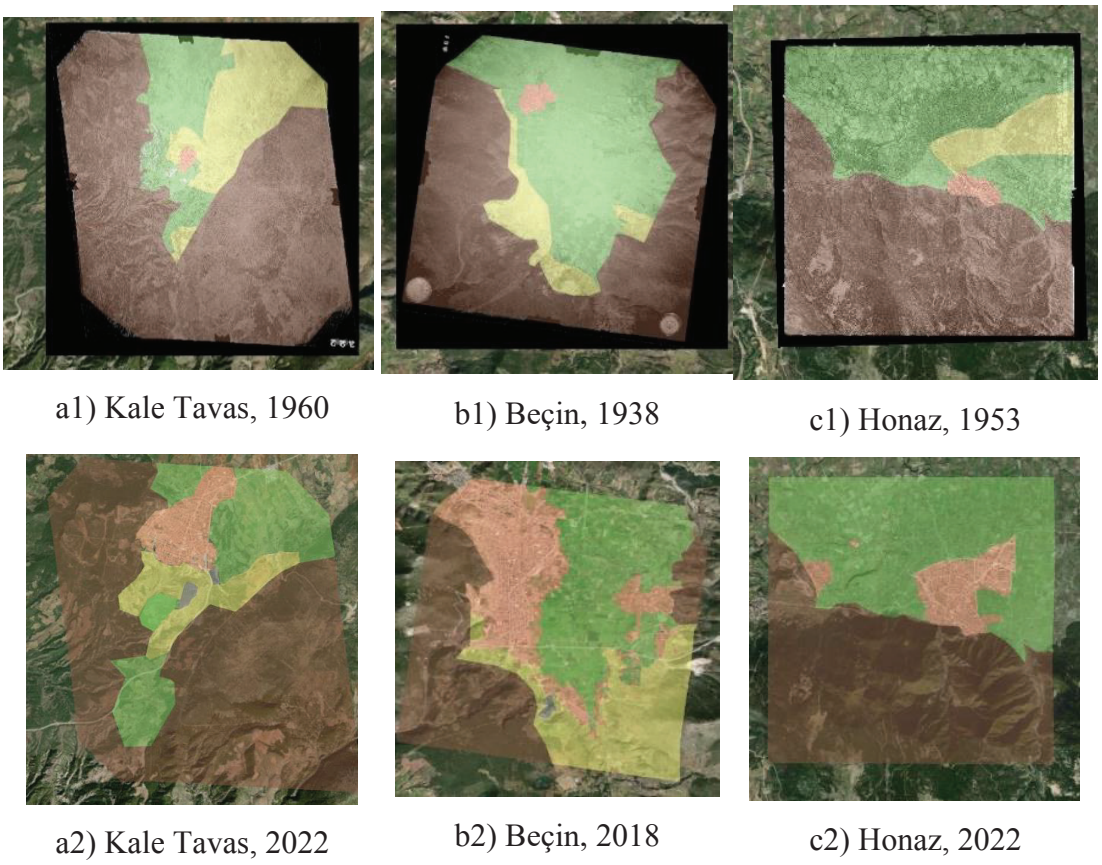


Figure 138. The landscape changes of Kale Tavas, Beçin, and Honaz Castle Towns.

- **Land Use**

The mesa in Kale Tavas was used as residential areas, and the hillsides and plains of Kale Tavas were used as prairies, and agricultural lands throughout history until the abandonment led to the ruin of the integrity of the whole landscape. Over time, agricultural areas have decreased especially on the plains on the hillside of Kale Tavas, because of the increase of the new settlement construction. Before abandonment, living on an isolated hill surrounded by steep ditches should have evoked the sense of a safe place. In addition, the feeling of loneliness should have been apparent to its inhabitants. Although it is abandoned, the hill is still a focal point with its physical form. Prairies, agricultural lands, and villages at the mountain skirts were all elements of the cultural landscape of Kale Tavas. The tight relation of these elements provides the integrity of Kale Tavas. After abandonment, agricultural activity decreased compared to the past on the plains, however, it continues. Moreover, animal husbandry, weaving, dialect, and cooperation of the former inhabitants continue. The cooperation and traditions stemming from the impossibility of departure location were transformed. The plateau in Beçin and

the hill in Honaz were used densely as residential areas. While the plateau in Gilevgi and the hill in Alara and Adanda were used barely as residential areas until abandonment. Although the natural inputs of the landscape of these castle towns are preserved at a great extent, the loss of physical, economic, and socio-cultural integrity of landscapes with their landscape is the major preservation problem detected. The landscapes of the Moorish Castle and La Couvertoirade retain a high degree of authenticity in terms of their natural and man-made elements. Although the population of La Couvertoirade has decreased over time, the settlement has still resided, and traditional pastoral activities have continued.

The roads of Kale Tavas and Beçin had organic patterns. Thus, the number of dead-end streets is also numerous. On the other hand, Since Honaz was abandoned and there is no information about the settlement area in the castle, there is no information about the road organization. The same is true for all comparative studies. On the other hand: the Moorish Castle has organic road structure, while La Couvertoirade has organic and grid street patterns. It reflects the settlement scheme of the period in which it was built.

The case studies had limited areas for agricultural activity. So, the inhabitants migrated to plains located in lower zones every summer for agricultural activities. These specific roads of seasonal migration are important circulation networks for castle towns. Although there is no information about seasonal migration in Gilevgi, Alara and Adanda, the agricultural areas that can be still observed on the outskirts of the castles of Gilevgi and Alara promote the seasonal migration of the people living here. There is no information about the agricultural areas of Adanda.

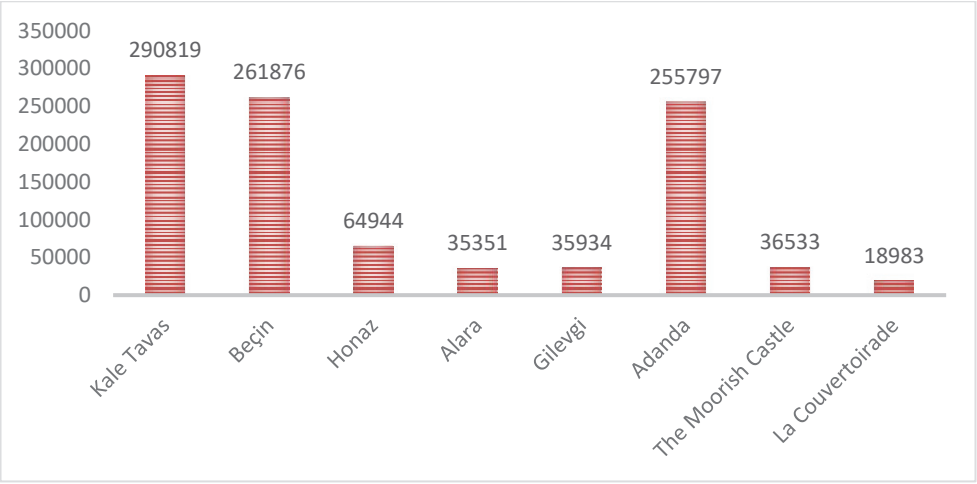


Figure 139. The surface area(m^2) of Castle Towns

- **Circulation Network**

Within the scope of this study, three case studies and three comparative studies on the same caravan route coming from the north to the east-west direction have been studied. The caravan road continues in the east-west direction, the first is the Adanda Castle. Then, there is the Alara Castle located at a distance to be reached a caravan in a day. There was one caravanserai between the Adanda and Alara Castle. The next stop was Gilevgi Castle. Although Adanda and Gilevgi Castles were located on this secondary road, there were six caravanserais between them. Moreover, the distance between the caravan road, and Adanda and Gilevgi castles is more than the other studied castle towns. Although the exact time of abandonment is not known, it is thought that this distance caused these castles to be abandoned earlier than others. After the Gilevgi, the caravan road reaches Honaz Castle. There were three khans between Gilevgi and Honaz. The next stop was Kale Tavas. Then, there was no khan between Honaz and Kale Tavas. Finally, the caravan road reaches Beçin Castle. There were two khans between Kale Tavas and Beçin. In addition, there were three bridges between Antalya and Denizli. The Moorish Castle and La Couvertoirade are located on different trade routes.

- **Preservation**

Most of the inland castle towns are in ruins as they are generally difficult to access. Since most of the inland castles are based on prehistoric civilizations, archaeological studies continue in and around the castle. The archaeological research continues in Kale Tavas. Especially Roman period structures and graveyards have been investigated, while reconstruction studies have been carried out for Turkish period monuments. Since the excavation commonly concentrates on monumental structures, the information provided about the lot organization, residential structures, and life story of Kale Tavas is either limited or absent. Besides, the archaeological site of Beçin has been excavated systemically since 1972 which was registered as an archaeological site in 1997. The scientific excavations focused on the Emirate of Menteşe monuments, most of which were restored. Whereas the houses in the inner castle are in ruins. Furthermore, Beçin Castle town has been on the tentative list of the World Heritage List as a cultural property since 2012. Although archaeological excavations are important in terms of knowing the history of the studied period, it may be insufficient in terms of the presentation of all layers in the castles. On the other hand, the archaeological research has not started yet in

Honaz and it has not been registered yet. The same is true for all comparative studies: Gilevgi, Alara, and Adanda castle towns.

In the 2009, an Archaeological Research Field and the Historical Interpretation Centre to provide knowledge about the human occupations of the castle were established in the Moorish Castle. Boundaries with different conservation measures at different scales have been defined for the Moorish castle and its landscape. The castle is registered as a monument, and the parks around it was registered as a national park. The Moorish Castle is part of the Cultural Landscape of Sintra has been on the World Heritage List as a cultural landscape property since 1995. Besides, the whole cultural landscape border has been also determined as a buffer zone and taken under protection.

La Couvertoirade is the fortified settlement of the Causses and the Cévennes, a Mediterranean Agro-Pastoral Cultural Landscape property that has been on the World Heritage List as a cultural landscape property since 2011. Furthermore, the whole cultural landscape border has also been determined as a buffer zone and taken under protection.

The fact that these two castles are included on the world heritage list not only as castles but also as cultural landscape reveals that they are protected holistically. The fact that these two castles abroad are registered as castles town within the cultural landscape areas in the world heritage list has ensured the conservation of the landscape surrounding the castles as a whole.

- **Authenticity and Integrity**

The mesa in Kale Tavas, the plateau in Beçin and hill in Honaz were used as residential areas throughout history until the abandonment. The settlement integrity of all these castle towns is ruined because of the abandonment. Prairies, agricultural lands, villages at the mountain skirts in the area under their control, and the caravan route providing access to this enclosed area were all elements of the cultural landscape of the studied castle towns. Over time, agricultural areas have decreased especially on the plains on the hillside of Kale Tavas, Beçin, and Honaz because of the increase of the new settlement construction. Although the landscape features of castle towns are preserved at a great extent, the loss of physical, economic, and socio-cultural integrity of the castle towns with its landscape is the major preservation problem detected. The last abandoned castle town was the Kale Tavas. Although the authentic settlement where the intangible heritage such as traditions, and local way of life changed, it the intangible heritage is still sustained by the former inhabitants. Since the other castle towns were abandoned a long

time ago, no information about the intangible heritage features has been reached so far. The Cevherpaşa Mosque was reconstructed in 2006 in Kale Tavas. After the mosque started to be used again, the inhabitants traditionally perform Friday prayers and Eid prayers in this mosque. Kale Tavas is the only place where symbolic use continues among the studied castle towns. On the other hand, the loss of physical, economic, socio-cultural integrity of Gilevgi, Alara and Adanda with their landscape, and lack of any conservation and presentation measures are the major preservation problems detected. The abandonment of these castle towns gave way to a rapid loss of both its tangible and intangible assets.

The fact that the Moorish Castle and La Couvertoirade are castle towns listed as WH with their cultural landscapes. At the same time, they stand out with their holistic conservation and management plans. Both castles are among the impressive points of visitors' travel routes. Both their authenticity and integrity have been preserved stairs, sign boards, etc. for their qualified presentation were provided.

La Couvertoirade is mainly inhabited by masters of various by crafts. At the same time, a GIS map showing livelihoods and micro-landscape was launched. This creates a pool of knowledge and increases attention to unique landscape diversity and livelihoods.

CHAPTER 6

CONCLUSION

In this study, a case study approach was undertaken: Kale Tavas (Tabae), Honaz Castle (Chonae), and Beçin Castle in Southwestern Anatolia were focused on. In addition, Gilevgi, Alara, and Adanda castle towns were examined as comparison cases located in the same network. These castle towns emerged in outstanding natural environments: elevated position for the castle and fertile agricultural lands, prairies and shrub lands in their vicinity. They were on strategic roads. They provided both secure settlement and trade opportunity. The view from the castle to the landscape consisted of one side of the mountains that form the border of the landscape, plains, valleys, brooks, fertile agricultural areas, graveyards, and roads. While the vista points from the lower elevations were fortification walls rising from a remarkable geographical shape such as mesa, plateau, hill side or hilltop.

The assessment method developed in this study can be used as a guide for understanding the evolution of similar castle towns and supporting the decision for their holistic conservation. The HLC technique is a holistic and inclusive tool for mapping castle towns together with their landscapes to present their evolution and heritage characteristics. Historical aerial photographs and old maps should be provided for illustrating the evolution of the discussed landscapes and settlements. GIS should be supported with graphically powerful programs e.g. AutoCAD and Photoshop to make abstractions of the captured preservation concepts. Different from the HLC method; network scale, settlement and single building scales are also evaluated in this thesis. At the same time, together with the evaluation of the evolution of landscape areas, time-depth studies based on primary sources were evaluated to understand the physical and social change of castle towns over time. Furthermore, information about local traditions, terms, and daily life can be gathered through the interviews with the people who migrated from the castle towns.

This study reveals the importance of understanding the evolution of the castle towns together with their landscapes. Understanding the topography composed of low and high elevation zones, landform made up of mountains, mesas, plateaus, plains,

valleys and brooks; and land cover defined by agricultural areas, shrublands, Mediterranean woodland and residential areas is indispensable. The period at which the castle town had developed should be defined: 16th century for Kale Tavas, 11th century for Honaz and 13th century for Beçin. Furthermore, the commercial route linking each castle town to its network should be realized. In this study, the commercial route linking each castle to its network was revealed west-east axis at the north of the Toros Mountains. At settlement scale, land use, solid-void, lot organization and relation of buildings should be understood. The castles had an interlocking lot layout, limited open space use, commercial buildings around the mosque, but generally had a dense residential texture. The streets pattern consisted of a narrow and organic roads and tiny squares were formed where dead-end streets end.

The evolution of castles is evaluated through their natural and cultural characteristics in this study. Castles were used extensively when security concerns were high. They have become uninhabitable due to different reasons: the criteria for selecting settlement locations changed based on economic and scientific reasons, the change in the understanding of security or cavities opened under the ground to provide water and earthquakes. As a result, their inhabitants had moved to new settlements founded at lower elevations in the nearby site and inharmonious new constructions have started to threaten the landscape. This had led to the loss of integrity of pastures, shrublands, and natural vegetation. The castle towns have faced considerable land use changes: the abandonment of the settlement together with traditional rural life caused the loss of the physical, economic, and socio-cultural integrity of the castle town with its landscape. The integrity and intactness of these cultural landscapes are related to the protection and presentation of the related remains. Unlike Turkey, the subject of protection and presentation related to castle towns is evaluated together with their surroundings such as landforms, natural vegetations and vistas in the international cases. There are also international documents and regulations supporting this holistic approach. Currently, conservation studies have not been started yet in Honaz. On the other hand, Kale Tavas and Beçin Castles are listed as archaeological areas. The related conservation studies generally concentrate on single elements: fortification walls and monuments located in the castle. The castle towns in their natural setting are not conceived as a whole.

Correlation between the castle town and the landscape in the vicinity for all relevant periods is indispensable for holistic conservation. In turn, castle surveying, conservation, and presentation strategies should be united with those of the related

cultural landscape. Completion of listing of the castle towns as archeological sites and the related archaeological geo-prospection research and development of a legal status for their landscapes; presentation of the vista points both from the castle and from the landscape, the traces and remains of ditches, zaviyes, bridges, caravan and migration routes, possible tent positions and settlement pattern; avoiding of reconstructions and utilization of this heritage data in the management and development of the landscape are necessary, e.g. limitation of housing and industrial zones on the plains, supporting of indigenous rural way of life: cotton, grain agriculture, animal husbandry.

The heritage management for the castle towns should be planned by considering the values of the historical landscape at different scales and the elements that threaten them. The border of the cultural landscape and its buffer zone proposed in this study are to preserve the cultural landscape whose focal element is the castle town and to prevent possible inappropriate new constructions in its landscape. In addition, agricultural activities should be encouraged to reveal the integrity of the landscape.

In addition, conservation and management plans should prevent dramatic changing in authentic land use, with arrangements that encourage the use of fertile agricultural lands in their authentic functions, together with experts from different disciplines.

The castle towns should be exhibited as an archaeological site with all the organization, traces and remains. Future archaeological studies will provide more detailed information about the remains and traces. The road arrangement to be made in the castle town should provide visitors with a unique view experience climbing to the castle, walking between the traces and ruins, informative signboards and peculiarities of the topography, landform, and land cover from the vista points. When the castle town has a wide landscape and completely abandoned, the virtual reality tools should be used for presenting the time depth of the site to comprehend the area with all its elements.

Future work may involve detailed studies on the other castle towns located in the same network with Kale Tavas, Beçin and Honaz. In addition, for the representation of the castle towns in Turkey and the cultural landscapes around them in WHL, it is important that the authentic land use distribution continues and that avoiding the construction on the natural areas.

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APPENDIX A

IN-DEPTH INTERVIEWS

In the field study, which was held on 14 June 2019, six people were interviewed. Four of these people were born and raised in Kale Tavas and then migrated to Kale (New Kale) while others are relatives of the people of Kale Tavas. Since they were born and raised in Kale, they remember their days in Kale Tavas.

The deciphering of these interviews is continuing and the interview with Interviewer 1 was presented in this study.

Interviewer 1 was born in Kale Tavas and she lived in there until Kale Tavas moved. She is 95 years old.

- What were your livelihoods in the old Kale Tavas?

We were tilling *düven*, ploughing and, thresholding the field, harvesting crops, like wheat, barley, weaving fabrics such as lining and cotton flannel, and selling them to shops.

- Did you cultivate the land in the castle?

No, there was no farm in the old castle. Once a week a market called the upper bazaar was set near the Pazar Mosque, all food was bought from there.

- Would you stay there all year, or would you migrate

We migrated to Öğlüpınar (Oğlupınar) every summer, we had a summer house in there.

- What was the features of the houses in the old castle?

  Majority of house had a single floor with two or single room and they had flat roof with earth covering. these houses were called *dam* house. Majority of the public lived in these houses. The rich lived in two-storey, large, hipped roof with tiles covering which were approximately five houses. The houses were located in a small courtyard called *Hayat*. They generally had a storage space called *Kaydırma*. There was a semi-open space in front of the room(s) called *Ayazlık*. If *Ayazlık* was a closed space it called *Alan*, which was generally found in bigger housing units. There was a fireplace located generally in the closed space. A sitting place was located in front of the fireplace called *bucaklık*.

- What was the traditional food?

Biber tatarı, patlıcan musakka, cracked wheat, in summer, *tarhana* soup, *kırık çürük* (pickle) in winter, dried vegetables fruits.

- How was the infrastructure system of the Kale Tavas?

  There was no electricity in Kale Tavas.

- Was it difficult to get use to the Yenişehir (Kale)?

  No, the traditional production and habits are continuing in the Yenişehir (Kale).

Figure A.1. The interview questions.

APPENDIX B

MONUMENTS IN KALE TAVAS

CEVHERPAŞA MOSQUE

Cevherpaşa Mosque is the reconstructed structure (Figure B.1). It is the only structure that remained completely stable in the city. The mosque was called Tavas Mosque; however, the name was changed to Cevherpaşa when the settlement moved due to the landslide in 1960's (Kütükoğlu 2002).

Cevher Pasha, who is frequently found in the official documents of the 16th century, is not known exactly, however he is thought to be an important figure who lived in the 14th or 15th century.

Although there is no inscription panel, defends that the mosque was built in the ends of the 18th and beginning of the nineteenth century, evidencing the mosques with similar plan schemes in the close environment and inscription panel on the entrance of Harim (Ersoy 2007). However, the existence of the mosque is pointed out in a historical document as dated to the 16th century. This is the foundation documentation dated 1530 and 1563 indicating that the income of the Varalı village belongs to the mosque (Kütükoğlu, 2002). In the light of this information, Cevherpaşa Mosque may be evaluated as to be constructed after the 15th century (Çakmak et al. 2013). The structure of the mosque consists of a *harim* with rectangular plan with a north-south direction, last comers praying hall with six timber pillars and a cylindrical minaret. It is out of rough cut and rubble stone blocks. The roof is timber hipped roof with marseilles tiles. The timber headings of the pillars, the cylindrical minaret, and its embellishment style at the main gate and interior of the mosque show the characteristics of late Ottoman architecture. These features prove that this mosque was reconstructed or repaired extensively in the 19th century (Kütükoğlu 2002). Furthermore, there is a date of 1819-1820 on the inscription panel above the entrance of Harim. which should be repair date (Çakmak et al. 2013). The mosque was restored in 2006-2007.

Figure B.1. The photos of the Cevherpaşa Mosque after the restoration, 2018.

PAZARYERİ MOSQUE

Pazaryeri Mosque is located at the outer castle and at the north-east of the Cevherpaşa Mosque (Figure B.2). The repair panel points out the date of the 1867-1868. Although there is no original inscription panel, it is thought that the mosque was constructed in the end of the 18th century and middle of the 19th century with reference to the comparative study with other mosques in the nearby environment (Kütükoğlu 2002).

The structure of the mosque consists of a *harim* with rectangular plan in north-south direction, last comers praying hall at the north direction of the *harim* and minaret. The minaret which is the only element have survived until today adjacent to western façade. It is out of rough cut and rubble stone blocks. According to excavation observation, the mosque had a timber ceiling (Beyazıt 2016).

Figure B.2. The photos of the Pazaryeri Mosque after the excavation, 2018.

CEVHERPAŞA BATH

Cevherpaşa Bath is located at the north direction of the settlement and near the edge of the steep valley (Figure B.3). Although there is no inscription panel, it is thought to be constructed at the 15th century by Cevher Paşa (Çakmak 2013). The bath was in use at the beginning of the 16th century. Comparison of architectural characteristics with other Ottoman baths in Anatolia points out that this bath dates to the 15th century (Durmuşlar et.al 2020: 8).

Figure B.3. The photos of the Cevherpaşa Bath from the south-western direction.

APPENDIX C

MONUMENTS IN BEÇİN

AHMET GAZİ MADRASAH AND TOMB

The Madrasah is the only structure in Beçin with ist superstructure still good condition (Figure C.1). It is located the northwest direction of Orhan Mosque. The Madrasah is the only structure having the inscription pane in situ. This building was built by Ahmet Gazi, the Menteşe Emie in 1375 (Arel, 1968).

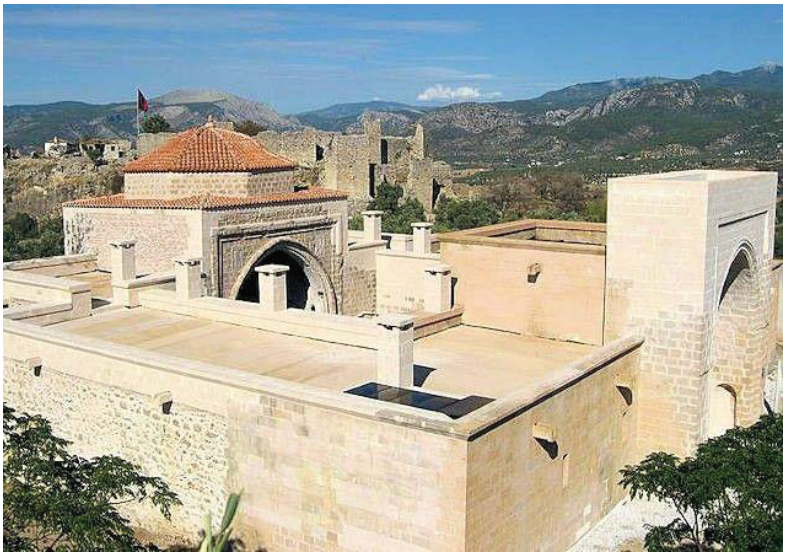

Figure C.1. The view of the Ahmet Gazi Madrasah
(Source: Ünal, 2005).

ORHAN MOSQUE

The building is located opposite the Ahmed Gazi Madrasa, overlooking the main street of the city. The L planned courtyard surrounds the southern edge of the mosque (Figure C.2). Although the eastern and western sides of the mosque are parallel to each other, the structure is not rectangular. According to the information given by Evliya Çelebi and Ibn Batuta, it can be said that the mosque may have been built between 1330-1335 (Ünal, 2012).

AHMET GAZİ *ZAVİYE*

It is adjacent to the western wall of the Orhan Mosque. Traces of a window opening, and a door opening can be selected on the northern façade of the building. As confirmed by the foundation record dated 1553-1554, this second structure of Beçin covered with cut stones must have been built by Ahmed Gazi, who had the madrasah opposite him, in the last quarter of the 14th century.

Figure C2. 1. Orhan Mosque; 2. Ahmet Gazi Madrasah
(Source: Ünal, 2012)

GREAT BATH

The bath is located southwest of the entrance to the inner castle and the north direction of the Ahmed Gazi Madrasah. it is thought that the bath had a cross plan scheme with three *eyvan*s and *halvet*. According to the foundation record dated 1562-1563, one of the foundations of Ahmed Gazi in Beçin is considered as this bath. In this case, it is thought to be constructed of the second half of the 14th century (Figure C.3).

Figure C.3. The interior of the Great Bath, (Öz, 2017)

YELLİ COMPLEX

There is a Yelli complex on the Kepez hill to the east of the settlement. This complex was first emphasized by Uzunçarşılı (Uzunçarşılı 1928). The complex is consisted of a Mosque, a bath and Madrasah.

The Yelli Mosque is well preserved. It has rectangular plan type. The structure consists of the portico covered by the cross vault and the *harim* section covered with a dome. Madrasah is very bad condition which is located at the east direction of Yelli Mosque. The Bath is located at the west direction of the Yelli Mosque. Although there is no inscription panel, it is thought to be constructed at the 15th century. It is hard to define of the plan organization exactly because of the ruined condition of the building. Although the plan scheme of the bath is not clear, it is thought that the bath had a cross plan scheme with four *eyvan*s (Figure C.4) (Arel 1968).

Figure C.4. The view of Yelli Mosque, 2019

KIZIL KHAN

Kızıl Khan is located the south direction of Orhan Mosque. The superstructure is entirely in ruin (Figure C.5). The crown gate of the structure is in a bad condition. The construction date is not clear. Although, some researcher claimed that this building was constructed as a residential purpose (Erdman, 1959; Arel, 1968), it has similarity with the khan structure in Afyon proves that this building was khan (Ünal, 2005). Construction date is not clear, according to Arel, the khan was constructed in the 14th century because of the similarities between architectural characteristics of entrance portal of Ahmet Gazi

Madrasah (Arel, 1968), while Ünal claimed that the construction date was in the first quarter in the 15th century (Ünal, 2005).

Figure C.5. The view of Kızıl Khan
(Source: Ünal, 2012)

BEY HOUSING

In 1995 and 1996, four rooms of the same width and two small areas adjacent to the south wall were exposed on the ground floor of the structure, which was cleaned in and around it. The house must belong to one of the richest.

Although the construction date of the building is not known exactly, since it is known that Beçin has entered a period of rapid collapse since the second half of the 15th century, it is thought that this structure was built at the beginning of the 15th century at the latest.

BEY BATH

The plan scheme of the building, which is located to the northwest of the Ahmet Gazi Madrasa, has a few examples in Anatolia in the 13th and 14th centuries. However, more than 30 examples of this plan scheme dating back to the 15th century are known. For this reason, the bath should be constructed in the 15th century.

ZAVİYE

Zaviye is located in the south of the inner fortress and is 80 m. east of the Ahmet Gazi Madrasah. It was unearthed in 1998. The entire southern wall and one section of the eastern and western walls are standing. The pendentives of the dome covering it are

partially intact in the southeast and southwest corner. Although there is no inscription panel or ornamentation, it is thought that *Zaviye* was built in the second half of the 14th century because the plan of the building has similar characteristics with the building called Tekke, which was built in the time of Ahmet Gazi in Balat. (Ancient Miletus) (Figure C.6). (Ünal, 2012)

Figure C.6. The view of the Zaviye, 2020

MÜLTEZİM HOUSE

The silver coin called Beçin treasure was found in 2000. The house in which the treasure was located has two square rooms arranged on either side of an eyvan. The Mültezim House is thought to was built in the 14th century (Ünal, 2012).

SOFUHANE

The building was constructed adjacent to Mültezim House. When the development of Beçin and the fluctuations followed by the population structure are considered, it seems possible to date the structure to the end of the 14th century or the beginning of the 15th century (Figure C.7).

THE TOMB

The western wall of the square-shaped, cubic-body tomb rests on the eastern wall of the courtyard of the Orhan Mosque (Figure C.7). It is understood that the tomb was built with the courtyard wall of the mosque. Therefore, it is thought that the building may have been planned together with the mosque and built for Orhan Bey (Ünal, 2012).

Figure C.7. the Beçin Castle view from the south direction
1. Mültezim House, 2. Sofuhane, 3. The Tomb, 4. The Tomb, 5. Inner Castle,
(Source: Ünal 2012)

EMİR COURTYARD

The building is located at southeast of the city (Figure C.8). There is no history inscription in the courtyard of the Emir, nor is there any other comparison element that can help date. Various pieces of Chinese porcelain found in this building surrounded by high walls, dating to the 15th century, seem to have been used as a residence. It is thought that this house, which should belong to a very wealthy person, may have been built during the time of Ilyas Bey.

Figure C.8. The view of the Emir Courtyard from the south direction
(Source: Ünal, 2012)

ORMAN DERVISH LODGE

Two of the coins recovered during the excavation can be dated to the reign of Mehmet the Conqueror. The building, which thus appears to have been operational in the mid-15th century, must have been built in the second half of the 14th century, or at the latest in the first quarter of the 15th century (Figure C9).

Figure C.9. The view of Orman Dervish Lodge,
(Source: Ünal, 2012)

MENTEŞE GRAVEYARD

The tombstones in the graveyard are dated to the period from the second half of the 14th century to the middle of the 15th century. Excavation of the cemetery has revealed a Zaviye consisting of a masjid, a meeting room, a kitchen, a dormitory, and a tomb (Figure C.10).

Figure C.10 The view of the Menteşe graveyards and graveyard stone
(Source: Ünal, 2012)

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EDUCATION

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ACADEMIC EXPERIENCES

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PUBLICATIONS

Articles in International Journals

Etlacakuş, A., Hamamcıoğlu-Turan, M. (2017). Historical Development of Darkale Rural Settlement in Soma, Manisa", A|Z ITU Journal of the Faculty of Architecture, 14(3).

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