CONSERVATION OF COMPLEX CULTURAL LANDSCAPES OF EXTRACTION AS HERITAGE PLACES: THE CASE OF KANDILLI/ARMUTCUK COAL MINING REGION IN ZONGULDAK

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ABSTRACT

CONSERVATION OF COMPLEX CULTURAL LANDSCAPES OF EXTRACTION AS HERITAGE PLACES: THE CASE OF KANDILLI/ARMUTCUK COAL MINING REGION IN ZONGULDAK

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Industrial heritage places are important symbols of their times as representatives of a new industry, a new industrial community, and a new industrial site. However, these once important areas have lost their functions and become abandoned due to various reasons. Later, some approaches have emerged to revitalize these disused areas. As cultural landscapes of extraction constitute an important part of the industrial heritage concept, they go through similar processes. Although these areas are parts of industrial heritage sites, they are more complex areas with other dimensions such as having a unique industry that is related to the production of extracted resources like coal, having a unique community that reflects mining culture, tradition, and social and daily life with memories and experiences of inhabitants, and having a unique extraction site which consists of the specific natural environment, extracted environment, open areas, transportation network, and built-up areas. However, these places are the most affected areas by the developments because of the decrease in extraction. Therefore, the conservation of cultural landscapes of extraction has started to be discussed throughout the world.

Zonguldak- Ereğli Coalfield is one of the most important mining sites where these kinds of conservation problems can be seen in Turkey. Kandilli/Armutçuk Coal Mining Region is one of the significant parts of the mining network in this coalfield by representing the integrity of tangible and intangible aspects of production, site, and community. Despite its significance, this area is under the threat of destruction due to development pressure, changing needs and technologies, natural factors that cause physical damage to the structures, and neglect. Therefore, the integrity of the area starts to deteriorate over time. Thus, this thesis aims to understand the Kandilli/ Armutçuk Coal Mining Region as a whole, identify its values and problems and develop conservation strategies to prevent the risk of its disappearance by considering all the components of the region at different scales concerning historical developments.

Keywords: Mining Heritage, Cultural Landscapes of Extraction, Post-mining Landscapes, Kandilli/ Armutçuk Coal Mining Region, Zonguldak

ÖZ

KOMPLEKS KÜLTÜREL MADEN ÇIKARMA PEYZAJLARININ MİRAS ALANLARI OLARAK KORUNMASI: ZONGULDAK KANDİLLİ/ARMUTÇUK KÖMÜR MADENLERİ BÖLGESİ ÖRNEĞİ

Aydemir, Çağıl Ezgi
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Endüstriyel miras alanları; yeni bir endüstrinin, yeni bir endüstri topluluğunun ve yeni bir endüstri yerleşiminin temsilcileri olarak zamanlarının önemli sembolleridir. Ancak bir zamanlar önemli olan bu alanlar, çeşitli nedenlerle işlevlerini yitirmiş ve terk edilmiştir. Daha sonra, bu kullanılmayan alanların yeniden canlandırılması için bazı yaklaşımlar ortaya çıkmıştır. Maden çıkarılan kültürel peyzajlar, endüstriyel miras kavramının önemli bir parçasını oluşturduğundan benzer süreçlerden geçmektedir. Bu alanlar; endüstriyel miras alanlarının bir parçası olmalarına rağmen, kömür gibi kaynakların üretimi ile ilgili özgün bir endüstriye sahip olmaları, madencilik kültürünü, geleneğini ve sosyal ve günlük yaşantıyı yaşayanların anıları ve deneyimleri ile yansıtan özgün bir topluluğa sahip olmaları, ve özel bir doğal çevreden, maden çıkarılan çevreden, açık alanlardan, ulaşım ağından ve yapılı çevreden oluşan özgün bir yerleşime sahip olmaları gibi diğer boyutları ile daha kompleks alanlardır. Ancak bu yerler maden çıkarmanın azalması nedeniyle teknolojik gelişmelerden en çok etkilenen bölgelerdir. Bu nedenle, kültürel maden çıkarma peyzajların korunması tüm dünyada tartışılmaya başlanmıştır. Zonguldak-Ereğli Kömür Havzası, Türkiye'de bu tür koruma sorunlarının görülebildiği en

önemli maden sahalarından biridir. Kandilli/Armutçuk Kömür Madenleri Bölgesi, üretimin, yerleşimin ve topluluğun somut ve soyut yönlerinin bütünlüğünü temsil ederek bu kömür sahasındaki madencilik ağının önemli parçalarından biridir. Önemine rağmen bu alan, gelişme baskısı, değişen ihtiyaçlar ve teknolojiler, yapılara fiziksel zarar veren doğal faktörler ve ihmal nedeniyle tahribat tehdidi altındadır. Bu nedenle alanın bütünlüğü zamanla bozulmaya başlar. Dolayısıyla bu tez, bölgenin tüm bileşenlerini tarihsel gelişmelerle bağlantılı olarak farklı ölçeklerde ele alarak Kandilli/Armutçuk Kömür Madencilik Bölgesi'ni bir bütün olarak anlamayı, değerlerini ve sorunlarını tespit etmeyi ve yok olma riskini önlemek için koruma stratejileri geliştirmeyi amaçlamaktadır.

Anahtar Kelimeler: Madencilik Mirası, Kültürel Maden Çıkarma Peyzajları, Post-madencilik Peyzajları, Kandilli/ Armutçuk Kömür Madenleri Bölgesi, Zonguldak

To my family and my grandfather …

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ABBREVIATIONS

TICCIH: The International Committee for the Conservation of Industrial Heritage

UNESCO: The United Nations Educational, Scientific and Cultural Organization

ICOMOS: The International Council on Monuments and Sites

EKİ: The Ereğli Coal Enterprise

TTK: The Turkish Hard Coal Enterprise Institution

TKİ: The General Directorate of Turkish Coal Enterprises

ARTİ: The Armutçuk Coal Enterprise

CHAPTER 1

INTRODUCTION

The Industrial Revolution, the first steps of which were taken in England in the middle of the 18th century, but whose effects extend from the 19th century to the present, caused many significant changes in social, economic, and physical terms. With industrialization, machines have taken the place of manpower in the production process and the way of production has changed. Migration of workers and urbanization occurred. In addition, it has enabled the production of different types of industrial buildings with the innovations it offers (Akay, Örmecioğlu, 2018, p.488). Landscapes and built environment have also changed with the development of different industrial structures like plants, warehouses, factories, collieries, dockyards, and transportation networks (Emery, 2018, p.6). Therefore, new industrial settlements that housed many industries, growing populations of workers in a new society, and the new services and infrastructures demanded to meet the needs of these workers appeared (Loures, 2008, p.688). Thus, industrialization marks an appearance period in which a new industry is formed, a new community with workers emerges, and new settlements are established (Figure 1.1).

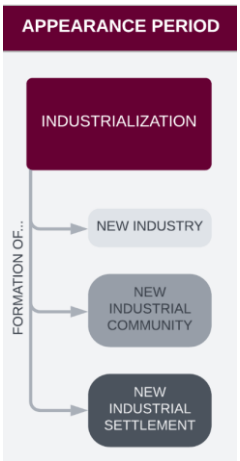

Figure 1.1. Diagram showing the results of industrialization (Author, 2021)

However, many industrial sites, once the centers of industrialization and wealth creation, have become unprofitable for various reasons since the 20th century. This has had many effects in these regions, including closures, significant shrinking of industries, unemployment, and outmigration (Harfst, 2015, p.217). Both the elimination of regional and national economic sectors and their tangible and intangible remains were threatened by deindustrialization. As a result, important large industrial sites were fading into oblivion (Leary, Sholes, 2000, p.49). Moreover, with the massive decline of heavy industry, previous production areas were in ruins (Pikner, 2014, p.83). Therefore, the concepts of industrial ruins, ghost towns, and post-industrial landscapes emerged as consequences of this period which is called deindustrialization. Thus, deindustrialization can be thought of as a disappearance period in which industry disappears, post-industrial societies emerge and post-industrial sites are formed, that is, the entire industrial order begins to disappear (Figure 1.2).

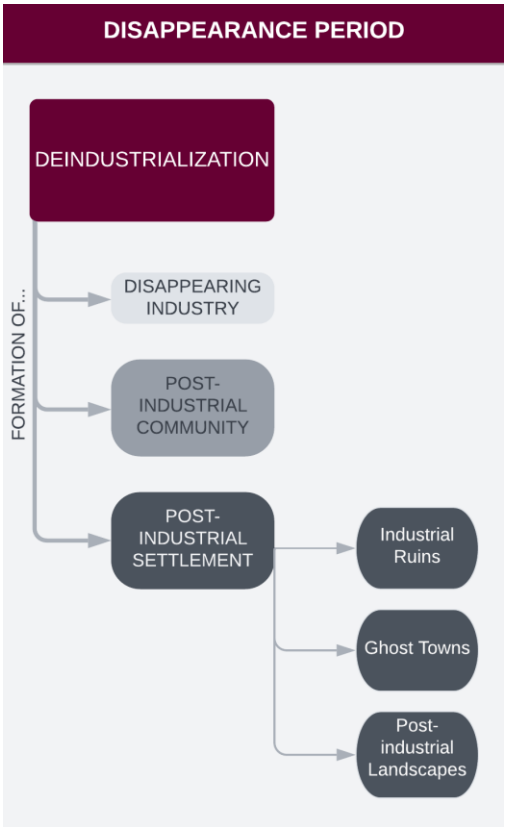

Figure 1.2. Diagram showing the results of deindustrialization (Author, 2021)

With the emergence of post-industrial concepts, they have become interesting areas to study. Many studies have been conducted on the causes of the disappearance of the industrial order, and the characteristics of post-industrial communities and sites. In line with these studies, many different views on these concepts have emerged. Although many positive views have emerged about these concepts, opposing views have also emerged.

The disappearance of the industry and the creation of a new industry, which is usually the service sector, has become a controversial issue in the literature. According to Bell, while there is an industry based on production in industrial areas, muscle power or energy has lost its importance in post-industrial areas and the service sector emerges which is related to information (1976, p.576). However, this can widen the gap between poor and rich nations (Bell, 1976, p.579).

The emergence of **post-industrial communities** is the other controversial subject related to deindustrialization. With the disappearance of industry and production, industrial communities also undergo many changes. The ways in which these communities adapt to these changes vary. However, problematic communities have often emerged that have difficulty adapting to change. According to Stephenson and Wray, post-industrial communities are traumatized after they lose their industries (2005, p.177).

Apart from disappearing industry, and the emergence of post-industrial society, the emergence of post-industrial sites is the other controversial topic of deindustrialization. Therefore, understanding the characteristics of industrial ruins, ghost towns, and post-industrial landscapes, and different opinions towards them are important.

Industrial structures which were constructed during the industrialization period have become abandoned because of industrial ruination during the deindustrialization period (Emery, 2018, p.6). The concept of **'industrial ruins'** appeared after this process. At first, industrial ruins were not perceived as beautiful unlike ruins of the late eighteenth century. They were considered as wastelands that are associated with

danger and ugliness. Later, these areas began to be found attractive with the change in the perception of beauty (Storm, 2014, p.18). Moreover, industrial ruins are often seen as worthless and waste sites waiting to be demolished. In addition, industrial ruins are associated with economic recession and ecological changes. On the other hand, industrial ruins are important in terms of their illuminating aspects, such as revealing the construction techniques of the buildings. Industrial ruins have also a great potential for transformation (Pikner, 2014, p.86). Moreover, the architectural remains of industrial structures indicate the memories of workers in both negative and positive ways (Emery, 2018, p.6).

Another concept that emerged with deindustrialization is **'ghost towns'**. The emergence of ghost towns is one of the results of urbanization. These formerly booming towns were abandoned due to economic, demographic, environmental, or infrastructural reasons (East, 2017, p.87). These towns lost their population and turned into a place that exists only in the memories of people who once lived there (East, 2017, p.88). These abandoned towns, called ghost towns, have the potential to be rehabilitated (East, 2017, p.101).

The concept of **'post-industrial landscape'** is also one of the concepts considered after deindustrialization. Post-industrial landscapes are the legacies of industrialization. They can be considered as landscapes formed by the remnants that emerged because of the abandonment of the industrial landscape over time. These remains can be derelict buildings, facilities, or chemical contaminations (Kolejka, Klimanek, 2015, pp.123-124). These landscapes are often considered as worthless, unimportant, and problematic areas. They are defined as decaying areas in both functional and physical aspects (Arnold, Lafreniere, 2017, p.115). Moreover, they have negative public perceptions (Loures, 2008, p.688). They are also dangerous sites because of the toxic wastes of the industry (Hardesty, 2001, p.19). However, they are important sites for many reasons. They are the representations of the past and are related to the identity of people and places (Loures, 2008, p.689). Moreover, the components of these landscapes have certain aesthetics, and they have a potential for different activities like creativity or exploration (Cizler, Pizzera, Fischer, 2014,

p.53). Furthermore, dangerous components of these landscapes like industrial toxic wastes can be considered as artifacts that can evoke the emotions of people and can be used as sources of information or income (Hardesty, 2001, p.20). In addition, the scars of the post-industrial landscapes which are the traces of former industry have narrative potential by reflecting recovery and resistance, as well as being sources of information about the industry (Storm, 2014, pp.11-12).

It can be understood that post-industrial areas have attracted the attention of many researchers and many positive and negative views have emerged about the characteristics of these areas (Figure 1.3). These views have led to the emergence of different approaches related to these areas.

	Industrial Ruins	Ghost Towns	Post- industrial Landscapes
Positive Characteristics	Attractive structures Illuminating structures Having potential for transformation Related to positive memories	Having potential for transformation Related to memories	Being lagecies of industrialization Being representations of the past Related to the identity of the people and place Aesthetic landscapes Having potential for transformation Having wastes that can be considered as artifacts
Negative Characteristics	Associated with ugliness Associated with danger Related to economic recession Related to ecological changes Being considered as wastelands Related to negative memories	Being abandoned due to economic, demographic, environmental, or infrastructural reasons Related to negative memories	Being abandoned Being considered as worthless, unimportant and problematic Decaying areas Negative public perception Dangerous sites with toxic wastes

Figure 1.3. The positive and negative characteristics of the post-industrial sites (Author, 2021)

As mentioned before, after the emergence of abandoned sites and post-industrial landscapes with deindustrialization, it has come to the fore what approaches can be followed in these areas. Therefore, some approaches like **dereliction**, **demolition**, **renewal**, **industrial archaeology**, and **industrial heritage conservation** appeared for these sites (Figure 1.4).

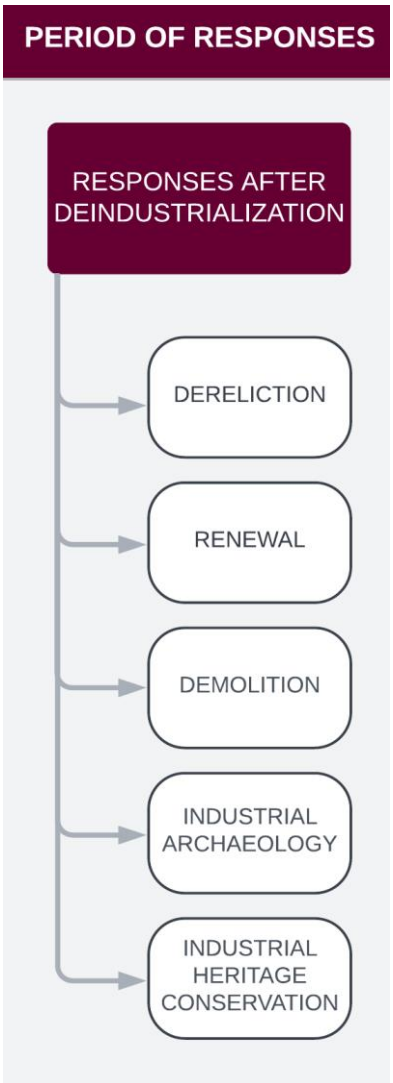

Figure 1.4. Diagram showing the responses after deindustrialization (Author, 2021)

Although historical structures such as churches and castles have drawn interest since the beginning of the 19th century, abandoned industrial structures which can be called 'the cathedrals of the industrial age' have recently started to be discussed (Laconte, 2014, p.309). In the beginning, these former industrial areas, which were understood to have the potential for new uses and gained value later, were neglected (Cizler, Pizzera, Fischer, 2014, p.53). These areas, which lost their former function, were seen by some as 'wastelands' with an uncertain future (Pikner, 2014, p.92). They have been considered by some as ecologically problematic 'brownfields' (Kolejka, Klimanek, Hradek, Kirchner, 2017, p.224). Moreover, there is a negative

public perception towards these sites that they are the traces of a negative past that should be forgotten (Cooper, 2005, p.167). Thus, these areas were not wanted to be intervened because of these reasons and were left as **'derelict'** areas.

These former industrial areas, which were left abandoned, even faced **'demolition'** because of the idea of 'recultivation' which was based on the desire of returning to a 19th century picturesque landscape by erasing all the traces of the industrial past (Langhorst, 2004, p.67).

However, this situation changed with the interests of the public and experts towards former industrial sites by understanding their values and their potentials for new activities were explored. Although there were **'renewals'** with interventions that reduce the uniqueness and meaning of the former industrial sites, successful approaches were developed.

In the second half of the 20th century, the field of **'industrial archaeology'** which is related to studying structures or artifacts to comprehend the industrial past of humanity emerged (Palmer, Neaverson, 1998, p.1).

Moreover, the remains of the former industrial sites were evaluated as **'industrial heritage'** and their importance and reuse are multiple. They are the memory of the past and symbols of the progress of the former community (Cizler, Pizzera, Fischer, 2014, p.53). Because conservation of industrial heritage has become an area of interest, the concept of industrial heritage has also helped develop different disciplines like 'restoration ecology' which is related to the vegetation of former industrial sites (Kolejka, Klimanek, Hradek, Kirchner, 2017, p.224).

The first meeting about industrial heritage conservation in which the World Heritage Convention was adopted by UNESCO was held in 1972. Then, the International Committee for the Conservation of Industrial Heritage (TICCIH) was founded in 1974. After that, the Nizhny Tagil Charter for Industrial Heritage was published to create an international reference text for conservation. In this charter which was

published in 2003 by TICCIH, the concept of industrial heritage was defined as follows:

> Industrial heritage consists of the remains of industrial culture which are of historical, technological, social, architectural, or scientific value. These remains consist of buildings and machinery, workshops, mills and factories, mines and sites for processing and refining, warehouses and stores, places where energy is generated, transmitted, and used, transport and all its infrastructure, as well as places used for social activities related to the industry such as housing, religious worship or education. (p.1)

The importance of the industrial heritage increased with the emergence of the Nizhny Tagil Charter in 2003 (Loures, 2008, p.688).

With the increasing importance given to industrial heritage, the scope of industrial heritage has also expanded over time. Although at first it was thought that the conservation of monuments was sufficient for industrial heritage conservation, industrial heritage is not limited to a single site. They consist of many interrelated sites that create industrial landscapes (Stuart, 2012, p.48). Although the landscape has been a subject of the UNESCO World Heritage Committee since the early 1970s, the term 'cultural landscape' which includes industrial landscapes was recognized by the committee as 'the combined work of man and nature' in the World Heritage Convention in 1992 (Abad, 2017, p.335). Moreover, there is an increased interest in the conservation of industrial heritage as a part of the cultural landscape concept, which can be understood by the inscription of many properties as a cultural landscape typology on the UNESCO World Heritage List (Staniscia, Yuill, 2017, p.31). In 2011, the Principles for the Conservation of Industrial Heritage Sites, Structures, Areas, and Landscapes, also called Dublin Principles, were accepted by ICOMOS and TICCIH. Thus, we can understand that the concept of conservation of industrial heritage has begun to be viewed with a more holistic approach (Figure 1.5).

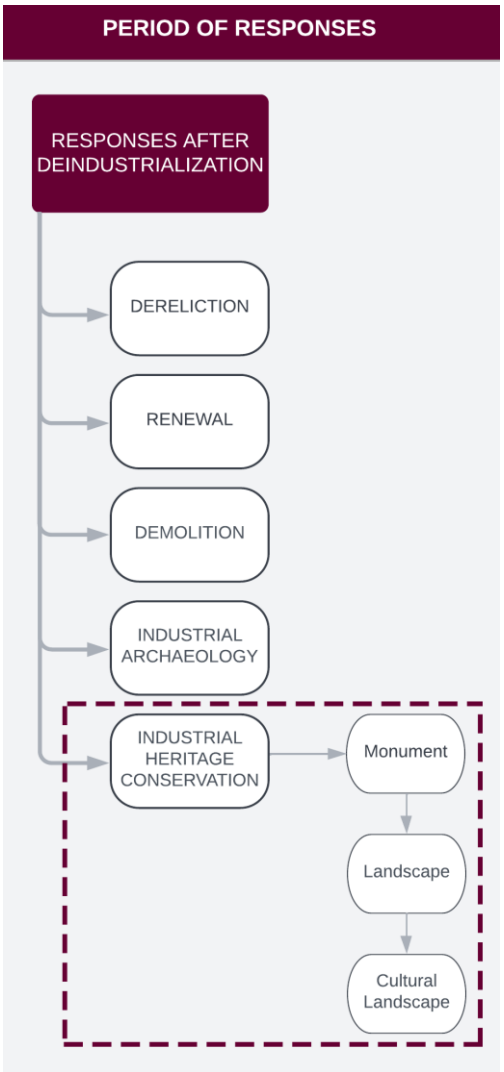

Figure 1.5. Diagram showing the processes of industrial heritage conservation (Author, 2021)

Since mining is an important industry type, it has gone through these processes in a similar way (Figure 1.6). Post-industrial areas not only consist of abandoned heavy industry structures but also contain mining areas that have lost their function (Lenartowicz, Ostrega, 2012, p.181). Post-mining landscapes as a part of post-industrial landscapes constitute an important part of the cultural landscape concept. UNESCO accepted historic mining landscapes as a part of the cultural landscape definition that represents the interaction between people and the environment (Ahmad, Jones, 2013, p.48). According to Australia ICOMOS (n.d.), post-mining

landscapes are placed under the category of ‘evolved landscape’ and they might be ‘relic’ or ‘continuing’ landscapes. Post-mining landscapes are also considered as the part of industrial heritage concept. According to the definition of the term industrial heritage in the Nizhny Tagil Charter (2003), the remains of the mine sites with their components are considered as a part of industrial heritage. The understanding of the mining heritage remains is important because they represent the past in many aspects like social, cultural, and physical (Merciu, Cercleux, Peptenatu, 2015, p.5). Although mining remains have recently been an important topic in the conservation field, they constitute an important part of the world heritage list (Dawson, 2017, p.28).

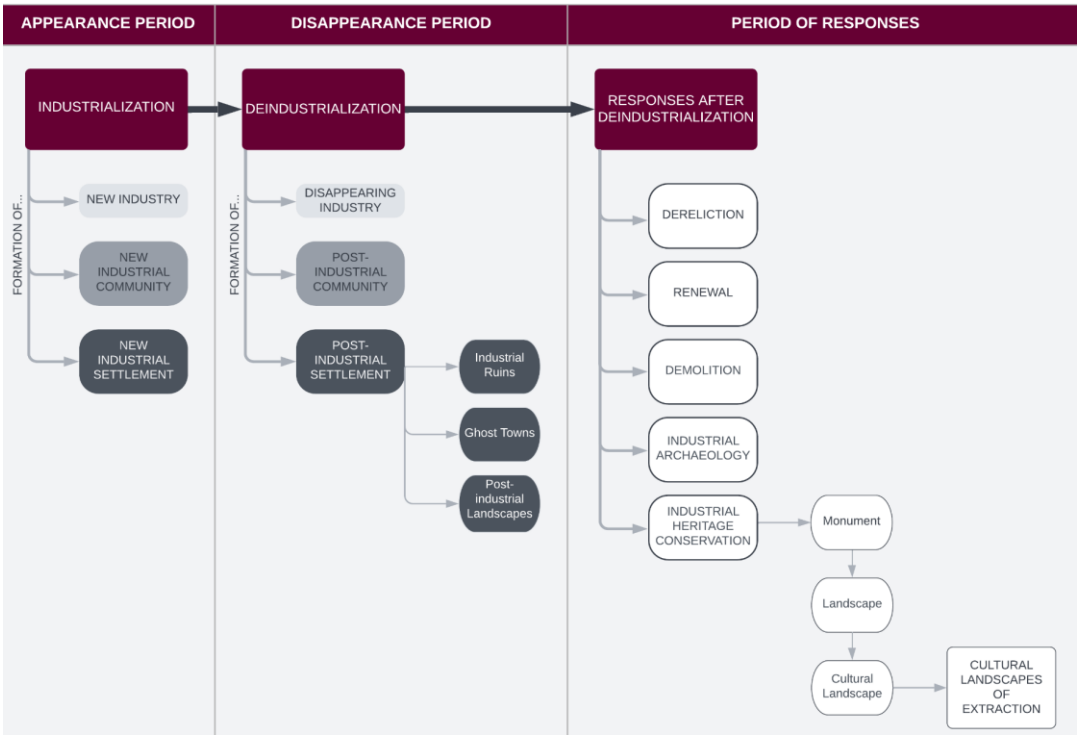

Figure 1.6. Diagram showing the emergence of the concept of ‘cultural landscapes of extraction’ (Author, 2021)

The conservation of complex cultural landscapes of extraction in Turkey has become an issue in recent years. Kandilli/ Armutçuk coal mining region which is an important representative of its period in various aspects was examined in the scope of this thesis.

1.1 Problem Definition

Most of the mining sites have lost their functions and become abandoned due to developing technologies and changing needs over time. Therefore, how these places were presented and reused emerged as important questions. As these places reflect the mine production, the mining culture, and the mining site resulting from the interaction of people and nature, they are generally considered as heritage places. These places gain more importance with their complexity as having a unique industry that is related to the production of extracted resources like coal, having a unique community that reflects mining culture, tradition, and social and daily life with memories and experiences of inhabitants, and having a unique extraction site which consists of the specific natural environment, extracted environment, open areas, transportation network, and built-up areas. Therefore, these mining places should be preserved because they are complex places reflecting and encompassing tangible and intangible components and context as a result of the interaction of production, people, and site.

These problems are also present in Turkey and Zonguldak- Ereğli Coalfield is one of the most important mining areas where these kinds of conservation problems can be seen. Although there are still mining activities in the area, some of the mine complexes disappeared, intervened, or are unused due to the decrease in the need for extraction. Kandilli/ Armutçuk Coal Mining Region is one of the most important, oldest, and less studied parts of the mining network in Zonguldak- Ereğli Coalfield. The region is an important cultural landscape of extraction because it is complex which represents the integrity of tangible and intangible aspects of production, site, and community. However, the region has become abandoned due to an increase in the use of natural gas instead of coal, developments in technology, the emergence of alternative energy sources, and new political decisions. Because of the migrations, the area is under the threat of destruction due to natural factors which harm the structures physically and neglect. Most of the structures have become ruins, but they still reflect characteristics of their period. Thus, this area is an important place for

cultural landscapes of extraction with its historical, natural, architectural, and cultural characteristics, but it defines important conservation problems. Therefore, it is important to develop conservation strategies on how to protect this area in accordance with its values and problems.

Figure 1.7. The general image of the Kandilli/Armutçuk Coal Mining Region (Source: Zonguldak Special Provincial Administration Archive, 2020)

Figure 1.8. The general image of the Kandilli/Armutçuk Coal Mining Region (Source: Google Earth, 2021)

1.2 Aim and Scope of the Thesis

This thesis aims to propose an approach that includes understanding abandoned cultural landscapes of extraction with all of their components and complexity, evaluating them by determining their values and problems, and improving conservation strategies towards them to determine how complex cultural landscapes of extraction should be considered in the field of conservation. In addition, within the scope of this thesis, this defined approach has been tested and evaluated in the selected area which is the Kandilli/Armutçuk Coal Mining Region.

This thesis conducts research at different scales to understand the concept of cultural landscapes of extraction, evaluate these areas, and make suggestions about these areas. Within the scope of this thesis, answers are sought to questions about understanding the concept of cultural landscapes of extraction on a large scale and the Kandilli/ Armutçuk Coal Mining Region in particular.

Cultural landscapes of extraction are made up of the integrity of tangible and intangible aspects of different components. These areas have an industry that is related to the production of extracted resources like coal, have a community that reflects mining culture, tradition, and social and daily life with memories of inhabitants, and have an extraction site that consists of the specific natural environment, extracted environment, open areas, transportation network, and built-up areas. Therefore, how to understand and evaluate these areas with all their complexity and components emerges as an important question.

In addition, cultural landscapes of extraction have faced some dangers and threats that may lead to the destruction of them for many reasons over time and have changed as a result of these dangers and threats. Therefore, understanding the threats faced by these areas and the changes they have undergone has emerged as an important question.

After cultural landscapes of extraction lost their importance over time and faced the danger of extinction, different ideas and approaches emerged regarding them.

Therefore, what can be done to these unused areas and what the results of the applications will be have emerged as important questions to be considered.

Since the Kandilli/Armutçuk Coal Mining Region is an important cultural landscape of extraction that has undergone similar processes in Turkey, similar questions have arisen in this area as well.

The Kandilli/Armutçuk Coal Mining Region is a complex area consisting of many components, as in other cultural landscapes of extraction. Therefore, what are the components that make up the complexity of the Kandilli region, how these components are related, and how all these relationships should be evaluated have emerged as important questions that need to be answered for the future of this region.

The Kandilli/ Armutçuk Coal Mining Region has become an important area with the start of coal production. However, over time, this area began to be abandoned and the unused parts began to disappear. Therefore, what are the threats that caused the collapse of the region and what are the changes that the region has undergone over time in line with these threats have emerged as questions that should be considered.

With the Kandilli/ Armutçuk Coal Mining Region starting to collapse due to various reasons, it should be started to think about what to do with this abandoned area. Therefore, how this area can be protected, how decisions should be made about this area, and how the taken decisions can affect this area have emerged as questions that need to be discussed.

Thus, this thesis aims to answer the following questions:

- How can the cultural landscapes of extraction be understood and evaluated with their complex and interrelated contexts and components?
- What kind of threats do cultural landscapes of extraction face and how do they change?
- How can the cultural landscapes of extraction be preserved, how they can become a part of today, how they can be presented, how they can be sustained, and what strategies and principles should be determined?

- What are the components and sub-components that make up the complexity of the Kandilli/ Armutçuk Coal Mining Region, how these components are related, and how all these relationships should be evaluated?
- What are the threats that caused the collapse of the Kandilli/ Armutçuk Coal Mining Region and what are the changes that the region has undergone over time in line with these threats?
- How the Kandilli/ Armutçuk Coal Mining Region can be protected, how decisions should be made about this area, and how the taken decisions can affect this area?

1.3 Methodology and the Structure of the Thesis

In this thesis, the concept of complex cultural landscapes of extraction has been studied at different scales, considering all its physical, social, and economic components. Within the scope of this thesis, first of all, a theoretical study has been made about mining areas in the world on a global scale. Then, regional scale studies were carried out to understand the networks, parts of the networks, the history of the basin, and mining policies related to the Zonguldak-Ereğli Coal Basin. Afterward, regional studies were carried out in order to better understand the parts of the Kandilli/Armutçuk region. Finally, for the Upper and Lower Kandilli regions, which are the regions selected for the thesis study, a detailed study was carried out at the building scale in order to understand all the social, economic, and physical components of the region (Figure 1.9). That is, as the study area narrows and becomes more specialized, the study becomes more detailed in order to better understand the complex cultural landscapes of extraction. However, in general, the study requires doing the necessary research for all scales. These complex areas are not easy to understand and can only be better understood with a holistic research method. In this respect, this study on the selected case can give clues about the conservation of similar cases throughout the world.

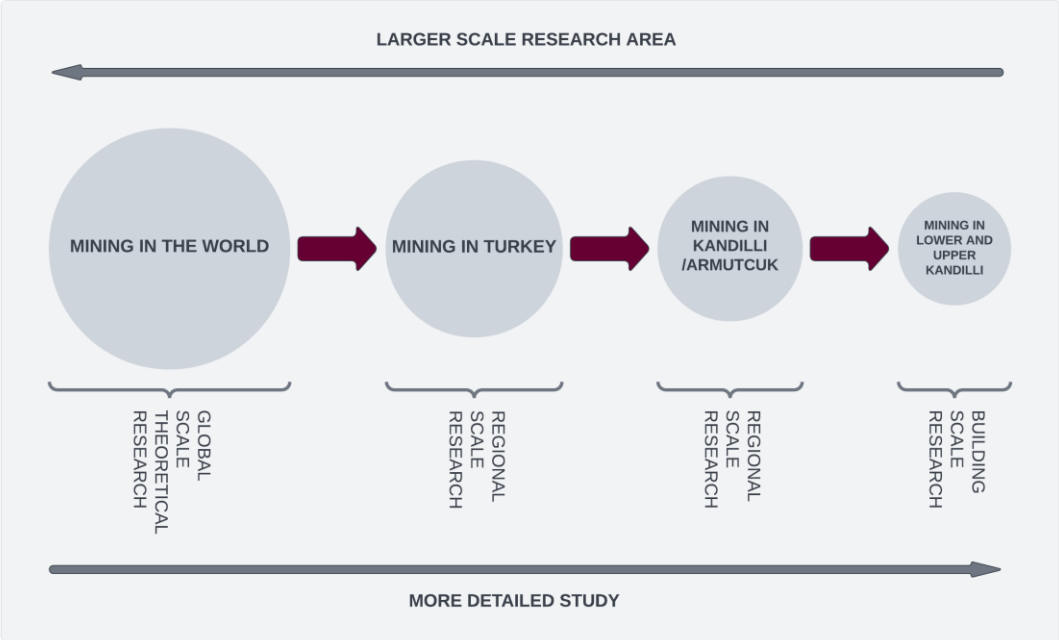

Figure 1.9. Diagram showing the relationship between the size of the research area and the detail of the study according to different scales (Author, 2021)

Moreover, this study is based on an analysis of literature survey, archival research, and site survey for understanding the selected region.

For the literature survey, both printed and online sources were used. Books, newspapers, journals, and websites were used as sources for the study. These sources were obtained from Middle East Technical University Library, Turkish History Association Library, and Turkish Hard Coal Enterprises Library. Internet research was made on both national and international websites. Local journals like ‘Zonguldak’, ‘67300’, and ‘Taşkömür’ were examined. In this research, the development of the concept of complex cultural landscapes of extraction in both Turkey and the world, the characteristics of the complex cultural landscapes of extraction, and conservation issues to make comparisons with the selected case were understood. Moreover, the characteristics, historic background, changes, and developments of the Kandilli/Armutçuk Coal Mining Region and other complexes in Zonguldak were examined.

For archival research, architectural drawings, site plans, old photographs, aerial photos from different periods, and various historic documents were reached. These sources were obtained from different places including personal archives because there was not an understanding of collecting and preserving historic documents in the coal enterprises in Turkey. There was not a well-organized archive in Turkish Hard Coal Enterprise and most of the historical documents were sent to factories to be burned. Architectural drawings and site plans were obtained from the Turkish Hard Coal Enterprises Archive, Turkish Hard Coal Enterprises Department of Occupational Safety and Education Archive, Kandilli Municipality Archive, Zonguldak Special Provincial Administration Archive, Sinan Candar who is working in Armutçuk Coal Management Enterprise, and archives of local historians who are Salim Çalık, Erol Çatma, and Ekrem Murat Zaman. Old documents and historic photographs were obtained from the Turkish Hard Coal Enterprises Archive, Turkish Hard Coal Enterprises Department of Occupational Safety and Education Archive, Kandilli Municipality Archive, Zonguldak Special Provincial Administration Archive, Sinan Candar who is working in Armutçuk Coal Management Enterprise, Korhan Us who is responsible from Kandilli Cultural Association, archives of local historians who are Salim Çalık, Erol Çatma, Ekrem Murat Zaman and Yüksel Yıldırım, and social media pages about Kandilli. Moreover, the General Directorate of Map was visited for aerial photographs of the region. For this study, aerial photographs showing the Kandilli region of 1944, 1955, 1973, 1975, 1979, 1982, and 1998 were taken. This research was made to comprehend the architectural, contextual, and socioeconomic characteristics and history of coal complexes in Zonguldak and Kandilli. Decisions and registration documents regarding the region were also provided by Ferhan Bostancı, an officer of the Special Provincial Administration of Zonguldak.

The site survey was made to understand the physical and socioeconomic features of the study area. In order to understand the physical characteristics of the area and its surroundings, human-made and natural elements which were the buildings, open spaces, transportation network, and infrastructure in the region were examined.

Human-made and natural elements were studied using methods such as exterior and interior surveys, photographing, video recording, drawing, and mapping. While the buildings in the Upper and Lower Kandilli regions were examined by making internal and external surveys with prepared survey sheets, the buildings in the surrounding settlements were examined by methods such as photographing and video recording. Natural elements, open spaces, roads, and infrastructure were examined using methods such as mapping, photographing, and video recording. For the surveys and mapping, the survey sheets and the base maps were prepared before the field trip. The architectural features, construction techniques, uses, current states of the structures, changes, and conditions of the buildings were studied on the survey sheets prepared for the Lower and Upper Kandilli regions during the field study (Figure 1.10). Uses and current situations are marked on maps prepared for natural elements, open spaces, roads, and infrastructure during the field trip.

In this study, all of the components of the region which are Çamlı, Geyikbeli, Lower Kandilli, Upper Kandilli, Yeni Kuyu, Kızılsu, Pazaryeri, Gökçeler village, Alacaağzı, and Kireçlik were studied by taking photos and video recording. The data collected during the field trip were then processed into the GIS program and converted into maps used in the thesis (Figure 1.11).

Moreover, in-depth interviews and surveys were made during the site survey with different stakeholders to understand the values, problems, and potentials of the region according to them. During these interviews and surveys, verbal information was collected about the memories and experiences of the people living or working in the region, social and economic life related to past and present in the Kandilli region, production of the area, and demographic structure of the region. For this, the interviews were made with experts like heads of profession chambers, decision-makers like the mayor of Kandilli and governor of Zonguldak, landowners, old workers, local historians, old inhabitants and inhabitants of nearby, people who studied this area for a project, and people from social media groups.

	METU GRADUATE PROGRAM IN CONSERVATION OF CULTURAL HERITAGE CONS - 500 M.S.THESIS IN RESTORATION AND CONSERVATION KANDİLLİ, EREĞLİ, ZONGULDAK FIELD STUDY Assoc. Prof. Dr. Güliz Bilgin Altınöz			TE
Surveyor:	Çağıl Ezgi Aydemir			TTK EXTERIOR
Date:	Address:		Block/Lot no:	
Const.date:	Usage	Building height:	Registration status	
Orig. func.:	Permanent ☐ Seasonal ☐ Empty ☐	Number of floors:	☐Registered	
Cur. func.:	Notes:	Put B for basement, put M for mezzanine	☐Not registered	

CONSTRUCTION TECHNIQUE (Masonry, Timber Frame, Concrete, Unidentified, etc.) (Identify also floor numbers and differences in different facades.)

FACADE ORIENTATION AND FACADE ELEMENTS (Look for authenticity of the elements)

INFILL AND CONSTRUCTION MATERIAL (Rubble stone, rough cut stone, fine cut stone, brick, mudbrick, timber, unidentified, not applicable, etc.)

FINISHING (Plastered, unplastered, wood siding, paint, etc.)

(Identify also floor numbers and differences in different facades. If there is paint, note its color.)

Original Color:
Current Color:

MORTAR (Lime based, mud-based, cement-based, unidentified,etc.)

CHANGES		**IN MASS**
	1	No change.
	2	Slight changes due to mass additions in small scale.
	3	Changes due to mass removals in small scale or mass additions in large scale.
	4	Major changes due to mass additions or removals in large scale but mass properties are still legible.
	5	Totally change due to mass additions and removals. Original mass properties are totally illegible.

Notes:

CHANGES		**IN FACADES**
	1	Facade organisation is totally conserved. No or minor changes in finishing materials.
	2	Slight changes in finishing materials and in the architectural elements. Facade organisation is totally conserved.
	3	Facade organisation is partially conserved but there are changes in and of architectural elements and finishing / construction materials.
	4	Major changes in facade organisation due to changes in and of architectural elements but original facade organisation is still legible.
	5	Totally change due to changes in facade organisation, materials and elements. Original facade organisation is not legible.

Notes:

CONDITION	GOOD	1	Deterioration on only finishing materials, no structural and material problems.
	FAIR	2	Deterioration of materials, no structural problems.
	MEDIUM	3	Slight structural problems, severe material deterioration and material loss.
	SEVERE	4	Severe structural problems, small scale collapse, severe cracks, material decay and material loss.
	COLLAPSE	5	Partial or total collapse.

Notes: (* For roof problems)

Figure 1.10. A sample of the survey sheet prepared by the author before the field trip to study the structures in the Upper and Lower Kandilli regions (Author, 2020)

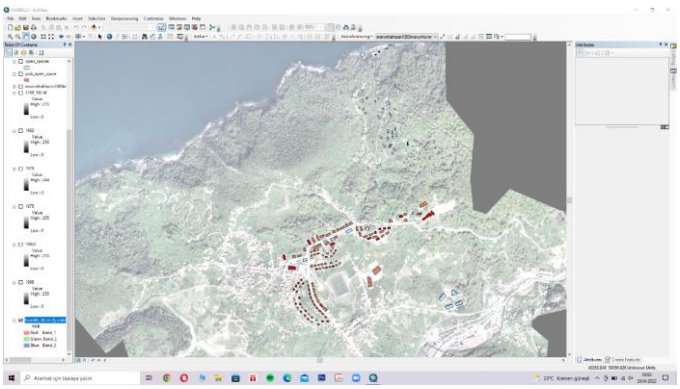

Figure 1.11. Screenshot of the GIS program where the structures in the Upper and Lower Kandilli regions are processed by the author (Author, 2020)

After understanding the place with archival research, literature survey, and site survey, the place was evaluated for determining the values and problems of the area. After that, conservation principles and proposals were decided by analyzing both the general information about mining heritage gained from the literature survey and evaluations of the place (Figure 1.12).

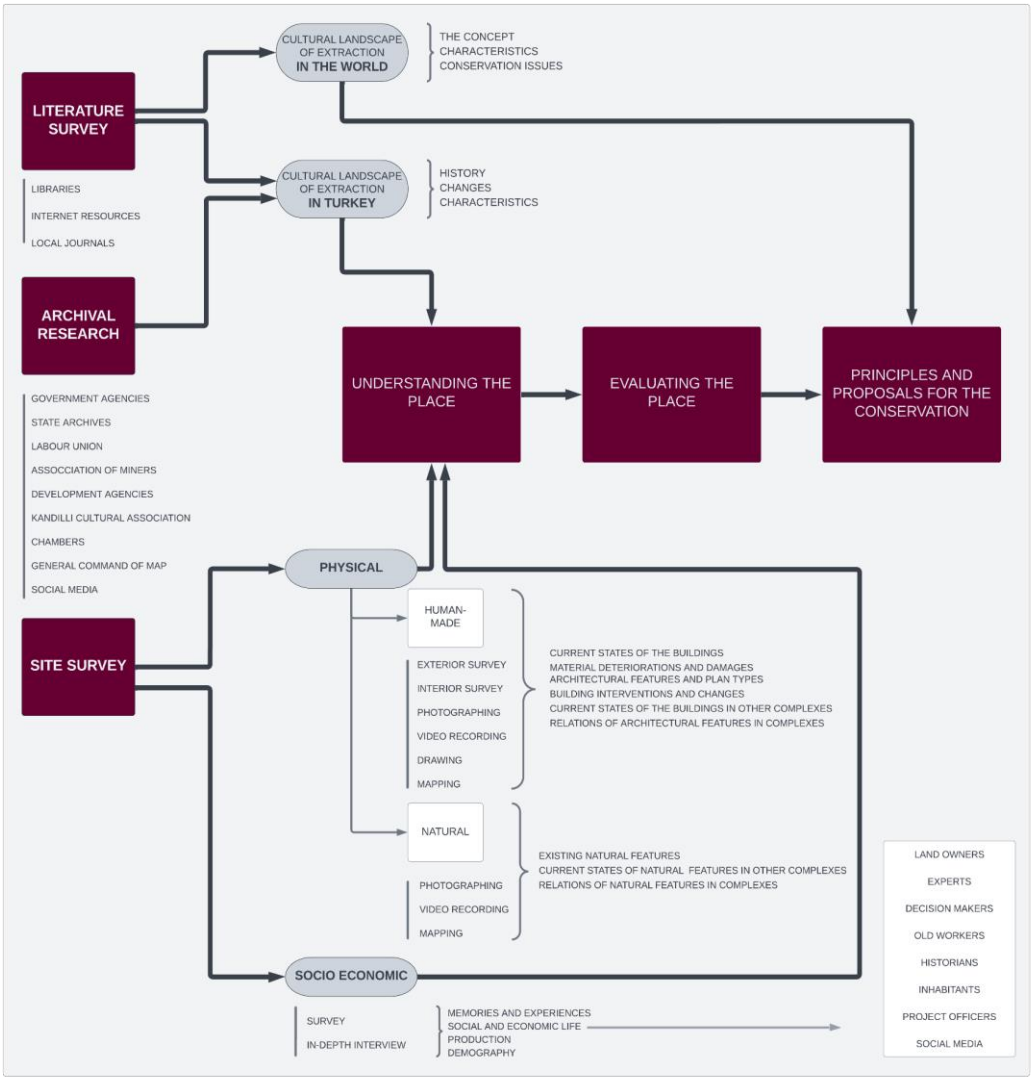

Figure 1.12. Diagram showing the methodology of the thesis (Author, 2021)

CHAPTER 2

THEORETICAL BACKGROUND OF THE THESIS: CONSERVATION OF CULTURAL LANDSCAPES OF EXTRACTION AS HERITAGE PLACES

After the second half of the 18th century, the Industrial Revolution and the process of industrialization started in Great Britain with lots of technological developments. During the nineteenth and twentieth centuries, this process spread throughout the whole world and significant changes occurred all over the world in different aspects (Albrecht, 2012, p.20). During industrialization, new technologies, building forms, manufacturing techniques, and settlement models emerged. In addition, new industrial culture appeared with the changes in pre-industrial communities during the industrialization process (Cossons, 2012, p.7). Moreover, landscapes were also altered by industrialization, and it had significant results in ecological aspects like pollution (Tempel, 2012, p.142). After the 20th century, these industrial landscapes lost their functions and became abandoned due to various reasons and post-industrial landscapes emerged. Afterward, it was started to be considered what to do with these derelict areas. The potentials and values of these areas started to be discovered and some approaches were invented for the reuse and sustainability of these areas.

Historic mining areas constitute an important part of these post-industrial landscapes. Mining is one of the most important sectors throughout history because it provides necessary raw materials for other sectors. Industrialization cannot have a huge impact without the extraction of minerals like coal, iron, or salt. However, these areas became abandoned due to various reasons such as the depletion of resources. Then, the survival and management of these areas started to be discussed. These areas are generally considered mining heritage places and the conservation of these areas is necessary.

The coal mining areas constitute special parts of mining areas that are important for the development of societies. Coal mining has been given importance in the world. However, the concept and protection of coal mining heritage have been the subject of recent times.

In this chapter, the development of the concept of historic coal mining cultural landscapes of extraction in the scope of mining heritage was examined. The importance of coal mining in the world was explained, the explanation of mining with its components was made, the closures and the responses towards these closures were explained, conservation issues of these areas were evaluated to understand the selected area by making comparisons, and how these areas should be considered in the context of conservation were explained.

2.1 Understanding the Concept of 'Cultural Landscapes of Extraction'

According to Matero, mines, quarries, collieries, refineries, plants, and heavy clay industries like brick and tile can be counted among the extractive industries that provide the extraction and processing of raw materials from the soil (2017, p.3). Therefore, mining landscapes represent an important part of the cultural landscapes of extraction, and coal mining is one of the most important, oldest, and most common mining activities. Therefore, in this part of the thesis coal mining cultural landscapes were explained to understand the concept.

Although coal has been used since prehistoric times, its importance increases over time because of the inability of wood for energy supply (Acun, 1952, p.20). Moreover, according to Acun, coal production started in 1066 in England, in 1195 in Belgium, in 1200 in France, in 1302 in Germany, and in 1700s in America. Although coal was used in maritime at first, its use was mastered over time and started to be used in industry as well (1952, pp.30-31). At that time, coal was produced in Europe, but it could not be placed in a regular system. Etingü signifies that the first periodical production of coal began in Newcastle in England in 1272.

However, the use of coal was banned due to the dense smoke, bad smells, and pollution over time in different countries such as England, Germany, and France. Later, the bans were lifted, and coal production was increased with the invention of steam power. Thus, the machinery industry was established and developed in a short time (1976, pp.21-22). In the 19th century, coal and iron became the most important resources for the development of countries (Acun, 1952, p.34). Coal basins are spread over a wide geography, and it is possible to see the coalfields in various parts of the world. According to Tanoğlu, there are coalfields in many countries, including Great Britain, France, Belgium, Germany, Poland, Russia, Spain, Turkey, USA, Canada, Siberia, India, China, Japan, Chile, Brazil, Colombia, South Africa, and Australia (Tanoğlu, 1940, pp.14-26). Moreover, Gürol states that Russia, the USA, China, India, Germany, England, Poland, Canada, Australia, and South Africa are among the countries rich in coal in the world (1997, p.2).

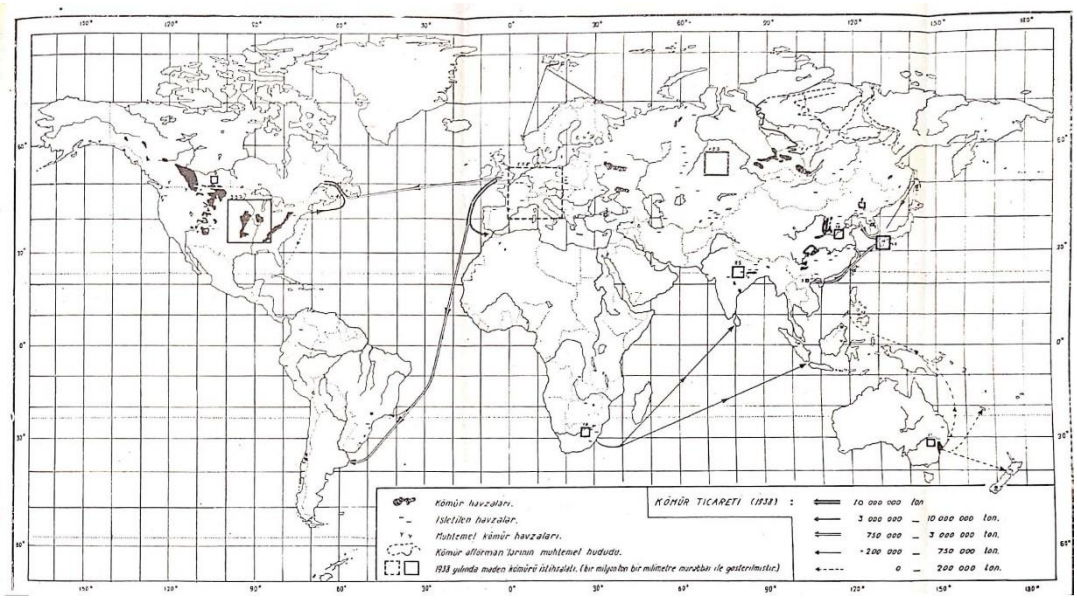

Figure 2.1. The map of coalfields in the world (Tanoğlu, 1940, p.49)

After the industrial revolution, the importance of coal increased, and its usage areas diversified. Therefore, coal became a symbol of development. Coal becomes one of the most important materials in the industry with its uses as heat and power fuel in the industry and coke source in the iron and steel industry (Gürol, 1997, p.1).

Therefore, the use of iron, which forms the basis of the industry, enables the production of machines and tools, the construction of railways and vehicles, and the production of steamers and weapons are possible with coal (Canokay, 1938, pp.7-8). Moreover, steam which is required in industry and provides the movement of various vehicles such as ships comes out of boiling water with the combustion of coal. In addition, coal gas, which is used in the production of electricity that illuminates cities and used as a fuel for industries is obtained from coal, and substances such as motor oils, naphthalene, benzol, ammonia aniline dyes are also obtained from coal (Canokay, 1938, pp.8-9). With all this wide range of uses, the value of coal was understood in a short time. Acun emphasized the importance of coal for humanity by calling them ‘underground forests’ that are at the forefront of various and rich blessings that play a key role in human life and the economy (1952, p.10). In addition, Canokay emphasized the importance of coal by arguing that the period after the industrial revolution, like the stone, bronze, and iron ages, should be called the coal age and he argued that since being civilized and progressing is possible with coal, coal can be viewed as a measure of civilization (1938, p.9). Moreover, Canokay signifies that coal is called as a ‘black diamond’ because it is seen as the source of strength and a great treasure of nature by carrying energy and producing useful substances (1938, p.9). The fact that coal is also called a 'black diamond' emphasizes the value given to coal.

Although the mining industry plays an important role in the development of countries, industrialization, and forming the basis of other industries with many different uses of the extracted products, mining activity cannot be thought of only with its industry. Mining activity consists of three components which are industry, site, and community. Therefore, mining activity should be considered as a whole with its industry, its community, and mining sites. Thus, these areas should be considered as cultural landscapes as they reflect the interaction of people and the environment. Moreover, these areas, like many industrial areas, have passed through certain phases in time. As I mentioned in the previous section, the appearance period, disappearance period, and period of responses should also be considered for these

areas. Therefore, the concept will be explained together with these processes in order to understand the mining cultural landscapes (Figure 2.2).

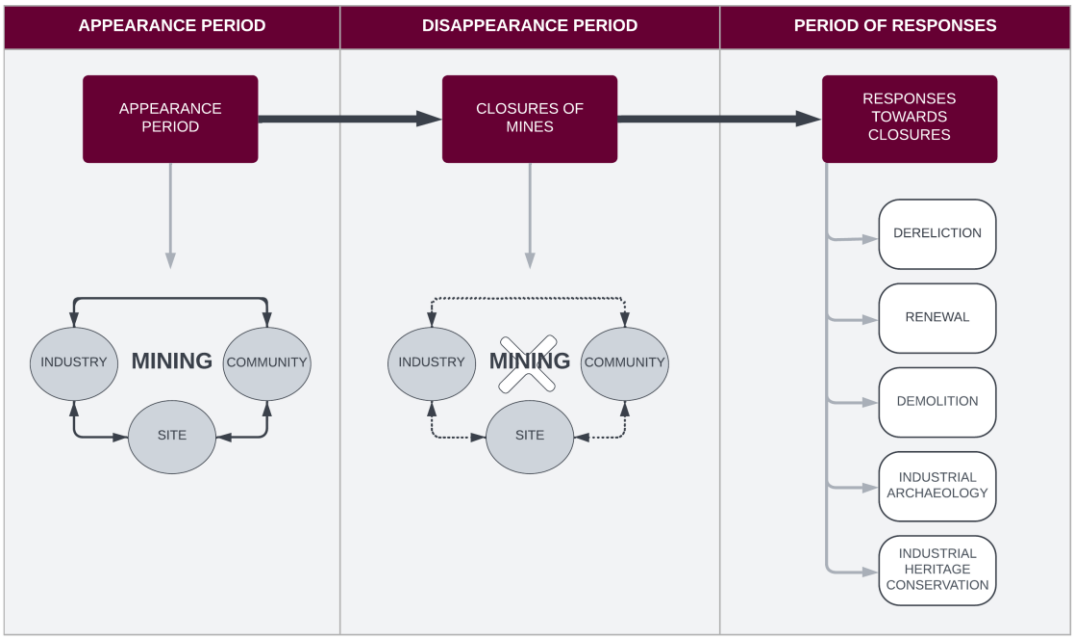

Figure 2.2. Diagram showing the processes of mining (Author, 2021)

2.1.1 The Appearance Period: The Emergence of the System and the Components of Mining

Since prehistoric times, the processing of mineral resources and mining have been essential for simple human activities. In fact, prehistoric times were named with the names of the mineral resources that were used extensively at that time like the Bronze Age. With the development of science and technology over time, mining has also developed. The usage areas of the mines have increased and more types and amounts of minerals have been extracted (Jelen, 2018, p.95). Moreover, the need for mining increased even more during the industrialization period, which was based on mines such as coal and lignite.

The increase in the need for mines over time has led to the rapid growth of mining areas. The sites where mineral deposits were found turned into large mining areas (Devenin, Bianchi, 2019, p.1). Thus, when a mineral resource is found in an area,

that area grows and develops rapidly. It becomes inevitable for these areas to change in many ways.

Mining regions have rural characteristics before mining activity started. Mining itself changed and reshaped the primitive rural landscape. With the start of mining activities, traces of mining such as new building types and mining wastes begin to appear in the region. Apart from physical changes, the social structures in these areas are changed. Original residents working mainly in the fields like agriculture and forestry have been replaced by or turned into workers of mining (Vaishar, Lipovska, Stastna, 2012, p.153). Therefore, these formerly rural areas turn into industrialized areas over time. This industrialization causes these previously rural regions to become places that attract more attention and receive investment.

Despite serious production in mining areas, there were no permanent settlements for workers in the early days. At that time, mining landscapes were called ‘camps’ and were not considered permanent sites as mining was not considered a permanent industry. But later on, when it became clear that mining was a permanent activity, the regions began to develop as well (Hotten, 2011, pp.40-41). The accommodation of miners started to become a problematic issue. Workers had to live far from where they worked. While residing in barracks in isolated mining areas, they could only return home on weekends. To solve accommodation problems and attract workers to the isolated mining areas, employers were building row houses in the area, some as the core of new settlements and others as abandoned reminders of their past. Some operators have established model villages to show their goodwill and to gain control over their employees (Palmer, Neaverson, 1998, p.25). Thus, steps have been taken to create more complex settlements where the problems of the residents are tried to be solved. Afterward, population nucleation occurred near the mines with the construction of lodgings close to the areas where the miners work (Hotten, 2011, pp.40-41). Therefore, the permanence of mining and the increase in the need for settlement accordingly paved the way for the emergence of mining cities. Moreover, it is clear that the establishment of mining settlements is associated with the arrival of mining activities in the area.

After the mineral resource is found in an area, besides the start of industrial activity and the formation of a new landscape, there is also the formation of a new mining community. Just as mining settlements are formed in a short time after the mineral is found, mining communities are formed in a short time by people of different origins who migrate to the area to work in these mines (Power, 2008, p.162). Thus, mining activity has been a trigger for the industrialization of a region, the establishment of a new settlement with changes in the landscape and the building of new industrial structures, and the formation of a new society with population growth and migrations. Therefore, when considering mining, it should be considered together with its industry, site, and community, and these components have their own characteristics that distinguish mining from other industries.

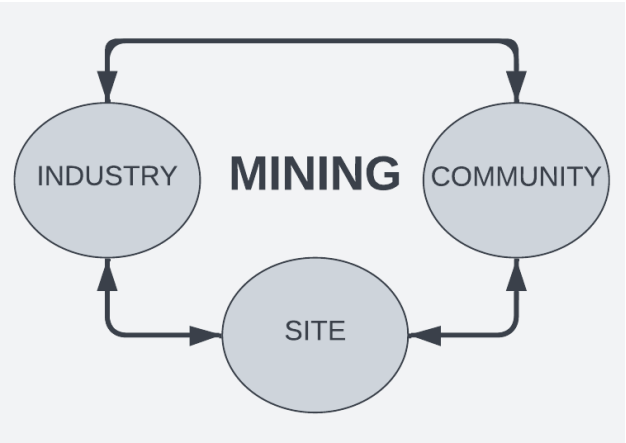

Figure 2.3. Diagram showing the components of mining (Author, 2021)

When an industrial scale mineral production starts in a region, the landscape in the region changes, new production structures begin to be created, people begin to migrate to the area with the job opportunities created, and a new settlement and a new community are formed in the region. Therefore, as mining consists of 3 components which are industry, site, and community, these components are closely related to each other. The existence of one brings the others along and ensures the establishment of a system in which everything for the mine is patterned (Figure 2.3).

In this part of the thesis, the characteristics of the 3 components of mining are explained in order to better understand the concept of mining.

Mining Industry:

The mining industry has been **an important factor in the development of humanity** in many respects, and without the extraction of raw materials there would have been great differences in the paths of countries took to develop. (Wirth, Harfst, 2012, p.1).

Mining is **a triggering activity** that causes forming communities, building infrastructure, population growth with migrations, and changes in the landscape (Keane, 2000, p.71).

Moreover, mining is **a boom-bust industry**. Although mining is an important industry and has a great impact on the environment and people, it is a running out of industry. Because its resources are nonrenewable and exhaustible, the closure of the industry is inevitable (Robertson, 2006, p.2). However, mining which is a run-out industry has played an important role in the development of many fields in boom periods. This process has led to the rapid growth of mining areas (Armis, Kanegae, 2019, p.1).

Moreover, the functions of the regions have also changed with mining. Some regions became settlements for miners, some turned into working areas and others became centers that were created because of the migration of the people for job opportunities (Vaishar, Lipovska, Stastna, 2012, p.155). Therefore, mining activities **shaped the towns** by building their own structures and creating unique communities (Keane, 2000, p.70).

Moreover, mining, which is one of the oldest activities in history, has been of great importance for humanity as it **provides raw materials for other industries** (Jelen, Kucera, 2017, p.321).

Mining is an occupation that handles exploration, development, mineral deposit mining, mineral preparation, related construction, and elimination of adverse environmental impacts (Skuta, Kucerova, Pavelek, Dirner, 2017, p.79). Therefore, it can be understood that mining which is an important extractive industry is a more

comprehensive field than just the extraction of raw materials from the soil, so it is **a complex activity**.

Moreover, mining generally **took place in remote areas and rural settings**, and it is reliant on railway transportation (Power, 2008, p.162). The railway is an important way of transportation for both the carrying the raw materials and transportation of workers.

Mining is also an activity that is **accompanied by other industries** like smelting, processing, and chemical industries. The togetherness of the different noxious industries in the same place can be harmful to the environment, however, this accumulation can be seen as a value (Langer, 2014, pp.49-50).

Furthermore, mining **covers a large portion of land** which can be seen as a problem for environmental and functional aspects (Jelen, 2018, p.96).

Although mining is related to economic growth and energy supply, it **has lots of environmental impacts.** It causes environmental degradation, erosion, increasing in harmful contents like heavy metals in soil, diminishing the quality of the water sources (Andriani, Nurini, Kurniati, 2018, p.1). The problem of waste disposal of mining activity needs to be solved for the recovery of the region (Bridge, 2004, pp.211-213). Since mining is an extractive activity, it causes the soil to move. Therefore, it has serious impacts on the environment, and it causes changes in the landscape during the extraction of minerals from the soil (Bridge, 2004, p.209). It also causes the transformation of the whole area by creating new settlements which include industrial structures like quarries, pits, mines, furnaces, smelters, and kilns, transportation networks, and worker communities with their social and residential structures (Matero, 2017, p.3). Mining also causes the deterioration of ecosystems. It destroys former habitats and decreases the biodiversity of the area. Therefore, there is a need to reclaim the mining regions (Dias, Panagopoulos, 2008, p.444). Mining is also a messy industry with the noise that creates, and its wastes threaten its environment (Quivik, 2017, p.10). The environmental impact of mining activity can change according to the mining methods. These methods can be divided into three

categories which are opencast, underground, and other methods like ecotechnological mining methods with chemical or bacterial leaching. Underground mining affects the environment through the creation of dumps and land movements and deformations. Dumps are waste materials of mining activity which related to air and land pollution. Land deformations and movements cause destruction of landscapes, damage to soil profile, and unwanted changes in ground and surface water (Skuta, Kucerova, Pavelek, Dirner, 2017, p.79). Moreover, the creations of waste disposal sites and mining areas where gas bursts can occur are other effects of underground mining on the environment (Skuta, Kucerova, Pavelek, Dirner, 2017, p.81). The effects of opencast mining can be the alterations in the landscape relief, water contamination, the changes in land quality and ecosystems, the emergence of new water sources that causes climatic changes, the emergence of noisiness and dustiness due to mining activity, and the emergence of new related industries (Skuta, Kucerova, Pavelek, Dirner, 2017, p.81).

Apart from environmental impacts, **the social aspects** of mining are also important for understanding the topic. The social organization of the mining industry changes in different places, but it generally is a family occupation that includes every family member. However, the role of women and children in mining activities diminished in time due to safety and health issues (Power, 2008, 161). Moreover, the mining industry is related to the development of the regions because of the created mining culture and traditions and the specific skills and knowledge of miners (Jelen, 2018, p.96). Therefore, mining communities are unique with their own languages, culture, and tradition. Furthermore, the dangerous nature of the mining industry with its difficult working conditions affects the life of the workers in a significant way. The mining industry which is a dangerous activity creates some beliefs which can be considered as a spiritual aid for protection against fires, collapses, or flooding and their physical remains can be found in the region (White, 2016, p.161). Moreover, the dangers of the mining industry and the common lifestyle of the workers and their families creates a specific form of community that is tight-knit (Power, 2008, p.163). However, there were ethnic and racial classifications throughout history. These

classifications affect both wages and housing locations of the workers (White, 2016, p.158). Moreover, mining affects the health conditions of the workers. Because of various factors like unstable land, pollution, contamination, and excessive working hours, workers undergo accidents, illnesses, injuries, and deaths (Shackel, 2004, p.51).

Mining Site:

Although mining sites are thought to consist only of production areas, these areas are more than that. The content of the mining landscape has been the subject of debate. According to Pearson and McGowan, in addition to mines themselves, there are also primary processing batteries and mills and secondary processing plants, like smelters and refineries. Furthermore, there are living sites for miners like housing and social buildings. Transportation like railways or roads which is associated with carrying minerals or people is another feature of mine sites. Infrastructure such as timber mills, water supply, smithies and foundries, brickworks, and plants for electricity is also an important mining site feature. Moreover, aspects of settlement stimulated by mining like agriculture and market gardening, other closer settlements, ports, and railway extensions are important features of mining sites. Lastly, landscape modifications due to mining like deforestation, pollution, tailing dumps, open cuts, embankments and mounds, and dredged streams can be considered as mining site features (2000, pp.2-3). Apart from Pearson and McGowan, there are other researchers who try to explain the complexity of mining sites by defining their features. According to Quivik, mining areas are large areas consisting of the structures used for production, the transportation networks that provide the connection between them, industrial wastes, and the structures necessary for the discharge of these wastes. These areas also include villages affected by the development of mining (2017, p.11). Moreover, Matero (2017) states that mining landscapes include structures related to production like quarries, pits, mines, furnaces, smelters, mills, transportation networks, and structures for workers like houses, schools, churches, and stores (p.3). Furthermore, according to Francaviglia, mining landscapes consist of natural and human-made topography, vegetation,

buildings, street pattern, transportation lines, and parcels of properties. To understand these areas correctly, it is necessary to evaluate the structures by considering their relations with other structures along with the context (1997, p.12). Therefore, the mining landscape can be thought of as **a complex structure consisting of many components.**

It is important to understand **the physical traces** of mining activities that make up the mining landscape. Mining affects the economy, people, and environment of all these regions in a significant way and the landscape is its visual legacy of it (Francaviglia, 1997, p.4). The traces of mining landscapes like tunnels, piles, slags, chips, drifts, or tool parts are important sources of information about industrial activities (Ateş, 2016, p.17). In addition to being information sources about industrial activity, they are the depictions of the daily life of inhabitants, and they reflect a lot about local beliefs (Francaviglia, 1997, pp.11-12). Furthermore, the legacies of mining are important for inhabitants' sense of place which create the base of structuring local identity. In other words, every landscape that people lived on begins to have cultural meanings and emotional importance because of interaction with people. As a result of the emergence of these meanings, concepts such as sense of place and attachment to place appear that affect the inhabitants. This sense of belonging of the inhabitants also provides the formation of local identities. As a result, mining landscapes become symbols of who people are (Robertson, 2006, pp.7-8). Moreover, sometimes nature can respond to the mining activities, and fires, depressions, and explosions can occur in the mining landscape. In this situation, structures such as monuments become important symbols that show this human-nature relationship (Francaviglia, 1997, p.4). Furthermore, as mining landscapes were perceived as more industrial areas compared to greener and less industrialized landscapes and the understanding of the aesthetics of industrial areas was not developed in early periods, the aesthetic of mining landscapes was also the subject of great debate (Francaviglia, 1997, pp.4-5). However, it is understood that the traces of mining activities have potential aesthetics (Huang, 2013, p.12). In addition, the physical traces of mining activity like housing stock, waste piles, and engineering

structures which are the indicators of mining are distinctive features. They can be used to distinguish mining settlements from others (Francaviglia, 1997, pp.58-59).

Moreover, it is significant to know that these complex mining sites are **operated differently throughout history**. According to Keane, mining towns can be incorporated, company-owned, or independent and self-governing (2000, p.81). Although mining company towns are widely found in the world, they are among the most discussed mining settlements in the literature. Mining company towns are settlements where companies make all decisions for their employees, including accommodation and social life (Watt, Marais, 2019, p.1).

Mining areas are **visually shaped by various features**, and this is important for a better understanding of these complex sites and the differentiation of these areas from other places. Francaviglia (1997) explained these **features as isolation, nucleation, differentiation, stratification, homogenization, transformation, and seriation** to prepare a guide for interpreting the mining landscapes (pp.67-168). Isolation is one of the key distinguishing features of mining landscapes that make these landscapes stand out from the rest. The isolation of these areas not only means that these areas are physically distant but also shows that they have different visual characteristics from the surrounding rural areas. These sites have their own identity with their distinct economy and people. However, these landscapes can affect their surroundings by creating a need for services for their workers and offering job opportunities for people. Railroads were created to diminish the isolation problem of mining sites. Although the existence of railroads underlines the isolation of mining landscapes from other areas, these railroads, which cannot be considered separately from mining areas, have increased the connection between these areas and their surroundings by providing material and information exchange. This has reduced isolation and made it easier for mining areas to blend in with the rest of the world (Francaviglia, 1997, pp.67-78). Another feature of mining areas is nucleation. Although mining settlements are places of sudden growth, settlement is usually not dispersed. Human activities are clustered and dense settlement is seen. Nucleation is observed in mining areas to be close to mineral resources and to adapt to the

topography in rugged areas. This nucleation brings lots of consequences in mining areas. Overcrowded accommodation, food shortages, insufficient health services, and epidemic diseases, which emerged due to population density, took many lives. In addition, since the buildings were built close to each other, the fires caused great damage (Francaviglia, 1997, pp.78-85). Differentiation is another feature of mining landscapes. Although a mining area has parts that provide visual integrity, each mining area has its own unique character. Differentiation is related to the complexity of the technology, the manufacturing scale, and economic factors. Land use patterns can show the differentiation in mining sites. (Francaviglia, 1997, pp.85-99). Stratification is also an important feature of mining landscapes. Employees in the mining region are divided into classes according to their occupations and ethnicities, and this separation causes stratification. These separations can be identified throughout the physical structure of the settlement (Francaviglia, 1997, pp.99-115). Another feature of the mining landscapes is homogenization. In the early years of mining, the mines were operated independently by separate operators. In the following years, these independent mines began to be purchased by large companies. When large companies started to operate these mines with better technologies, smaller operators became unable to compete with them. With the centralization of mining operations in the hands of these large companies, the physical structure of these areas has been shaped and homogenized accordingly (Francaviglia, 1997, pp.115-126). Transformation is another feature of mining landscapes. The topography of mining sites is permanent unless it is reused and is the most important indicator of human activity of its time. This human-made topography reveals the physical transformation in mining areas (Francaviglia, 1997, pp.126-149). Seriation which is another feature of the mining landscapes is related to the evolution of the district. The characteristics of the mining areas are shaped by the events they go through, and seriation is important at that point. Seriation is not just about topography, although it is a similar term to transformation. It is also effective in the change in cultural characteristics and architectural structures (Francaviglia, 1997, pp.149-168).

Apart from these factors that visually shape the mining landscape, these areas also need to be evaluated from **an environmental point of view.** Mining landscapes have lots of pollutants. These mining wastes cause decreasing the quality of surface and groundwater. Moreover, these wastes release toxic and harmful particles (Robertson, 2006, p.4). According to Matero (2017), mining sites are toxic brownfields that can be problematic for re-functioning (p.3). Furthermore, mining landscapes are environmentally damaged areas with surface alterations. There are two types of surface alterations that are related to either mineral extractions like shafts, pits, and quarries or deposits of mining, milling, and refining wastes like piles, slags, and tailings. These cause changes in topography, drainage systems, and vegetation and harm habitats and the environment (Robertson, 2006, pp.3-4). Furthermore, a mining landscape is a landscape where rare colors, smells, and shapes are revealed by extraction activity. The resulting crevices and mounds, mountains and valleys, different geometric shapes, and yellow hues indicate human intervention in the region (Ballesteros, Valcuende, Quintero, Cortes, Rubio, 2009, p.150). The mining landscape can be seen as a human-created desert with its strange features like an absence of greenery, having softened shapes, lack of habitats due to noise, dust, explosions, and acidity in extraction areas (Ballesteros, Valcuende, Quintero, Cortes, Rubio, 2009, p.150). Moreover, mining landscapes are altered because of the mining activity that causes the transformation of vast regions with the building of lots of structures for production, accommodation, transportation, and social activities (Matero, 2017, p.3). These altered mining landscapes can be described as 'alien' because of the transformations of the land with mining activity (Ballesteros, Valcuende, Quintero, Cortes, Rubio, 2009, p.150). This idea is supported by Langer by arguing that mining landscapes are strange and distinguishable from other landscapes with their unique characteristics (2014, p.49).

In addition to its environmental features, mining landscapes **have many meanings** for those who live there and even those who do not live there but just observe. It is also important to understand the meanings of these landscapes. In this respect, Robertson indicates that mining landscapes often evoke desolation, but they are

meaningful areas for those who live there (2006, pp.1-2). Landscapes of extraction strengthen a sense of identity. Landscapes gain cultural meanings and emotional importance as people interact with them. The sense of belonging also provides the formation of local identity (Robertson, 2006, pp.7-8). Moreover, the harsh, unpretentious, and troublesome appearance of the mining landscape reminds miners that they are members of strong, hardworking, and determined communities (Robertson, 2006, p.11). According to Robertson, mining landscapes hold different meanings according to different segments of society. There are many debates about the meanings of these mining areas. Although these areas do not mean much to observers or outsiders, they mean a great deal to those who live there who can be seen as insiders (2006, p.8).

Mining Community:

After the mineral resource is found in an area, besides the start of industrial activity and the formation of a new landscape, there is also the formation of a new mining community. It is also essential to understand the community, which is one of the most important parts of mining along with its industry and landscape, in terms of a comprehensive understanding of mining.

Mining communities are formed in a short time by people of different origins who migrate to the area to work in these mines (Power, 2008, p.162). Therefore, it can be understood that mining communities **have complex structures consisting of different groups of people from different localities.**

Moreover, since mineral resources are exhaustible resources when the resource is exhausted in one place, it starts to be extracted from another place. Therefore, mining communities are **mobile communities** (Power, 2008, p.162).

Although mining communities are considered as impermanent due to their complexity and mobility, they can be survivals from rapid closures. According to Robertson, although mining settlements are thought of as temporary places, **the persistence of mining communities** cannot be ignored (2006, p.6). Mining creates

communities with a strong sense of attachment to the mining place. The danger of the mining activity and the common hardships of inhabitants create a togetherness of miners. This reinforces the sense of belonging to the community and increases the chance of community survival (Robertson, 2006, p.10).

Moreover, mining communities **have a unique sense of identity** because of the dangers of mining, its specific work environment, and the bonds between miners. The social bonds between miners appeared because of the sense of comradeship resulting from dangerous working conditions and socio-economic classes they belonged (Skeard, 2015, p.94).

In addition, mining communities have emotional history because of the dangerous nature of the mining activity and disasters. This history of industrial tragedy causes the rise of **the tight-knit mining communities** with a strong sense of solidarity (Power, 2008, p.163).

Besides all these features, mining communities are **vulnerable to the issues which are related to health**. During boom periods, the mining community must face with mine-related accidents, unwanted pregnancies, and sexually transmitted diseases. During bust periods, the mining community must handle mental health issues like depression (Shandro, Veiga, Shoveller, Scoble, Koehoorn, 2011, p.178). In line with all these, it can be understood that mining communities are more different and unique than other communities in terms of their commitment to each other and their places. Considering all these features, mining activity cannot be considered separately from its unique community.

2.1.2 The Disappearance Period: The Closures of the Mines and its Consequences

Although the mining industry has had rich times with its landscape and community, it has not always been this way. Over time, these areas, which were important to humanity, began to lose their importance. After the industrial revolution, mining

areas have become the centers of abundance and have contributed to regional development around the world. But over time, with the change in technology, mining settlements that were once ‘centers of wealth’ began to close (Armis, Kanegae, 2019, p.2). It can be observed that the reasons for the loss of importance and the closure of these mines vary. According to White, the depletion of minerals in the mineral deposits, the sudden decrease in the prices of the mineral resources, and the workers' uprisings against the difficult working conditions caused the closure of the mines (2016, p.154). In addition to the fact that mining activities enable the development of regions and the emergence and growth of settlements, their loss of importance over time causes many problems. Wirth and Lintz state that the weakening of the mining industry in an area causes the overall fall of the entire area and this situation creates a challenging environment for solving problems (2006, p.69). Since the mining settlements are single-industrial areas, the closure of the mines brings with it many problems (White, 2016, p.154). It can be understood that the disappearance of the only industry that provides the livelihood of the region causes significant problems in the area. The consequences of the closures of the mines were tried to be defined by different researchers throughout history. According to Robertson, after the closure of the mines in the post-mining settlements, a period of decline in income levels, increased unemployment, economic recession, and population loss with migrations is started to be experienced. This economic decline and population loss cause the reduction of public services and degradation of community infrastructure. Moreover, the settlements have an obsolete appearance (2006, p.3). Moreover, according to Armis and Kanegae, problems such as economic incapability, changes in social structure, and environmental degradation emerged in mining regions in the post-mining period (2019, p.1). Therefore, after the closure of the mines, many consequences arise in different areas such as economic, social, and environmental/physical.

Economic consequences have been the trigger of the decline of the field, and they have also been catalysts for the emergence of troubles in social and environmental fields. It is inevitable that all mining areas become unprofitable after a certain period.

With the closure of the mines, the deindustrialization of the mining district begins. Since these mining areas are in remote locations and single-industry areas, the closing of the mines causes an economic decline in the area (Robertson, 2006, p.3). Since mining areas are mono-structured areas economically, the closure of these areas causes damage to the entire economic structure. Moreover, it is very difficult to create a new industry in these areas. Therefore, unemployment and related social problems begin to appear in these areas. All these problems cause people to migrate to other places (Wirth, Lintz, 2006, p.69). Therefore, economic consequences should be considered deeply and tried to find solutions. For this, Jelen determined that to compensate for the loss of income because of the economic stagnation and economic transformation which began to be seen after the closures, new commercial activities are sought (2018, p.96). Thus, the closure of mines has important economic consequences that should be solved for the survival of the region.

There are also many **social consequences of the closures of mines** that are as important as economic ones in the mining regions. The mining communities that arise depending on the extracted mineral resource are very sensitive to economic declines which are the results of resource depletion and external market factors (Skeard, 2015, p.90). Economic declines in single-industry and resource-dependent areas pose problems for the continuity of communities. (Skeard, 2015, pp.91-92). Therefore, it can be understood that economic difficulties also bring social problems along with them, and the mining community is seriously affected by this situation. One of the important reasons for social problems can be job losses. Because mining settlements are single-industry places, the loss of their only industry causes struggles for the communities. According to Scott, the disappearance of the mining work caused communities that previously had a sense of pride and distinctiveness to turn into communities that felt lack of identity (2009, p.68). Moreover, job losses cause the demolition of established relations and deprivation of meaning in a post-mining region. As a result, just as communities are traumatized and grieving after a loss, post-industrial communities undergo an ‘emotional degeneration’ process when they lose their industries (Stephenson, Wray, 2005, p.177). Long-term unemployment

resulting from the closure of mining areas leads to social exclusion, economic hardship, and poor mental and physical health. These troubles put societies with a strong attachment to the place and unique culture into a difficult process, and this process can be called ‘emotional degeneration’ (Stephenson, Wray, 2005, pp.177-178). Moreover, when an industry goes from an area, its benefits such as the place where the work is done and the social structures are also gone. According to Stephenson and Wray, the deficiency of the workplace and other important social focal points which are the sources of social support, communal interaction, and the pride in industrial identity has led to personal, public, and political problems by breaking the connection between community (2005, pp.179-180). Therefore, according to Stephenson and Wray, employment and professional identity are of great importance for the emotional health of employees. Long-term unemployment has many physical and mental consequences, but these consequences become more pronounced in single-occupation communities. Moreover, in such communities, the collective loss of occupational identity and deterioration of social structure cause emotional degeneration (2005, pp.192-193). Apart from job losses, another social problem can be caused by the changes in the environment. According to Staniscia and Yuill, when an area is changed to such an extent that it erases the memory of the place and disrupts the attachment of the inhabitants to the place, with and after mining activities, the inhabitants of this area are psychologically affected and experience ‘solastalgia’ which is an illness related to changes of the environment (2017, p.41). Thus, it can be understood that the end of mining activity in a region affects post-industrial communities deeply and community survival should be managed by solving these problems. According to Skeard, the mining communities that face difficulties after the closure can survive with a strong sense of identity and community of inhabitants (Skeard, 2015, p.92). Moreover, community cohesion and the sense of place of inhabitants are also important for community survival (Skeard, 2015, p.95).

Apart from economic and social consequences, the closure of mines has also **environmental/physical consequences.** Mining leaves behind significant

environmental degradation that needs to be resolved. These environmental disturbances include open mines, surface depressions, landslides, subsidence, lowering of groundwater levels, and contaminated areas (Wirth, Lintz, 2006, p.69). Moreover, the transformation of the landscape can be seen because of the new structures added to the area for production. Apart from land transformations during mining activity, the transformations of the environment also occur after the closure of the mines. The evidence of the industry quickly disappeared in some areas after the closure of the mines. Mining buildings began to be demolished. Some areas have been forested. Some areas remained abandoned. In some areas, the flora was enriched (Power, 2008, p.164). Moreover, the changes in the physical fabric in post-mining areas are seen such as the closure of local pubs and shops and houses covered with a board (Stephenson, Wray, 2005, pp.180). In addition, the railway, which provides the transportation of raw materials and is the main means of travel, also began to disappear with the closure of the mines (Power, 2008, p.164). Furthermore, miners' welfare buildings and social support networks were also badly affected by the closures (Power, 2008, p.164). Although there are lots of negative consequences of the closure of mines, the traces of mining activity that remained after these closures have many positive impacts on the post-mining region. According to Robertson, even if the mining activity ends in an area, it leaves traces in many ways. Although these traces cause problems from economic and environmental aspects, they affect the mining culture in positive ways such as adding meaning to the area, strengthening the local identity, and consolidating the communities (2006, p.11). Moreover, the residues of mining activity symbolize the restricted life and unstable nature of the process of mineral development. In addition, post-mining landscapes reflect the stories of inhabitants and the identities of the community (Cater, Keeling, 2013, p.60). In addition, the physical elements in the mining landscape are also a reminder of the past of the area. At the same time, these structures are the distinctive symbols of this area. The mining landscape ensures that the collective sense of place can be sustained, as it represents the common experiences of the community. This landscape also represents the presence of migrant miners in the mining area and their

new life in a new place. Moreover, the mining landscape is also the embodiment of the sacrifices and labors of the miners. In addition, the mining landscape and its elements can become a place to commemorate those who died in the mine (Robertson, 2006, pp.10-11). Thus, the closure of mines has physical/environmental consequences which can be both positive and negative.

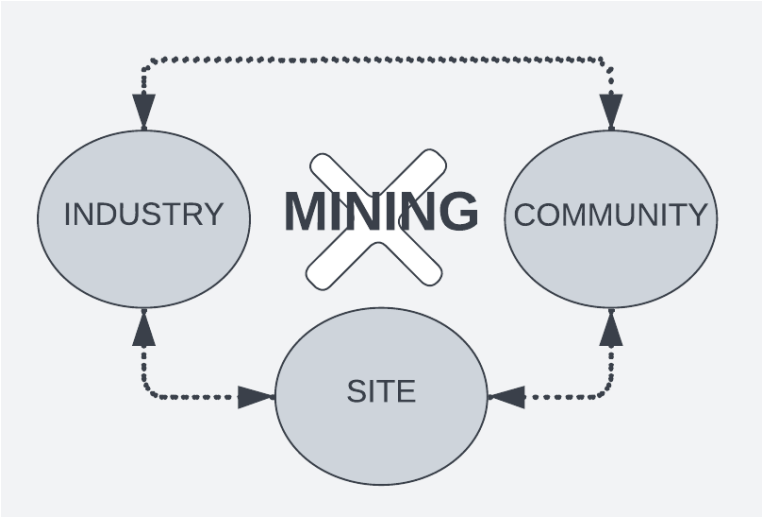

Figure 2.4. Diagram showing the relations of the components of mining in the disappearance period (Author, 2021)

As mentioned before, mining consists of 3 components, and these components have a system in which they have strong relations with each other. One of these components affects other components as well. Likewise, the development of one component causes the development of other components, leading to the development of the region. However, this situation works in the opposite way during the disappearance period. At that time, damage to one component causes damage to the others, causing the region to collapse (Figure 2.4).

When the mines which are the driving force are closed, the physical environment designed for that place becomes unusable, deformed over time, or completely disappears or loses its meaning. With the end of the industry, job opportunities also run out. People who lose their job and social life lose their ties to the place and migrate out. Only environmental pollution and collapsed buildings remain in the

area. Therefore, it can be understood that the destruction of one of the components during the disappearance period, this is usually the destruction of the industry with the closure of the mines, causing damage to other components. This causes the collapse of relations and the system, and the region is in decline. Afterward, discussions began on what to do with these collapsed large areas.

2.1.3 The Period of Responses: Responses Towards Closures

When mining started in an area and an industry based on mining emerges, communities and cultures connected to them are formed with the increase in population over time. In addition, settlements are formed to meet the needs of the communities and the landscape alters. However, when this driving force that led to the formation of mining settlements for various reasons disappears, the region starts to collapse and enters the process of losing its economy, community, and site. Although the closure of the mines had many important consequences affecting the area, responses to these changes emerged over time.

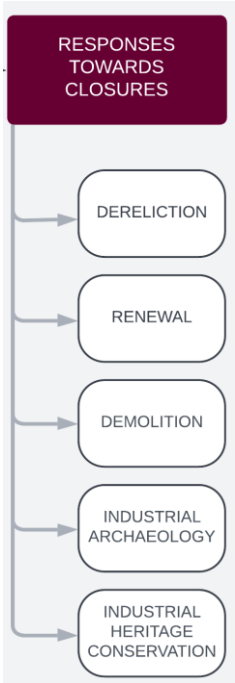

Figure 2.5. Diagram showing the responses towards mining closures (Author, 2021)

As in other industrial sites, in mining, approaches such as **dereliction** of the structures as they are, **demolishing** the structures completely, **renewal** of the structures, considering the structures as an **industrial archeology** field, and protecting the structures by accepting them as **industrial heritage** are emerging (Figure 2.5).

Although the interest in the preservation of historical buildings has existed for a long time, at first, production areas such as mining areas were not wanted to be protected because they evoked ugliness and pollution. Therefore, these areas **remained abandoned** when the production in these areas ended (Edwards, Llurdes, 1996, pp.342-343). In fact, there appeared a response which has been to **erase all the traces** of the past and return to landscapes of the pre-industrial period which have lots of natural elements (Jonsen-Verbeke, 1999, p.70). Apart from those concerned, even mining community members did not find these mining traces worth protecting because they believed that preserving them is the same as trying to save a humiliating period in history (Shackel, 2004, p.44). Later, the potentials of these areas were understood and different approaches began to be followed. The buildings were started to be **renewed** or the buildings were considered as **industrial archeology** and examined to obtain information about their periods. However, the most discussed approach has been to develop strategies for the protection of these areas by considering them as **industrial heritage** areas.

2.2 The Concept of 'Cultural Landscapes of Extraction' as Heritage Places and Conservation Approaches to them

As mentioned before, the acceptance and conservation of mining areas as industrial heritage places have caused many discussions in the literature throughout history. The topics discussed were why such areas should be considered as heritage, the conservation challenges, the decisions on which structures can be considered as heritage and their value assessment, the content of the mining heritage concept, and

the strategies for the revitalization of these areas. Therefore, these issues are addressed in this part of the thesis.

It was understood that the remains of mining are valuable and have many potentials for revitalizing the region and solving the problems created by the closures, and they were started to be protected by considering them as heritage. Throughout history, the reason **why mining traces should be considered and conserved as heritage** has been the subject of research for many people. According to Power, although some of the miners do not want to remember their heritage due to pollution, hardships, and negative effects of closure, heritage is a very important concept for mining communities that want to conserve their meaning, pride, and identity for revitalization (2008, p.168). Moreover, Jelen states that it is not easy to erase mining from memory because of its importance for regional development. Even its remains were considered as heritage and preserved their values and meanings (2018, p.94). In addition, according to Veldhoven (2015), while mining represented wealth and development in its good times, it was associated with unemployment, poverty, and social problems when it lost its importance. Therefore, parts of the mining landscape have become reminders of memories people wish to forget (pp.331-332). Although the mining period was not considered as a heritage for a long time, over time this changed, and communities began to accept their old rejected pasts. It began to question why we should embrace a past that has destroyed the lungs of thousands of people, caused widespread unemployment, spread feelings of contempt, pain, and grief, and stained the landscape with dust in the conservation field. However, to close a traumatic era such as the closing phase of the mines, a period of remembrance when the formative paradox of forgetting that the forgotten thing is assimilated to the new identity occurs is needed (Veldhoven, 2015, pp.339-340). Furthermore, Francaviglia states that one of the most important reasons for the survival of mining towns is that they began to be seen as historical heritage (1997, pp.172-173). Thus, these old mining areas should be seen as heritage places that are worth conserving.

Although there is an acceptance that mining residues should be protected, there are many **conservation challenges.** Edwards and Llurdes explain that mining areas were

not considered worthy of protection due to aesthetic perceptions in the beginning. Apart from the perception of beauty, there are other reasons why these areas are not advantageous in terms of conservation. These areas are facilities with large installations, so the repair and maintenance of these areas are expensive. Moreover, these areas have suffered from environmental degradation. Therefore, the use of the area for new activities is problematic. In addition, improvement of these areas is not a priority as they are far from other centers and touristic rotations (1996, pp.343-344). According to O'Neill, mining areas are expensive to improve and monitor because of environmental problems (2015, p.27). Moreover, Quivik states that historic buildings and equipment in the area are large and financially difficult to maintain and conserve. Moreover, industrial activities are complex systems consisting of many different components. In addition, since these landscapes are very large areas, a component in one part may not be visible from another part. This makes it difficult to understand the field and the system as a whole (2017, pp.8-9). He also adds that due to the necessity of serious financial power which comes from the size of these landscapes and their components, the protection of these areas is also very difficult. In addition, actions such as cleaning up the waste in order to eliminate the environmental problems of these areas conflict with the protection of cultural resources and create difficulties (Quivik, 2017, p.26). Furthermore, Robertson claims that it is difficult to balance the objectives of conservation with the aspects of public health, safety, and environmental protection because harmful substances from mining attract people's attention. This complicates the protection of the mining landscape. In addition, some government policies, and public perceptions towards the removal of physical traces of mining, and negative external perceptions towards mining remains make it difficult to conserve these landscapes. (2001, p.10).

In addition, issues such as **which buildings can be considered as heritage and value assessment** have occupied the literature for a long time. The evaluation of mining remains in terms of value is a difficult task, but it is an important process for the determination of suitable conservation principles. According to Hardesty, the evaluation of the importance and values of historic mining regions is a problematic

issue because of various reasons such as insufficient consistent research structure, problems associated to scale, integrity and inventory, and the insufficient database for comparisons (1990, p.42). However, according to Jelen, it is unlikely that all mining remains can be counted among mining heritage. Therefore, the selection of representative elements and the definition of some values and meanings are important for conservation (Jelen, 2018, p.97). In the beginning, a subjective and selective way was followed in the selection of buildings to be protected. While it was decided to preserve more interesting and marketable structures, uninteresting industrial structures were not (Francaviglia, 1997, pp.180-181). Moreover, according to Scott, people in mining communities prefer to focus their conservation efforts on objects that represent unity and have positive connotations, rather than directing their conservation efforts on mining structures that are remembered with depressing memories (2009, p.70). For a more objective evaluation, this process has started to be tied to criteria and there are lots of studies about the determination of criteria. According to Rybar, the appraisal of the attractiveness of a geo-touristic area that includes historic mining areas can be made with a scoring technique. This evaluation can be made by considering its natural characteristics like its geological features, uniqueness, accessibility, safety, availability of information, visual value, value related to its services, existing publications, observation conditions and objects related to tourist attractions, and anthropogenic characteristics such as age, historic value, aesthetic value, excellence, emotional value, utility value, safety, the capability of reconstruction of cultural routes, and value related to its services (2010, pp.13-17). Moreover, Pearson and McGowan created the 'Mining Heritage Places Assessment Guideline' to help people for determining the values of historic mining areas and making decisions for their future in 2000. According to them, firstly, research consisting of stages such as collecting and understanding historical information should be carried out to evaluate mining heritage sites. Then these fields need to be recorded in various ways. After the research and recording phases, the field should be analyzed. Then, evaluations should be made using certain criteria. Moreover, this guideline that is prepared by Pearson and McGowan has been

determined as the main national criteria for evaluation and determination of the values of mining heritage places in Australia (Ahmad, Jones, 2013, p.447). The determination of heritage assessment criteria is significant for identifying the values of mining areas. These heritage criteria generally vary from country to country but often focus on historical, scientific, social, and aesthetic significance (Ahmad, Jones, 2013, p.447). For example, according to them, although some countries such as the United Kingdom has important primary tools like 'Historic Landscape Characterization' for evaluating rural and historic mining landscapes, some countries like Malaysia do not have legislation that emphasizes the significance, values, and conservation of mining heritage places completely (2013, p.447). Moreover, there is a specific study which is about the creation of understanding towards collieries as the 'International Collieries Study' which is declared by ICOMOS on behalf of TICCIH in 2011. The importance of historic coal mining sites which are called collieries is examined in this study according to some criteria. According to this study (2011), a colliery site has outstanding international importance according to some criteria such as being a unique achievement by being a masterpiece of the creative genius, having an impact on technological developments, being an example of the structures that reflect the important process of history, being relevant to social and economic developments of universal importance, authenticity, and the status of legal protection (pp.8-9). Moreover, according to this study, colliery heritage sites have technological, economic, social, landscape, and documentation values (2011, pp.10-11).

The content of the mining heritage has also been one of the issues discussed in the field of conservation. It has been understood that the mining heritage does not only consist of tangible elements but also includes intangible elements. According to Jelen, mining heritage is the ensemble of both tangible and intangible components which have the values and meanings associated with the extraction of minerals, miners, and their communities. All these components have their own values which are important for the present-day community, and it is necessary to conserve them for future generations (Jelen, 2018, p.102). Jelen also wrote about the content of

mining heritage with Kucera that mining heritage includes both intangible components like customs, traditions, and techniques and tangible components like mines, structures, and machinery (2017, p.325). In addition, Power explains that the concept of mining heritage includes physical remains such as buildings, collieries, landscape features like spoil heaps, miners' houses, halls, chapels, and welfare buildings, artifacts that are equipment or machinery related to mining, newspapers, and products of entertainment, local traditions, sports, games, culture of education such as specific apprenticeship system, unions, songs, culture of first aid, religion, language and dialect, regular social activities like camps, memories, poetry, drawings, bands and choirs, banners, local names for physical features, stories and oral history, genealogy and family ties, humor, beliefs towards supernatural figures, and community spirit (2008, pp. 168-178).

Along with concepts such as heritage and heritage conservation in historical mining settlements, **the revitalization of these areas and the survival strategies of the communities** should also be considered in order to take advantage of the potentials of the area. Matero states that these extraction heritage sites, which help to preserve the site, also provide revitalization of the region by "regeneration through heritage", and rejuvenate and sustain the social and natural fabric (2017, p.3). Revitalization and sustainability of these areas should be achieved in economic, social, and environmental aspects. According to Conesa, Schulin, and Nowack, the emergence of new economic developments with cultural revitalization and new potentials in these areas should be evaluated by considering environmental problems. In other words, economic developments, cultural preservation, and environmental risks should be in balance and considered (2008, p.690).

With the closure of the mines, the mining communities, which are connected to a single industry, lose their economic resources and a new economic resource must be defined for the revival of the areas. For this, Armis and Kanegae claim that as there are not enough economic alternatives for the development of mining sites, the revitalization of them is becoming a very important issue and one of the most common choices is tourism in these areas (2019, p.2). In addition, Jelen argues that

mining heritage sites have the capability of becoming attraction centers for tourists, and using these areas in this way can help protect them and pass them on to the next generations (2018, p.102). Moreover, Francaviglia states that the survival of mining communities depends on their market ability and these settlements have the capability of economic diversification, the marketing of recreation and comfort, and the promotion of tourism (1997, pp.171-172). Thus, tourism can be seen as a logical solution for the **economic revitalization** of the region.

When the economic factor disappears in mining communities, workers begin to leave the area. Therefore, it is important to ensure the continuity of communities in these areas. According to Stephenson and Wray, the regeneration of mining communities is succeeded by using their cultural capital (2005, p.175). Instead of forgetting the mining past, the continuity of identity and memory is crucial for these communities (Stephenson, Wray, 2005, p.193). When there is nothing left to share or be proud of with the disappearance of the reason for the existence of the mining communities, it is important for them to proudly remember their past in terms of regaining their self-confidence and regenerating themselves. Maintaining a collective legacy, revitalizing the community's trust and well-being, promoting collective identity, and gaining pride are important for ‘emotional regeneration’ (Stephenson, Wray, 2005, p.196). Moreover, Robertson argues that attachment to place is important for the survival of the mining communities. Despite all the difficulties, miners chose to stay in the region because of place attachment (2006, p.186). According to him, as mining is the reason for the formation of mining communities, the end of mining also threatens their existence. This situation also leads to the emergence of communities with strong ties. Therefore, mining communities are resistant to demolition thanks to their strong bonds both to the place and within themselves (Robertson, 2006, p.195). Thus, remembering the past with pride, identity, culture, and attachment to place are crucial for the **social revitalization** of mining regions.

Because mining is an environmentally hazardous activity, land rehabilitation is necessary for the environmental revitalization of the region. According to Wirth and Lintz, it is important to try to eliminate the harms of mining to the natural and human-

made environment. Decontamination of the land ensures a healthy environment and reusing old buildings reduces the flow of harmful materials. Another important benefit of land rehabilitation is enhanced socio-economic development. These areas are less attractive due to degraded landscapes, pollution, derelict buildings, and collapse. This situation can change with land rehabilitation. For example, hazardous open-pit mines can be turned into attractive lakes. This can enhance the character of the region and create an opportunity for tourism (2006, p.72). Thus, cleaning and reusing environmental wastes of mining activity can create tourism and **environmental regeneration.**

There are specific **revitalization strategies** for mining areas. Mining structures have potentials for new uses, but there are some criteria to consider. According to Jelen and Kucera, they can be used for tourism, they can be used for commercial purposes, they can be converted into accommodation, or they can be repurposed in line with their previous uses, such as being used as a warehouse. However, while these areas are re-functioning, the conservation principles should be considered, as well as the sustainability of the area in terms of economic, social, and environmental aspects (2017, p.326). Moreover, Langer states that after the end of activities, mining facilities are adapted to new functions, such as tourist attractions, museums, entertainment centers, arts and culture, sports, entertainment, religious cults, science, education, and others. Reuse and development of disused structures must preserve the authenticity and be compatible with the environment (2014, p.50). Apart from the reuse of physical structures of mining, there are other strategies for the revitalization of the region. According to Power, there can be projects that enable old workers to connect with children by telling them old stories using small objects, or old photographs. In addition, memorials can be made to remind the lost traces of mining. Moreover, heritage trails can be arranged so that the post-mining landscape can be understood and interpreted. Furthermore, local traditions like baking must be maintained so that the well-being of the inhabitants can continue. In addition, new social activity centers can be created for the mining community, whose places for social activities have disappeared. Moreover, the welfare of miners can be

maintained in order to ensure the continuity of social and sporting traditions. Furthermore, annual festivals which are open to the public can be made. In addition, community spirit which includes a sense of community, the nature of work, and a way of life should be maintained for survival (2008, pp.169-178). Thus, mining remains have a huge capability of the revitalization of the region, and survival can be possible after the closures of the mines.

Apart from these, when **the examples related to the revitalization of old mining areas** are examined, certain approaches emerge (Figure 2.6). Among these examples, some of these old mining areas are conserved and turned into conservation and ecosystem services like botanic gardens (Figure 2.6.a). In some, the old mining areas are preserved in a decayed state and become ghost towns that attract many tourists (Figure 2.6.b). In some, the areas are left as ruins and these ruined areas become parts of a trekking route and these areas are observed without damaging the ruins (Figure 2.6.c). In some, these areas are turned into recreational and sports areas (Figure 2.6.d). In some, the areas are turned into places for community and culture (Figure 2.6.e). In some, the buildings are preserved and re-functionalized by becoming a museum (Figure 2.6.f). In some, the old mining region is converted into a cultural tourism center where festivals are held (Figure 2.6.g). In some, the site remains as it is without any intervention because there is a very strong community there. In some, the areas are turned into "landscapes of consumption," such as shopping and restaurant districts or resorts (Figure 2.6.h).

In Figure 2.6.a, the image of Kebun Raya Megawati Soekarnoputri is seen. This former mining region was transformed into a botanical garden. There are lots of benefits of this transformation in conservation, information, and environmental aspects. The greenery helps decrease the effects of mining pollutants. However, nature can cause damage to the mining structures. In Figure 2.6.b, Bodie State Historic Park in California is seen. The region was conserved and converted into a ghost town. The region was introduced and opened to tourism. The region has started to generate income, but the authenticity of the region has become a matter of debate. In Figure 2.6.c, a walking trail of Keweenaw National Historic Park in Michigan is

shown. The region was preserved and a trekking route was created to observe the old mining area. In the region, income has started to be obtained through tourism, and damage to the structures has been prevented with little intervention. In Figure 2.6.d, Mega Underground Bike Park in Kentucky is seen. The former mining area was transformed into a sports area. This situation attracted the masses who wanted to do sports in the region, prevented the region from being forgotten, and paved the way for investment in the region. However, it should be considered that tourism can harm the originality of the region. In Figure 2.6.e, Zollverein Coal Mine in Germany is shown. The old mining region is turned into an entertainment hub. This change has caused the region to attract tourists. The region has been prevented from being forgotten, but the negative effects of tourism should also be considered. In Figure 2.6.f, The Mining History Centre in Lewarde is seen. In this area, old mining structures have been converted into a museum and it is aimed to transfer the history of the region to future generations. While this change helps to preserve the mining culture and structures, attention should be paid to transforming the structures in accordance with their original situations. In Figure 2.6.g, Erzgebirge/Krušnohoří Mining Region on the border of Germany and the Czech Republic is seen. The old mining region was transformed into a cultural tourism center and income has started to be obtained through tourism activities in the region. It is aimed to convey the physical traces of the mining activity in the region as well as the mining culture in the region. In order to convey the mining culture to the tourists, traditional products are introduced and traditional celebrations and shows are held. Although mining structures and culture are preserved with this transformation, the negative effects of tourism on the region should also be considered. In Figure 2.6.h, Shimao Wonderland InterContinental Hotel in the Tianma Pit in Shanghai is demonstrated. In this region, the old mining pit was turned into a hotel. With this transformation, tourists were attracted to the region, the region began to be remembered and invested. However, attention should be paid to the relationship of the converted building with mining and its harmony with the original state of the area. In addition, the negative impact of tourism on the area should also be considered.

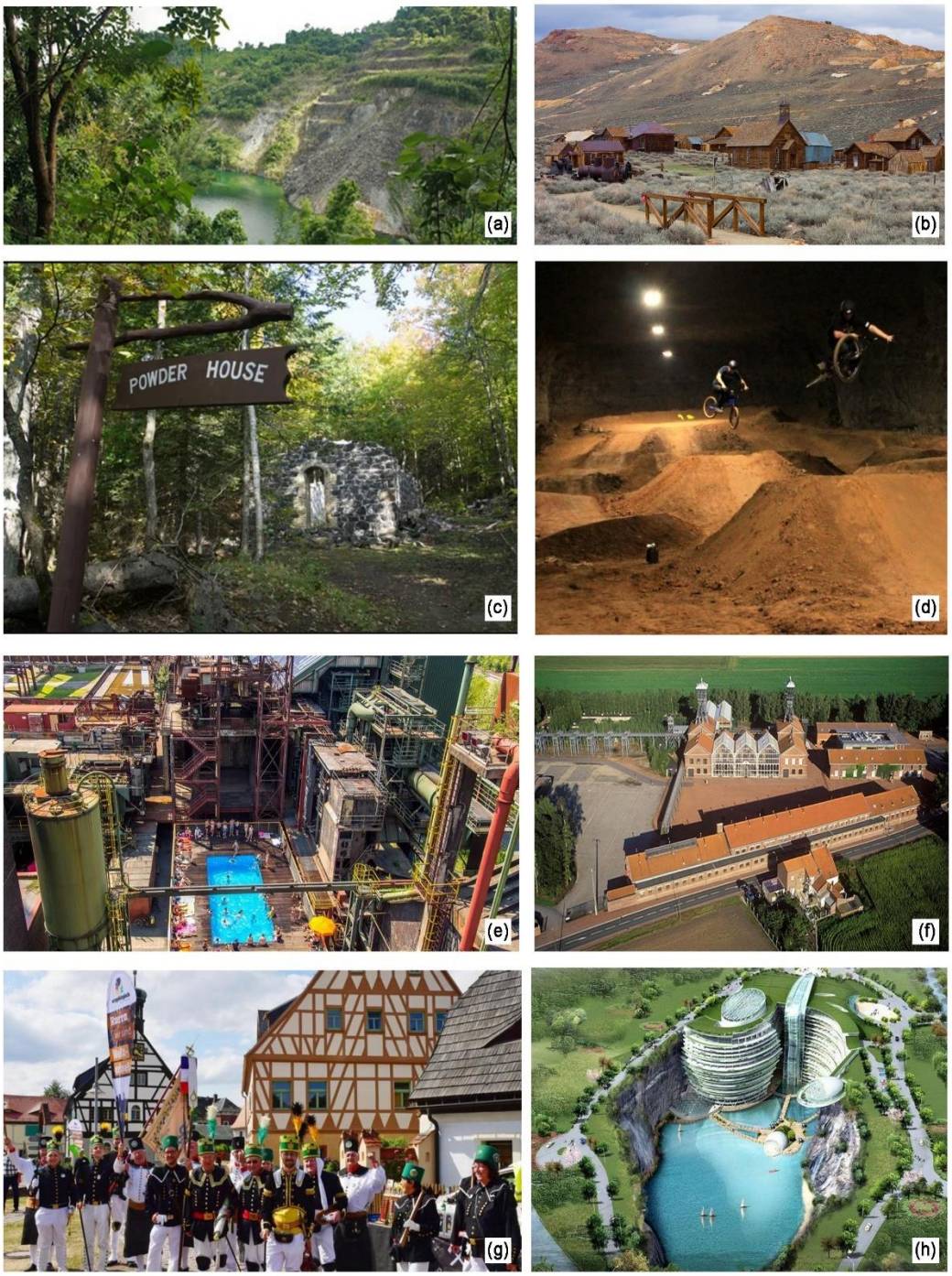

Figure 2.6. The image showing some of the examples of re-functioned mining areas (**a:** Kebun Raya Megawati Soekarnoputri Botanical Garden in Indonesia, Source: https://k2fly.com/blog/5-examples-of-extraordinary-repurposed-mine-sites/, **b:**

Bodie State Historic Park in California, Source: https://www.visitmammoth.com/trip-ideas/exploring-bodie-state-historic-park/, **c:** A walking trail of Keweenaw National Historic Park in Michigan, Source: https://www.nps.gov/kewe/planyourvisit/hiking.htm, **d:** Mega Underground Bike Park in Kentucky, Source: https://k2fly.com/blog/5-examples-of-extraordinary-repurposed-mine-sites/, **e:** Zollverein Coal Mine in Germany, Source: https://k2fly.com/blog/5-examples-of-extraordinary-repurposed-mine-sites/, **f:** The Mining History Centre in Lewarde, Source: https://www.chm-lewarde.com/en/the-mining-history-centre/presentation-and-missions/, **g:** Erzgebirge/Krušnohoří Mining Region on the border of Germany and the Czech Republic, Source: https://time.news/christmas-toys-from-the-ore-mountains-photo-germany-information-and-travel-tips-dw/, **h:** Shimao Wonderland InterContinental Hotel in the Tianma Pit in Shanghai, Source: https://k2fly.com/blog/5-examples-of-extraordinary-repurposed-mine-sites/)

Thus, the concept of cultural landscapes of extraction has been a controversial issue in the field of conservation because of its complexity. These areas have lots of components, therefore the recognition of these areas as cultural heritage, the content of these areas, the conservation strategies of these areas, the conservation difficulties towards these areas, the evaluation of the values and problems of these areas, and the determination of strategies for the revitalization of these areas occupy the agenda of conservation experts. Since these areas are unused areas with high potential for use, which contain many components together, it was thought that approaches should be created for the reuse and revitalization of these areas. Since there can be no single truth for such complex areas, many approaches have been created. It is important to analyze these different approaches and strategies related to these areas in detail. Moreover, there is a need to develop a site-specific conservation approach related to these areas in accordance with their complexity.

2.3 How to Consider the Concept of 'Cultural Landscape of Extraction' in the Conservation Field: A Proposal for Holistic Conservation Approach

After a mine is found in a region, an industry is formed in line with the needs of the people in that region. Later, a settlement is formed in line with the needs of this industry and its employees, and communities associated with this industry and settlement are formed as people migrate and settle in the region. Therefore, a mining system consists of three interrelated components which are industry, site, and community. However, the industry that triggered the formation of the region begins to disappear due to various reasons such as the loss of importance or depletion of the mine over time, and the relationship between the 3 components deteriorates. The collapse phase begins in the region, following the disappearance of the industry and the community over time. As a result, various approaches emerge in these collapsing regions. In some approaches, these components are rejected and completely destroyed. In some approaches, these components are ignored and the space is left as if it is empty and nothing is done. In some approaches, only some features of the site are preserved and the region is started to be used again with a completely different function. In some approaches, the site is protected and used to obtain information about the past. In some approaches, it is seen that the whole constituted by this trio is accepted as a heritage, and suggestions are made for its protection by revealing its different aspects.

Among these approaches, the approach that emerged by considering all three components is the most complex and the most effective approach for reuniting the relations that were broken during the collapse phase. Therefore, these 3 components are important for such complex areas, and when studying such complex cultural landscapes of extraction, it is necessary to document and evaluate the area by looking at these 3 components and their relationships, and make site-specific decisions accordingly (Figure 2.7).

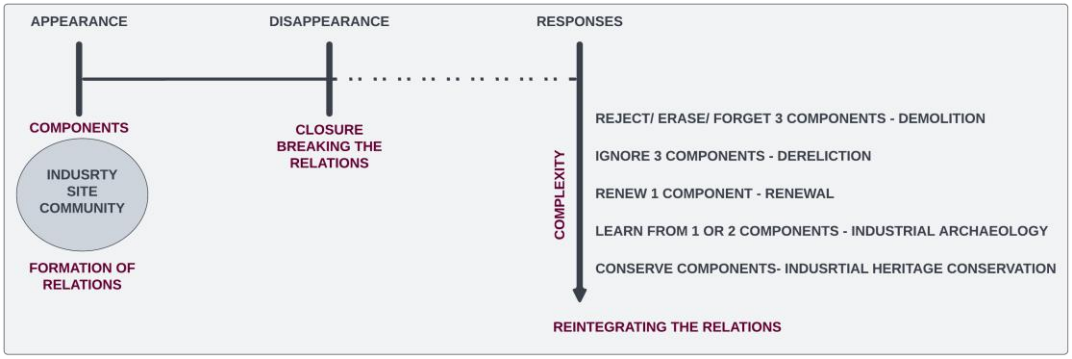

Figure 2.7. Diagram of the phases of cultural landscapes of extraction (Author, 2021)

While it is mentioned that the components of such areas are industry, site, and community, it is necessary to be aware that they also have components. When studying such areas, components such as intangible aspects of production which are related to the industry, social aspects like culture, tradition, and lifestyles which are related to community, and physical environment consists of the natural environment, cultural landscapes, open areas, built-up environment, and transportation network which are related with the site and their relationships should all be considered as a whole (Figure 2.8).

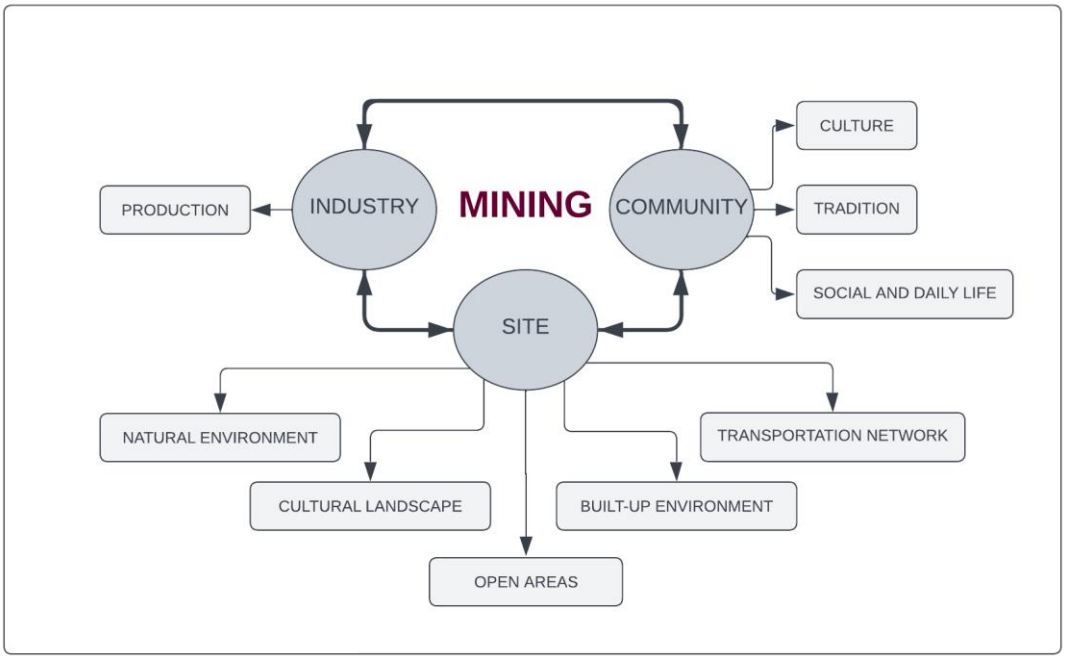

Figure 2.8. Diagram showing the components of the mining (Author, 2021)

When studying such complex and interrelated fields, it is not sufficient to look only at the relations of the components. At the same time, the area should be studied by looking at certain scales in order to understand the network in which the area is located. In this direction, multiple-context and multiple-scale approaches are important and necessary. Apart from components and their relationships and scales, a time factor should also be considered. Together with these 3 components, it is necessary to look at both the historical and current situation of the field and how the decisions made for the future will affect these 3 components and their relations at different scales. Therefore, in order to study such complex cultural landscapes of extraction, a holistic approach is required, in which all three components, different scales, and time factor are examined as a whole (Figure 2.9).

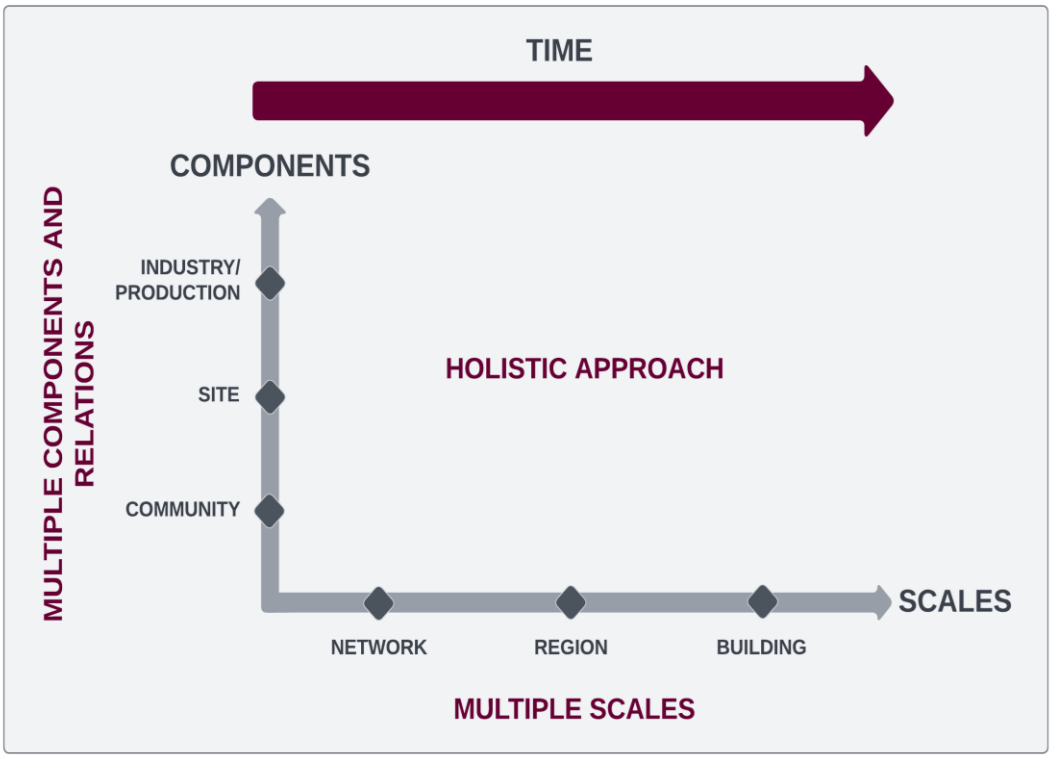

Figure 2.9. Diagram showing the holistic approach towards the concept of cultural landscapes of extraction (Author, 2021)

Therefore, in such complex fields, the field must first be understood. At this stage, it should be understood how the area was in terms of production, site, and community at different scales in the past and now. Then, the area should be evaluated. At this stage, values and problems should be evaluated in line with these 3 components at different scales. After determining the importance of the area and the factors that threaten its importance, the future vision of the area should be determined. Then, decisions should be made regarding the future of the area, and these decisions should be evaluated in line with these 3 components (Figure 2.10).

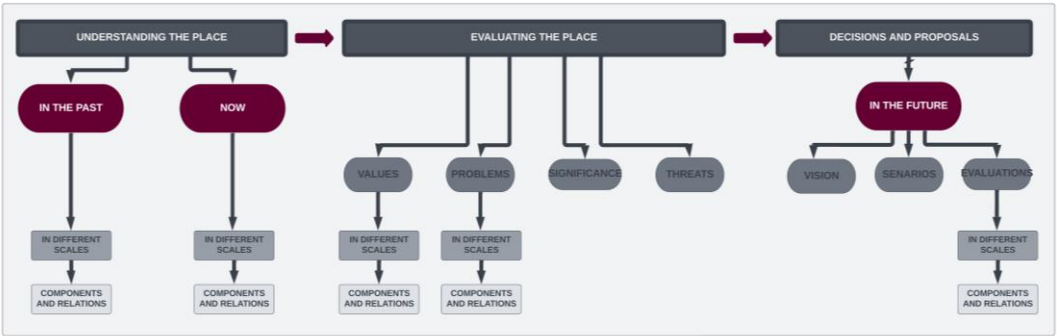

Figure 2.10. Diagram showing the proposed approach towards cultural landscapes of extraction (Author, 2021)

However, there is no single truth in such complex cultural landscapes of extraction. Therefore, while making decisions, it is necessary to develop many different scenarios and evaluate these scenarios by comparing them with each other in accordance with the characteristics of the region. While developing and evaluating these scenarios, the three components which are determined as industry, community, and the site should be taken into consideration and the effects of different scenarios on these components should be considered by different stakeholders. After these scenarios are created and their positive and negative effects are evaluated, it is important to determine the most appropriate scenario for the area.

In addition, the decisions of a single stakeholder group cannot be sufficient when creating a proposal related to such complex regions. While developing proposals, a multi-stakeholder system should be established and a common mind should be

formed. For this, associations, residents, miners, experts, decision-makers, and place owners should come together and make decisions together (Figure 2.11).

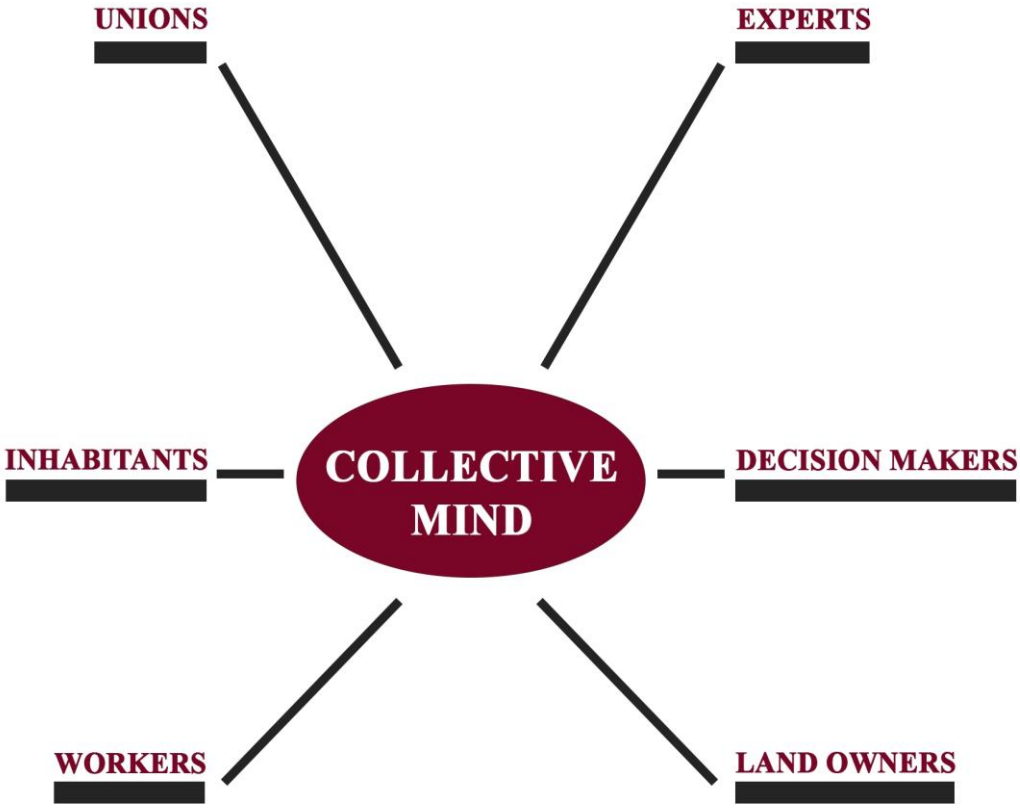

Figure 2.11. Diagram showing the stakeholders of complex cultural landscapes of extraction (Author, 2021)

In this thesis, this proposed holistic conservation approach is tested in the Kandilli/Armutçuk Coal Mining Region in Zonguldak. The study follows the steps in Figure 2.10 in order to create conservation proposals for the selected regions which are the Lower and Upper Kandilli regions. However, a multi-stakeholder study could not be done within the scope of this thesis because of the complexity of the region.

CHAPTER 3

UNDERSTANDING THE KANDILLI/ ARMUTCUK COAL MINING REGION IN ZONGULDAK AS A COMPLEX CULTURAL LANDSCAPE OF EXTRACTION

As mentioned in Chapter 2, cultural landscapes of extraction are complex sets of relationships consisting of 3 components which are industry, site, and community. There are also sub-components related to these 3 components which are natural features, cultural landscapes, built-up environment, transportation network, and open areas. These areas should be considered holistically with all their components and relationships. In addition, these areas go through various phases such as appearance and disappearance. It is known that the emergence of the industry in the field during the appearance phase triggers the formation of the site and the community. It is known that in the disappearance phase, with the loss of the industry, the relations were broken and the field entered a period of collapse. Zonguldak- Ereğli hard coal basin is an area that contains the integrity of these components and relations and experiences these phases.

Kandilli/ Armutçuk Coal Mining Region is the production center located in the town of Kandilli in the Ereğli district of Zonguldak and is one of the five production zones of the Zonguldak-Ereğli hard coal basin. Due to the use of different names in different periods when describing the region, this area will be called the Kandilli/Armutçuk Hard Coal Mining Region within the scope of this thesis.

Kandilli/ Armutçuk is one of the oldest production areas of the hard coal basin. For this reason, the rapidly industrializing region has become a center where the technologies of the period are reflected. With the production of hard coal in the region, great job opportunities appeared, the region began to urbanize and new transportation networks such as railways are created. Moreover, with the construction of places where workers can stay in this area, the region became more complex and began to reflect the residential architecture of its period. While the

locals, cinemas, a primary school, guesthouses, and sports areas reflect the social policies of the republican period, both these buildings and workers' lodgings are examples of modern architecture. Moreover, this area became a place where the mining culture is formed as it became an area where workers spend their entire lives over time.

Thus, Kandilli/Armutçuk mining region is a good example of complex cultural landscapes of extraction because it reflects the phases of appearance and disappearance of the previously mentioned cultural landscapes of extraction together with industry, site, and community components and their relationships, and it has many small components related to these three components such as production network, mining culture, mining traditions and unique lifestyle of miners' and the built-up environment with production, residential and public buildings, natural landscape with forests, cultural landscape with mines, transportation network, and open areas.

As mentioned before, cultural landscapes of extraction include many components which can be grouped under the headings of industry, site, and community and their complex relationships. Therefore, in order to study such complex areas and to make decisions about these areas, it is necessary to first understand the area in detail. In order to understand such areas well, it is necessary to study these areas with all their components which are industry, site, and community, at different scales and historically, with a holistic approach. Therefore, this path was followed while describing the Kandilli/ Armutçuk coal mining region as an important example of such areas in this thesis.

Therefore, in this chapter, firstly, general information about Zonguldak and Zonguldak- Ereğli Hard Coal Basin has been given in order to understand how Kandilli/ Armutçuk is located in a whole and understand the coal production network in Turkey. After the general information, it was mentioned how production/industry, site, and community were at different scales which are the Zonguldak scale and Kandilli/ Armutçuk scale in the past. Then, the current situation of the area is

explained with production, site, and community components at different scales which are the Zonguldak scale and Kandilli/ Armutçuk scale (Figure 3.1).

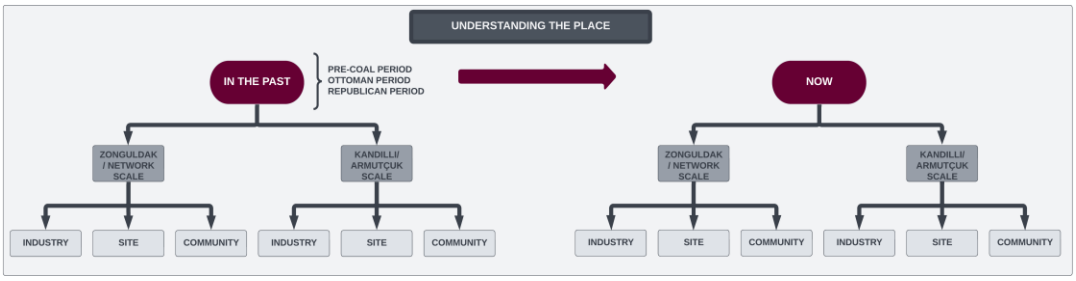

Figure 3.1. Diagram of the method followed to understand the field (Author, 2021)

3.1 General Information about the Region

Zonguldak is a city that was a small settlement before coal was found in the eastern black sea region in Turkey, but gained importance with the discovery of coal and became one of the important industrial cities in Turkey, and is also rich with its nature and forests. **Coal production has not only led to the development of Zonguldak, but also the development of the country.** For this reason, Zonguldak and its coalfield are of great importance to Turkey.

Coal was discovered in Turkey in 1829, and since then, many coal deposits have been unearthed all over our country, thanks to the systematic and long-lasting research conducted by various institutions such as the Mineral Research and Exploration Institute (Serdaroğlu, 1956, p.3). There are four types of coal which are peat coal, lignite, hard coal, and anthracite in Turkey (Acun, 1952, p.11).

According to Nami Serdaroğlu, we can divide these coal deposits into five zones: Thrace coals, Western Anatolian coals, Eastern Anatolian coals, Central Anatolian coals, and the Black Sea coals (Figure 3.2). Although the Black Sea coals from these regions have been operated since 1848, the others have been operated since 1917 (1956, p.3). Therefore, **it can be understood that the oldest coal extraction activity in Turkey is carried out in Zonguldak and its surroundings**.

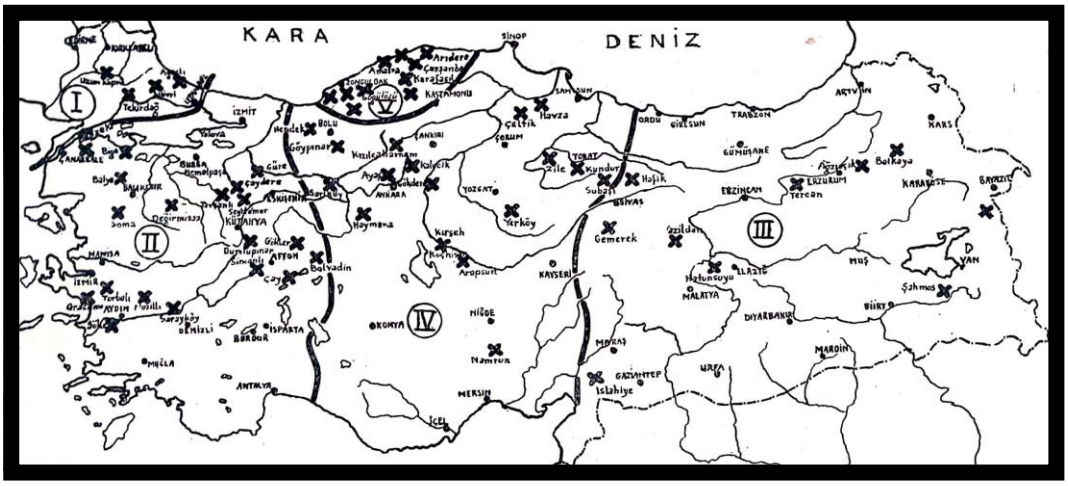

Figure 3.2. The map that shows the five zones of the coal deposits in Turkey (Serdaroğlu, 1956, p.4)

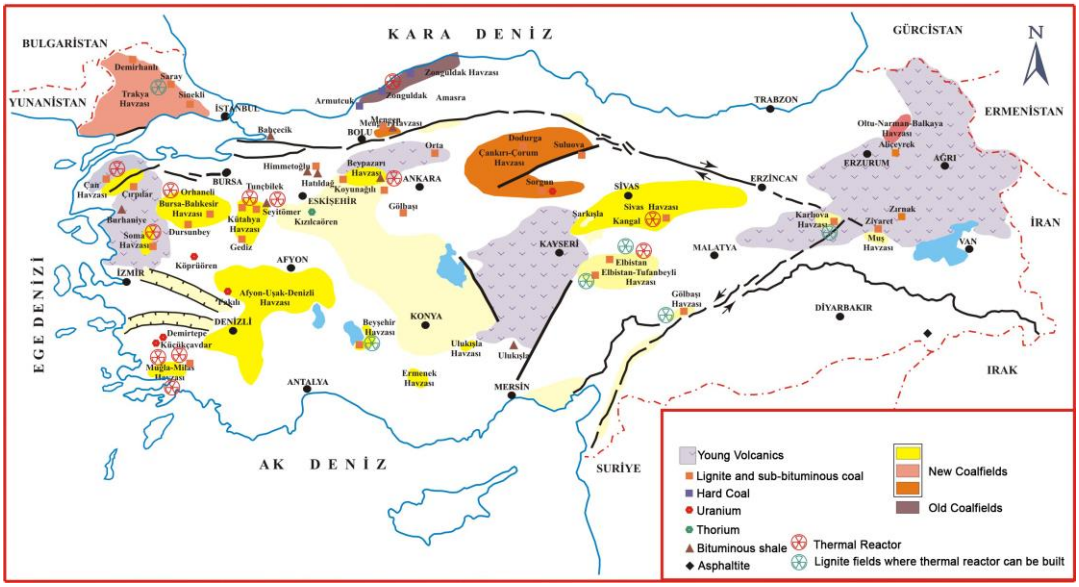

Figure 3.3. The map that shows the distribution of the coalfields in Turkey (Source: https://www.mta.gov.tr/v3.0/hizmetler/jeotermal-harita)

According to the map from Mineral Research and Exploration Institute which shows the coal reserves of Turkey, the distribution of coal reserves and their characteristics can be understood (Figure 3.3). Although lignite deposits are located all over Turkey, hard coal is only produced in and around Zonguldak in the Western Black Sea region according to this map. Although two hard coal deposits have been found around

Antalya in Southern Anatolia and around Diyarbakır in Southeastern Anatolia, these areas are inefficient in terms of reserves. In Turkey, there are Zonguldak- Ereğli, Diyarbakır- Hazro and Antalya- Kemer coalfields. However, the only important one for the production of coal is Zonguldak- Ereğli coalfield. In other words, **it is the only hard coal basin that is important in terms of hard coal reserve and production in Turkey** (State Planning Organization, 1988, pp. 84-85).

The location of the region is also important for the production activities as it is on the coast of the sea. The Zonguldak- Ereğli coal basin is located on the coast of the Black Sea, within the provinces of Zonguldak and Kastamonu, on a coastline of approximately two hundred kilometers stretching from Karadeniz Ereğli to Cide- İnebolu. Kandilli/ Armutçuk hard coal mining region which is the selected area is located in the Kandilli town of Ereğli district of Zonguldak province as a part of the coal production network of Zonguldak- Ereğli coalfield (Figure 3.4).

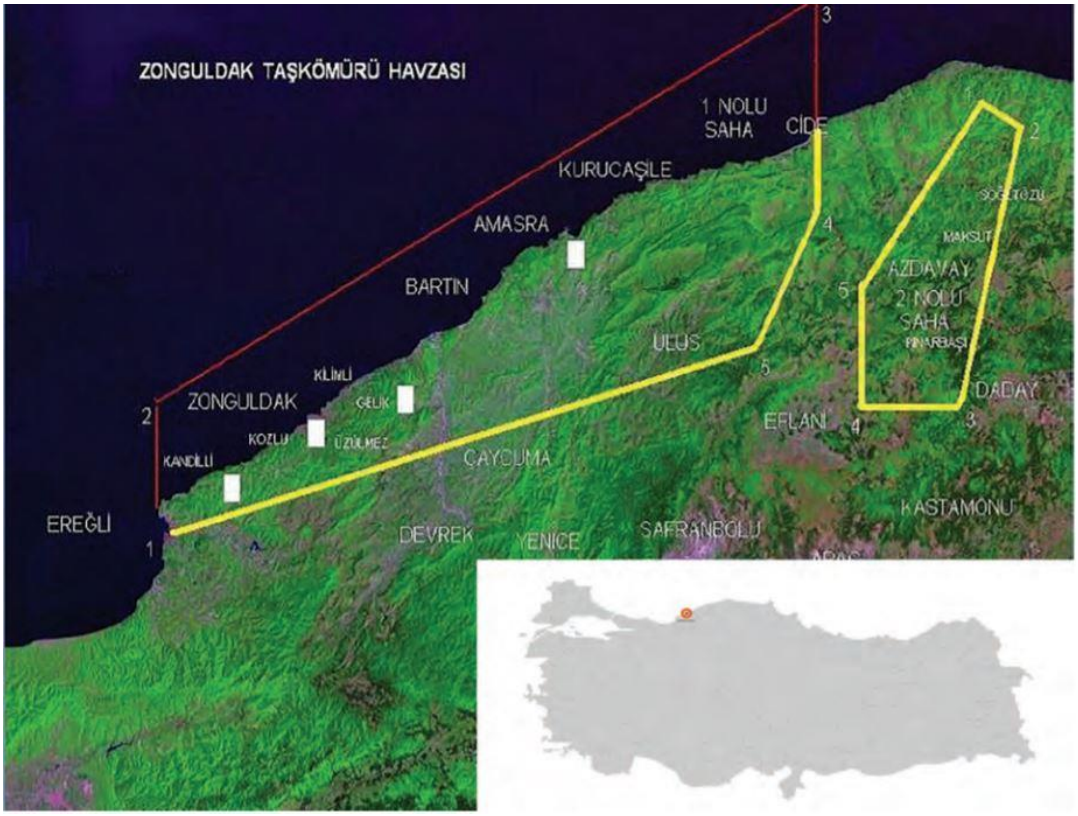

Figure 3.4. The Zonguldak- Ereğli hard coal basin concession area (Turkish Hard Coal Enterprise Institution Activity Report, 2019, p.36).

3.1.1 Natural and Geological Features of the Region

The geological features of the region are complex in terms of different aspects. Zonguldak- Ereğli hard coal basin has become a mixed, faulted, and geologically defective area because of severe tectonic events that took place in geological times (Turkish Coal Enterprises Authority, 1962, p.39). The complex geological structure of the Zonguldak- Ereğli hard coal basin, where deep underground coal mining is carried out, makes production difficult with fully mechanized systems, and hard coal production is mainly carried out based on manpower (Turkish Hard Coal Institution Sector Report, 2019, p.23).

Moreover, Zonguldak- Ereğli coalfield is not a solid area for settlement. According to Oskay, Zonguldak and its surroundings are mountainous areas. These mountains are full of deep seams and new galleries are constantly being opened. As the galleries are opened, there are depressions and slides. As a result, buildings are damaged as if they were exposed to an earthquake (1983, p.63). Therefore, **this area has a fragile structure.**

This region is also very rich in terms of natural factors. According to the information on the website of Zonguldak Governorate, Zonguldak is a province in the Western Black Sea Region, which has a coast to the Black Sea from the west and north. The province is surrounded by the Black Sea from the north, Bartın from the northeast, Karabük from the east, Bolu from the south, and Düzce from the west.

Zonguldak province has very rough terrain. It is covered with steep and sloping high mountains. Since the mountains form three lines parallel to the coast, transportation between the coast and the interior becomes difficult. There are rich hard coal beds under the mountain range formed by the elevations close to the coast.

Zonguldak is very rich in terms of surface water resources. Although there is no big stream in the province except Filyos Stream, there are many streams.

Moreover, 56% of the provincial lands are forested areas of which 88% are groves and 12% are coppice forests. In Zonguldak, there are broad-leaved forests, mainly beech, oak, hornbeam, chestnut, plane tree, linden, and alder, and coniferous forests, such as larch, yellow pine, red pine, and maritime pine. The region is covered with coniferous trees at the top, broad-leaved trees at the bottom, and poplar and willow trees along the river banks. This main green texture is complemented by forest vegetation such as rhododendron, holly, laurel, arbutus, cranberry, cherry, heather, bearberry, rosehip, blackberry, wild strawberry, and fern.

The province of Zonguldak is under the influence of the temperate Black Sea climate. There is no dry season in Zonguldak and it is rainy and warm in all seasons. The most precipitation occurs in the autumn and winter seasons. In Zonguldak, the rainiest months are December and January. As you go inland from the sea, the climate gets a little harsher. Precipitation decreases as you go from the coast to the interior and turns from rain to snow (Figure 3.5). June, July, and August are the months with the sunniest days in the province. The lowest relative humidity in Zonguldak is 70%, and the average relative humidity is 75%.

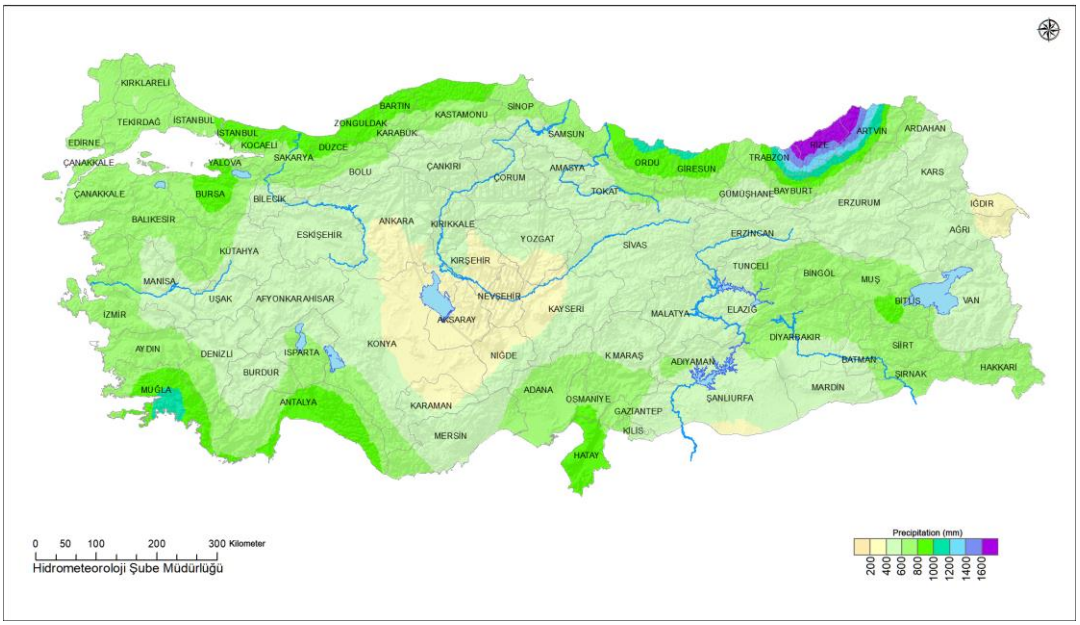

Figure 3.5. Annual total precipitation map (1991-2020) (Source: https://www.mgm.gov.tr/veridegerlendirme/aylik-normal-yagis-dagilimi.aspx)

According to the temperature statistics for Zonguldak province which are obtained from the website of the Turkish State Meteorological Service, there is no significant temperature difference between seasons and day and night in the province. There is no significant variation in annual average temperatures across the province. The prevailing wind in the province is in the southeast direction. The second-degree effective wind is in the northwest direction.

Thus, besides being rich in coal production, Zonguldak is also rich in natural factors such as water resources and vegetation. Moreover, it has a good climate and the location of the province is good for the production network. However, the mining activity, which has been carried out for a long time, has begun to damage the geological structure of the region.

3.1.2 The Components and Networks of the Region

In order to understand the field, it is necessary to understand the components of the field, the relationships of the components, and the production network in the field. Therefore, it is important to know that the Zonguldak-Ereğli coal basin consists of 5 different production regions which are Amasra, Karadon, Üzülmez, Kozlu, and Armutçuk hard coal mining regions from east to west, and all these production areas are divided into sub-production zones (Figure 3.6).

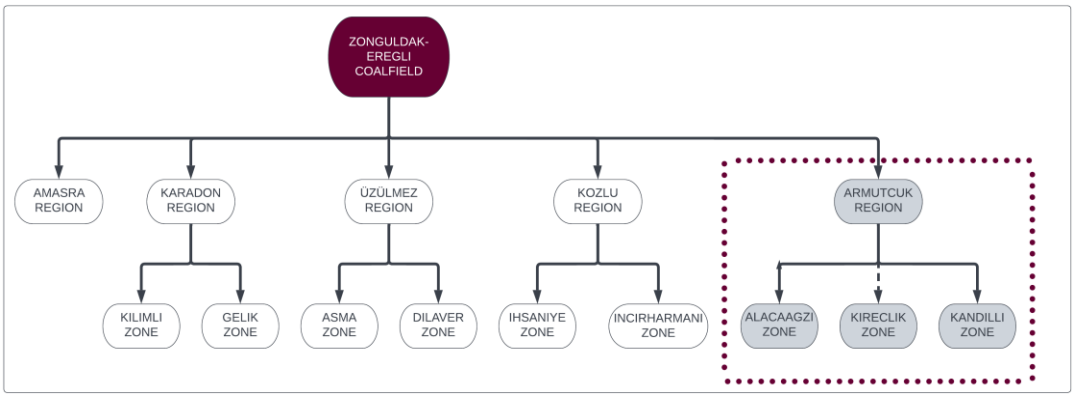

Figure 3.6. Diagram showing the production regions of Zonguldak- Ereğli Coalfield (Author, 2021)

Figure 3.7. The General View of the Amasra Hard Coal Enterprise (Source: http://taskomuru.net/tr/amasra-t-i-m/)

In Amasra Hard Coal Enterprise that located in the eastern part of the mining basin non-coking hard coal is produced and these produced coals are washed in the Amasra coal washing facility. Production works are carried out in two separate coal seams with varying thicknesses between 2.23-3.60 m between -236/-300 elevations (Turkish Hard Coal Enterprise Institution Activity Report, 2019, p.39).

Figure 3.8. The General View of the Karadon Hard Coal Enterprise (Source: http://taskomuru.net/tr/karadon-t-i-m/)

Karadon Hard Coal Enterprise continues its production activities in 15 km east of Zonguldak province and on an area of 32 km2. Coking coal is produced in Kilimli and Gelik Enterprises. Production works are carried out in areas between -150/-460 elevations and in six separate coal seams with thicknesses varying between 1.70-3.00 m. The produced coals are washed in the coal washing facility established by the contractor company in exchange for a ton cost. The establishment generally carries out its production in the north of Gelik, in veins sloping to the north (Turkish Hard Coal Enterprise Institution Activity Report, 2019, p.39).

Figure 3.9. The General View of the Üzülmez Hard Coal Enterprise (Source: http://taskomuru.net/tr/uzulmez-t-i-m/)

Üzülmez Hard Coal Enterprise continues its production activities at 7 km from Zonguldak province and on an area of 28 km2. In the establishment, the production of coking coal, some of which is from pre-prepared panels, in thicknesses varying between 2.10-3.20 m in three separate coal seams, is conducted in Asma-Dilaver Plant, the coal seams are normal in the north and steeply inclined in the south. Production works are carried out in the area between -183/-253 elevations and the produced coals are washed by the contractor company in return for a ton cost in the coal washing facility within the institution (Turkish Hard Coal Enterprise Institution Activity Report, 2019, p.38).

Figure 3.10. The General View of the Kozlu Hard Coal Enterprise (Source: http://taskomuru.net/tr/kozlu-t-i-m-2/)

Kozlu Hard Coal Enterprise continues its production activities in 8km west of Zonguldak province and 12km2 area. It is the only institution in our country that produces hard coal under the sea. Coking coal is produced in İhsaniye-İncirharmanı facility. Production and preparation works are conducted in four different coal seams with thicknesses varying between 2.30-3.80 m between -300/-560 elevations. The produced coals are washed by the contractor company in exchange for a ton cost in the coal washing facility (Turkish Hard Coal Enterprise Institution Activity Report, 2019, p.38).

Figure 3.11. The General View of the Armutçuk Hard Coal Enterprise (Source: http://taskomuru.net/tr/armutcuk-t-i-m/)

Located 35 km west of Zonguldak province, Armutçuk Hard Coal Enterprise is bordered by Çamlı in the west, Çavuşağzı in the east, Ömerli and Keşkek villages in the south, and the Black Sea in the north, and is located on a total area of 100 km2, 54 km2 on land and 46 km2 on the sea. In the facility located in the western part of the basin, semi-coking hard coal is produced in the Kandilli-Alacaağzı facility. Production works are carried out in the great vein at levels -450/-540. The complexity of the geological structure and the thick, steep, and fire-prone veins cause difficulties in carrying out production activities. The thickness of the veins varies between 3 and 9 m, and the produced coals are washed in the Armutçuk coal washing facility (Turkish Hard Coal Enterprise Institution Activity Report, 2019, p.38).

However, these production zones are not limited to the production areas. These areas are also the whole of complex relations in which production-related or unrelated settlements and natural areas coexist (Figure 3.12). Therefore, at this stage, small zones with different characteristics of the Kandilli/ Armutçuk coal mining region should also be mentioned and in order to understand these zones, it is necessary to look at the formation of the current complexity of the settlement over time.

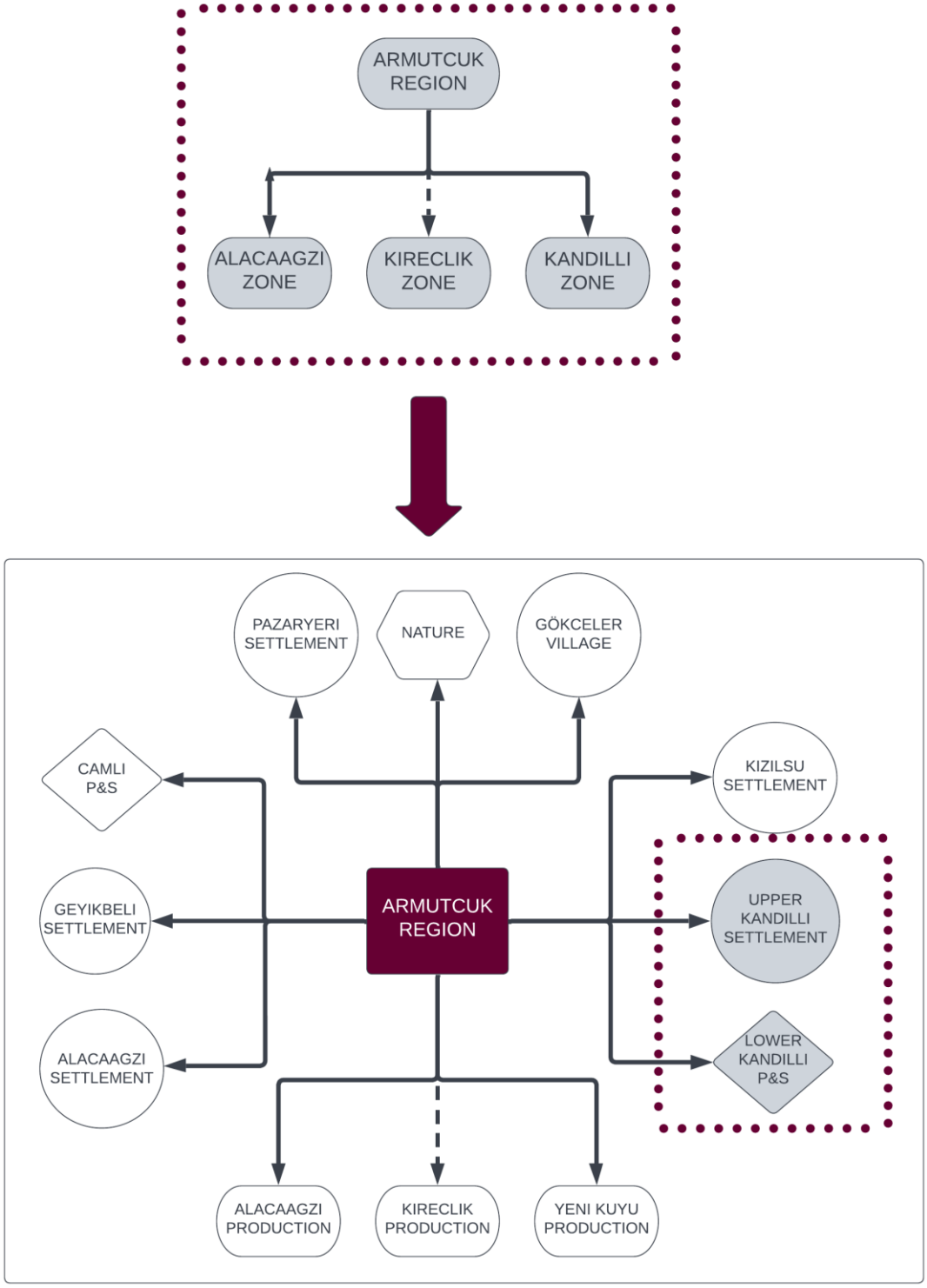

Figure 3.12. Diagram showing the sub-components of the Armutçuk Region (Author, 2021)

The formation of the Kandilli/Armutçuk Hard Coal Mining Region follows a unique and complex process. There are villages such as Keşkek and Neyren, which have existed in the region since the Ottoman period. With the discovery of coal in the coastal areas of the region, mining settlements such as Çamlı and Kandilli begin to form near these villages, and the people living in the surrounding villages begin to work in these mines. Mining areas, which consist of production areas and places for workers to stay, begin to receive intense migration as production creates job opportunities. Thus, depending on the increasing population, civilian settlements such as Geyikbeli begin to form. Although all these settlements were formed at different times and have different characteristics, they continue to exist in harmony. The relations between these components can be seen in the plan of 1977 of the region (Figure 3.14). According to this plan, the region consists of Çamlı, Geyikbeli, Uzun Mehmet, Yayla, Kandilli, Yeni Kuyu, Kızılsu, Armutçuk, Pazaryeri, Gökçeler (Neyren) Village and Alacaağzı regions. Among these areas, Çamlı is a production and settlement area, Geyikbeli is a civil settlement area that was formed later, Kandilli where production ended and settlement was lost over time was a production and settlement area like Çamlı, Uzun Mehmet, and Yayla settlement areas created when the settlement in Kandilli was not sufficient, Yeni Kuyu which was formed after the production in Kandilli ended is the new production area, Armutçuk is production and settlement area, Pazaryeri is a civilian settlement area, Gökçeler is a village from the Ottoman period and Alacaağzı is a production area.

Among these areas, Uzun Mehmet, Yayla, and Kandilli areas are examined within the scope of the thesis as they still carry the important traces of their period and set good examples for areas of their kind. According to the information obtained during the field trip, the part consisting of Uzun Mehmet and Yayla districts will be mentioned as Upper Kandilli in the rest of the thesis, and the part with Kandilli will be mentioned as Lower Kandilli. Therefore, three components which are production, site, and community with their sub-components are considered only for the Lower and Upper Kandilli regions on the regional scale besides Zonguldak- Ereğli Coalfield which is related to the network scale (Figure 3.13).

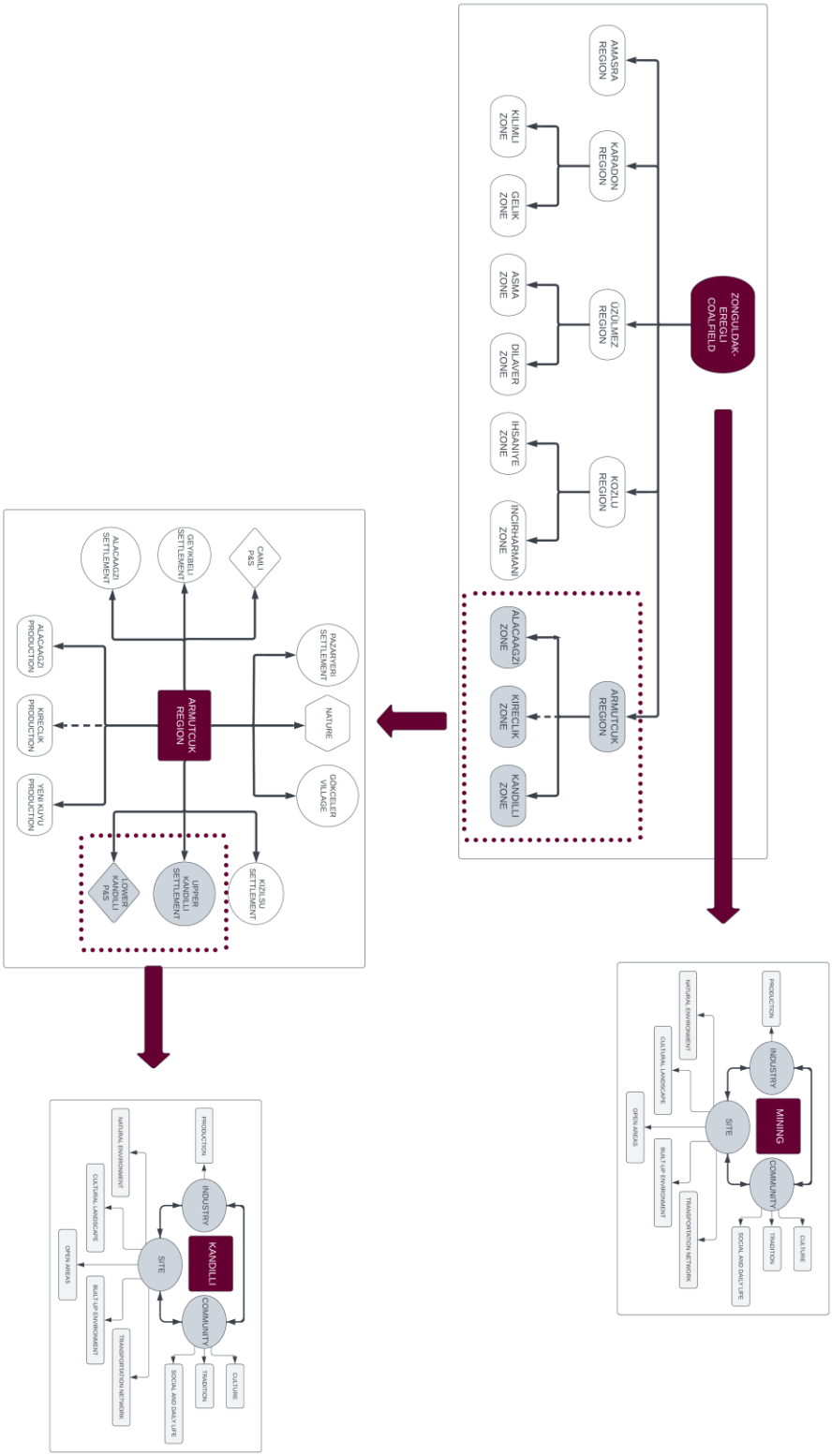

Figure 3.13. Diagram showing the detailed components of the region (Author, 2021)

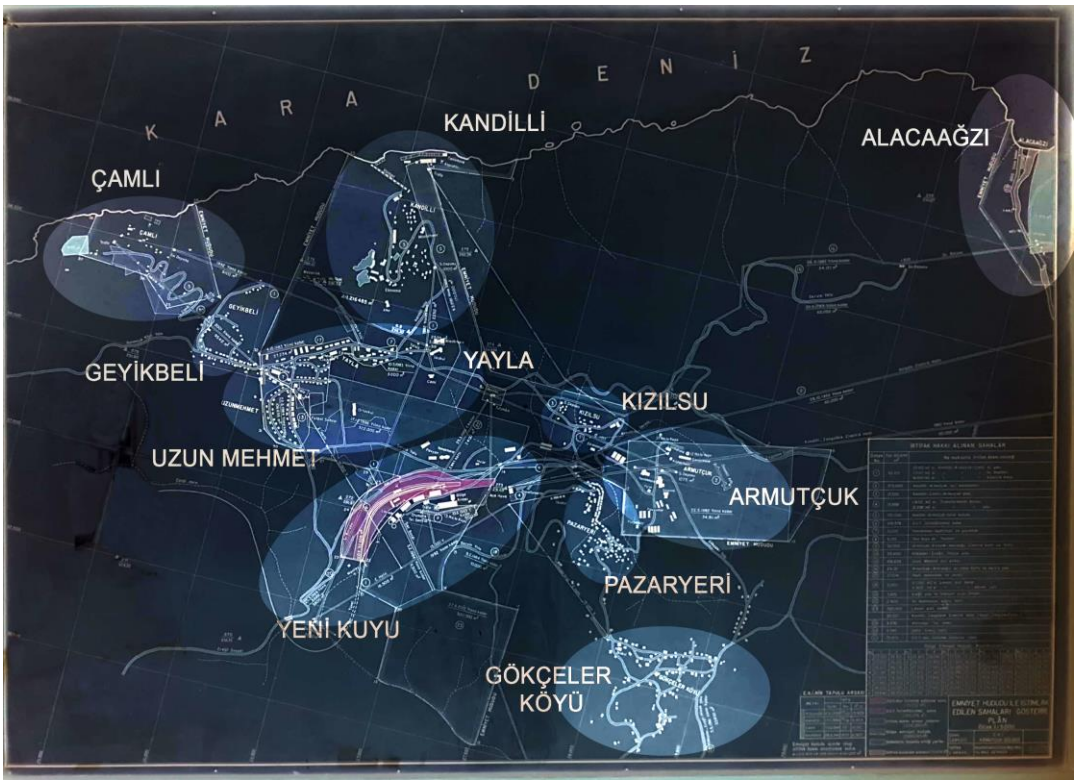

Figure 3.14. The regional plan of Kandilli/ Armutçuk Hard Coal Mining Region in 1977 (Source for the plan: Armutçuk Hard Coal Enterprise Archive, 2020; Markings were done by the author, 2020)

Çamlı:

According to oral history studies and field trips, the loading chutes of the region are ordered from west to east as Çamlı, Kofalık, Kandilli, Alacaağzı, Kireçlik. Çamlı mines are among the first mines opened in the basin. Çamlı mines, which have been operating since the Ottoman period, lost importance with the firedamp explosion in 1942. After the 1980s, the mines were closed, but the workers and their families continued to live there for a while. Nowadays, few people are living in the region who have set their hearts on it. The buildings are in ruins and many have been demolished. Even traces of some structures are not found. In Çamlı, there was a beach where the workers could spend time with their families, a power plant on the beach, a forge, mule barns, customs, coal silos, coal loading docks, a Turkish bath in the plain area, TTK lodgings, workers' cafeteria, manager's lodging, and a health

center. Life in Çamlı presents the best examples of worker solidarity. Çamlı was a place where everyone knew and supported each other. While the Lower Kandilli beach was operated by the TTK, the Çamlı beach was used as a public beach. While you were buying food and beverages from the TTK on the Lower Kandilli beach, you didn't need to bring food and drink to the Çamlı beach, the people living there offered food to each other. There was no ‘ekonoma’ which is a specific marketplace for miners in Çamlı. Postman Hüseyin would visit the houses one by one every morning and take the list of the needs of the houses, and in the afternoon he would take the orders from the ekonoma and deliver them to the houses one by one. After the Çamlı mines were closed, the people who set their hearts on the area did not leave the area for a while and provided access to the newly opened mines with the TTK services.

Figure 3.15. The maps of Çamlı from 2018 and 1977 (Sources from left to right: Zonguldak Special Provincial Administration Archive, 2020; TTK Archive, 2020)

Figure 3.16. The images of Çamlı from the field trip (Author, 2020)

Figure 3.17. The image of the seashore of the Çamlı region (Source: https://www.facebook.com/photo/?fbid=10154394883439312&set=gm.10154542226388646)

Figure 3.18. The image of the seashore of the Çamlı region (Source: https://www.facebook.com/photo?fbid=10216056685184333&set=gm.10157091282548646)

Geyikbeli:

It is one of the old civil settlements of Kandilli. It was established in the mid-1970s due to the increasing migration with mining and mining-related job opportunities.

Figure 3.19. The maps of Geyikbeli from 2018 and 1977 (Sources from left to right: Zonguldak Special Provincial Administration Archive, 2020; TTK Archive, 2020)

Figure 3.20. The image of Geyikbeli (Source: Kandilli Municipality website, https://www.kandilli.bel.tr/index.php?modul=1_9)

Pazaryeri:

It is one of the oldest civil settlements in the region. The lower floor of the buildings was used as a shop and the upper floor as a living space. Since the region has migrated, most of the buildings are idle and in poor condition. Abandoned buildings are demolished over time. There is no TTK structure in this area. But in the past, all infrastructure systems were made by TTK.

Figure 3.21. The maps of Pazaryeri from 2018 and 1977 (Sources from left to right: Zonguldak Special Provincial Administration Archive, 2020; TTK Archive, 2020)

Figure 3.22. The general image of the Pazaryeri region (Source: https://www.facebook.com/photo?fbid=10150321931382970&set=a.10150321928292970)

Gökçeler (Neyren) Village:

It is a residential area from the Ottoman period. Since the region has migrated, Gökçeler lost its population and took its place among the municipalities to be closed. Thereupon, Gökçeler was connected to Kandilli. Although the two settlements were merged in 2013, the population is still low.

Figure 3.23. The maps of Gökçeler from 2018 and 1977 (Sources from left to right: Zonguldak Special Provincial Administration Archive, 2020; TTK Archive, 2020)

Kızılsu:

In Kızılsu, which was one of the important settlements of the region in the past, most of the structures do not exist now. Water tanks and pumping facilities established for the water requirement of the region were located in this area. In addition, the propeller, the facilities established for the ventilation of the mine and the discharge of groundwater, and the lodgings were located in this area.

Figure 3.24. The maps of Kızılsu from 2018 and 1977 (Sources from left to right: Zonguldak Special Provincial Administration Archive, 2020; TTK Archive, 2020)

Figure 3.25. The image of Kızılsu from the field trip (Author, 2020)

Alacaağzı:

Alacaağzı consists of two parts, a worker settlement area, and a production area. While the workers' settlement area is located inland, the production area is on the coast. The naming of the worker settlement area and the production area differs in the sources. While the workers' settlement area is called Armutçuk on some old maps, it is named Alacaağzı on some maps. Alacaağzı, Çamlı, Kofalık, Kandilli and

Kireçlik are among the oldest loading chutes in the region. Alacaağzı mines are among the old mines of the basin. After the 1970s, Alacaağzı was abandoned as a result of the reduction of the production coefficients in the mines, the gathering of scattered working places, the reduction of production costs, and the targeting of low ash production within the framework of the basin concentration project. Nowadays, while the production area on the coast of the region is being used as a public beach, the workers' settlement region has been transferred to Erdemir to start coal production. But most of the industrial heritage sites have disappeared. There were buildings such as a lamproom, forge, well no. 12, dynamite warehouse, dining hall, bakery, cinema, workers' pavilions, and ekonoma in the workers' settlement region.

Figure 3.26. The maps of Alacaağzı workers' quarter from 2018 and 1977 (Sources from left to right: Zonguldak Special Provincial Administration Archive, 2020; TTK Archive, 2020)

Figure 3.27. The images of Alacaağzı workers' quarter from the field trip (Author, 2020) (left: The image of the bakery, right: The image of the workers' pavilion)

Figure 3.28. The map of Alacaağzı in the seashore region from 2018 and 1977 (Sources from left to right: Zonguldak Special Provincial Administration Archive, 2020; TTK Archive, 2020)

Figure 3.29. The images of Alacaağzı in the seashore region from the field trip (Author, 2020)

Kireçlik:

Kireçlik is the easternmost production area after the Çamlı, Kofalık, Aşağı Kandilli and Alacaağzı loading chutes and is the farthest from the others. Although Kireçlik is efficient in terms of coal reserves, it was closed in 1972 due to the downsizing policies of the enterprise, as the coal seams were not economical. The structures of the region are abandoned and neglected.

Figure 3.30. The images of Kireçlik from the field trip (Author, 2020)

Figure 3.31. The images of Kireçlik from the field trip (Author, 2020)

Yeni Kuyu:

In this region, hard coal production started on the coast of the Black Sea due to the ease of ship transportation and technological deficiencies. However, as the coal is mined and the veins in the inner parts are reached, it has been decided to move the establishment to the inner parts. Thus, in the 1960s, a German company built the Armutçuk coal washing facility and well no. 13, which was approximately 600 meters underground. Thus, the new Armutçuk enterprise was established. Today, hard coal is still produced in the Yenikuyu region. This enterprise works in 3 shifts with approximately 1000 workers. However, production decreased as a result of the fact that the Armutçuk field, which is a difficult area to operate as a result of the government's failure to invest in the mining sector, could not benefit from new technologies and latest systems, and the retired workers left the region and new

workers were not recruited. However, when we look at the private sector mining, the hard coal production of the TTK Armutçuk establishment is in a better condition. Social life, on the other hand, is in a position to search for the old with a candle. For the last 20 years, more than half of the lodgings have been empty and neglected, as workers have not preferred to live in lodgings. TTK Armutçuk Establishment will continue production with existing workers despite the decrease in the number of workers. This establishment still has enough coal reserves to produce 80-100 years. In the production area of the Armutçuk enterprise, there are the administration building, the workers' changing rooms and showers, the well no. 13, the electrical office, the repair shops, the facility for washing coal and making it suitable for sale, the engine garage, the security, the coal sales office and the family medicine.

Figure 3.32. The maps of the Yenikuyu region from 2018 and 1977 (Sources from left to right: Zonguldak Special Provincial Administration Archive, 2020; TTK Archive, 2020)

Figure 3.33. The images of the administration buildings in Yenikuyu from the field trip (Author, 2020)

WORKERS' LOCKER ROOMS

WELL NO.13 AND ITS ELEVATOR

FIRST AID STATION AND MATERIAL WAREHOUSE

Figure 3.34. The images of buildings in Yenikuyu from the field trip (Author, 2020)

Figure 3.35. The images of the buildings in Yenikuyu from the field trip (Author, 2020)

The areas mentioned as Uzun Mehmet and Yayla on the 1977 map which are called as Upper Kandilli region, and Kandilli on the 1977 map which is called as Lower Kandilli region will be examined in more detail in the following sections within the scope of the thesis.

3.2 Historical Context of the Region

After understanding the general information about the region, it is important to understand the historical context of the region. In order to understand the cultural landscapes of extraction, understanding the changes and developments of the areas over time is of great importance for the conservation of the areas and for making decisions about them. Especially, time is of great importance for a holistic understanding of such multi-component complex areas. Therefore, a holistic approach in which all the components, different scales, and historical changes are considered as a whole is necessary to understand this area, which is one of the important examples of cultural landscapes of extraction.

For this, first of all, it was explained how the 3 components which are industry/ production, site, and community of the Zonguldak- Ereğli coalfield were in the past on a network scale. Then, it was mentioned how the 3 components of the Upper and Lower Kandilli regions were in the past according to the historic timeline of the region. After that, the current situation of the Zonguldak-Ereğli hard coal basin was explained by considering 3 components of mining. Finally, the current situation of the Upper and Lower Kandilli regions was explained by considering 3 components which are industry, site, and community (Figure 3.36).

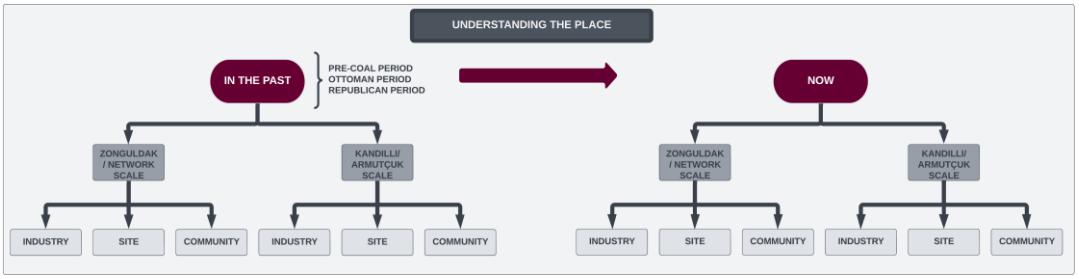

Figure 3.36. Diagram showing the method of understanding the place

Therefore, the characteristics of the region, the complex relations between components of the region, and the changes and the development of the region in different phases which are the appearance and disappearance phases of the region can be understood in detail.

3.2.1 Historical Development of Zonguldak- Ereğli Coalfield

To understand the area, firstly, Zonguldak- Ereğli Coalfield should be understood in accordance with industry, site, and community which are related to economic, physical, and social aspects of the region in historic order.

Therefore, the area is described in four stages, namely the pre-coal period, the Ottoman period, the Republican period, and its current situation (Figure 3.37).

Figure 3.37. The Operational Timeline of the Coal Production in the Basin (Image made by the Author by using the information in Turkey Coal Inventory in 1978)

Zonguldak- Ereğli Coalfield Before Coal Production:

Although there is not much information about the region before the Ottoman period, there have been settlements in the geography of the Zonguldak coal basin since ancient times. According to Zaman, the coal basin is located within the borders of Bithynia and Paphlagonia and is adjacent to Galatia (2004, p.11). These settlements can be seen in the ancient maps of the region (Figure 3.38).

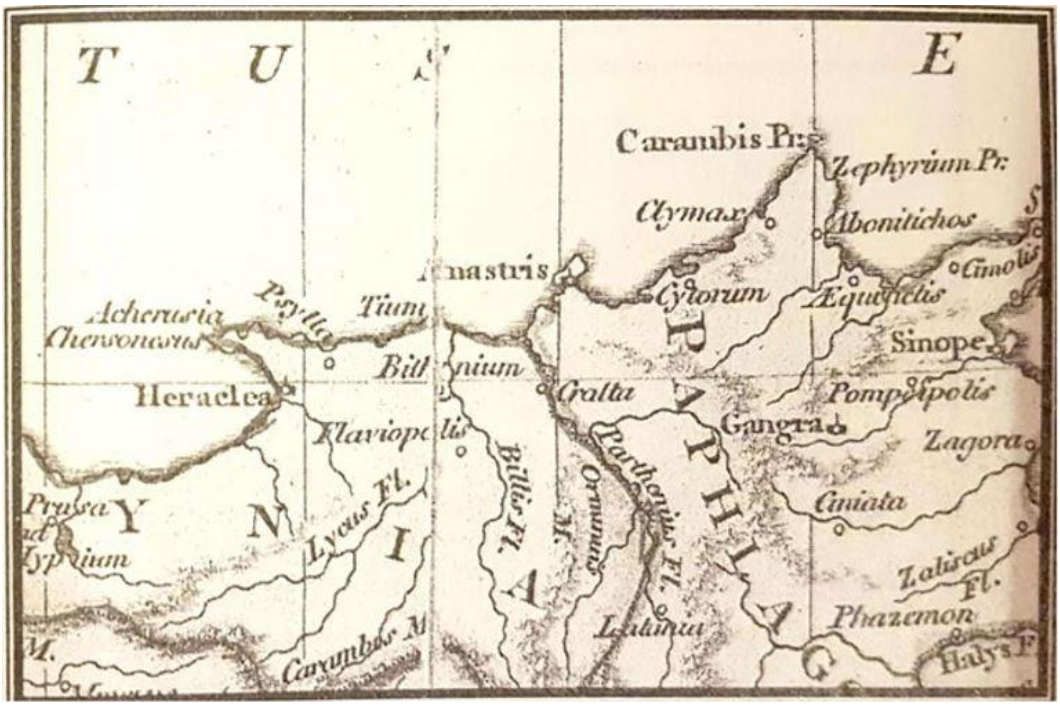

Figure 3.38. Ancient Geography Map of the Basin (Çatma, 2006, p.295)

More detailed information about the area belonging to the pre-coal production period can be reached when it comes to Ottoman period documents.

Looking at the **industry and production** in the region, it can be understood that the basin, where various civilizations were established until the Ottoman period, was an important center of the Ottomans for the shipping and timber industry before coal was discovered. According to Çatma, at that time, forestry, timber transport, the timber trade, and sawmills were important sources of income. Maritime, fishing, boatbuilding, and working on ships were also quite common. Fruits, vegetables, and grains were grown in these wetlands (2006, p.115). The economy on the coast was developed for sea and maritime transportation, and the people living in the interior were interested in agriculture, animal husbandry, and forestry depending on the land (Sakaoğlu, 1987).

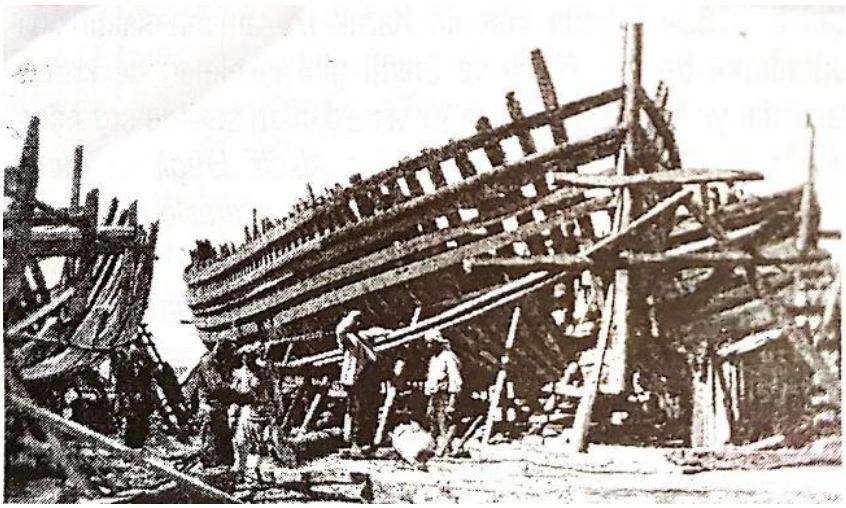

Figure 3.39. Wooden Boat Building (Zaman, 2004, p.14)

Looking at the **site** in this period, it is understood that it had very different characteristics from the period in which the coal was produced. The land was forested and wetland before coal and industry-related pollution has not yet occurred (Çatma, 2006, p.115). Moreover, there were only Ottoman settlements unrelated to coal in the region.

The **community** in this period consisted of Ottoman communities who were unaware of coal. Mining culture and mining communities have not yet been formed.

However, with the introduction of steam engines, the production of hard coal becomes mandatory and the need for hard coal gradually increases (Zaman, 2004, p.14). When steam power was applied to war and merchant ships, the economic importance of coal increased a lot. During the reign of Mahmud II, steam engines began to be installed on the galleons that formed the Ottoman navy, and the need for coal for the navy arose (Chamber of Commerce and Industry, 1933, p.113). Hard coal was needed to operate large facilities such as the navy, armory, mint, and shipyard, but this basic fuel had not yet been found in Zonguldak. Therefore, coal was imported from other countries, despite the economic difficulties (Etingü, 1976, p.23). At the end of the 18th century, the Ottomans started to import coal from abroad to obtain the coal needed by the industry. During this period, the demands for hard coal increased, and the Ottomans could not meet these demands in time with

financial difficulties. Thereupon, it was thought that this need could be met with the coal resources to be found in Ottoman Empire (Gürol, 1997, p.26). Thus, hard coal started to be searched. In 1829, Uzun Mehmet, one of the Marines, found hard coal in Köseağzı (Figure 3.40). Thus, the foundations of coal management in the Ottoman Empire were laid (Turkey Coal Inventory, 1978, p.14). However, the operation of coal production has started in 1848. Sultan Abdülmecid formalized the coal management in the Ereğli basin with an edict in 1848 (Turkey Coal Inventory, 1978, p.15).

Figure 3.40. Köseağzı Mill where Coal is Allegedly Found (Çatma, 2006, p.297)

Zonguldak- Ereğli Coalfield in Ottoman Period:

Hard coal production in the Zonguldak-Ereğli coal basin has been one of the main factors in the industrialization of the region, as well as a constant source of livelihood (Oskay, 1983, p.60). Therefore, the discovery of hard coal is of great importance to the history of the Zonguldak- Ereğli coal basin. Throughout history, the Zonguldak-Ereğli coal basin has witnessed different administrations, fluctuations in production, the inflow and outflow of domestic and foreign capital, a series of legal regulations, many injuries and deaths, and major strikes (Aytekin, 2006, p.27).

In the Ottoman period, the **mining industry** in the basin started to develop with the discovery of coal. In the beginning, production was carried out with extremely primitive methods in the basin (Aytekin, 2006, p.29). The veins were dug by digging and the extracted coal was carried on the backs of humans or animals such as horses and mules (Özeken, 1955, p.23). At that time, the basin was in the hands of individual non-Turkish people. The mines were dug randomly. For this reason, the production in the mine was frequently interrupted and changed owners profusely (Enver, 1941, pp.24-25). The low production level in the coal basin and the irregularities in the organization of the basin paved the way for the management of the mines to be given to the navy (Aytekin, 2006, p.30). During the time of the navy administration, many innovations were made in the basin. Among these innovations is the coke and briquette factory, which was established to evaluate the unused powdered coals (Enver, 1941, p.14). In this period, the management of the basin was partially regulated, and coal production expanded (Chamber of Commerce and Industry, 1933, p.122). Although mining activities were carried out with a relatively better infrastructure and organization in this period, production could not be stabilized (Aytekin, 2006, p.30). This enabled the removal of the monopoly of the navy supervision, the involvement of large foreign companies in the operation of the mines, and an increase in production (Aytekin, 2006, p.31). The coal economy followed a completely stagnant character between 1848 and 1882 (Özeken, 1955, p.19). After 1882, with the foreign capital entering the basin, coal production gained momentum (Özeken, 1955, p.20). For example, with the concession given to the French-owned Ereğli company in 1896, the field underwent a major change (Aytekin, 2006, p.31). The company embarked on serious infrastructure works in the basin. These investments and the railway construction, which was produced by the Ottoman government, accelerated the production (Aytekin, 2006, p.32).

Thus, it can be understood that in Ottoman Period, the mining industry had a very unstable character. Production was made with simpler methods compared to the following periods. Production could not increase sufficiently and production could not be regularized as the management of the area was constantly changing hands.

After the start of coal production, urbanization begins in the region (Zaman, 2004, p.14). Therefore, it is important to understand the **mining site** in the region. In the beginning, the mines were dug randomly. The mines were opened close to each other and in case of any damage, the mine was left as it was and new mines were opened on a new seam. For this reason, the land has been turned into a molehill (Özeken, 1955, p.23). Moreover, this site has a mountainous and rugged character which creates a natural beauty but makes transportation and coal processing difficult (Quataert, 2009, p.49). Therefore, in the beginning, coal was transported by mule, buffalo, or horse-drawn carriages. Furthermore, at the beginning of mining, there are also barracks for workers in the region. These barracks were formed in a place where those who came to the region stayed to extract minerals (Çatma, 2006, p.116). However, there are harmful effects of mining on its site. With the start of coal mining, streams, vineyards, and gardens begin to struggle with pollution and the creatures living in water resources begin to disappear (Çatma, 2006, p.115). During the Crimean War, new mines were opened, railway lines were laid, and fundamental innovations were made in extraction and transportation techniques (Özeken, 1955, p.23). During the navy administration period, there are many innovations to increase the production of coal. However, there are more radical innovations in the basin after 1882. After the free market was allowed in 1882, important changes are seen in the technological infrastructure (Quataert, 2009, pp.54-56). In the 1970s, coal transfers were made only by sea. Therefore, the estuaries formed by the streams served as coal loading points. These transfer points were heavily affected by bad weather and sea conditions (Quataert, 2009, p.49). Moreover, the mines operated close to the shore so that once the coal was mined it could be loaded directly onto the boats (Quataert, 2009, p.54). In the late 1800s, coal was coming on rails and was carried to small boats on animal backs or by canals. However, these are changed with the entrance of the free market in the basin after 1882 (Quataert, 2009, pp.54-56). For example, as the Ereğli company expanded its mining production area, it also created technical facilities to increase coal production. The company built the workshop, coal washing areas, and an overhead line. (Chamber of Commerce and Industry, 1933, p.123).

Moreover, the Ereğli company repaired and extended the transport lines in 1899 and established cable car lines. In 1902 the new port opened. Fueling coal ships were loading at this port using powerful cranes. In addition, the company opened a washroom, foundry, locomotives, repair shops, and a coke and briquette factory (Quataert, 2009, pp.57-59). Therefore, the site started to be developed according to the needs of the industry.

Thus, it can be understood that the site has changed over time with the start of mining activity. Although the mining area started as a place of production, over time it ceased to be only a place of production. The living spaces and transportation networks of the workers began to form and the components of these mining towns became more complex over time. The structures used for mining have also become more complex over time. In addition, pollution has started to be a problem.

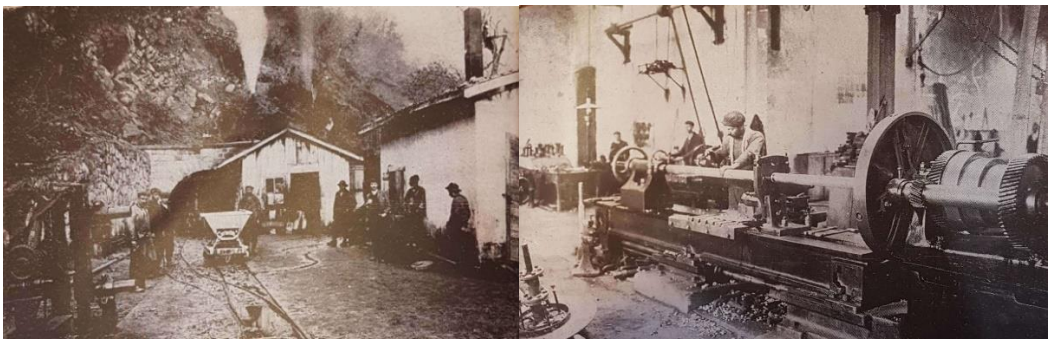

Figure 3.41. left: Asma Mines in the Ottoman Period (Enver, 1941, p.104), right: Turning Lathe in the Ottoman Period (Enver, 1941, p.101)

Figure 3.42. left: A well top in Ottoman Period (Enver, 1941, p.106), right: Ironworks in Zonguldak in the Ottoman Period (Enver, 1941, p.102)

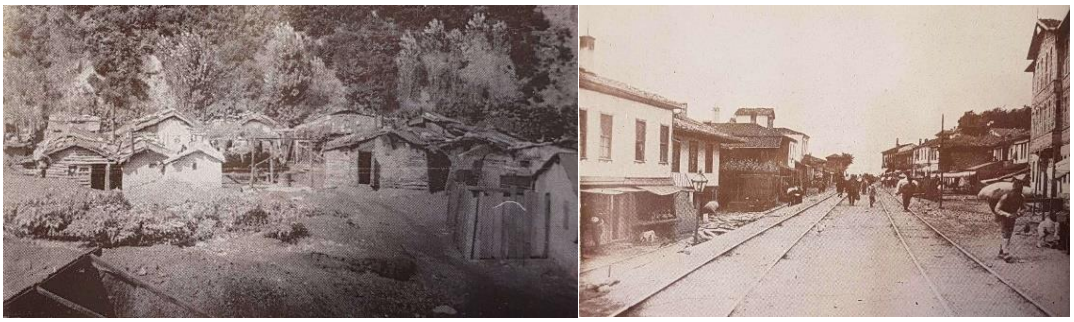

Figure 3.43. left: Worker houses in the Ottoman period (Enver, 1941, p.97), right: Zonguldak Town Center (Enver, 1941, p.98)

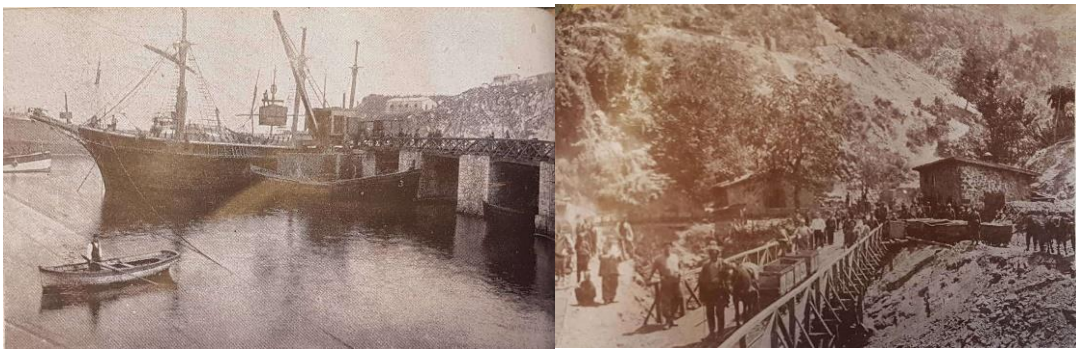

Figure 3.44. left: Coal Loading at Zonguldak Port in the Ottoman Period (Enver, 1941, p.100), right: Gelik Mines in the Ottoman Period (Enver, 1941, p.99)

There are also the creation and transformation of a **mining community** in the Ottoman period. In the beginning, there was a constant labor shortage (Aytekin, 2006, p.42). Therefore, coal workers were brought from Croatia and Montenegro (Özeken, 1955, p.22). Later, domestic workers started to be used in the mines, and technicians were brought from England (Özeken, 1955, p.24). At the beginning of the mining, working conditions were extremely unhealthy and unsafe. Workers were working from morning to night without any rules or health care (Aytekin, 2006, p.88). According to Çatma, it has been created a community whose health problems arise from working with coal from a healthy and dynamic rural community (2006, p.115). Therefore, in 1867, a detailed legal arrangement called Dilaver Pasha Regulation was made for coal mining (Aytekin, 2006, p.42). After the regulation, the problems of the workers continued. Workers were not paid on time and unhealthy and dangerous working conditions continued (Aytekin, 2006, p.44). Therefore, from

the second half of 1908, many strikes took place in the coal basin (Aytekin, 2006, p.45). Moreover, according to Aytekin, the start of coal mining in the Zonguldak-Ereğli coal basin brought radical changes to the people living in the region, which had an agrarian economy for a long time. Men, women, and children gradually became part of the mining activity in the basin. Migrant workers who come from different backgrounds have also been a part of this great transformation (2006, p.41). However, unhealthy relations arose between the locals and the workers who came to work. A self-contradictory mass of miners emerged because of different lifestyles (Çatma, 2006, pp.116-117). Moreover, alienation from the old lifestyle and getting used to a new lifestyle began to be seen in the village people who left their village and started to work in the mines (Çatma, 2006, p.120). Therefore, a specific type of worker group emerged. According to Oskay, in Zonguldak- Ereğli coal basin, which has suddenly become industrialized from agricultural production, traditional structures, and a rural lifestyle, there is a transitional period of worker type with its own unique character, which is on one side peasant and on the other hand worker (1983, p.238). Thus, in this period a complex mining community began to form, where the local people and people who came to the region from other places such as Montenegro and Croatia worked together. There was no effective regulation that protects the rights of miners. For this reason, miners were not able to work in healthy conditions and receive their wages properly. In addition, peasant workers have emerged, trying to keep up with the rapidly developing mining activity in the region.

Figure 3.45. Coal Worker in Ottoman Period (Enver, 1941, p.96)

Zonguldak-Ereğli Coalfield in Republican Period:

The governments of the Turkish Republic gave great importance to the mining industry for industrialization within the scope of development activities (Polatoğlu, 2019, p.445). During a period of occupation in the country, the Assembly carried out a series of legislative studies to increase production and improve the situation of workers in the coalfield. Moreover, for increasing coal production, High Mining Engineer School was established in 1924, and students were sent to Europe and the United States. Furthermore, the opening of the mineral exploration research institute, the establishment of Etibank, and the opening of the coal exhibition in Ankara reflect the importance given to coal. The Mineral Exploration Research Institute is tasked with investigating, finding, and unearthing the mines all over the country. Etibank is tasked with operating these mines. The coal exhibition was to show the public the ways to benefit from coal and to inform the public about it. Moreover, the increase in coal production in this period also shows the importance given to coal (Canokay, 1938, p.10). The importance given to the coal basin by the government of the Republic is understood by the national institutions it opened and the modern installations made by those institutions in the basin (Chamber of Commerce and Industry, 1933, p.148). In addition, visits of rulers to the coal basin show the importance of coal and the basin.

Figure 3.46. left: İsmet İnönü's Visit to the Coal Basin (Yıldırım, 2017, p.47), right: Mustafa Kemal Atatürk's Visit to the Coal Basin (Şavran, 1958, p.10)

The mining industry and production have gained importance during the Republican period because coal is the fundamental element of many industries which are needed for the development of the country. The emergence of the export of coal and the fact that coals take a major place in the Turkish economy started with the administration of the Republic and the operation of the national institutions in the basin (Chamber of Commerce and Industry, 1933, p.148). Production increased during this period and the coal basin provides the income for a larger group of citizens every year. The Republican period adapts workers' earnings to living conditions and increases the level of daily earnings (Enver, 1941, pp.39-41). Programmed and systematic work was done in this period (Enver, 1941, p.61). Moreover, in this period, large-capital companies were born instead of derelict and ruined individual mines, which were opened with small capitals and could not operate effectively. In this way, both production and the demand for basin coals have increased (Chamber of Commerce and Industry, 1933, pp.134-135). This starts with the establishment of companies that are supported by İşbank. With the commencement of operations of three companies which are the coal works Turkish joint stock company, Kozlu coal works Turkish joint stock company, and Kilimli coal mines Turkish joint stock company established by İşbank, and with the inflow of the capital of İşbank into the basin, some of the coal mines that were in the hands of various companies were merged and the production methods in these companies became national in 1926 (Chamber of Commerce and Industry, 1933, pp.148-149). Although the mines were mostly operated by non-Turkish people in the Ottoman period, they disappeared one by one during the Republican period, and Turkish mining took their place (Chamber of Commerce and Industry, 1933, p.133). The nationalization of the coal basin for the need of increasing coal production can be seen in the companies of İşbank. Moreover, the fact that the mines were in the hands of different individuals and companies cause conflict between them. In order to prevent the turmoils, it was decided to collect the mines in the hands of the state, and this merge, called fusion, was carried out in 1940 and no mines were left in the hands of the individuals and companies in the basin (Bildik, 1950, p.19). The establishment

of Ereğli Coal Enterprise (E.K.İ.) in 1940 with fusion shows that the state has started to play an important role in coalfield management.

With the increase in coal production in the Republican period, **the sites** where coal was produced began to develop and urbanize rapidly. Therefore, understanding the characteristics and elements of the site is important. There are many developments in many fields in this period. Before this period, there were two coal washing plants, one in Zonguldak and the other in Üzülmez in the basin, this number increased to twelve during this period (Enver, 1941, pp.56-57). Moreover, hospitals were established for the health of the workers (Enver, 1941, p.61). In addition, the accommodation has also changed significantly in this period. The first capital granting the worker the right to sleep, sit and wash in sanitary buildings belongs to İşbank. Etibank also continued the same basis. While the Ereğli Coal Enterprise worked for the arrangement and expansion of the production, on the one hand, it also ensured the welfare and rest of the workers (Enver, 1941, p.78). While the coal miners of Zonguldak slept outside in the summer, they lived in huts built with trees in the winter in Ottoman Period. The barracks built during the Constitutional period were in bad sanitary conditions (Enver, 1941, p.60). However, large workers' buildings such as dormitories and cafeterias were built instead of the workers' barracks made of stone, lime, or bushes in the Republican period (Enver, 1941, p.79).

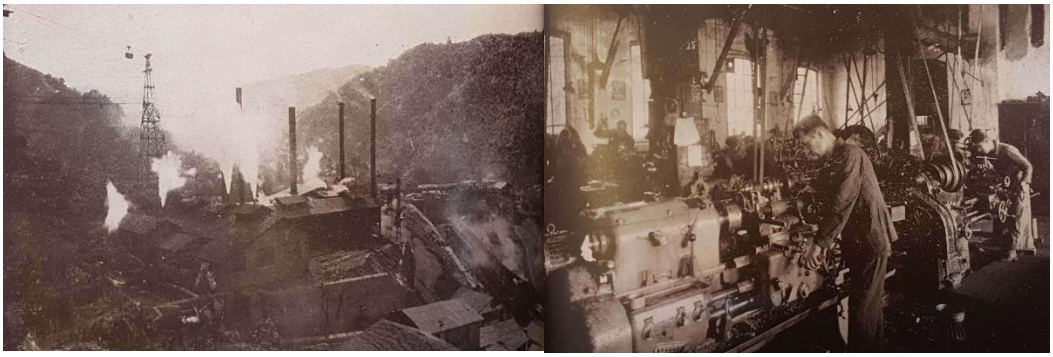

Figure 3.47. left: Asma Mines in the Republican Period (Enver, 1941, p.104), right: Turning Lathe in the Republican Period (Enver, 1941, p.101)

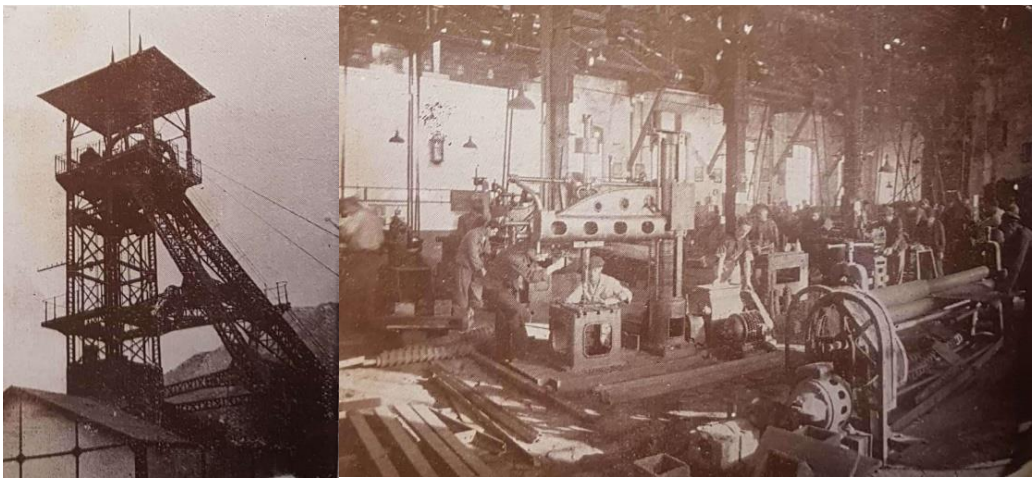

Figure 3.48. left: A well top in Republican Period (Enver, 1941, p.106), right: An Atelier in Zonguldak in the Republican Period (Enver, 1941, p.102)

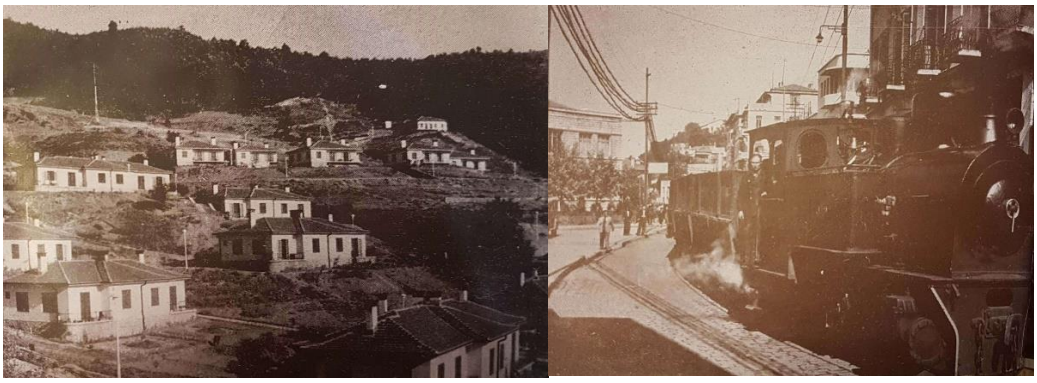

Figure 3.49. left: Worker houses in the Republican period (Enver, 1941, p.97), right: Zonguldak Town Center (Enver, 1941, p.98)

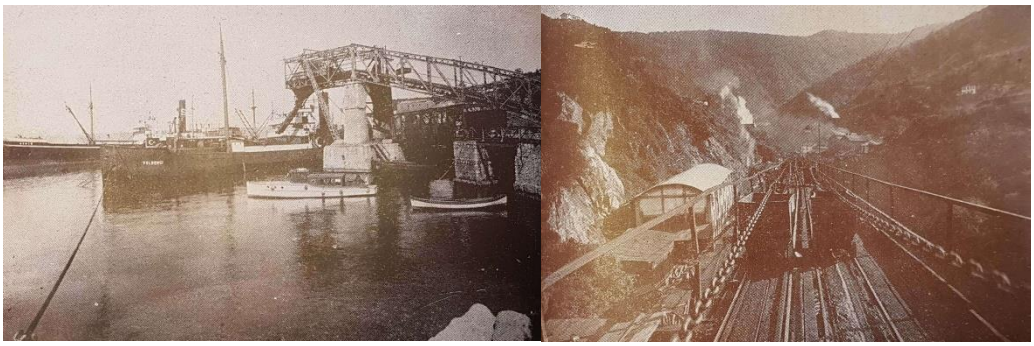

Figure 3.50. left: Coal Loading at Zonguldak Port in the Republican Period (Enver, 1941, p.100), right: Gelik Mines in the Republican Period (Enver, 1941, p.99)

The mining community in this period had unique characteristics and there was great support for them from the government. In this period, the government enacted a labor law specific to the coal basin in 1921 to protect the rights of workers. With this law, working hours were limited, young children were prevented from working in difficult jobs, it was decided that the worker who had an accident would be sent to the hospital, not his village, and it was stated that compensation would be given to the family of the deceased worker. An important benefit of this law was the 'Zonguldak labor union care fund' which provides protection for workers in case of injuries or help for families of workers in case of death (Enver, 1941, pp.37-38). Moreover, the Republican administration, on the one hand, took measures to strengthen the economy of the basin, on the other hand, corrected the social and sanitary condition of the basin (Enver, 1941, p.38). Therefore, the state was acting on a holistic ideology to increase coal production.

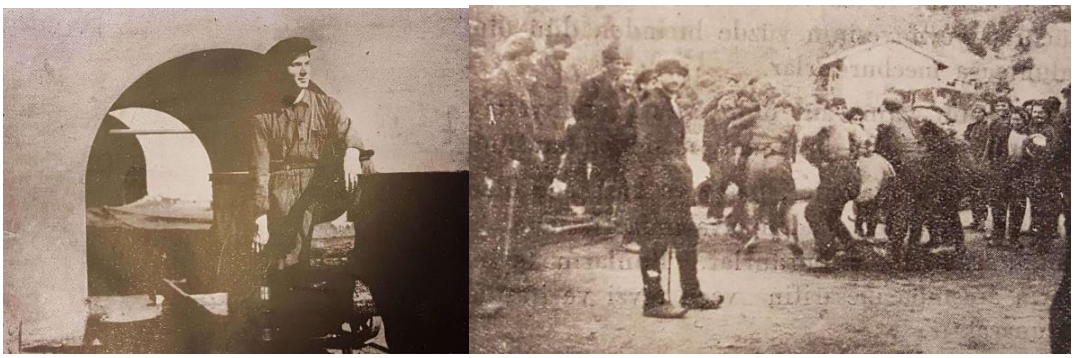

Figure 3.51. left: Coal Worker in Republican Period (Enver, 1941, p.96), right: Feast of the miners after the adoption of the labor law (Chamber of Commerce and Industry,1933, p.183)

	OTTOMAN PERIOD	REPUBLICAN PERIOD
PRODUCTION	SIMPLE METHODS NOT REGULIZED PRODUCTION UNSTABLE PRODUCTION AMOUNTS	DEVELOPED METHODS SYSTEMATIC PRODUCTION INCREASED PRODUCTION AMOUNTS
SITE	LESS COMPLEX SITE POLLUTION	MORE COMPLEX SITE POLLUTION
COMMUNITY	COMPLEX COMMUNITY ABSENCE OF WORKER REGULATIONS LESS SOCIAL LIFE UNIQUE WORKER TYPE (PEASANT-WORKER)	COMPLEX TIGHT- KNIT COMMUNITY WELL- DEVELOPED LABOR REGULATIONS WELL- DEVELOPED SOCIAL LIFE UNIQUE WORKER TYPE (PEASANT-WORKER)

Figure 3.52. Diagram showing the comparison of mining components in different periods (Author, 2021)

Thus, it can be understood that in the Ottoman period, **production** was carried out randomly at the location of the mine, with simpler technologies. Since the mining management and mine owners were constantly changing hands, there was no order in production. However, during the republican period, production began using more advanced systems and technologies. Adjustments have been made so that production can be done more regularly rather than randomly. The mines were nationalized and collected on one hand. Therefore, production increased with the policies and supports followed by the state.

Looking at **the site**, there were mining areas consisting of a small number of structures in the Ottoman period. Production was carried out with less advanced technologies and pollution began to occur in the area. In the Republican era, with the development of technology, more structures began to be seen. Building groups that take care of not only the production but also all the needs of the workers began to take place in the area. Pollution also increased with increased production and construction.

When we look at the **mining communities,** it is seen that the mining communities have just begun to emerge in the Ottoman period. Mixed communities were formed where local miners and miners from Croatia and Montenegro coexist. In addition, there was no successful regulation that protects the rights of miners. Miners worked in poor and unhealthy conditions and earned low wages. The social needs of the workers were not considered. In addition, a new type of worker, in the form of peasant-miner, has emerged in order to keep up with the rapidly changing industry. In the Republican period, the mining communities were still mixed and complex, but they were a community with strong ties. During this period, labor law was enacted that protects the rights of miners. With this law, the working conditions of the workers were improved and their wages increased. The social needs of the workers were also considered.

Moreover, it would be correct to consider the E.K.İ. in a broader context, as it forms the basis of current mining facilities. With the law numbered 3867 dated 15 October 1940, the mines were purchased from their owners and given to the Ereğli Coal Enterprise with the whole administration and ownership (Turkey Coal Inventory, 1978, p.17). EKİ undertook the duties of various organizations that could not keep up with the rapid change in the region, such as education, transportation, road construction, and repair. We can say that it has assumed the function of a municipality in a way. The fact that even the requirements that the local government must meet, are met by EKİ has made it a buffer institution (Oskay, 1983, p.69). This feature is similar to the concept of the company town. E.K.İ., whose main purpose is the production of hard coal, has also undertaken various responsibilities that are

directly or indirectly related to production (Oskay, 1983, p.69). In 1964, EKİ Manpower Training Directorate was established for organizing trainer courses, technical study trips, press and broadcasting activities, film screening and shooting, seminars and conferences, and other educational work (Zonguldak Provincial Yearbook, 1967, pp.385-386). Moreover, issues related to health are important for EKİ. There are hospitals, dispensaries, health houses, and health rooms in the coal basin which belong to EKİ (Zonguldak Provincial Yearbook, 1967, p.392). Providing social activities for workers is also important for EKİ. Dealing with workers' food, clothing, and shelter problems, increasing the purchasing power of the personnel through the ekonoma and canteens, taking measures to meet the sports, cultural and moral needs of the employees of the establishment, to ensure that the children of workers have a primary and secondary education are important activities of EKİ for the socialization of its workers (Zonguldak Provincial Yearbook, 1967, p.388). Furthermore, EKİ has a Transportation Directorate which made the operation of railway vehicles and maintenance and repair of railways, operation of motor land transport vehicles and their maintenance and repair, ensuring the necessary transportation of the produced coals, loading and unloading of various materials, warehousing and shipping, operation of Zonguldak port, and gathering all services as statistical documents, administration of all kinds of correspondence, archives, warehouse works (Zonguldak Provincial Yearbook, 1967, p.394). Moreover, EKİ built residences and the residences built by EKİ include service residences for workers, civil servants and their families, and workers' pavilions for single workers. (Zonguldak Provincial Yearbook, 1967, p.251). There are also support services of the company which are coal washing facilities, workshops, oxygen factory, port, coke and briquette factory, and transformer stations (Zonguldak Provincial Yearbook, 1967, pp.382-384).

3.2.2 Historical Development of Lower and Upper Kandilli Regions

Kandilli/ Armutçuk Hard Coal Mining Region has changed and developed in many ways since the discovery of hard coal. There were only Ottoman villages like Neyren village and forested lands in the region before coal in the region. After the coal was found, coal was started to be mined in the areas close to the sea where transportation is easy, and only barracks were formed where the employees would stay for a short time near coal seams. The region, which used to be composed of barracks for workers and forested lands, was industrialized over time and became a developed campus where every need of workers and civil servants was met by reflecting the technology and lifestyle of the period. Therefore, the regions like Çamlı, Lower Kandilli, and Alacaağzı emerged. As coal production technologies developed, rail transport began to be used instead of sea transport, and coal production progressed towards the interior, new production areas like Yeni Kuyu and settlements like Upper Kandilli began to form in the interior regions. With the development of coal mining, new civilian settlements like Geyikbeli and Pazaryeri began to form as a result of the migration towards the region. The region has undergone physical changes over time, as well as in terms of social life. With the formation of a more complex campus over time, a mining culture and a community that is specific to mining were formed. At first, there were strikes and many deaths in the region, where mining communities consisting of workers who had to work under bad conditions to meet their material needs and sometimes forced labor were seen, but over time, more suitable working conditions were created, all the needs of the workers, including their social needs, were met and worker welfare was considered. Communities were formed where a sense of unity and togetherness developed, and mining was seen as an honorable profession. Considering all these, it is important to understand this area, which shows many differences, changes, and developments in terms of physical, economic, and cultural aspects, by examining it in a historical process with its components.

Since this region is a large and comprehensive area, the Upper and Lower Kandilli regions will be selected and examined within the scope of this thesis. Lower Kandilli

was chosen because it is the part that contains the most remains and traces among the mining settlements in the coastal part of the region, while Upper Kandilli was chosen because it best reflects the characteristics of the mining settlement with its lodgings and social structures. In addition, it is not possible to consider these areas separately from each other, therefore, two regions will be examined within the scope of this thesis.

The historical development of the Upper and Lower Kandilli regions is in parallel with the history of hard coal in the region. No document was found showing that there was a settlement in the area before Uzun Mehmet found the coal in Köseağzı in 1829; however, the people of the period were aware of the existence of coal in this area which is very close to Köseağzı (Çatma, 2006, p.113).

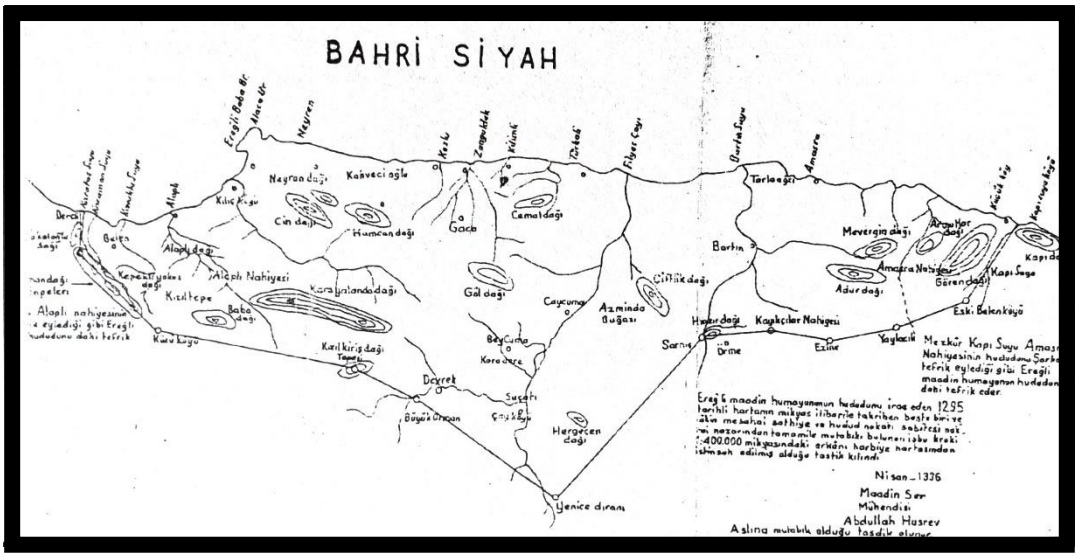

Figure 3.53. The map of the basin boundaries was produced by the Ottoman delegation that went to the basin to mark the locations where the coal samples were found (Çatma, 2006, p.296)

Apart from Uzun Mehmet's discovery of coal in Köseağzı in 1829, there are fewer common beliefs regarding the discovery of coal in the basin. However, in these beliefs, it is stated that the coal was found in the village of Niran or that Uzun Mehmet was a resident of the village of Niren. The village called Niran or Niren is

also called Neyren. Neyren, on the other hand, is an Ottoman village very close to the Kandilli region, now called Gökçeler village (Çatma, 2006, pp.112-114).

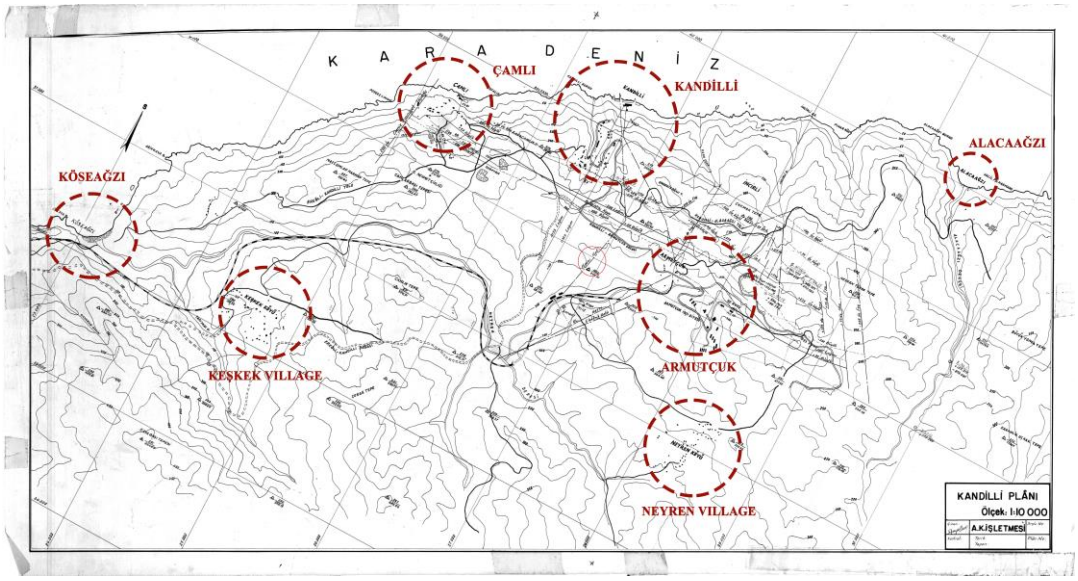

Figure 3.54. The map shows the relationship of Kandilli with the surrounding settlements, including the places where coal is thought to be found (The base map is from the archive of Kamuran Ayyıldız, and markings are made by the author)

Coal production started in 1848 in the basin where it was known that there was coal. With the start of **coal production** in the basin, the period of treasury administration began. During this period, regular coal mining activities were not carried out in the region, and coal extraction activities were observed wherever coal was encountered. In this period, production was made with primitive methods. **The site** has begun to change as coal is mined at random places in the area. During this period, with coal production, forest areas and agricultural areas have begun to decrease and suffer. **The mining community** is not yet fully formed. Since mining was an unknown profession in this period, mining was done by bringing miners from Croatia and Montenegro. Therefore, a new community began to form, where local people and miners from other places came together to work.

Although it is known that coal was mined in the Kandilli region during **the treasury administration period**, the region gained importance during the Crimean War.

According to Zaman's study, during the Crimean War, Admiral Spratt went on a tour in the basin to discover the coals of the basin for using them in the British navy and determine their quality and mentions that there are coal deposits in the Kandilli and Alacaağzı that run by Croatians (2012, p.63). Moreover, Erol Çatma emphasized the importance of the Armutçuk region during the Crimean War in his study by examining the accounting books of the period (2006). According to Çatma, in 1955, all **production activities** were concentrated in Armutçuk and Ballık mines. The reason for this may be the desire to turn to easy-to-ship and high-quality coal seams to meet the increasing coal need due to the Crimean War (2006, p.164). Moreover, during this period, workers from surrounding villages such as Niran, Yaraşlı, Keşkek, Danışmantlı, Soğanlı, Kemer, Kepez, Yazıcılar and Mudurnu came to work in the Armutçuk mine (Çatma, 2006, pp. 169-173). Therefore, the **mining community** consists of people from surrounding villages, and a complex mining community, in which people with different lifestyles coexist, began to form. Furthermore, according to Çatma's study, it is understood that the coals from the Armutçuk mine were taken to Çamlı and Köseağzı piers for transportation (2006, pp. 175-176). Therefore, **the site** began to take shape according to the needs of mining.

With the regulation created during the **Navy administration period**, a legal, administrative, social, and technical order was tried to be established in the basin. The boundaries of the coal basin were determined and sketched, and accordingly, the basin mainly included Zonguldak, Kilimli, Kozlu, and Alacaağzı regions. In addition, the mines in Zonguldak, Kilimli, Kozlu, and Alacaağzı regions were numbered in 1878 to avoid confusion (Özeken, 1955, pp.24-25). In 1883, important decisions were taken in the basin, which was under the management of the navy. With the 'İrade-i Seniye' dated 1883, the miners who were extracting coal in the basin were compelled to sell sixty percent of the coal they extracted to the Navy Administration, as in the past, and the sale of the remaining forty percent was released. With this decision, there has been a large influx of foreign capital into the basin and incorporation has begun to be seen in the basin (Kara, 2010, pp.18-19).

Karamanyan Company, one of the first companies established in the basin, started to operate the mines in the Kandilli region in 1885. Although the phrases Armutçuk or Alacaağzı mines are used in different sources about the mines operated by this company, these mines are in the Lower Kandilli region. According to Zaman, founded by Artin Karamanyan, Laz Ahmet and Aslıoğlu Bedosaki, the Karamanyan company began operating mines in 1885 by purchasing mines 59 and 281 in Zonguldak and mine 353 in Armutçuk. In the following years, the company obtained production licenses in Gelik and Amasra mines. Therefore, the amount of **coal produced** by this company in this period increased over time with the purchase of new mines. In addition, this company has made many technical innovations in the basin, so **the site** has changed according to mining needs. For example, this company established the first 'varagel' which is a specific system for the transportation of coal and people of the basin in mine number 131 in 1885 (Figure 3.56). However, these developments have emerged in relation to production, so except for production structures, other structures do not attract attention. Although the technology required for coal extraction in the basin was started to be created during the time of the Karamanyan Company during the Navy administration period, there was no intense industrialization and urbanization. In addition, during this period, forest areas and agricultural areas were damaged by mining activities and pollution began to occur. In addition, the **mining community** began to form, but the rights of miners were not considered much. Coal production in the region was more important than workers.

Figure 3.55. The Machines and Atelier for Coal Extraction in Armudcuk Mine of Merchant Ahmed (Source: 2. Abdulhamid Collection)

Figure 3.56. The ‘varagel’ in Armudcuk (Kandilli) Mine of Merchant Ahmed (Laz Ahmet) (Source: 2. Abdulhamid Collection)

Figure 3.57. The General View of Armudcuk Mine of Merchant Ahmed (Source: 2. Abdulhamid Collection)

However, this company went bankrupt in 1898 and its assets around Kandilli were left to the state (2004, p.39). The mine numbered 131 was purchased by people named Pangiris and Cartali in 1896, and later in the same year, it passed under the auspices of the French Ereğli Company (Genç, 2007, p.145).

During this period, there were also independent mine operators apart from the Karamanyan Company in and around the Kandilli region (Table 3.1).

Table 3.1 The location and amount of coal extracted from the Ereğli Mines in 1893 and the owners of mines in Alacaağzı (Kandilli) (Zaman, 2012, pp.100-101).

Mine Owner	Mine Location	Mine Number	Amount of Extracted Coal (Kantar)
Dağcı Ahmet Ağa		117	1569
Hacı Süleymanoğlu Süleyman Efendi		190	169
Hacı Bekiroğlu Emir İsmail Ağa		128	14260
Trabzonlu Ahmet Efendi ve Şürekâsı	Akçabağlık	132	36611
Üçköylü Mehmet Efendi	Akçabağlık	135	5824
Onsekizoğlu Mehmet Efendi ve Şürekâsı	Çakmaklı Karagürgen	136	6259
Karamahmutzade Mahmut Bey		171	5544
Karamahmutzade Mahmut Bey		202	5678
Karamahmutzade Halil Bey	Çamlı	214	182
Mustafa Beyoğlu Mahdumu Mehmed Ağa	Kireçlikİskelesi, Kirenlik	263	3995
Gerzelioğlu Rıza ve Şürekası	Kadıpınarı	278	34851
Karamanyan Kumpanyası ve Şürekası	Armutçuk O.	131	38614
Hacı Ali bey Ocağ (127 ve 129)	Armutçuk	216	9982
Uncu Mitos ve Hacı Şakir Şürekası	Eseli Köyü	130	3558
Karamahmutzade Hacı Ahmet Ağa ve Veresesi		138	12175
Balıkçı Ahmetzade İsmail Bey " 339 2340	Kireçlik	339	2340
Trabzonlu Ahmet Efendi ve Şürekâsı	Oluk İskelesi	340	74
Gerzeli oğlu Rıza ve Şürekâsı	Kelppınarı	338	947
Hancerli (?) oğlu İbrahim Efendi	Kireçlik	346	310
Balıkçı Ahmetzade İsmail Bey	Camtaş	345	798
Karamahmutzade Mahmut Bey	Köseağzı	293	580
İsmail Bey ve Rıza Efendi Şürekâsı	Paskal	272	4546
Petko - Niko Cura		125	1272
Halatçı Osmanoğlu Mahdumu		192	350
Dağcı Ahmet Ağa ve Şürekâsı	Kireçlik	204	593

After the Karamanyan company went bankrupt, the mines around Kandilli were purchased by the **Sarıcazade Company.** Sarıcazade Company, founded by Ragıp Pasha, started mining in the basin in 1900. This company was established by purchasing the mines around Kozlu and Kandilli (Zaman, 2004, p.49). During this period, the amount of **coal production** was shaped in line with the company's needs and possibilities. Moreover, this company tried to follow the technological developments of its period. In this period, **the site** continued to change with these technological developments. The fact that this company descends to a depth of 150

meters with a well and uses the latest technology tools to transport from the well reveals the technological development in the basin (Etingü, 1976, p.63). Moreover, **mining communities** began to form, but mining continued under difficult conditions.

Although most of the mines in the region belonged to Sarıcazade Company, independent mining operators with a small number of mines in the region continued their existence in this period. These independent mining operators were from different nationalities and operate only one or two mines. During this period, a total of 14 mines were operated in Kandilli (Table 3.2).

Table 3.2 List of Mine Operators in and around Kandilli (Zaman, 2004, p.48).

Mine Owner	Mine Number	Amount	Mine Location
Asadoryan	130	1	
Todori	124	1	
Marko	297	1	
Aslıoğlu Bedosaki	353	1	Armutçuk
Sarıcazade ocakları	121,122,123,125,190,340	6	Alacaağzı
Sarıcazade ocakları	132,135,202,206,216	5	Kandilli
Dağcı İsmail Bey ve Ortakları	116	1	
Halil Paşa Mirasçıları	214,364	2	
Dağcı Ahmet Ağa Mirasçıları	117,275	2	
Hacı Ali Bey ve Todori	124	1	
Karamahmut zade Halil ve Ortakları	372	1	Alacaağzı
Toplam		14	

However, the mining period of Sarıcazade Company did not last long, and the operation of its mines was transferred to a Greek named Abacıoğlu. Although Abacıoğlu started the business with his own capital in the first period, he later tried to run the business by establishing a Belgian company (Enver, 1941, p.18). **Bender-Ereğli United Coal Enterprises Joint Stock Company (Charbonnades Reunis De Bender-Ereğli Societe Anonyme),** which was established by Abacıoğlu (Abacı Pirikli) with Belgian and German capital, was established in 1913 and Sarıcazade mines were leased to this company. (Zaman, 2004, p.59).

Meanwhile, with the establishment of the Ereğli Mines Directorate that headquartered in Zonguldak, Ereğli that includes Çamlı, Alacaağzı, and Kandilli, Kozlu and Kilimli were connected to this directorate in 1910 (Zaman, 2004, p.54).

During the First World War, the operation of the mines was in the hands of the Germans. At the end of the First World War, the mine operation passed to the Italians (Enver, 1941, p.18). The Italians started to operate the mines in 1918; however, they established the **Turkish Coal Mines Joint Stock Company** in 1926 (Zaman, 2004, p.83). In addition, in some sources, there is information that the region was operated by the French for a short time after the first world war. For example, Kara indicates that after the First World War, the French capital occupied the Çamlı mine and Ereğli with the help of the French soldiers who occupied Zonguldak. However, after a while, the French left the region (2010, p.37). In addition, based on the oral history study in the area and the information on the signs that are said to exist, it is said that the 'varagel' next to mine number 131 was developed by the French in 1919 and turned into its current mechanism.

In 1920, the Turkish Grand National Assembly was established, and the basin administration passed to the national government. The republican period of the coal basin has begun. After this date, there were two big companies besides the independent mine owners in and around Kandilli (Table 3.3). One of them was **the Kireçlik Coal Mines Joint Stock Company** which is affiliated with Sümerbank and İşbank, and the other was **the Turkish Coal Mines Joint Stock Company** which is operated by Italians. During this period, **coal production** began to become regular. With the development of technology, production increased. **The site** changed in line with coal needs. **The mining community** started to be formed but mining was carried out under difficult conditions.

Table 3.3 Mining companies and mine numbers in 1933 in and around Kandilli (Zaman, 2012, p.234).

REGION	OPERATOR NAME	ENTERPRISE	MINE NUMBER
Ereğli	Türk Kömür Madenleri A.Ş.	İtalyan	Kandilli ocağı ve Alacaağzı İstismar Mıntıkası
	Kireçlik Kömür Madenleri Türk A.Ş.	SÜMERBAK	128
	Dağcızade İsmail Bey		116
	Kara Mahmutoğulları mirasçıları		171 (Kofalık)
	Halil Paşa mirasçıları,Hayri Arapoğlu (Akmanoğlu Tahsin' den 25 yıl süre ile kiralanmış)		214 Subaşı, 138 Çamlı
	Akça Mehmet Efendi		297
	Mazlumcuzade ocağı		377

Kireçlik Coal Mines Joint Stock Company was established in 1927 by Basmacızades in the Kireçlik region in Kandilli. However, since Basmacızades could not pay their debts, the mines were transferred to Sümerbank. The company built a lavuar that washed 50 tons of coal per day in 1927. This company was acquired by İşbank in 1935, making it the 4th İşbank institution established in the basin (Zaman, 2004, p.83). In 1938, a power plant was established to meet the electricity needs of the Kireçlik mines, but this plant was operated for only 5 months (Zaman, 2012, p.239).

In this period, one of the most important companies producing coal in the Kandilli region was the **Turkish Coal Mines Joint Stock Company.** This company which is one of the companies established in the Republican period was formed in 1926 upon the dissolution of the Belgian company by Italians. This company operates the mines in Kandilli-Alacaağzı and Kozlu regions. In 1927, the mines that belonged to the Sarıcazade company were transferred to this company. As of 1927, 11 mines in Kandilli and Alacaağzı and 6 mines in Kozlu were transferred to this company (Zaman, 2012, pp.216-217). Therefore, it can be understood that **coal production** was actively carried out in this period. According to Zaman, this company continued its activities until 1940 (2004, p.84).

There were a thousand workers in Kozlu, six hundred workers in Kandilli, and engineers, specialists, and civil servants as needed in the company. Therefore, there was a complex **mining community** in Kandilli during this period. At the same time, there are important regulations concerning the rights and working conditions of workers in this period. Moreover, the social needs of the miners were also considered in this period. Therefore, many social activities and celebrations were organized. For example, 'Labor Day' was regularly celebrated by the workers. Moreover, Italian families performed baptismal ceremonies in the region (Figure 3.58). This shows that people from different nationalities lived together in this region and cultural diversity was created.

Figure 3.58. left: A photo from the baptism ceremony in Kandilli (Source: Yüksel Yıldırım Archive, right: A photo of the workers celebrating the Labor Day in Kandilli (Kara, 2010, p.227)

At the same time, **the site,** which was shaped according to the mining needs in this period, started to become complex with different components. There were residences of civil servants and workers, workshops, and warehouses in both Kozlu and Kandilli. Moreover, the residences are completely illuminated with electricity, and there were bath and shower rooms, dispensary, and oven installations to fulfilling the needs of the workers. A school was also established in Kandilli for the children of the employee. Moreover, a power plant that has 1200 horsepower was built in Kandilli in 1929 and mine shafts were equipped with technological elevators, ventilators, and compressors which made the mines modern structures (Chamber of Commerce and Industry, 1933, pp. 155-157) (Table 3.5). Thus, it can be understood that this company creates the infrastructure of the later periods of Kandilli that includes living areas, socialization areas, and production areas in the same region and reflects the technologies and lifestyles of Italians. Although it is stated in the source published by the Zonguldak Chamber of Commerce and Industry in 1933 that there is no coal washing facility in Kandilli, Enver's book titled Zonguldak Coal Basin, published in 1941, states that there is a coal washing facility made by this company in Kandilli (Table 3.4). Therefore, the construction date of the Kandilli coal washing plant is not certain, but it is likely to be between 1933 and 1941. Moreover, the construction dates of social and residential facilities which were made by this company are not certain.

Table 3.4 The coal washing plants were established before 1941 in the coal basin (Enver, 1941, p.57)

LOCATION	COAL WASHED PER HOUR (TON)
Kozlu'da İncir harmanı	100
Gelik	100
Kilimli	100
Zonguldak «Merkez»	90
Üzülmez	75
Karadon (inşa halinde)	75
Kozlu'da No. 17	60
Kandilli	35
İnağzı	35
Kasap Tarla	30
Zonguldak «Acılık»	18
Kireçlik	15

Table 3.5 Power plants established in the basin until 1940 (In 1940, there were only 6 power plants in the basin.) (Zaman, 2012, p.239)

MINE OWNER	MINE LOCATION	ANNUAL PRODUCTION (Kwh)	YEAR OF CONSTRUCTION
Ereğli Şirketi	Gelik	1.500.700	1928
Türkiş	Üzülmez	23.760	1929
Süleyman Sırrı	Acılık(Ontemmuz)	797.871	1925
Kömüriş	Kozlu / İncirharmanı	15.201.239	1928
Türk Kömür Madenleri A.Ş.	Kozlu / 17 ve Domuzini	174.072.650	1924, 1929
İsmail Ergener (Kasaptarla ve Gürgen Ocakları)	Kasaptarla	183.510	1933
Türk Kömür Madenleri AŞ	Kandilli	2.524.633	1929
Hayri Arapoğlu	Çamlı	133.323	
Kireçlik Kömür Madenleri Türk A.Ş.	Kireçlik		1938 (5 aylık)
Ali Fırat (Kürt Ali Bey) ve Ortağı	İnağzı	96.600	1936
Ekİ	Kilimli		1942 (Kasım)

The region was built in harmony with topography. Although the living and socializing areas were located on the hills of the region, the production areas were established on the seaside. Production areas were located on the seaside because it was difficult to extract coal by going deep underground, and there was not enough technology for this. Moreover, this location was advantageous for loading the coal into ships easily as soon as it is extracted in coal transport by sea. Moreover, in this region, the rulers and chiefs were often Italians and many people from different cultures lived together in this area and many buildings in the area are thought to have been built by the architect Giangi and Italian masters.

In the living and socialization region, there were residences for both civil servants and workers. These residences were illuminated with electricity, there were baths and shower rooms in them, and oven installations were made. In fact, it is said that when there is no electricity in the surrounding areas, the boatmen who do not know electricity think that there are too many oil lamps here while passing through the region, so the name of the region is Kandilli. Residential buildings were generally single-story structures. Moreover, while the stone masonry technique can be seen in the buildings up to the basement level, their facades were made of brick masonry. The buildings are positioned in harmony with the topography. There were also ateliers, warehouses, a dispensary, and a school in this region apart from the residents of workers and chiefs.

Figure 3.59. The Living and Social Spaces of Kandilli Region (Chamber of Commerce and Industry, 1933, p. 136)

Figure 3.60. The Living and Social Spaces of Kandilli Region (Chamber of Commerce and Industry, 1933, p. 136)

It is said by the people living in the region that the education level in this primary school was very good and that Italian and Turkish students studied together. It is also said that special days like 23 April were celebrated with great solemnity.

Figure 3.61. The First Primary School in the Kandilli Region in the 1930s (Source: Kandilli Cultural Association Archive, 2021)

It is said that the Italians living in the region left their homes and household goods in 1937, upon Mussolini's call, and returned to Italy and the company was closed in 1940 with the nationalization of the mines in the basin.

With the law numbered 3867 enacted in 1940, all mines and facilities in the basin were nationalized and transferred to Etibank. Thus, **Ereğli Coal Enterprise (EKİ)** which was established by Etibank became the only coal producer in the basin. From

this date on, Armutçuk mines began to be managed as chief engineering. This area became a Regional Directorate of EKİ in 1946 (Taşkömür, 1985, p.9).

Since the mining centers were located in remote areas and transportation was not developed at that time, the state, which gathered all the mines in its own hands, gathered all the services in these regions in order to meet all the needs of the workers. By adopting the understanding of the social state, cinemas, eating and drinking places, lodgings, clubs, ekonomas, and facilities to be used for sports activities were built. In addition, the institution printed its own money to be used in ekonomas, and the infrastructure of the campuses, social activities, and transportation were considered. A system has been developed considering everything so that the workers can work comfortably. The developments in the Kandilli region after 1940 will be mentioned with aerial photographs taken from the General Directorate of Mapping at 10 year intervals in this part of the thesis.

Kandilli Region Between 1940 and 1950:

During this period, regulations regarding **coal production** were made. Since all mines were nationalized and collected on one hand, production was regulated and increased.

Moreover, in this period, the **mining community** gained a unique identity. Their rights are protected and their social needs are considered. Sports have been important in the basin since the 1930s. After 1940, the sport continues with interregional football, wrestling, tennis, and volleyball matches. EKİ sports organization was established in 1942 and the kömürspor club, which was established as a branch of this organization, was registered with the general directorate of physical training. EKİ youth organization consists of Central, Kandilli, Kozlu, Üzülmez, Kilimli and Gelik youth groups. The formation of this organization was approved by the head of the physical training district in 1944.

Figure 3.62. The image of EKİ Armutçuk Sports Club founded in 1946 (Source: Kandilli Cultural Association Archive, 2021)

Apart from sports competitions between different regions of EKİ, young people used to gather to play football in the neighborhood of Onsekizoğulları and play volleyball on the field next to the club. Moreover, the guesthouse was a building where important people of the period stayed and important meetings and celebrations were held (Figure 3.63). In addition, charity bazaars and balls were held in the guesthouse. In addition, weddings and entertainment were held in the club. Furthermore, families, singles, and children were also shown the most popular films of the period on certain days and hours in the cinema in the region.

Figure 3.63. A photograph showing the Kandilli guesthouse Dining Hall (Source: Ekrem Murat Zaman Archive, 2020)

Apart from social life and economy, arrangements have been made for **the site** and services, but the effects of foreign companies on the structures and site arrangement continued. With the development of technology and the increase in production, more buildings began to be seen on the site and the building density increased. In addition, since the needs of the workers were taken into consideration in addition to production in this period, it is seen that there were many building types such as production, socialization, and living spaces on the site.

In the 1940s, both the settlement and production took place by the sea (Figure 3.64). The structures remained from the Italian company and continued to be used in the same way. While the production took place on the coast, the settlement was located at higher elevations.

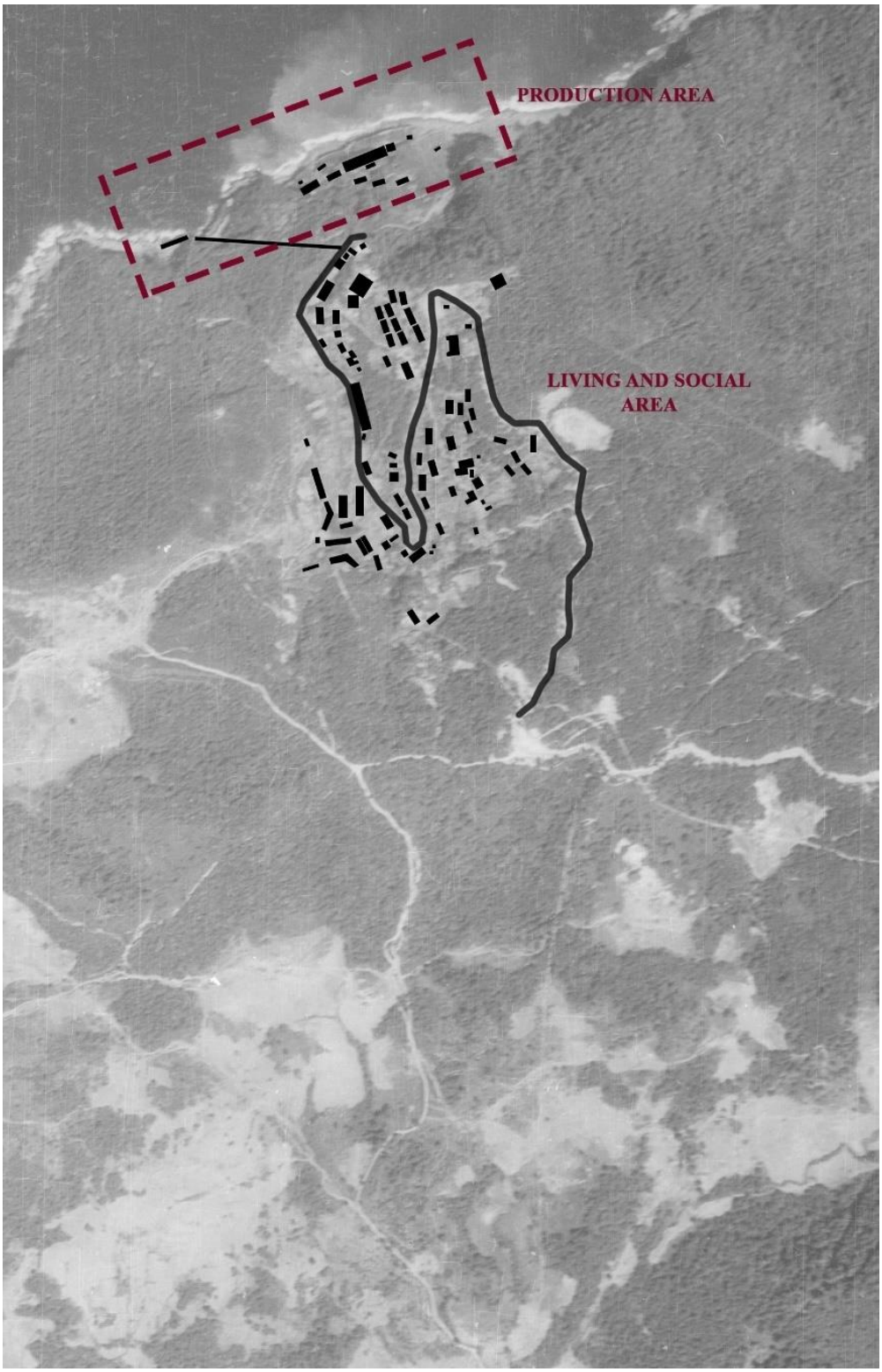

Figure 3.64. The Aerial Photo of Kandilli Region from 1944 (The base is from the General Directorate of Mapping and the markings made by the author)

When we look at the aerial photograph of 1944, the density of buildings and settlements are mostly seen in the coastal area, but no construction was found in the part where Upper Kandilli is located today (Figure 3.65). This shows that the settlement started in the Lower Kandilli region in the coastal areas in this region and then progressed to the inner parts.

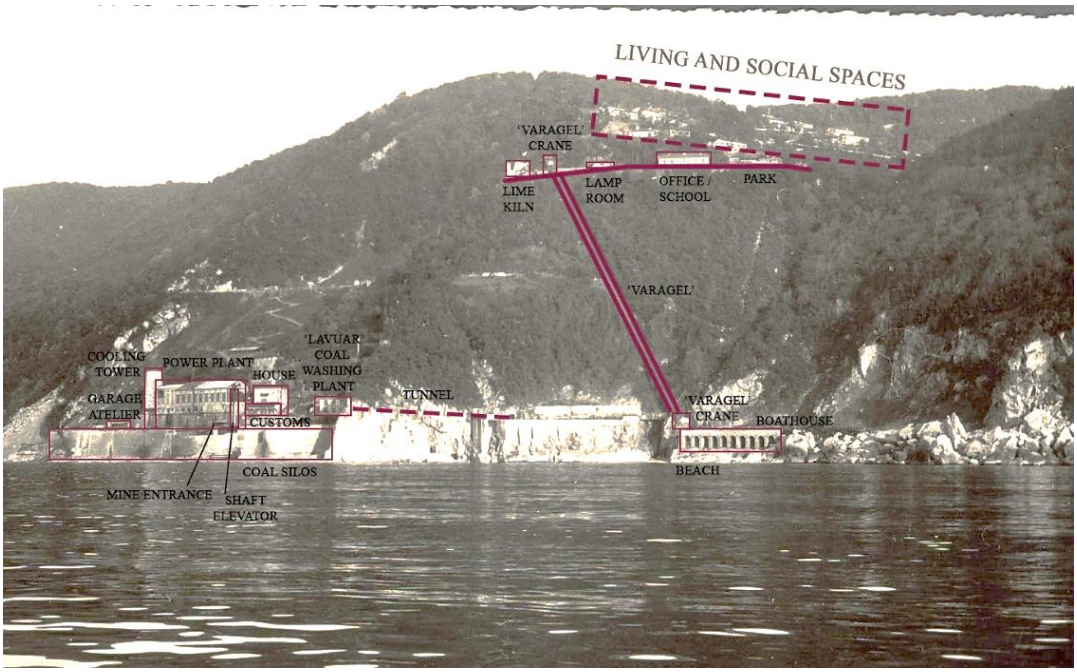

Figure 3.65. The General View of Kandilli Region (Source for the photo: Yüksel Yıldırım Archive, 2020 and markings were made by the author)

The buildings in the region were positioned in harmony with the topography. While the structures related to coal production were located in coastal areas due to the reasons such as the transportation of coal by sea and coal extraction from near the surface, the living areas built to meet the needs of the employees were located at higher elevations. There were a garage or atelier building, a mine entrance, a shaft with its elevator, a customhouse, a house, a lavuar which is a coal washing plant, a power plant that will be converted into an aspirator building in later years, a cooling tower, coal silos where coal is stored, piers where coal is transported to ships, a sawmill, tunnels, a boathouse that will be used as a dressing cabin and a restaurant in the following years with the formation of the beach by the sea. In the middle

ground between the living areas and production areas, there were a lime kiln that provide construction materials for the buildings, a ‘varagel’ crane, a lamp room where miners can take their equipment for underground work, an office building that was used as a school in later periods, and a park for recreational activities of workers. In the highest part of the region, there was a living area where all the needs of the workers and civil servants could be met.

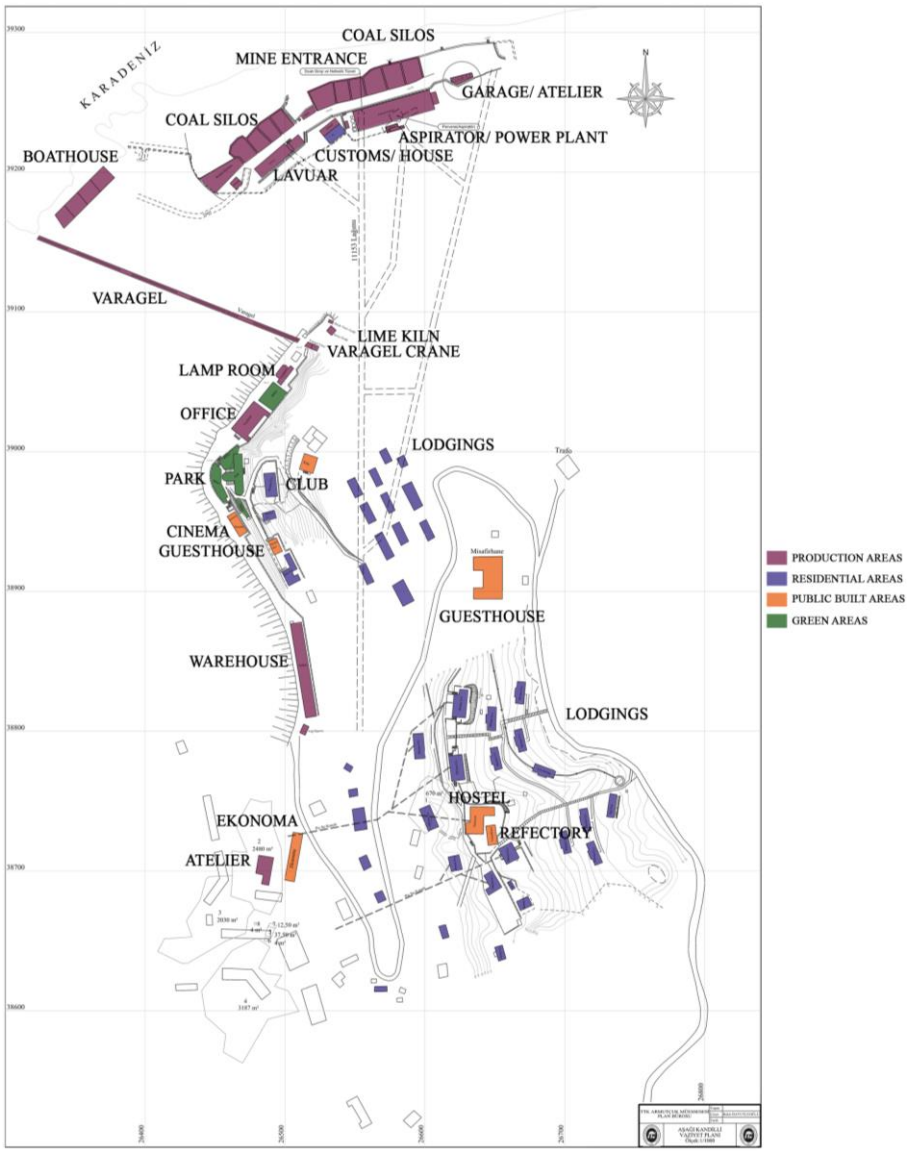

Figure 3.66. The map that shows building types of the Lower Kandilli Region (The base map was taken from the TTK Armutçuk Archive, 2020, and the markings were made by the author)

In addition to the production-related structures on the seaside and at +17 elevation, there were warehouses and workshops further inland. Apart from the production areas, accommodation areas, usually single story, were built for both civil servants and workers. Looking at the lodging numbers given by EKİ, it can be understood that the lodgings at higher elevations were built later (Figure 3.67). Apart from the accommodation structures, there were a hostel, a cafeteria, an ekonoma, two guesthouses, a cinema, a mosque which was made by Italians as a church, and a club in the area. In addition, open areas such as parks and gardens were also allocated for workers, although a settlement was established in a forested area.

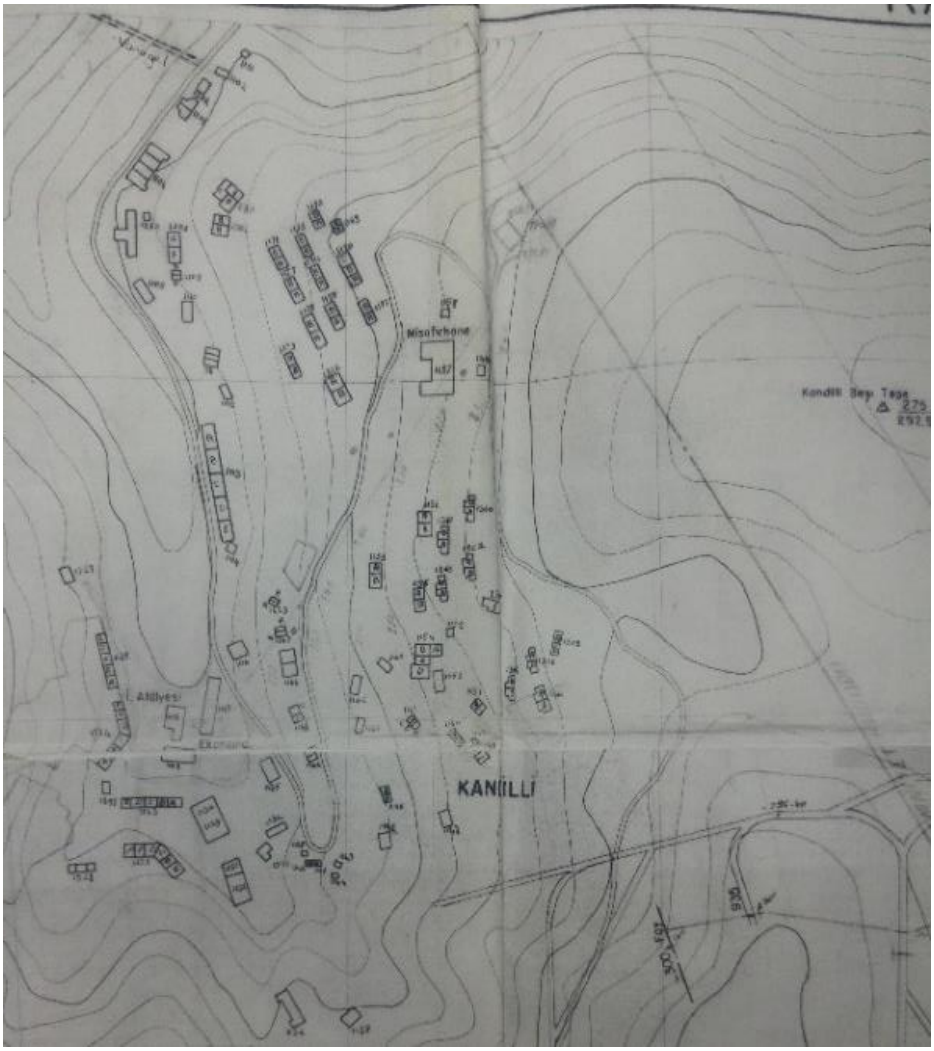

Figure 3.67. The map of the Lower Kandilli Region with EKİ numbers of the structures (Source: TTK Armutçuk Archive, 2020)

EKİ used to give numbers to the buildings in its inventory. In addition, there was a caste system in EKİ lodgings. There were buildings of type A, B, C, D, E, F, and these letters showed in which lodgings people from which segments could live. Thus, the residences of workers and managers were separated from each other. Based on this information, it can be thought that the building, which is known to have been used as a warehouse, may have been used as lodging at one time. Apart from these mentioned structures, there were also structures that are mentioned in various sources but whose location cannot be determined. According to Enver, there were educational buildings and a dispensary in the region (1941, pp. 80-87).

In addition to knowing the characteristics of the buildings of the coal enterprise in the region in the 1940s at the settlement scale, it is also important to understand the architectural features at the building scale.

Production Areas:

The production-related buildings were located in the seashore area and +17 levels from the sea. The industrial buildings were made in harmony with the topography. The industrial buildings on the site built with the latest technologies for coal production represent the Italian architecture of the period and stand out with their different architectural characteristics. There were a power plant that has 1200 horsepower, mine shafts with technological elevators, ventilators, compressors, varagel and its crane, a boathouse, a lavuar, a house, a customs, coal silos, a cooling tower, an atelier, coal carrying equipment and a pier in one side of the mountain.

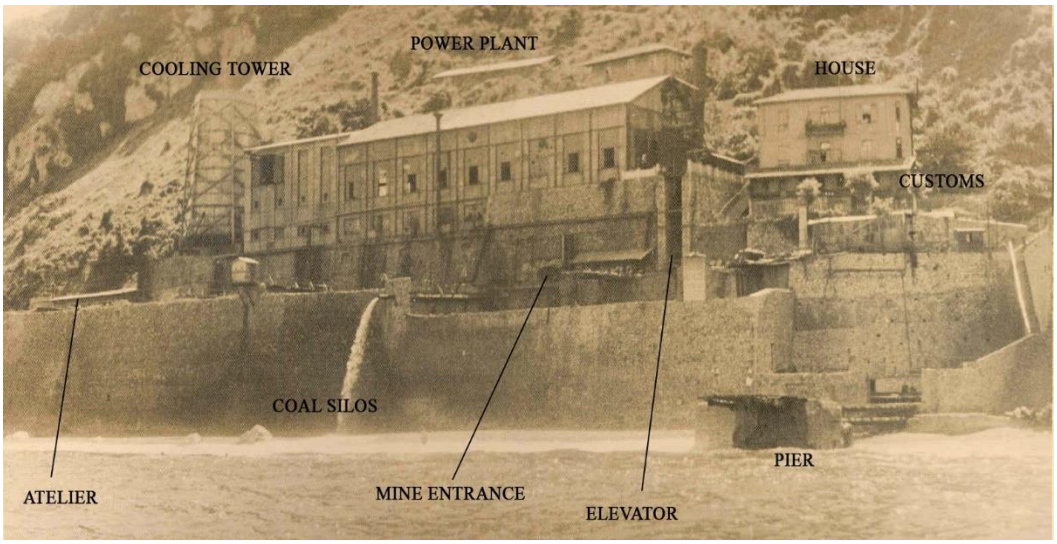

Figure 3.68. The View of Power Plant and its surroundings (Source: Zonguldak Special Provincial Administration Archive, 2020)

The power station is a structure built with Italian architecture, with brick-filled walls built with a steel load-bearing system sitting on the rocky ground. The building, which has a height of approximately 14 meters, also has a cooling tower next to it. This power plant continued to be used until the new power plant was opened in Çatalağzı in 1948.

Figure 3.69. The Coal Washing Plant (Source: TTK Archive, 2020)

There was a ‘lavuar’ which was used for washing coal particles on the same side of the mountain. Washing 35 tons of coal per hour, the ‘lavuar’ was a structure that rests on rock floors and stone retaining walls. The walls of this building, which has

a steel carrier system, are filled with bricks. The structure, which has a height of about 8 m, increased the capacity of the coal extracted from the region and preserved its function until the Armutçuk 'lavuar' were built.

At sea level, after descending with 'varagel' which is a unique transportation system, there was a boathouse where the boats are held. There was a tunnel between the power station part of the mountain and the boathouse part. With the formation of the beach in front of this building in later times, this building will be used as changing cabins over time, and the upper part will start to be used as a restaurant.

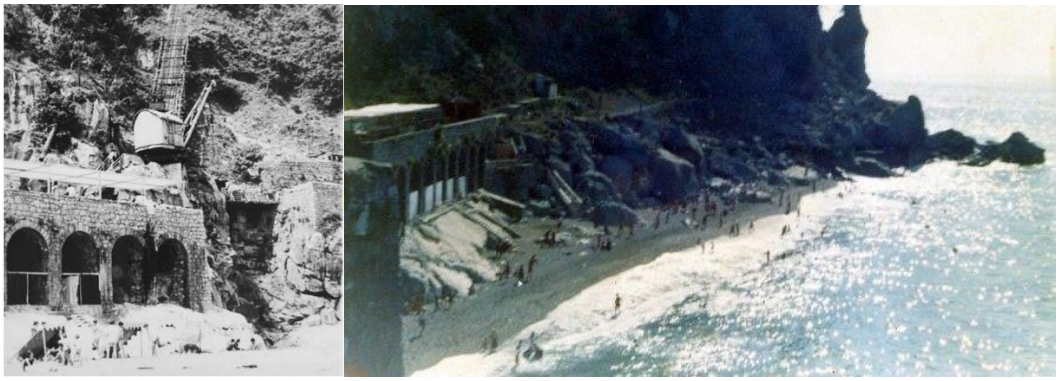

Figure 3.70. The boathouse in different periods (Source: Zonguldak Special Provincial Administration Archive, 2020)

Apart from production, the transportation of coal was an important process in this region. Some structures like coal silos, piers, sawmills, and railways were made for transportation purposes. In 1942, there were 40 boats of 20-25 tons in Kandilli-Çamlı, and these vehicles were used for sea transportation at that time (Zaman, 2004, p. 106). In the coastal map of Kandilli in 1949, it can be seen that there were lots of coal silos and piers in the Lower Kandilli region (Figure 3.71).

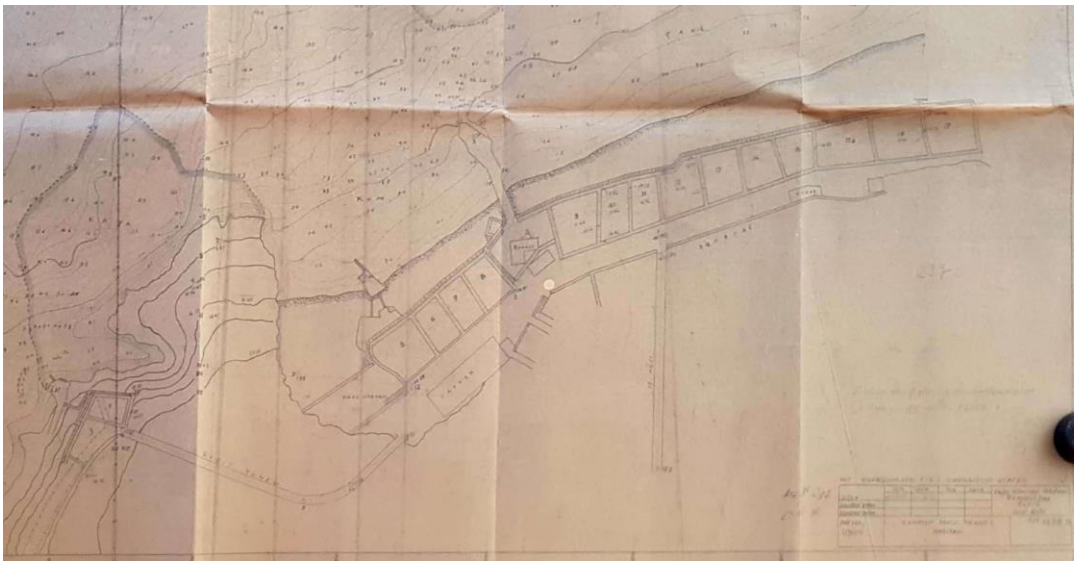

Figure 3.71. The map which shows the coal silos and piers in the Lower Kandilli Region in 1949 (Source: TTK Archive, 2020)

There was a specific transportation mechanism with rail systems in this region. After the coal was extracted from the underground, it was transported to the seaside by wagons and rail systems, where it was loaded on boats and transported to larger coal loading centers. The coals were stored in coal silos built on the shore with the stone masonry construction system. When the ships came to the shore, they were transported to the ships by rail systems.

Figure 3.72. The coal silos and the rail system for the transportation of coals to the silos in 1949 (Source: TTK Archive, 2020)

Figure 3.73. The piers of the region and the rail system for transporting the coal from silos to ships in 1949 (Source: TTK Archive, 2020)

Figure 3.74. The images from Lower Kandilli piers in the 1940s (Sources from left to right: TTK Archive, 2020, Kandilli Cultural Association Archive, 2021)

The abundance of production on these dates can be understood from the fact that the silos are filled with coal (Figure 3.74). The technological developments on these days can be understood from the fact that the rail system established for the transportation of coal was long enough to continue from the seacoast to +17 elevations.

Human and material transportation between sea level and +17 elevations was provided by a special transport vehicle called 'varagel'. The ‘varagel’ is a unique transportation system using brake and rope on a 45-degree slope surface of 245 meters in length.

Figure 3.75. The image of the ‘varagel’ in 1940 (Source: Kandilli Cultural Association Archive, 2021)

There were structures related to production such as a lime kiln, varagel crane, lamp room, and office on the +17 level, which is reached by varagel. Moreover, in the plan taken from the TTK Armutçuk archive, it is seen that the railway used for transporting coal reaches the warehouse (Figure 3.76).

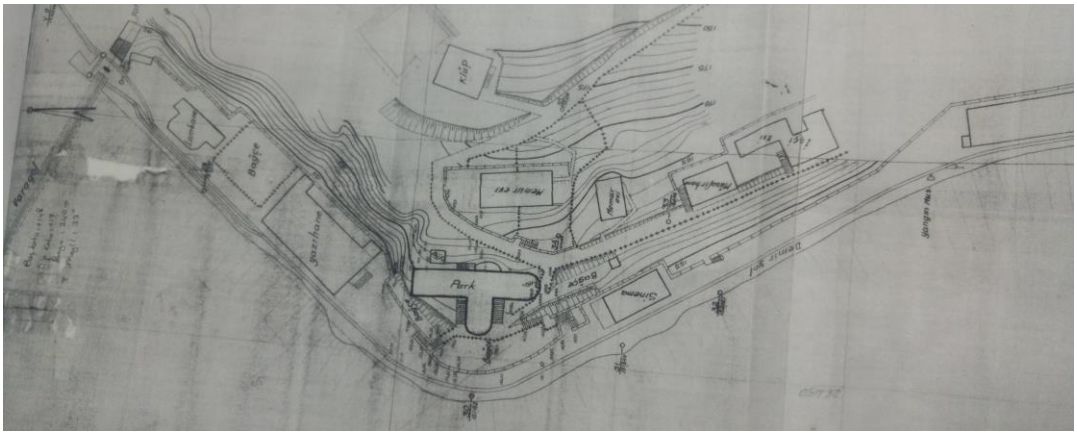

Figure 3.76. The map of +17 level in the Lower Kandilli Region (Source: TTK Armutçuk Archive, 2020)

Residential Areas:

The residential buildings were made in the Italian company period; however, their exact production dates were not known. The neighborhood where the lodgings at the +17 level is called the 17th quarter by the people of the region, and the quarter where the lodgings located at the higher elevations are called "onsekizoğulları". The buildings were generally a single story and built with a masonry system. It is known that the 2-story buildings in the region were previously used for other purposes and then converted into lodgings. For example, it is known that the building, which was used as a hospital, was later turned into lodging in figure 3.77. Until the 1990s, people continued to live in this region until the lodgings were demolished. The lodgings were located in harmony with the topography. Green areas were also considered during the settlement process. Each house had a small garden in front of it. These gardens had colorful flowers and fruit trees.

Figure 3.77. The image which shows the Onsekizoğulları quarter in the 1980s (Source: Kandilli Cultural Association Archive, 2021)

Public Built-Up Areas:

There were a cinema, a club, an ekonoma, guesthouses, a cafeteria, a school, and dispensaries in the region. In 1942, 14 ekonomas were opened in various parts of the basin in order to provide the necessary clothing and food items for civil servants, employees, and workers working in the basin without profit and one of them was in Kandilli (Zaman, 2004, p.118). Moreover, in 1942, two hospitals that have 20-beds in Kandilli were transferred to EKİ. In these hospitals, all EKİ employees and their families are examined and treated free of charge (Zaman, 2004, p.123). One of the most used socializing areas in the region is the guesthouse, which is thought to have been built by the French. This building was made with the stone masonry technique up to the basement level, and its facades were made of brick masonry.

Figure 3.78. The image of a French guesthouse in the Lower Kandilli Region (Source: Kandilli Cultural Association Archive, 2021)

After the operation of the mines was started by the state in the 1940s, not only production, accommodation, and social structures were considered, but also EKİ

aimed to provide services such as transportation and infrastructure by working like a municipality.

Although the region was developed in terms of buildings, transportation was not very developed in the 1940s. In 1947, it takes two hours to go from Ereğli to Kandilli on horseback because of the absence of the Ereğli-Armutçuk railway (Zaman, 2004, p.120).

During this period, services such as infrastructure works and electricity services, water services, road construction, and garbage collection are also carried out by EKİ. According to the descriptions of the people living there, there were garbage barrels in front of each house. The muleteers used to collect all Kandilli's garbage regularly every day.

Between 1945 and 1950, the money was given to the workers as advances by EKİ to be used in the ekonoma. Between these years, an armed and special uniformed coal regiment was also established. EKİ has been referred to as the Zonguldak Republic because of its money, ekonoma, band, and coal regiment (Zaman, 2004, p.118). Thus, it can be understood that EKİ's services are in many different areas. EKİ contributes to the urbanization of the region by constructing many housing and social facilities. It sells at unprofitable prices well below the market with Ekonomas. Thus, EKİ leaves its mark on cultural life and commercial relations not only as a workplace but also with its social facilities. In addition, road construction, electricity, and water supply are covered by EKİ. Educational services in the region are also covered by EKİ. It establishes a primary school for the children of workers and civil servants, equips them, recruits teachers and staff, and pays them. School bands were also formed for the celebrations (Figure 3.79). EKİ also attaches importance to worker health by establishing a hospital.

Figure 3.79. The photo showing 23rd April celebrations with the school band in the Lower Kandilli (Source: Kandilli Cultural Association Archive, 2021)

The Zonguldak- Ereğli Hard Coal Basin General Management Project, which was prepared in 1945 in order to increase the coal production in the basin, started to be implemented in 1948 with the help of Marshall (Kara, 2010, p.88). Within the scope of this project, Çatalağzı Power Plant was established in 1948 (Kara, 2010, p.91). This development has reduced the use of the Kandilli power plant. Moreover, three large coal washing plants were built in the place of the old and inadequate coal washing plants. One of these is the Armutçuk Lavuar, built in 1960. This reduced the use of lavuar in Kandilli (Kara, 2010, p.92). In addition, an aerial line was decided to build in Kandilli in 1948 within the scope of this project (Şavran, 1958, p.97). The Kandilli-Armutçuk aerial line location was investigated on 13 and 14 June 1949 by Herr Kaufmann who is a representative of Pohlig firm (a German Company), and Raşit Moral from Etibank (TTK Report, 1949, p.1).

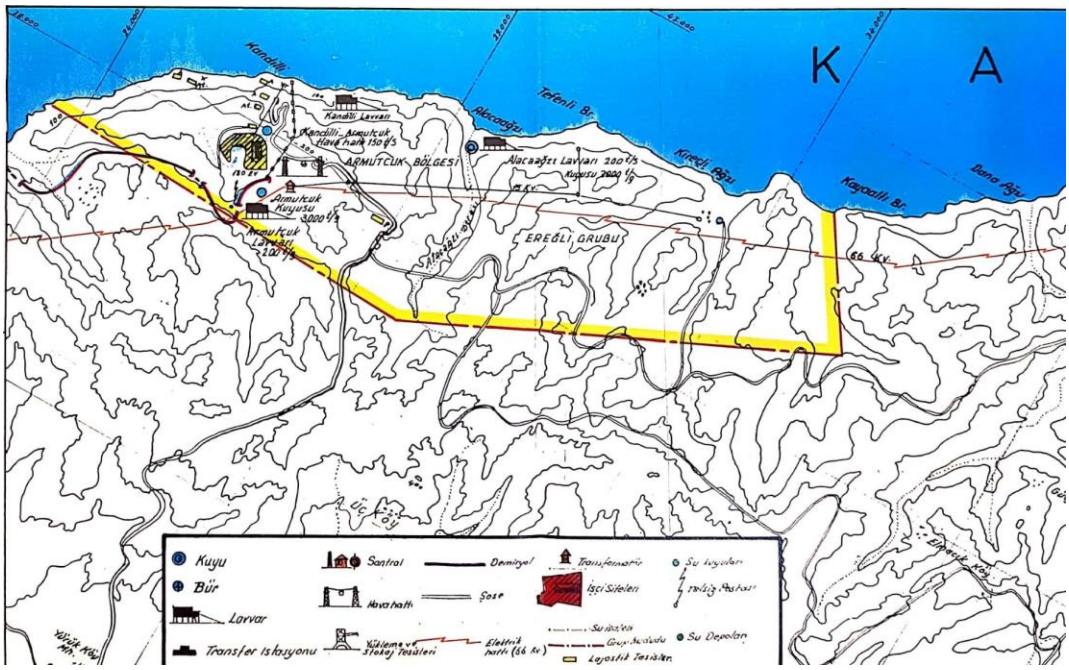

Figure 3.80. The map which shows the location of the Kandilli Aerial line (TKİ, 1973, p.49).

Kandilli Region Between 1950 and 1960:

The operation of the mines in this area changed in the 1950s. With the law numbered 3460 enacted in 1957, Armutçuk Coal Enterprise (ARTİ) was established in this area by separating from other regional directorates (Taşkömür, 1985, p.9).

During this period, **coal production** in the region increased with the return of engineers sent to Europe to learn mining to work in this field, government policies supporting mining, and the management project to increase production in the region.

In this period, besides production, workers' rights and the social needs of workers were also considered. Therefore, in this period, there was a **mining community** with strong ties to each other and to the place. The social life of the region was very developed in the 1950s. With an active social life, neighborly relations and unity had developed. Workers who come to this area usually came from other cities. However, those workers saw themselves as a part of this region due to the mining profession and felt a sense of belonging. They saw their workplace and neighborhood as their

home. The inhabitants of the area spent a lot of time with each other. Balls and dinner organizations were organized. They often went to theaters and cinemas. In addition, special days such as 29 October and 23 April were celebrated with enthusiasm. Moreover, there was a sports team of AKİ in the 1950s in the Kandilli region (Figure 3.81).

Figure 3.81. The image of the AKİ Sports Team (Source: Kandilli Cultural Association Archive, 2021)

When we look at **the site** in this period, serious changes are seen in the site due to various reasons like the increase in production and the increase in the population of the region.

Although the production was carried out on the coast in the early 1950s, within the scope of the management project developed to increase coal production, the overhead line that was opened in 1950 to transport coal from +17 elevation to the Ereğli railway, the new well and its facilities that were started to build in 1954 were completed in 1966, and the Armutçuk lavuar with a coal washing capacity of 200 tons/hour was built in 1958 (Zaman, 2012, P.271). With these innovations, it is seen that production started in a new facility in the interior in the 1960s and the sea coast will become abandoned.

Apart from production zones, the residential zones were also changed in this period. The region has migrated over time with the return of mining engineers sent abroad to their homeland and coal management gaining importance. Therefore, a larger residential area was needed. Moreover, with the construction of the Ereğli-Armutçuk railway in 1953, the need for workers to be located close to the railway emerged. Thus, a new workers' campus was started to be established in the higher part, which we refer to as Upper Kandilli. However, settlement continued in the Lower Kandilli region until 1995.

The aerial photo of Kandilli from 1955 shows these changes in detail (Figure 3.82). It shows that the production activities continued at the sea level like in older periods. There are coal silos, boathouse, lavuar, customs, a house, a power plant, and a mine entrance in the production area. Moreover, necessary structures for the operation of the overhead line system have been added in front of the lavuar and its structures can be seen along the region. Moreover, there are living and social areas in the Lower Kandilli region like in the 1940s. There are houses for officers and workers, a guesthouse, a club, a cinema, a warehouse, an ekonoma which is a specific marketplace, a hotel, a mosque, and a refectory in the residential part of the Lower Kandilli region. Moreover, there are an office, park, a lamp room, a varagel crane and a limekiln in the middle of the production area and residential area. However, there are extensions for the lamp room and office buildings and the structure of the park is different from the 1940s. The office became a secondary school at the end of the 1950s. Moreover, the aerial photo of Kandilli from 1955 (Figure 3.82) shows that there was a new residential area for workers near the Ereğli- Armutçuk railway. Several proposals were prepared in 1954 for the new campus to be built (Figure 3.83).

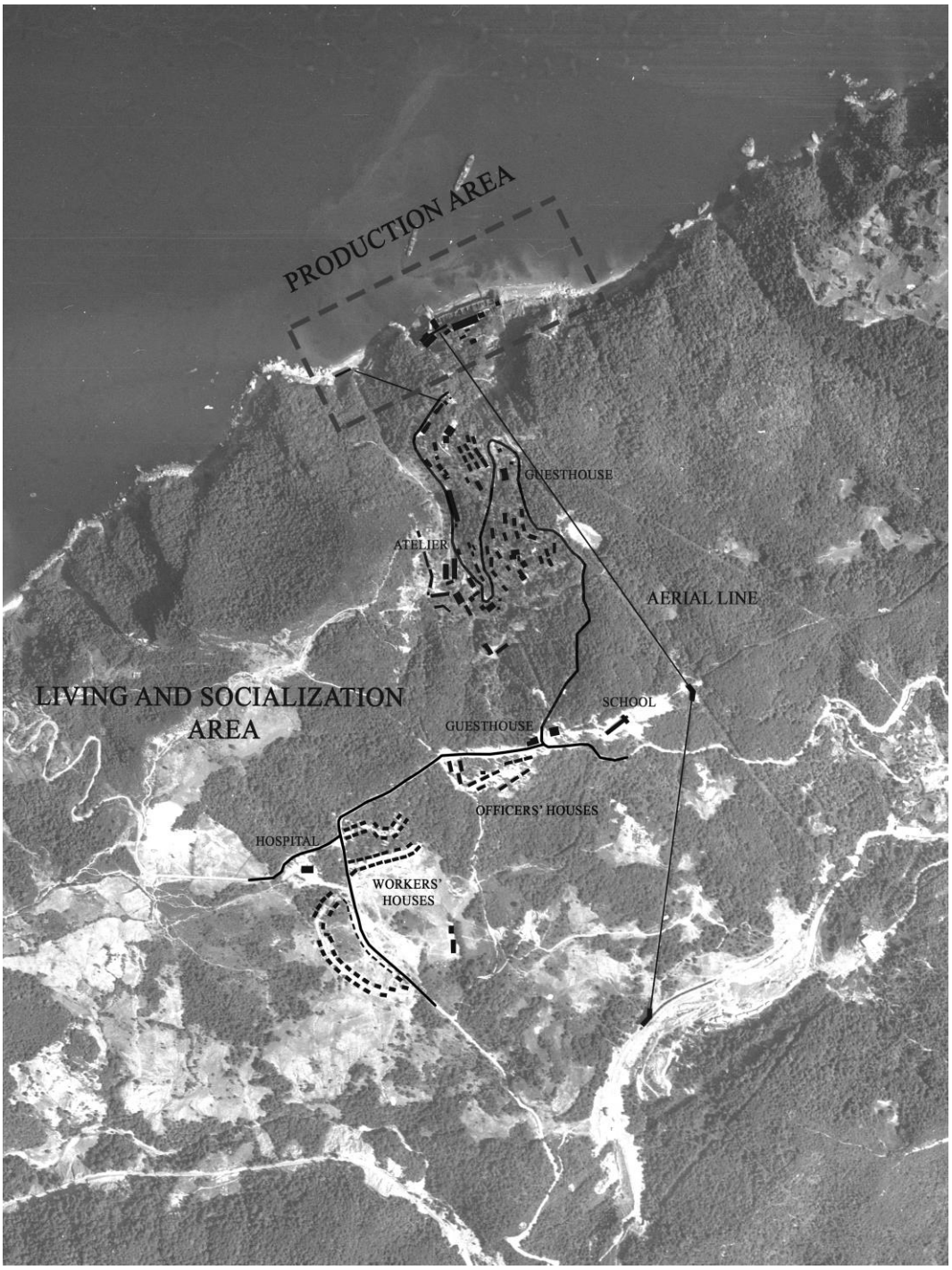

Figure 3.82. The aerial photo of Kandilli from 1955 (The base map is from the General Directorate of Mapping and the markings made by the author)

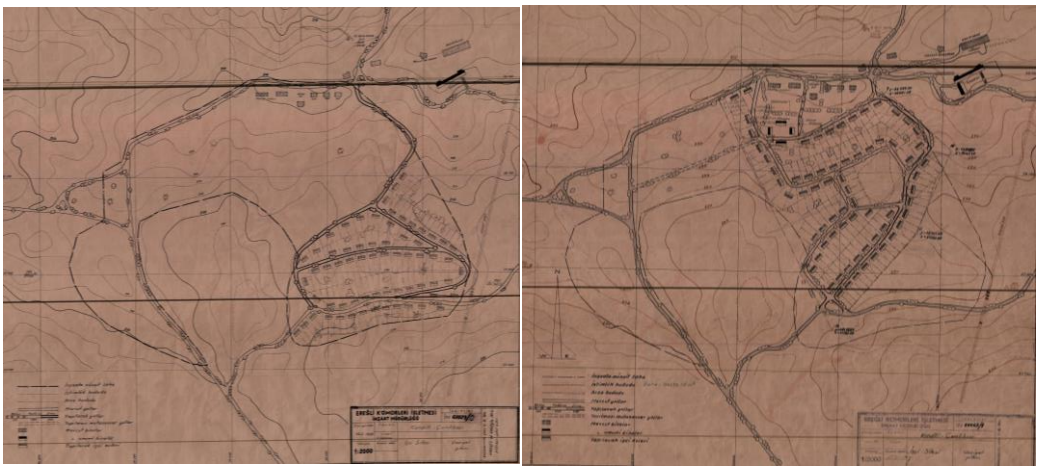

Figure 3.83. The maps of different proposals in 1954 (Source: TTK Archive, 2020)

Considering these suggestions, it can be thought that the civil servants' houses may have been built before the workers' houses. The workers' campus was built by the French company RAD Construction Company (Figure 3.84). Looking at the worker lodgings designed by the RAD company, it can be seen that the structures are similar to each other and are positioned along a road to coincide with the two sides of the road. There are two types of workers' lodgings which are single and the family type and all lodgings have their own gardens. Therefore, the region has an exemplary zoning plan with the dimensions of the lodgings, their distance to each other, and their gardens.

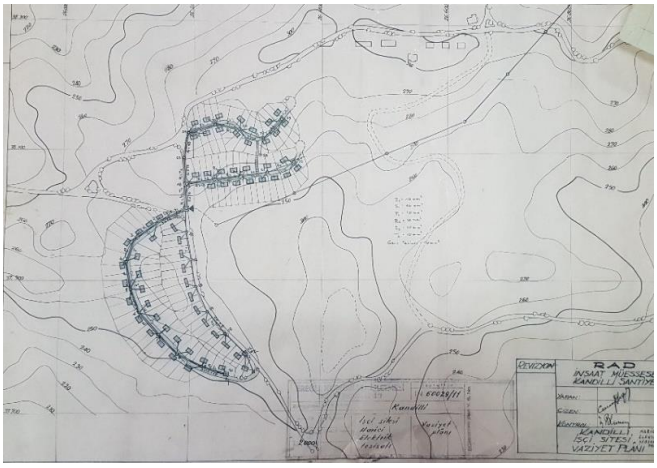

Figure 3.84. The map of workers' campus by RAD Company (Source: TTK Archive, 2020)

At that time there were residents for workers and officers in the region. Since there is a caste system in the area, the civil servant and worker lodgings are located separately. Workers' quarters were built by the RAD company and are located at lower elevations, while civil servants' houses are located on higher and scenic parts separately from the workers. There is also a manager's house in this area. In this area, apart from the houses, there were a hospital, a school, and a guesthouse for workers. It is said that these structures were built with bricks and lime produced in the region. Bricks were made from a red brick quarry established around Helvacı Lake and the limestone was found on the Kandilli coast. Cement was not used in most of the early structures. In addition to knowing the locations and characteristics of the buildings in the region in the 1950s at the settlement scale, it is also important to understand the architectural features at the building scale.

Residential Areas:

The lodgings in Upper Kandilli are similar to those in Lower Kandilli. While workers' lodgings are of two types, for families and singles, officers' houses are designed differently from workers' lodgings. Workers' houses usually consist of one floor and a basement. The basement floor is used as a kitchen. Officers' houses, on the other hand, are designed wider than workers' houses. The buildings were built with the brick masonry structure and materials from the region were used. In addition, each lodging has its own garden.

Public Built-Up Areas:

Apart from the ones in the Lower Kandilli region that are mentioned before, there are a guesthouse, a primary school, and a hospital in the Upper Kandilli region. Apart from the buildings seen in the aerial photograph, a cinema building and an Ekonoma were opened near the civil servants' houses in the Yayla neighborhood between 1957- 1959. Moreover, the office building in the Lower Kandilli region became a secondary school in 1958.

The guesthouse in the Upper Kandilli region was built in 1951. This building changed its use in the following years and was converted into a directorate building and then a lodging.

The primary school in the Upper Kandilli was built in 1953. Schools in the region are structures that show the importance AKİ attaches to education. These schools were AKİ's own schools and their teachers were permanent officers of the institution. According to the status of AKİ private primary and secondary schools, the institution paid the salaries of all teachers and staff, except for the head teacher. Educational requirements were met by AKİ, so the quality of education was higher than in surrounding schools. Free unit magazines were distributed in schools, and there were football, volleyball, and basketball teams. AKİ used shuttles to transport students. AKİ's contribution to education was not only limited to its own schools but also contributed to the technical equipment of many schools in Ereğli and its villages. These schools were transferred to the National Education in 1983 (Zaman, 2004, p.122). The primary school building in the region is a single-story building made of bricks obtained from the quarries in the region. Over time, various additions such as toilets were made to the building according to the needs.

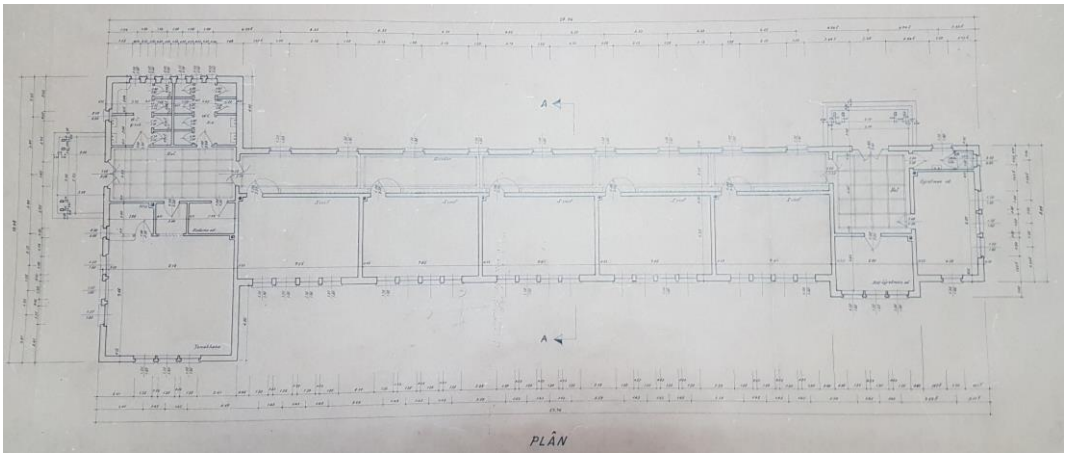

Figure 3.85. The plan drawing of the primary school in the Kandilli Region (Source: TTK Archive, 2020)

The building has a T-plan. It has 5 classrooms connected to the corridor. In the building, there are separate toilets for girls and boys, a janitor room, office, dining hall, teachers' room, and head teacher's room (Figure 3.85).

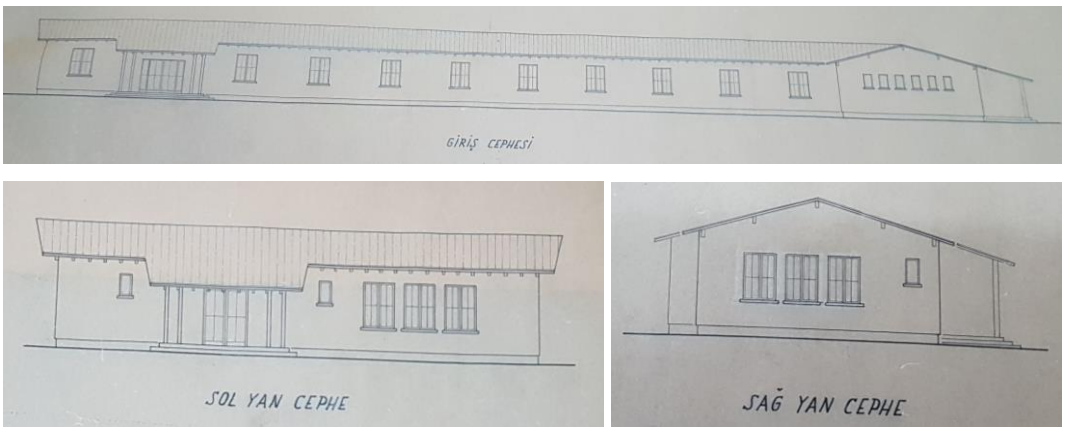

Figure 3.86. The elevation drawings of the primary school in the Kandilli Region (Source: TTK Archive, 2020)

According to the elevation drawings of the primary school, the building is a single-story building. There are two entrances in the building in the 1950s. It is built with a brick masonry construction technique. It has a gabled roof (Figure 3.86).

There is also a hospital in the region. The dispensary, which was previously located in lower Kandilli, was later moved to the upper Kandilli region, and the hospital building was turned into a lodging. There were many physicians from various branches in this hospital with a capacity of 50 beds. In addition, the hospital was technically equipped to perform surgery. Those injured as a result of mining accidents were treated in this hospital. This building was built in 1954, and in the following years, an addition was made to the building in line with the needs.

Figure 3.87. The image of the Kandilli hospital (Source: Kandilli Cultural Association Archive, 2021)

The building has two floors and a basement. It was made with a masonry construction technique and the materials of the building were from the region. It has a rectangular plan. There are technical rooms and staff rooms on the basement level. There are laboratories, examination rooms, a pharmacy, a room for a dentist, surgery rooms, technical rooms, and waiting areas on the ground floor. There are offices, a terrace, and rooms for 3, 4, and 6 patients on the first floor. Looking at the plans, it can be understood that it is a hospital where all kinds of services are considered for employees and patients (Figure 3.88, Figure 3.89, and Figure 3.90). In 1969, the terrace was closed and additional parts were added to the building (Figure 3.91).

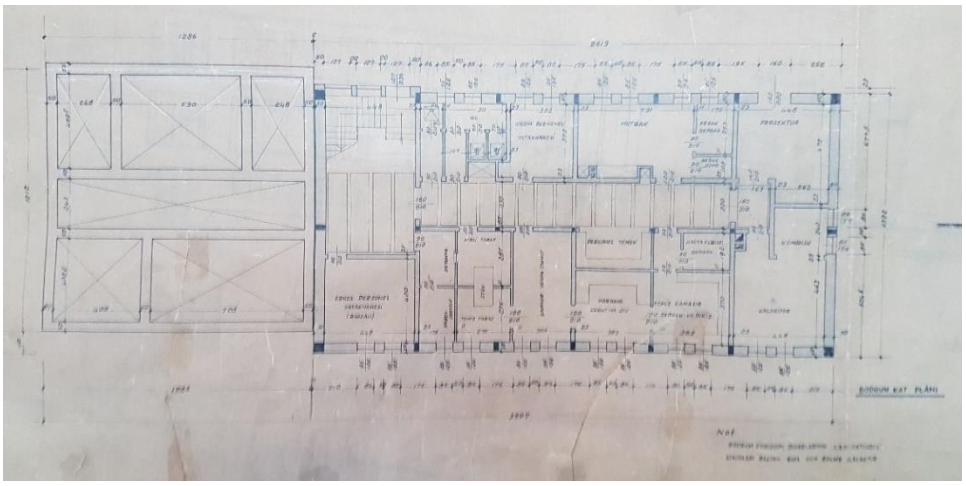

Figure 3.88. The basement floor plan of the hospital (Source: TTK Archive, 2020)

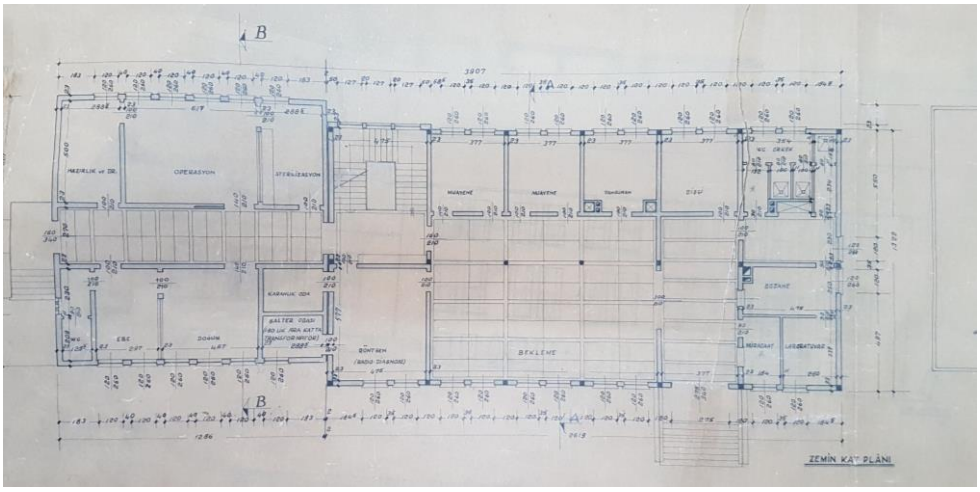

Figure 3.89. The ground floor plan of the hospital (Source: TTK Archive, 2020)

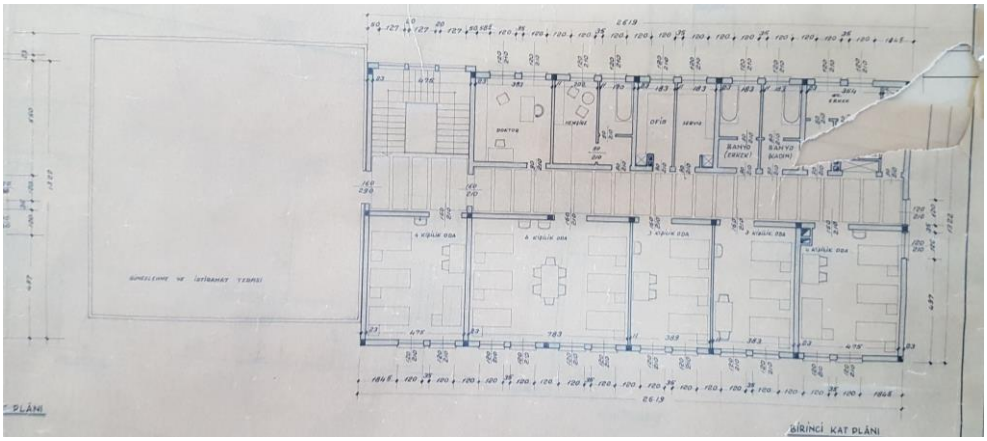

Figure 3.90. The first floor plan of the hospital (Source: TTK Archive, 2020)

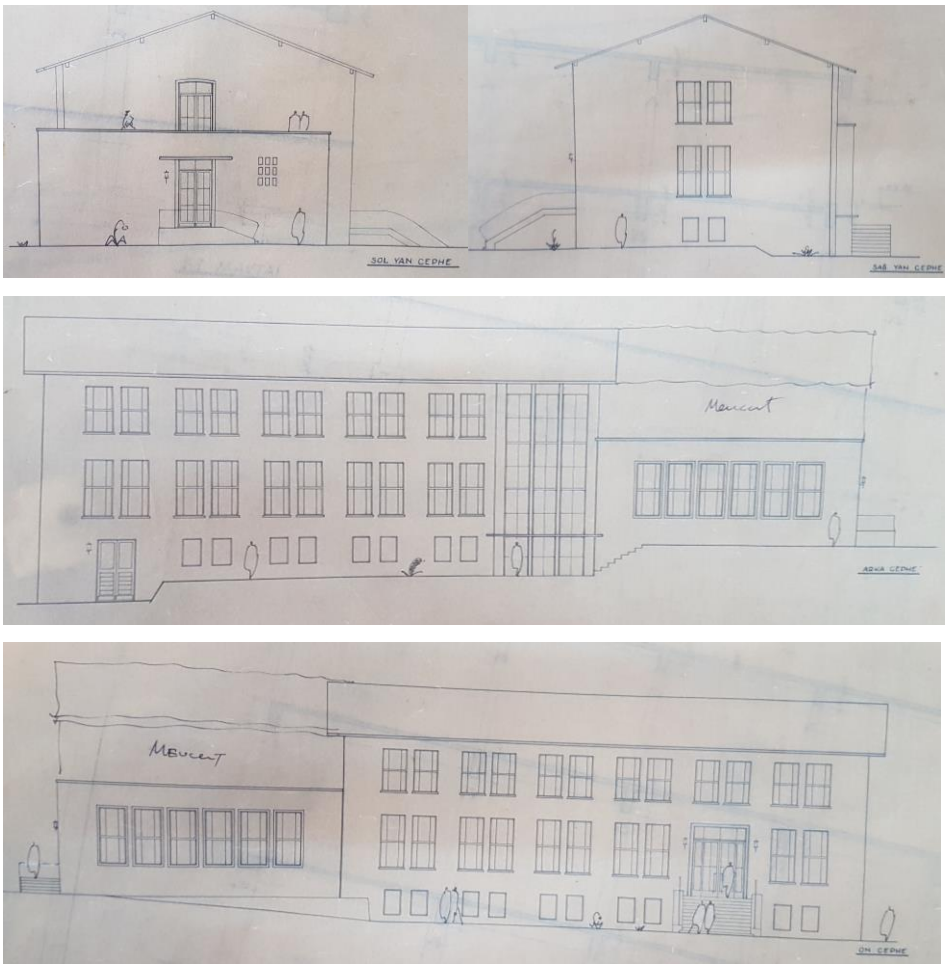

Figure 3.91. The elevation drawings of the hospital (Source: TTK Archive, 2020)

In addition, towards the end of the 1950s, a cinema was built for workers, civil servants, and their families. It is said that the newest movies played in Istanbul are shown in this cinema as soon as possible. Theater and concert groups coming to the region also perform in these movie theaters. Other segments of the public also benefit from cinema events at very low fees. Screenings are held by applying separate programs for families, singles, and children. In addition, at the end of the 1950s, ekonomas, which are market-like structures where workers and civil servants can meet all their needs, were opened in the Upper Kandilli region.

In the 1950s, a state model in which all the needs of the workers are considered and tried to be met has been maintained even though a new modernized campus has been built according to needs. The infrastructure of the region was built by AKİ, and the

water and electricity costs of the newly built lodgings were covered by AKİ. In addition, transportation was also considered by AKİ. AKİ took care of the maintenance of the roads between the neighborhoods. In addition, AKİ contributes to the construction of highways in order to provide a connection between its sections. In this direction, a highway was built between Kandilli and Kozlu in 1958. In addition, coal and people are transported by the Armutçuk-Eregli railway, which was opened in 1953.

Kandilli Region Between 1960 and 1970:

In this period, the operation of the mines was changed and AKI becomes part of EKI again. After 1962, this enterprise continued to operate as the **Armutçuk Regional Directorate in Ereğli Coal Enterprise (EKİ)** (Taşkömür, 1985, p.9).

In this period, **coal production** increased in this region after Yenikuyu was operational since the 1960s. More efficient coal extraction works can be carried out with more technological methods compared to the past.

In the 1960s, there was a tight-knit **mining community.** Moreover, there was a friendly atmosphere in Kandilli and the social life was intense. Time was spent both in the officer's club and in the guesthouse in Aşağı Kandilli, and people would come together for holidays, New Year's Eve, and farewell dinners. Moreover, in this period, reading festivals, demonstrations, and holiday celebrations were frequently held in schools.

Figure 3.92. The image of the primary school building and those preparing for the show (Source: Kandilli Cultural Association Archive, 2021)

In addition, there were concerts of famous singers of the period. The women gathered in different houses in the afternoon and eat something and chat. The remaining pulp from the coals mined in Lower Kandilli was poured into the sea and the beach was formed by the accumulation of these pulps. In the summer, there was a beach service in the afternoon and one would go down to the beach with a varagel. During this period, the region has a football team. There was also a field where residents can play volleyball (Figure 3.93).

Figure 3.93. The image of a volleyball field in the 1960s (Source: Kandilli Cultural Association Archive, 2021)

When we look at **the site,** it is understood that the changes continued as a result of the development of technology and the increase in the population of the region by immigration in the 1960s.

Although we cannot reach the aerial photograph of the 1960s, we can obtain information about the period through archive scans (Figure 3.94). As mentioned before, production and settlement in the region were located in the Lower Kandilli region in the 1940s. However, at the beginning of the 1960s production and

settlement shifted towards the Upper Kandilli and Yeni Kuyu regions, that is, further inland due to the return of engineers sent abroad and the increase in the population due to immigration to the region with increasing job opportunities, the shift of coal production in the coastal areas to the interior, the end of sea transportation and the transition to road and rail transportation, and the construction of new lavuar and power plants within the scope of the management project. While it was estimated that there was no change in the Lower Kandilli region in the 1960s, the Upper Kandilli region continued to develop with the increase in population.

Figure 3.94. The map of the Upper Kandilli region in 1965 (Source: TTK Archive, 2020)

In addition to knowing the locations and characteristics of the buildings in the region in the 1960s at the settlement scale, it is also important to understand the architectural features at the building scale.

<u>Residential Areas:</u>

In this period, with the relocation of the business center to the Yeni Kuyu area, which was established near the railway, the lodging settlements gradually shifted to the south. With the increase in the population, new civil servants' houses were built in 1962 in the area where the civil servants' lodgings in the Yayla neighborhood were located in the 1950s. Moreover, all lodgings have their own gardens. Furthermore, civil structures and new neighborhoods built by those who immigrated to the region gradually began to form in the region. In this period, multi-family apartments are starting to be built. In these years, a four-family apartment was built in the area where workers' lodgings were located (Figure 3.95, Figure 3.96, Figure 3.97).

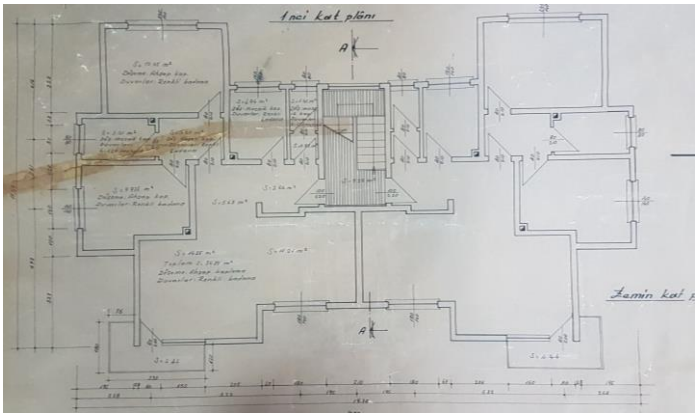

Figure 3.95. The ground floor plan drawing of the four-family apartment (Source: TTK Archive, 2020)

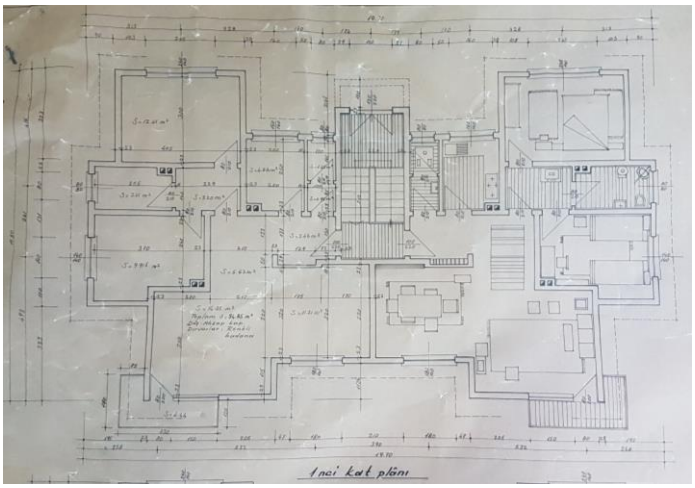

Figure 3.96. The first floor plan drawing of the four-family apartment (Source: TTK Archive, 2020)

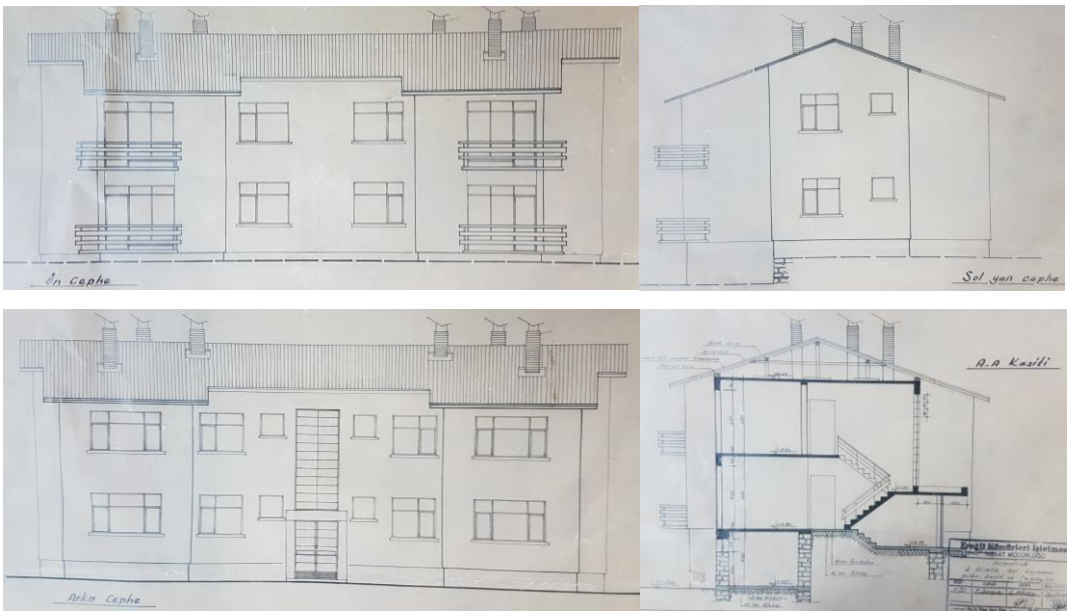

Figure 3.97. The elevation and section drawings of the four-family apartment (Source: TTK Archive, 2020)

Public Built-Up Areas:

In this period, there were a hospital, a primary school, a directorate converted from the guesthouse, a cinema, and an Ekonoma in the Upper Kandilli region. In addition, additions were made to the hospital and primary school buildings during this period. Toilets were added to the school building in 1963 and the addition of the hospital was made in 1969. In addition, meals and meetings were held in the officers' club, which is an extension of the cinema building in 1964 (Figure 3.98).

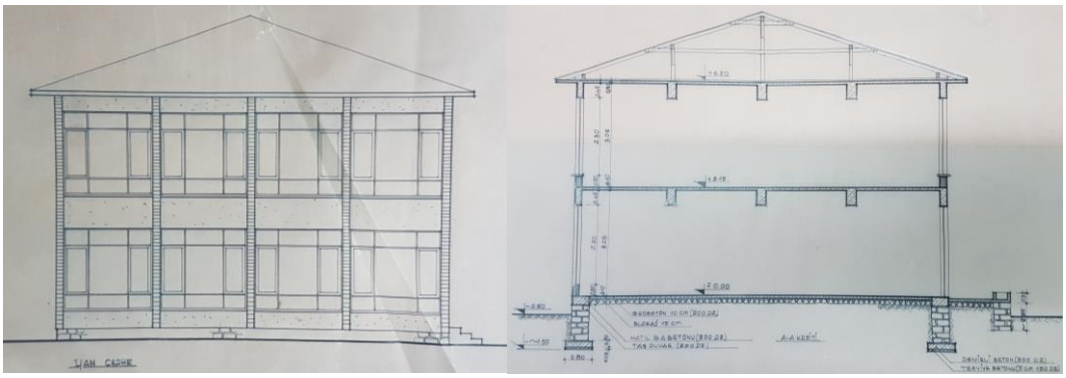

Figure 3.98. The elevation and section drawing of the officers' club (Source: TTK Archive, 2020)

The directorate building and the square in front of it have hosted many memories. Celebrations were held in the square with the Atatürk bust in front of the directorate building.

Figure 3.99. The image of the directorate building (Source: Kandilli Cultural Association Archive, 2021)

Figure 3.100. The image of the directorate building (Source: Kandilli Cultural Association Archive, 2021)

Ekonoma is the market-like structure of today, where employees in the region can shop with EKİ money called tike. It is a single-story building and was built with the masonry brick technique.

Figure 3.101. The image of Ekonoma (Source: Kandilli Cultural Association Archive, 2021)

There was a field behind the primary school building. Holidays were celebrated and sports activities were held in this field.

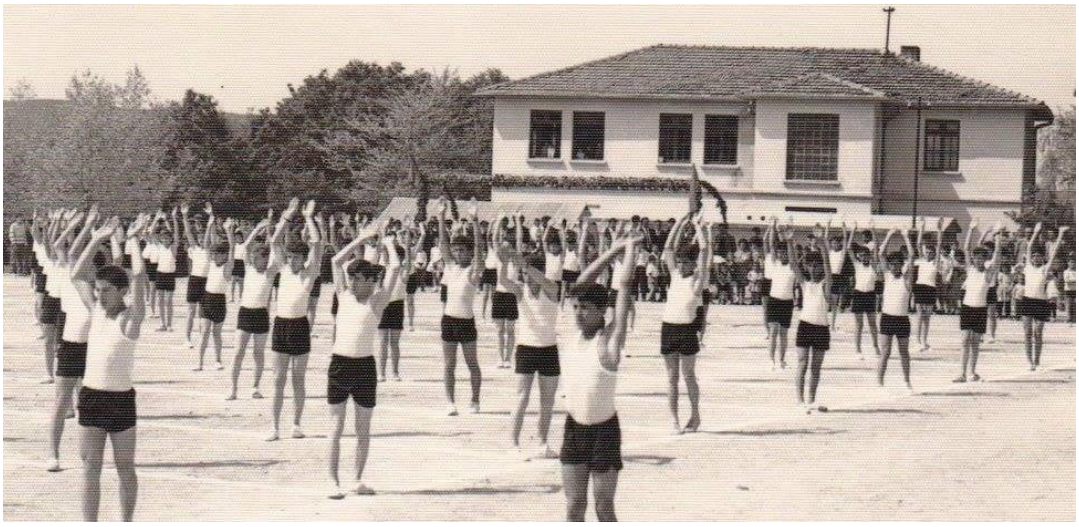

Figure 3.102. The image of the field behind the primary school (Source: Kandilli Cultural Association Archive, 2021)

EKİ continued its system, which considers all kinds of needs of the workers, in this period as well. It provided many services to the employees, such as road construction, housing maintenance, electricity services, water services, and garbage collection services. Transportation was by rail and road. EKİ would remove shuttles for those living in the area.

Kandilli Region Between 1970 and 1980:

In the 1970s, **coal production** in the region continues in the Yenikuyu region and the region receives migration depending on coal production.

During this period, there was a **mining community** with strong ties. Social life in Kandilli was also active in the 1970s. There was a band. There were balls, plays were played at school. Holidays were celebrated with great enthusiasm. There was a sports club in Kandilli in the 1970s. Moreover, there were two sports fields in the region, and celebrations or sports competitions were made in these areas.

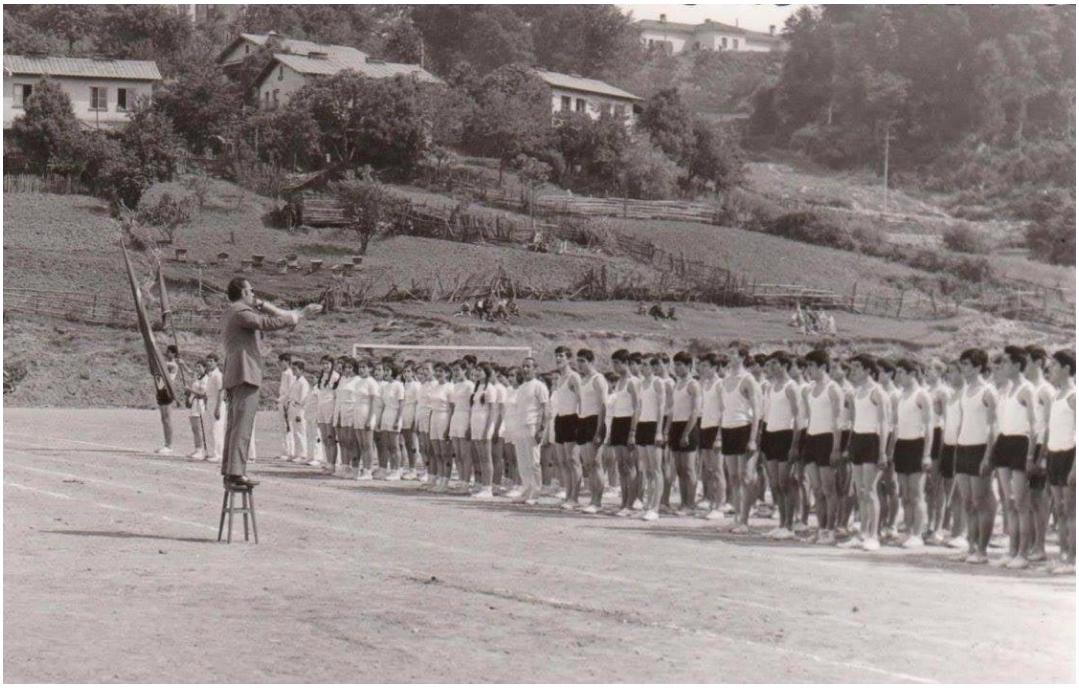

Figure 3.103. The image of a sports field in Kandilli in the 1970s and the buildings visible in the back are the lodgings and the ekonoma. (Source: Kandilli Cultural Association Archive, 2021)

When you look at **the site** in this region, the changes that occur due to the migrations of the region draw attention. In the 1970s, the region received immigration. Numerous slums are starting to form around the lodgings. A different social structure began to form. Although production and settlement moved to the interior, there were still people living in the Lower Kandilli region. However, since the production in the Lower Kandilli region has ended, the coastal areas have become idle and the structures have begun to disappear. The Upper Kandilli region, on the other hand, became crowded with immigrants.

According to the aerial photo of Kandilli in 1979, it can be understood that there are some changes in the site during this period (Figure 3.104). The lavuar building in the Lower Kandilli region was demolished. The power plant was also demolished and an aspirator structure was built on its foundation in 1976. In the Upper Kandilli region, there are different types of lodgings, an ekonoma, a cinema with its club extension, a primary school, a mosque, a workers' club, a hospital, a secondary school, a directorate, an office, an accounting building, a complex that consists of workers' lodgings, cinema and cafeteria buildings, and two sports fields in the 1970s. Moreover, during this period, an addition was considered to be made to the cinema building (Figure 3.105, Figure 3.106). During this period, workers' pavilions and a recreational facility complex were built near the Yeni Kuyu area. This property contains a cafeteria, cinema, and two worker pavilions. In this facility, besides the accommodation of group and single permanent workers, the food, sleep, and entertainment needs of the workers are provided. The electricity and water need of the pavilions are provided by EKİ. Furnishing expenses in the pavilions also belong to the administration. This complex was started to be built in 1975 (Figure 3.107).

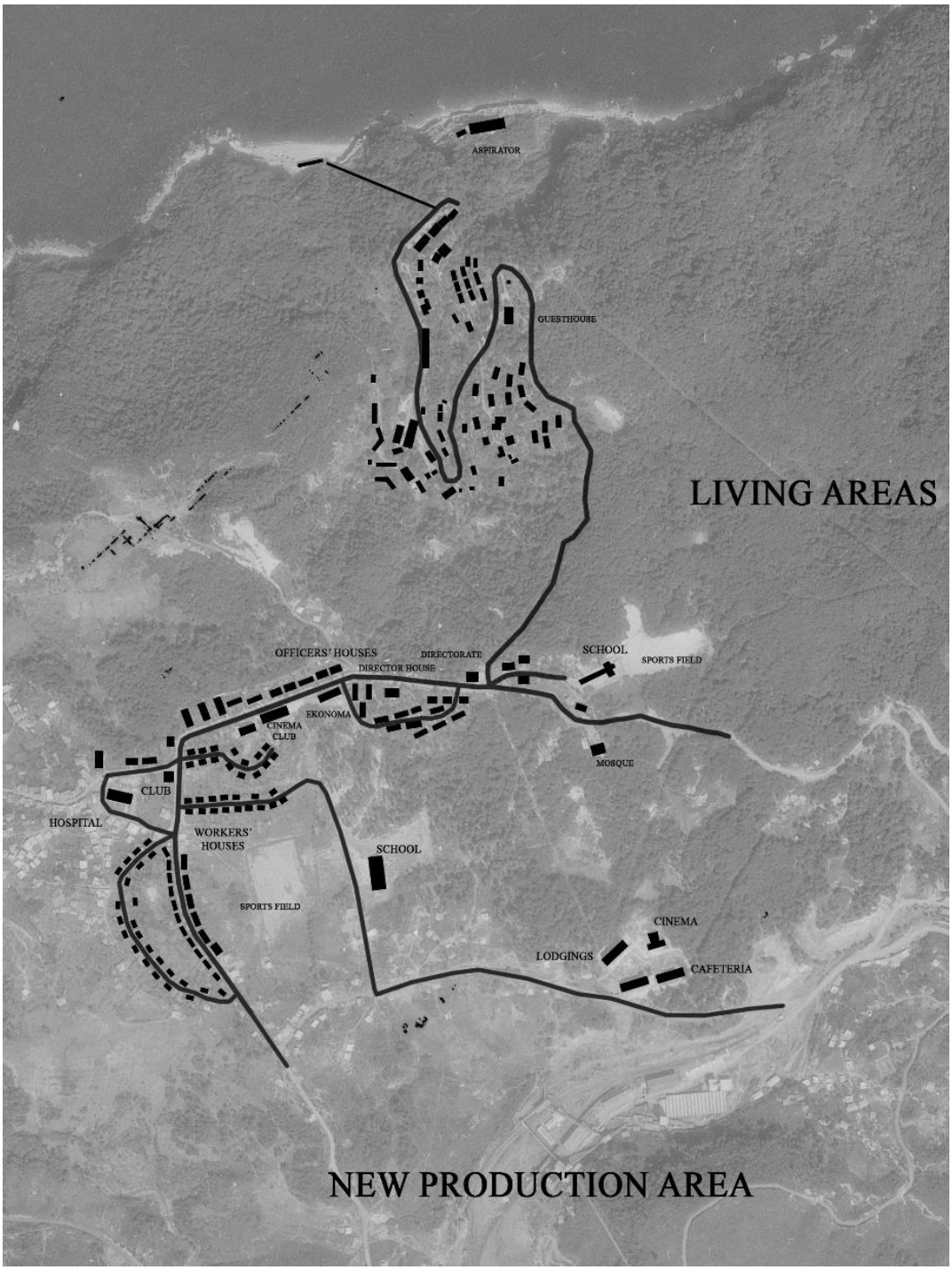

Figure 3.104. The aerial photo of Kandilli Region in 1979 (The base is from the General Directorate of Mapping and the markings made by the author)

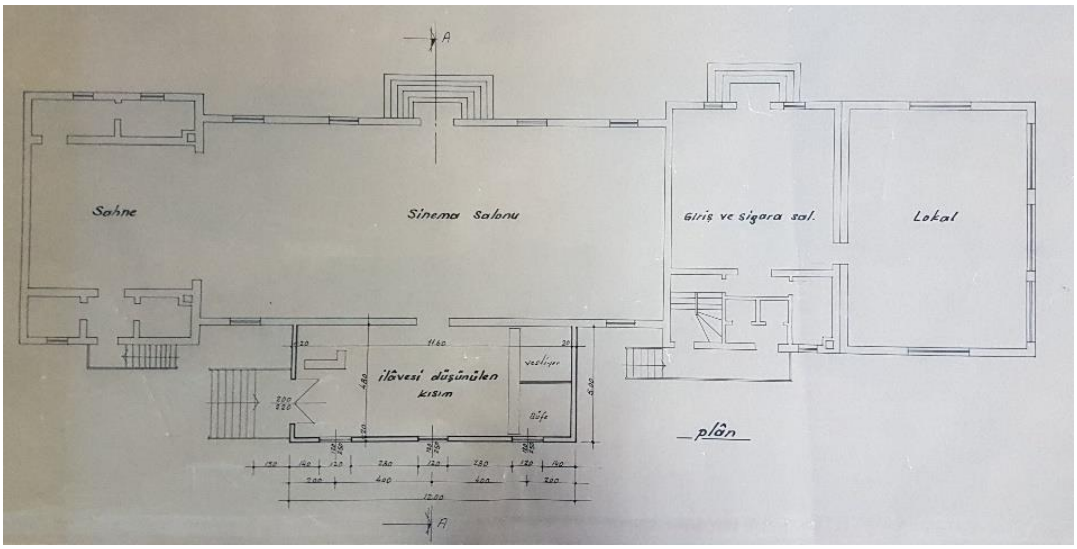

Figure 3.105. The plan drawing of the extension proposal of the cinema building (Source: TTK Archive, 2020)

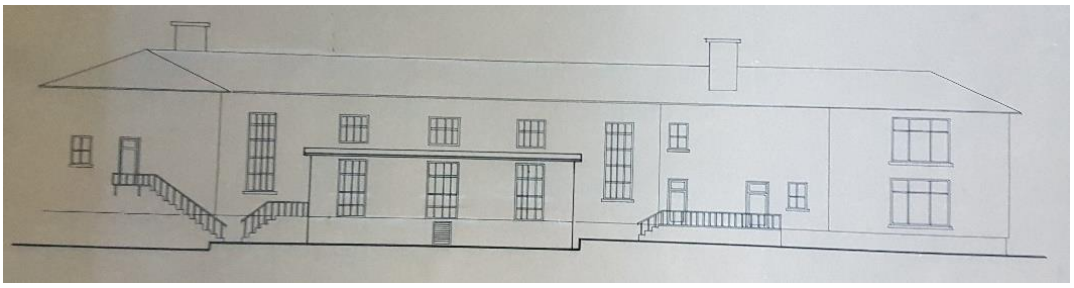

Figure 3.106. The elevation drawing of the extension proposal of the cinema building (Source: TTK Archive, 2020)

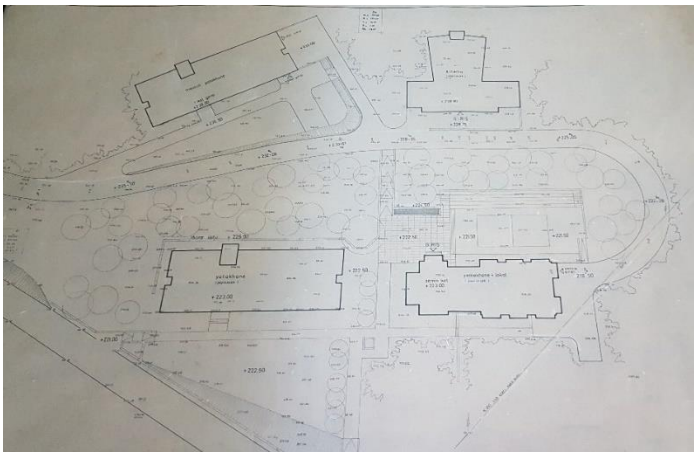

Figure 3.107. The site plan of the complex for workers (Source: TTK Archive, 2020)

Apart from building new complexes, structures, or extensions, EKİ was considered the infrastructure of the region. The infrastructures of the newly built buildings were also made by EKİ. The city has expanded with the immigration areas and EKİ has also supported the infrastructure of the newly established places. Transportation was by EKİ vehicles (Figure 3.108).

Figure 3.108. The image of an EKİ vehicle in the 1970s (Source: Kandilli Cultural Association Archive, 2021)

Kandilli Region Between 1980 and 1990:

The operation of the mines was changed in this period. With the conversion of EKİ to TTK in 1983, this enterprise continued its activities as Armutçuk Hard Coal Enterprise affiliated with TTK (Taşkömür, 1985, p.9). TTK has paved the way for urbanization along with industrial development in this region, where it has undertaken the realization of industry, transportation, energy, communication, trade,

and infrastructure equipment. The region received immigration and became a town in 1987.

In the 1980s, **the coal production** in this region continues in the Yenikuyu region under the management of TTK.

During this period, there was a complex **mining community** in this region. When the region became a town in 1987, almost all of the population of Armutçuk consists of those who came to work through immigration, mainly from the provinces of Trabzon, Kars, Ordu, Giresun, Gümüşhane, Ardahan, Çorum, and Kastamonu. Although the inhabitants came from different cities, they had a common culture and bonds over time. Moreover, the 1980s coincide with the last times of the active sociocultural life in the region. During this period, balls, celebrations, and performances are held.

Figure 3.109. The Photograph of a theater show from the 1980s (Source: Kandilli Cultural Association Archive, 2021)

Moreover, the coast was also one of the important centers of social life in the 1980s. The people living in the region had a good time by going down to the beach with varagel (Figure 3.110).

Figure 3.110. The image of the beach in the 1980s (Source: Kandilli Cultural Association Archive, 2021)

Apart from the active sociocultural life of the inhabitants, negative situations also took place in the 1980s in the region. There was an explosion in Kandilli on March 7, 1983, and 103 people died (Zaman, 2004, p.140). There was great mourning with this explosion and a cemetery was provided for the mining martyrs to keep their memory alive.

When we look at **the site** in this period, there is not much change compared to previous periods. During this period, maintenance projects were generally carried out in the buildings, and the new structure is not seen much in the Lower Kandilli region. The guesthouse, which has an important place in the social life of the society, was maintained in 1985 (Figure 3.111, Figure 3.112).

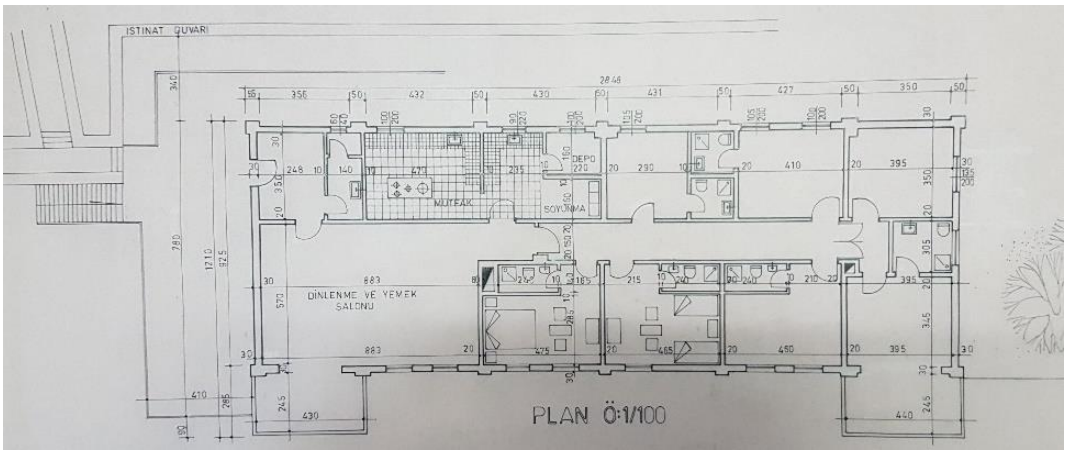

Figure 3.111. The plan drawing of the guesthouse in the Lower Kandilli region (Source: TTK Archive, 2020)

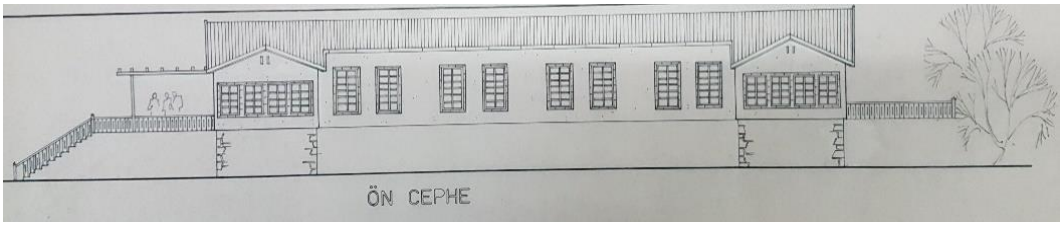

Figure 3.112. The elevation drawing of the guesthouse in the Lower Kandilli region (Source: TTK Archive, 2020)

Although the buildings in the area are generally similar to the previous years, with the increase in the population in the Upper Kandilli region, lodgings for engineers in the form of apartments were built in this period next to the cinema in the Yayla neighborhood (Figure 3.113).

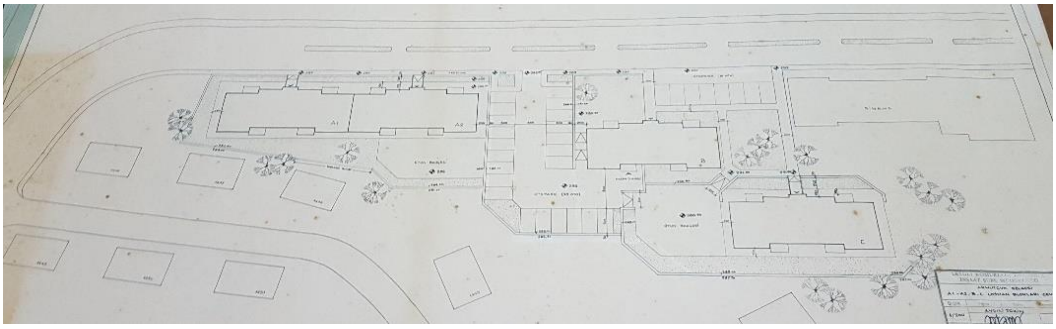

Figure 3.113. The site plan of new apartments for engineers in the Upper Kandilli region (Source: TTK Archive, 2020)

Moreover, in this period, an indoor sports hall was built on the land next to the secondary school in line with the needs of the period (Figure 3.114, Figure 3.115, Figure 3.116).

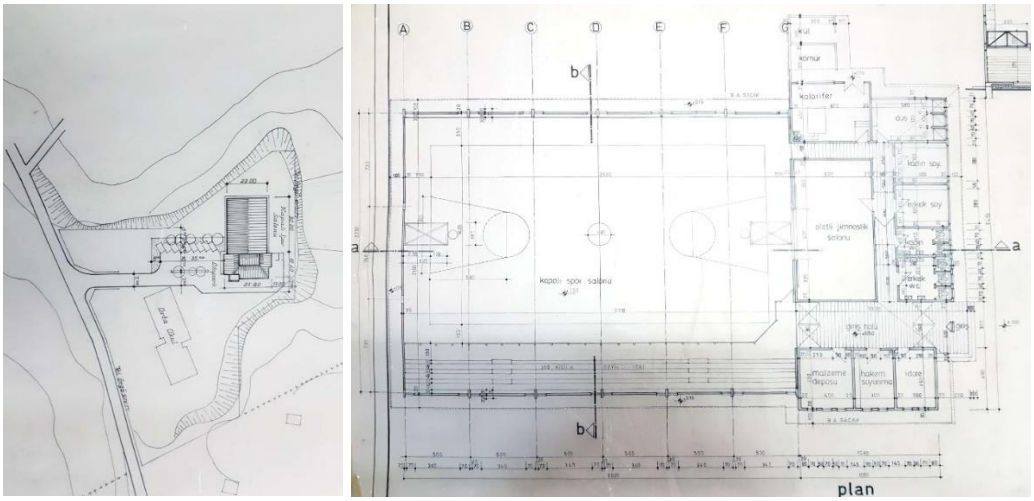

Figure 3.114. The site plan and plan of the sports hall (Source: TTK Archive, 2020)

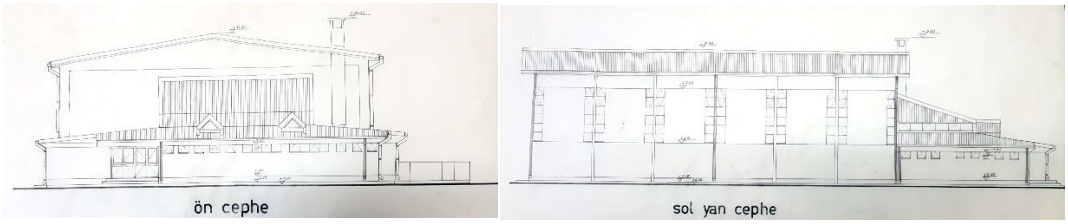

Figure 3.115. The elevation drawings of the sports hall (Source: TTK Archive, 2020)

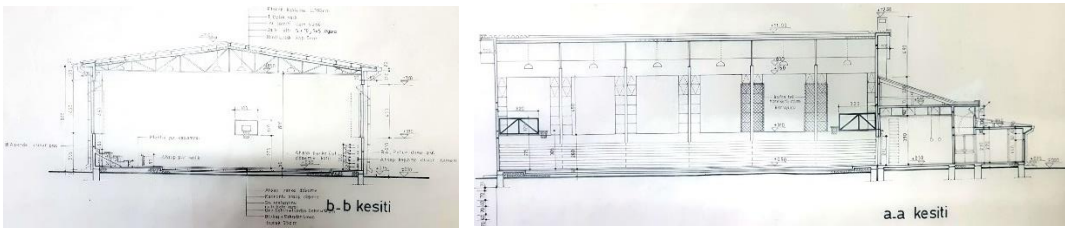

Figure 3.116. The section drawings of the sports hall (Source: TTK Archive, 2020)

Moreover, after the primary school was connected to the Ministry of National Education in 1983, the culture of education changed. Moreover, the services of the TTK began to change. For example, the tradition of distributing coal to houses by mule has come to an end. Towards the end of the 1980s, fires began to break out in

the buildings. After 1986, a fire broke out in the cinema building and the cinema building burned down. But the officers' club, which is part of the cinema building, remained intact.

Kandilli Region After 1990:

Before the 1990s, Ereğli Coal Enterprise (EKİ) established the infrastructure to meet all the needs of the workers and the workers' families living in that area and serves like a municipality. Before the 1990s, there were two beaches for rest and entertainment, one bakery that could meet the bread needs of the region, a workers' club for workers and chiefs, an officers' club that was opened for the use of women once a week, five marketplaces (ekonoma), two mosques, a park, an indoor sports hall, three cinemas one of which was destroyed by fire and two of which were destroyed by the TTK. The last cinema, on the other hand, was rented to the Kandilli Municipality, and the private person renting it from the municipality turned it into a wedding hall. Until it was transferred to the Ministry of National Education in 1983, EKİ had one private primary school and one private secondary school providing education, and the teachers worked as permanent officers of EKİ with high wages. EKİ schools had football, volleyball, and basketball teams. EKİ also provided transportation services. There were student transportation to Ereğli and public transportation to Ereğli Market for those who want to go shopping for the weekly markets. In addition, EKİ considered all the needs from the water-sewage infrastructure of the region, to the necessary construction equipment and materials, including salting, in order to keep the roads that provide transportation from the surrounding villages to Armutçuk open during heavy snowfall in the winter months. Moreover, it is known that people from Ereğli came to Armutçuk for the movies and the beach, although it was not a big town.

In the 1990s, the Kandilli region entered a **period of collapse.**

The mining industry was faced with the rhetoric of downsizing of the state and the privatization-closure impositions that were put into practice in the 1980s. These impositions continue to accelerate in the 1990s. It has become the main target of

TTK privatization initiatives, arguing that coal is not a strategic mine to be purchased. For this reason, many resistances, meetings, and panels were held by the workers in the 1990s. This solidarity was an effort to keep Zonguldak and TTK alive, as well as the wage struggle of the workers. For this reason, political differences were lifted and the people of Zonguldak were tied together and in 1990 there was a big strike in which the people of Kandilli also participated (Zaman, 2004, P.139). In the 1990s, closures began to come to the fore. TTK has gone down in size. With the basin concentration project, it is aimed to reduce the production coefficients in the quarries, to gather scattered working places, to reduce production costs, and to produce low ash. In this context, the Kireçlik mines were closed in 1992. Alacaağzı facility was also abandoned and the production areas were completely concentrated in the Kandilli region (Zaman, 2004, p.142). Until the 1980s, Zonguldak experienced the problems of being a province that received immigration, but in the 1990s, everything in the basin turned upside down. Forced dismissal under the name of retirement began to be implemented. As a result of the retirement transactions carried out within the scope of the workforce improvement project, a worker shortage occurred underground (Zaman, 2004, p.143). In the 1990s, there was a shortage of workers, and there was no investment in the regions with downsizing policies. As a result, coal production declines, and the regions migrate. The quality of social life decreases and the collapse of the regions begins. Kandilli has also experienced similar processes. After 1990, with the acceleration of the practices to narrow and downsize the TTK, it ceased to serve as a municipality, and the social facilities it used were first destroyed and then demolished by the staff of the institution. As the recruitment of workers was not as much as before, Kandilli ceased to be a center of attraction, and the children of the workers also migrated to the big cities. While a significant part of the TTK employees moved to the surrounding districts, the miners living in the villages also moved to Kandilli. After this population movement, the indigenous population started to constitute almost half of the total population. Thus, with this process of not giving importance to coal production and social-cultural structures, some neighborhoods of Kandilli completely disappeared and some

neighborhoods have shrunk considerably with the reverse migration. In addition, TTK's mission is to produce coal, and for this, it uses all its means. Therefore, it cannot protect its above-ground facilities. When coal production ends, it cannot allocate a budget to repair the unused structures in the region, leaving the facilities there as they are, and starting to establish new facilities in new mines in new veins.

Thus, it can be understood that the decrease in the importance and production of coal in Kandilli caused the deterioration of the community and the site in the region, triggering the collapse of the region. As mining lost its importance, the workers living in the region began to be ignored and the needs of the workers were not met. As a result, workers migrated from the region and many buildings became unusable. Later, these structures began to disappear.

The collapse phase of the region can be understood from the aerial photograph of the region in 1998 (Figure 3.117). The structures in Kandilli were established on forest property and treasury land, and the Lower Kandilli area was leased for 99 years. They leave the region after 1995 when the production is over. Since the lodgings in Lower Kandilli are not used, they are demolished by the institution, and the buildings that are not destroyed are damaged by the destructive power of nature. In this period, the aspirator building, the house next to it, the workshop building, the varagel, the hoist, and the house next to it remained intact as they continued to be used. With the end of production, the beach also disappeared.

The immigrating Upper Kandilli region, on the other hand, becomes a town of empty buildings. Since the number of workers has decreased, the dormitories of the workers' complex structures, which are no longer in use, become idle after being used as chest diseases hospital and health vocational high school. The cinema structure in the complex also becomes idle after being used as a wedding hall for a while. The directorate was moved and the directorate building was turned into a lodging. Two schools, a hospital, and a guesthouse continued to operate. Although the officers’ lodgings and worker's lodgings continued to be used for a while, the worker's lodgings began to become empty over time. Although the club buildings

continued to be used for a while, their use decreased when the population decreased due to immigration from the region. With the decrease in the importance given to social activities and sports, the gym was closed over time.

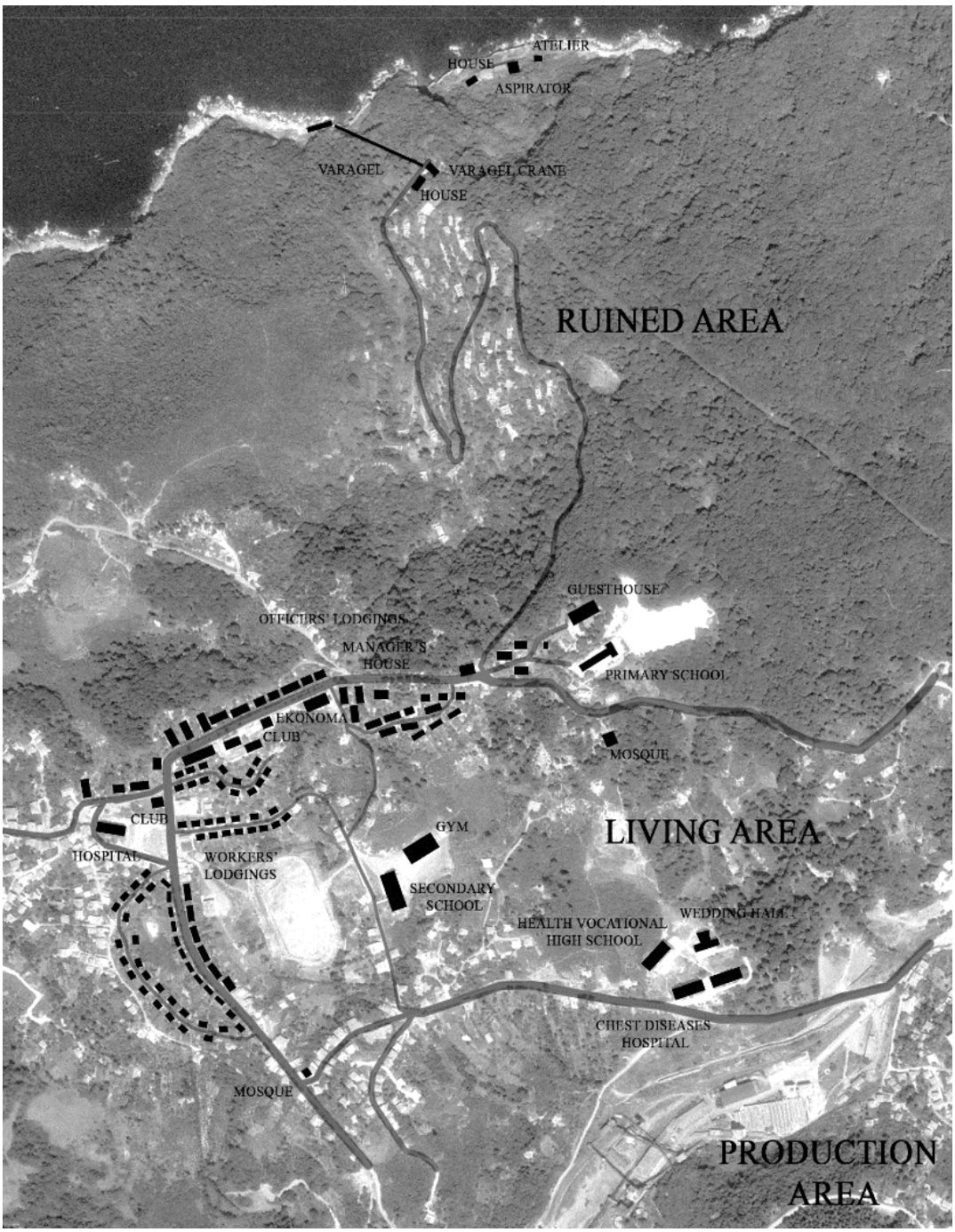

Figure 3.117. The aerial photo of Kandilli in 1998 (The base is from the General Directorate of Mapping and the markings made by the author)

As the value of the region began to be appreciated in the following years, conservation efforts began. Accordingly, ten industrial structures which are cinema, office, lamp room, varagel crane, varagel, boathouse, house, aspirator building, coal silos, and mine with tunnels were registered in the Lower Kandilli region in 2015 by Karabük Cultural Heritage Preservation Regional Board (Figure 3. 118).

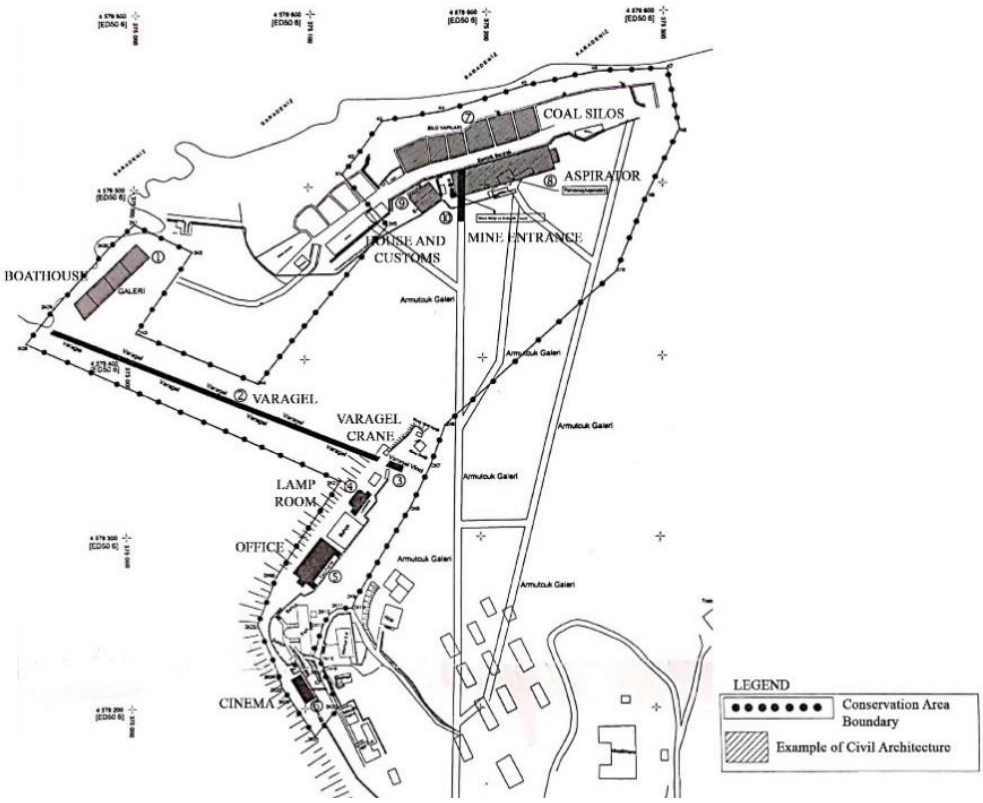

Figure 3.118. The map that was taken from the registration document shows registered buildings in the region (Source: Zonguldak Special Provincial Administration Archive, 2020)

In addition, the inhabitants realized that the region was disappearing and started to take action in the region in order to keep the region alive. For this reason, the people of the region came together and carried out cleaning work in the forested area in the Lower Kandilli region in 2017 (Figure 3. 119).

Figure 3.119. A piece of internet news about the cleaning of the Lower Kandilli region by the people of the region (Source: https://www.aa.com.tr/tr/turkiye/asirlik-varagel-icin-belde-halki-seferber-oldu/877528)

Furthermore, a proposal was developed by architect Nevzat Sayın and his team in order to revitalize the area in 2018. However, the project could not be implemented due to financial insufficiencies. In the project, a sunken mole, hotels, museums, a restaurant by the sea, a pedestrian path, a driveway, a nature sports center, and a beach were proposed. Within the scope of the project, it was thought that the aspirator building would be transformed into a museum, the old beach would be rebuilt, the varagel was operated, and hotels would be built with new structures according to the needs (Figure 3.120).

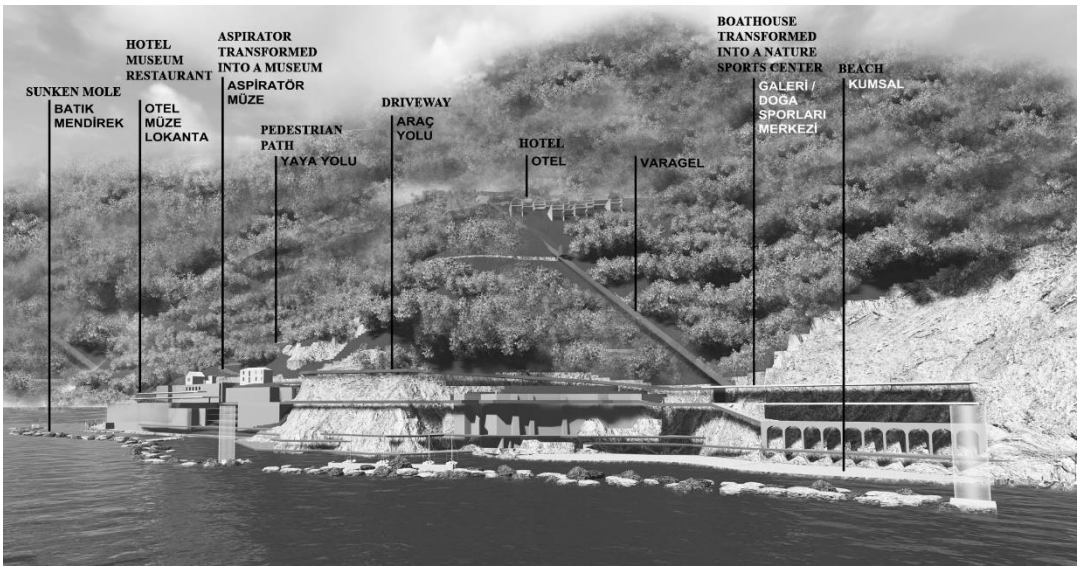

Figure 3.120. The image shows the proposal of Nevzat Sayın and his team in the Lower Kandilli Region (Source: https://www.arkiv.com.tr/proje/kandilli-varagel-mimari-konsept-projesi-proje-kunyesi/9717)

Considering all these, it can be thought that the 1940s, when all the mines were collected and nationalized on one hand, was a turning point for the Kandilli/ Armutçuk region. It has been determined that the 3 components of the Kandilli region, namely industry, site, and community, have changed with the nationalization of the mines in 1940. Therefore, making a comparative summary of the pre-1940 and post-1940 periods of the Kandilli region is necessary to understand the history of the region.

Pre- 1940 Period of Kandilli/ Armutçuk Region:

Production:

This region is one of the oldest coal areas where coal has been produced since the first years of its existence. **Before the 1940s**, the mines in this region were operated by different companies and independent individuals. Therefore, integrated and regular coal production has not been made. The most active companies in the region were foreign companies. Therefore, production technologies in the region were able to develop rapidly and a significant amount of production in the basin was made

from this region. In addition, due to its location in the region, production has been able to continue without stopping. In addition, while the production was made with simpler methods at first, the methods have developed over time.

Community:

Since the first days of mining in the region, there has been a complex mining community. **Until the 1940s**, miners were brought from other places because mining was not known in the region. Then, miners started to come from the surrounding villages and cities after learning about mining in the region. Later, with the entry of foreign companies into the region, the foreign population in the region increased. Therefore, the synthesis of different mining groups from different lifestyles and cultures was seen in the region. However, miners' rights were not taken into account until the time of the Italians. Miners were forced to work under difficult conditions and their social needs were ignored. With the arrival of the Italians in the region, a system began to emerge in which all the needs of the workers were met. Social life began to move, and sports competitions and entertainment began to be organized.

Site:

A large settlement was not seen in this area **until the 1940s.** Both production and living areas are located by the sea. Production structures were given priority. In the beginning, intense urbanization and industrialization were not seen. Since the technology was not very developed, the production areas were few, while the other structures were almost non-existent. However, in the time of the Italians, the site began to become more complex and the buildings where the social and accommodation needs of the workers were met began to be seen. However, production and settlement were still limited to the seaside.

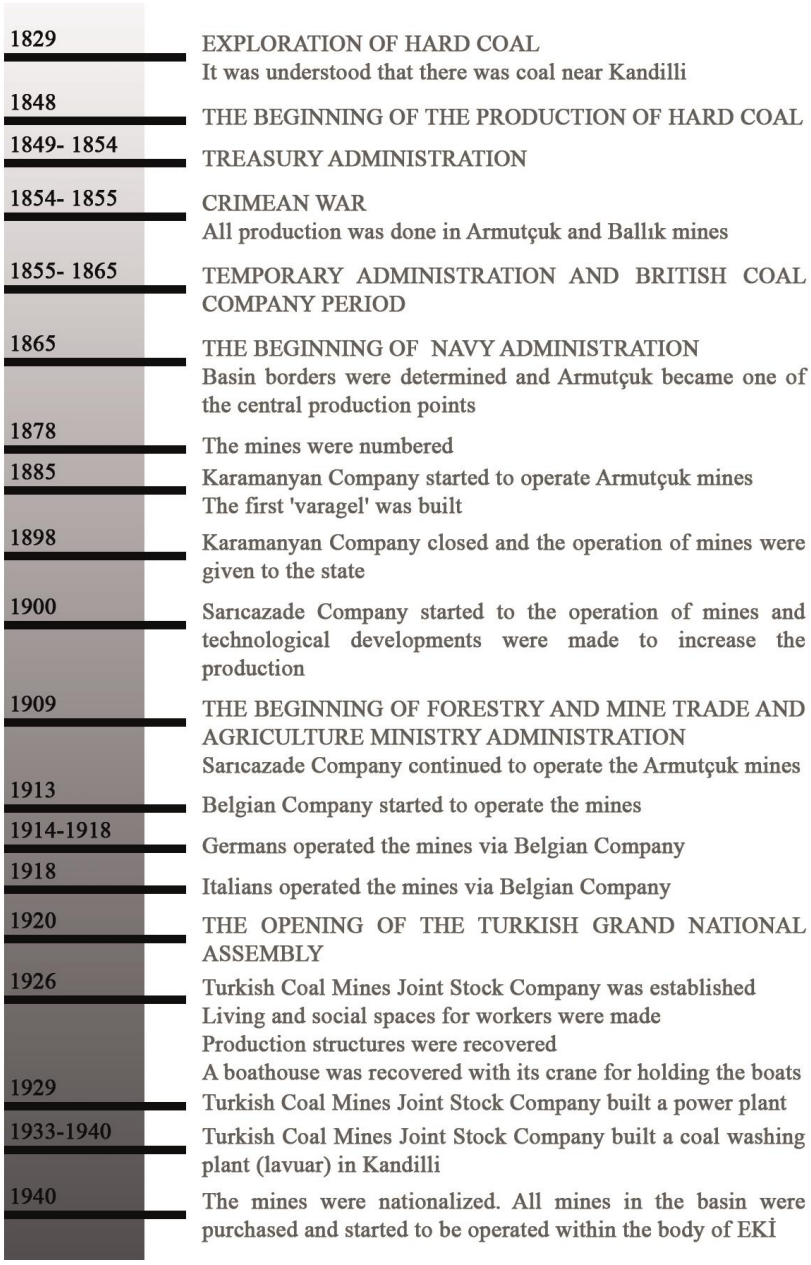

Figure 3.121. The image of the historical development of the region in the pre-1940 period (Author, 2021)

Post- 1940 Period of Kandilli/ Armutçuk Region:

Production:

With the nationalization of the mines in the 1940s, coal production in the Kandilli region was also nationalized. Over time, the institution providing production in the

region has changed. While coal was produced by EKİ at first, the region became a separate directorate in the 1950s as AKİ. Later, the area passed back to the EKİ administration, and in the 1980s EKİ turned into TTK. After the mines in the area were nationalized, production increased in the area until the 1990s with the policies, supports, and technological developments implemented. However, the decline of the importance given to coal mining later triggered the collapse of the region.

Community:

With the establishment of EKİ **after 1940**, a period was entered in which all the needs of miners, especially their rights and social needs, were considered. Working conditions were regulated, security measures were taken, and salaries were regulated. In addition, their own currencies and shopping areas were created. Moreover, social life entered its most active period. Sports competitions, theater and cinema screenings, concerts, balls, dinners, meetings, and holiday celebrations were organized. The mining community established strong ties with each other and with Kandilli, and unity increased. However, by the 1990s, as coal mining lost its importance, the social needs of the miners became unmet and strikes arose. Later, the ties of the miners with Kandilli were severed and migration started from the region.

Site:

After the 1940s, the Kandilli site expanded until the 1990s in line with the policies and needs of EKİ. It is understood that the region started to form from the seaside and then developed towards the interior for various reasons. While production and settlement were at the seaside at the beginning, then with the migration to the region and the transfer of production to the inner parts, the settlement area grows and spreads towards the inner parts. Then, with the end of production on the seaside, the first settlement that was established comes to the brink of extinction. In the diagram below, the green line shows the change in the production zone over time, while the purple line shows the change in the residential zone (Figure 3.122).

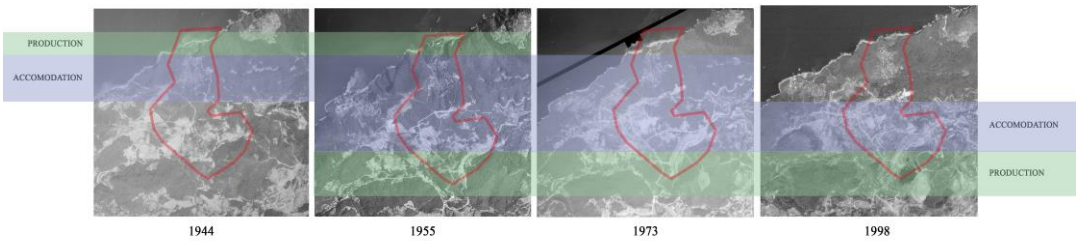

Figure 3.122. The image that shows the transformation of the region in time (The base maps are from the General Directorate of Mapping and the markings were made by the author)

In the 1940s, while the production areas were by the sea, the living and socializing areas were located at higher elevations. During this period, a settlement was started to be established by considering all the needs of the workers. By the 1950s, while the production areas were still by the sea, the living and socializing areas expanded towards the interior. In the newly formed living area, all the needs of the miners were taken into consideration. In this direction, lodgings for workers and civil servants, and public structures such as hospitals and schools were created. However, the density of buildings in the region during this period is very low. By the 1970s, production begins in the Yenikuyu region, and the old production area begins to disappear. However, the residential buildings in the Lower Kandilli area are still in use. This shows the commitment of the inhabitants to the area. However, the Upper Kandilli part has expanded and developed as the region has received immigration. New civil servants' houses, sports fields, ekonama, cinema, and clubs were built in the region. In addition, a workers' complex consisting of a cinema, lodgings, and cafeteria was created. The building density has increased in the area. By the 1990s, the Lower Kandilli area in the area was completely emptied and came to the brink of destruction. In the Upper Kandilli region, the building density has increased. Buildings such as apartments, an indoor sports hall, and a secondary school were formed. However, with the loss of importance of coal in this period, the buildings started to become empty (Figure 3. 123).

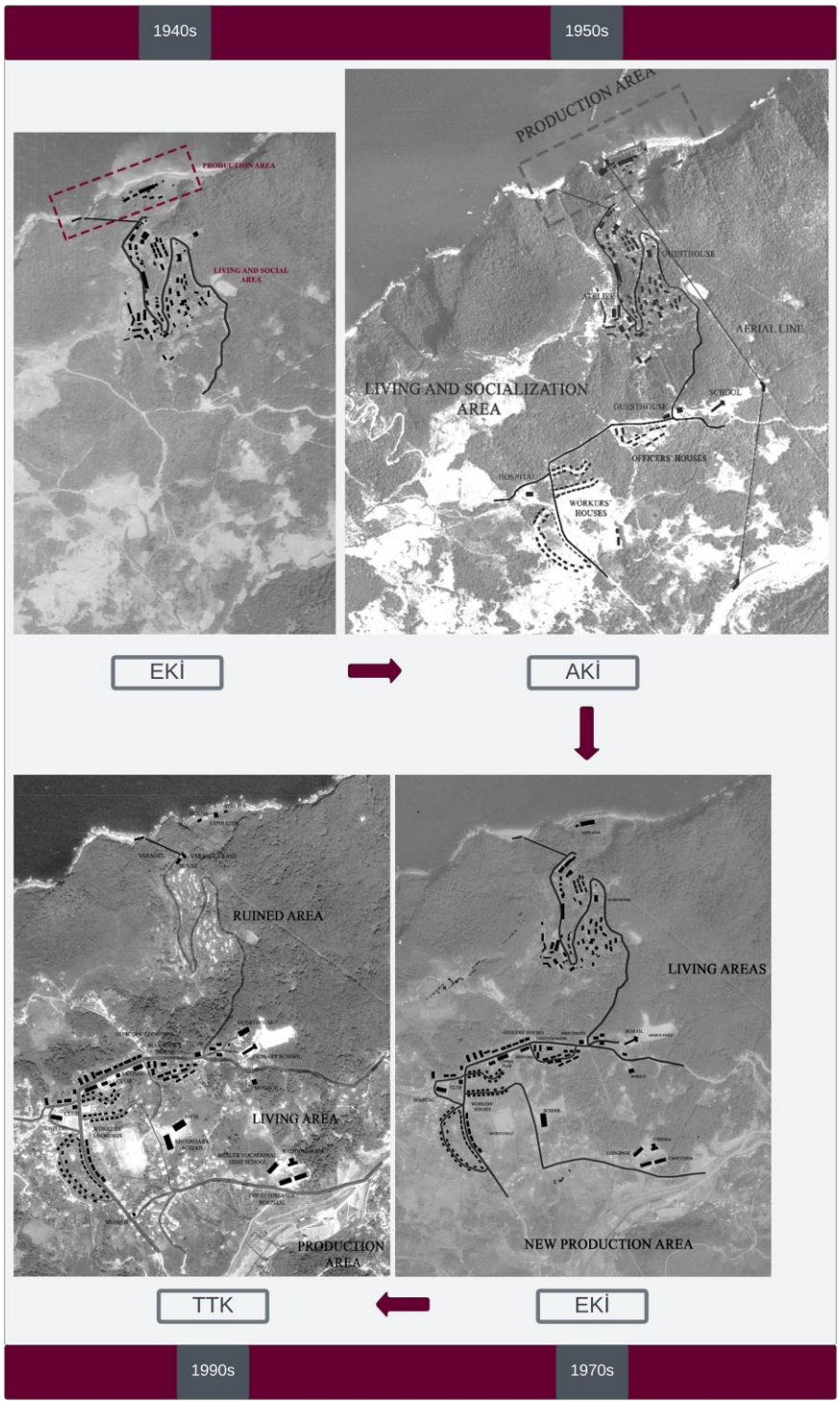

Figure 3.123. The image of the historical development of the region in the post-1940 period (The base maps are from the General Directorate of Mapping and the markings were made by the author)

3.2.3 The Current Status of Zonguldak- Ereğli Coalfield

In order to understand the current situation of Zonguldak- Ereğli Coalfield, the region should be examined with its three components which are industry/ production, site, and community.

The production of hard coal still continues in Zonguldak- Ereğli coalfield. Turkish Hard Coal Enterprise Institution has operated the production works in the basin. Turkish Hard Coal Enterprise Institution, which was established as a state-owned enterprise with the decree dated 28.10.1983 and numbered 96, has been the only establishment producing hard coal in Turkey since its establishment (Gürol, 1997, p.1). Turkish Hard Coal Enterprise Institution continues its production activities with five establishments within the provincial borders of Zonguldak and Bartın, and consists of Amasra, Karadon, Üzülmez, Kozlu, and Armutçuk Hard Coal Enterprises from east to west.

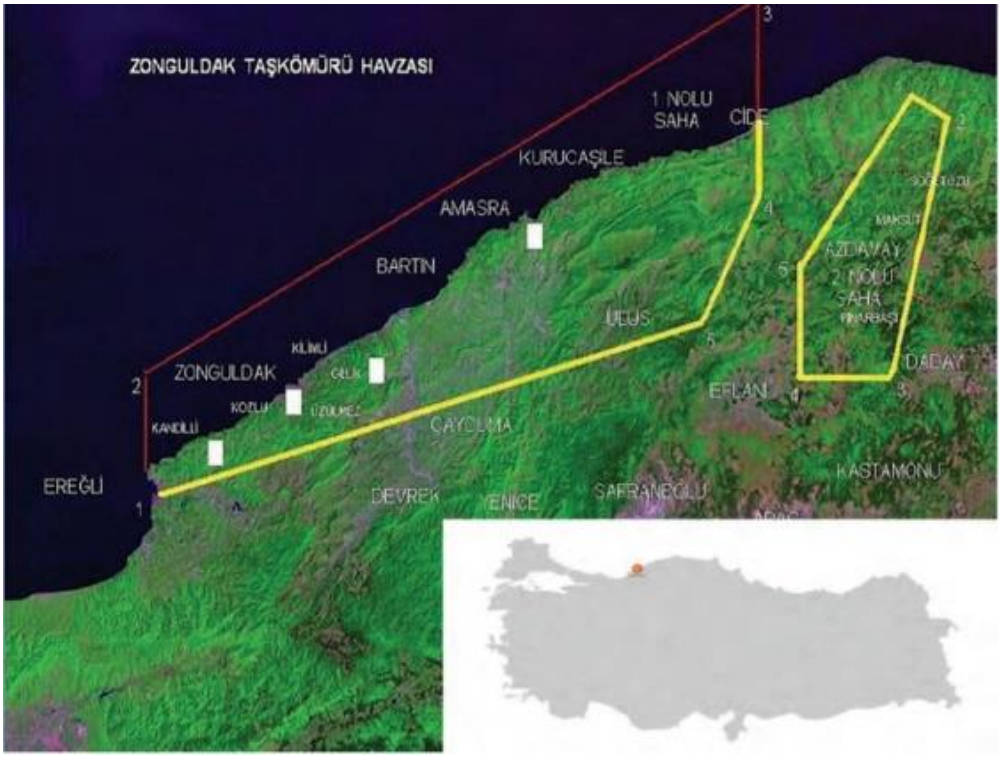

Figure 3.124. Zonguldak-Ereğli Hard Coal Basin Concession Area (Turkish Hard Coal Enterprise Institution Activity Report, 2019, p.36).

The total geological reserve identified up to -1200 m depth in the reserve exploration studies carried out to date in the basin is 1.517 billion tons, of which approximately 48% is considered as a visible reserve (Turkish Hard Coal Enterprise Institution Activity Report, 2019, p.21).

RESERVE	Armutçuk	Kozlu	Üzülmez	Karadon	Amasra		TTK
					A	B	
Prepared	1.453.322	3.037.432	327.943	1.844.496	335.000	-	**6.998.193**
Visible	7.468.483	62.721.133	133.177.529	129.958.531	5.550.407	395.954.757	**734.830.840**
Probable	14.407.491	40.539.000	94.342.000	159.162.000	2.176.308	151.161.950	**461.788.749**
Possible	7.883.164	47.975.000	74.020.000	117.034.000	7.758.000	58.812.778	**313.482.942**
TOTAL	**31.212.460**	**154.272.565**	**301.867.472**	**407.999.027**	**15.819.715**	**605.929.485**	**1.517.100.724**

Figure 3.125. Hard Coal Reserves in Turkey in ton (Turkish Hard Coal Enterprise Institution Activity Report, 2019, p.21)

Moreover, according to the Turkish Hard Coal Enterprise Institution Activity Report, coal production in the basin has decreased since 2010 (2019, p.24).

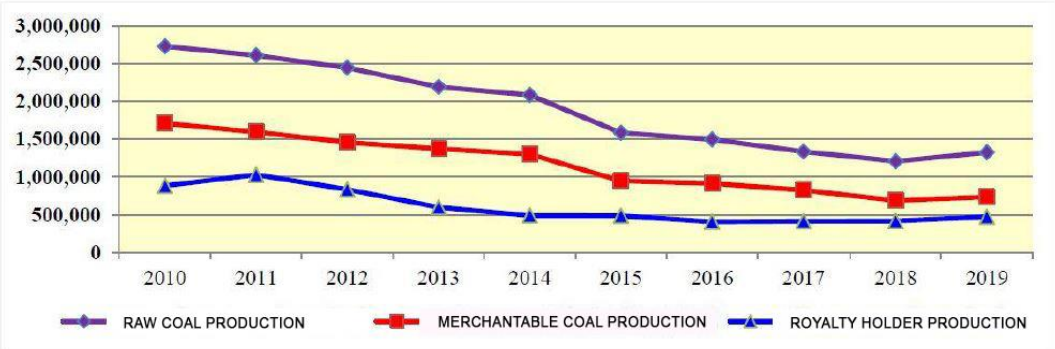

Figure 3.126. Coal Production in the Basin between 2010 and 2019 (Turkish Hard Coal Enterprise Institution Activity Report, 2019, p.24)

Looking at **the site** in the region, it can be understood that the integrity of the area has been broken. Although new tourism-oriented studies are carried out on old coal production areas, there are parts that are not successful. It is seen that the important

industrial and living structures that were used at the time of coal production, which are not currently in use, were either demolished or left in ruins or were renovated with a new function unrelated to their old function. There is also pollution from coal production in the region. In addition, the site has a very fragile structure as underground mining is done in the region.

Looking at **the community**, it is understood that although the mining culture is tried to be preserved, the identity of the miners' has begun to disappear as the production has decreased. Miners and their families prefer to live in big centers such as Zonguldak or Ereğli instead of living in production areas. It is seen that the needs of the miners are not met as much as before, and it is understood that the professional pride of mining has eroded over time.

3.2.4 The Current Status of Lower and Upper Kandilli Regions

When a mine is found in a region, an industry develops in that region depending on this mine. With the emergence of job opportunities along with the industry, the region receives immigration, and a community and a culture connected to this community are formed. In addition, settlements appeared near the production areas where the needs of these communities can be met. Therefore, mining areas are complex areas that include industry, community, and site and should be understood with all their components. The Kandilli region, as an area with its own industry, community, and site, established with the discovery of coal, sets a good example for these areas and follows similar processes to other mining regions in different parts of the world.

Mining is an important industry with a major impact on the environment and communities. This industry, which is inevitable to be consumed, has been a triggering force for the development of the region and the formation of the community and landscape. In Kandilli, the mining industry had a similar effect on the region. With the discovery of coal, the region attracted the attention of the

administrators and started to play a major role in the development of the country. Thus, the region received large investments and over time became an important area that reflects the technology, ideology, and way of life of its period.

In mining regions, mining communities formed with the start of the mining industry differ from other industrial communities and have their own characteristics. Mining communities are known for the dedication of workers to their jobs and to each other. The dedication of the mining communities to their work makes mining a family profession that is passed down from generation to generation. The similar lifestyles of the workers and the dangerous nature of mining also create a tight-knit society. This strengthens the sense of belonging to the community and increases the community's chances of survival. Mining communities take pride in their work and have a unique sense of identity. They have a strong sense of solidarity with industrial tragedies caused by accidents and deaths. Mining communities, which have a complex structure where racial and class distinctions are visible, develop a culture and lifestyle of their own with their commitment. In Kandilli, a community is formed that is connected to their work, place of residence, and to each other. Everyone in the area knows each other. Together, they react to accidents, explosions, and political decisions to downsize mining. The people living in the region own Kandilli and feel that they belong to a society and a place. Although there are racism and class distinctions, they have found a way to live together and have established an emotional bond.

When there is a mine in an area, a landscape is formed in that area besides the industry and the community. Mining landscapes are complex like mining communities by having lots of components and they contain mines themselves, secondary industries, living sites with housings and social buildings, infrastructure, transportation, landscape modifications, natural elements, and closer rural settlements. These mining landscapes, like mining communities, have their own characteristics. These landscapes are isolated areas. They are generally located in rural areas and far from other settlements and can be distinguished from the surrounding settlements. They are clustered and positioned depending on the mineral

source and topography. For this reason, disasters such as fires or epidemics spread more easily. Mining areas have distinctive features and can be distinguished from each other and their surroundings. Race and class divisions in society can be read from the landscape. There is homogenization. Harmful wastes and land movements and deformations are seen in these areas. In addition, mining landscapes have a distinctive aesthetic that can be distinguished from other landscapes. The mining landscape of Kandilli is also a landscape that should be examined with its unique features. It contains production areas with their structures, secondary industries like lime kilns, sawmills, or factories related to coal mining, living sites with lodgings and social structures, infrastructure, transportation networks, landscape modifications with voids that are mines and underground tunnels, natural elements like gardens, parks or forests, and closer rural villages like Gökçeler village. The mining landscape of Kandilli has unique characteristics. It is a remote area from other settlements, it is clustered because of the topography and the mine veins, it is distinctive from its surroundings, race and class divisions in society can be read from the landscape, it is homogenized, land movements and waste disposals can be seen and it has a unique aesthetic with old industrial structures and its location on the coast. Thus, mining areas such as the Kandilli region should be understood by being aware of their complexity within a system where all kinds of services are considered for the maintenance of the region with its industry, community, and landscape.

However, besides all these unique characteristics, mining is an exhaustible resource, and mining areas are single-industrial areas. For this reason, it is inevitable to start the disappearance of mining areas. When the mining industry, which is the driving force of the urbanization and development of the region, disappears due to various reasons such as the depletion of resources, the region enters a process where it collapses and loses its economy, society and landscape. When the mining production stops, with the decrease in job opportunities and social opportunities, outward migration begins and the region loses its community whose bonds were lost. The unused physical environment also deforms over time by becoming obsolete. After the 1990s, Kandilli entered a similar process of collapse because of the changing

political ideologies and the decreases in production. Although Kandilli is in the process of collapse, the current situation of the area should be understood within a complex system with its industry, community, and physical structure/ site, considering its complexity. Thus, in this part of the thesis, the current situation of the Lower and Upper Kandilli regions is examined with their three components which are industry/ production, site, and community. Moreover, these three components which are industry, site, and community examined together with their sub-components which are natural features, cultural landscape, built-up environment, transportation network, and open areas for a better understanding of the field (Figure 3. 127).

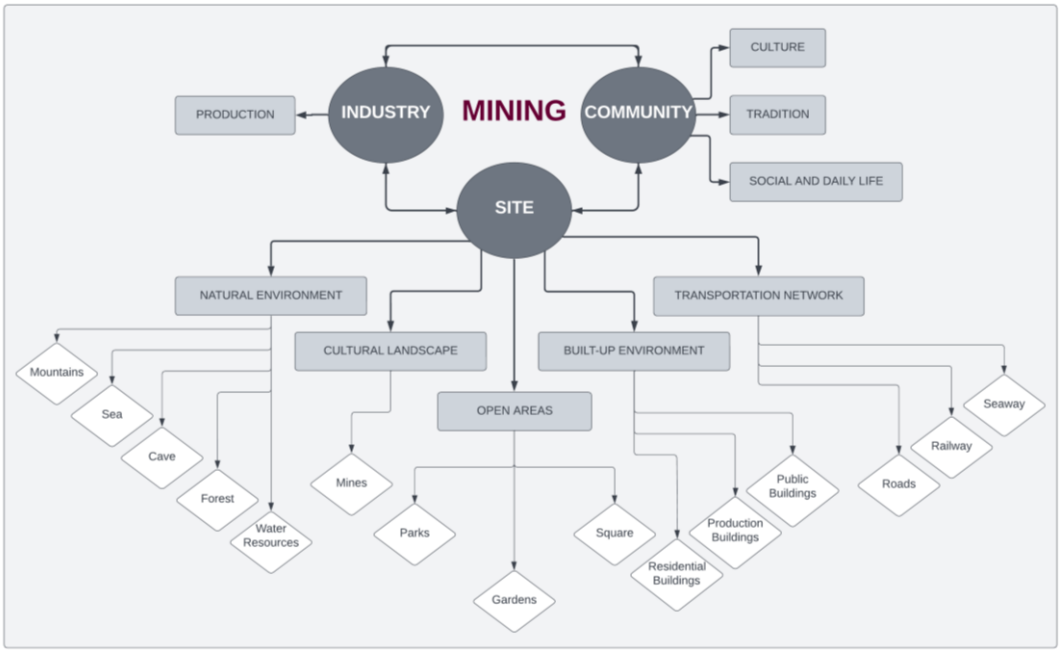

Figure 3.127. Diagram showing the components and sub-components of the Lower and Upper Kandilli regions (Author, 2021)

Industry:

The only hard coal in Turkey is produced in the Zonguldak-Ereğli hard coal basin. The veins with the highest methane content are in this region, so there is a lot of firestorm explosions. While coking coal is extracted in other regions, semi-coking

coal is extracted in Kandilli. While there is more than one vein in other regions, there is only one large vein in this region. Production in the region started from the Lower Kandilli region. However, over time, with the depletion of coal in that region, the production area has shifted towards the interior. With the TTK leaving the area due to the end of production, Lower Kandilli has become a post-mining area. Today, there is no production in the Lower Kandilli region. The tunnels in that area are used as ventilation for the new production area. However, problems have started to be seen in today's mining production. With the decrease in the importance given to mining in the 1990s, TTK started to follow a downsizing policy. Due to the lack of investment in mining, new technologies and the latest systems could not be utilized in production. In addition, workers were not recruited to replace the retired workers and production decreased. With the withdrawal of the TTK from its sustainable system and services to meet all the needs of workers, regressions occurred in areas such as social, health, and education. The people living in the region started to migrate from the region. The region, which was established with coal production, started to collapse due to a decrease in coal production.

Community:

Kandilli used to be a crowded and lively region. The miner community consisted of those who migrated from different provinces and settled here, but those who came also adopted Kandilli and each other. It was a community committed to work and to each other. The miners had a sense of belonging and were appreciated for their work. But now, as a result of the decrease in the number of workers and the inadequate services in the region, the social life has been damaged and the sense of belonging has decreased. Miners began to be underappreciated and occupational pride waned. Since the people living in the region know that they will leave after retirement, a community has formed that does not own the region.

Site:

Since the production in the Kandilli region started from the seaside, the landscape also started from the seaside. Later, the campus spread over a wider area due to

population growth, the opening of the railway, and the progress of production to the inner parts. Later, with the end of production in the Lower Kandilli region, that region was abandoned and the post-mining landscape emerged. While the Lower Kandilli region is a post-mining landscape consisting of ruins, the Upper Kandilli region is a landscape with empty buildings that have been abandoned in recent years, but are still alive. Although Lower Kandilli and Upper Kandilli regions have different conditions, the mining landscape in both regions includes natural areas, cultural landscape, built-up environment, transportation network, and open areas.

Natural Environment:

Kandilli is a very rich region in terms of natural features. The region is quite mountainous. This made transportation difficult but facilitated coal production. In addition, the fact that the region is on the seaside shows the richness of the natural environment. Another natural feature in the region is the caves. There are Göleviç, Alayurt, Cehennemağzı and Ilıksu caves in the region. Apart from these, another natural feature of the region is its rich water resources. There are Göleviç and Üçköy waterfalls, Ilıksu hot spring, and rivers in the region. In addition, the region is a very forested area and there are many types of trees in the area.

Cultural Landscape:

In the region, the areas where the interaction of human and nature occur most are voids. Therefore, voids were mentioned in this part. When we look at the present situation of the Kandilli region, we see that it is a town sitting on unstable ground with many underground tunnels. In particular, the bottom of the Lower Kandilli region consists of a huge void. In this region, there are approximately 173 km of tunnels between +20m and -550m in depth. Among these, tunnels other than the -500m tunnel are no longer used. Tunnel entrances are located in the Lower Kandilli area in the region.

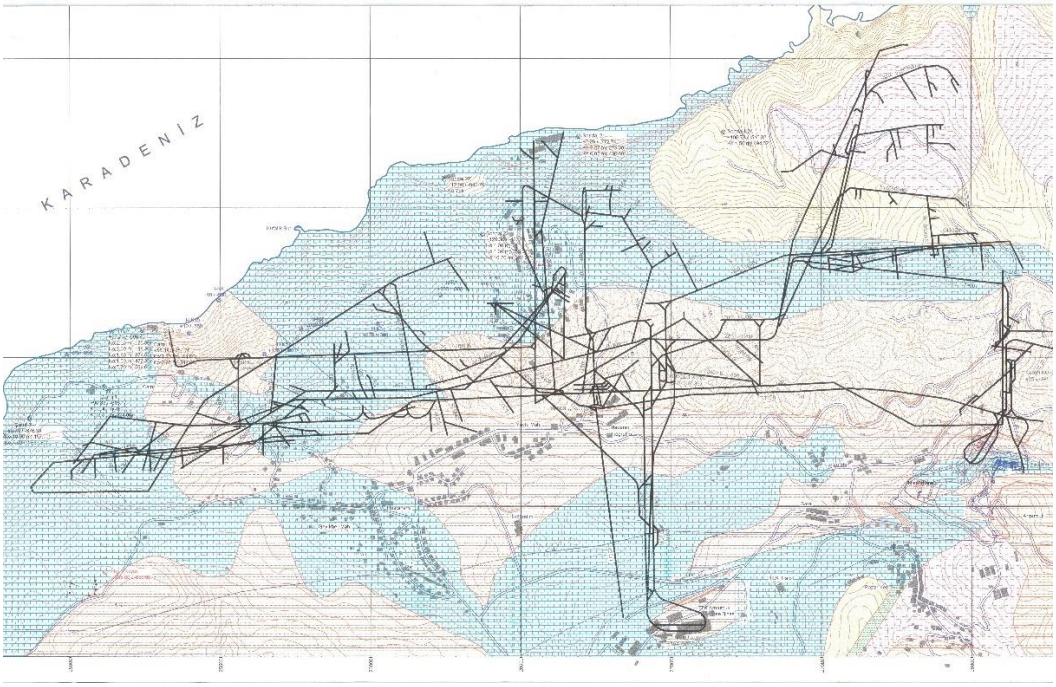

Figure 3.128. Kandilli region map with overlapping underground and aboveground (Source: TTK Armutçuk Archive, 2020)

Figure 3.129. Some of the tunnel entrances in the Lower Kandilli Region (Source: Zonguldak Special Provincial Administration Archive, 2020)

Open Areas:

It is possible to come across quite a variety of open areas in the Kandilli region. Since the Lower Kandilli region is an abandoned area, it has become an area covered by forest. There are no landscaped gardens or parks in the area (Figure 3.130). In the Upper Kandilli region, all TTK lodgings have their own garden. The inhabitants of the region grow fruits and vegetables in their own gardens. Buildings such as the guesthouse, schools, the municipality, and the hospital in the region also have gardens. Apart from these gardens, Martyrs Park was built instead of the destroyed ekonoma in the area. In addition, a new park is being built in the area where the old tea garden is located opposite the principal's house. Apart from these, there is also a large sports field in this region. The area with the old sports field next to the school is also empty. Apart from these, there are two playgrounds and a basketball court in the area. Apart from these, there are two square/ gathering areas. One of them is the garden of the municipality and the other is the square with the Atatürk bust.

Figure 3.130. The Lower Kandilli area has been abandoned and turned into a forest-covered area (Source: Zonguldak Special Provincial Administration Archive, 2020)

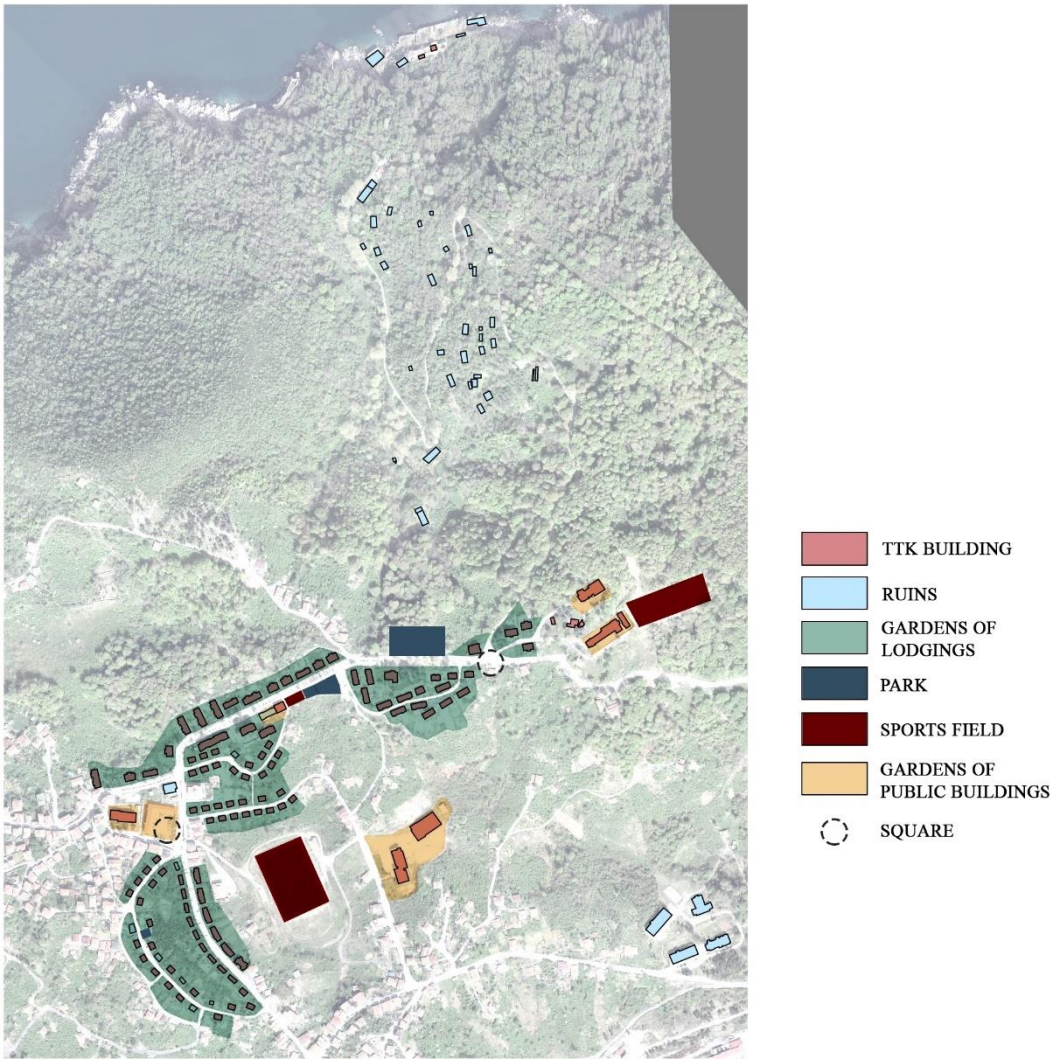

Figure 3.131. The map of open areas in the Kandilli Region (The markings were made by the author, 2021)

Garden of workers' lodging

Garden of single workers' lodging

Garden of officers' lodging

Garden of officers' lodging

Garden of manager's lodging

Garden of apartments

Figure 3.132. The gardens of lodgings (Author, 2021)

Although the workers' lodgings were empty, the gardens of some of them were planted, and the gardens of the workers' lodgings were well-maintained. Since the lodgings for single workers are empty, their gardens are not used. The gardens of the officer lodgings, which were sold and restored, were also built. Planting is done in the gardens of the civil servants' lodgings, which are not sold but are lived in. The garden of the manager's house is neglected and not used. The gardens of the apartments are also neglected.

Garden of Guesthouse

Garden of Primary School

Garden of Hospital

Cinema

Garden of Municipality

Garden of Secondary School

Figure 3.133. The open spaces of the public buildings in the region (Author, 2021)

The gardens of public buildings are well-maintained as the buildings are used. However, the garden of the cinema is in disrepair as the cinema structure burned down and only the floor remained.

Playground Playground

Martyrs Park Tea garden converted into a park

Figure 3.134. The parks and playgrounds of the region (Author, 2021)

BASKETBALL FIELD SPORTS FIELD

Figure 3.135. The sports fields of the region (Author, 2021)

While sports and events were held on the field next to the primary school building in the past, the field is no longer used. The large sports field is currently used.

Built-up Areas:

When we look at the built environment, Lower Kandilli and Upper Kandilli regions appear with their different characteristics. While the buildings in Lower Kandilli are in ruins due to neglect and harsh environmental effects, the buildings in Kandilli have minor deteriorations as they have just begun to be abandoned.

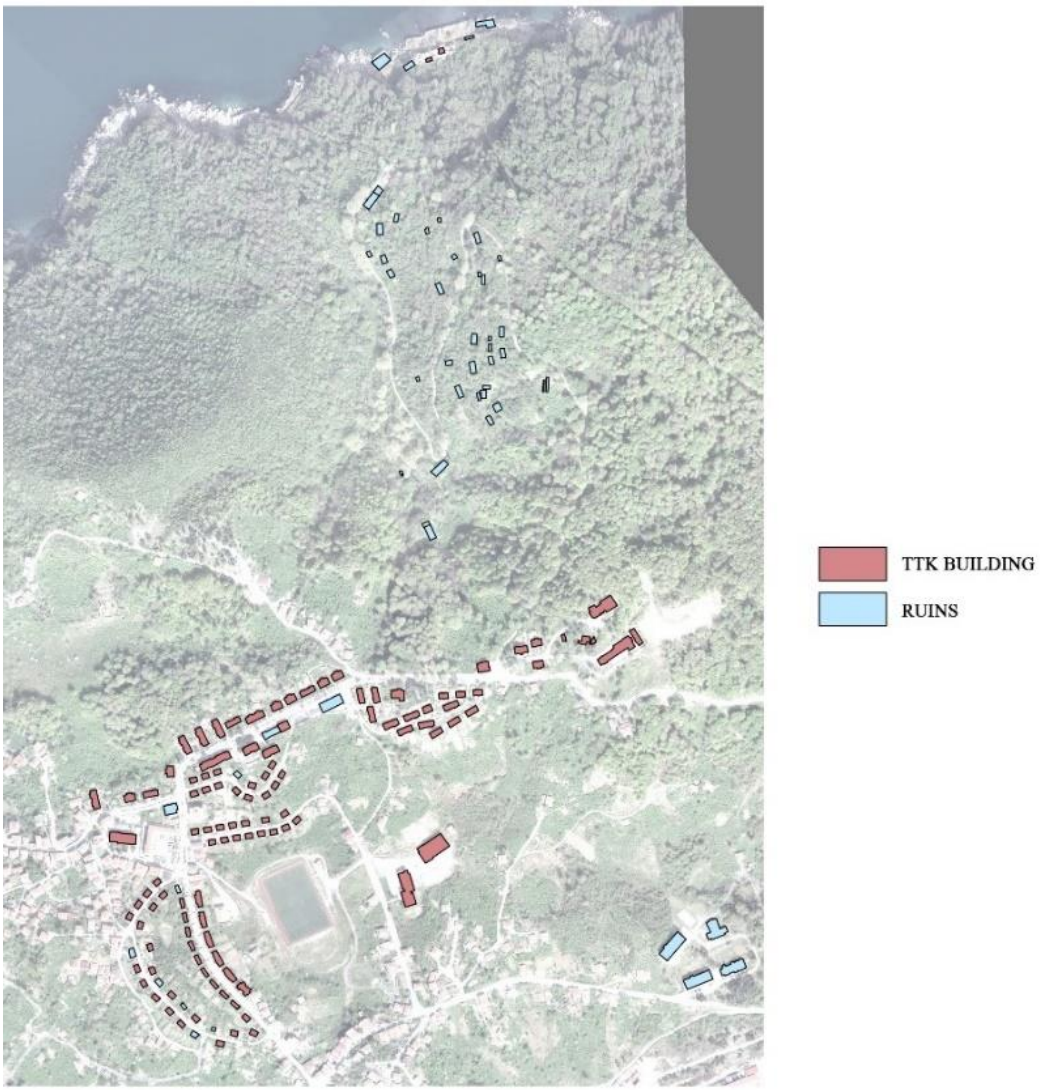

Figure 3.136. The map shows the locations of TTK buildings and ruins (The markings were made by the author, 2021)

Most of the buildings in the Lower Kandilli region were either demolished by the institution or damaged over time due to harsh environmental conditions. Only the

aspirator structure is used in the region. Other buildings are in ruins. In the Upper Kandilli region, the destroyed or ruined buildings are structures that appeal to the general public and have a role in socializing, such as the club, cinema, ekonoma, and worker complex. In addition, workers' residences, which were vacated by the migration of the region over time, began to be demolished (Figure 3. 136).

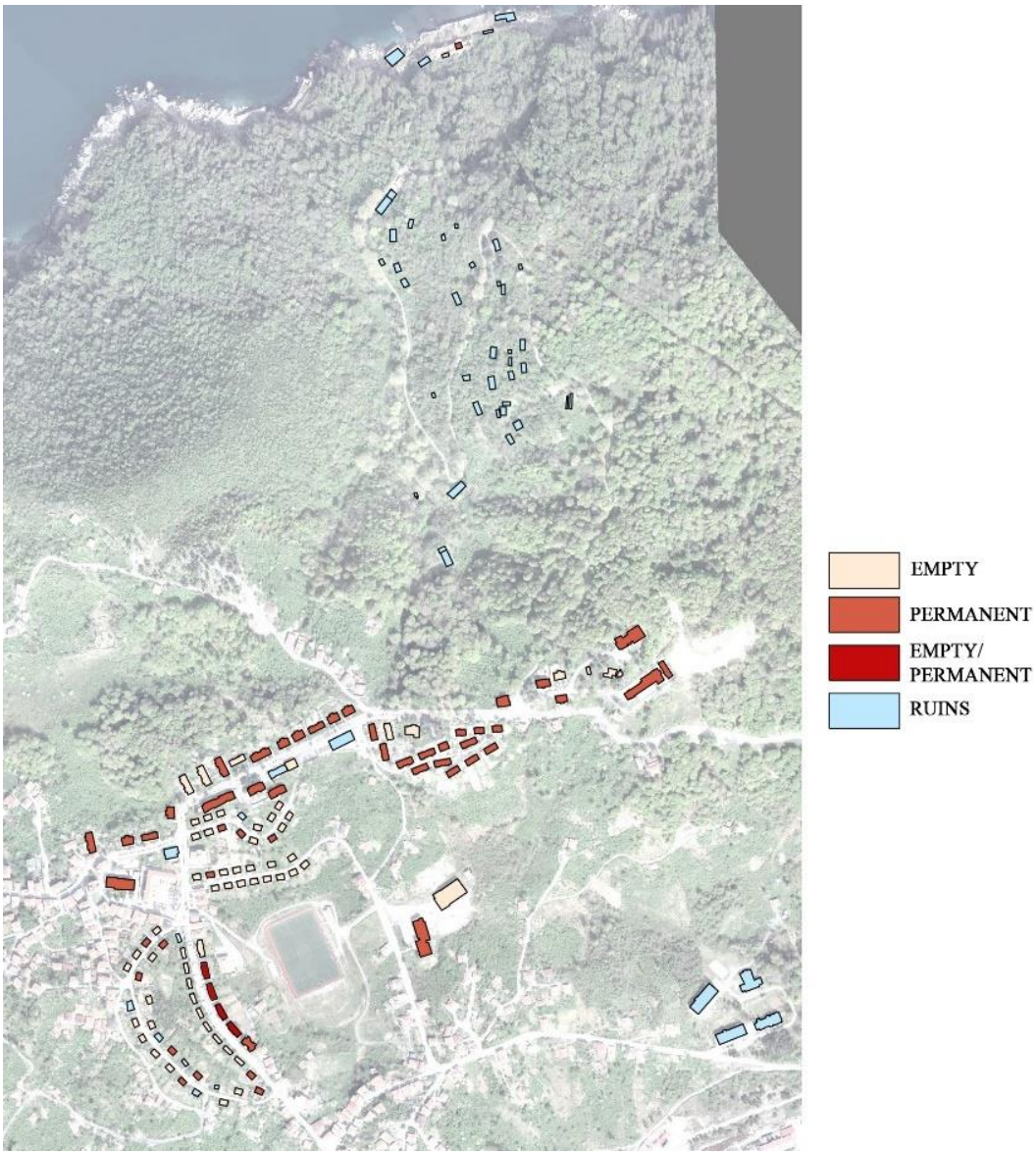

Figure 3.137. The map shows the usage status of TTK buildings and ruins (The markings were made by the author, 2021)

In the Lower Kandilli region, only the aspirator building is used. Single worker lodgings are not used in Upper Kandilli. Most of the workers' housing designed for the family is empty and has begun to collapse. Officer lodgings are used, but they are used in a mixed manner, not according to the caste system as in the past. In other words, both workers and managers are accommodated in these structures. The principal's house is not used. School buildings and guesthouses are used. The hospital building is used, but its use is insufficient. There is only one family doctor in the hospital building. Moreover, the indoor gym is not used (Figure 3. 137).

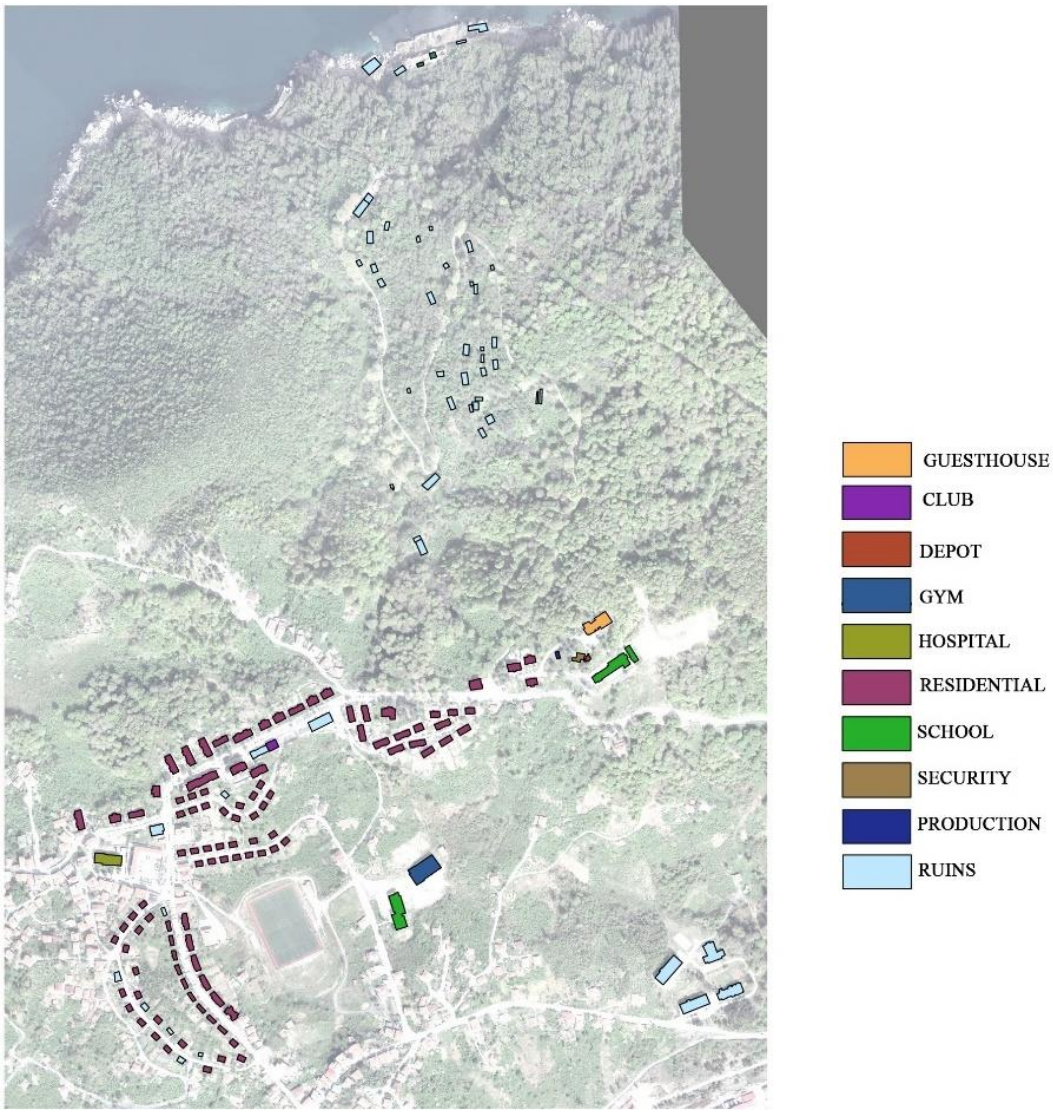

Figure 3.138. The map shows the category of TTK buildings and ruins (The markings were made by the author, 2021)

There are different categories of buildings in the region. While there are ruins and an aspirator building in the Lower Kandilli area, there are lodgings and public built-up spaces in the Upper Kandilli area (Figure 3. 138).

The Lower Kandilli region is the place where the oldest mines of the region are located. In the times when there was not enough technology to go deep underground, coal was extracted by establishing furnaces near the coast and the coals were transported to the necessary places by sea. Lower Kandilli mines started to be operated when coal was first discovered. At first, part-time workers were accommodated in small workers' huts, but later this area became a large campus containing the permanent accommodation of the workers, guesthouses, and social facilities. While the areas by the sea are production areas, the upper levels are designed as living areas (Figure 3. 139).

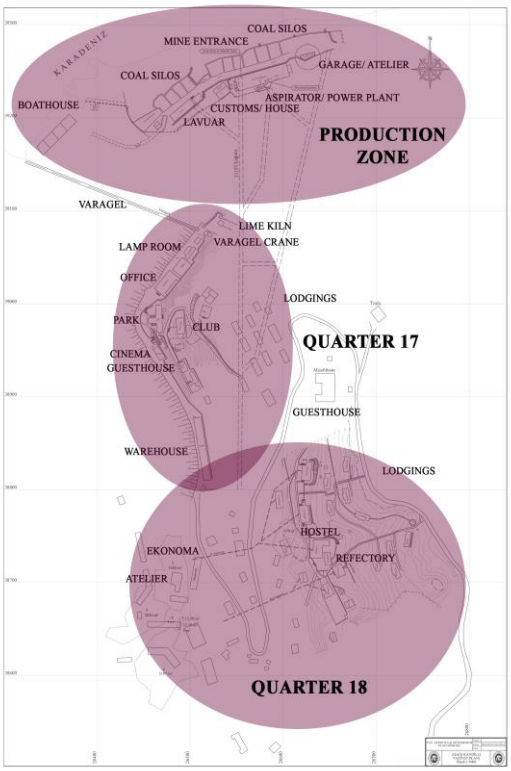

Figure 3.139. The map that shows the regions of the Lower Kandilli Region (Source for the map: TTK Armutçuk Archive, 2020, and the markings were made by the author, 2021)

There are two lodging areas in the Lower Kandilli region, the one at the lower level is called 17 and the one at the upper level is called 18. Region 17 was named that way because it was established at +17 elevation, but it is not known where the name of the region 18 came from. Along with the lodgings, there are production facilities by the sea in this area. Currently, in the production area, there are parts of the aspirator building, customs-house, garage, mine, and coal silos. The aspirator building in the region was built on the remains of the thermal power plant built by the Italians. In district 17, all of the lodgings were demolished. These lodgings were rented to the Forestry Administration for 99 years, and they were demolished in order to save money when their term expired. At the +17 level, there is a lime kiln, mast crane pillar, varagel crane, varagel, office building, which later became a secondary school, and the secondary school's library and cinema building. In the secondary school in this area, people from different cultures such as Germans and Turks were educated together. There is nothing left in district 18, only the ruins of buildings.

Figure 3.140. The remains of the houses in the Lower Kandilli region (Author, 2020)

Figure 3.141. The cinema and the school/ office remains in the Lower Kandilli region (Author, 2020)

Figure 3.142. The structures of ‘varagel’ in the Lower Kandilli region (Author, 2020)

Figure 3.143. The machines in the varagel crane and the lime kiln remain in the Lower Kandilli region (Author, 2020)

Figure 3.144. The chapel and the house remains (Source: Zonguldak Special Provincial Administration Archive, 2020)

Figure 3.145. The atelier remain and the aspirator building (Source: Zonguldak Special Provincial Administration Archive, 2020)

Since the number of workers working in the Armutçuk establishment has decreased and the region has migrated, most of the lodgings at the beginning of Kandilli have remained empty. Civil settlements in the lodging area have increased over time. The Kandilli region was divided into nine parts for an easier explanation (Figure 3. 146).

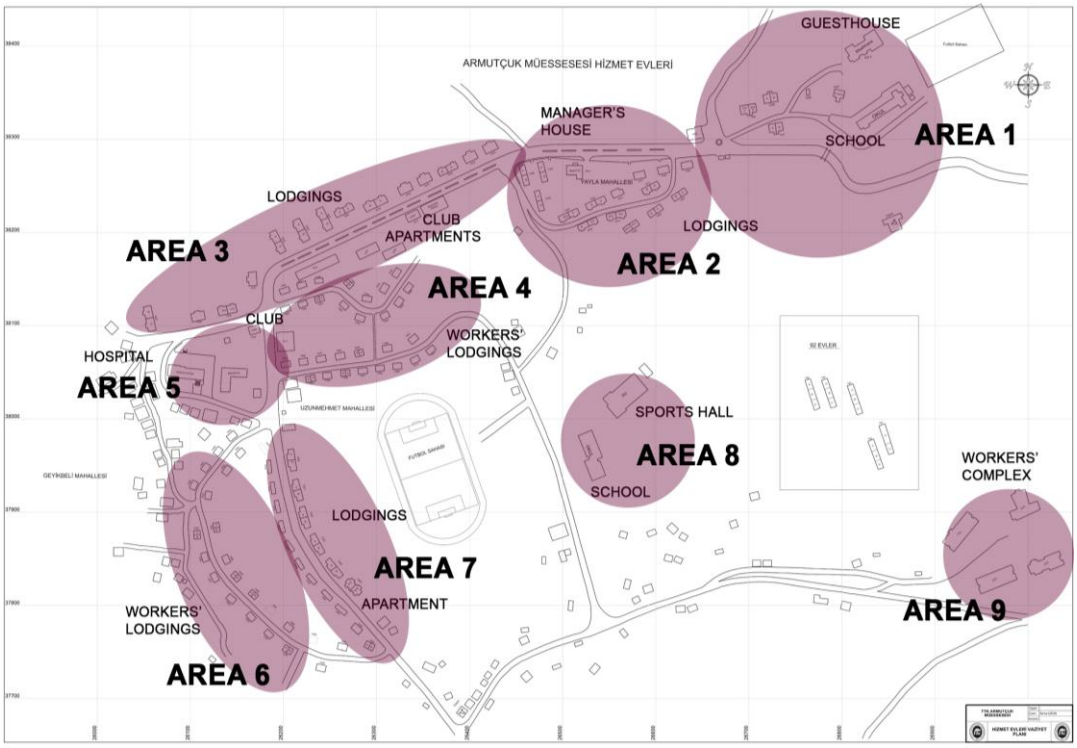

Figure 3.146. The site plan of the Upper Kandilli region (The base is from TTK Archive, 2020, the markings were made by the author, 2021)

The majority of the settlements in the Kandilli region are forest land, forest land that has lost its forest characteristics, and treasury land. The structures in the region have been given numbers by the TTK. According to these numbers, structures that are similar to each other can be distinguished. In addition, it is easily determined which structure needs to be treated in order to meet the repair works and other needs. In addition, lettering has been made for multi-family lodgings. Since there used to be a caste system in the region, according to these numbering, it was determined which family would live in which building. But now there is no caste system in the area. Most of the lodgings in the region are not used, and those that are used are mixed.

In Area Number 1, there are Kandilli guesthouse, Armutçuk Miner Primary School, a square with the Atatürk bust, and personnel structures. Ceremonies were held in the square with the Atatürk bust. Kandilli guesthouse is a 2-story building with a basement. The basement part is made with rough cut stone masonry technique. The top of the basement level is made with brick masonry technique and covered with plaster and paint. It is a structure that has been repaired over time and the garden has been arranged. While this building is a place for outsiders to stay, there is no place for them to eat. Armutçuk miner primary school is one of the first private schools in Zonguldak. The school is a single-story building and has been added and repaired over time. The building was built with brick masonry technique and covered with plaster and paint. The building numbered 1439 was built as a place to stay for the personnel and is not currently used. The building is single-story and has a basement. While the basement was made with rough cut stone masonry technique, the upper part was made with brick masonry technique and covered with plaster and paint. The building numbered 1390 was built as a place to stay for the personnel and is currently in use. The building has 3 floors and was built with brick masonry technique and is covered with plaster and paint. Additions were brought to the building over time and the building was repaired. The building numbered 1440 was built as an accounting building and has now been sold. The building purchased by the TTK employee was repaired and changed according to daily needs and started to be used as a house. The building has a single story and a basement. The construction technique is the same

as the other structures in the region, and the plaster and paint were made by the person from whom it was purchased. The building numbered 1406 was built as a guest house and later converted into a directorate. It is now used as a place for staff to stay. The building has 2 floors and 1 basement. The construction technique is the same as the other structures in the region, and annexes have been added and repaired over time. Doors and windows have been changed as needed.

Figure 3.147. The images of the buildings in the area number 1 (Author, 2020)

Figure 3.148. The image of the square with the Atatürk bust (Author, 2020)

Figure 3.149. The gate of Kandilli near the Atatürk bust (Source: Kandilli Cultural Association Archive, 2021)

The structures in Area 1 are located around the square with the Atatürk bust. This square is an important area for Kandilli as it is the place where celebrations and marches are held. At the same time, the entrance gate, which is one of the symbols of Kandilli, is located in this area.

There are civil servant and engineer lodgings in **Area Number 2**. This area is very close to both the guesthouse and the school. For this reason, this region was known as the teachers' quarter for a while because the teachers lived here. The manager's house is also located here. In this area, there are lodgings for single families and for many families. Lodging floors are formed according to the topography. While the lodgings in this area are generally single-story, the lodgings 1434, 1433, 1424, and 1425 have 1 floor and 1 basement floor due to the topography. The lodgings numbered 1426 and 1513 have 2 floors. The construction techniques of the lodgings in this area are similar to other structures in the region. While the basement floors are rough cut stone masonry, the upper floors are made with brick masonry technique and are covered with plaster and paint. The buildings are in use, so they have been repaired. Additions have been made as needed. The buildings have gardens and their gardens are used for growing vegetables and fruits and for resting. The manager's house, on the other hand, can be distinguished from other buildings in the region. It is a single-story building with a basement. Its construction technique is similar to other structures, but its color, appearance, and location away from other structures distinguish it from other structures. This building also has a different heating system than other buildings. There are planting areas and a sitting area in the garden. But since the building is not used, its garden is not used either. The goods in the manager's house are covered by the coal company. There is also security at the door of the manager’s house. This region is the liveliest area of Kandilli. Regional lodgings are used and neighborly relations are developed compared to other regions. Each house has its own garden, and some gardens are shared. The people living here believe in the prestige of these lodgings, but they do not own this area because they are not usually from here. However, since the lodgings belong to the coal company, it is very difficult to repair the lodgings. For this reason, those living in these lodgings are waiting for the lodgings to be put up for sale. The lodgings do not have central heating, they are heated with coal extracted from the establishment. The area is designed to have lodgings on both sides of the road.

Figure 3.150. The images of the buildings in the area number 2 (Author, 2020)

Figure 3.151. The images of different lodgings in the area (Author, 2020)

In Area number 3, there are lodgings for civil servants and engineers. Areas 1,2 and 3 are located higher than the workers' quarters and the lodgings are located in a scenic place. 6 of the lodgings in this region were sold and they were bought and repaired by those who gave their heart to Kandilli. While the workers' lodgings are usually empty, the lodgings in these areas are used. In addition, there are socializing areas such as the park built in place of the destroyed ekonoma, the disused civil servants' club, and the basketball court in this area. In this area, there used to be a cinema building adjacent to the club, but it burned down with a fire and only its remains remained. The road is a building that has been around since the first time the region was built, where celebrations were held in Kandilli. The number of floors of single-family and 2-family lodgings in the region varies according to the topography. For this reason, while all the lodgings in this area are single-story, lodging number 1525 has 2 floors and a basement. The lodgings numbered 1571, 1577, and 1578 were built in the form of apartments and have 3 floors. Lodgings numbered 1514, 1515, 1516, 1517, 1518, and 1519 were sold in this area. These lodgings, which were purchased by the people who used to live in Kandilli, were repaired according to need without much change. While the sub-basements of these structures were made with the rough-cut stone masonry technique, the walls were made with the brick masonry technique, plastered and painted in different colors. Additions were made to the buildings by their owners as needed. The unsold single-family and two-family lodgings in the region were built with similar construction techniques. The structures were repaired by the TTK and small additions were made as needed by the inhabitants. All residences have their own gardens. These gardens are also used for growing fruits and vegetables or for social purposes. Apartment buildings are in a neglected state. Since the apartments were built in later years, they have central heating. In addition, although the garden of the apartments has been arranged, the garden is in a bad condition at the moment. The buildings were built with brick masonry technique and covered with plaster and paint. It is said that these apartments were built for the accommodation of engineers in the region. Small additions were made to the structures over time.

Figure 3.152. The images of the buildings in the area number 3 (Author, 2020)

Figure 3.153. The images of the sold lodgings in the area (Author, 2020)

In Area number 4, there are two workers' lodgings quarters and an old post office building demolished after the field trip. Since the region has migrated, there is no demand for worker lodgings in this region. Since the housing is not maintained by the TTK, the housing is neglected and unable to meet the daily needs of the residents. More than half of the lodgings are vacant, and some have begun to collapse. The lodgings are located on both sides of a road opposite each other. It was established in lower sections than the civil servants' houses, so they do not have as beautiful views as the civil servants' houses. However, considering the peasant-worker character, a large garden has been allocated to each of the lodgings. These lodgings are the same type of buildings. It has one story and one basement floor. The basement floor is made with rough cut stone masonry technique and the upper floor is made with brick masonry construction technique, plastered and painted. Since these structures did not meet the needs of the inhabitants, closed and open annexes were made to different parts of the buildings, but after the buildings were abandoned, some of these annexes were either demolished or in poor condition. Some of the annexes were destroyed by the TTK because they were forbidden in the period. The doors and windows of the buildings were changed over time and the windows were fenced with the emergence of the need for security. The roofs of the buildings are in poor condition. Some roofs were repaired by the TTK with the petitions of the residents. There is a level difference between the front and the back of the houses. Each house has a large garden, and its inhabitants grow crops in some of the gardens. The wires separating the gardens from each other disappeared over time as the structures were not used. While there is a side entrance on the upper floor, there is a front entrance on the lower floor. However, in some buildings, the doors on the side facades are closed, and in some buildings, the doors on the front facade are closed. Some windows of some buildings were also closed. The interior plans of the lodgings in which they live have generally been changed. It is seen that the housing units, which were adjoining before, have been converted into spaces for single families to live, with the demolition of the wall between them. There are still door numbers from EKİ on the doors of some residences.

Figure 3.154. The images of the buildings in the area number 4 (Author, 2020)

Figure 3.155. The street views of workers' lodgings in the region (Author, 2020)

In Area number 5, there are the workers' club, Kandilli Municipality building, and hospital, which are in danger of being demolished by being removed from the inventory of the TTK. After the field trip workers' club was demolished. Although the hospital was once built for workers who were exposed to mine explosions, there is not even a doctor in it now.

Figure 3.156. The images of the buildings in the area number 5 (Author, 2020)

There are workers' lodgings **in Area number 6** as well, and the demolition of the abandoned ones has begun. Worker lodgings in this area are located on both sides of a road, facing each other. The lodgings are made similar to each other. The use of worker lodgings in this area is higher than elsewhere. The unused ones are neglected and have begun to collapse. Considering the peasant-worker character, all the lodgings were designed in a large garden of their own. The gardens in the houses they live in are also well-maintained and are used for growing fruits and vegetables and feeding chickens. The residences consist of one floor and a basement floor. The basement floor was made with the rough cut stone masonry technique and the upper floor was made with the brick masonry technique. The lodgings are designed in harmony with the topography. Therefore, there is a level difference between the two facades. While the upper floor is entered by climbing the stairs from the side facade, the lower floor is entered through a door on the front facade. Closed or semi-open annexes were added to the buildings as needed. However, the annexes of the abandoned but not demolished ones are also in bad condition. The lodgings are designed with a kitchen downstairs and a room upstairs. There is a staircase inside to enable the passage between the floors. While the lodgings were originally designed for 2 families, over time, as the number of residents in the area decreased, the lodgings were converted into single-family residences. The upper floor has turned into a large living space after the staircase providing the passage between the floors was closed and the wall between the two houses was demolished. The entrance to the lower floor started to be only from the outside. One of the doors on the side of some single-family lodgings has also been closed. Some structures were repaired by the TTK in line with the petitions of the inhabitants. Doors and windows were renewed and roofs were repaired.

Figure 3.157. The images of the buildings in the area number 6 (Author, 2020)

Figure 3.158. The image showing the interiors of the lodgings (Author, 2020)

In Area number 7, there are lodgings located on both sides of the road. The lodgings on one side of the road were originally built for single people, and later their interior plans were changed to suit family use. On the other side of the road, there are lodgings suitable for family use and an apartment belonging to TTK. The chief houses on one side of the road consist of 1 floor and 1 basement floor. These structures are designed for 2 families. The lower floor was made with stone masonry construction technique and the upper floor was made with brick masonry construction technique and covered with plaster and paint. Additions were made to the buildings as needed and some of the balconies were also closed. In some structures, the opening dimensions have been changed. These structures also have their own gardens, like other structures in the region. The apartment building, on the other hand, is a 2-story building with a basement and is currently in use. It was built with the same construction technique as the other structures in the region. On the other side of the road, there are single-story single houses. These structures were also used for a period of time for the family. They are currently not used. It was built with masonry brick technique and covered with plaster and paint. Since these structures are not used, they are neglected and in poor condition. While the buildings were transformed into a family structure, their interior plans and openings were changed. By demolishing the partition walls inside, a larger area was obtained and the openings were changed to make it suitable for family use. In addition, annexes were added and removed over time. These structures also have their own gardens, but since they are not used at the moment, their gardens are also neglected.

Figure 3.159. The image showing the interiors of the lodgings (Author, 2020)

Figure 3.160. The images of the buildings in the area number 7 (Author, 2020)

Figure 3.161. The images showing the street views of the region (Author, 2020)

In Area number 8, there is a secondary school and an indoor sports hall. Although the secondary school structure is currently in use, the indoor sports hall is not used and is in a neglected state.

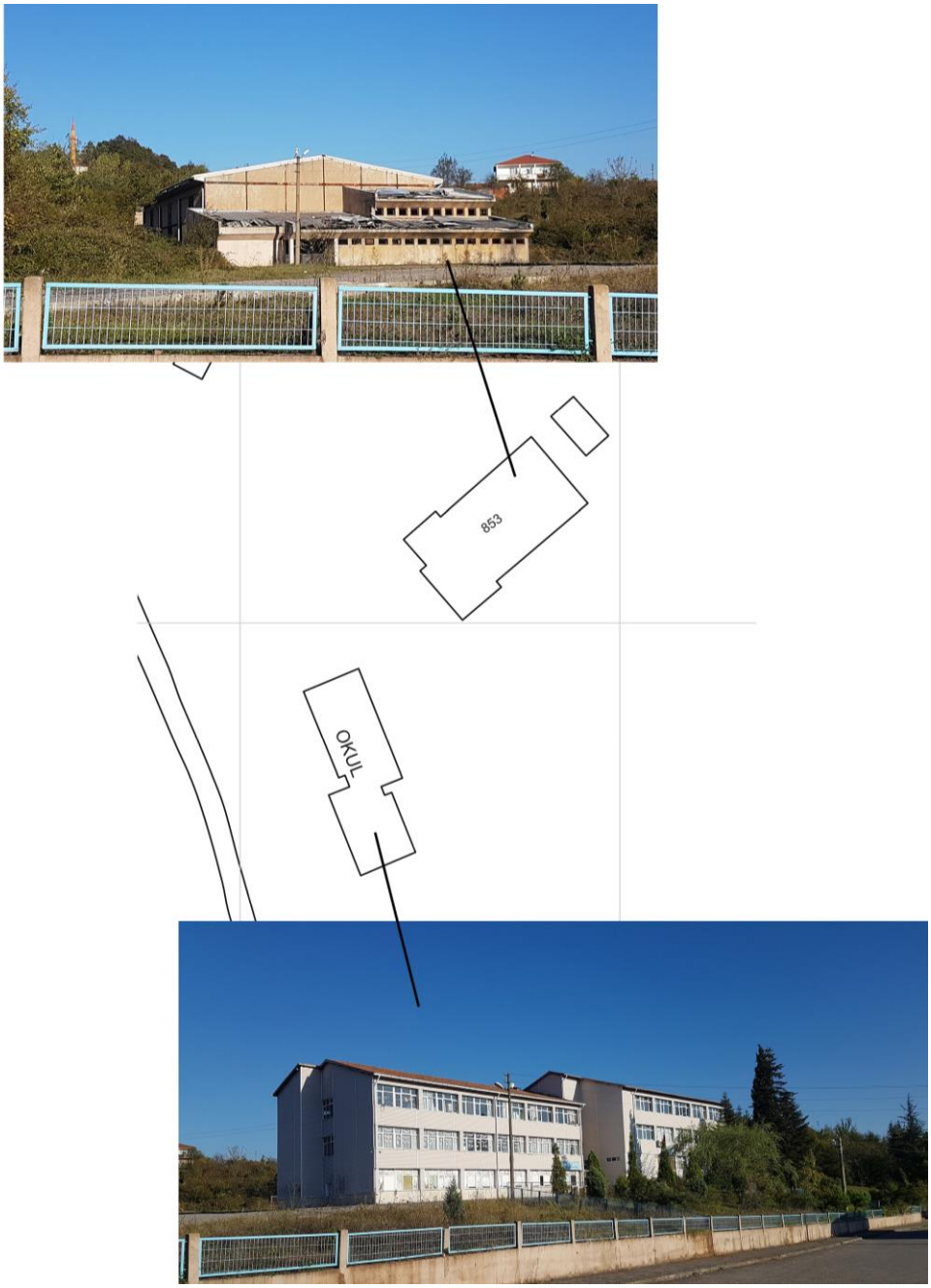

Figure 3.162. The images of the buildings in the area number 8 (Author, 2020)

In Area number 9, there are cinema, cafeteria, and workers' pavilions built for the workers working in the Armutçuk establishment. After a while, when the workers stopped staying in the pavilions, the pavilions were reopened as a chest diseases hospital and an institution providing education in the field of health. Although the cinema was run by the private sector for a while, these four buildings became idle. After the field trip, these four buildings were demolished.

Figure 3.163. The images of the buildings in the area number 9 (Author, 2020)

The built-up areas are public buildings and lodgments in the Upper Kandilli region. It is possible to see different typologies of lodgings in the area according to their plans, elevations, and user profile. The lodgings in the Lower Kandilli region could not be evaluated because they are in ruins.

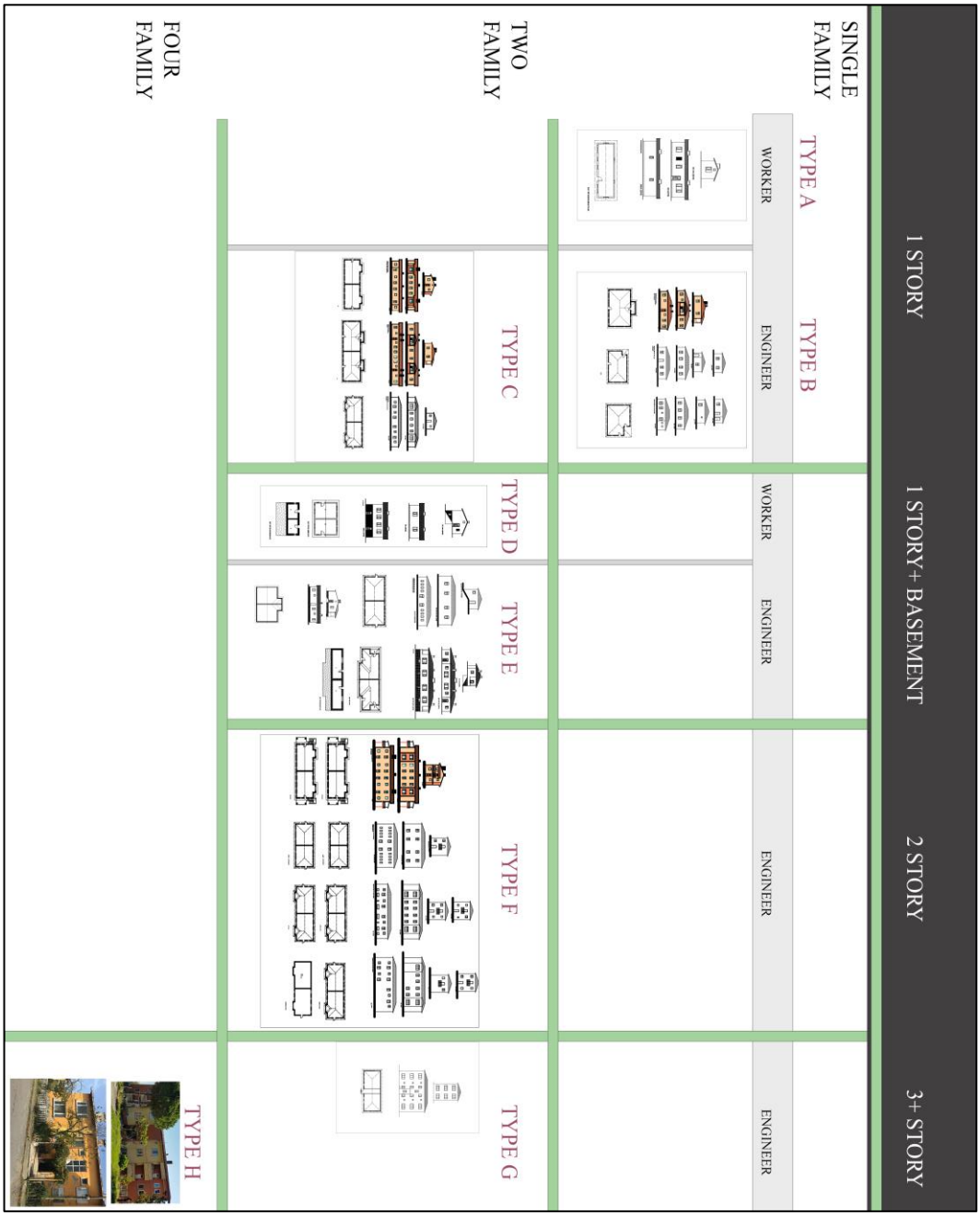

Figure 3.164. The image showing the lodging typologies in the Upper Kandilli region (Author, 2021)

In the Upper Kandilli region, there are 2 types of housing according to the user profile, for civil servants-engineers or workers. Workers' lodgings are of two types as lodgings for singles and family-type lodgings. The lodgings for single workers are single-story buildings, but over time they have been converted into lodgings for families. Family-type worker lodgings are designed for 2 families, and the lower floor is designed as a kitchen and the upper floor is designed as a living space. However, when the population in the region decreased over time, these structures were converted to be used by a single-family. Today, while single worker lodgings are completely empty, there are people living in family-type worker lodgings. Housing for civil servants-engineers in the Upper Kandilli region, on the other hand, is of three types as lodgings for one family, lodgings for two families, and apartments for four or more. The lodgings for a single-family are single-story structures, and the lodgings for 2 families are divided into four as single-story, single-story and basement, 2-story, and 3-story. Apartments consist of 3 or more floors. Most of these residences are currently occupied in the region (Figure 3. 164).

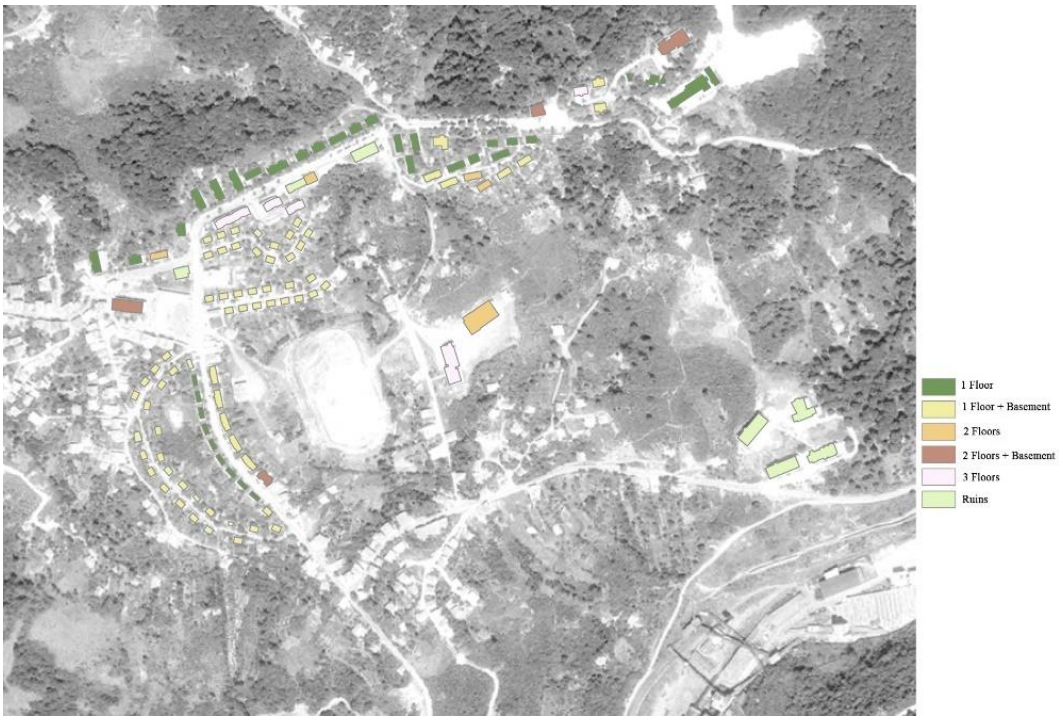

Figure 3.165. The map showing the number of floors of the buildings (Author, 2021)

The positioning of the lodgings and other structures in the area according to the number of floors was realized in harmony with the topography. Looking at the number of floors, it can be understood in what direction the slope is. The structures in the Lower Kandilli region could not be examined because they are in ruins (Figure 3. 165).

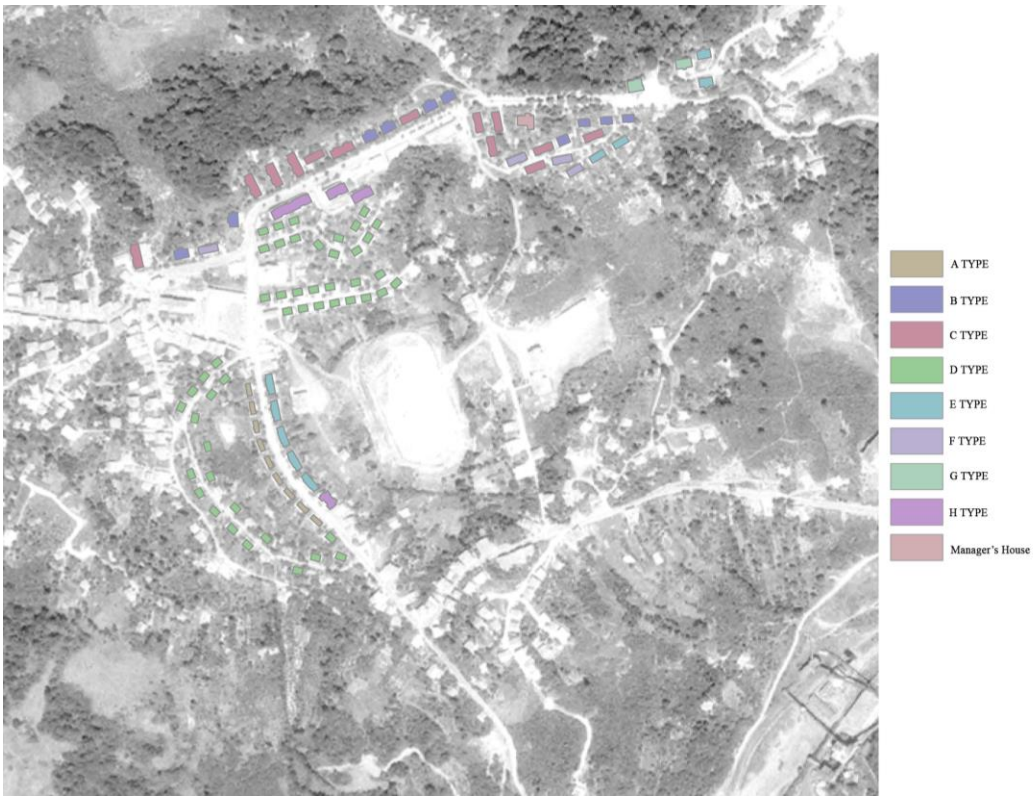

Figure 3.166. The map showing the location of the lodgments according to their types in the Upper Kandilli region (Author, 2021)

Looking at the locations of the lodging types, it is seen that there are various groupings. While it is seen that the civil servants-engineer lodgings are located close to each other at higher elevations, the worker's lodgings are located in a different area than the civil servant-engineer lodgings, in an area where the elevation is lower. As for worker lodgings, lodgings for single workers and family-type lodgings are located separately from each other. The civil servant-engineer lodgings are also located more irregularly than the workers, and the floor numbers are determined in accordance with the topography (Figure 3. 166).

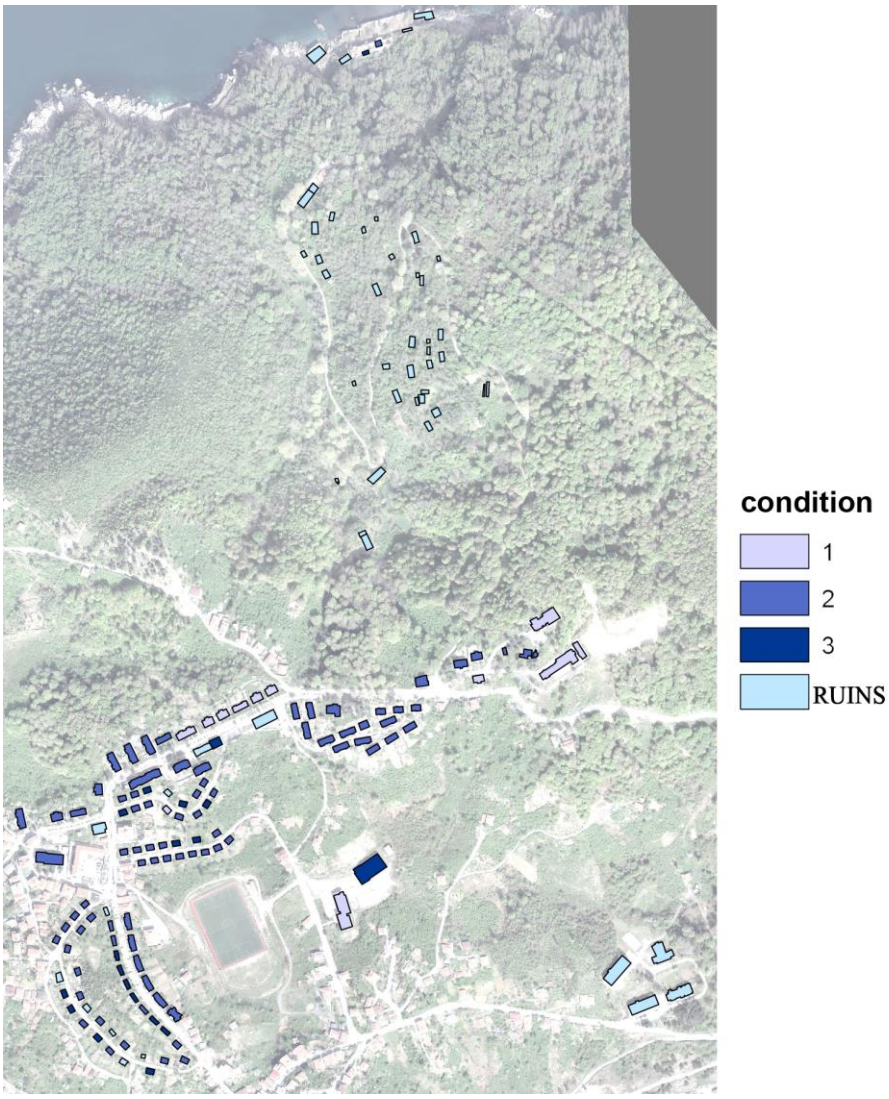

Figure 3.167. The map of the condition of the buildings (The map was made by the author, 2021)

When the structures in the area are examined, it is seen that the structures in the worst condition are the ruins in the Lower and Upper Kandilli regions. The club structure and indoor sports hall in the area are in bad condition due to their structural problems. Moreover, single worker lodgings and some family type worker lodgings have structural problems and are in poor condition. The conditions of schools, the guesthouse, and lodgings that have been sold and repaired are good. In the remaining structures, small deformations and deterioration of the material are observed. No structural problems were detected (Figure 3. 167).

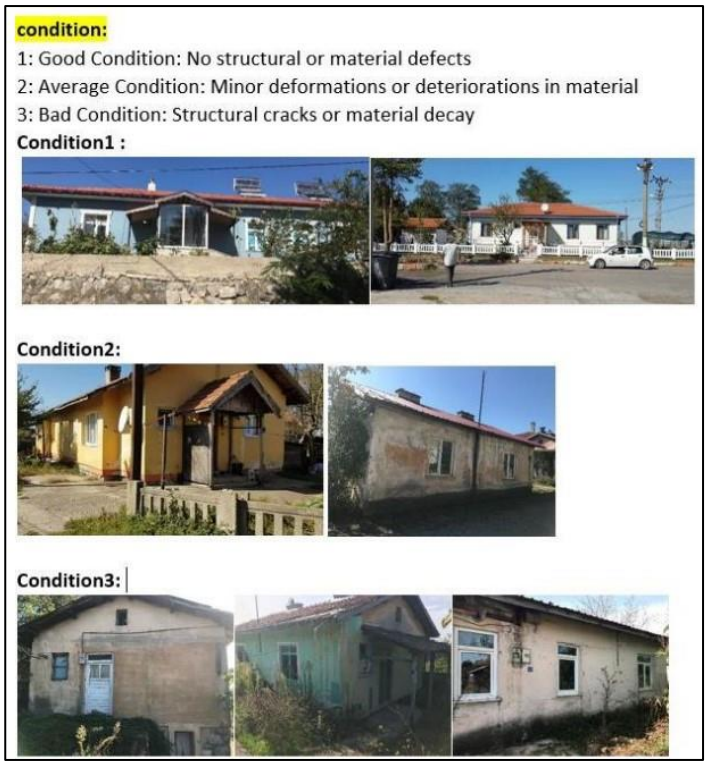

Figure 3.168. The image shows the conditions of the buildings (Author, 2021)

Figure 3.169. The image shows the changes in the buildings (Author, 2021)

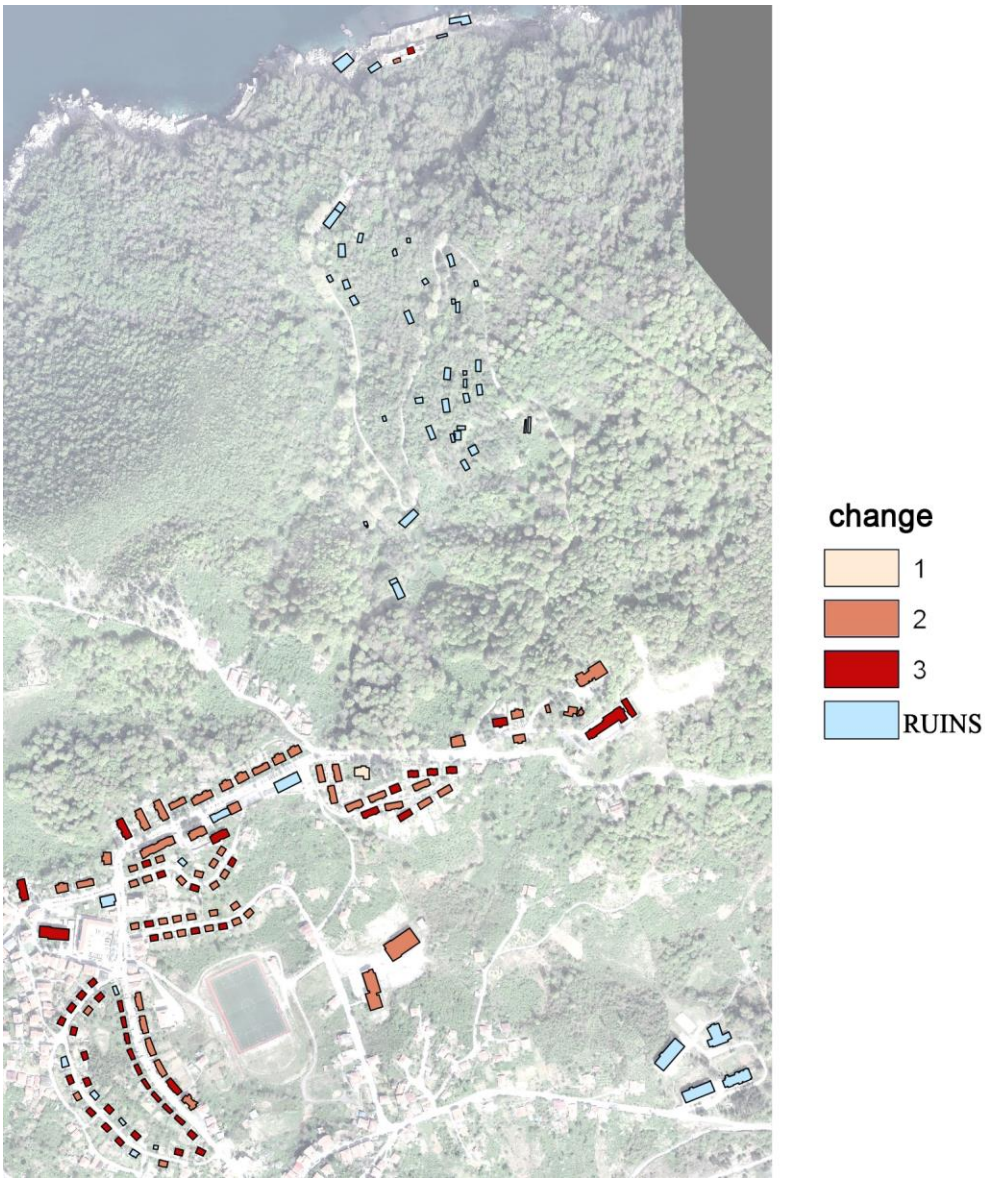

Figure 3.170. The map of the degrees of the changes in the buildings (Author, 2021)

The only building in the region that has not undergone any change is the principal's house. All other structures have undergone slight or major changes. Since Lower Kandilli structures are in ruins, their changes cannot be understood. In the Upper Kandilli region, it has undergone major changes with the additions to the hospital and primary school building. In addition, single houses were changed as they were converted into family lodging. In addition, changes can be seen in other lodgings by adding or removing large volumes.

Infrastructure:

The infrastructure of the region was built by EKİ when the operation of the region's mines was taken over by the state. The infrastructures of areas such as Pazaryeri and Geyikbeli, which are the neighboring campuses of the Kandilli region, were created by EKİ. Working as a municipality, EKİ not only met the water and electricity needs of the buildings in the Kandilli region but also took care of the road construction works and the maintenance of the lodgings. Today, however, since the municipality was established in the region, electricity, water, and road services are covered by the municipality.

Transportation:

Figure 3.171. The image showing the roads and their surroundings in Kandilli region (Author, 2021)

In Kandilli, transportation was provided by the sea, rail, and road in the past, today only road transportation is provided. With the end of sea transportation, the collapse of the Lower Kandilli region had begun, but in the following years, the railway began to be obsolete. At present, the rails of the railway have been dismantled.

In the Lower Kandilli region, there is only a carriageway up to the varagel crane. The existing road is in very poor condition. After the Varagel crane, the descent was by Varagel or a small path. But today the varagel does not work, so the path has to be used. In the Upper Kandilli region, the middle of the main road is a two-way road with trees. There are lodgings and social structures where important people stay around this road. The roads between workers' lodgings are narrower.

Public transportation in the region is provided by buses. Although there is no public transportation to the Lower Kandilli region, it is possible to find traces of the old stops (Figure 3. 172).

Figure 3.172. The image showing the remain of the bus stop (Author, 2020)

Apart from these, there are traces of structures used for transporting coal in the Lower Kandilli region. There are still traces of the railway and wagons used for coal transportation in the region. Wagons are also used for decoration. There are also traces of the piers used while transporting coal by sea, along with the tools that allow the coal to be poured into the sea after being transported. In addition, the varagel, the crane, and the mechanism of it are important traces that reflect the transportation of coal and people. The shaft elevator structure in the region is also one of the important traces of transportation in the region. There are also traces of stairs in the different parts of the Lower Kandilli region.

Figure 3.173. The image showing the traces of transportation in the Lower Kandilli region (Author, 2020)

Thus, Kandilli/ Armutçuk region is a cultural landscape of extraction formed by the unity and relations of industry, site, and community. Although the relations and importance of these 3 components are great during the establishment phase, it is determined that the site and community in the region have also been damaged and relations have been broken due to the fact that the industry has lost its importance. The community lost its belonging to the region over time and began to disintegrate by migrating out of the region. The site was abandoned and started to fall into disrepair over time due to the effects of nature and uselessness.

CHAPTER 4

ASSESSING THE SIGNIFICANCE OF THE KANDILLI/ARMUTCUK REGION AS A CULTURAL LANDSCAPE OF EXTRACTION AND PROPOSALS FOR ITS CONSERVATION

As mentioned before, cultural landscapes of extraction are complex areas consisting of three components which are industry/production, site, and community. There are also sub-components related to these three components which are production, culture, tradition, lifestyle, natural environment, cultural landscape, built-up environment, transportation network, and open areas (Figure 4.1). In addition, these areas go through various phases which are appearance period, disappearance periods, and the period of responses. As mentioned before, the Kandilli/ Armutçuk mining region is an area that contains the integrity of all these components and experiences appearance and disappearance phases. Therefore, it is a good example for the concept of cultural landscapes of extraction to study. However, in order to study such complex cultural landscapes of extraction, a holistic approach is required, in which all three components, different scales, and time factor are examined as a whole.

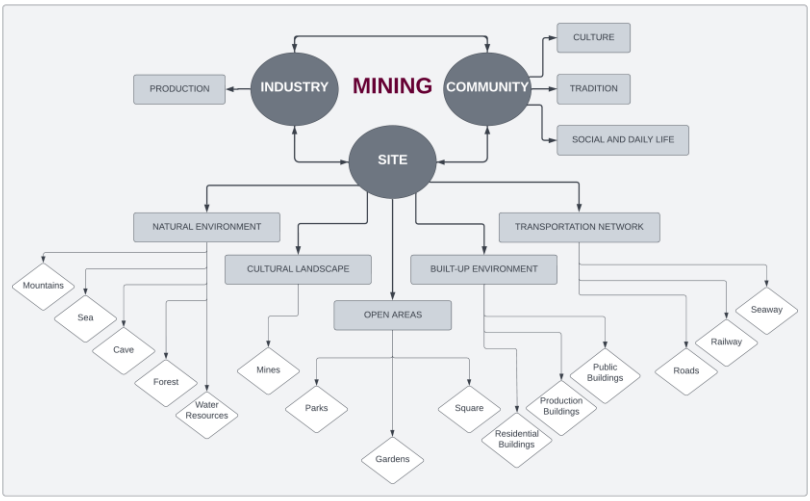

Figure 4.1. Diagram showing the components of the Kandilli/ Armutçuk region (Author, 2021)

Moreover, the Kandilli/ Armutçuk region, which has been producing coal since 1848, when coal production started in Zonguldak, has hosted many nations over the years and presented the best examples of the policies related to workers and building types of its period. However, with the loss of importance of coal production over time, the investment in the region decreased. As a result of not meeting the needs of the workers, the region started to become empty by emigration. The buildings were abandoned and came to the brink of destruction. The region has come to the brink of collapse with the rupture of the ties between the 3 components of the region.

Thus, it is necessary to make decisions about the future of the Kandilli region in order to prevent the extinction of the region, and for this, the region must first be evaluated. Considering all the characteristics, historical development, and current situation of the area, it is seen that the area has many values and problems at different scales. These values and problems can also be understood when looking at the 3 components that make up this field and the relations of these components. Therefore, while determining the values and problems of the field at different scales, a holistic approach should be followed by looking at 3 components. However, it is not sufficient to determine the values and problems alone in order to make decisions about the region. At the same time, the importance of the area should be determined and a vision of the decisions should be established.

Thus, in this chapter, the region was evaluated by determining the values and problems of the region in line with three components which are the industry/ production, site, and community at three different scales which are network scale, regional scale, and building scale. After determining the values and problems of the area, the significance of the place was stated. After that, the factors threaten the importance of the region determined. Then, the vision of the area was determined and scenarios were made regarding the future of the area and the effects of these scenarios were evaluated in line with the same 3 components of the regions (Figure 4.2).

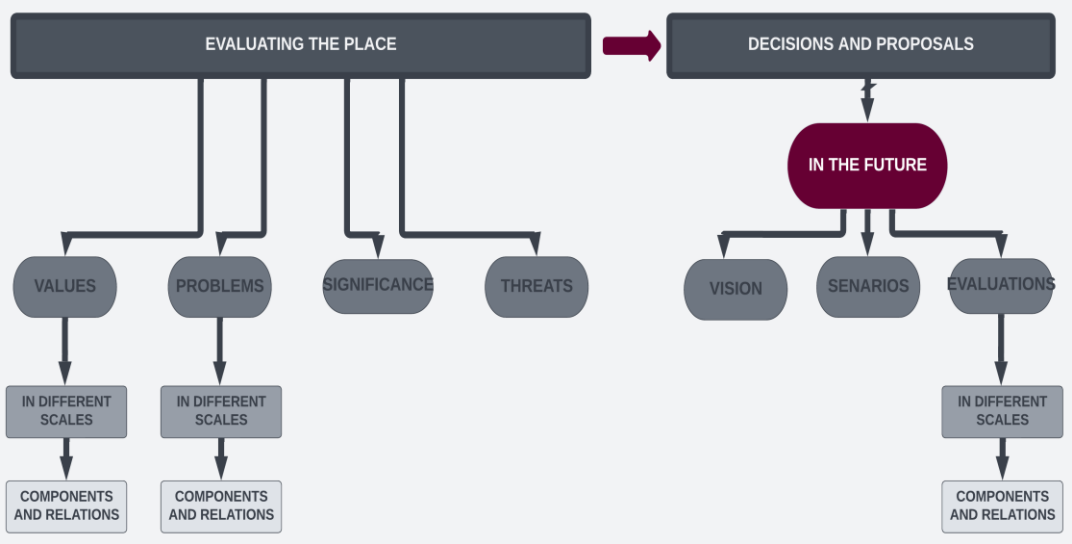

Figure 4.2. Diagram showing the evaluation process toward cultural landscapes of extraction (Author, 2021)

In addition, the decisions of a single stakeholder group cannot be sufficient when creating proposals related to such complex regions. While developing proposals, a multi-stakeholder system should be established and a common mind should be formed. For this, associations, residents, miners, experts, decision-makers, and place owners should come together and make decisions together for the Kandilli example.

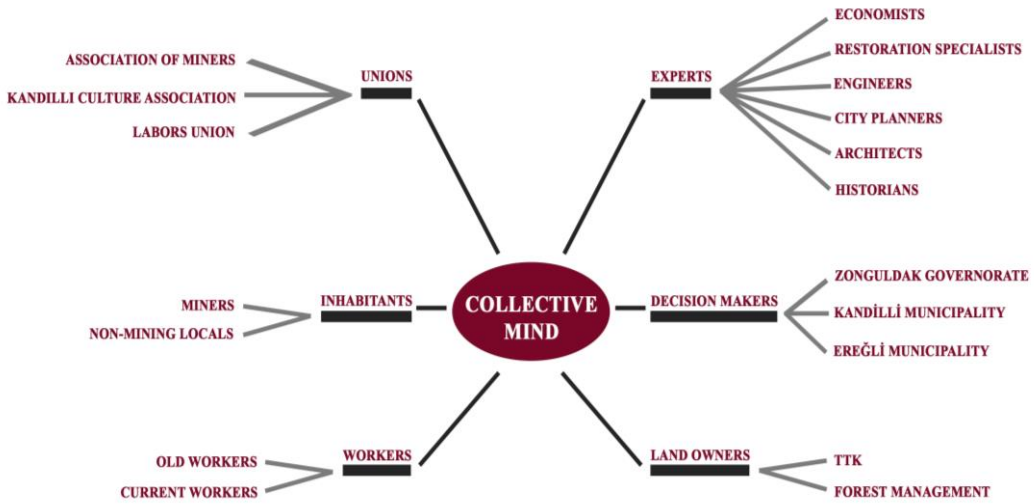

Figure 4.3. The image of the stakeholder map for the proposals of the Kandilli/ Armutçuk coal mining region (Author, 2021)

4.1 General Evaluation of the Kandilli/ Armutçuk Region: Values and Problems in Different Scales

In the Dublin Principles which was prepared in 2011, the industrial heritage concept was defined comprehensively by including both tangible and intangible aspects. According to it, the industrial heritage concept contains transportation networks, machinery, sites, and buildings related to extraction or production activities and social and cultural aspects (pp. 2-3).

The Kandilli region reflects the technologies, welfare level, architecture, social and daily life, mining culture, labor movements, and memories of the inhabitants of the period. Therefore, this region can be evaluated as an industrial heritage place. The region should be conserved and some strategies should be developed for future uses of the region. To create conservation strategies for Kandilli, first of all, the values and problems of the region should be evaluated on different scales in line with three components which are industry, site, and community.

4.1.1 Values of the Kandilli/ Armutçuk Region in Different Scales

To date, values have been defined in many different ways in the field of conservation. Although some researchers agree with each other, some have evaluated values in different ways. Within the scope of this thesis, the age and historical value, authenticity and integrity value, architectural and technical value, document value, aesthetic value, identity value, functional value, social and memory value, landscape value, and economic value were considered while evaluating the Kandilli region. While making these evaluations, network scale, regional scale, and building scale were considered in line with three components of the region which are industry, site, and community. Looking at the value diagram (Figure 4.4), it is seen that there are many values at different scales in the field. Moreover, these values were determined according to the information obtained from the literature research and the evaluations and interviews made during the field study.

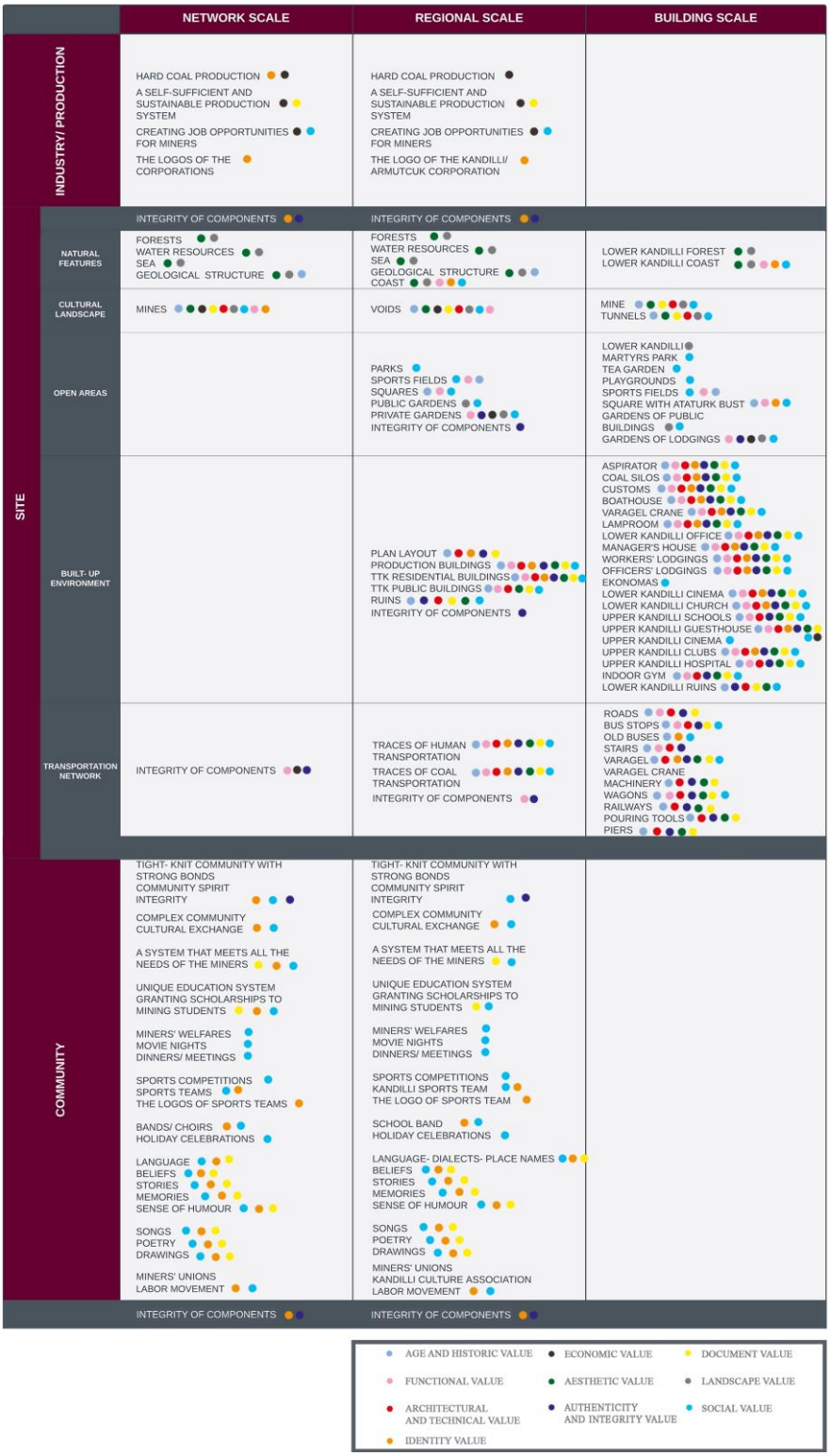

Figure 4.4. Diagram showing the values of the region on different scales in line with three components (Author, 2022)

Network scale:

Firstly, the values of the region should be evaluated on the network scale in line with industry, site, and community.

When we look at the values related to **production/ industry** in the network scale of the region, the production of hard coal in the region, the existence of a self-sufficient production system, the creation of job opportunities for miners, and the logos of mining-related institutions draw attention.

Hard coal production in Turkey is provided only by this production network, and coal production has been a factor that triggered the development of the region by creating the industry of the region. For such reasons, hard coal production in the region has an identity value as it is the only hard coal production network in Turkey, and coal production has an economic value because it provides the economic development of the region.

There is also a self-sufficient and sustainable production system in the region. TTK creates its own workforce. It trains its employees according to the needs of the institution and trains the miners' children with the apprenticeship method and produces a new workforce in line with its needs. With the created workforce, coal production begins. Then the institution monitors and controls the coal production works. Then, the produced coal is sold to generate economic income for the development of the institution and the continuity of the production work and is used for the needs of the institution and the workers. This modern production system has economic value as it provides economic income and has document value because it is a sustainable system.

In addition, the production activities in the region provide job opportunities to the people living in the region. This has economic value as it provides economic income to the workers. It also has a social value as it creates a new worker community.

In addition, there is the logo of the institution so that the institution that produces in the region can be identified. Therefore, this logo has an identity value.

When we look at the network-scale values in the region related to **the site**, the natural features of the network, mines, and transportation network draw attention.

The coal basin is very rich in terms of natural features. The region is located on the coast, in an area where forest areas and water resources are abundant. These areas have aesthetic and landscape value in terms of aesthetic features and natural characteristics of the region.

The basin is also very rich in terms of underground mines. Since these mines have existed since the Ottoman period, they have age and historical value. Also, they have identity value as they are the only hard coal mines in Turkey. In addition, mines gain aesthetic characteristics because they are hollow areas created in the landscape. Therefore, they have aesthetic value. In addition, mines have economic value as they are places of production. Moreover, the mines have document value and technical value as they reflect the technologies of the period. In addition, they have social value because they are in the memories of miners and they have landscape value because they affect the landscape. In addition, some mines have a functional value because they are still used.

The interconnection of different production parts is also valuable at the network scale. There is an integrity value because of the integrity of the parts of the basin. Moreover, the network has functional and economic value as these connections positively affect the production and use of the basin.

Apart from these, the integrity of the components that make up the site is also valuable at the network scale. The integrity of these components has integrity value and also has identity value because it creates the identity of the field.

When we look at the network-scale values in the region related to **the community**, community spirit, cultural complexity, a system that meets all the needs of the miners, unique education system, miners' welfares, movie nights, dinners, sports competitions, sports teams, the logos of sports teams, bands, holiday celebrations,

language, beliefs, stories, memories, sense of humor, songs, poetry, drawings, miners' unions, and the labor movement draw attention.

Mining societies have become tight-knit communities that are highly dependent on the place and each other due to their lifestyles and difficult working conditions. Therefore, these societies are very rich in terms of community spirit. Therefore, this community spirit has identity value along with social value, as it is a feature that distinguishes the mining society from other societies. Moreover, this tight-knit community is in unity with each other and with the place, as they are connected to the place and each other with strong ties, so it has the value of integrity.

In addition, these societies are highly complex and mixed. Therefore, they have evolved into societies unique to themselves, where there is a lot of cultural exchange. Therefore, this complexity also has identity value and social value.

There is also a system where all the needs of the mining community such as occupational safety, education, health, housing, transportation, infrastructure, and social needs are met. Because this system is specific to mining, it has identity value and social value. In addition, this system has document value as it is informative for future generations and other cases.

Moreover, a special apprenticeship method has been developed for the education of these mining societies, and mining students are supported with scholarships. Because this is specific to mining this has identity value. Moreover, it is related to social issues and has social value. Because this method is informative for future generations and other cases, it has document value.

In addition, social activities and welfares such as movie nights and dinner parties are very important for the miners to meet their social needs. Therefore, these social activities have social value.

In addition, sports teams are established in mining areas and sports competitions are organized. Organizing sports competitions has social value. Sports teams, on the other hand, have an identity value and social value because they are established

specifically for the region. In addition, these sports teams have their own logos, and these logos also have identity value and social value.

In addition, holiday celebrations are of great importance for miners in the mining network. Moreover, local bands are set up for celebrations. Therefore, bands and holiday celebrations have a social value. In addition, bands have an identity value as they are established specifically for the region.

In addition, each mining region has its own language with its own dialect and place names, beliefs, stories, memories, and even a sense of humor. Therefore, they also have social value, identity value, and document value.

In addition, due to the difficult working and living conditions in mining communities, an abundance of artistic products emerge. Songs, poems, and drawings describing the ways of life of miners have identity value, social value, and document value.

In addition, many associations and unions were established to support the miners. These unions also have identity value as they are specific to mining. They also have social value as they take part in the social life of miners and support them.

Moreover, this community is one of the important communities representing the labor movement in Turkey. Miners are a community that rises and marches against injustice, and their stance has even been the subject of movies. Therefore, since this society is a community with its own unique social stance, it has social value and identity value.

Apart from these, mining is the sum of a system formed by the coexistence and relations of three components which are industry, site, and community. Therefore, the coexistence of these three components in the Zonguldak basin and ensuring integrity between them is an important value in network scale. The fact that these three components form a system as a whole has the integrity value, and since this integrity also creates the identity of the network, it has an identity value.

Regional Scale:

Apart from the values of the region in the network scale, the values of the region should also be evaluated on the regional scale in line with industry, site, and community.

When we look at the values related to **production/ industry** on the regional scale, the production of hard coal in the region, the existence of a self-sufficient production system, the creation of job opportunities for miners, and the logo of Armutçuk Hard Coal Enterprise draw attention.

As seen in the whole coal production network, coal production in Kandilli constituted the industry of the region. With the start of coal production, industrialization and urbanization were seen in the region. Moreover, with coal production, the region has developed by obtaining economic income, so the region has economic value.

In addition, there is a self-sufficient and sustainable coal production system in Kandilli, as in other places where coal is produced in the network. Thanks to this system, coal production become continuous. Therefore, this system has economic value as it provides economic income. It also has document value as this system is instructive for other fields and future generations.

Since mining constitutes the industry of the region in Kandilli, it offers job opportunities to its inhabitants. This creates economic value by causing miners to earn economic income. This situation also has social value by causing the formation of a mining society.

Moreover, Armutçuk Hard Coal Enterprise has a logo created to show the production places. Since this is unique to the enterprise, it has an identity value.

When we look at the values related to **the site** on the regional scale, five sub-components which are natural environment, cultural landscape, open areas, built-up environment, and transportation network are encountered.

The region has unique natural characteristics. This area is located by the sea and has a unique landscape that combines forests and a built environment. Therefore, this region has a landscape value. In addition, its natural environment is also rich in aesthetics, so this area also has aesthetic value. However, the shore of the Kandilli is very valuable in many ways. The coast, where the sea, mountains, forests, and structures coexist, has an aesthetic value and landscape value. There is also a functional value on this shore as it has the potential to be used even though it is not currently in any use. In addition, since the nature of this place is unique, it has an identity value. It also has social value because it is engraved in the memories of the inhabitants.

There are many tunnels and mines in Kandilli to be used for both transportation and mining. The oldest mines in the region are located in this region and the structures in this region have existed since the Ottoman period. For this reason, there is an age and historical value in this region. Moreover, these mines have an aesthetic value. In addition, although there is no production from the mine in Lower Kandilli in the region, income can be obtained because there are other mines produced, so the mines have an economic value and functional value. Since these mines reflect the technology of the period, they have technical value and document value. These mines also have landscape value as they become part of the landscape. In addition, mines also have social value, as they have a place in the social lives of workers.

This area is also very rich in terms of open spaces. The region includes parks, sports fields, squares, public gardens, and private gardens. The parks in the region have a social value because they still remind the residents of the area of their old lives and are one of the few places where workers can socialize. Moreover, there are three sports fields in the region. Some of the sports fields in the area are still used and the unused ones have usage potential so they have functional value. In addition, it has a historical and age value, as traces of old sports fields are still found. Also, they have social value as they are reminders of old social life. There are also important squares in the region where great feasts, celebrations, and funerals were held in the past. Therefore, squares have age and historical value. Since these squares are still

standing, they have functional values. In addition, the squares have a social value because inhabitants are still gathered in these squares. There are also public gardens in the region. The gardens of public buildings in this area have landscape value. They also have social value as the inhabitants congregate in these areas. There are also gardens of the lodgings in the area. Even if the lodgings are not inhabited, the gardens in this area are used to grow vegetables and fruits, so they have functional values. Vegetables grown in this garden have economic value because they can earn economic income. These gardens also have landscape value. These gardens also have social value as they are the areas where the inhabitants spend most of their time and even host each other. Moreover, the togetherness of these open areas has an integrity value in the region.

The built-up environment of the field is also very valuable. There are residential buildings, production buildings, and public social buildings in the area. The plan layout of the area is also very important. The original plan of the area is preserved; therefore, the area has authenticity value and age and historical value. Moreover, the plan organization and the relations of open and built-up spaces show an architectural value. The plan layout of the region has unique relations, so it has an identity value. Since the plan layout of the area gives information about the life in the area, it also has document value. Since the structures related to production and residential purposes in the region are among the first building groups created in the region, they have age and historical value. In addition, these buildings have functional values because the buildings in the area are used or the buildings have the potential for use. Since the buildings show the architectural style and construction techniques of the period, they also have architectural and technical value and document value. Since the buildings become identified with the area over time, the buildings have identity value. In addition, since most of the structures have been preserved, they have authenticity value. These buildings also have aesthetic value. Since these structures are embedded in the memories of the living, they also have social values. Although the public buildings of TTK have changed with additions over time, the buildings have age and historical value, functional value, architectural and technical value,

aesthetic value, document value, and social value. There are also many ruins in the region. Ruins are one of the oldest structures in the region, so they have age and historical value. Moreover, they keep their original conditions even though their conditions are bad. Therefore, they have authenticity value. Ruins in the region can also show the construction techniques and the plan organization of the region, so they have architectural and technical value. Moreover, they have different aesthetics, so they have aesthetic value. Furthermore, they have document value because they are the oldest structures in the region, and thanks to these structures the settlement plan of the areas, construction techniques, architectural style, lifestyle of the community, and production methods can be understood. These areas also have social value as they are in the memory of the living. Moreover, the preservation of the integrity and original physical structure of the buildings is an important value in this region. Although this integrity is not felt as the buildings collapse in some regions, overall integrity is felt and this shows that there is an integrity value in the region.

Moreover, there are traces of people and coal transportation structures in the region. These traces are the remains of old coal and human transportation, they have age and historical values. Some of these have functional values because they have the potential to be used. In addition, these traces have technical value as they show the technology of the period. In addition, these traces have an identity value and aesthetic value. Since these traces are preserved in their original form, they have authenticity value. Moreover, they have document value as they give information about the old production method and transportation. In addition, these traces have social and memory value as they are also found in the memories of the inhabitants. Furthermore, the transportation network is important as it provides the interrelationship of the parts of the region. It has integrity and functional value in the region, as it provides integrity between the components in the region and facilitates use.

Apart from these, ensuring integrity between the parts of the site is also important for the region. Apart from the ruined areas and the destroyed buildings in the region, the physical structure is generally preserved and the integrity of the region is felt.

This causes the inhabitants of the region to recognize the area and preserve their ties with the area. Therefore, the field has the integrity value, as there is a combination of the parts of the physical structure of the field. As this integrity creates the identity of the area, the site has also an identity value.

When we look at the values related to **the community** on the regional scale, community spirit, cultural complexity, a system that meets all the needs of the miners, unique education system, miners' welfares, movie nights, dinners, sports competitions, sports teams, the logos of sports teams, bands, holiday celebrations, language, beliefs, stories, memories, sense of humor, songs, poetry, drawings miners' unions, and the labor movement draw attention.

Although the people living in this area came from different places, the mining society of the region is a tight-knit community that is highly dependent on the place and each other due to their lifestyles and difficult working conditions. Therefore, this community is very rich in terms of community spirit. Therefore, this community has a social value. Moreover, the mining community in this region has integrity value because the community remembers old memories and does not lose their connection with each other and the place.

In addition, these communities are highly complex and mixed. At the same time, the fact that Italians and people from different cultures lived in the region led to the formation of traditions such as baptism ceremonies. Therefore, they have evolved into unique societies, where there is a lot of cultural exchange. Therefore, this complexity also has identity value and social value.

Like other production areas, a system has been established in this area to meet all the needs of miners. Within this system, besides the production areas, lodgings for the shelter of the miners, schools for their education, a hospital for their health needs, a market-like ekonoma for them to shop, cinemas, clubs, beaches, and guesthouses to meet their social needs, and transportation networks were created to provide transportation. This system has improved social life by increasing the commitment of the miners to the region, to each other, and to their work. For this reason, it can be

said that there is a social value. In addition, this system has document value as it is informative for future generations and other cases.

Moreover, a special apprenticeship method has been developed for the education of these mining societies, and mining students are supported with scholarships. It is related to social issues and it has social value. Because this method is informative for future generations and other cases, it has document value.

In addition, social activities and welfares such as movie nights and dinner parties are very important for the miners to meet their social needs. Therefore, these social activities have social value.

In addition, sports competitions are organized in the region. Organizing sports competitions has social value. Moreover, the region has its own sports team. Therefore, the Armutçuk sports team has an identity value and social value because it is established specifically for the region. In addition, this sports team has its own logo, and this logo also has identity value and social value.

In addition, holiday celebrations are of great importance for the inhabitants of the region. Moreover, a school band was set up for celebrations. Therefore, this band and holiday celebrations have a social value. In addition, this band has an identity value as it is established specifically for the region.

In addition, Kandilli has its own language with its own dialect and place names, beliefs, stories, memories, and even a sense of humor. Therefore, it has social value, identity value, and document value.

In addition, due to the difficult working and living conditions in the region, an abundance of artistic products emerge. Songs, poems, and drawings describing the ways of life of miners have identity value, social value, and document value.

In addition, many associations and unions were established to support the miners. There is a unique association which is Kandilli Culture Association for Kandilli. It has an identity value as it is specific to the region. It has a social value as it takes part in the social life of miners and supports them.

Moreover, the mining community in this region has been an important representative of the miner's movement, as miners have developed a resistance against the political situation and joined the marches against injustice with other mining communities. Therefore, with their own stance and social life, this society has social and identity values.

Apart from these, the Kandilli/Armutçuk region is a complex area where the industry, community, and site coexist with their sub-components. The coexistence of all these components creates the identity of the region and ensures its development. The deterioration of the relations between these components causes the collapse of the region. Therefore, it is very important to preserve the integrity of the region. Although it is seen that the components have started to disappear in the region, the traces of the components are still read in the region, indicating that the region has an integrity value. In addition, since the integrity of the region creates the character of the region, the region also has an identity value.

Building Scale:

After determining the values at the network and region scale, values should also be determined at the building scale in the Kandilli region in order to develop a proposal.

When we look at the values related to **the site** in the regional scale of the region, five sub- components which are natural environment, cultural landscape, open areas, built-up environment, and transportation network are encountered.

The region has unique natural characteristics. However, the area richest in terms of natural features is the Lower Kandilli region as it is abandoned and left to nature. This area is located by the sea and has a unique landscape. Therefore, Lower Kandilli has a landscape value. In addition, its natural environment is also rich in aesthetics, so this area also has aesthetic value. However, the shore of the Lower Kandilli is very valuable in many ways. The coast, where the sea, mountains, forests, and structures coexist, has an aesthetic value and landscape value. There is also a functional value on this shore as it has the potential to be used even though it is not

currently in any use. In addition, since the nature of this place is unique, it has an identity value. It also has social value because it is engraved in the memories of the inhabitants.

There are many tunnels and mines in the Lower Kandilli region to be used for both transportation and mining. The oldest mines in the region are located in this region and the structures in this region have existed since the Ottoman period. For this reason, there is an age and historical value in this region. Moreover, these mines have an aesthetic value. Since these mines and tunnels reflect the technology of the period, they have technical value and document value. These mines also have landscape value as they become part of the landscape. In addition, mines also have social value, as they have a place in the social lives of workers.

The Lower and Upper Kandilli regions are also very rich in terms of open spaces. Since the buildings in Lower Kandilli are in ruins, the area can be considered as an open area. Therefore, it has a landscape value. The Upper Kandilli region includes parks, sports fields, squares, public gardens, and private gardens. The parks in the region have a social value because they remind the residents of the area of their old lives and are one of the few places where inhabitants can socialize. Moreover, there are three sports fields in the region. Some of the sports fields in the area are still used and the unused ones have usage potential so they have functional value. In addition, it has a historical and age value, as traces of old sports fields are still found. Also, they have social value as they are reminders of old social life. There are also important squares in the region where great feasts, celebrations, and funerals were held in the past. The most important square in the region is the square with the Atatürk bust. Since the square has been in existence since the first times of the region, it has age and historical value. Since the square is still existing, it has functional value. In addition, the square has a social value because inhabitants are still gathered in the square. Moreover, the square has identity value because it witnessed the most important events of Kandilli, and the gate, which is the symbol of the region, is also located in this area. There are also public gardens in the region. The gardens of public buildings in this area have landscape value. They also have social value as the

inhabitants gathered in these areas. There are also gardens of the lodgings in the area. Even if the lodgings are not inhabited, the gardens in this area are used to grow vegetables and fruits, so they have functional values. Vegetables grown in this garden have economic value because they can earn economic income. These gardens also have landscape value. These gardens also have social value as they are the areas where the inhabitants spend most of their time and even host each other.

The built-up environments of the Upper and Lower Kandilli regions are also very valuable. When the buildings in the region are evaluated one by one, it is understood that the buildings have many values (Figure 4.5).

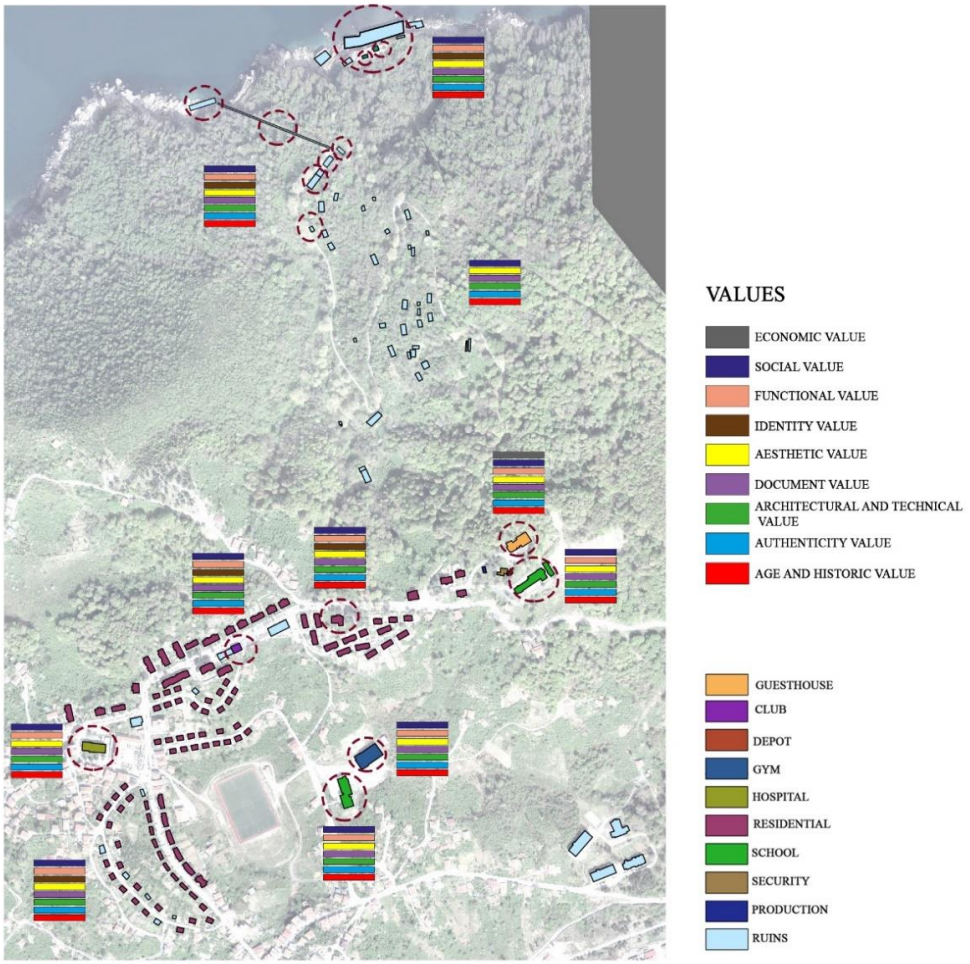

Figure 4.5. The image that shows the values of the buildings in the region (Author, 2021)

There are 10 registered building types in the Lower Kandilli region that should be evaluated as a priority.

Lower Kandilli region is one of the first settled parts of the region and the structures in this region are among the oldest structures in the region. Therefore, the structures in this region which are the coal silos, the customs/ house structure, the power plant, the boathouse, the varagel, the varagel crane, the lamp room, the office building, and the cinema have age and historical value because of their oldness, their existence through different periods in history, carrying the physical traces of the periods that they have passed.

Although some parts of the buildings have been destroyed since their construction in the Lower Kandilli region, the structures which are the coal silos, the customs/ house structure, the boathouse, the varagel, the varagel crane, the lamp room, the office building, and the cinema have authenticity value as the parts that remain undestroyed are original, the buildings have not changed much since the time they were built, the original plan scheme, the structural system, the construction technique, and architectural features are still present, and in some of the structures such as the varagel crane, there are still original machines inside of the buildings. Apart from these, although the power plant has changed since its construction, this building has the value of authenticity as the original plan scheme and the structural system can still be read.

Moreover, considering the architectural style, artistic features, construction techniques, and other technical characteristics, the buildings which are the coal silos, the customs/ house structure, the power plant, the boathouse, the varagel, the varagel crane, the lamp room, the office building, and the cinema in Lower Kandilli region have architectural and technical value.

Apart from these, the physical features of the buildings that are the coal silos, the customs/ house structure, the power plant, the boathouse, the varagel, the varagel crane, the lamp room, the office building, and the cinema in Lower Kandilli region are the documents of the past and they transfer information such as construction

technique, technology, architectural elements, plan layout, and mass configuration about their periods. Therefore, these buildings have document value.

In addition, the buildings which are the coal silos, the customs/ house structure, the power plant, the boathouse, the varagel, the varagel crane, the lamp room, the office building, and the cinema in the Lower Kandilli region have aesthetic value because of their architectural style, and artistic features.

As their physical characteristics and distinctive features define the identity of the place, and the buildings are made specifically for the region, the buildings which are the coal silos, the customs/ house structure, the power plant, the boathouse, the varagel, the varagel crane, the lamp room, the office building, and the cinema in Lower Kandilli region have also identity value.

In the Lower Kandilli region, the power plant has functional value as it is in use currently. Although the other structures which are the coal silos, the customs/ house structure, the boathouse, the varagel, the varagel crane, the lamp room, the office building, and the cinema in the Lower Kandilli region are not currently used, they also have functional value because they have the potential to be used.

Furthermore, the buildings which are the coal silos, the customs/ house structure, the power plant, the boathouse, the varagel, the varagel crane, the lamp room, the office building, and the cinema in the Lower Kandilli region have social and memory value as they take place in the memory of the society.

Apart from the registered buildings, there are building remains in the Lower Kandilli region, some of which are obscure. Since these building remains are the remains of old buildings, they have age and historical value. In addition, thanks to the ruins, the original layout of the buildings can be read, the original plan schemes can be understood and the original construction techniques can be observed. For this reason, these remains have the value of authenticity. In addition, when the construction techniques and plan schemes are considered, the buildings also have architectural and technical value. In addition, since the construction technique and settlement

organization of the period can be read, the ruins have document value. The ruins also have their own unique aesthetic value. In addition, because the remains have a place in the memories of the living, they also have social and memory values.

Although the Upper Kandilli region was established after the Lower Kandilli region, the buildings in this area have age and historical value as they have been in existence since the 1950s.

In the Upper Kandilli region, the buildings are usually in their original location, and preserve their original plan scheme, original functions, and original construction techniques; therefore, they have authenticity value. Although the guesthouse building has been renovated, it has the value of authenticity since it has not changed much and it is in its original location. Since the school building in the region is in its original location and has not undergone much change except for the annexes, it has the value of authenticity. The manager's house in the region has the value of authenticity as it is in its original location and preserves its original plan scheme and original function. The club building, secondary school building, and the sports hall in the region have the value of authenticity as they are in their original locations, and preserve the original plan schemes and original construction techniques. Despite the additions added over time, the hospital structure in the region has the value of authenticity as it is in its original location and preserves its original plan scheme and original construction technique. The lodgings in the region have a value of authenticity because they preserve the original construction techniques, the layout plans are the same as when they were first built, and the plan schemes are mostly original, although there are minor changes according to the needs of the period, and the original details such as door number are still present.

Moreover, considering the architectural features and the construction techniques, the buildings which are the guesthouse, the primary school, the manager’s house, the club building, the hospital, the secondary school, the sports hall, and the lodgings in the Upper Kandilli region have architectural and technical value.

In addition, the buildings which are the guesthouse, the primary school, the manager's house, the club building, the hospital, the secondary school, the sports hall, and the lodgings in the Upper Kandilli region have document value as they give information about their periods by representing the building typologies, architectural features, construction technique, mass configuration, and plan layouts.

Furthermore, the buildings which are the guesthouse, the primary school, the manager's house, the club building, the hospital, the secondary school, the sports hall, and the lodgings in the Upper Kandilli region have aesthetic value because of the architectural characteristics and aesthetic features of the buildings.

Moreover, the physical characteristics of some of the structures in the Upper Kandilli region define the identity of the region. Because the manager's house-made specifically for the region, it has identity value. At the same time, the club building has an identity value as it was built specifically for the region and is the only club structure left in the region. Apart from the manager's house and the club building, the lodgings have identity value as they represent the characteristics of the mining region.

Furthermore, the buildings in the area that are not demolished are generally used. The unused ones have the potential to be used. Therefore, the structures have a functional value. The guesthouse, the primary building, the manager's house, the secondary school, and some of the used lodgings have functional value as they are still used with their original functions. Although the club building, the hospital, the sports hall, and some of the unused lodgings are currently idle, they have functional value as they have the potential to be used.

Moreover, the buildings which are the guesthouse, the primary school, the manager's house, the club building, the hospital, the secondary school, the sports hall, and the lodgings in the Upper Kandilli region have social and memory value because they take place in the memory of the inhabitants.

Apart from these, the guesthouse has economic value as income is generated by those who come to the region.

Moreover, there are many transportation traces in the Lower and Upper Kandilli regions for both human and coal transportation. In the region, there are traces of roads, bus stops, old buses, stairs, varagel, varagel crane machinery, wagons, railways, coal pouring tools, and piers. In the Upper Kandilli region, between the workers' lodgings, the old roads are still used by repairing, so the roads have age and historical values. Also, these roads have functional values because they can still be used. These roads have technical values because they show the techniques of the period. Also, these roads have authenticity and document values. In addition, there are remains of old bus stops in the Lower Kandilli region. Since these bus stops are old, they have age and historical values, technical values, authenticity values, document values, and social values. These structures also have functional values as they have the potential for use. There are also remnants of old buses in the area. These buses also have age and historical value, identity value and social value. There are also old stairs in the Lower Kandilli area. These stairs have age and historical value, functional value, technical value and authenticity value. Moreover, in the Lower Kandilli region, there is varagel used for human and coal transportation. Since varagel has existed since the Ottoman period, it has age and historical value. In addition, it has technical value and document value as it shows the technology of its period. It has an identity value because it has become the symbol of the region. It has an authenticity value because it has not changed much. It has aesthetic value because it has a unique aesthetic. It has a social value because it is remembered by the people of the region. In the Lower Kandilli region, there are unique machines in the structure of the varagel crane. Hence, machines have age and historical value and authenticity value. They have technical and document values as they show the technology of the period. They also have aesthetic values. In addition, there are original wagons used for decorative purposes in the Aşağı Kandilli region. Therefore, these wagons have age and historical value, document value and authenticity value. They also have functional value due to their use. They also have aesthetic and social values.

Furthermore, there are traces of original railways in the Lower and Upper Kandilli regions. Therefore, they have age and historical value, technical value, authenticity value, aesthetic value, and document value. Moreover, there are traces of old coal pouring tools in the Lower Kandilli region. Because of their originality, they have age and historical value, technical value, authenticity value, aesthetic value, and document value. There are also traces of piers in Lower Kandilli region. Because they are old structures, they have age and historical value, technical value, authenticity value, aesthetic value, and document value.

4.1.2 Problems of the Kandilli/ Armutçuk Region in Different Scales

The Kandilli/Armutçuk region has many values at different scales. At the same time, many problems that caused the collapse in the region are detected. The region should be conserved and some strategies should be developed for future uses of the region. Therefore, the problems of the region should be analyzed thoroughly while making decisions about the future of the region. Thus, in this part of the thesis, the problems of the region should be evaluated on different scales which are network scale, regional scale, and building scale in line with three components which are industry, site, and community. Therefore, the problems of the field can be evaluated under the same headings as the values of the region (Figure 4.6). In addition, the problems in the region were determined in line with the literature research and by making use of the interviews made during the field trip.

		NETWORK SCALE	REGIONAL SCALE	BUILDING SCALE
	INDUSTRY/ PRODUCTION	DECREASE IN HARD COAL PRODUCTION LOSS OF A SELF-SUFFICIENT AND SUSTAINABLE PRODUCTION SYSTEM LACK OF JOB OPPORTUNITIES FOR MINERS LOSS OF THE IMPORTANCE OF THE LOGOS OF THE CORPORATIONS	DECREASE IN HARD COAL PRODUCTION LOSS OF A SELF-SUFFICIENT AND SUSTAINABLE PRODUCTION SYSTEM LACK OF JOB OPPORTUNITIES FOR MINERS LOSS OF THE IMPORTANCE OF THE LOGO OF THE CORPORATION	
		DISINTEGRATION OF COMPONENTS	DISINTEGRATION OF COMPONENTS	
SITE	NATURAL FEATURES	MOUNTAINOUS LAND DAMAGED GEOLOGICAL STRUCTURE	MOUNTAINOUS LAND FORESTS, SEA HUMIDITY, CLIMATE, AND VEGETATION DAMAGED GEOLOGICAL STRUCTURE	LOWER KANDILLI FOREST LOWER KANDILLI COAST
SITE	CULTURAL LANDSCAPE	MINES	VOIDS	LOWER KANDILLI MINE LOWER KANDILLI TUNNELS
SITE	OPEN AREAS		PARKS SPORTS FIELDS SQUARES DISINTEGRATION OF COMPONENTS	LOWER KANDILLI TEA GARDEN SPORTS FIELDS SQUARE WITH ATATURK BUST UPPER KANDILLI CINEMA GARDENS OF LODGINGS FOR SINGLE WORKERS' GARDEN OF MANAGER'S HOUSE
SITE	BUILT- UP ENVIRONMENT		PLAN LAYOUT PRODUCTION BUILDINGS TTK RESIDENTIAL BUILDINGS TTK PUBLIC BUILDINGS RUINS DISINTEGRATION OF COMPONENTS	ASPIRATOR COAL SILOS CUSTOMS BOATHOUSE VARAGEL CRANE LAMPROOM LOWER KANDILLI OFFICE MANAGER'S HOUSE WORKERS' LODGINGS OFFICERS' LODGINGS EKONOMAS LOWER KANDILLI CINEMA LOWER KANDILLI CHURCH UPPER KANDILLI SCHOOLS UPPER KANDILLI GUESTHOUSE UPPER KANDILLI CINEMA UPPER KANDILLI CLUBS UPPER KANDILLI HOSPITAL INDOOR GYM LOWER KANDILLI RUINS WORKERS' COMPLEX
SITE	TRANSPORTATION NETWORK	DISINTEGRATION OF COMPONENTS	TRACES OF HUMAN TRANSPORTATION TRACES OF COAL TRANSPORTATION DISINTEGRATION OF COMPONENTS	ROADS BUS STOPS OLD BUSES STAIRS VARAGEL VARAGEL CRANE MACHINERY WAGONS RAILWAYS POURING TOOLS PIERS
COMMUNITY		LOSS OF TIGHT- KNIT COMMUNITY WITH STRONG BONDS COMMUNITY SPIRIT DISINTEGRATION LOSS OF COMPLEX COMMUNITY CULTURAL EXCHANGE LOSS OF A SYSTEM THAT MEETS ALL THE NEEDS OF THE MINERS LOSS OF UNIQUE EDUCATION SYSTEM GRANTING SCHOLARSHIPS TO MINING STUDENTS LOSS OF MINERS' WELFARES MOVIE NIGHTS DINNERS/ MEETINGS LOSS OF SPORTS COMPETITIONS SPORTS TEAMS THE LOGOS OF SPORTS TEAMS LOSS OF BANDS/ CHOIRS HOLIDAY CELEBRATIONS LOSS OF LANGUAGE BELIEFS STORIES MEMORIES SENSE OF HUMOUR LOSS OF SONGS POETRY DRAWINGS LOSS OF MINERS' UNIONS LABOR MOVEMENT	LOSS OF TIGHT- KNIT COMMUNITY WITH STRONG BONDS COMMUNITY SPIRIT DISINTEGRATION LOSS OF COMPLEX COMMUNITY CULTURAL EXCHANGE LOSS OF A SYSTEM THAT MEETS ALL THE NEEDS OF THE MINERS LOSS OF UNIQUE EDUCATION SYSTEM GRANTING SCHOLARSHIPS TO MINING STUDENTS LOSS OF MINERS' WELFARES MOVIE NIGHTS DINNERS/ MEETINGS LOSS OF SPORTS COMPETITIONS SPORTS TEAMS THE LOGOS OF SPORTS TEAMS LOSS OF BANDS/ CHOIRS HOLIDAY CELEBRATIONS LOSS OF LANGUAGE BELIEFS STORIES MEMORIES SENSE OF HUMOUR LOSS OF SONGS POETRY DRAWINGS LOSS OF MINERS' UNIONS LABOR MOVEMENT	
		DISINTEGRATION OF COMPONENTS	DISINTEGRATION OF COMPONENTS	

Figure 4.6. Diagram showing the problems of the region at different scales (Author, 2022)

Network Scale:

While evaluating the problems, it is necessary to make an evaluation at the network scale first.

In terms of **production/ industry,** the decrease in coal production is one of the most important problems in network scale. The hard coal production has decreased as a result of the fact that the field, which is a difficult area to operate as a result of the state's failure to invest in the mining sector, cannot benefit from new technologies and latest systems, and the retired workers leave the region and new workers are not recruited. With the decrease in coal production, the industry in the region begins to disappear and the region begins to fail economically. This situation is followed by a decrease in social life. The work required to meet the social needs of the workers has decreased, so social life has become problematic. People start to migrate from the area and buildings start to become idle. Then, many unused structures were destroyed because of the TTK not allocating a budget for them and removing them from their inventory and the municipalities not taking ownership of the structures. Therefore, the loss of importance of coal and the decrease in its production is one of the most important factors causing the collapse of the region. In addition, the sustainable production system in the region was damaged. With the loss of importance of coal, the institution started not to create a new workforce, which created a labor shortage, resulting in a decrease in coal production and the absence of sustainable production. Moreover, the lack of employment in mining reduces job opportunities in the region. Therefore, the region emigrates. In addition, the logos of the institutions have started to lose their importance over time.

In terms of **the site,** one of the most important problems at the network scale is natural features. The coalfield is quite mountainous. This made transportation difficult and create disintegration between different production regions. Moreover, the fragile geological structure of the coalfield is another problem related to natural features. Because of this character, the basin is heavily affected and damaged by mining operations. Moreover, mines cause some problems in the mining site. Mining

towns are regions sitting on unstable ground with many underground tunnels. Therefore, the demolitions of the regions can be seen. Moreover, the connection between the coal production parts in the basin has decreased over time although the connection still exists. The disruption of this connection creates a problem at the network scale.

Apart from these, it is important for such complex areas that the parts that make up the coal site are interrelated. But over time, these relations weakened. Unused coal fields have been converted or damaged. Therefore, the weakening of the relations of the sub-components that make up the site is a problematic situation as it changes the character of the region.

There are also many problems related to **the community** at the network scale. With the decrease in the importance given to coal in the basin, the importance given to the coal worker has decreased over time. When the system in which all the needs of the workers, especially their social needs, were met deteriorated, the commitment of the workers to the place, to each other, and to their jobs decreased over time. The disintegration of the community occurs and workers began to migrate to other areas. Thus, the community spirit and the complexity that comes with cultural exchange have started to decrease over time. Social life has lost its vitality. Cinema screenings and sports competitions have decreased in time. Football teams and their logos have lost their importance. Celebrations began not to be held, so the band was on the verge of extinction. In addition, due to the aging of the old workers and the lack of new miners, the mining culture faced the danger of not being passed on to future generations. The educational culture that is specific to mining, miner stories, and memories began to disappear. With the loss of importance of mining, the arts such as poetry, songs, and drawings about mining began to decline. In addition, mining unions have also reduced their activities. Moreover, Zonguldak- Ereğli coal basin has been one of the leading places for workers' movements. This basin, where important workers' marches are held, has even been the subject of movies and cinemas with its political stances and strikes. However, over time, although this

aspect of the basin is generally remembered, it has begun to be forgotten and not passed on to future generations.

Apart from the problems about industry, site, and community, the bond between these components that make up mining in the Zonguldak- Ereğli basin has also weakened. The mining areas have begun to be unused and have been left idle or converted. As a result, the relationships of the components have become problematic at the network scale.

Regional Scale:

The problems should also be evaluated at the regional scale in line with three components of mining which are industry, site, and community.

There are many problems related to **the industry/ production** at the regional scale. With the decrease in the importance given to mining in the 1990s, the downsizing policy of TTK started to follow in Kandilli/ Armutçuk region. Due to the lack of investment in mining, new technologies and the latest systems could not be utilized in production. In addition, workers were not recruited to replace the retired workers and production decreased. Therefore, the coal production in the region started to decline. The system that meets all the needs of the workers was broken and regressions occurred in areas such as social, health, and education. Therefore, people started to migrate and the region, which was established with coal production, started to collapse due to a decrease in coal production. Moreover, with the loss of importance of coal, the institution started not to create a new workforce. Therefore, a labor shortage was created in the region and coal production declined. In addition, the logo of the institution has started to lose its importance over time.

There are also many problems related to **the site** at the regional scale in the Kandilli/ Armutçuk region. There are some problems related to the natural features of the region. The Armutçuk/ Kandilli region is quite mountainous and this causes transportation difficulties (Figure 4.7). To ensure transportation in the mountainous region, especially in the Lower Kandilli region, narrow paths, steep roads, and rail

transport vehicles such as varagel are needed. These are transportation routes that are difficult to use with the effects of nature; therefore, the mountainous characteristics of the region cause some problems.

Figure 4.7. The images that show the mountainous characteristics of the region (Source: Zonguldak Special Provincial Administration Archive, 2020)

Moreover, the forests and the sea damage the structures in the region, especially in the Lower Kandilli region (Figure 4.8, Figure 4.9). The unused structures and the ruins in the region have become unnoticeable as the forest dominates the area over time, the destructive effect of the sea, and the lack of maintenance of the structures. While only traces of most structures can be found, even traces of most structures cannot be found. Therefore, the impact of forests and the sea on the built environment in the region is quite problematic.

Figure 4.8. The images that show the destructive effect of the sea in the Lower Kandilli Region in the Kandilli/ Armutçuk region (Source: Zonguldak Special Provincial Administration Archive, 2020)

Figure 4.9. The images that show the destructive effect of the forest in the Lower Kandilli Region in the Kandilli/ Armutçuk region (Source: Zonguldak Special Provincial Administration Archive, 2020)

In addition, humidity, climate, and vegetation in the Kandilli/ Armutçuk region damage the structures and the ruins in the whole area, so these characteristics are problematic (Figure 4.10, Figure 4.11). The unused buildings in the region have been destroyed and the steel structures have rusted due to neglect and natural features like climate, vegetation, and humidity in the region.

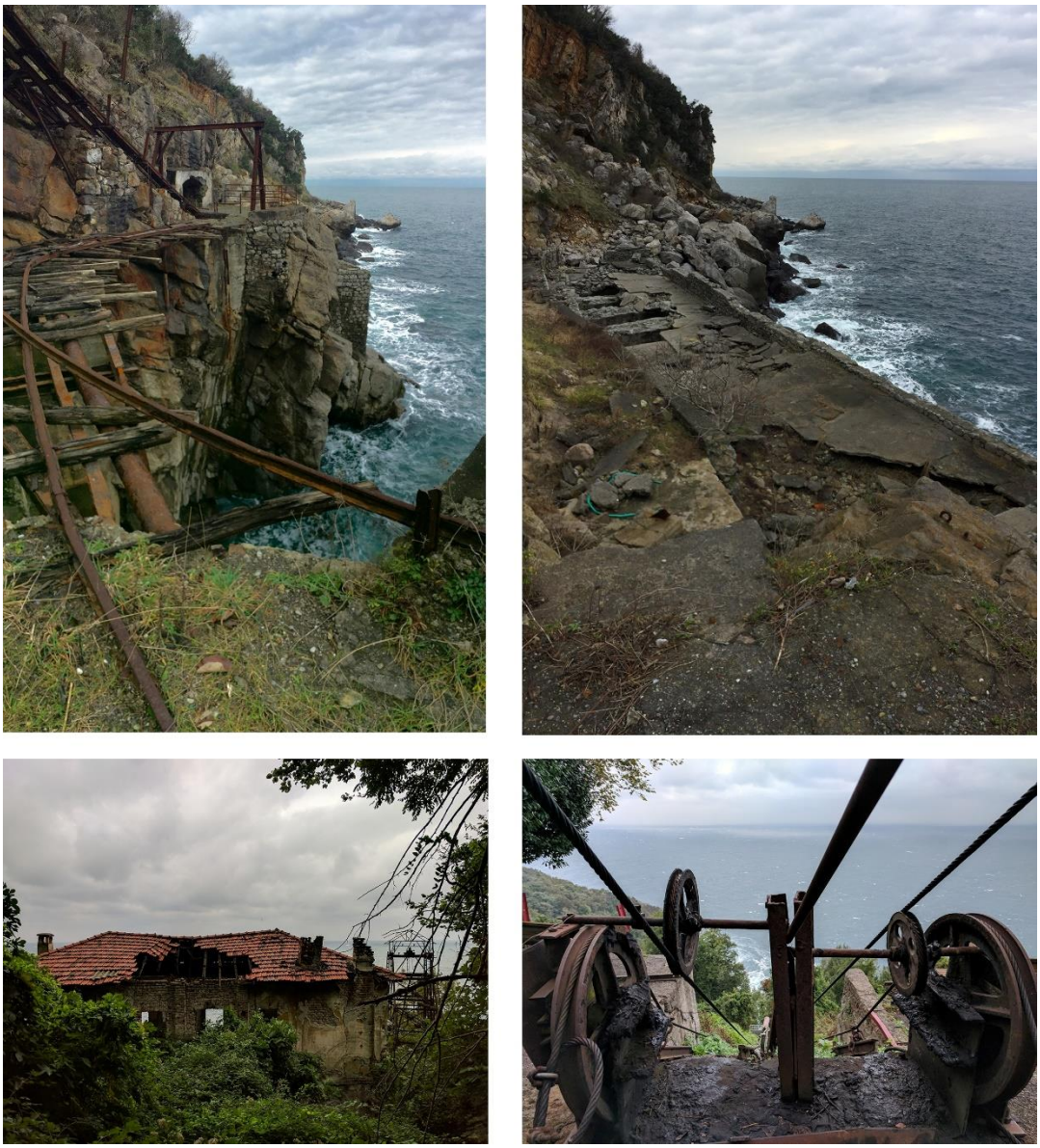

Figure 4.10. The images that show the problematic effect of the climate, humidity, and the vegetation in the Lower Kandilli region in the Kandilli/ Armutçuk region (Source: Zonguldak Special Provincial Administration Archive, 2020)

Figure 4.11. The images that show the problematic effect of the climate, humidity, and the vegetation in the Upper Kandilli region in the Kandilli/ Armutçuk region (Author, 2020)

Furthermore, the region is damaged by mining operations because of its fragile geological characteristics. Moreover, Kandilli/ Armutçuk region is a town sitting on unstable ground with many underground tunnels and mines, so there is a risk of demolition. Therefore, the geological characteristics of the region are problematic.

Apart from the problems related to the natural features of the region, there are some problems related to the voids of the Kandilli/ Armutçuk region. Based on Figure 4.12, it is understood that there are many tunnels in the region. Among these tunnels, only the tunnel at the -500m level, which is marked in blue, is used. In addition, the tunnels and the connections of the tunnels in the region were damaged.

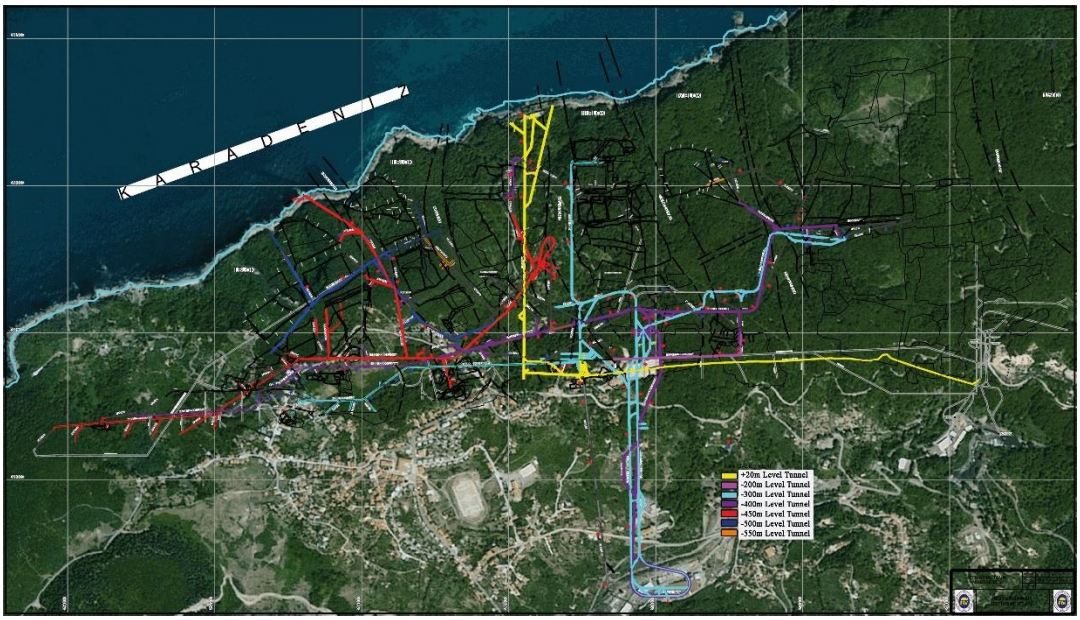

Figure 4.12. The image that shows the used and unused tunnels in the region (Source: Zonguldak Special Provincial Administration Archive, 2020)

Besides the natural characteristics and the voids in the Kandilli/ Armutçuk region, there are also problems related to the open areas. The open areas are not used efficiently in the region (Figure 4.13). In the Lower Kandilli region, instead of human-made open spaces, an irregular, uncontrolled, and unused open space dominated by the forest was formed. In the Upper Kandilli region, on the other hand, private gardens are mostly open areas. These areas are also open to limited access. Moreover, the parks, sports fields, and squares are not used enough for gathering and

recreational purposes. In addition, the integrity between open spaces has begun to deteriorate because the connections between different parts of the region have been damaged.

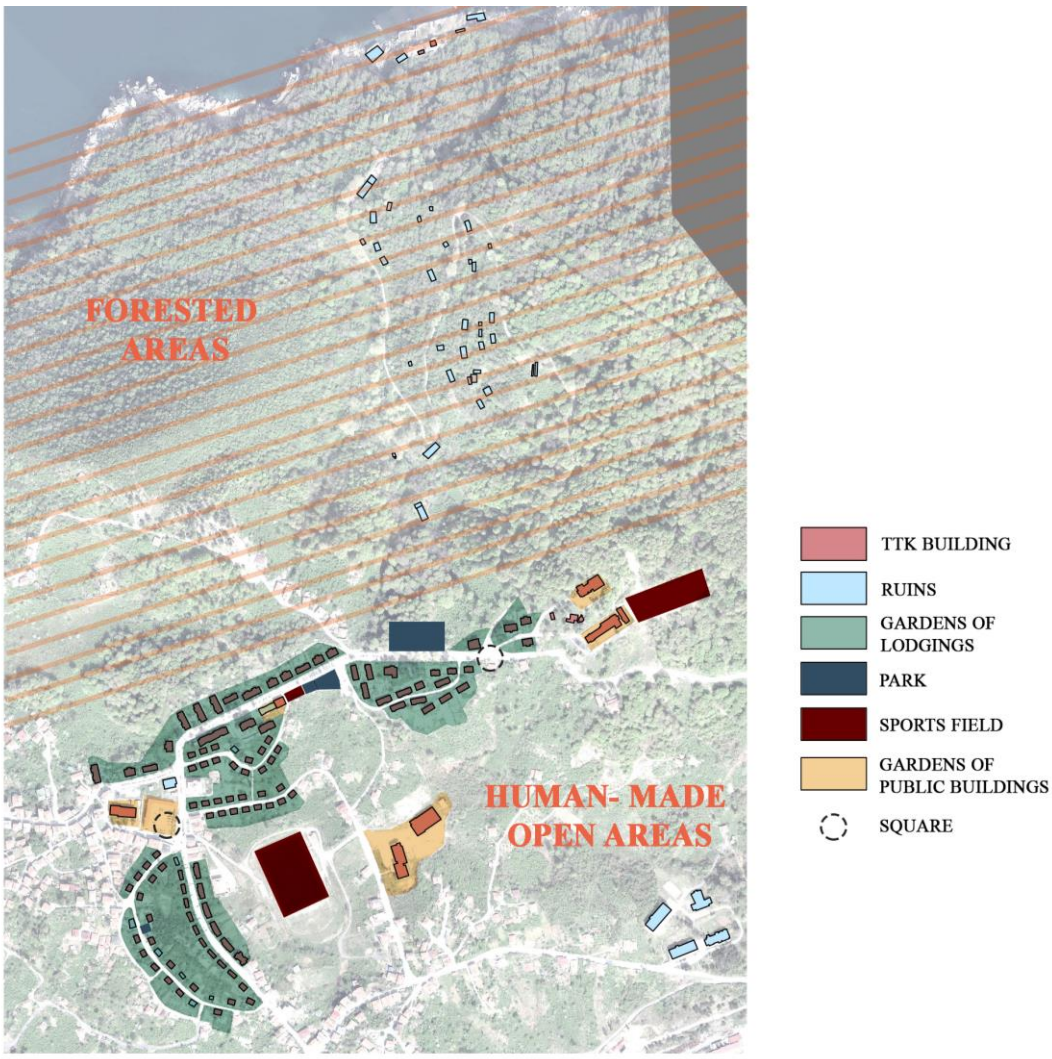

Figure 4.13. The image that shows the disintegration and the distribution of the open areas of the region (Author, 2022)

Apart from these, the built environment of the region is also problematic. The buildings in the region have become obsolete and the unused buildings have started to be demolished. Most of the buildings in the Lower Kandilli region are not used and the unused buildings have been demolished and become ruins. In the Upper Kandilli region, although some of the buildings are in use, most of them are out of

use and the unused buildings have begun to collapse. Because of the destroyed buildings, the plan layout of the region has become incomprehensible (Figure 4.14).

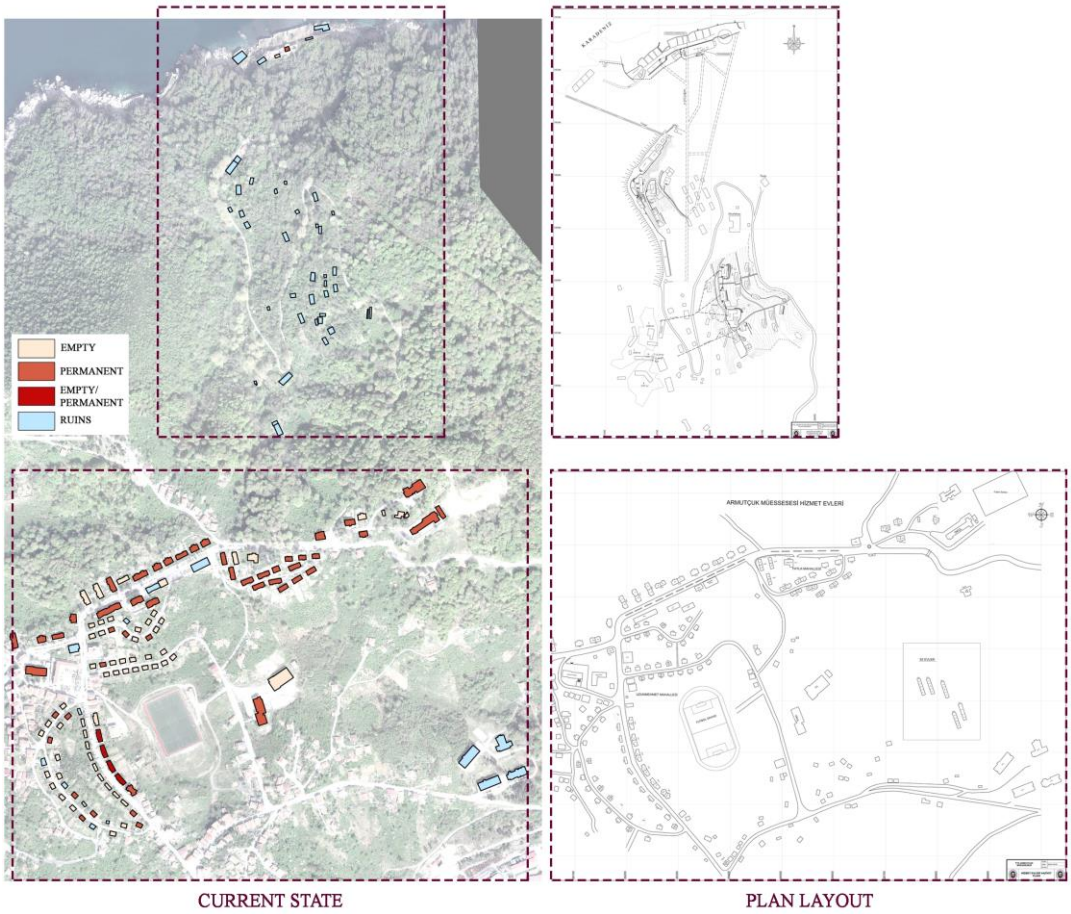

Figure 4.14. The image that shows the comparison of the current states of the ruins and the usage of the TTK buildings which create an incomprehensible plan layout of the region and the general plan layouts (Author, 2022)

Moreover, the old production structures are problematic in the region because they are generally in ruins or in disrepair (Figure 4.15). Although most of the production structures in the area are unused, the production structures that are currently in use, such as the power plant, are changing because of function changes or additions. In addition, the conditions of the production structures are getting worse day by day as the buildings lose their importance and regular maintenance and repair works are not done.

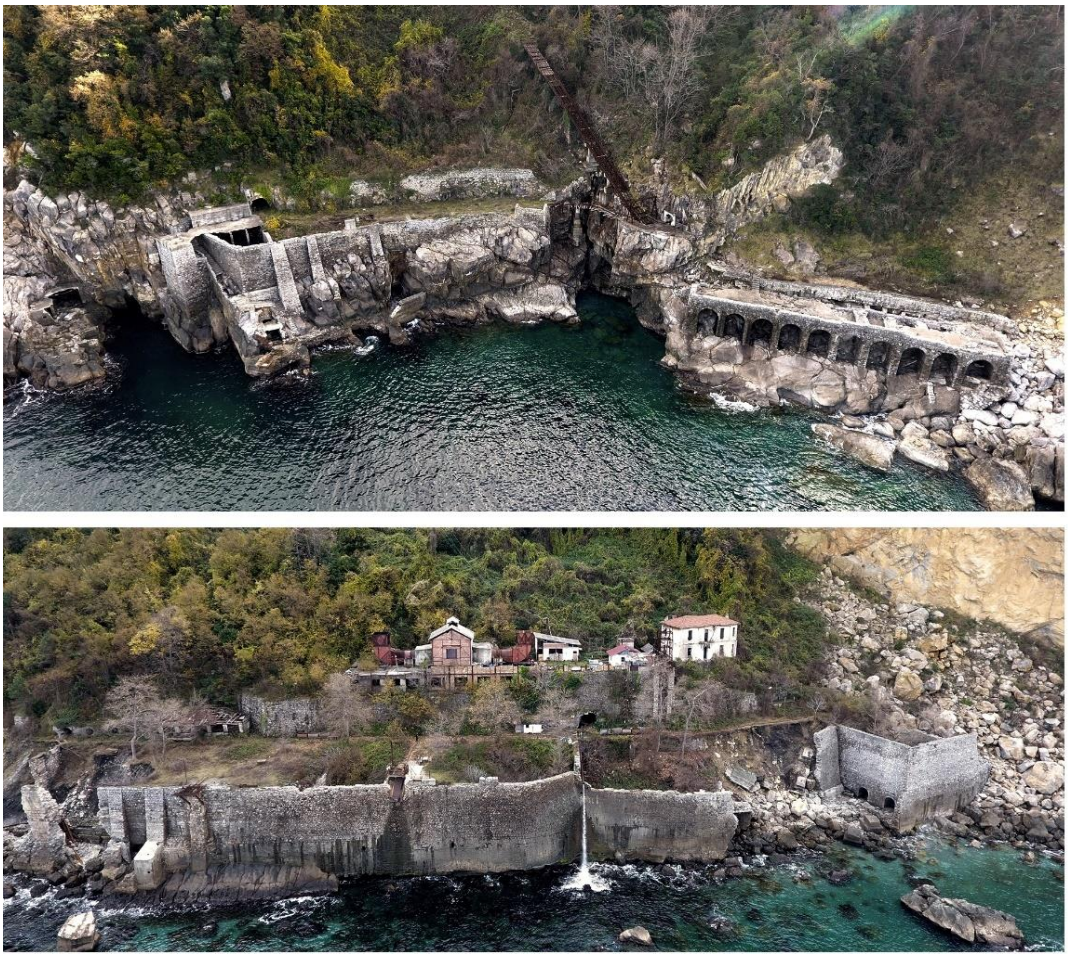

Figure 4.15. The image that shows the neglected state of the old production-related structures in the Kandilli/ Armutçuk region (Source: Zonguldak Special Provincial Administration Archive, 2020)

Institutional residential buildings in the region are also problematic because most of them are empty or in ruins (Figure 4.16). The old settlement in the Lower Kandilli region is no longer used and has been destroyed and turned into a ruin. Even traces of some structures are not found. In the Upper Kandilli region, while some of the lodgings for engineers and civil servants in the region are still in use, the lodgings for workers are unused and in poor condition. Since the buildings did not undergo regular maintenance and repair, the roofs of the buildings began to have problems, moisture began to be seen in the buildings and cracks began to form. Therefore, the demolition of the housing units in bad condition has begun in the region. In addition,

although the lodgings in the region have not changed much, the plans of some of them have changed considerably. This situation makes it difficult to understand the original state of the structures.

Figure 4.16. The images that show the problematic status of the TTK residential buildings (Author, 2020)

The public buildings in the area are also problematic because most of them have been demolished and these demolitions continue today (Figure 4.17). While the public buildings in the Lower Kandilli region remained in ruins, only a few public buildings in the Upper Kandilli region remained intact. These structures have also changed over time with function changes or additions.

Figure 4.17. The images that show the problematic status of public buildings in the region (Author, 2020)

Although the integrity is still felt in the areas where the physical structure is largely preserved, such as the places where the lodgings are located, this integrity has not been felt in the areas where there are ruins or destroyed structures in the region. The weakening of this integrity between the elements that make up the built environment in the region also creates a problem in the region.

The transportation structures in the region were also problematic and damaged. Although some traces of transportation are still found in the area, some have completely disappeared. Those still in the area are in very poor condition.

Some of the traces of human transportation such as stairs, bus stops, and roads are still found in the area. However, these traces are in very bad condition or are about to disappear. On the other hand, some traces have been destroyed by the destructive force of nature or by humans, and they cannot even be understood to have existed in the area. For example, there is no road to descend to the Lower Kandilli part of the region and the connection between settlements with different characteristics in the region has also weakened (Figure 4.18).

Figure 4.18. The images that show the current conditions of some of the human transportation traces in the Kandilli/ Armutçuk region (Author, 2020)

Moreover, some of the traces of the coal transportation in this area, such as coal transport wagons, railways, and machinery, are damaged and in poor condition, and some have completely disappeared (Figure 4.19).

Figure 4.19. The images that show the current conditions of some of the coal transportation traces in the Kandilli/ Armutçuk region (Author, 2020)

Problems regarding the status of traces of transportation also raise another problem. The disappearance of traces and the inability to transport cause the components to break down. Transportation between different parts of the region cannot be provided and the integrity of the parts is broken. This is an important problem for a mining area where integrity is important.

Apart from these, the integrity between the sub-components that make up the site in the region has also weakened with the change in the natural environment over time, the damage to the tunnels, the decrease in the use of open spaces, the change in the built environment and the destruction of the buildings, and the damage to the transportation network in the region. This poses a significant problem in the region.

There are also many problems related to **the community** at the regional scale in the Kandilli/ Armutçuk region. The region used to be crowded and lively. The community consisted of those who migrated from different places, but they adopted to the place and each other. The community commitment to work and to each other occurred and integrity emerged. The miners had a sense of belonging and were appreciated for their work. But now, as a result of the decrease in the importance of coal production and the number of workers, and the inadequate services in the region, the social life has been damaged and the sense of belonging has decreased. Miners

began to be underappreciated and occupational pride waned. The elders can still recognize the area, but this is gradually dissolving. The integrity of the community with each other and with the ground in the region is weakening. Therefore, a community has formed that does not own the region. Social life stagnated. Cinema screenings and sports competitions have decreased in time. The football team and its logo have lost their importance. Celebrations began not to be held, so the band was on the verge of extinction. The educational culture that is specific to mining, miner stories, and memories began to disappear. The arts such as poetry, songs, and drawings about mining began to decline. In addition, mining unions have also reduced their activities in the Kandilli/ Armutçuk region. Moreover, Kandilli/ Armutçuk is a region where the harsh conditions of mining are experienced, mass accidents occur, strikes are held and groups participating in political marches emerge. Therefore, the mining community in the region has been one of the leading representatives of the labor movement and its stance. However, over time, the mining community in this region lost these characteristics, the identity of the community began to change, and the community began to become irrelevant to mining. Therefore, the occurrence of this situation is an important problem in the region.

Apart from these, with the loss of importance of the industry in this region and the lack of investment in mining and the mining society, the needs of the people of the region were not met, and the social life in the region became insignificant. The people of the region began to migrate and the character of the mining community deteriorated. When the region began to be abandoned, the unused structures in the region began to disappear. Therefore, the importance of the three components which are industry, community, and site in the region began to decline and their ties with each other began to break. The integrity of the mining system in the region has deteriorated and the region has begun to collapse. Therefore, the weakening of the integrity of the three components, which are industry, community, and the site, at the regional scale is an important problem.

Building Scale:

After determining the problems at the network and region scale, problems should also be determined at the building scale in the Kandilli region in order to develop a proposal. There are many problems related to **the site** at the building scale in the Lower and Upper Kandilli regions.

There are problems related to natural features in the region at the building scale. Problematic natural areas are generally concentrated in the Lower Kandilli region. In this area, the most problematic natural areas are forested areas and the coast. Forested areas are problematic natural areas in the Lower Kandilli region. These areas are quite prevalent and dominate the area in the parts that are not intervened and cleaned. The building remains in the region begin to disappear with the effect of these forested areas. Therefore, these forested areas are problematic areas that should be kept under control as they begin to threaten the traces of the industrial era (Figure 4.20).

Figure 4.20. The images that show the dominant effect of the forested areas in the Lower Kandilli region (Author, 2020)

Apart from the forested areas, the coastal area is also a problematic natural area in the Lower Kandilli region. In the past, the coast in the region was used for both recreation and coal transportation. However, the coastal zone is not currently used. Even going down to the shore is quite difficult. The structures on the coast have been damaged by the effect of the sea and forested areas have started to cover the coastal region. Moreover, the public beach, which was formed by coal production, disappeared with the absence of coal production. Therefore, the coastal area has turned into a cliff where landslides begin to be seen and has become a wasted area (Figure 4.21).

Figure 4.21. The images that show the problematic status of the coastal area in the Lower Kandilli region (Author, 2020)

Besides the problems related to natural features, there are also some problems related to the tunnels and mines in the region at the building scale. Most of the tunnels in the region are located in the Lower Kandilli region and except for the tunnel at the -500m level, the other tunnels are not currently in use. In the past, some of the tunnels in the Lower Kandilli region were used for coal production and some for transportation, but now only the tunnel around the aspirator is used for ventilation

(Figure 4.22). Other tunnels have become unusable as a result of the effect of the sea or landslides (Figure 4.23).

Figure 4.22. The image showing the current status of the tunnel for ventilation in the region (Source: Zonguldak Special Provincial Administration Archive, 2020)

Figure 4.23. The images that show the current status of the tunnels in the region (Source: Zonguldak Special Provincial Administration Archive, 2020)

Besides natural features and the tunnels, open areas in the Lower and Upper Kandilli regions are also problematic at the building scale. As the Lower Kandilli area consists of ruins and forested areas, it can be thought of as a large open area. The destructive effect of nature shows itself in this region and a large and uncontrolled open space is formed. Therefore, the large open space of the Lower Kandilli region is problematic and the open space must be used and cleaned in a controlled manner.

Figure 4.24. The images that show the large open area of the Lower Kandilli region (Source: Zonguldak Special Provincial Administration Archive, 2020)

Moreover, there are some problematic open areas in the Upper Kandilli region as well. The tea garden, where many meetings, wedding ceremonies, and celebrations were held in the past, is not used today. Small structures related to the celebrations in this area were demolished and the area was completely covered with greenery. This area is in bad condition and there is no trace of this area as a tea garden. Information about this area can only be obtained by asking the people living in the area (Figure 4.25).

Figure 4.25. The images that show the problematic status of the tea garden in the Upper Kandilli region (Author, 2020)

Moreover, sports fields are also problematic open areas in this region. While sports and events were held on the sports field next to the primary school building in the past, the field is no longer used and is in a bad condition (Figure 4.26).

Figure 4.26. The images showing the problematic status of the old sports field (The images are retrieved from the Facebook account of the Lower Kandilli region left: https://www.facebook.com/photo/?fbid=10224101379696668&set=oa.160025506193554, right: https://www.facebook.com/photo/?fbid=10224106226737841&set=oa.160025506193554)

Another problematic open area in the region is the square with the Atatürk bust. The square with the Atatürk bust, which was one of the important gathering areas of the region where the celebrations were held in the past, is not used as before. Therefore, the importance of this area has begun to be forgotten (Figure 4.27).

Figure 4.27. The image showing the problematic status of the square with Atatürk's bust (Author, 2020)

Moreover, the garden of the cinema in the Upper Kandilli region is in disrepair as the cinema structure burned down and only the floor remained (Figure 4.28).

Figure 4.28. The images that show the problematic status of the old cinema in the Upper Kandilli region (The images were taken by the author, 2020)

In addition, the garden of the manager’s house is problematic because of its neglected state. Although the principal's house is the most important accommodation in the region, the garden of the manager's house is neglected and not used (Figure 4.29).

Figure 4.29. The image that shows the neglected status of the garden of the manager’s house in the region (The image was taken by the author, 2020)

In addition to the manager's house, the gardens of the apartment buildings in the area are also problematic open areas. Although these apartment buildings are used, their gardens are neglected and unregulated (Figure 4.30).

Figure 4.30. The images that show the neglected status of the gardens of the apartments in the region (The images were taken by the author, 2020)

In addition, the gardens of the lodgings in the region are generally used. However, since the lodgings for single workers are not used, their gardens are also neglected and unregulated (Figure 4.31).

Figure 4.31. The images that show the neglected status of the gardens of the lodgings for single workers in the region (The images were taken by the author, 2020)

Besides the natural features, the tunnels, and the open areas, the built environment is also problematic in the Lower and Upper Kandilli regions. While the buildings in Lower Kandilli are in ruins due to neglect and harsh environmental effects, the buildings in Kandilli have minor deteriorations as they have just begun to be abandoned.

In the past, the Lower Kandilli region that has production areas, living spaces, and public buildings was an area where all the needs of the workers could be met (Figure 4.32), now only traces of most of the structures in the region can be found.

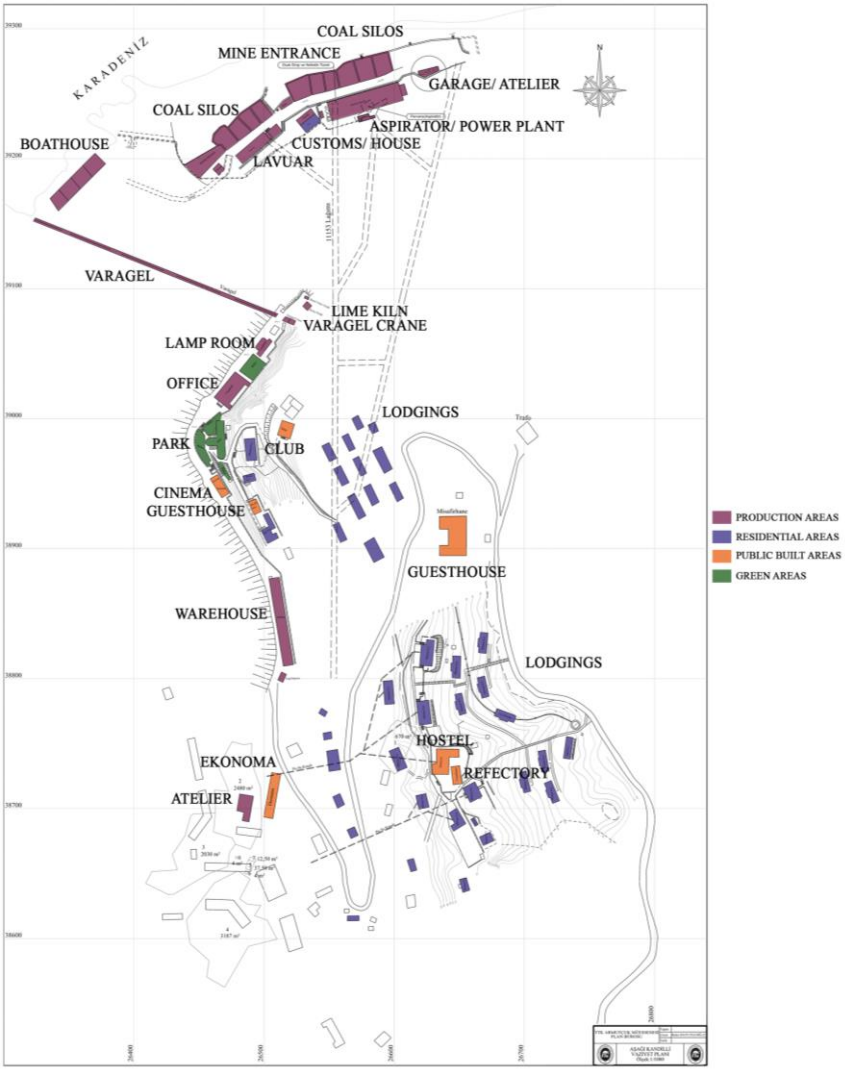

Figure 4.32. The image that shows the building types of the Lower Kandilli region (The image was made by the author, 2021)

Most of the buildings in the Lower Kandilli region were either demolished by the institution or damaged over time due to harsh environmental conditions. Only the aspirator structure is used in the region, but this structure does not preserve its original state. Others are in ruins and some structures do not even have traces of them.

The aspirator structure is a structure that was built on the traces of the power plant structure, which was very important for the region (Figure 4.33). Although this building was the only one used in the region, it was difficult to understand the original state of the power plant, as the structure was built on the traces of the power plant. In addition, the aspirator structure and power plant structures need maintenance and repair (Figure 4.34). Moreover, there are pieces belonging to the period inside the old power station structure. However, these parts are also neglected and difficult to access (Figure 4.35).

Figure 4.33. The image showing the current states of the aspirator and the traces of the old power plant in the Lower Kandilli region (The image is from the Zonguldak Special Provincial Administration Archive, 2020 and the markings are made by the author, 2022)

Figure 4.34. The images that show the problematic status of the aspirator and the traces of the old power plant in the Lower Kandilli region (Author, 2020)

Figure 4.35. The images that show the interior of the traces of the old power plant in the region (The images were taken from the archive of Salim Çalık, 2021)

Coal silos are other problematic structures in the Lower Kandilli region. Although these structures were places where coal was stored before, they lost their functions after the absence of coal production in this area. These unused structures have also been damaged over time due to neglect and the destructive effect of the sea (Figure 4.36).

Figure 4.36. The images that show the neglected states of the coal silos in the region (Author, 2020)

In addition, the structures used as customs and a house in the region are also important structures of the period. However, as a result of the end of coal production and the abandonment of the region, the customs structure has disappeared and the house has become neglected (Figure 4.37).

Figure 4.37. The images that show the neglected status of the house in the Lower Kandilli region (Author, 2020)

In addition, although the atelier was an important structure of its period, it was damaged over time due to neglect and the destructive effects of nature. Therefore, it faces the danger of extinction (Figure 4.38). In addition, there are still machines in this building, but these machines have become unusable due to lack of maintenance (Figure 4.39).

Figure 4.38. The images that show the neglected state of the interior and the exterior of the atelier in the Lower Kandilli region (Author, 2020)

Figure 4.39. The image showing the machines of the atelier in the Lower Kandilli region (Author, 2020)

Apart from this, the boathouse which was used for the storage of boats, used as a changing cabin and a cafe in the past in different periods, is currently abandoned. This structure is damaged by the destructive effects of the sea and nature, and it is being destroyed day by day due to lack of maintenance and protection (Figure 4.40).

Figure 4.40. The image showing the problematic status of the boathouse in the region (Source: Zonguldak Special Provincial Administration Archive, 2020)

Apart from this, there is no trace of the lavuar building, which is another important structure in the region, even today.

Apart from this, the lime kiln, which produced the raw materials for the buildings in the region, has lost its function and is not used today. This kiln has begun to disappear due to neglect and the influence of nature (Figure 4.41).

Figure 4.41. The image showing the problems of the lime kiln in the Lower Kandilli region (Author, 2020)

Moreover, the varagel crane is a structure that provides the movement and control of the varagel, which is one of the main means of transportation in the region. Although this structure is preserved, it is in poor condition as it has not been regularly repaired. In order to protect the structure from external factors, the roof should be repaired (Figure 4.42). In addition, there are original machines in this structure. These machines are also in bad condition due to lack of maintenance (Figure 4.43).

Figure 4.42. The images that show the deterioration of the varagel crane in the Lower Kandilli region (Author, 2020)

Figure 4.43. The images that show the unused machines in the varagel crane (The images were taken by the author, 2020)

In addition, the office building in the region has changed over time as it has been used for different functions at different times. Also, since this building was not used, it was in ruins due to neglect and the effects of nature (Figure 4.44).

Figure 4.44. The images that show the ruined state of the office in the Lower Kandilli region (The image was taken by the author, 2020)

In addition, the lamp room in the region is one of the problematic structures. This structure changed over time and started to lose its originality (Figure 4.45).

Figure 4.45. The image showing the changes in the lamp room in the Lower Kandilli region (The image was taken by the author, 2020)

There is also a miner's guesthouse in this area, where important meetings and celebrations take place. Important people of the time stayed in this building. Although the guesthouse, which started to be unused after the evacuation of the area, was tried to be repaired and kept alive, today it has become a forested area with only a few pieces of a wall (Figure 4.46).

Figure 4.46. The image showing the wall remains of the guesthouse in the Lower Kandilli region (The image was taken by the author, 2020)

Although many clubs and guesthouses were found in the region, the traces of them in the region were not found during the field trip. There is also an ekonoma structure in this region. However, traces of this structure were not found during the field trip as well.

In addition, there is a cinema in the Lower Kandilli region, which was one of the important socializing areas of its time. This cinema structure has become a ruin due to neglect with the abandonment of the region over time. The vegetative density around this building also damages the ruins of the building day by day (Figure 4.47).

Figure 4.47. The images that show the ruined state of the cinema in the Lower Kandilli region (The images were taken by the author, 2020)

There are also many civil servants’ and workers' lodging structures in this region. Since these areas were not used and destroyed over time, they only exist as remains. These areas are quite problematic because they are in the forested area and the remains began to disappear over time due to the effects of the forests (Figure 4.48).

Figure 4.48. The images that show the ruined states of the lodgings in the Lower Kandilli region (The images were taken by the author, 2020)

Another problematic area in this region is the church. This building was transformed into a mosque over time. In addition, it is in a very bad condition due to the destructive effect of nature and neglect (Figure 4.49).

Figure 4.49. The image showing the ruined state of the church in the Lower Kandilli region (The image was taken by the author, 2020)

Apart from the Lower Kandilli region, the Upper Kandilli region also has a problematic built environment. Since this region has begun to be abandoned due to the changing production policies, the buildings in the region have not been used. The unused structures began to be demolished over time. Public socialization structures are at the forefront of demolished structures. Although some of the lodgings are used, the unused ones have also started to be demolished. This can be understood from Figure 4.50. which shows the categories of the buildings and the ruins in the Upper Kandilli region.

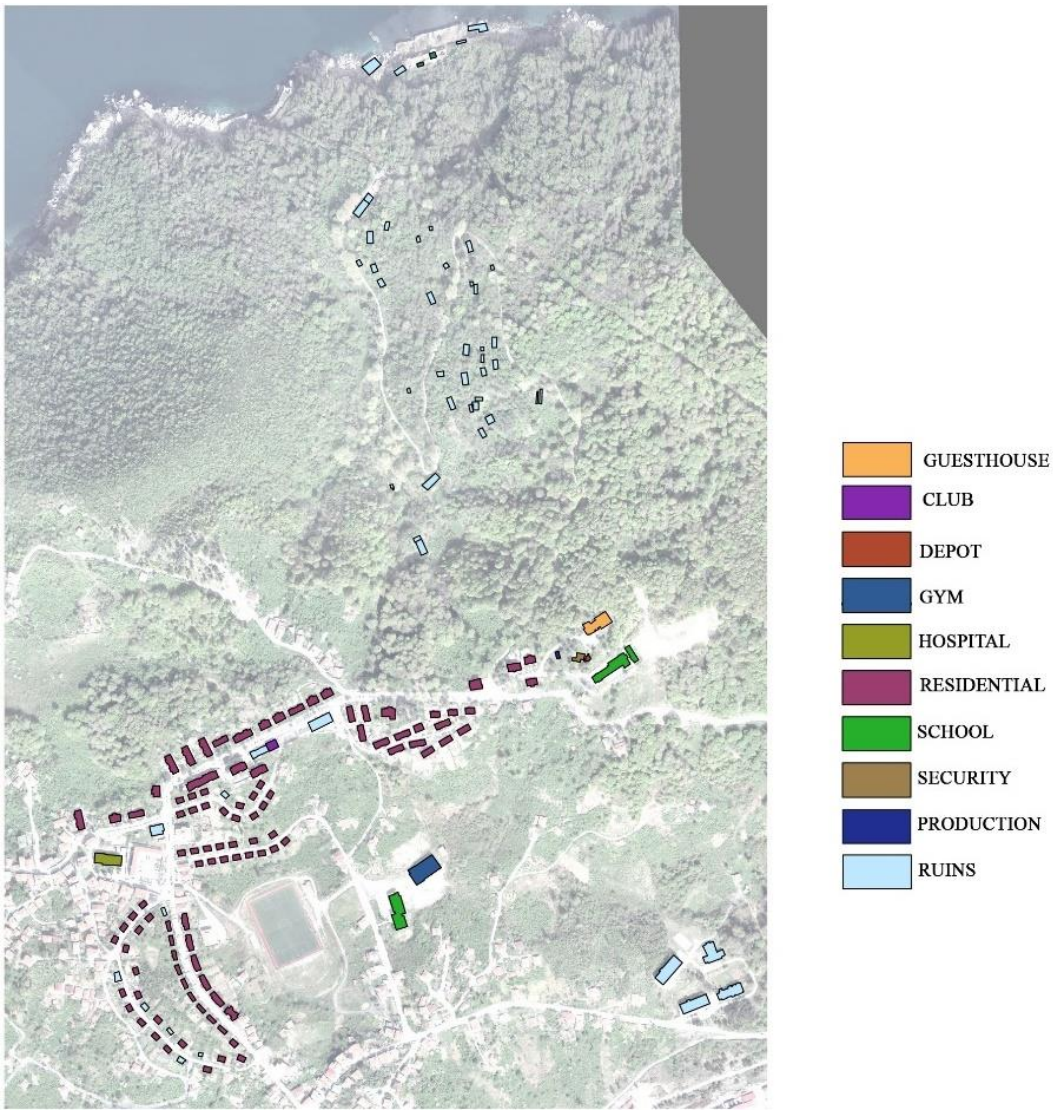

Figure 4.50. The image showing the building categories and the ruins in the region (Author, 2021)

In the Upper Kandilli region, most of the destroyed or ruined buildings are structures that are related to the social needs of the workers. In the area, the workers' complex (Figure 4.51), cinema, ekonoma, and workers' club were demolished. However, there are also various problems in undestroyed public buildings.

Figure 4.51. The images that show the demolition of the workers' complex in the Upper Kandilli region (Source: the archive of Salim Çalık, 2021)

While the guesthouse in Upper Kandilli is a place for outsiders to stay, there is no place for them to eat. In addition, although this building is in good condition since it was repaired, it has begun to lose its originality because it has undergone a serious repair (Figure 4.52).

Figure 4.52. The images that show the guesthouse in different periods (The images were taken by the author)

Moreover, the hospital is another problematic public building in the Upper Kandilli region. It is used, but its use is insufficient. There is only one family doctor in the hospital. Furthermore, this building has started to come to a bad state due to neglect over time. This structure has also changed over time by taking additions (Figure 4.53).

Figure 4.53. The images that show the deterioration of the hospital in the Upper Kandilli region (The images were taken by the author, 2020)

Moreover, the indoor gym is another problematic building in the region. This building is not in use, so it started to demolish due to neglect (Figure 4.54).

Figure 4.54. The image showing the deterioration of the indoor gym in the Upper Kandilli region (The image was taken by the author, 2020)

Apart from these structures, the primary school building is one of the problematic buildings. The school is in use, but it has lost its authenticity with additions and repair works (Figure 4.55).

Figure 4.55. The image showing the additions of the primary school in the Upper Kandilli region (The image was taken by the author, 2020)

In addition, the officers' club, built as an addition to the cinema, is out of use and in poor condition (Figure 4.56).

Figure 4.56. The images that show the deterioration of the club in the Upper Kandilli region (The images were taken by the author, 2020)

In the Upper Kandilli region, there are also residential buildings that have some problematic issues.

Although the manager's house has preserved its originality, it is in a bad condition as it is an unused building (Figure 4.57).

Figure 4.57. The images that show the deterioration of the manager’s house in the Upper Kandilli region (The images were taken by the author, 2020)

Apart from the manager’s house, lodgings for workers are also problematic. Since the number of workers working in the Armutçuk establishment has decreased and the region has migrated, most of the workers’ lodgings are abandoned in the Upper Kandilli region and have begun to collapse.

Lodgings for single workers are not used, so they are neglected and in poor condition. While the buildings were transformed into a family structure, their interior plans and openings were changed. In addition, annexes were added and removed over time (Figure 4.58).

Figure 4.58. The image showing the lodging number 1475, which is used to set an example for the general condition of the lodgings (The image was taken by the author, 2020)

Family-owned workers' lodgings are also in a similar situation. Since the housing is not maintained by the TTK, the lodgings of worker families are neglected and unable to meet the daily needs of the residents. Most of these lodgings are abandoned, and

some have begun to collapse. Since these structures did not meet the needs of the inhabitants, closed and open annexes were made to different parts of the buildings, but after the buildings were abandoned, some of these annexes were either demolished or in poor condition. The roofs of the buildings are in poor condition. The interior plan of these lodgings has generally been changed (Figure 4.59).

Figure 4.59. The images that show the lodging number 1446, which is used to set an example for the general condition of the lodgings (The images were taken by the author, 2020)

However, officer lodgings are in use, but they are used in a mixed manner, not according to the caste system as in the past. However, since the lodgings belong to the coal company, it is very difficult to repair the lodgings. For this reason, those living in these lodgings are waiting for the lodgings to be put up for sale (Figure 4.60). Six of the lodgings of officers in Upper Kandilli were sold, but they were repaired and changed (Figure 4.61). Apartments are also in a bad condition (Figure 4.62).

Figure 4.60. The images that show the lodging number 1432, which is used to set an example for the general condition of the lodgings (The images were taken by the author, 2020)

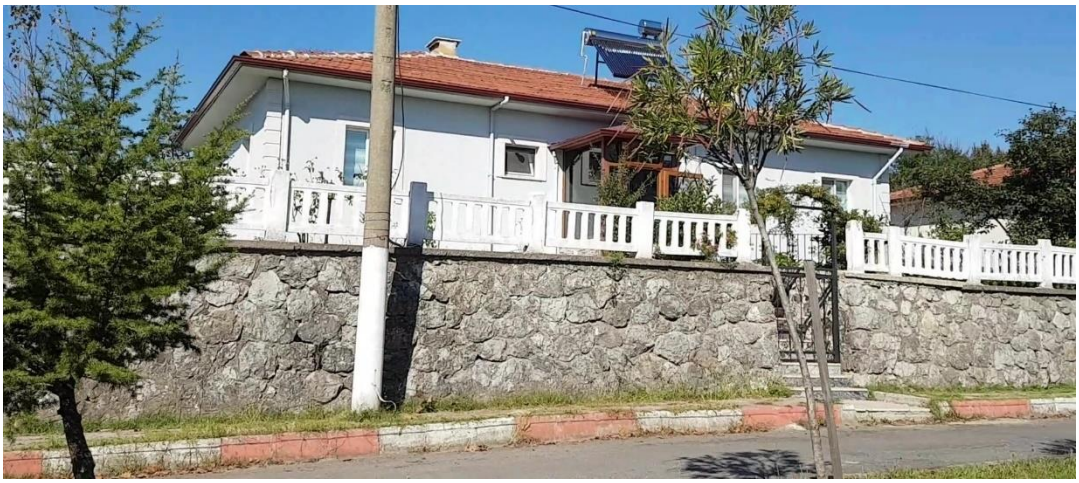

Figure 4.61. The image showing the lodging number 1518, which is used to set an example for the general condition of the lodgings (The image was taken by the author, 2020)

Figure 4.62. The image showing the apartment number 1577, which is used to set an example for the general condition of the apartments (The image was taken by the author, 2020)

Besides the natural features, the tunnels, the open areas, and the built environment, there are also problems with the traces of the transportation network in the Upper and Lower Kandilli regions.

In Kandilli/ Armutçuk region, transportation was provided by the sea, rail, and road in the past, today only road transportation is provided. Although the roads of the Upper Kandilli region are original and in use except for the side streets (Figure 4.63), the roads of the Lower Kandilli region are in very bad condition. In the Lower Kandilli region, the existing road which connects the Upper and Lower Kandilli regions is in very poor condition (Figure 4.64). In addition, a small and dangerous path is used for reaching the seaside parts of Aşağı Kandilli, which was previously descended with a varagel (Figure 4.65).

Figure 4.63. The image showing the road of the side street in the Upper Kandilli region (The image was taken by the author, 2020)

Figure 4.64. The image showing the problematic main road of the Lower Kandilli region (The image was taken by the author, 2020)

Figure 4.65. The image showing the small and dangerous path in the Lower Kandilli region (The image was taken by the author, 2020)

Buses have been used in this area for a long time and there were bus stops. Today, the old institution buses have been removed and municipal buses have started to be used. Traces of the old institution buses cannot be reached. Although there is no problematic situation at the bus stops in the Upper Kandilli region, the stops in the Lower Kandilli region are about to disappear among the forested areas and only traces of them can be found (Figure 4.66).

Figure 4.66. The image showing the old bus stop in the Lower Kandilli region (The image was taken by the author, 2020)

In addition, there is no trace of the important railway of the period that connects the Kandilli/ Armutçuk region to Ereğli.

Moreover, since this region is very mountainous, the place of the stairs in transportation was also quite large. Although there is no problem with the stairs in the Upper Kandilli region, the stairs in the Lower Kandilli region are neglected and have begun to disappear among the forested areas (Figure 4.67).

Figure 4.67. The images that show the examples of stairs in the Lower Kandilli region (The images were taken by the author, 2020)

Moreover, the varagel, once an important means of transportation in the Lower Kandilli region, is now abandoned and neglected (Figure 4.68).

Figure 4.68. The images that show the unused condition of the varagel in the Lower Kandilli region (The images were taken by the author, 2020)

In addition, the elevator and its machines are also important for transportation in this region. This elevator, which was previously used for transportation to coal silos, has ceased to be used with the abandonment of the area. Over time, this unused elevator and its machines began to suffer due to neglect (Figure 4.69).

Figure 4.69. The images that show the neglected states of the elevator and its machines in the Lower Kandilli region (The images were taken by the author, 2020)

Moreover, the traces of coal transportation such as wagons, transportation machines, rails, coal pouring tools, and piers in the Lower Kandilli region are being damaged due to the harsh conditions of nature (Figure 4.70).

Figure 4.70. The images that show the problematic status of the wagons, rails, coal pouring tools, and piers in the Lower Kandilli region (The images were taken by the author, 2020)

4.2 Conservation Proposals for the Kandilli/ Armutçuk Region

The Kandilli/Armutçuk region has many values and problems at different scales. Considering these values and problems, it can be understood that strategies for the conservation of this area should be created. In order to create conservation strategies for this area, the importance of the area should be determined first. Then, a vision should be determined in line with this importance.

Kandilli is a complex cultural landscape of extraction consisting of the totality of different components, and each of these components has many values and problems. When all values and problems are considered, it can be seen that Kandilli should be evaluated as a whole with its production, community, culture, traditions, social life, natural environment, open spaces, transportation network, built environment, and cultural landscape at different scales. **Therefore, the main importance of this area is that Kandilli/ Armutçuk is a complex cultural landscape of extraction which represents the integrity of tangible and intangible aspects of production, site, and community.**

However, over time, production decreased due to the abandonment of policies supporting production in this region for various reasons. With the decrease in production, the social structure has deteriorated. With the deterioration of the social structure, the sense of belonging decreased and people started to migrate. Due to the decreasing population over time, the buildings were abandoned and started to turn into ruins and the physical structure deteriorated. **Therefore, Kandilli started to become a settlement where the integration of tangible and intangible aspects of production, site, and community is weakened over time. Thus, the vision should be strengthening and sustaining the integrity of tangible and intangible aspects of production, site, and community.**

This integration can be achieved in many different ways. It is not possible to propose a single solution in such a complex area. Therefore, in line with this vision, different scenarios should be made and their effects should be discussed (Figure 4.71).

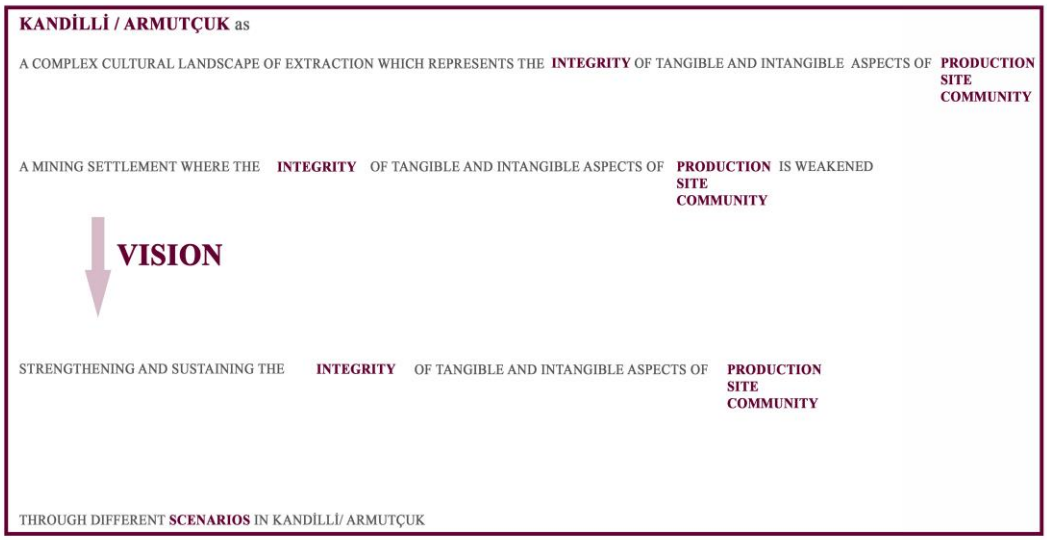

Figure 4.71. The diagram showing the vision for the conservation of the region (Author, 2022)

While developing proposals for this region, a multi-stakeholder system should be established and a common mind should be formed. However, as a result of interviews with other stakeholders, I propose 5 different scenarios within the scope of this thesis, with my own expert opinion. Therefore, in this section, 5 different scenarios regarding the region will be described based on the values, problems, and importance of the area. Later, these scenarios will be evaluated. While making these evaluations, the effects of the interventions on the 3 components that make up the mining system and on the social, physical, and economic contexts will be examined.

4.2.1 Proposed Scenarios for the Conservation of Kandilli/ Armutçuk Region in Zonguldak

Within the scope of this thesis, 5 possible scenarios were created about how the future of the Kandilli/ Armutçuk region could be. Firstly, these 5 possible scenarios will be defined in this section. Later, it will be explained how to intervene in the area within the scope of these scenarios. Afterward, the effects of these interventions on

the values and the problems in the region will be discussed according to the value and problem figures that I explained earlier (Figure 4.72).

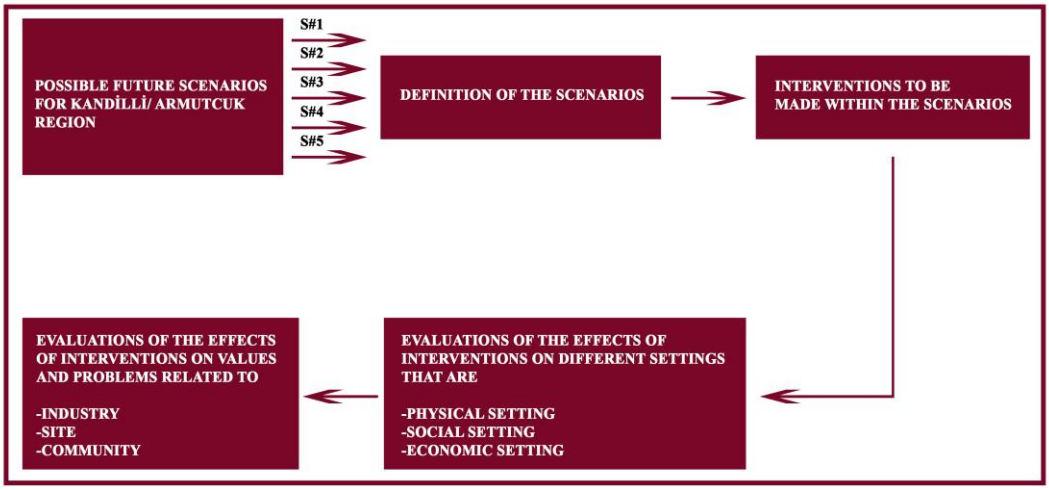

Figure 4.72. The diagram showing the process of the creation and evaluation of the scenarios (Author, 2022)

Scenario 1:

Definition of the Scenario:

The Kandilli/Armutçuk region can be left untouched.

The Lower Kandilli region may turn into an industrial archaeology area in which nature dominates the entire area over time, the structures become ruins with the influence of nature with preserved traces of the old settlement, or the old traces disappear and the region turns into a pre-industrial state. The Upper Kandilli region may also be abandoned over time and turn into an industrial archaeology area or a ghost town with the influence of nature.

Interventions:

There is no human intervention and nature begins to dominate the built environment, making the area pre-industrial.

Effects of Interventions on Different Contexts:

Although there is no human intervention, **the physical context** is affected by the nature. Although the buildings and nature create a certain aesthetic perception in the region, the damage to the structures and the disappearance of some traces of the past cause the physical context to be damaged.

People may leave the area as the buildings begin to turn into ruins. Thus, **the social context** may be adversely affected.

There is no change in **the economic context** in this scenario as there is no human intervention in the region.

Effects of Interventions on Values and Problems of the Region:

Since there is no human intervention in the area and the area is left to its own state, interventions affect the values related to the site and the community.

In this scenario, the values related to **the site** were affected by the interventions. Since there is no human intervention in the region and nature begins to dominate the region, the values related to the natural environment of the area increase. With the domination of the area by nature, the forested areas in the region increase. Therefore, the aesthetic value and the landscape value of the area increase. Since the mines and tunnels in the region are damaged by the corrosive effect of nature, the values associated with these structures decrease. In addition, the impact of nature on the built environment is quite high. Nature damages the unprotected structures and the values related to the structures are reduced. Since there is no interference with the structures in the region, the authenticity value of the region is preserved. The architectural and technical value of the remaining buildings in the region is preserved. However, since some structures disappeared, the document value of the region was damaged. Since the structures that used to generate income from mining activities in the region turn into ruins, their economic values are damaged. Since buildings become ruins over time, their functional value decreases. Moreover, the dominance of nature in the region affects traces of transportation. Since these traces

are not protected by any intervention, they begin to disappear over time with the corrosive effect of nature. Therefore, the values associated with these traces are reduced. Since these traces give information about coal and human transportation, technical value and document value decrease with the disappearance of traces.

With this scenario, values related to **the community** decrease. As people in the area migrate from the area, the mining community in the area begins to lose its integrity. Society, which has its own strong ties and complexity, begins to disappear over time. Mining culture, traditions, and lifestyles begin to be forgotten. This reduces the social, identity, and document value of the society.

Apart from the effects of interventions on the values related to the site, and the community, there are also some effects of them on the problems of the site, and the community.

In this scenario, the problems related to **the site** were affected by the interventions. One of the most important problems in this region is that the natural environment is wild and the buildings are damaged by the natural features. Since there is no human intervention, the destructive effect of nature increases in this scenario. This causes an increase in this problem related to the natural environment. Moreover, there are problems with the poor conditions of the mines. In this scenario, this problem is exacerbated by the destructive effect of nature. In addition, there are problems with the use, conditions, and changes in the built environment in the area. In this scenario where nature dominates the area, these problems increase as the use of buildings decreases and the buildings are damaged by nature. In addition, traces of the transportation network in the area are in danger of being lost. With the destructive effect of nature, this problem is exacerbated in this scenario.

With this scenario, problems related to **the community** increase. The migration of people in the region with the transformation of the region into a residual area creates a big problem by causing the mining community to deteriorate. The fragmentation of mining communities, where unity and solidarity are important, causes them to have social problems and lose their identity. In addition, the departure of miners from

the area prevents the preservation and transmission of miner traditions, cultures, and lifestyles to future generations.

Considering all these, while scenario 1 seems like a positive scenario because it does not include human interventions that harm the region, it can also be evaluated negatively due to the erasure of some traces with the effect of nature. Moreover, it can also lead to the extinction of mining communities by causing miners to leave the area.

Scenario 2:

Definition of the Scenario:

The Kandilli/ Armutçuk region can be transformed into a nature tourism area.

While the Lower Kandilli region can be transformed into an area where transportation can be provided by using the route of the old settlement, nature walks and sports can be done, the Upper Kandilli region can also be transformed into an area that draws attention to the forested areas as a part of this route.

Interventions:

First of all, this area should be declared as a protected area with all its elements. After that, the main axis of the region passing through the attraction points of the region can be determined as a path. People who come to the area for nature tourism can enter the area from the end of this path located on the Upper Kandilli part. As people progress along the road, there is a chance to observe the lodgings and important social structures of the region. In addition, in the Upper Kandilli section, there can be playgrounds, picnic areas, gathering areas, and observation points to observe Lower Kandilli and the sea. Afterward, people can go down to the Lower Kandilli part and do activities such as trekking and mountain biking. The area with old lodgings in Lower Kandilli has a great potential for camping. In addition, the old park area in the region can be reorganized as a recreation area. The part where the varagel crane is located is a good gathering and observation area. People can meet their toilet needs and do activities such as picnics in this region. Afterward, people

can descend to the sea level with the trekking paths created from the end where the varagel is and the small path next to it. At sea level, boathouse and coal silos can be repaired, making them convenient points for coastal activities. Areas for swimming and fishing can be created on the shore as in old times. In addition, sailing and diving can be done so that the region can be perceived by the sea. The mine in the region can also be used as a part of the trekking route (Figure 4.73).

Therefore, minimum intervention is needed in this scenario. A route should be determined for tourists and the area should be declared a protected area. Although there is no need for much intervention for the Upper Kandilli part, it is important to repair the structures such as coal silos and boathouse by the sea in the Lower Kandilli part. In addition, the repair of registered structures that are important for the region should be done regularly. In addition, minimal intervention should be made in nature. Only the necessary amount of vegetation should be cleaned in order to facilitate the transportation of tourists. Thus, paths and activities should be planned. Maintenance of the structures should be done with small-scale repairs and small spaces should be considered for the needs of the tourists like wet spaces.

Moreover, management of the scenario is also something to consider. Different stakeholders have property rights in different parts of this region. While the property right of the Lower Kandilli region is held by the General Directorate of Forestry, the property rights of the structures in the Upper Kandilli are held by the TTK. Moreover, some TTK lodgings were sold and the ownership rights were passed to private individuals. Therefore, the opinions of different stakeholders should be sought in this scenario. However, the community can be a pioneer in the determination and implementation of the activities to be carried out. Because these people are the inhabitants of the region, they may be the ones who know best what activity should be done in which region.

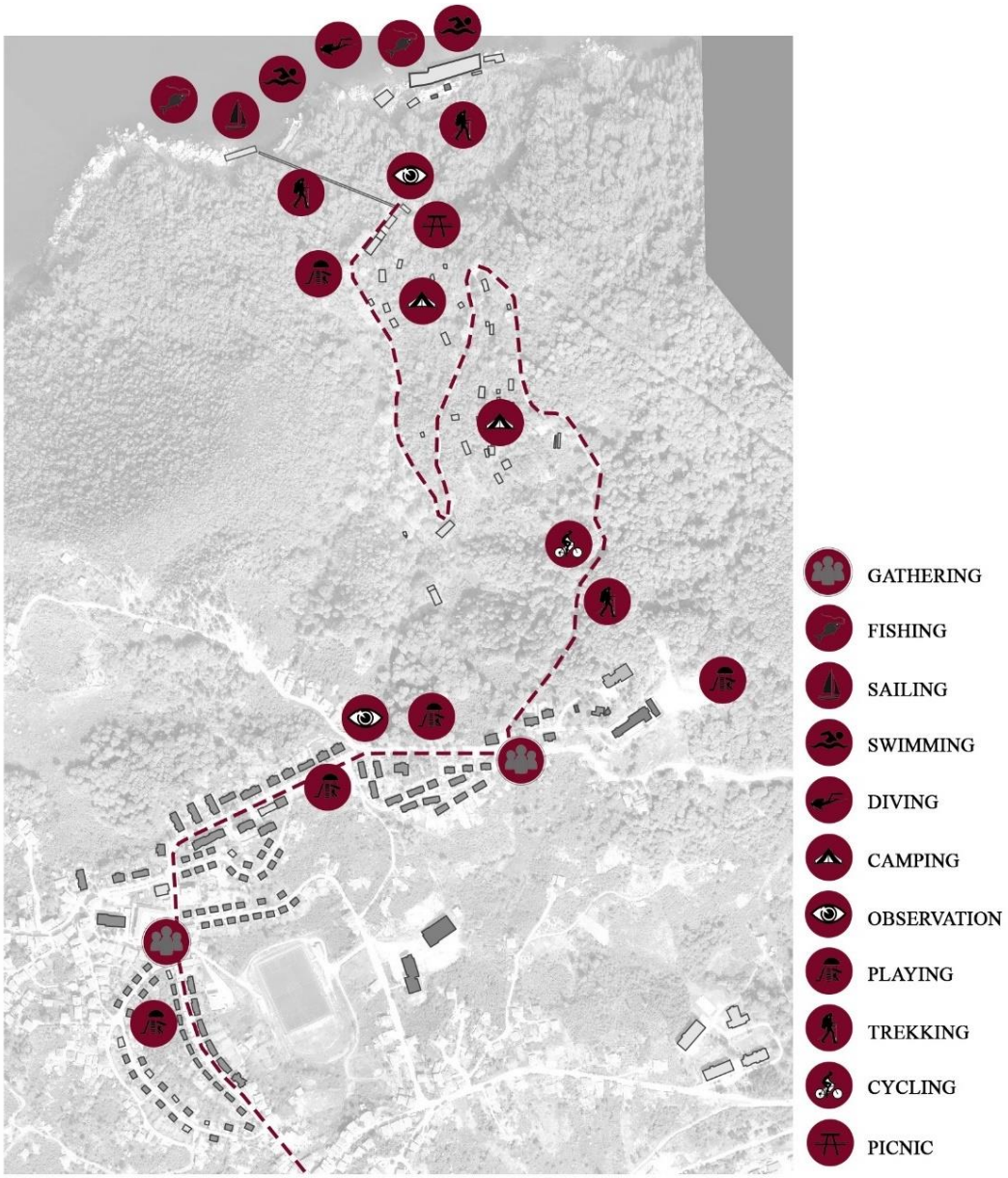

Figure 4.73. The diagram showing the proposal for the second scenario for the conservation of the region

Effects of Interventions on Different Contexts:

In this scenario, since the open areas were intervened and the existing structures were repaired, **the physical context** of the area was not damaged.

The social context of the region has been affected as tourists are attracted to the region. The cultural exchange took place between the people of the region and the tourists.

In addition, **the economic context** of the region is also affected by the tourists coming to the region. It contributes to the region economically.

Effects of Interventions on Values and Problems of the Region:

In this scenario, the interventions affect the values related to production/ industry, site, and community.

The industry of this region is coal production. The production of coal provides the development of the region. However, with the decrease in coal production, the region entered into economic difficulties. The nature tourism proposed in this scenario could create a new industry in the region and reduce the problems arising from the lack of coal. It can also create job opportunities for the people living in the area. Therefore, the values of industry/ production may continue to be preserved in the region.

With this scenario, as open spaces are intervened in the region mostly, minimal interventions are made only for repair purposes, and only small spaces such as toilets are created for the essential needs of tourists, the values related to **the site** are not affected much. In this scenario, values related to open spaces and transportation networks increase in the area. With this scenario, the use of open spaces increases, and a repaired and regulated transportation network is required since open spaces are spread over a large area.

With this scenario, values related to **the community** increase. With nature tourism and tourists coming to the region, people from different cultures come together in the region. This increases the complexity of the community by causing cultural exchange. Moreover, with the increase in social activities in the region, the miners become more connected to the place and each other, and the community spirit increases.

In this scenario, the interventions affect the problems related to production/ industry, site, and community.

The factor that triggers the development in this region is the mine itself. With the loss of importance of the mine and the decrease in its production, the region enters the process of collapse. The nature tourism proposed in this scenario creates a new industry in the region. This can solve the problems created by the reduction of coal production. In addition, the creation of a new industry can solve the job opportunity problem in the region. Thus, this scenario has the potential to solve **production/industry-**related issues. However, it should be considered that tourism may have negative effects.

With this scenario, the problems related to **the site** are not affected much. In this scenario, problems related to open spaces and transportation networks decrease in the area with the increasing use of open spaces and a repaired and regulated transportation network.

There are significant problems with **the community** in this area. With the deterioration of the system in which all the needs of the workers were met, the workers lost their loyalty to the region and started to migrate. The migrating society began to fragment and began to lose its complexity. In addition, the decrease in social life in the region has also damaged the community spirit and the mining culture has sunk into oblivion. With the nature tourism proposed in this scenario, the complexity of the society may increase by realizing cultural exchange in the region with the tourists coming from other places to the region. In addition, the community spirit can be strengthened with increased social activities. Thus, it can be understood that the problems related to the community can be solved in this scenario.

Thus, creating only paths and activities, repairing existing structures as much as necessary, creating only necessary small functions, minimal intervention in nature, and the fact that the economic and social gap created by the reduction of mining without too much economic cost can be revived with tourism makes this scenario a highly probable scenario for Kandilli.

Scenario 3:

Definition of the Scenario:

The Kandilli/ Armutçuk region can be transformed into a cultural tourism region.

In this scenario, the Lower Kandilli region can be considered as a large open-air museum, as it is the oldest area of the region and an area with original production structures. Upper Kandilli, on the other hand, is an area that reflects the period after the proclamation of the republic, but also where people still live. Although this area can be considered as an open-air museum because it carries traces of the past, it can also be considered as a cultural center where tourists who come to the region for cultural tourism have places to stay, places to eat, and socialize with the local people.

Interventions:

First of all, this area should be declared a protected area with all its elements. Moreover, a cultural route that forms the main axis of the region and passes through the important structures of the region can be determined. People who come to the region for cultural tourism can enter this route from the beginning of Upper Kandilli and proceed towards the Lower Kandilli region. This cultural tour can be done under the guidance of the residents by giving historical information about the region. Within the scope of cultural tourism, the region can be considered as an open-air museum reflecting different periods. Information signs can be found next to the buildings. The principal's house structure in the Upper Kandilli region, the varagel crane structure, and the tunnel in the Lower Kandilli region are structures that can be re-functionalized as a mining museum. While the old officers' club in Upper Kandilli can be re-functioned as a restaurant, a new restaurant building can be built in accordance with the region, since the workers' club has been demolished. Local dishes can be tasted in these restaurants. In addition, social activities and structures can be reactivated as in the times when the social life was lively in the region. The ruins of the cinemas in the Upper and Lower Kandilli regions can be converted into open-air cinemas and movie nights can be organized. Sports competitions can be

held on the sports fields and in the indoor gym. Collective celebrations can be revived with those who come to the region for cultural tourism. Open spaces and recreation areas can be revitalized so that tourists and locals can socialize with each other. In addition, the beach that was once located in the Lower Kandilli area can be revived. The guesthouse building can also be used to meet the accommodation needs of those who come for cultural tourism. Apart from that, tourists can stay at the homes of the locals and witness their way of life. In addition, idle workers' lodgings can be repaired and turned into accommodation for tourists. The structures in the region should be repaired regularly and the plants that damage the structures should be cleaned regularly (Figure 4.74).

Therefore, minimum intervention is needed in this scenario. A cultural route should be determined for tourists and the area should be declared a protected area. Moreover, the buildings in the region that need repair should be repaired without much intervention. Furthermore, minimum intervention should be made in nature by cleaning the vegetation for transportation of the tourists. Only structures that can provide the required functions should be reused in their original functions. Moreover, the socio-cultural structure should be revived by ensuring the integration of tourists and locals.

Moreover, management of the scenario is also important for the success of the scenario. Different stakeholders have property rights in different parts of this region. Therefore, in order to determine more applicable and correct strategies, a process involving many stakeholders should be followed. However, the community can be a pioneer in the determination and implementation of the cultural activities to be carried out. In addition, the Kandilli municipality may obtain the property rights of the buildings to be reused from the TTK and ensure that the buildings are repaired and made usable.

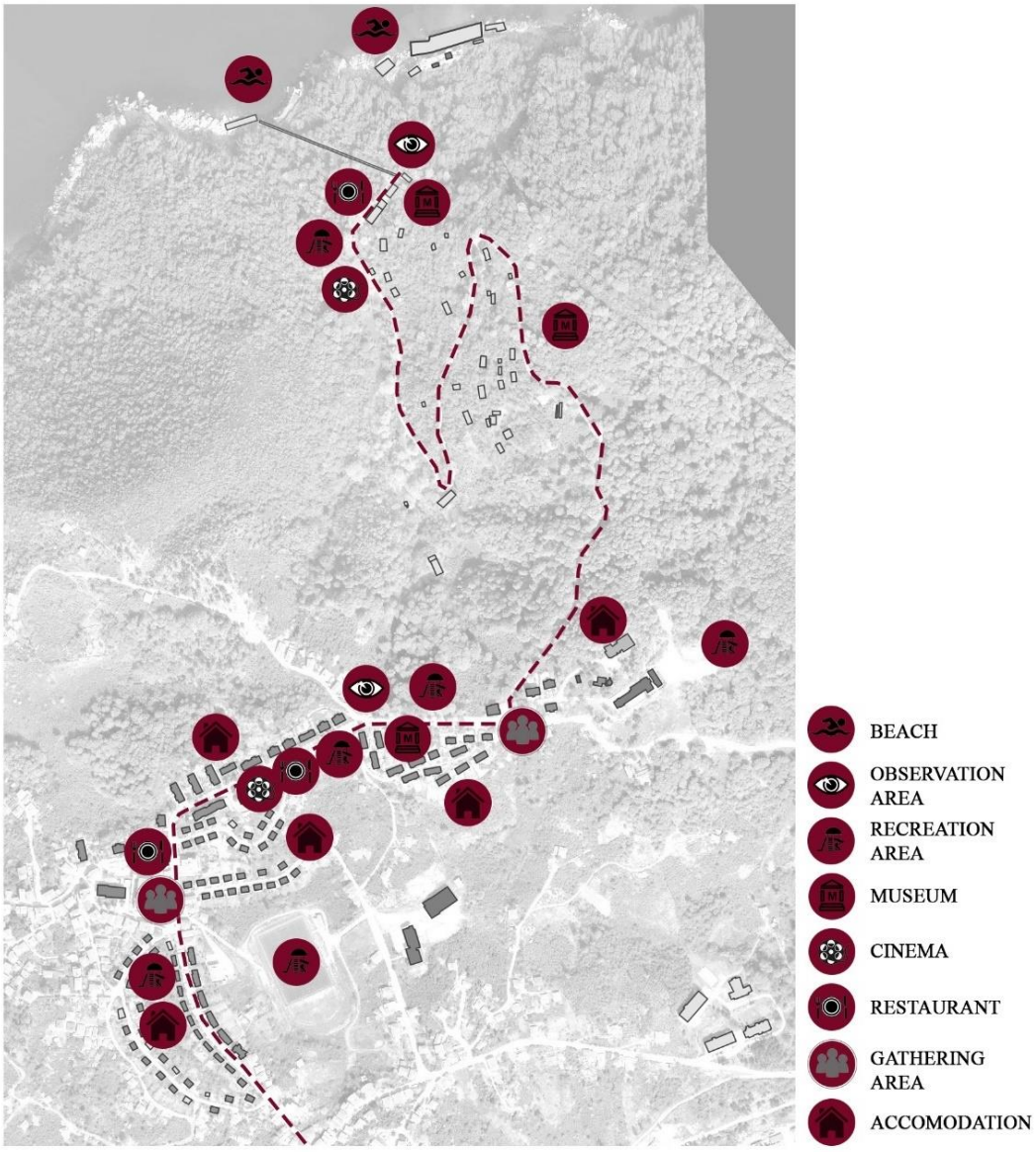

Figure 4.74. The diagram showing the proposal for the third scenario for the conservation of the region

Effects of Interventions on Different Contexts:

In this scenario, **the physical context** was affected as the abandoned structures were reused close to their original functions, the structures were repaired so that they could be museumized, and nature was intervened to prevent damage to the structures and tourism.

Because of cultural tourism, there has been a cultural exchange between tourists and local people, as tourists are attracted to the region. In addition, obsolete social structures were revived and social life was activated. All these had a positive effect on **the social context.**

The economic loss due to the mining industry, whose importance decreased in the region, decreased with the arrival of a new sector in the region. Thanks to tourism, **the economic context** of the region can be positively affected.

Effects of Interventions on Values and Problems of the Region:

There are more interventions in this scenario than in the others. The unused structures have been reused in accordance with their original use and the wild nature has been brought under control in a way that does not hinder tourism. Interventions to the structures have been kept to a minimum to suit their new use, and all structures have been repaired. Therefore, in this scenario, the interventions affect the values related to production/ industry, site, and community.

In this scenario, as in the previous scenario, since a new industry is proposed to the region, it can be said that interventions can increase the values related to **the industry.**

In this scenario, the interventions to **the site** are more than in the previous scenario. Therefore, the impact of the interventions on the values related to the site is also greater. Since nature is intervened in this scenario, the natural environment values of the region decrease. In addition, the functional value and social values of open spaces increase in addition to their existing values, as more functions are placed on the open spaces in the region in the scenario. Furthermore, the values of the buildings are preserved as minimum interventions such as repairs are made to the built environment in the region. However, as the structures that were previously in the residual state are used, their functional values increase. In addition, since the traces related to transportation in the region have been renewed, their functional values have increased.

In this scenario, it is understood that values related to **the community** have increased since cultural tourism is suggested. The complexity of the community increases as a result of the fusion of local people with people coming from different places to the region. A cultural exchange takes place and mining culture spreads. In addition, with the revival of social life, the ties of the society to the place and to each other increase. With the increasing number of cultural activities in the region, activities such as sports competitions, movie nights, and holiday celebrations, which are about to disappear, come to life. Thus, its social and document value increases.

Moreover, in this scenario, the interventions affect the problems related to production/ industry, site, and community.

The disappearance of the mining **industry** in the region is a major problem affecting the region in general. In this scenario, this problem was tried to be solved by proposing a new industry which is cultural tourism to the region. However, the negative effects of tourism should also be considered.

There are many problems related to **the site** in this area. One of the most important problems in this region is that the natural environment is wild and the buildings are damaged by the natural features. In this scenario, this problem has decreased as nature has been intervened. Moreover, there are problems with the poor conditions of the mines. This problem has been reduced as the destructive effect of nature is reduced and structures are repaired. Moreover, there is a problem related to the use of open areas in the field. However, this problem is solved by using unused open spaces. In addition, there are problems with the use, conditions, and changes in the built environment in the area. In this scenario, this problem has been decreased as unused structures were recommended to be used in accordance with their original functions, and structures in poor condition were repaired. In addition, traces of the transportation network in the area are in danger of being lost. In this scenario, this problem has been reduced as repairs are recommended with minimal intervention and the destructive impact of nature is reduced.

There are also many problems about **the community** in this region. However, with this scenario, most of them can be solved. Community-related problems can be reduced in this scenario, as the revival of social life, cultural exchange and keeping the mining culture alive increase the unity and commitment.

Thus, this scenario is characterized by the cultural route created, the reduction of the economic loss caused by the loss of importance of mining with tourism, the re-functioning of the structures in accordance with their original use in line with the needs with minimum intervention, the revival of social life and culture, and the cultural exchange of tourists and local people. It can be a positive recommendation for Kandilli region. However, it is necessary to consider and evaluate the negative effects of intervention to nature and tourism to the region.

Scenario 4:

Definition of the Scenario:

Kandilli is a settlement formed with the start of mining activity. This region was established and developed in order to meet all the needs of workers near the mines without having to go to other places. Therefore, it can be said that the settlement was built for miners. Although the importance of this place, which has been the settlement of miners since its establishment, has decreased over time, the region may regain its importance by turning into an area that meets the needs of miners. In this scenario, it is suggested that the Kandilli/ Armutçuk region becomes a town of miners again.

Interventions:

The fact that Kandilli is a region with all the needs of miners as before, requires more intervention than other scenarios. In order to meet the accommodation needs of the workers, the lodgings in the Upper Kandilli and Lower Kandilli regions need to be repaired or rebuilt. However, the hospital needs to be repaired and started to serve again. A market can be established in the park which made in the location of the ekonoma in Upper Kandilli in order to carry the traces of the ekonoma to future

generations. A new market can be built instead of the ekonoma in Aşağı Kandilli. In addition, the social life of the miners can be revived by revitalizing the old beach in Aşağı Kandilli. Moreover, public events such as celebrations and movie nights should also be brought back. In addition, the officers' club in Upper Kandilli can be repaired and serve as a restaurant again, but since the workers' club has been demolished, a new restaurant that is compatible with the environment should be built instead. A new restaurant can be built using the traces of the club structure in Aşağı Kandilli. Using the traces of the ruins of the French-built guesthouse in Lower Kandilli, a restaurant can be built in harmony with the environment. Open-air cinemas can be built in places where there are old cinemas. Moreover, the region should be declared as a protected area, the structures should be repaired and the wild nature should be intervened in a way that does not affect the daily life of the people living in the area (Figure 4.75).

Therefore, more interventions are needed in this scenario. A main route should be determined for the miners and the area should be declared a protected area. In addition, all structures in poor condition should be repaired until they are usable. Moreover, nature should be intervened in order for the inhabitants to continue their lives easily. In addition, many structures should be reused to meet the needs of workers. Moreover, it is necessary to revitalize the socio-cultural life in the region in order to revive the social life of the workers and increase their connection to the region.

Moreover, management of the scenario is also significant. Different stakeholders like the municipality, TTK, General Directorate of Forestry, and private individuals have property rights in the region. Therefore, in order to determine more convenient strategies, a process involving different stakeholders should be followed. However, TTK can be a pioneer in the determination and implementation of the scenario as before. The institution can have an important place in this scenario, as it can better follow the lives of workers, enable workers to return to the life they are used to, and easily enable the reuse of structures.

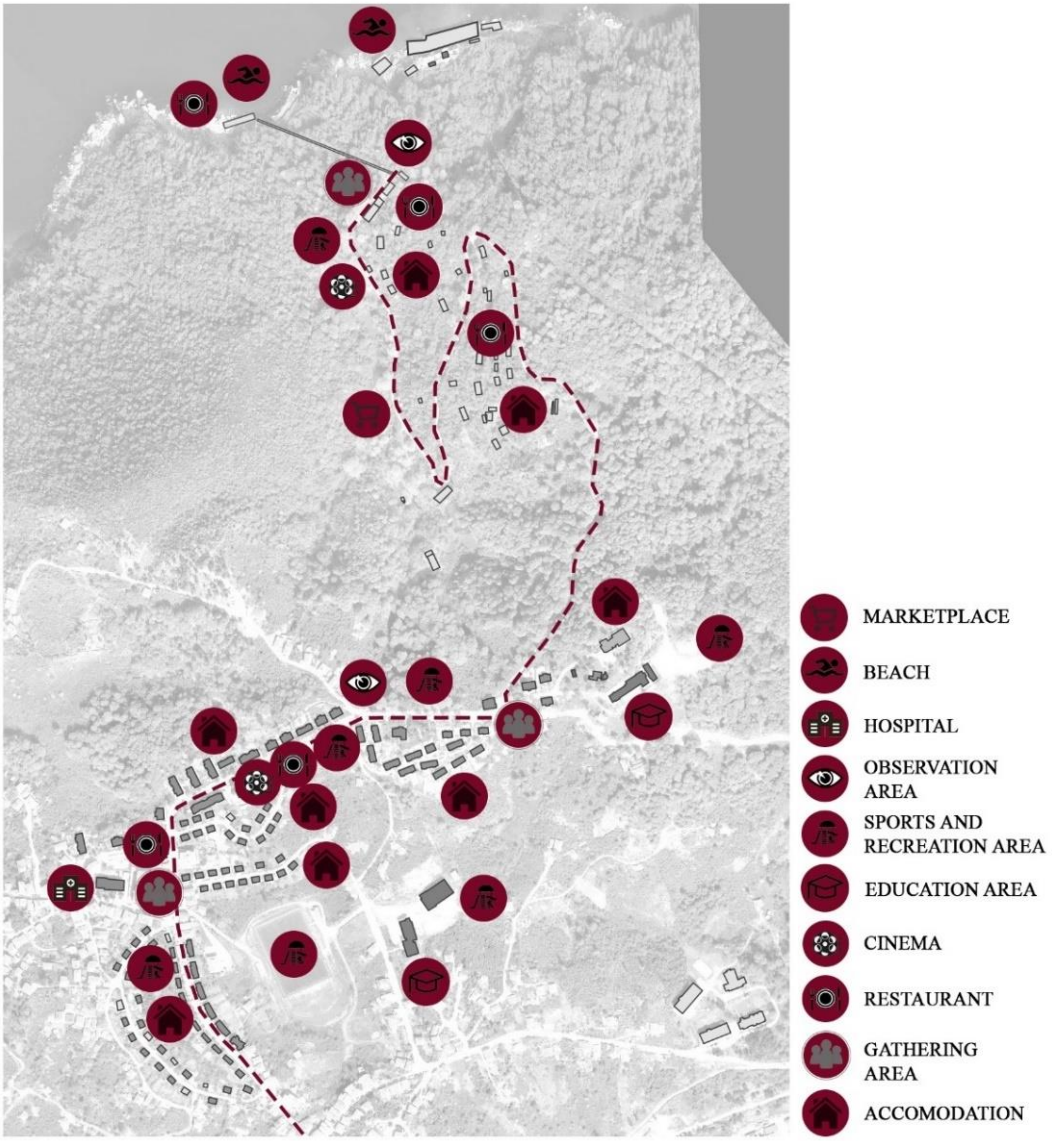

Figure 4.75. The diagram showing the proposal for the fourth scenario for the conservation of the region

Effects of Interventions on Different Contexts:

In this scenario, **the physical context** is affected because the intervention to the structures is excessive.

In this scenario, as the social life of the miners is activated, the belonging of the miners to the field increases and they own the place more. This has a positive effect on **the social context.**

In this scenario, there is no change in **the economic context** since there is no change in industry or production.

Effects of Interventions on Values and Problems of the Region:

In this scenario, the interventions affect the values related to the site and community as no new industry is proposed to the area.

There are many **site-related** values in the field and interventions in the field have affected these values. The increase in the mining activity and miner population in the area requires intervention in nature. This reduces the values related to the natural environment. Moreover, as the use of the mines in the area increases, the values associated with the mines also increase. Furthermore, since the use of open spaces is recommended to increase, the social and functional values of open spaces are increasing. As there is no destruction in the region within the scope of this scenario, the age and historical value, architectural and technical value and document value of the buildings are not affected. Moreover, as previously unused structures are used, the functional value increases. However, as the ruins decrease, the aesthetic value of the area decreases. In addition, since the traces related to transportation in the region have been renewed, their functional values have increased.

As this scenario aims to restore the mining **community**, community-related values have increased. The mining history and culture are tried to be preserved, so the social and memory value and identity value increase.

In this scenario, the interventions also affect the problems related with site and community as no new industry is proposed to the area.

There are many problems about **the site.** One of the most important problems is natural characteristics of the region. However, with the intervention towards the nature, this problem decreases. Moreover, the conditions of the mines and tunnels

are problematic in the region. Therefore, with repairs this problem can diminish in this scenario. In addition, there is a problem with the use of open spaces in the region, but in this scenario, this problem decreases as the use of open space increases. However, with the decrease of ruins and the increase of interventions in the region, aesthetic problems arise. In addition, traces of the transportation network in the area are in danger of being lost. In this scenario, this problem has been reduced as repairs are done and nature's destructive impact is diminished.

As this scenario aims to restore the mining **community**, community-related problems have decreased.

Thus, there are positive and negative aspects to consider in this scenario. Although this scenario is considered positive in terms of the memories, lifestyles and identities of the miners, it is a scenario that should be considered in many aspects. While trying to restore the town's memories, the originality and aesthetic values of the area should not be damaged.

Scenario 5:

Definition of the Scenario:

It may be an option to create a new industry in order to eliminate the economic gap created by the decrease in the need for coal and to ensure that the region can continue to sustain. Accordingly, a renewable energy production and research center can be established in the Kandilli/ Armutçuk region.

Interventions:

In this scenario, it is proposed to transform the Kandilli/ Armutçuk region into a renewable energy production and research center. With the decrease in the importance of hard coal production, ways to produce renewable energy in this field can be sought. In this context, a scenario where researchers come to the region and work with the local people is considered. In this scenario, while the production areas are located in the Lower Kandilli region, there are areas where the researchers can work together with the local people in the Upper Kandilli region. The old power

plant in the Lower Kandilli region can be used with its original function and energy production can be easily provided with the wind turbines placed on the shore in the region. In addition, other structures required for production can also be created by renovating structures that once provided coal production. In the Upper Kandilli region, researchers can stay in the guesthouse. Worker housing, which is currently vacant, can be converted into classrooms and laboratories to be used for the training and work of researchers. In addition, club structures in the area can be converted into restaurants. The remains of the old cinema in the region can be renovated and used as a meeting room. Interventions increased in this scenario compared to other scenarios. Unused structures were adapted to new functions and started to be used. New structures necessary for production have begun to be built. The buildings have been repaired and nature has been intervened to facilitate research work. It has been tried to fill the industry gap created by the loss of importance of mining in the region and thanks to the emerging renewable energy, the region's electricity needs can be easily met (Figure 4.76).

Therefore, more interventions are needed in this scenario. A main route should be determined for the researchers. Moreover, all structures in poor condition should be repaired until they are usable. Furthermore, nature should be intervened so that scientific studies can be carried out easily. In addition, most of the buildings in the region should be transformed to meet the needs of new functions. Moreover, the revitalization of the economic structure of the region should be provided.

Moreover, management of the scenario is also important. Different stakeholders have property rights in the region. Therefore, in order to determine more appropriate strategies, a process involving different stakeholders should be followed. However, the Kandilli municipality can be a pioneer in the determination and implementation of the scenario. The municipality can take ownership of the buildings and ensure that the buildings are used by transforming them with appropriate new functions for the development of this area.

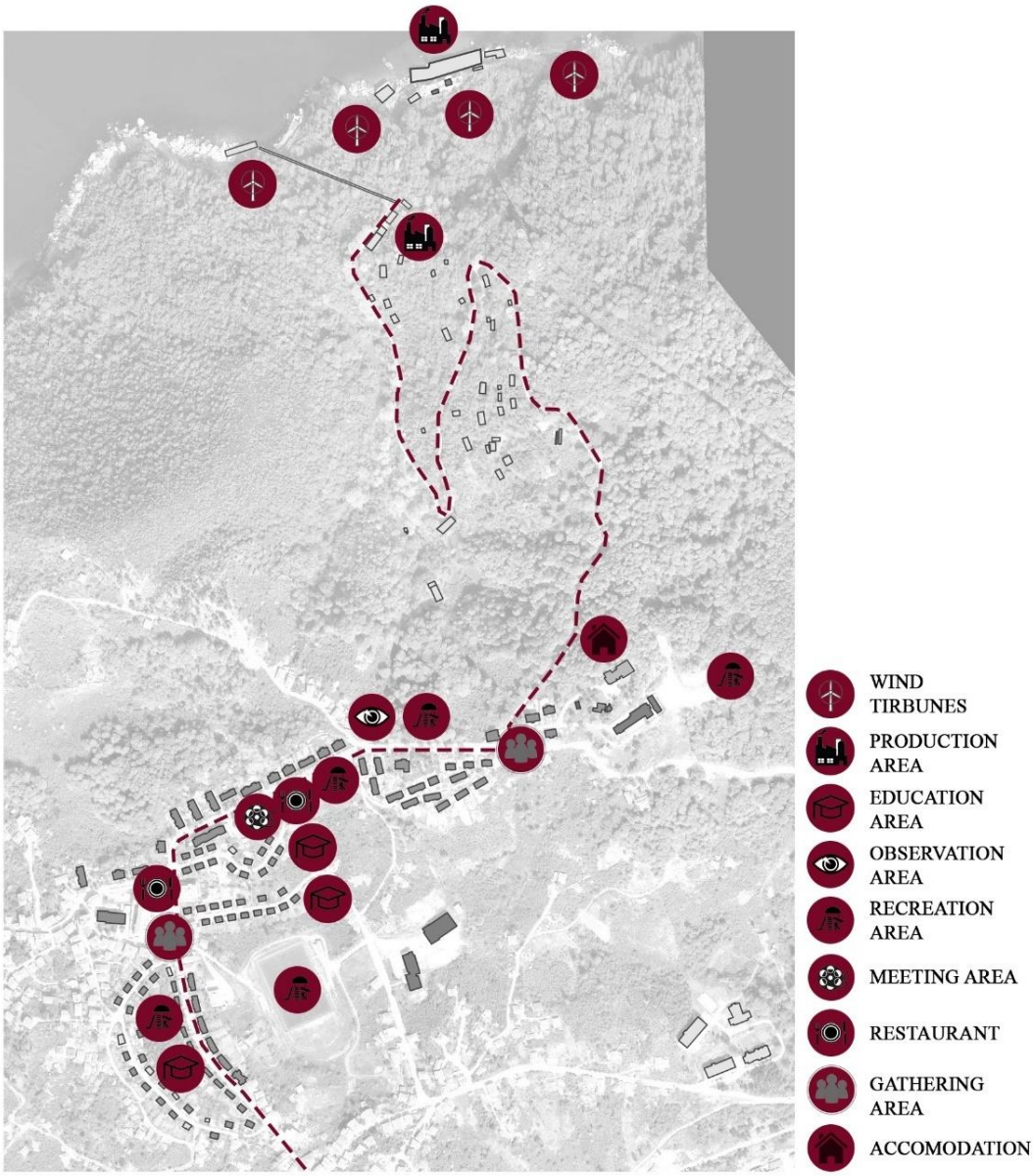

Figure 4.76. The diagram showing the proposal for the fifth scenario for the conservation of the region

Effects of Interventions on Different Contexts:

In this scenario, **the physical context** of the region was affected as the buildings were used by changing them to adapt to their new functions, nature was intervened and new building types required for the new industry were created.

The social context of the region has also been affected because a new employee profile has emerged in the field.

The economic gap created by the loss of importance of the mining industry has been closed with the arrival of a new industry in the area, and in this way the development of this region can be triggered. Therefore, this has a positive effect on **the economic context.**

Effects of Interventions on Values and Problems of the Region:

In this scenario, the interventions affect the values related to production/ industry, site, and community.

In this scenario, since a new **industry** is proposed to the region, it can be said that interventions can increase the values related to the industry and production. The economic value has increased as a new industry has come, which can trigger the development of the region.

There are many **site-related** values in the field and interventions in the field have affected these values. Since nature was intervened in this scenario, the values related with natural environment also decreased. Moreover, the interventions also affect the built environment. Considering the interventions made in the region within the scope of this scenario, it is understood that the age and historical value, architectural and technical value and aesthetic value of the region are preserved. However, since the buildings were transformed and used in accordance with new functions, their authenticity value decreased. As the region began to undergo a transformation, its document value and identity value also decreased. However, as the unused structures started to be used, their functional value increased. In addition, since the traces related to transportation in the region have been renewed, their functional values have increased.

There are also values about **the community** in the region. The social and memory value of the region has decreased as the region has begun to move away from the memory of the people. With the change in the area, inhabitants began to lose their

attachment to their place. Therefore, the values related to the community have decreased.

In this scenario, the interventions affect the problems related to production/ industry, site, and community.

The disappearance of the mining **industry** in the region is a major problem affecting the region in general. In this scenario, this problem decreases with a emergence of a new industry in the region.

There are many problems related to **the site** in this area. One of the most important problems in this region is that the natural environment. In this scenario, this problem has decreased as nature has been intervened. In addition, there are problems with the use, conditions and changes of the built environment in the area. In this scenario, this problem has been alleviated as unused structures were recommended to be used. However, buildings change as they are reused with new functions. This increases the problems with the site. In addition, traces of the transportation network in the area are in danger of being lost. In this scenario, this problem has been reduced with repairs.

There are also many problems about **the community** in this region. As the area changes, the inhabitants may lose their bond. This causes problems with the community to increase.

Thus, this scenario should be paid attention to. Although this scenario seems like a positive proposal for the Kandilli/ Armutçuk region as it provides a new triggering industry, the structures require a lot of intervention as they are used outside of their original use. This causes the spirit and identity of the region to gradually change. It can have a negative impact on the sense of belonging of the people living in the area.

4.2.2 Comparisons of the Scenarios for the Future of the Kandilli/ Armutçuk Region in Zonguldak

Definition of the Scenarios:

Scenario 1 is to leave the area away from human intervention and leave it to nature, Scenario 2 is to open the region to nature tourism, Scenario 3 is to open the region to cultural tourism, Scenario 4 is to turn the region into a town where all the needs of miners are met, and Scenario 5 is to create a renewable energy production and research center in the region.

Interventions:

In Scenario 1, there is no human intervention in the region and the buildings are left as they are. In Scenario 2, the area was declared a protected area, the tourist route was determined, the buildings were repaired, the minimum intervention was made to nature so as not to hinder nature tourism, the activities to be done in open areas were determined, and only the necessary structures were minimally interfered with. In Scenario 3, the area was declared a protected area, the tourist route was determined, the buildings were repaired, the wild nature was intervened in a way that would not hinder cultural tourism, only the designated buildings were reused in a way that would preserve their original use, and the socio-cultural structure of the region was revived. In Scenario 4, the area was declared a protected area, the main axis was determined for the workers, the buildings were repaired, the wild nature was intervened, the majority of the buildings were reused by preserving their original use, and the socio-cultural structure of the region was revived. In Scenario 5, the main axis was determined for researchers, the buildings were repaired, the nature was intervened, the buildings were transformed and reused in accordance with their new uses, and the economic structure of the region was revitalized. Considering all these, it is seen that the size and intensity of the interventions increases as the scenario goes from 1 to 5. (Figure 4.77).

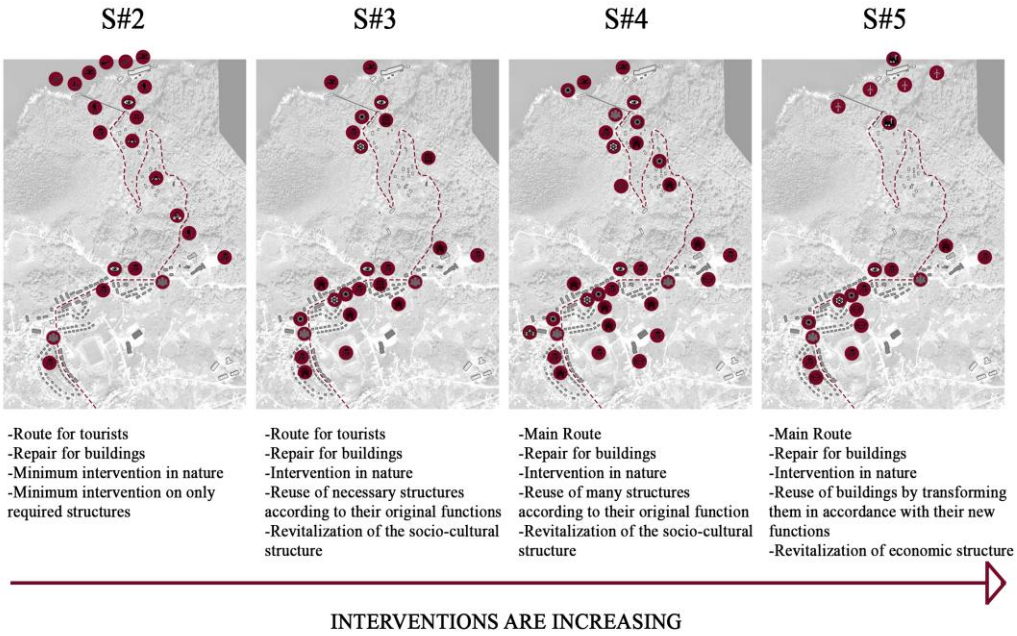

Figure 4.77. The comparisons of the interventions for different scenarios

Effects of Interventions on Different Contexts:

The interventions in the scenarios have different effects on the different contexts. In Scenario 1, physical and social contexts are affected by the interventions. In Scenario 2, social and economic contexts are affected by the interventions. In Scenario 3, the physical, social and economic contexts are affected by the interventions. In Scenario 4, physical and social contexts are affected by the interventions. In Scenario 5, physical, social and economic contexts are affected by the interventions (Figure 4.78).

In Scenario 1, since the area is left as it is without any intervention to the structures, the structures begin to become ruins over time due to the influence of nature. Therefore, as the traces of the production period begin to disappear, the physical context is generally adversely affected. In addition, in this scenario, the inhabitants of the region may leave the region as the structures begin to be dominated by nature. This causes the mining community to begin to disintegrate and the social context is

negatively affected. Moreover, in this scenario, the economic context is not affected as no proposal is made to stimulate the industry.

In Scenario 2, the physical context is not affected since the open areas are intervened by loading activities and the existing structures are only repaired without serious interventions. Moreover, in this scenario, as tourists start to come to the region, cultural exchange with the local people occurs and the complexity of the community increases. This generally affects the social context in a positive way. In addition, in this scenario, the economic context of the region is generally positively affected as a new source of income is defined in the region.

In Scenario 3, the physical context is generally positively affected because unused structures are started to be used and repaired as needed. Moreover, in this scenario, with the arrival of tourists in the region, cultural exchange takes place and socio-cultural life is revived. This ensures that the social context is positively affected. In addition, with the creation of a new source of income in the region, the economic context is generally positively affected.

In Scenario 4, the physical context can be positively affected as many structures are reused in their original functions. However, if the effects of these interventions grow and the region starts to lose its identity, the physical context may be adversely affected. Moreover, in this scenario, the social context is generally positively affected as social life is revitalized and workers' bonds with the place and with each other are strengthened. Furthermore, in this scenario, the economic context does not affected as a new source of income is not proposed.

In Scenario 5, the physical context are generally affected negatively because the buildings are changed to adapt their new functions and the identity of the place can be lost. Moreover, the identity of the mining community may be lost as new people unrelated to mining arrive in the area. This can negatively affect the social context. In addition, the economic context is generally positively affected as a new source of economic income is offered to the region.

	S#1	S#2	S#3	S#4	S#5
PHYSICAL CONTEXT	↓	↔	↑	↕	↓
SOCIAL CONTEXT	↓	↑	↑	↑	↓
ECONOMIC CONTEXT	↔	↑	↑	↔	↑

Figure 4.78. The comparisons of the effects of the interventions for different scenarios

Effects of Interventions on Values and Problems of the Region:

The interventions in the scenarios have different effects on the values and the problems of the region.

In Scenario 1, the interventions affect the values related to the site and the community because the area is left to its own state without any human interventions. In this scenario, the values related to **the site** are generally negatively affected with the domination of the area by nature and the traces of the buildings disappeared over time. Although this scenario affects the values related to the natural environment positively, its negative effects of the site is more by effecting the tunnels, the built environment and the transportation network negatively. Moreover, people in the area may leave the area due to structures that have turned into ruins. This disrupts the structure of the community and negatively affects the values related to **the community.**

In Scenario 1, there are also some problems about the site and the community. In this scenario, the problems related to **the site** are caused by the characteristics of the nature. The nature of the area is wild, and the tunnels, the built environment, and the transportation network are damaged by the nature. Since there is no human intervention, the destructive effects of the nature increase. Moreover, there are

problems related to **the community.** Migration of people in the region with the transformation of the region into a ruined area creates a big problem by causing the mining community to deteriorate.

Thus, while scenario 1 seems like a positive scenario because it does not include human interventions that harm the region, it decreases the values related to the site and the community and increases the problems related to the site and the community.

In Scenario 2, the interventions affect the values related with production/ industry, site, and community because tourism came to the region as a new income source, only minor interventions were made to the necessary structures, and the cultural interaction between tourists and locals emerged. In this scenario, the values related to **the industry** are positively affected because of the emergence of a new economic income source that is tourism. Moreover, the values related to **the site** are not affected much because open spaces are intervened in the region mostly, minimal interventions are made only for repair purposes, and only small spaces such as toilets are created for the needs of tourists. In addition, the values related to **the community** are affected positively because socio-cultural structure of the region is revived.

In Scenario 2, there are some problems with the production/ industry, site, and community. In this scenario, the problems related to **the industry** can be solved. The important problem of the region is the loss of the industry. However, this scenario has the potential to solve production/ industry-related issues by proposing a new source of income for the region. Moreover, the problems related to **the site** are not affected much because of the minimum interventions. In addition, the problems related to **the community** can be solved in this scenario. The mining community in the region gradually lost their attachment to each other and the place. However, the cultural exchange and revitalization of socio-economic life proposed in this scenario can solve this problem.

Thus, scenario 2 increases the values related to the industry and the community and decreases the problems related to the industry and the community.

In Scenario 3, the interventions affect the values related to production/ industry, site, and community because some buildings started to be used in their original use, the socio-cultural structure was revived and tourism started to be made in the region. In this scenario, the values related to **the industry** are positively affected because a new source of income that is tourism is proposed. In addition, the values related to **the site** are positively affected because buildings that were previously unusable are started to be used and structures that are related to the built environment, the mines, and the transportation network are repaired with minimal intervention. Furthermore, the values related to **the community** are positively affected because of the revitalization of the socio-cultural structure of the community and the cultural exchange between locals and tourists.

In Scenario 3, there are some problems with the production/ industry, site, and community. This scenario has the potential to solve **the industry**-related problems by proposing a new source of income for the region. Moreover, in this scenario, the problems related to **the site** can be solved. This region has a problematic nature that damages the built environment, the mines, and the traces of the transportation network. With the repairs and the interventions to the nature that are proposed in the scenario, the problem can be solved. Furthermore, This scenario has the potential to solve **the community**-related problems by proposing some strategies for the revitalization of the socio-cultural life in the region.

Thus, scenario 3 increases the values related to the industry, the site, and the community and decreases the problems related to the industry, the site, and the community.

In Scenario 4, the interventions affect the values related to the site, and the community because a new industry is not proposed to the region. The values related to **the site** are positively affected because most of the unused buildings are started to be used and the structures of the built environment, the mines, and the transportation network are repaired to prevent loses. Furthermore, the values related to **the**

community are positively affected because the mining culture, traditions, and lifestyle are tried to be preserved.

In Scenario 4, there are also some problems about the site, and the community. In this scenario, the problems related to **the site** can be solved by the repairing the built environment, the tunnels, and the traces of the transportation network, and by controlling the destructive effect of nature. Moreover, in this scenario, the problems related to **the community** can be solved by the preservation of the mining culture, traditions, and lifestyle.

Thus, scenario 4 increases the values related to the site, and the community, and decreases the problems related to the the site, and the community.

In Scenario 5, the interventions affect the values related to production/ industry, site, and community because a new economic resource has come to the region, the buildings have been transformed in accordance with this by gaining new functions, and the ties of the miners with each other and with the place are severed. The values related to **the industry** are positively affected because a new industry is proposed to the region. Moreover, The values related to **the site** are negatively affected because the structures in the region change according to their new functions by undergoing a lot of intervention. As a result of these changes, their connection with their former state may be broken. In addition, the values related to **the community** are negatively affected because inhabitants begin to lose their attachment to their place. As a result of the arrival of people who are not related to mining and the excessive change of the area, the ties of the inhabitants with each other and with the place are weakened.

In Scenario 5, there are some problems with the industry, the site, and the community. This scenario has the potential to solve **the industry**-related problems by proposing a new source of income for the region. Moreover, in this scenario, the problems related to **the site** can be increased because the structures undergo a lot of intervention and transform into a state different from their previous state. In addition, in this scenario, the problems related to **the community** can be increased because the mining community loses its characteristics and a new society is formed.

Thus, scenario 5 increases the values related to the industry and decreases the values related to the site and the community. Moreover, scenario 5 increases the problems related to the site and the community and decreases the problems related to the industry.

Considering these, there are lots of effects of the interventions. Although there are lots of effects, it is necessary to intervene to protect the region. However, the dimensions of the interventions are important. If there is no intervention, the region may become a part of nature and lose its traces. However, if too many interventions are made, the region loses its identity. Therefore, intervention in the is necessary, but its dimensions and effects must be considered. Moreover, when the effects of the necessary interventions in the 5 scenarios are compared, interesting results are found. When we look at the 5 different scenarios that I have suggested, it can be understood that the effects of the first scenario are mostly negative and it cannot find a solution to the problems in the economic context. Moreover, the effects of scenario 2 are generally positive, but it cannot be a solution to the problems in the physical context. Furthermore, the effects of scenario 3 are generally positive. In addition, the effects of scenario 4 are generally positive, but it cannot find a solution to the problems in the economic context. Finally, the effects of scenario 5 are negative in the physical and social contexts, but it can find a solution to the problems in the economic context.

We have stated that 3 important components should be considered to understand the area in such complex areas such as Kandilli. These 3 components are also important in the evaluation and conservation proposal phases. To develop protection recommendations, it is necessary to evaluate how the scenarios I created affect these 3 components. As a result of these evaluations, a single ideal result may not be achieved, but each scenario may have different positive or negative contributions to different components. Therefore, all these scenarios need to be considered together. While doing this, a selection should be made among these scenarios by discussing these scenarios according to different priorities by gathering different stakeholders. If necessary, revision and updating of these scenarios may be possible in line with the recommendations.

CHAPTER 5

CONCLUSION

With the Industrial Revolution in the 19th century, the whole world entered a period of serious change. A new industry emerged, new industrial settlements were formed, and new industrial communities emerged. But later on, this industrialization period gave way to the deindustrialization period due to various reasons such as the advancement of technology and the changing needs of people. Thus, these large industrial areas became obsolete and turned into waste and abandoned areas. Later on, what to do with these unused post-industrial areas became a topic that occupied the agenda of the world. As a result of these discussions, although various approaches have been thought about these areas, the concept of conserving industrial heritage has dominated and conservation strategies have been started to be formed about these areas. Although these areas were tried to be protected at the scale of the building, it was understood that conservation could only be possible by considering all the components of the area together, and the concept of cultural landscapes was formed.

Since cultural landscapes of extraction constitute important parts of the concept of cultural landscape, these areas are complex areas consisting of many components that need to be protected. Cultural landscapes of extraction are complex areas that consist of 3 components which are industry, site and community. They have also some sub-components related to these 3 components which are natural features, cultural landscapes, built-up environment, transportation network, and open areas. Although these areas are quite complex areas, they go through similar processes with other industrial areas as they are part of the industrial heritage concept. These areas go through various phases that are the appearance period, the disappearance period, and the period of responses. It is known that the emergence of the industry in the field during the appearance period triggers the formation of the site and the

community. However, it is also known that in the disappearance period, with the loss of the industry, the relations between the three components that are the industry, the site, and the community were broken and the field entered a phase of collapse. Then, approaches are started to be formed about what can be done with these areas in the period of responses.

The Kandilli/ Armutçuk coal mining region is a good example of complex cultural landscapes of extraction because it contains three components that are the industry, the site, and the community with their relations, and it has many sub-components related to these three components such as production network, mining culture, mining traditions and unique lifestyle of miners' and built-up environment with production, residential and public buildings, natural landscape with forests, cultural landscape with mines, transportation network and open areas. Moreover, the region goes through the similar phases that are the appearance and the disappearance periods with the other examples of the cultural landscapes. In the Kandilli/ Armutçuk coal mining region, with the discovery of coal, workers began to come to the region to extract coal. Later, in order to facilitate production, a settlement was formed in the region where these workers could stay, and due to the difficulty of the work, a mining community with its own ties was formed. However, coal production in the region has begun to lose its importance due to various reasons such as developing technologies, changing human needs, and changing production policies over time. As a result of not investing in coal production and coal workers, the workers started to migrate from the region. Therefore, the settlement in this area has begun to be abandoned and the mining community in the region has also begun to disintegrate. However, this region illustrates the characteristics, strategies and technologies of its period well in the physical, social and economic contexts. Therefore, even if the region is in danger of extinction and has lots of problems, it has many values and should be conserved.

Therefore, this thesis study aims to propose an approach that includes understanding abandoned cultural landscapes of extraction with all of their components and complexity, evaluating them by determining their values and problems, and

improving conservation strategies towards them to determine how complex cultural landscapes of extraction should be considered in the field of conservation by proposing different scenarios. In addition, within the scope of this thesis, this defined approach has been tested and evaluated in the selected area which is the Kandilli/Armutçuk Coal Mining Region.

This thesis conducts research at different scales to understand the concept of cultural landscapes of extraction, evaluate these areas, and propose conservation strategies for these areas. Therefore, within the scope of this thesis, answers are sought to questions at different scales. Thus, this thesis aims to answer the following questions:

• How can the cultural landscapes of extraction be understood and evaluated with their complex and interrelated contexts and components?

• What kind of threats do cultural landscapes of extraction face and how do they change?

• How can the cultural landscapes of extraction be preserved, how they can become a part of today, how they can be presented, how they can be sustained, and what strategies and principles should be determined?

• What are the components and sub-components that make up the complexity of the Kandilli/ Armutçuk Coal Mining Region, how these components are related, and how all these relationships should be evaluated?

• What are the threats that caused the collapse of the Kandilli/ Armutçuk Coal Mining Region and what are the changes that the region has undergone over time in line with these threats?

• How the Kandilli/ Armutçuk Coal Mining Region can be protected, how decisions should be made about this area, and how the taken decisions can affect this area?

In order to answer these questions, study such complex areas, and make decisions about these areas, it is necessary to first understand the area in detail. For this, the literature survey, archival research and the site survey were made to gather detailed

information at different scales. After understanding the place and the concept with archival research, literature survey, and site survey, the place was evaluated for determining the values and problems of the area. After that, conservation principles and proposals were decided. While following such a path in this study, it was noticed that a conservation approach should be proposed in order to understand and evaluate such complex areas, and make decisions about them.

Therefore, a holistic approach in which all three components, different scales, and time factor are examined as a whole is proposed within the scope of the thesis. In this direction, this thesis tried to understand the place and then evaluate the place by taking into account the complexity of such areas, focusing on the 3 components, and correlating time and scale variables. Therefore, in such complex areas, the area must first be understood. At this stage, it should be understood how the area was in terms of production, site, and community at different scales in the past and now. Then, the area should be evaluated. At this stage, values and problems should be evaluated in line with these 3 components at different scales. After determining the importance of the area and the factors that threaten its importance, the future vision of the area should be determined. Then, decisions should be made regarding the future of the area, and these decisions should be evaluated in line with these 3 components. However, there is no single truth in such complex cultural landscapes of extraction. Therefore, while making decisions, it is necessary to develop many different scenarios. While developing these scenarios, the three components which are determined as industry, community, and the site should be taken into consideration and the effects of different scenarios on these components should be considered. In addition, while developing proposals, a multi-stakeholder process should be established. Moreover, in this thesis, this proposed holistic conservation approach is tested in the Kandilli/Armutçuk coal mining region in Zonguldak.

At the end of this thesis, it has been understood that the Kandilli/Armutçuk region has become a place that has lost importance as a result of the deterioration of the integrity between its components for various reasons. Although this area is a place that has many problems at different scales related to its industry, site, and

community, it also has many values at different scales depending on its industry, site and community. Therefore, it is an area that needs to be protected, and the bonds between its components must be re-established. In this direction, 5 different scenarios were created and evaluated in order to protect this area. Some of these scenarios focused on nature, some on the built environment, some on social life, and some on the economy. Although it is seen that each of these scenarios produces different results, it is important to preserve the traces of the past in each scenario, at least present the place as it is and transfer the traces to the future. However, the interventions of each scenario and the effects of the interventions on the components differ and these scenarios need to be handled with different stakeholders.

In addition, although there are many studies on the concept of cultural landscapes of extraction, this thesis also contributes to the literature.

Firstly, the studies on this subject have generally discussed one or limited number of the components of these fields. However, these areas are complex areas with many components, and they should be considered together with all these components. Therefore, thanks to this thesis, it has been tried to facilitate a better understanding of the components of these cultural landscapes of extraction and the determination of methods to intervene in these complex landscapes. Thus, the tangible and intangible aspects of three components which are industry, site and community of these areas should all be considered together.

Secondly, although there are many studies focusing on different aspects of this concept before this thesis, this thesis reveals that decisions should be developed by bringing all different dimensions together and developing different intervention proposals in a broad perspective, and evaluating them with different stakeholders.

Thirdly, this thesis makes a methodological contribution to the literature by developing a holistic approach that contains the combination of the three components, the time factor, and the different scales to understand and evaluate such complex areas.

In addition to the contributions of this thesis to the literature, there are also further research topics. Although it is understood that cultural landscapes of extraction should be understood and evaluated with a holistic approach and interventions for protection should be developed by producing different scenarios in this direction with this thesis study, such complex areas require a multidisciplinary and multidimensional study. It is not possible to carry out such a multidimensional and multidisciplinary study within the scope of a thesis study. Many disciplines and experts should be involved in this process and the common mind should be formed. All of these stakeholders should have a say in the decisions to be taken, and tools and methods should be developed together.

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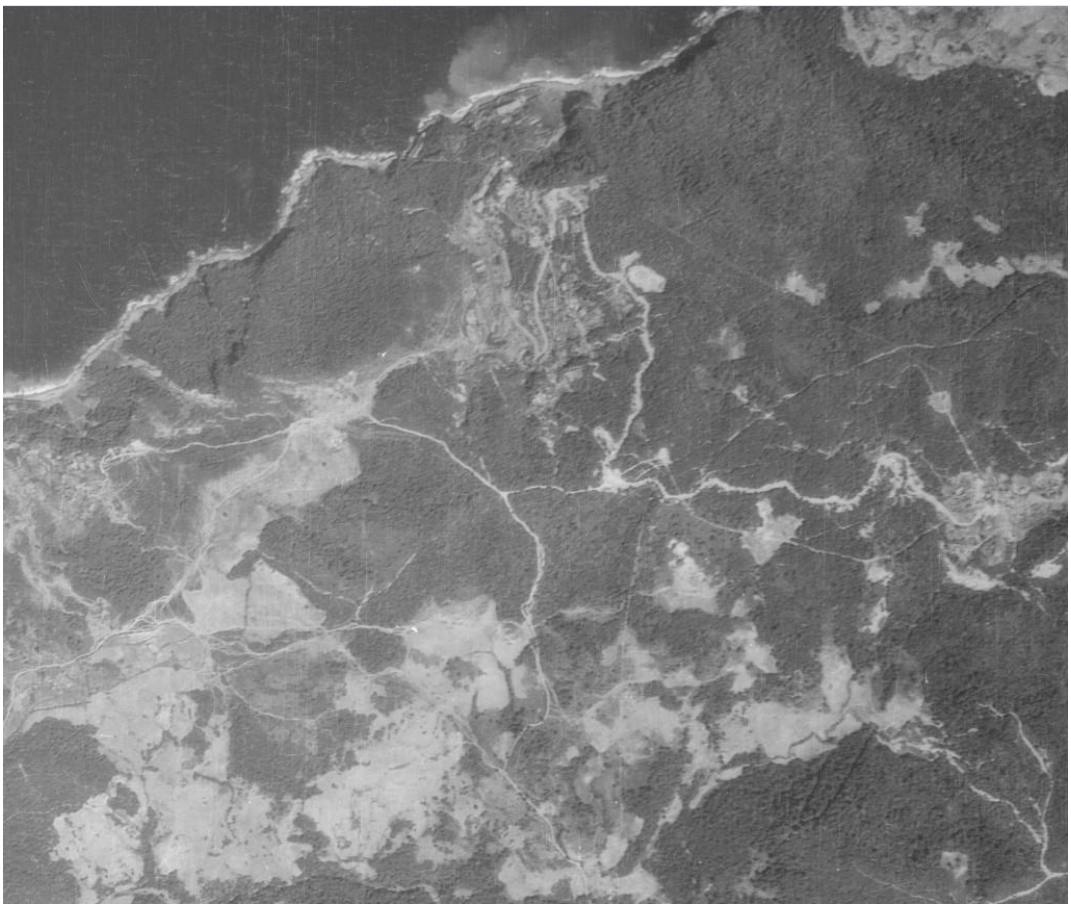
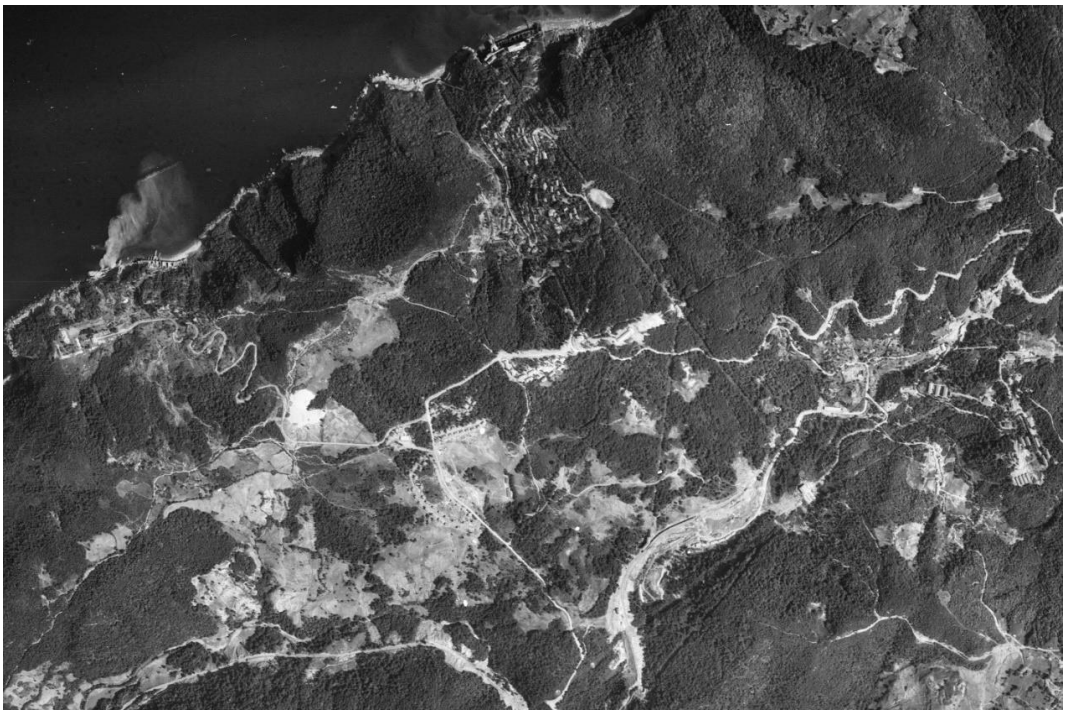
APPENDICES

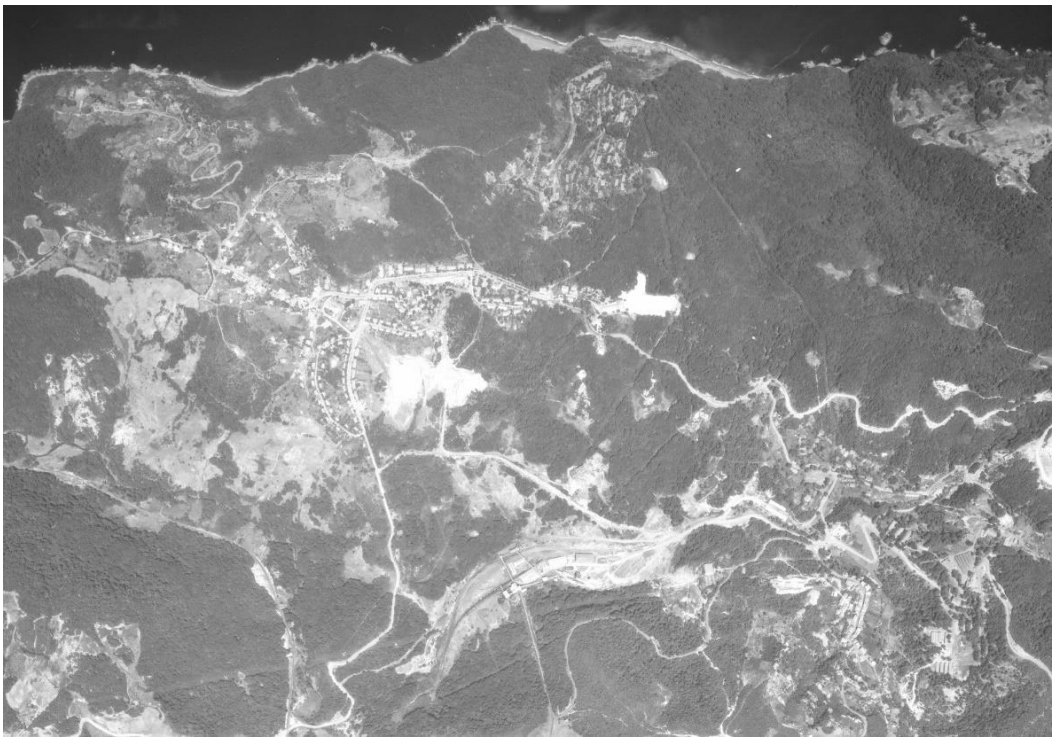
A. Aerial Photographs of the Kandilli/ Armutçuk Region in 1944, 1955, 1973, 1975, 1979, 1982, and 1998 (the photos were obtained from the General Command of Mapping)



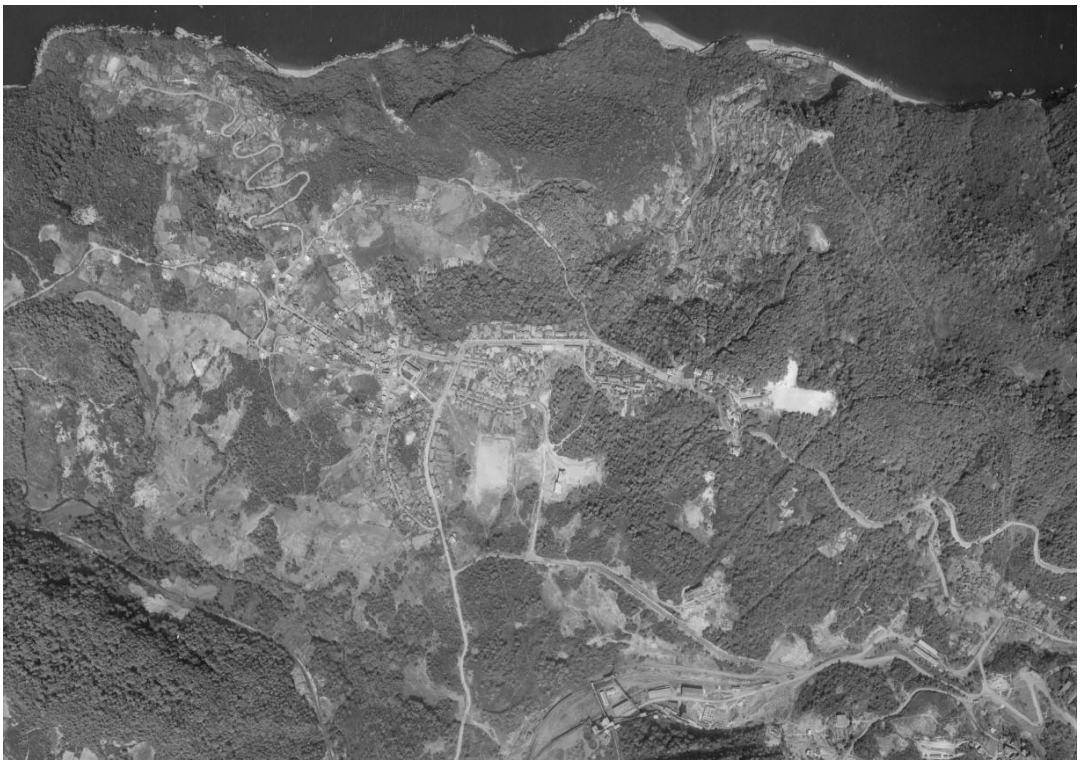
Aerial photograph of the Kandilli/ Armutçuk region in 1944, (obtained from the General Command of Mapping)



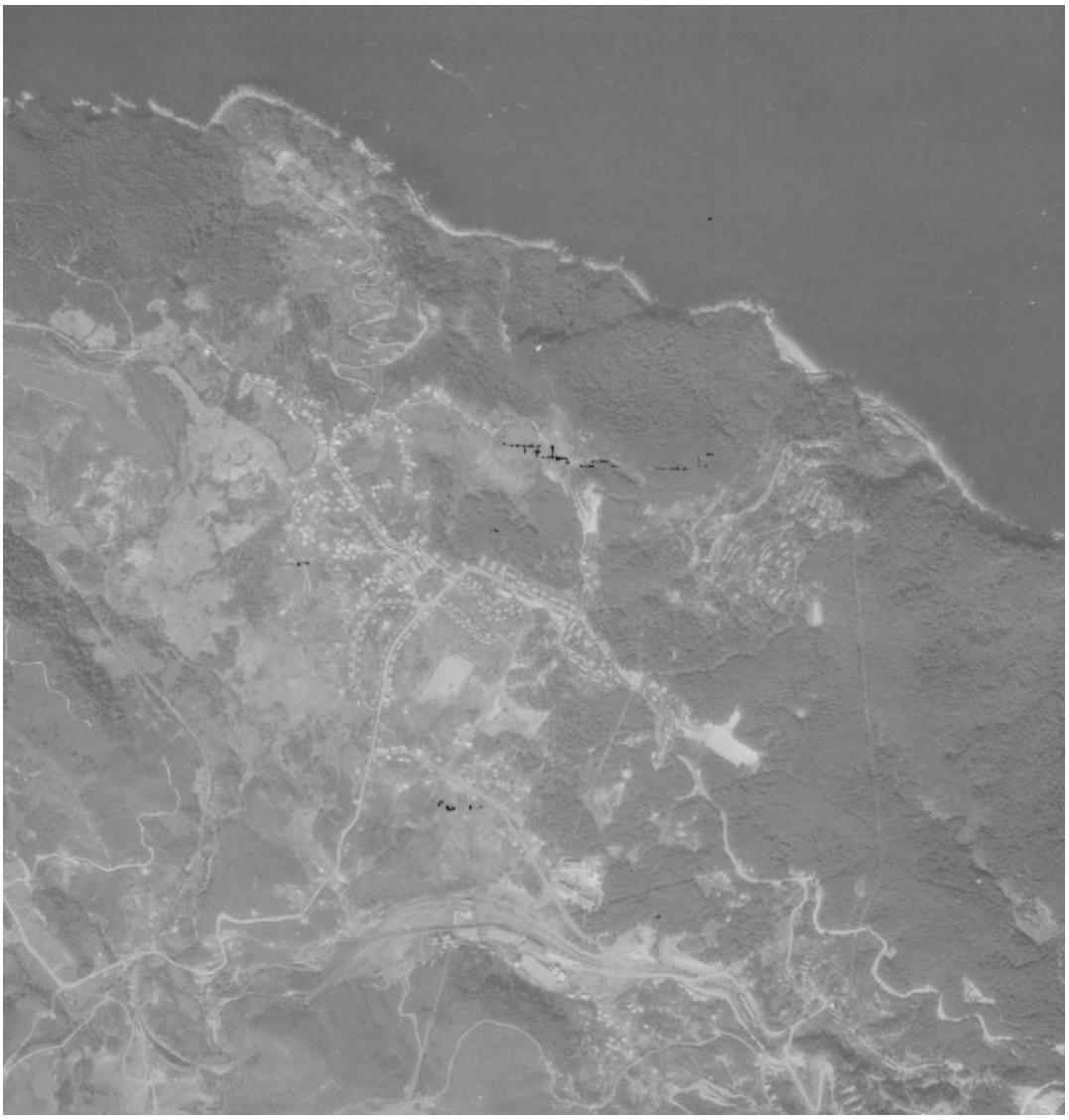
Aerial photograph of the Kandilli/ Armutçuk region in 1955, (obtained from the General Command of Mapping)



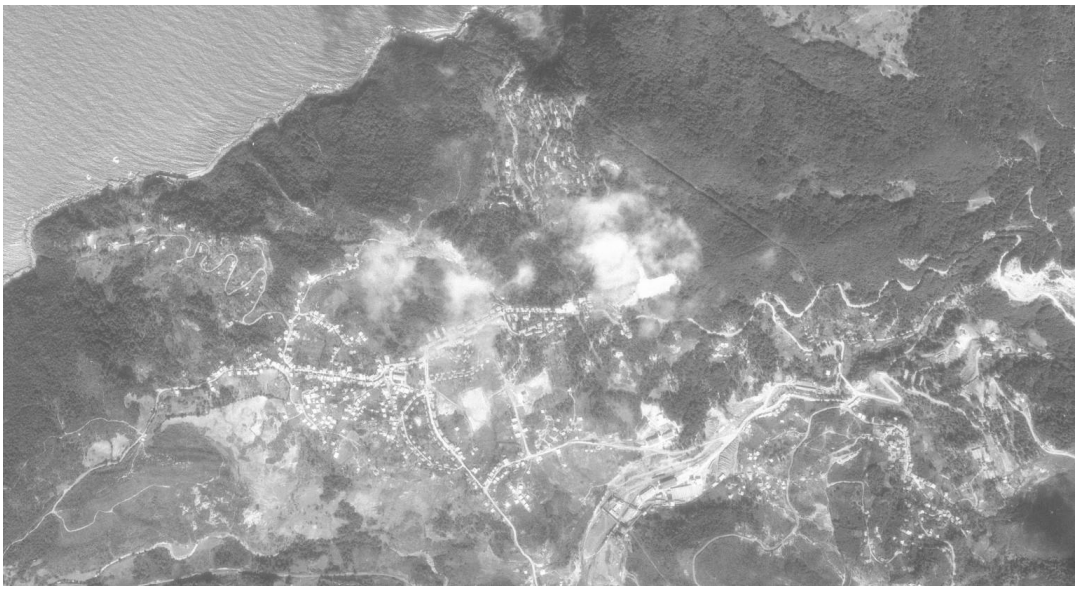
Aerial photograph of the Kandilli/ Armutçuk region in 1973, (obtained from the General Command of Mapping)



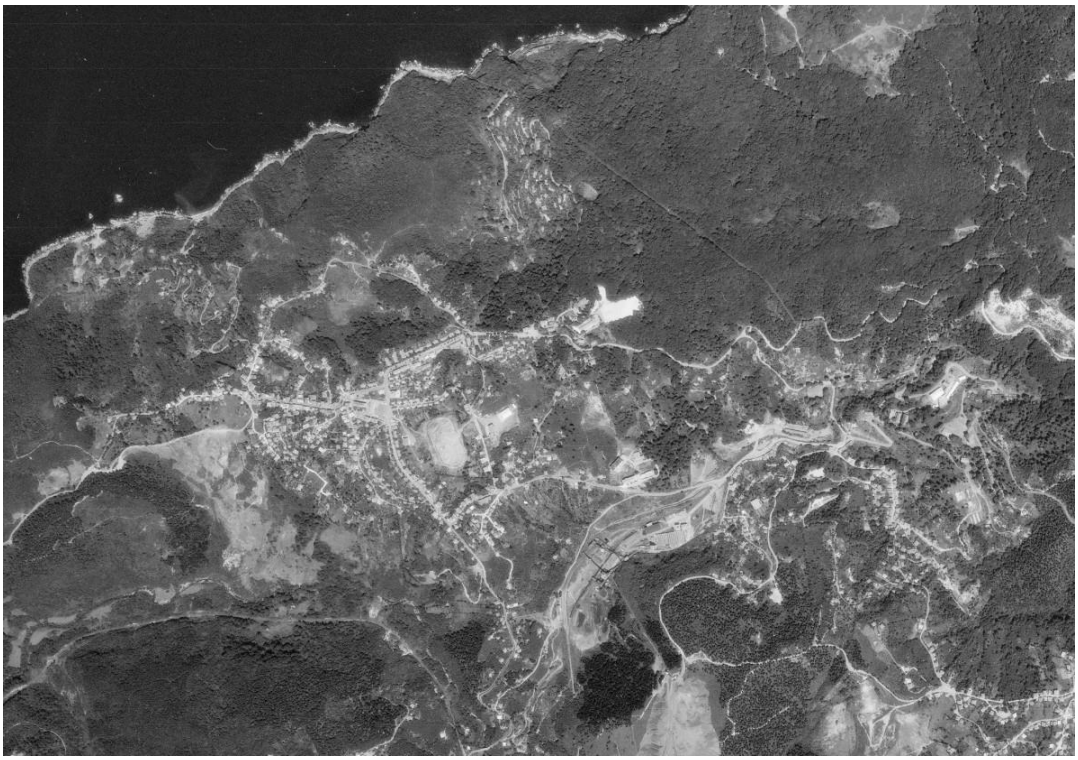
Aerial photograph of the Kandilli/ Armutçuk region in 1975, (obtained from the General Command of Mapping)



Aerial photograph of the Kandilli/ Armutçuk region in 1979, (obtained from the General Command of Mapping)

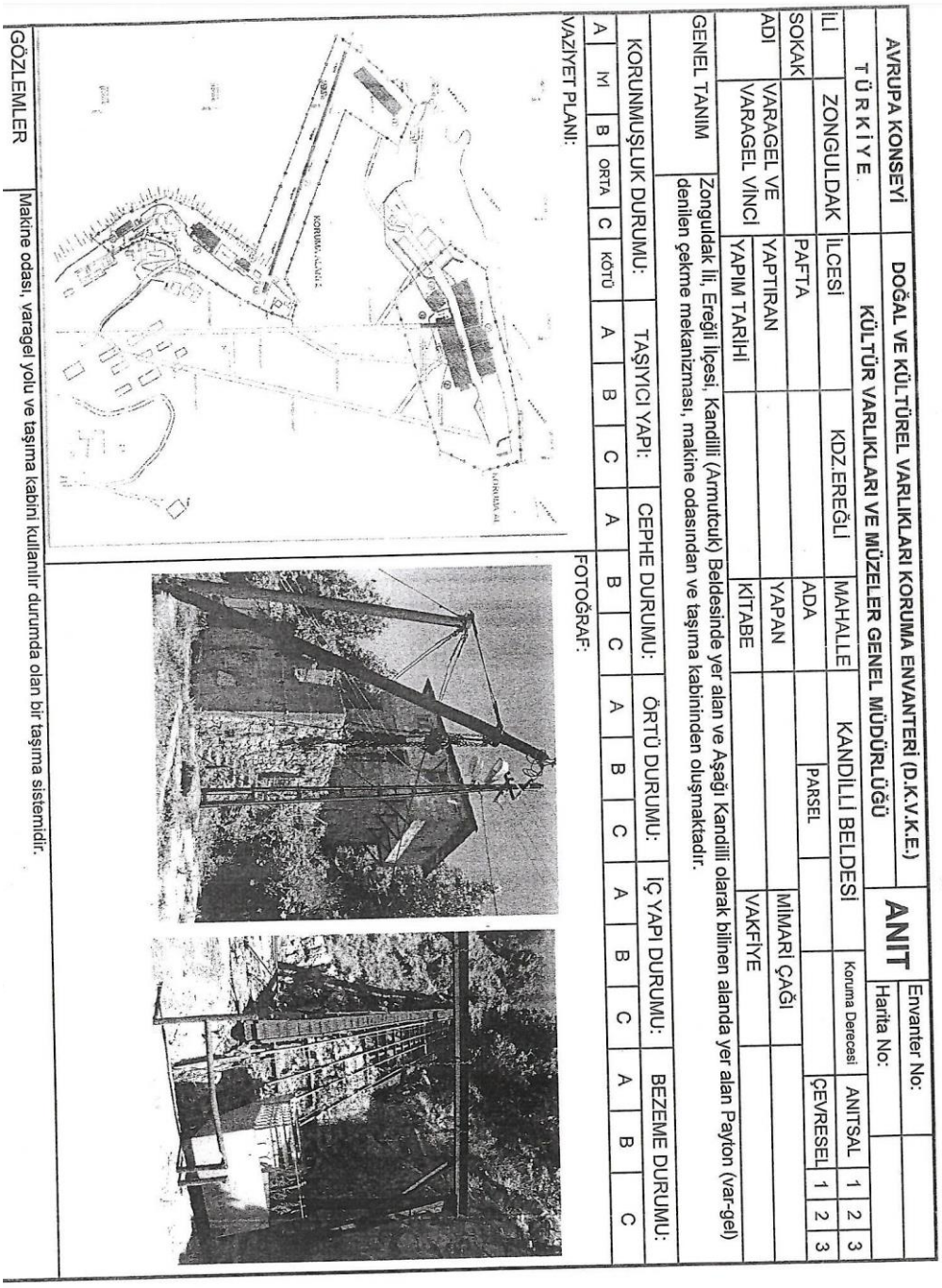


Aerial photograph of the Kandilli/ Armutçuk region in 1982, (obtained from the General Command of Mapping)



Aerial photograph of the Kandilli/ Armutçuk region in 1998, (obtained from the General Command of Mapping)

B. Examples of Registration Sheets of the Buildings in the Lower Kandilli Region (the photos were obtained from the Zonguldak Special Provincial Administration Archive)



AVRUPA KONSEYİ — DOĞAL VE KÜLTÜREL VARLIKLARI KORUMA ENVANTERİ (D.K.V.K.E.) — ANIT — Envanter No: — Harita No:

TÜRKİYE — KÜLTÜR VARLIKLARI VE MÜZELER GENEL MÜDÜRLÜĞÜ

İLİ	ZONGULDAK	İLÇESİ	KDZ.EREĞLİ	MAHALLE	KANDİLLİ BELDESİ			Koruma Derecesi	ANITSAL	1	2	3
SOKAK ADI		PAFTA		ADA		PARSEL			ÇEVRESEL	1	2	3
	VARAGEL VE VARAGEL VİNCİ	YAPTIRAN		YAPAN			MİMARİ ÇAĞI					
		YAPIM TARİHİ		KİTABE			VAKFİYE					

GENEL TANIM: Zonguldak İli, Ereğli İlçesi, Kandilli (Armutcuk) Beldesinde yer alan ve Aşağı Kandilli olarak bilinen alanda yer alan Paykon (var-gel) denilen çekme mekanizması, makine odasından ve taşıma kabininden oluşmaktadır.

KORUNMUŞLUK DURUMU:			TAŞIYICI YAPI:			CEPHE DURUMU:			ÖRTÜ DURUMU:			İÇ YAPI DURUMU:			BEZEME DURUMU:		
A	İYİ	B	ORTA	C	KÖTÜ	A	B	C	A	B	C	A	B	C	A	B	C

VAZİYET PLANI:

FOTOĞRAF:

GÖZLEMLER: Makine odası, varagel yolu ve taşıma kabini kullanılır durumda olan bir taşıma sistemidir.

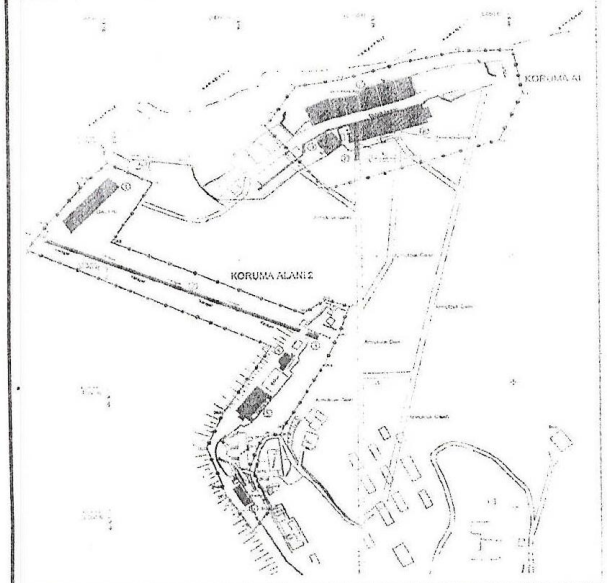
AVRUPA KONSEYİ	DOĞAL VE KÜLTÜREL VARLIKLARI KORUMA ENVANTERİ (D.K.V.K.E.)	ANIT	Envanter No:	
TÜRKİYE	KÜLTÜR VARLIKLARI VE MÜZELER GENEL MÜDÜRLÜĞÜ		Harita No:	

İLİ	ZONGULDAK	İLCESİ	KDZ.EREĞLİ	MAHALLE	KANDİLLİ BELDESİ			Koruma Derecesi	ANITSAL	1	2	3
SOKAK		PAFTA		ADA		PARSEL			ÇEVRESEL	1	2	3
ADI	OCAK GİRİŞİ VE NEFESLİK TÜNELİ	YAPTIRAN		YAPAN		MİMARİ ÇAĞI						
		YAPIM TARİHİ		KİTABE		VAKFİYE						

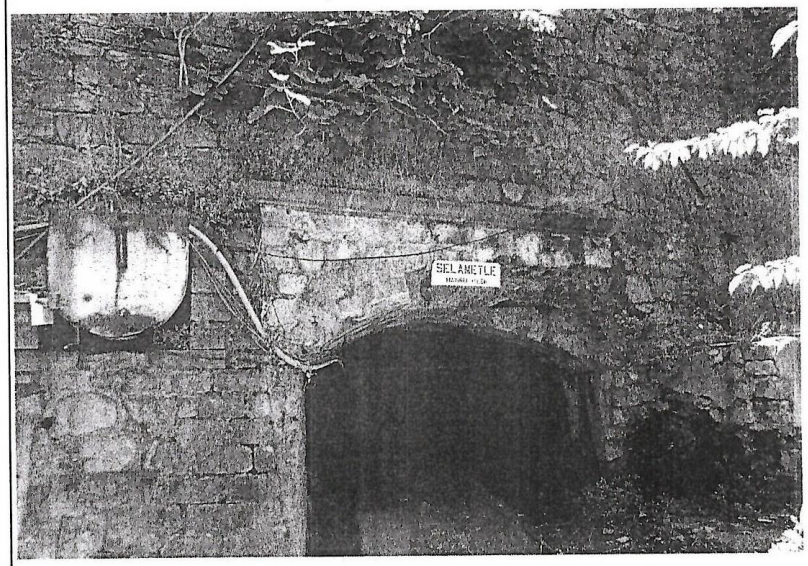
GENEL TANIM	Zonguldak İli, Ereğli İlçesi, Kandilli (Armutcuk) Beldesinde yer alan ve Aşağı Kandilli olarak bilinen alanda yer alan ocağın

KORUNMUŞLUK DURUMU:						TAŞIYICI YAPI:			CEPHE DURUMU:			ÖRTÜ DURUMU:			İÇ YAPI DURUMU:			BEZEME DURUMU:		
A	İYİ	B	ORTA	C	KÖTÜ	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C

VAZİYET PLANI:



FOTOĞRAF:



GÖZLEMLER	Kare planlı elektrik binasının içerisinde çalışmakta olan bir sistem bulunmaktadır.

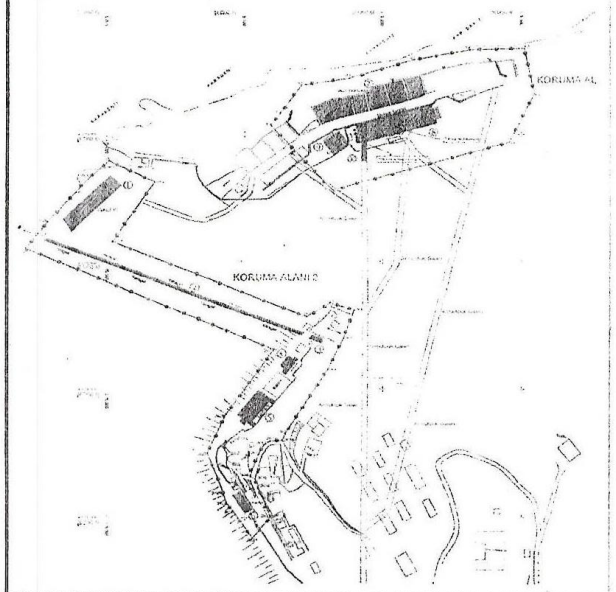
AVRUPA KONSEYİ	DOĞAL VE KÜLTÜREL VARLIKLARI KORUMA ENVANTERİ (D.K.V.K.E.)	ANIT	Envanter No:	
T Ü R K İ Y E	KÜLTÜR VARLIKLARI VE MÜZELER GENEL MÜDÜRLÜĞÜ		Harita No:	

İLİ	ZONGULDAK	İLCESİ	KDZ.EREĞLİ	MAHALLE	KANDİLLİ BELDESİ			Koruma Derecesi	ANITSAL	1	2	3
SOKAK		PAFTA		ADA		PARSEL			ÇEVRESEL	1	2	3
ADI	SİLO YAPILARI	YAPTIRAN		YAPAN		MİMARİ ÇAĞI						
		YAPIM TARİHİ		KİTABE		VAKFİYE						

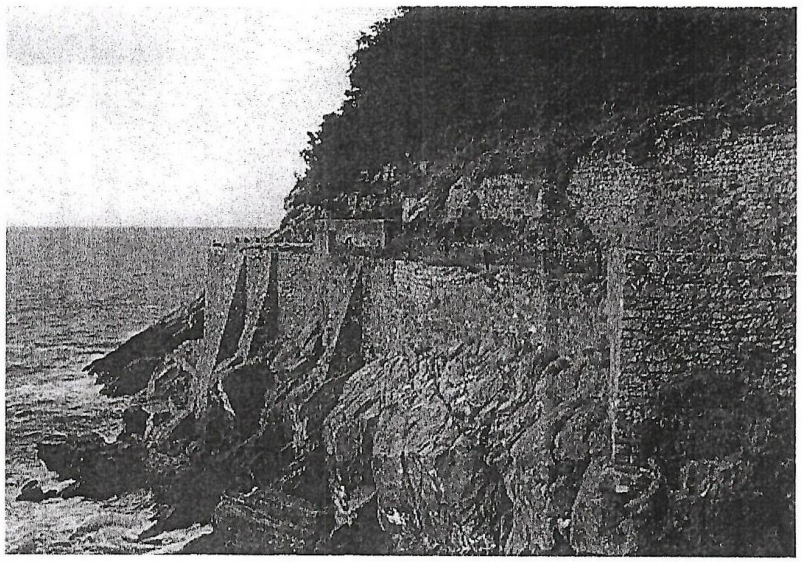
GENEL TANIM	Zonguldak İli, Ereğli İlçesi, Kandilli (Armutcuk) Beldesinde yer alan ve Aşağı Kandilli olarak bilinen alanda yer alan, ocaktan çıkan kömürün depolandığı yapılardır.

KORUNMUŞLUK DURUMU:						TAŞIYICI YAPI:			CEPHE DURUMU:			ÖRTÜ DURUMU:			İÇ YAPI DURUMU:			BEZEME DURUMU:		
A	İYİ	B	ORTA	C	KÖTÜ	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C

VAZİYET PLANI:



FOTOĞRAF:



GÖZLEMLER	Zaman içerisindeki bakımsızlık, deniz etkis, bitki örtüsü, toprak kayması yapıları tahrip etmiştir.

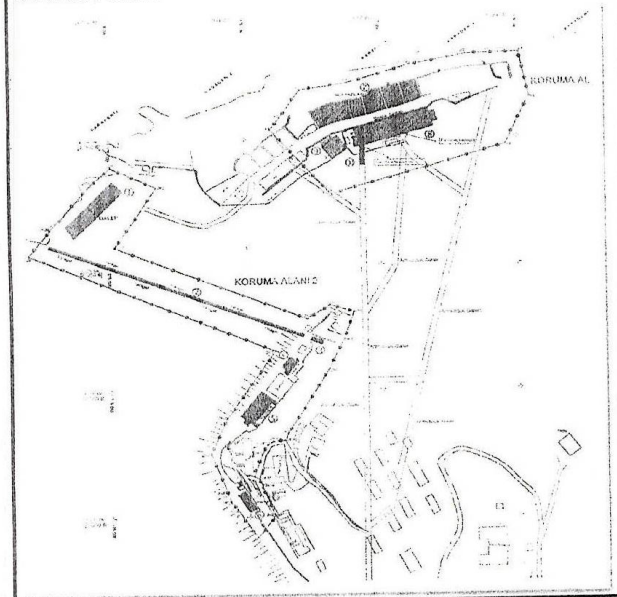
AVRUPA KONSEYİ	DOĞAL VE KÜLTÜREL VARLIKLARI KORUMA ENVANTERİ (D.K.V.K.E.)	ANIT	Envanter No:	
TÜRKİYE	KÜLTÜR VARLIKLARI VE MÜZELER GENEL MÜDÜRLÜĞÜ		Harita No:	

İLİ	ZONGULDAK	İLCESİ	KDZ.EREĞLİ	MAHALLE	KANDİLLİ BELDESİ			Koruma Derecesi	ANITSAL	1	2	3
SOKAK		PAFTA		ADA		PARSEL			ÇEVRESEL	1	2	3
ADI	SİNEMA BİNASI	YAPTIRAN		YAPAN			MİMARİ ÇAĞI					
		YAPIM TARİHİ		KİTABE			VAKFİYE					

GENEL TANIM	Zonguldak İli, Ereğli İlçesi, Kandilli (Armutcuk) Beldesinde yer alan ve Aşağı Kandilli olarak bilinen alanda yer alan, döneminde sinema olarak kullanılan betonarme, boyuna dikdörtgen uzantılı bir yapıdır.

KORUNMUŞLUK DURUMU:						TAŞIYICI YAPI:			CEPHE DURUMU:			ÖRTÜ DURUMU:			İÇ YAPI DURUMU:			BEZEME DURUMU:		
A	İYİ	B	ORTA	C	KÖTÜ	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C

VAZİYET PLANI:



FOTOĞRAF:

GÖZLEMLER	Sinema yapısının duvarlarının bir bölümü yıkık durumdadır. Zaman içerisindeki bakımsızlık, bitki örtüsü tahrip etmiştir.

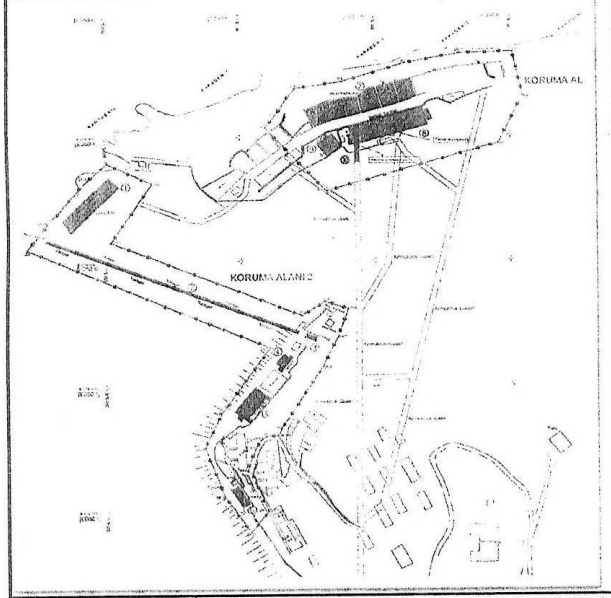
AVRUPA KONSEYİ	DOĞAL VE KÜLTÜREL VARLIKLARI KORUMA ENVANTERİ (D.K.V.K.E.)	ANIT	Envanter No:	
TÜRKİYE	KÜLTÜR VARLIKLARI VE MÜZELER GENEL MÜDÜRLÜĞÜ		Harita No:	

İLİ	ZONGULDAK	İLCESİ	KDZ.EREĞLİ	MAHALLE	KANDİLLİ BELDESİ			Koruma Derecesi	ANITSAL	1	2	3
SOKAK		PAFTA		ADA		PARSEL			ÇEVRESEL	1	2	3
ADI	GÜMRÜK - EV	YAPTIRAN		YAPAN			MİMARİ ÇAĞI					
		YAPIM TARİHİ		KİTABE			VAKFİYE					

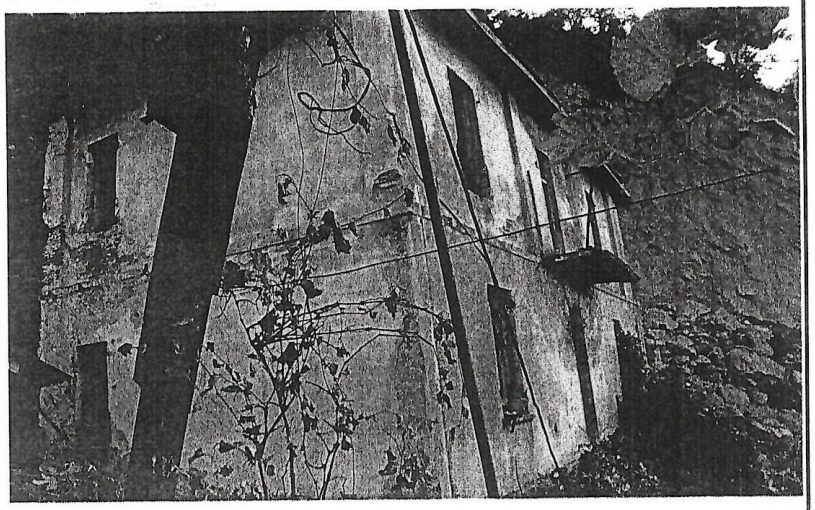
GENEL TANIM	Zonguldak İli, Ereğli İlçesi, Kandilli (Armutcuk) Beldesinde yer alan ve Aşağı Kandilli olarak bilinen alanda yer alan, döneminde gümrük + ev olarak kullanılan yapı bodrum + zemin + 1 katlıdır.

KORUNMUŞLUK DURUMU:						TAŞIYICI YAPI:			CEPHE DURUMU:			ÖRTÜ DURUMU:			İÇ YAPI DURUMU:			BEZEME DURUMU:		
A	İYİ	B	ORTA	C	KÖTÜ	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C

VAZİYET PLANI:



FOTOĞRAF:



GÖZLEMLER	Zaman içerisindeki bakımsızlık, bitki örtüsü ve deniz havası binayı oldukça etkilemiştir. Çatısının bir kısmı çökmüş durumdadır. Pencere elemanları bulunmamaktadır.

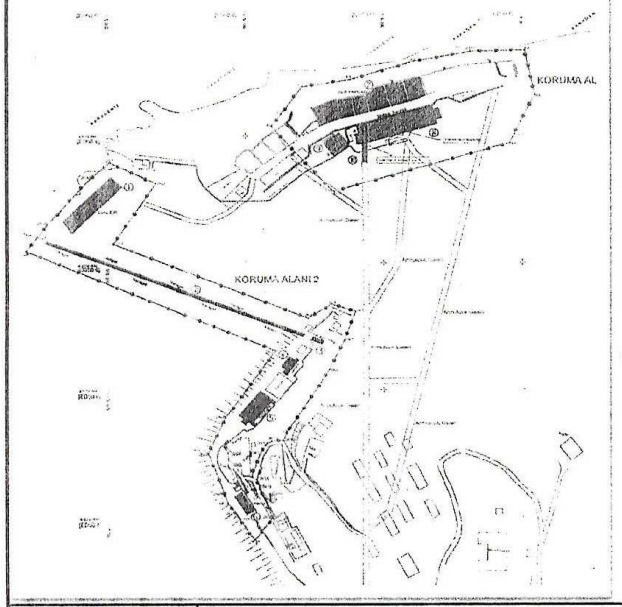
AVRUPA KONSEYİ	DOĞAL VE KÜLTÜREL VARLIKLARI KORUMA ENVANTERİ (D.K.V.K.E.)	ANIT	Envanter No:	
T Ü R K İ Y E	KÜLTÜR VARLIKLARI VE MÜZELER GENEL MÜDÜRLÜĞÜ		Harita No:	

İLİ	ZONGULDAK	İLCESİ	KDZ.EREĞLİ	MAHALLE	KANDİLLİ BELDESİ			Koruma Derecesi	ANITSAL	1	2	3
SOKAK		PAFTA		ADA		PARSEL			ÇEVRESEL	1	2	3
ADI	LAMBANE	YAPTIRAN		YAPAN			MİMARİ ÇAĞI					
		YAPIM TARİHİ		KİTABE			VAKFİYE					

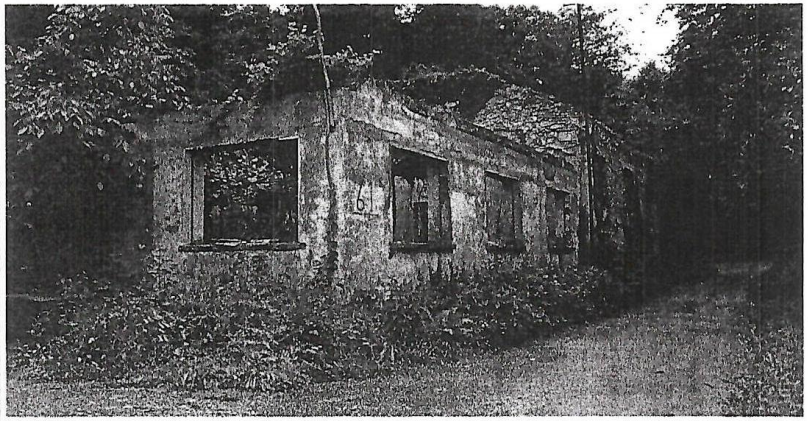
GENEL TANIM	Zonguldak İli, Ereğli İlçesi, Kandilli (Armutcuk) Beldesinde yer alan ve Aşağı Kandilli olarak bilinen alanda yer alan, döneminde ocakta kullanılan lambaların bakımı, onarımı ve muhafazasının yapıldığı yerüstündeki özel bir yapıdır.

KORUNMUŞLUK DURUMU:						TAŞIYICI YAPI:			CEPHE DURUMU:			ÖRTÜ DURUMU:			İÇ YAPI DURUMU:			BEZEME DURUMU:		
A	İYİ	B	ORTA	C	KÖTÜ	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C

VAZİYET PLANI:



FOTOĞRAF:



GÖZLEMLER	Zaman içerisindeki bakımsızlık, bitki örtüsü tahrip etmiştir. Üst örtüsü yıkılmış durumdadır.

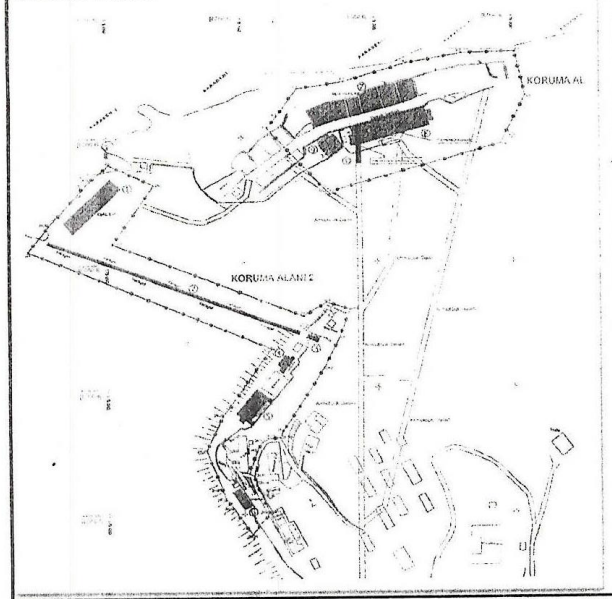
AVRUPA KONSEYİ	DOĞAL VE KÜLTÜREL VARLIKLARI KORUMA ENVANTERİ (D.K.V.K.E.)	ANIT	Envanter No:	
TÜRKİYE	KÜLTÜR VARLIKLARI VE MÜZELER GENEL MÜDÜRLÜĞÜ		Harita No:	

İLİ	ZONGULDAK	İLCESİ	KDZ.EREĞLİ	MAHALLE	KANDİLLİ BELDESİ			Koruma Derecesi	ANITSAL	1	2	3
SOKAK		PAFTA		ADA		PARSEL			ÇEVRESEL	1	2	3
ADI	YAZIHANE	YAPTIRAN		YAPAN			MİMARİ ÇAĞI					
		YAPIM TARİHİ		KİTABE			VAKFİYE					

GENEL TANIM	Zonguldak İli, Ereğli İlçesi, Kandilli (Armutcuk) Beldesinde yer alan ve Aşağı Kandilli olarak bilinen alanda yer alan yapı işletmenin aktif çalıştığı dönemlerde yazıhane olarak faaliyet göstermekteydi.

KORUNMUŞLUK DURUMU:						TAŞIYICI YAPI:			CEPHE DURUMU:			ÖRTÜ DURUMU:			İÇ YAPI DURUMU:			BEZEME DURUMU:		
A	İYİ	B	ORTA	C	KÖTÜ	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C

VAZİYET PLANI:



FOTOĞRAF:

GÖZLEMLER	Yazıhane yapısının duvarlarının bir bölümü yıkık durumdadır. Zaman içerisindeki bakımsızlık, bitki örtüsü tahrip etmiştir.

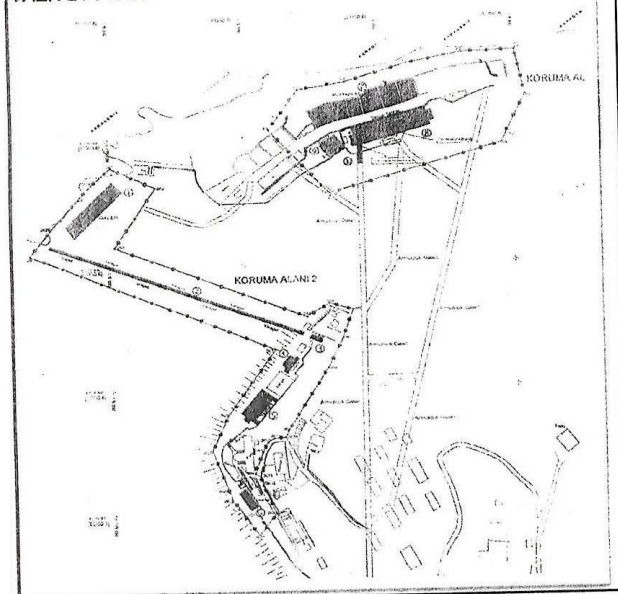
AVRUPA KONSEYİ	DOĞAL VE KÜLTÜREL VARLIKLARI KORUMA ENVANTERİ (D.K.V.K.E.)	ANIT	Envanter No:	
TÜRKİYE	KÜLTÜR VARLIKLARI VE MÜZELER GENEL MÜDÜRLÜĞÜ		Harita No:	

İLİ	ZONGULDAK	İLCESİ	KDZ.EREĞLİ	MAHALLE	KANDİLLİ BELDESİ			Koruma Derecesi	ANITSAL	1	2	3
SOKAK		PAFTA		ADA		PARSEL			ÇEVRESEL	1	2	3
ADI	ELEKTRİK SANTRALİ	YAPTIRAN		YAPAN		MİMARİ ÇAĞI						
		YAPIM TARİHİ		KİTABE		VAKFİYE						

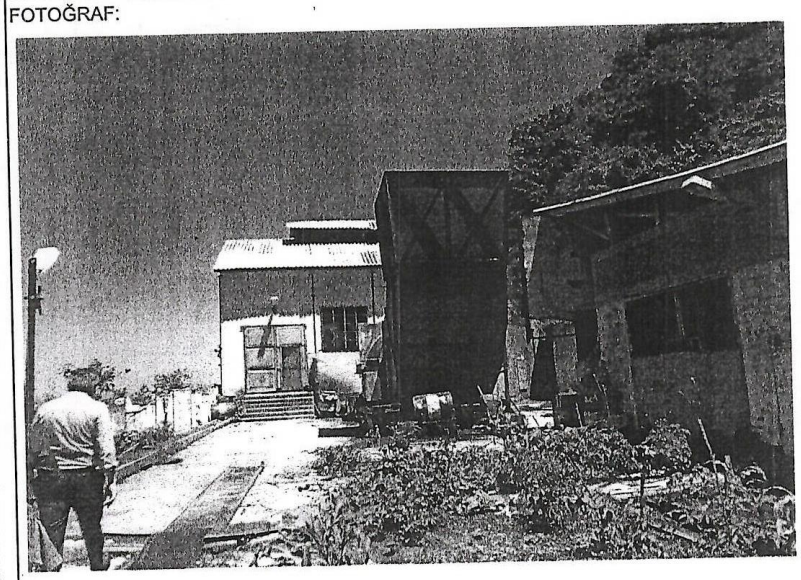
GENEL TANIM	Zonguldak İli, Ereğli İlçesi, Kandilli (Armutcuk) Beldesinde yer alan ve Aşağı Kandilli olarak bilinen alanda yer alan, ocağın havalandırma sisteminin, elektrik aksamının ve aspratörün bulunduğu binadır. Günümüzde kullanılmaya devam etmektedir.

KORUNMUŞLUK DURUMU:						TAŞIYICI YAPI:			CEPHE DURUMU:			ÖRTÜ DURUMU:			İÇ YAPI DURUMU:			BEZEME DURUMU:		
A	İYİ	B	ORTA	C	KÖTÜ	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C

VAZİYET PLANI:



FOTOĞRAF:



GÖZLEMLER	Kare planlı elektrik binasının içerisinde çalışmakta olan bir sistem bulunmaktadır.

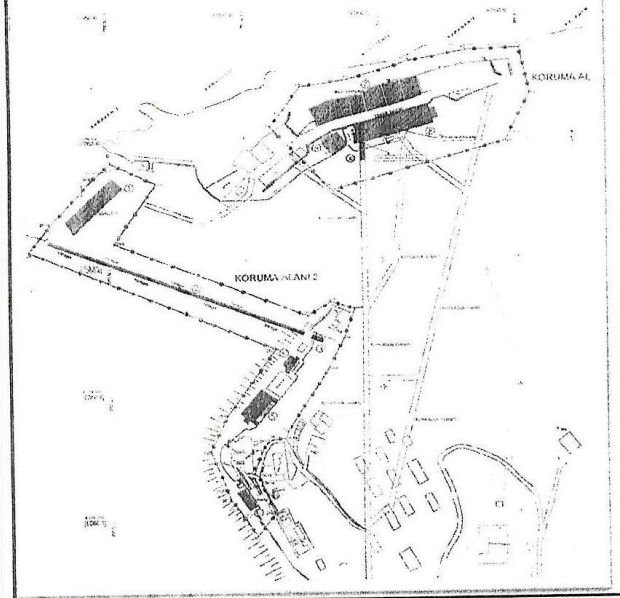
AVRUPA KONSEYİ	DOĞAL VE KÜLTÜREL VARLIKLARI KORUMA ENVANTERİ (D.K.V.K.E.)	ANIT	Envanter No:	
TÜRKİYE	KÜLTÜR VARLIKLARI VE MÜZELER GENEL MÜDÜRLÜĞÜ		Harita No:	

İLİ	ZONGULDAK	İLCESİ	KDZ.EREĞLİ	MAHALLE	KANDİLLİ BELDESİ			Koruma Derecesi	ANITSAL	1	2	3
SOKAK		PAFTA		ADA		PARSEL			ÇEVRESEL	1	2	3
ADI	GALERİ	YAPTIRAN		YAPAN			MİMARİ ÇAĞI					
		YAPIM TARİHİ		KİTABE			VAKFİYE					

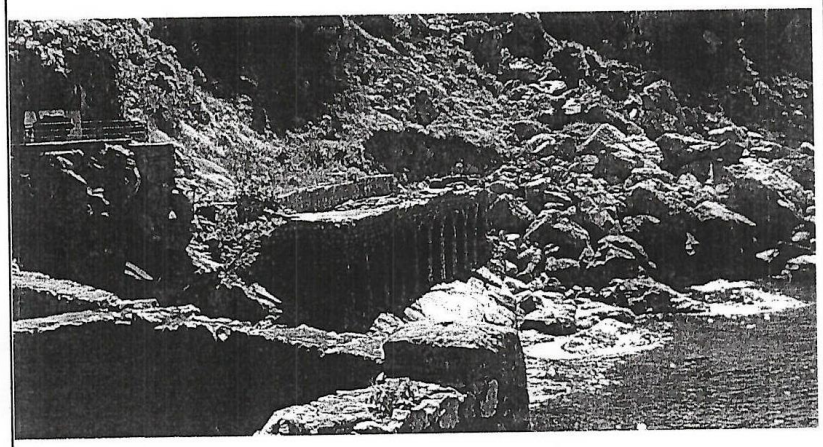
GENEL TANIM	Zonguldak İli, Ereğli İlçesi, Kandilli (Armutcuk) Beldesinde yer alan ve Aşağı Kandilli olarak bilinen alanda yer alan Payton (var-gel) ile inilen son noktada yer alan 10 hücreden oluşan yığma taş tekniği ile oluşturulan kısımdır.

KORUNMUŞLUK DURUMU:						TAŞIYICI YAPI:			CEPHE DURUMU:			ÖRTÜ DURUMU:			İÇ YAPI DURUMU:			BEZEME DURUMU:		
A	İYİ	B	ORTA	C	KÖTÜ	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C

VAZİYET PLANI:



FOTOĞRAF:



GÖZLEMLER	Hava koşullarından ve toprak kaymasından dolayı terkedilmiş bir durumdadır.