



# Monitoring the Capital Pressure on Cultural Heritage Sites through Plan Revisions: The Case of Aliğa Kyme Ancient City

Kültürel Miras Alanları Üzerindeki Sermaye Baskısının Plan Revizyonlarından İzlenmesi: Aliğa Kyme Antik Kenti Örneği.

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## Öz

Kültürel miras alanlarının sahip oldukları tarihi, kültürel ve bilimsel değerleriyle, gelecek nesiller için korunmaları önemlidir. Kapitalist birikim dinamikleri, mekânsal genişleme ihtiyacı nedeniyle kültürel miras alanları ve taşınmaz kültürel varlıklar üzerinde baskı yaratmaktadır. Özellikle kentsel alanlar içinde kalan arkeolojik sit alanları ve taşınmaz kültür varlıkları; sanayi, konut ve ticaret gibi kentsel alanlar ile çevrelenmekte ve bu kullanımların gelişme baskısı altında kalmaktadır. Bu durum, koruma alanları ile kentsel arazi kullanımları arasında çatışma ve gerginliğe neden olmaktadır. Bu çalışmada, kapitalist birikim süreçlerinin baskısı altında bulunan İzmir ili Aliğa ilçesi Nemrut Körfezi'nde Kyme Antik Kenti'nin bulunduğu arkeolojik sit alanına odaklanılmıştır. Aliğa örneğinde koruma alanlarına yönelik bu baskı, temelde ulusal ve bölgesel düzeyde önemli endüstriyel kullanımlardan kaynaklıdır. Bu nedenle kültürel mirasın korunması, teorik ve pratik karmaşıklıklarla doludur. 1960'lı yıllardan itibaren kesintisiz devam eden sanayi ve kentleşme süreçleri nedeniyle, Kyme Antik Kent çevresi sanayi tesisleri ve limanlarla çevrilmiş, süreç içerisinde arkeolojik sit alanı sınırı değişmiştir. Bu çalışma kapsamında, Kyme Antik Kent koruma alanının sınır değişimi ve yakın çevresindeki kentsel baskının somut göstergesi haline gelen üst ölçekli planlarda yapılan plan revizyonları incelenmiştir. Çalışma sonuçları, sadece sit sınırları içinde korumanın sağlanmasına yönelik çabaların bu alanların çevresinin tamamen dönüşmesiyle, kentsel bağlamından kopmasına ve sit sınırlarına yönelik değişiklik baskısının artmasına neden olduğunu göstermektedir.

**Anahtar Kelimeler:** Arkeolojik Sit Alanı, Sermaye Birikimi, Koruma Alanları, Sanayi, Çevre Düzeni Planı, Plan Revizyonu, Kyme Antik Kenti

## ABSTRACT

Cultural heritage sites must be preserved for future generations due to their historical, cultural, and scientific value. However, the dynamics of capitalist accumulation exert significant pressure on cultural heritage sites and immovable cultural assets, primarily due to the demand for spatial expansion. Archaeological sites and immovable cultural assets, particularly those in urban areas, are increasingly surrounded by industrial, residential, and commercial developments, placing them under constant pressure from these urbanization processes. This situation creates conflicts and tensions between conservation areas and urban land uses. This study focuses on the archaeological site of the ancient city of Kyme, located in Nemrut Bay in the Aliğa district of İzmir, which is under intense pressure from capitalist accumulation processes. In the case of Aliğa, this pressure on conservation areas primarily stems from significant industrial activities at both national and regional levels. Consequently, the protection of cultural heritage in such contexts is fraught with theoretical and practical complexities. Since the 1960s, continuous industrialization and urbanization have resulted in the ancient city of Kyme being encircled by industrial facilities and ports, leading to modifications in the boundaries of the archaeological site over time. This study examines the shifting boundaries of the ancient city of Kyme and the upper-scale plan revisions that have served as concrete indicators of the increasing urban pressure in its immediate surroundings. The findings reveal that conservation efforts confined strictly within site boundaries have led to the complete transformation of the

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*surrounding landscape, the detachment of these sites from their urban context, and a heightened pressure for further changes to the site boundaries.*

**Keywords:** *Archaeological Sites, Capital Accumulation, Protection Areas, Industrial, Territorial Plan, Plan Revision, Kyme Ancient City*

## INTRODUCTION

Cultural heritage and its preservation constitute a complex and often conflicting phenomenon, both conceptually and materially. Within the framework of capitalist production relations, cultural heritage conservation encompasses multiple intersecting, complementary, conflicting, and competing approaches. While specific cultural heritage sites are commodified through frameworks such as the culture industry, others risk being erased from history due to urbanization and industrial pressures. Consequently, preserving cultural heritage presents theoretical and practical challenges (Muñoz-Viñas, 2023).

Preserving historical and cultural immovable assets in situ and within their original context is primarily achieved through the designation of conservation areas (Tekeli, 2009). In regions where capital accumulation necessitates concentration and spatial expansion, one of the most significant factors that can slow down this process is the establishment of conservation area boundaries, as defined by international and national legislation for safeguarding cultural heritage sites.

Determined conservation area grades may constitute an "obstacle" in forming, expanding, or accelerating capitalist production cycles under legislation protecting the cultural heritage and conservation areas during the relevant area's growth, development, and industrialization processes. Due to private ownership, unplanned industrial development may occur, especially in regions with intense infrastructure and industrial development. In this context, central governments' determination of an area "close" to cultural heritage sites as an industrial zone may prevent spatial expansion in cases where future spatial expansion to industrial areas is required, triggering unplanned and uncontrolled industrial development (Sezen and Kubaş, 2014). There are many studies in the literature dealing with historical immovable cultural assets. Unlike current studies, this study examines the change in the conservation area's boundaries determined to protect historical and cultural assets because of plan changes parallel with capital accumulation processes.

This study focuses on the Aliğa district, which has a population of 105,000 as of 2023, from a small settlement consisting of a farm and the houses of those living on the farm in 70 years, with the influence of large industrial facilities established by transferring the capital accumulated throughout the country under the guidance of the development plans of the republic, and which is surrounded by industrial establishments as a result of the development of industry in the district. It focuses on the conservation area of the ancient city of Kyme. The ancient city of Kyme, located in Aliğa district, is a multi-layered and multi-traced cultural heritage site dominated by many civilizations throughout its history. Plan revisions dealing with the ancient city of Kyme and its industrial areas in their historical context are compiled. The role of plans and planning tools in the capital accumulation processes is discussed, with the expansion of industrial areas aimed at increasing capital accumulation and the process that caused the ancient city of Kyme and the conservation area to remain among the industrial areas.

In the next section, the theoretical basis and legal legislation that protects cultural heritage sites are discussed. Section 2 explains the study area, data, and methodology. Section 3 discusses the development process of the Aliğa settlement within its historical context. Section 4 presents capital accumulation in the Aliğa district and its reflections on upper-scale plans with planned changes. Section 5 belongs to the discussion and conclusion.

## 1. Literature Review

Throughout its history, Anatolia has hosted many civilizations. Civilizations that left their mark in Anatolia built cities from their savings and established trade routes from surplus production. As a result of this cultural accumulation, Anatolia has many archaeological and historical value areas. While some of the aforementioned areas have continued to be centers of production and accumulation until today and are in the core or ground of cities, the use of some of them ended after disasters and wars within their historical past. For this reason, archaeological and cultural areas in Anatolia are sometimes intertwined and often lie on top of each other as layers.

However, the city is not a static phenomenon; on the contrary, it is an organism that constantly changes and transforms, and the areas expressed will inevitably be affected by such changes and transformations. After the Industrial Revolution, the need for urban and industrial areas requiring significant land use also affected the archaeological and cultural areas in or near cities. This situation creates a tense relationship between preserving past values and new development.

Below, the development process of the approach to the protection of cultural heritage and archaeological sites, protection problems in archaeological sites under development pressure, the relationship between the protection of cultural heritage and urban planning, and the role of stakeholders and local authorities in the protection of cultural heritage are defined under subheadings and the relevant literature is reviewed.

### 1.1. The Development Process of the Approach to the Protection of Cultural Heritage Through International Regulations

Changes in the approach to conservation at the international level are examined throughout the historical process;

- Monument-based conservation came to the fore at the end of the 19th century, and the basic principles of international codes of practice regarding the conservation of monuments were determined at the 1931 Athens Conference organized by the International Museums Office.
- In the second half of the 20th century, the protection of the historical environment first came to the agenda with the Second International Congress of Architects and Technicians of Historical Monuments, which was held in Venice in 1964, in the form of protection of the area that forms the background of monumental buildings.
- With the Amsterdam Declaration published because of the campaign that started with the declaration of 1975 as the European Year of Architectural Heritage, the protection of architectural heritage was determined as one of the objectives of urban and regional planning, and an integrated conservation model with economic, social, administrative, and legal aspects was defined as the target.
- Since the 1990s, the integrative potential of landscape, shaped by both natural and sociocultural processes in the cultural heritage field, has begun to attract attention.
- With the historic urban landscape recommendation decision adopted in 2011, intangible values and concrete elements are emphasized. The relations and integrity between the built and natural environment are considered to establish relations between the traditional and the new heritage management and sustainable development, which are addressed together as a holistic approach. It seems that an integrated and value-oriented approach is envisaged (Ahunbay, 1996; Bandarin and van Oers, 2015; Ginzarly et al., 2018; ICOMOS, 1975; Orbasli, 2000; Palmer, 2008; Pereira Roders and van Oers, 2012; UNESCO, 2011).

As can be seen, the approach to protecting cultural heritage does not have a very long history (Cengiz and Zeren, 2021). The conservation approach was enhanced by developing overtime and adding different dimensions. Its relationship with contemporary developments has recently become controversial. Integrating cultural heritage into the planning process reached the international policy level only at the end of the twentieth century (Mubaideen and Al Kurdi, 2017). Recently, there has been an increasing tendency to consider city historical sites as part of a broader environmental context.

### 1.2. The Development Process of the Approach to the Protection of Archaeological Sites with International Regulations

The changes in approaches to the protection of archaeological sites are;

- UNESCO's 1956 "International Principles Recommended for Application in Archaeological Excavations" emphasized the value of archaeological heritage as a source of information in terms of human history, the importance of public awareness and ownership of the heritage in the protection of archaeological heritage (Ahunbay, 2018).
- The "Venice Charter" (1964) determined the principles for the protection of architectural works that constitute a part of the archaeological heritage (ICOMOS, 1964).
- The "Charter for the Protection and Management of the Archaeological Heritage" (1990) emphasized the necessity of controlling land uses to minimize the destruction of archaeological heritage; that cultural, environmental, and educational policies are an important component of protection, and that the protection of archaeological heritage should be integrated with international, national, regional and local planning policies (ICOMOS, 1990).
- The "European Convention for the Protection of Archaeological Heritage," published by the Council of Europe in 1969 and revised in 1992, emphasized the development of public awareness of heritage values (Council of Europe, 1992).
- The UNESCO World Heritage Committee has made management plans mandatory for areas nominated for the World Heritage List since 2005.
- The "Regulation on the Perception and Presentation of Cultural Heritage Sites," published in 2008, emphasized that the most important part of the protection process is communication with the public, that the natural, cultural, historical, and social context of the area, its authenticity and the spirit of the place should be respected in the interventions carried out, and emphasized the importance of stakeholder participation (ICOMOS, 2008).

### 1.3. Protection Problems in Cultural Heritage Areas and Archaeological Sites in Settlements Under Development Pressure

Rapid urbanization and the rapid transformation of urban spaces have significantly impacted traditional city centers and archaeological sites (Elia, 1997; ICOMOS, 2005; Rodríguez and García, 2017). The constant change of urban space in form and function makes continuity and harmony difficult regarding heritage management (Bandarin et al., 2011; Bandarin and Van Oers, 2012). These developments, which can be considered a negative result of rapid urbanization, were unfortunately supported by the plans for these areas in the early stages of urbanization. Modernist urban planners developed the idea that a city's historic core can impede current and future growth. This perspective has caused conservation and development to be seen as contradictory elements for a long time, causing the loss of traditional settlement areas and historical values through plans.

Expanding cities toward the periphery and rural areas can destroy cultural traces, historic ruins, and natural areas that have remained intact for centuries. This impact can be direct or indirect. Actions that alter these areas and their immediate surroundings—such as flattening hills, filling valleys, and modifying riverbeds—can significantly change the context in which cultural values are situated, making it challenging to comprehend the historical significance of a given area (Antrop, 2005; Stephenson, 2008). Urban development can make previously remote areas more accessible, leading to increased risks of vandalism and looting (Vella et al., 2015). Again, rapid development may lead to changes in site status through hasty and insufficient documentation in archaeological sites, which are seen as obstacles to development and, as a result, loss of valuable historical and cultural information.

Many studies in Turkey address conservation issues in archaeological sites and discuss the effects of urban and/or urban development pressure on archaeological sites and their immediate surroundings. The conservation issues in archaeological sites were evaluated from an institutional and legal perspective by Ahunbay (2010). Ceco and Aydın (2023) examined the effects of high-rise buildings, high-rise buildings, and traffic density on the perception of traditional residential texture and monumental structures in Gebze, which has transformed from a town to an industrial city, like the Aliğa district, which constitutes the sample area of this study. The multi-story and dense urban development around the Soli Pompeipolis archaeological site in Mersin and the Prusias Ad Hypium Ancient City in Konuralp (Düzce) were examined by Sarıkaya Levent (2013) and Mutlu and Kaya (2022), while the problems such as the change in the lifestyle and identity of the ancient city under the influence of tourism, the compression of the cultural heritage between the new constructions brought about by contemporary life and the new functions developed for tourism, the loss of historical structures in the context of the city and their degradation and destruction, illegal construction, etc. were examined by Büyüksural and Demirci (2023), Kılıç and Aydoğan (2009), Taşçı and Levi (2018) and Cengiz, Tekdamar and Seçkin (2018) in Side, Amasra, Foça and Bodrum.

As can be seen, how deterioration development puts pressure on archaeological sites and historical values is possible with different uses. In the peripheries of large cities, this effect may change with the expansion of the main transportation axes and the altered use of housing and commerce connected to these axes. On the other hand, tourism facilities and second homes along the coast are a source of this pressure. Demand for new land, whether due to housing, tourism, or industry, causes land values to increase, and increased land values cause development pressure to increase on cultural and/or natural assets. Although this situation does not occur directly on archaeological sites due to legal protection systems, it can completely change the immediate environment of this settlement, and its perception/connection with natural areas and the culture with related content can be completely transformed. On the other hand, it is important to integrate archaeological evaluations into urban planning and development processes, including local communities in protecting archaeological sites, and properly document and protect sites by using technological opportunities and advanced documentation methods. In the Aliğa settlement, where the case study was carried out, the main determinants of the development are the port and the industrial areas near the port. In this context, this study contributes to the discussion of the impact of development on conservation areas designated for protecting cultural heritage sites, especially settlements where industrialization- and industrialization-induced urban development pressures are rapid and intense.

#### 1.4. The role of stakeholders and local authorities in heritage protection

As previously mentioned, conservation has evolved towards an integrated, holistic, and value-oriented approach. A value-oriented approach recognizes different stakeholders and includes them in heritage management. The cultural heritage of a society is shared in line with the interests of residents, visitors,

the private sector, and the public sector (Varol, 2017). Systematic and coordinated stakeholder dialogue is important to cultural heritage management (Varol, 2020).

The living heritage approach places the local community at the center as a user and protector of the heritage (Maksić et al., 2018). The Washington Charter also emphasized the importance of community participation for the Protection of Historic Towns and Urban Areas (1987) (ICOMOS, 1987). With these developments, the local community is increasingly becoming an important stakeholder in the conservation process. Community participation contributes to conservation by strengthening belonging among community members (Jaafar et al., 2015).

Protecting cultural heritage requires the contribution and coordination of various private and public actors and the design and implementation of appropriate public policies and regulations. Local governments and stakeholders are increasingly promoting heritage sites for culture-oriented development strategies (Bertacchini & Revelli, 2021).

### 1.5. Relationship Between Cultural Heritage Protection and Urban Planning

Planning-protection relationality, as presented by Örnek Özden and Görgülü (2006), is based on the rapid and unplanned development in urban areas after 1950 and the rent pressure triggered by neoliberal policies after 1980, causing rapid destruction of cultural and natural assets. The emergence of "special purpose plans" for special status areas is the urban development dynamics after 1980. Special status areas were regulated by Law No. 2863 on the Protection of Cultural and Natural Assets in 1983. Örnek Özden and Görgülü (2006) define the concept of "Conservation Purpose Development Plans" because of the efforts to place a legal framework on the environmental protection phenomenon that emerged in Turkey in the 1970s. It is also revealed by Örnek Özden and Görgülü (2006) that the zoning plans made within the historical development of the concept were limited to the conservation areas determined by the law and that the area's place within the city, its definition, future role, and relations were left aside and turned into a single-plan urban conservation area. In this study, we argue that conservation areas are under the pressure of urban area uses such as housing and trade, and industrial areas created because of investment decisions based on economic growth affect conservation areas.

International regulations regarding the protection of cultural heritage and archaeological sites, especially in recent years, emphasize the necessity of integrating conservation areas' natural, cultural, historical, and social context, their relations with the local community, and regional and local planning policies. In Turkey's practice, plans for cultural heritage areas (urban sites, archaeological sites, historical sites, mixed sites) are prepared at the scales of the Master and Implementation Development Plan and by considering the interaction between the sites and their immediate surroundings. Upper-scale plans lack strategic decisions regarding these areas with special status and do not adequately address the issue other than general explanations and plan provisions on the subject (Çatalbaş and Ecemiş Kılıç, 2023).

On the other hand, the demand for investment areas with national and regional significance leads to modifications in upper-scale plans through targeted plan changes. These changes often concentrate in areas where natural and cultural sites face development pressure, resulting in continuous alterations to conservation areas' silhouette, topography, context, and access relations. Furthermore, the involvement of local communities in the conservation processes tends to be limited in these areas. If the areas subject to plan revisions lie outside protected zones, the lack of a system to assess the potential impacts of these changes on cultural heritage sites transforms conservation areas into isolated zones, thereby increasing pressures to modify their boundaries. Therefore, this study aims to



examine how upper-scale plan revisions affect the archaeological site area. The development introduced by these plans and changes may trigger unplanned and planned developments.

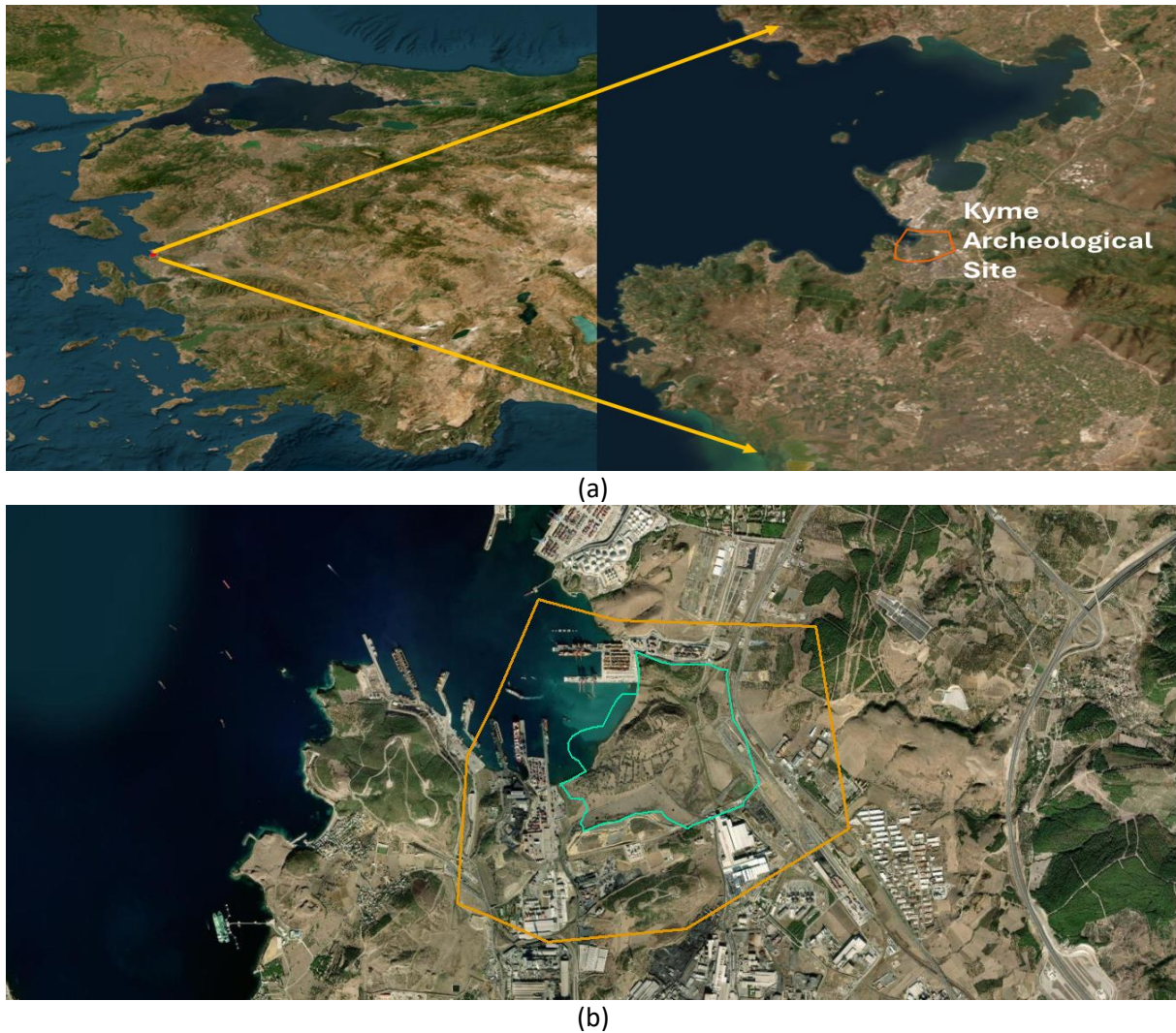
In this context, satellite images and GIS tools are used to analyze how urban development dynamics and investment decisions have changed the land use of Aliğa district in its historical context. There are studies on the classification of satellite images in the literature regarding the scope and focus of the study (Corine, etc.). In this study, the satellite images presented by Zhang et al. (2024), which provide data in a broader historical spectrum, were used at 5-year intervals between 1985 and 2024.

## 2. Study Area, Data, and Method

This study focuses on the Aliğa district of İzmir province, which is in the westernmost part of Turkey and is the third region with the highest income and population. Aliğa is located 60 km away from a metropolitan center like İzmir, where approximately 4 million people live. It has intense economic relations with İzmir and the settlements in its hinterland, with its strong sea, road, railway, and air transportation connections. The district is located on the seashore and has been an industrial core from the 1960s to the present day since its locational advantages. Some infrastructures in Aliğa require large capital, such as private industrial zones, organized industrial zones, industrial areas, energy conversion facilities, thermal power plants, ports, railways, and highways. It has a population of 104,000 as of 2022, and its day and night populations vary because of industrial areas and other areas requiring intensive employment. According to information on the website of Aliğa Municipality, the daytime population of Aliğa district is up to 200,000 people.

The ancient city of Kyme is in the Nemrut Gulf, south of the present-day settlement of Aliğa district. Situated along the Gulf's shores, Kyme was a significant trade center throughout its history due to its strategic location. It is also one of the ancient cities that issued its coinage. Excavations conducted until 2017 have uncovered several key structures, including the port, city walls, stoa, theatre, Hellenistic-Roman agora, a small temple from the Late Hellenistic Period, the Kybele/Koutrophoros/Isis Temple on the North Hill, the settlement area on the South Hill, and a castle structure from the Byzantine Period (Marca, 2016). Figure 1 illustrates the locations of the cultural heritage sites within the ancient city of Kyme and its surroundings.

As shown in Figure 1-b, the ancient city and conservation area of Kyme is on the coast of the Gulf of Nemrut. The area where the ancient city of Kyme is located has changed and transformed throughout its history. By 2024, it is seen that there will be a port, a fertilizer factory, and iron and steel facilities around the ancient city protection area. The pressure of intensive/rapid industrialization and urbanization trends is a hegemonic process, and the dynamics of capital accumulation need to be evaluated with the national and local policy dynamics (Harvey, 2018). This intensive/rapid industrialization and urbanization trend in the district has created development pressure on these areas with natural and cultural values. The necessary plans and plan changes need to be made for the investments to gain legal status. The İzmir-Manisa 1/100,000 scale TP was approved in 2014, and the İzmir Metropolitan Municipality 1/25,000 scale TP was approved and implemented in 2012.



**Figure 1:** Nemrut Bay and Kyme Ancient City Current 1st Degree (Blue) and 3rd Degree (Orange) Archeological Site Border (The Archeological site borders were drawn from the Nemrut 1/1000 Additional Plan Explanation Report see Appendices 1)

One of the data that makes the intense/rapid industrialization and urbanization trend pressure concretely visible in the immediate vicinity of the ancient city of Kyme, which is constantly at the forefront in the region, and the TP changes in Aliğa district. Within the scope of this study, the historical and cultural values, industrialization, and urbanization processes of the district were examined using digital and printed sources. By correlating both data, the spatial transformation process of Aliğa district and the impact of the industrialization process on cultural heritage areas were evaluated in an integrated manner.





**Figure 2:** Kyme Ancient City Images, a) - d) views from around the ancient city e) 2010, f) 2014, g) 2024 Google Earth Satellite Images

The historical changes in the protection boundaries of the ancient city of Kyme and the plan revisions made in the **TP** for the Aliğa district and its vicinity were examined over an approximately 10-year period from 2014 to 2024. The study analyzed the trends of intensive and rapid industrialization and urbanization using satellite imagery and GIS tools. Both old and new land uses were evaluated based on factors such as the date of the change, the function assigned to the newly designated areas, and their proximity to the ancient city of Kyme. Information about archaeological sites was expanded, and maps and photographs were included to highlight significant architectural landmarks (Figure 3).

### 3. Cultural Heritage Sites in Aliğa and The Historical Process of Settlement

Aliğa settlement is in a basin north of Izmir's metropolitan center, with traces of many civilizations with a rich historical past. Aliğa settlement developed in parallel with the causality of being on the coast of the sea and the Bakırçay plain between two important centers, Smyrna and Pergamon, in ancient times (Karaca, 2017).

Although the oldest settlement in the history of the region is the Neolithic Village Settlement, which was established between 6230 BC and 5720 BC in the region where the Aliğa Ege Gübre Factory is located today, the most important historical settlement of the region is the ancient city of Kyme, founded by the Diols. The ancient city of Kyme is one of the 12 cities in the region called Aiolis, and according to Strabo, it is the largest city in the region. Wars and disasters are decisive in future settlements. The Hellenes dominated the city of Kyme in 1000 BC, and then the city came under Roman rule in 129 BC, and the Roman administration took over the city between 50 BC and 17 BC (Karaca, 2017).

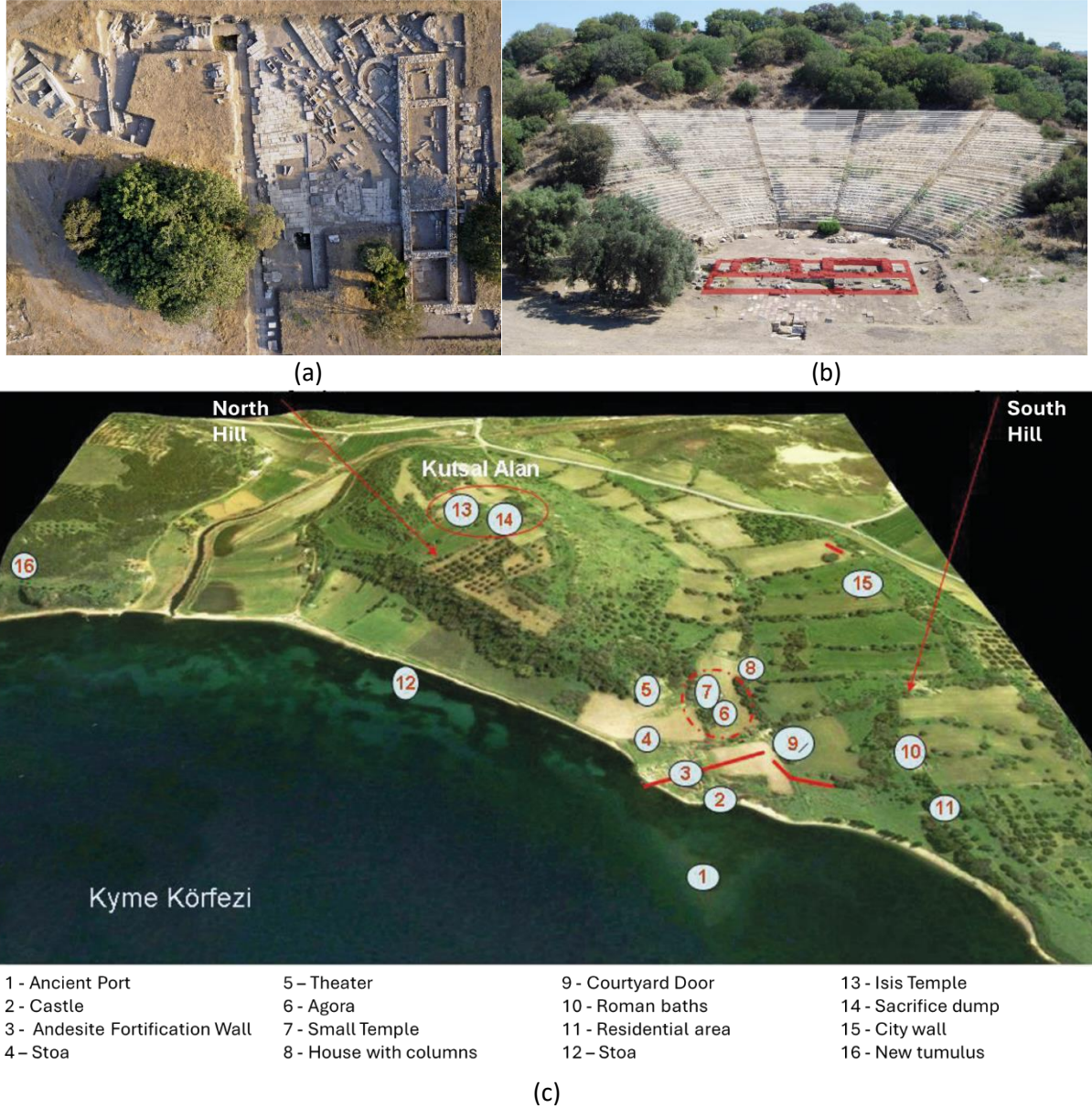
Various archaeological excavations have been carried out since 1881, and Antonio La Marca was the head of the excavations between 2008 and 2017. Excavations carried out in the city of Kyme have unearthed finds such as a Roman agora, a theatre, a hot spring bath, a merchant's house with a cistern, an aqueduct, a columned road and castle walls, wastewater, a septic tank, and a sewage system, countless amphora remains, and a port ruins 150 meters into the sea, and a Byzantine church was also found. The area covering the ruins of the ancient city of Kyme and its surroundings was designated as a 1st and 3rd-degree archaeological site area by the Izmir No. I Cultural and Natural Heritage Preservation Board, dated 30.09.1990, numbered 2253.

The Regulation on the Determination and Registration of Immovable Cultural and Natural Assets in Need of Protection defines "Archaeological site" as "the place where the remains of an ancient settlement or an ancient civilization are located or the areas that are known or discovered underwater and that need to be protected." The principles of protection and usage conditions for archaeological sites were determined by the principal decision taken by the High Council for the Protection of Cultural and Natural Assets in 1999. This principal decision defines "I. Degree Archaeological Site: Site areas that will be protected as they are, except for scientific studies aimed at protection" and "III. Degree Archaeological Site: Archaeological sites where new arrangements may be permitted in line with protection-use decisions." Again, while no construction is allowed in 1st-degree archaeological site areas, the drilling excavations to be carried out before construction in 3rd-degree archaeological site areas are subject to evaluation by the conservation boards (Figure 3).

Due to its strategic importance, the bay where the ancient city of Kyme is located has always stood out where urban infrastructure and superstructure areas such as industrial areas, ports, roads, and power plants are located and chosen, as in ancient times and in recent times. The causality of the factors affecting the ancient city of Kyme and the area within the border of the conservation area is related to the fact that, after the newly established modern republic, Turkey turned its face to the West and initiated the social-economic transformation process (Pamuk, 2012). Public investments were made



throughout the country in the early periods of the republic, and there were changes in the settlement hierarchy with the impact of the investments. The population of the settlement, founded as Aliğa Farm, reached 1730 in 1951 and is 5 km (air distance) away from the ancient city of Kyme and has turned into a settlement with a population of 16,000 by 2023. The decisions taken within the scope of development plans during the approximately 70-year development period between 1960 and 2024 accelerated the district's social, economic, and spatial transformation. New investments were attracted to the region because of the development of transportation infrastructure.



**Figure 3:** Structures of the ancient city of Kyme (Marca, 2016)

The decisions made in the development plans form the basis for the social, economic, and spatial transformation of Aliğa district. In the Second Development Plan, it was planned to establish a refinery in İzmir, and the Aliğa settlement was chosen as the location (Doğer, 2017). However, the refinery location determined for Aliğa was canceled owing to objections. With the Third Development Plan, the decision to establish a refinery in Aliğa was finalized, and the process of transforming the settlement consisting of a farm and buildings where farm workers lived into an industrial city began. Another important factor that will accelerate economic, spatial, and social change in the district is the Fourth Development Plan. In the Fourth Development Plan, Aliğa district was chosen to produce steel

by converting scrap iron and steel into liquid steel in rolling mills in the region located south of Nemrut Bay. Another important decision that will make Aliğa district an industrial city is to transfer the prosperity created throughout the country within the scope of development plans to Aliğa district (Doğer, 2017).

The selection of the Aliğa region as an industrial zone in development plans-initiated industrialization initiatives. The first industrial facility was the Dönmezler Cotton-Ginning Factory, which was established in 1960. Aliğa's becoming an industrial center enabled the development of necessary regional infrastructure. In this direction, electricity started to serve the district in 1963, and water infrastructure started to serve in 1967. With laying the foundations of the first refinery, TÜPRAŞ, in 1965-1967, the industrial sector began to dominate the region's local economy, which was based on fishing and agriculture. This process triggered other private sector investments, and in this context, the Viking Paper Factory was established in 1971. In addition to the refinery, the industrial presence and capital intensity in the district increased with the opening of a petrochemical facility in the region in 1972 to produce petroleum derivatives and the start of the development of the ship dismantling industry in Nemrut Port in 1973 to provide input to the iron and steel industry (Ünal, 2020).

One of the most important reasons for choosing a location for large-scale industrial investments in the region is to ensure maximum maritime transportation. In this context, port investments have also begun in the region. In 1977, the Ege Gübre Factory was established in the Neolithic Village Settlement, one of the first settlements in the region, and the foundations of the port facilities were laid in 1985. Another important development that enabled Nemrut Bay to become an important port center was the introduction of a shipyard located in Alaybey to Nemrut Port in 1994. In the early 2000s, when ports came to the fore, the piers belonging to seven enterprises at Nemrut Port were converted into a single port (Eroğlu and Bozyiğit, 2013). Railways are another type of transportation that is as strategic as the maximum use of maritime transportation. In parallel with the increase in industrial investments in the Aliğa region, railway investments were initiated and continued through the construction of the Aliğa-İzmir electric train line in 1996. After the İzmir-Aliğa electric train line within the TCDD body was closed in 2006, it was transferred to İZBAN A.Ş. in 2010. It began to carry passengers between Cumaovası and Aliğa in 2011 (Şenbil et al., 2022).

As a result of the development of relevant infrastructure in the region, the establishment of industrial facilities focused on iron and steel recycling accelerated, and the construction of numerous steel production factories was completed by 1996. In 1999, the Aliğa Organized Industrial Zone was established in Çoraklar Village, with access provided via the North Aegean Highway, the construction of which began in 2011. Following the establishment of the industrial zone, the chemical and chemical derivative industries were integrated into the region's industrial development, which had previously been focused solely on iron and steel processing (Doğer, 2017). The refineries established under the Third Development Plan and the petrochemical facilities built in subsequent years were later privatized. With the establishment of a new refinery by a company that acquired petrochemical facilities, the number of refineries in the Aliğa district increased to two. The rapid growth of industrial areas in the region has led to a significant rise in energy demand. Consequently, thermal and natural gas cycle power plants have begun to be established in the area (Doğer, 2017).

### 3.1. Capital Accumulation in Aliğa District and The Reflection of Territorial Plans Under Plan Changes

While Aliğa district was a settlement consisting of a farm and houses where farm workers lived in the early 1950s, it has undergone economic, social, and spatial changes in line with decisions taken in development plans. The decision to establish a refinery and develop the petroleum-chemical industry in the Second (1968-1972) and Third (1973-1977) Development Plans and to develop the iron and steel

industry in the Fourth (1979-1983) Development Plan led to the transformation of Aliğa district into an industrial center after the 1970s. The Fourth Development Plan for the development of the iron and steel industry was planned to complete the first phase of the İzmir Aliğa high-quality steel factory of the Machinery and Chemical Industry Corporation for long products with a liquid steel capacity of 300,000 tons and to largely realize the second phase for flat products. In the Fifth Development Plan (1985-1989), it was envisaged that studies in the Petrochemical Industry and Transportation for the İzmir Northern Region be carried out. This plan period was aimed at increasing the total refining capacity of the İzmir-Aliğa refinery. Therefore, there was no need for new refineries in this period. It also aimed to complete the Aliğa-Menemen railway connection and Aliğa-İzmir pipelines in the fifth plan period. In the Sixth Development Plan (1990-1994), significant developments were foreseen in the Petrochemical Industry throughout İzmir.

In the Regulation on Spatial Plans: Environmental Plan (TP) (if there are spatial strategy plans for the region), the plan shows basic geographical data such as forests, rivers, lakes, and agricultural lands following the spatial strategy plans target and strategy decisions. It determines general land use decisions regarding urban and rural settlement, development areas, industry, agriculture, tourism, transportation, and energy. It is a plan prepared with plan notes and reports, which can be prepared at the regional, basin, or provincial level using the appropriate scale display on maps at 1/50,000 or 1/100,000 scale, providing the relations between settlements and sectors and the protection-use balance (Official Gazette, 2014; Official Gazette, 2008). The first TP addressed the province of İzmir, where the Aliğa district is located, and the neighboring provinces in a holistic manner were the İzmir, Manisa, and Kütahya TP, which was approved in 2007 but canceled in 2012. Following the cancellation of the relevant plan, a new TP covering the provinces of İzmir and Manisa was approved in 2015 and is still in force (MEUCC, 2014).

Within the scope of the İzmir-Manisa TP, the plan aims to "...take the rapid and uncontrolled urbanization under control, eliminating the problems created by fragmentary and sectoral planning, ensuring the controlled development of industrialization, making developments sustainable, preventing possible impacts that would disrupt the ecological balance, directing development to ensure the protection of cultural and natural values until 2025..." (MEUCC, 2014). In line with the stated purpose, it is predicted that 5.5 million people will live in the entire planning area for İzmir-Manisa TP 2025, 3.8 million people will live in the İzmir city center, and 160,000 will live in the Aliğa district. Within the plan's scope, two regions were developed, the central city and other settlements outside the central city. Aliğa district was considered within the scope of other urban settlements outside the central city (MEUCC, 2014). For İzmir-Manisa TP, since the North Aegean Çandarlı Port in Aliğa district will not be realized until the target year of 2025, it has been accepted that the use of İzmir Port will continue and maintain its importance. Therefore, the construction in Aliğa and Bergama Organized Industrial Zones will slow down. There will be no need for new development areas in these regions. In addition, TP assumes that existing planned industrial areas in İzmir will satisfy the requirement (MEUCC, 2014).

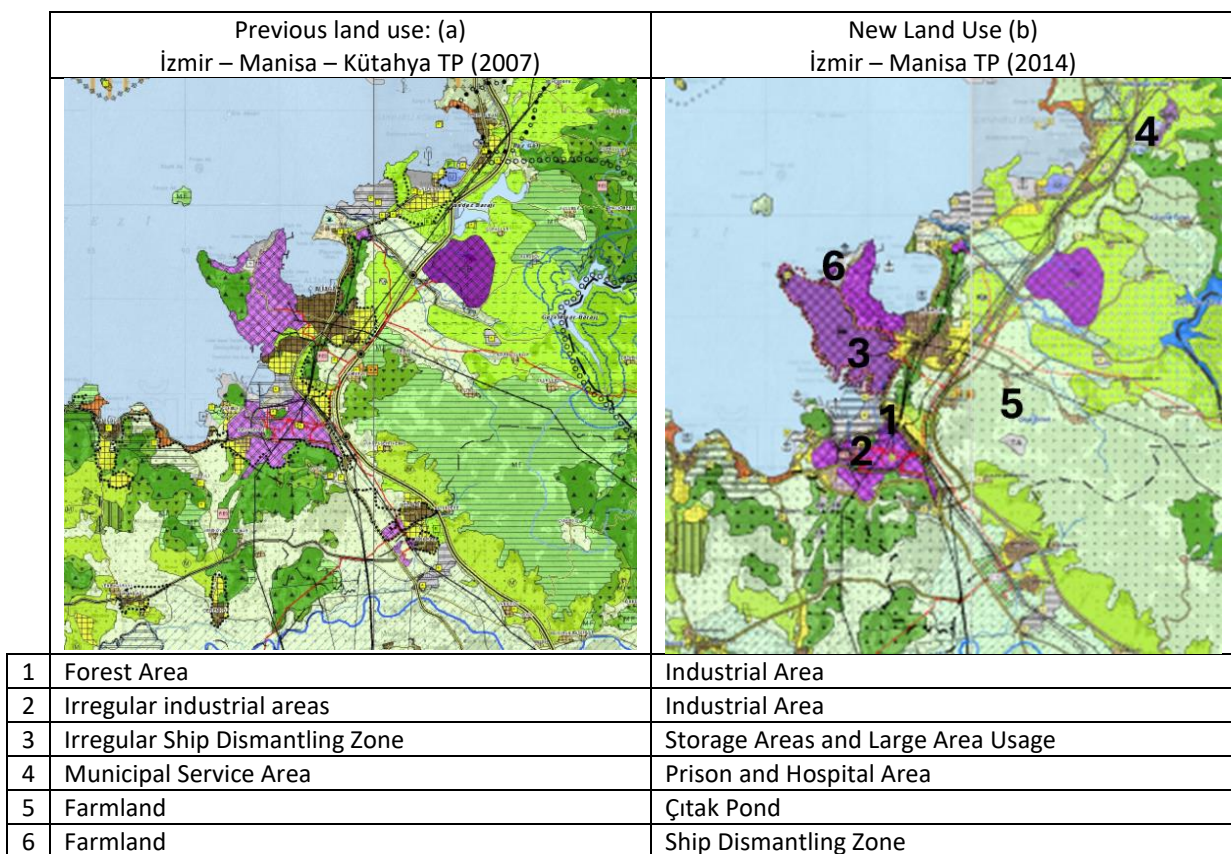
It is recommended that the location selection made for yacht and boat manufacturing in Aliğa be accepted and the surrounding area be arranged in accordance with this development. After the investments are made in the north of Aliğa (port, shipyard, organized industry, etc.), new housing developments can be expected in the nearby areas, and the Menderes-Aliğa railway line will be brought to the metro standard and extended to Torbalı and Selçuk in the south and to Bergama in the north. It is assumed that an emerging airport and comfortable transportation connections will increase tourism development in Selçuk and Bergama (MEUCC, 2014). With the İzmir-Manisa TP, new development areas have been organized, considering population growth and labor force needs in areas that are not integrated with İzmir Central City and where investment decisions are made, especially in



industry. In this context, the Aliğa district was considered the area where the largest industrial activities were in the province of İzmir, and since most development plans were for industrial use, a population of 160,000 was envisaged for the Aliğa district (MEUCC, 2014).

### 3.2. A Comparison of the Current Territorial Plan and Cancelled Territorial Plan Concerning How They Address Aliğa District

A comparison of the canceled and current TPs aims to determine whether the industrial policies implemented with revisions after the approval of the current TP are compatible with the plans. Unlike the canceled TP dated 2012, which dealt with the Aliğa region, the İzmir-Manisa TP issued land use decisions in the Aliğa district. Determining the land uses where the two plans differ and diverge reveals how the plans can differentiate the roles that different plan approaches impose on a settlement. Figure 4(b) and Table 1 show the differences between plans. The most striking difference between the two plans is the difference in the area designated as an industrial area where the refinery and petrochemical industries are located, which will later be converted into a "special industrial zone." While the canceled plan determined the relevant area as residential and development housing areas, the current plan determined both residential and development housing areas as industrial areas. Relevant areas are represented by 3 in Table 1 and Figure 4-b.



**Figure 4:** Comparison of Territorial Plans: (a) İzmir-Manisa-Kütahya TP and (b) İzmir-Manisa TP

As seen in Figure 3, industrial areas are much larger in the current plan than in the canceled plan. The forest areas in the peninsula to the west of Aliğa, where Tüpraş, Petkim, and Socar are located, have been converted into industrial areas in the current plan. Although the relevant area is a forest area, it also includes the 1st Degree Archeological Site (conservation area) where ancient port ruins are registered. With the current plan, this conservation area is entirely within industrial areas. Thus,

according to the current plan, the peninsula, where large-scale industrial facilities and ship dismantling industries are located, can be considered the entire industrial area.

In the İzmir-Manisa Territorial Plan (TP), the forested areas to the west and south of the Aliğa settlement center were designated as industrial zones, and both the existing industrial facilities and the Organized Industrial Zone under construction were approved. A yacht and boat production area was also proposed for the Aliğa district. To the north of Aliğa, investments such as Çandarlı Port, a shipyard, and an organized industrial zone were planned. In line with these developments, it was recommended to expand the Menderes-Aliğa railway line and establish a connection to the Bergama district (MEUCC, 2014).

In addition, spatial decisions requiring the use of large areas such as the University area, pond, and hazardous waste disposal facility were also made in the plan. Although these plan decisions do not directly pressure conservation areas, they are important because they are the infrastructure investments needed in the Aliğa district due to industrialization trends. Although the area located in Çaltılıdere location is designated as a university area in both İzmir-Manisa-Kütahya and İzmir-Manisa Territorial Plan, the implementation of this plan decision has not been realized, and it is used as an organized industrial zone.

### 3.3. Plan Changes for Aliğa District In İzmir Manisa TP Approved In 2014

Capital concentration, the economic externalities of the Aliğa district that are suitable for capital transfer, and the spatial arrangements of the economic trends expressed in the realization of new investments in the Aliğa district come to the fore as plan changes. The above canceled and valid EPs, their objectives, and their approaches to the Aliğa district are discussed in their historical context. In this context, this section discusses the planned changes to industrialization trends in Aliğa district and the planned changes to the infrastructure required by the industrialization process.

#### 3.3.1.Changes for the Socar Private Industrial Zone and Nemport Rear Service Area

Nemport and SOCAR Special Industrial Zone are located adjacent to the 3rd Degree archaeological site of Kyme Ancient City. Changes made to these two important areas on a regional and national scale have a direct impact on the ancient city.

**Table 1:** İzmir-Manisa TP Plan Changes

	Subject	Change Date	Previous Use	Usage with Change	Distance *
1	Changes for the Construction of the Nemport Rear Service Area	16.11.2015	Municipal Service Area: The Municipality of	Public Institution Areas Requiring Storage Areas and Large Area Usage	The relevant area falls within the borders of the Kyme Ancient City 3rd Degree Archeological Site
2	Aliğa Industrial Zone Application Development Plan addition and revision	12.05.2017	Irregular industrial areas with heavy iron and steel industries	DOP-applicable industrial parcels	Kyme Ancient City 3rd Degree Archeological Site border and zoning plan border are integrated.
3	Changes for the Construction of the SOCAR Private Industrial Zone	28.12.2021	Industrial, Forest, Storage, Area to be Afforested, Urban Residential,	Special Industrial Zones	3 km

Daily, and Energy Investment Areas					
4	Change for Prison and Hospital Construction	12.01.2022	Farmland	Prison and Hospital	20 km
5	Change for the construction of Çitak Pond	13.09.2022	Farmland	Pond	10 km
6	Ship Dismantling Zone Local Development Plans and Revisions	26.04.2023	Regular Ship Breaking Yards	DOP-applicable industrial parcels	7.5 km

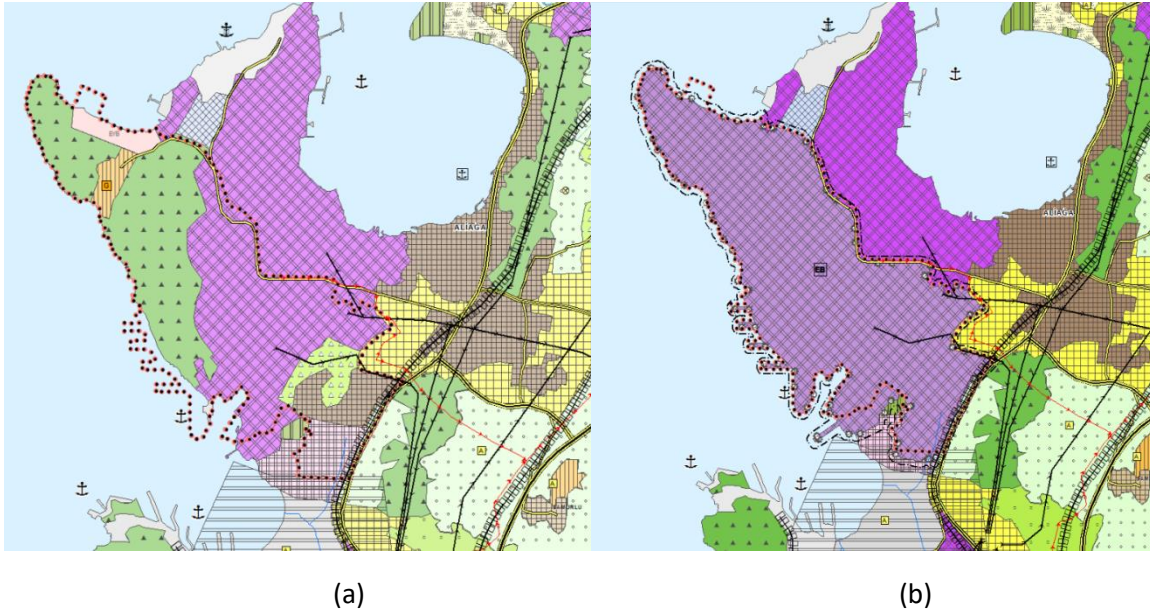
\* The distance refers to the approximate straight-line distance from the ancient city of Kyme to the area where the new land use decision was implemented following the relevant plan change.

#### Socar Private Industrial Zone

Turkey's first private industrial zone is in the Aliğa district. This view is based on the privatization of Petkim, one of the most important privatization practices carried out within the framework of neoliberal policies and the subsequent regulations. The purpose of establishing industrial zones is to create new industrial areas for local and foreign investors, expand existing industrial areas, and enable investments to be implemented quickly without getting stuck in bureaucratic processes. The area on the Petkim Peninsula, which has strategic importance for the Turkish economy and covers refinery, petrochemical, energy, logistics, distribution, and transmission activities, has been declared a SOCAR Turkey Energy Joint Stock Company Special Industrial Zone. In this context, the 1.453-hectare area in the area shown in Figure 4-a is designated as an "Industrial Area," "Forest Area," "Storage Area," "Area to be Afforested," "Urban Area," "Daily Area" and "Energy Investment Zone" has been transformed into a "Special Industrial Zone" in the Izmir-Manisa Planning Region 1/100,000 scale Territorial Plan, as shown in Figure 5-b, with purple zones (MEUCC, 2021a).

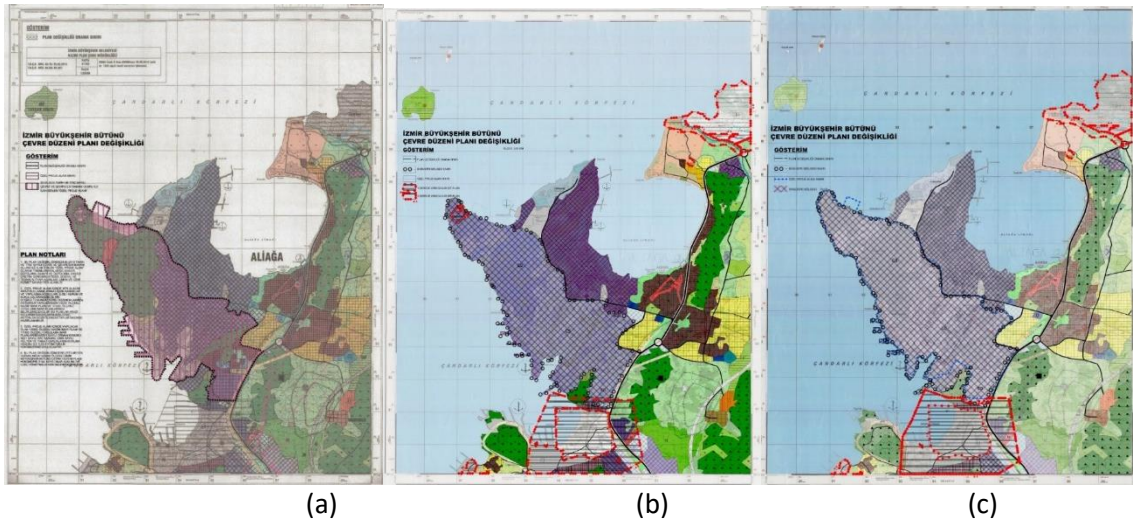
Then, with Presidential Decree numbered 190, on 19.10.2018, SOCAR Turkey Energy Joint Stock Company, located on an area of 1,453 hectares, appeared as a "Private Industrial Zone" in the plan but was arranged as an "Industrial Zone" in line with the plan change. In line with the provision of "Updating the plan depending on changing data" of the Spatial Plans Making Regulation, the Izmir-Manisa Planning Region 1/100,000 Scale Territorial Plan was changed for this area. Thus, TP implementation provisions are arranged as "Decisions regarding land uses and construction conditions to be included in the special project area can be determined in zoning plans without making changes to the plan, in line with the opinions of relevant institutions and organizations, taking into account the characteristics of the special project area, and zoning plans can be determined in stages, taking into account the functional integrity in land use decisions can be prepared" (MEUCC, 2021b).





**Figure 5:** Plan Changes for the Construction of Private Industrial Zones: a) İzmir-Manisa TP (MEUCC, 2021a), b) İzmir-Manisa TP Plan Changes for the Relevant Area (MEUCC, 2021b)

Another revision in the plans aims to restrict applications within the area designated as a Special Project Area. The provisions introduced by the plan amendment define the Special Project Area as encompassing industrial, storage, energy production, daily facilities, social and technical infrastructure, as well as port and back-service area uses. Additionally, decisions regarding land use and construction conditions can be transferred to sub-scale plans without requiring any modifications to the territorial plan (MEUCC, 2021b). Industrial Zones (EB, in Figure 5-b) are regulated under Industrial Zones Law No. 4737. According to the law, industrial zones are defined as "production areas established in accordance with this Law to enhance the country's economic competitiveness on an international scale, facilitate technology transfer, increase production and employment, accelerate foreign capital inflow, and create an industrial environment suitable for large-scale investments, particularly in terms of production costs" (Official Gazette, 2002).

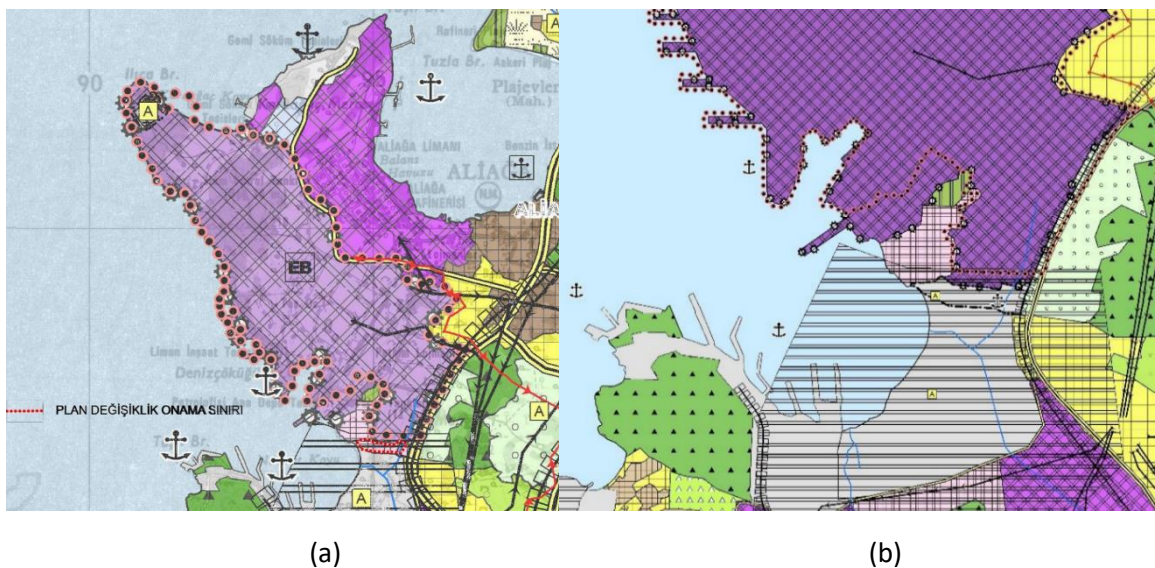


**Figure 6:** 1/25000 Scale İzmir Metropolitan Municipality Entire Territorial Plan Changes: a) Socar Special Industrial Zone Regulation (MEUCC, 2013); b) Socar Private Industrial Zone Regulation Revision (MEUCC, 2013); c) Treatment of Archeological Sites Revision (MEUCC, 2013)

Another planned change concerns the area designated as the SOCAR Turkey Energy Joint Stock Company Special Industrial Zone on October 19, 2018, by Presidential Decision No. 190. This designation includes a portion of the 3rd-degree archaeological site of the ancient city of Kyme, as well as areas subject to Conservation Planning and Conservation Application Zoning regulations. It was determined that there is a registered 1st-degree archaeological site for which no plan has been produced. Although the conservation area boundaries of Kyme Ancient City were shown in the 1/100,000-scale İzmir-Manisa Territorial Plan and the 1/25,000-scale İzmir Metropolitan Entire Territorial Plan, it was determined that the archeological site boundaries in the 1/25,000-scale İzmir Metropolitan Area Territorial Plan were incorrect. With this regard, on 19.09.2012, a 1/25,000 Scale İzmir Metropolitan Entire Territorial Plan Amendment was prepared to show the boundaries of the registered 1st-degree archaeological site and Kyme Ancient City 3rd-degree archaeological site on the plan sheet (Figure 6(a), 6(b) and 6(c)). The fact that the conservation area of the Kyme Ancient City is under the pressure of construction and that the boundaries of the ancient city conservation area, which we can see from the change in the boundaries of the conservation area later, are not shown in the plan is critical in terms of planning practices, as it may pave the way for irreversible planning disasters (MEUCC, 2013).

#### Nemport Rear Service Area




The port belonging to the Nemport company was put into service in 2010 as the first private container port in the Aegean region to ensure the transportation of products produced in Aliğa, İzmir, and the Aegean region. The SOCAR Special Industrial Zone is located north of the Nemport in Nemrut Bay, and the ancient city of Kyme is in the south. The Nemport is situated within the 3rd-degree archaeological site conservation border of Kyme ancient city (Figure 7). As a result of increasing industrialization and production relations, the port area had to be expanded, which led to the need to expand the port back service areas, and the plan change took place accordingly. Within the scope of the plan change, the parcels belonging to Nemport Company and Özel Antrepo Transport Company were changed to "storage areas." Due to land use constraints and restrictive special status areas around the designated storage area, no additional space could be found, necessitating an expansion of the existing area. The area is surrounded by a Special Industrial Zone in the north, a forest parcel in the northwest, the Kyme Ancient City 1st degree archaeological site in the south, and a railway and highway in the east (MEUCC, 2022a).



**Figure 7:** Plan Changes for the Construction of the Nemport Back Service Area a) İzmir-Manisa TP (MEUCC, 2022a), b) İzmir-Manisa TP Plan Change for the Relevant Area (MEUCC, 2023)



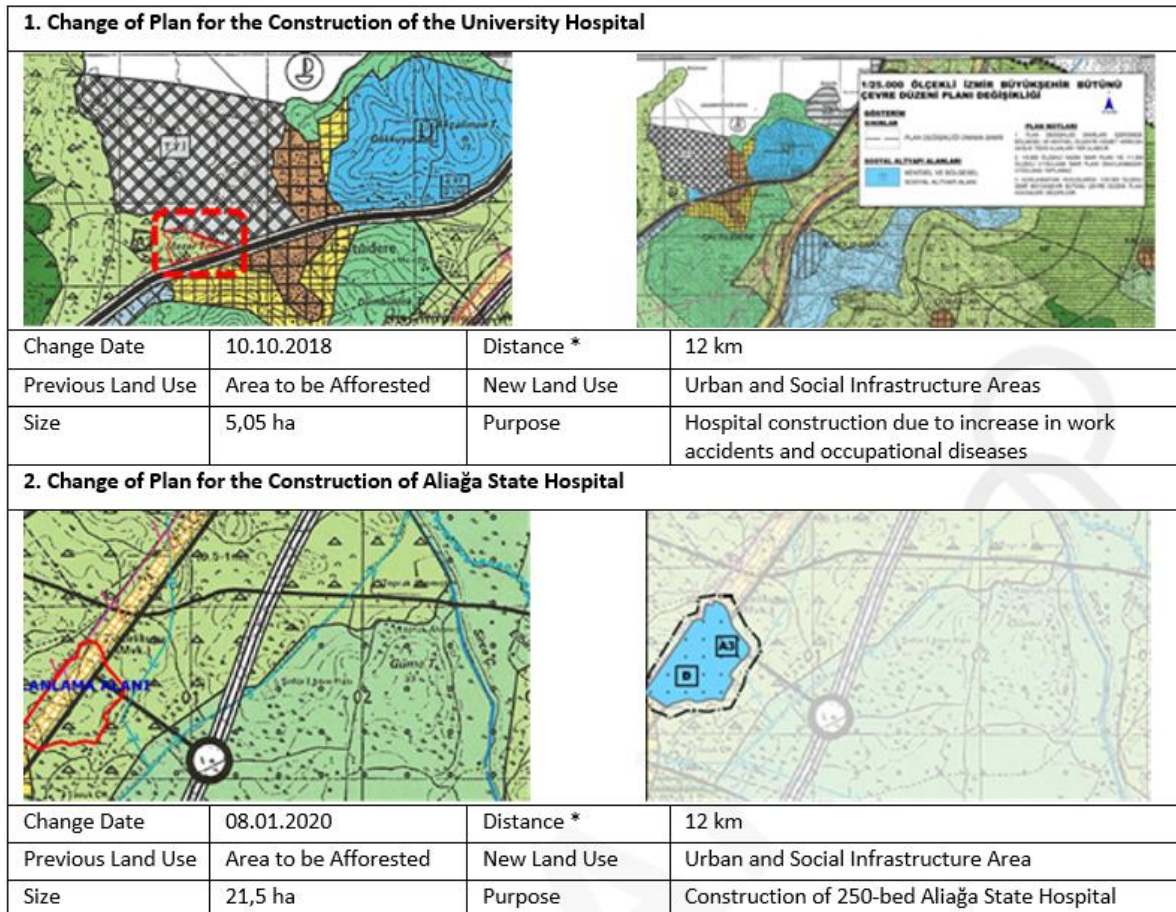
The area located within the Nemport area was arranged as a "Municipal Service Area" in the zoning plan. It was replaced with 779 parcels approximately 2 km away, considering that it could not serve the public as a municipal service area due to other area uses surrounding the Nemport area (not possible both technically and in terms of security). The area located within the Nemport area is arranged as a "Public Institution Area Requiring Large Area Use and Storage Area." Notably, the area is within a 1st-degree archaeological site, and the municipality does not prefer to expropriate it and transfer its ownership to the public (MEUCC, 2023).

1. Change of Plan for Industrial Zone Construction			
			
Change Date	12.01.2022	Distance *	20 km
Previous Land Use	Area to be Afforested	New Land Use	Industrial Zone
Size	102 ha	Purpose	Creating an investment area
2. Change of Plan for Prison and Hospital Construction			
			
Change Date	04.07.2022	Distance *	20 km
Previous Land Use	Area to be Afforested	New Land Use	Public Institution Area Requiring Large Area Use
Size	115 ha	Purpose	Construction of hospitals, penal institutions and additional facilities
3. Change of Plan for Kunduz Dam Construction			
			
Change Date	13.09.2022	Distance *	10 km
Previous Land Use	Dam	New Land Use	Agricultural Land
Size	350 ha	Purpose	Conversion of the reservoir area and protection zones of the dam that cannot be put into operation into agricultural land

**Figure 8:** Plan Changes in İzmir-Manisa TP (İzmir-Manisa TP (left), İzmir-Manisa TP Plan Change for the Relevant Area (right)

### 3.3.2. Other Plan Changes in 1/100.000 and 1/25.000 Scale Territorial Plans

Although it is not located directly within the ancient city of Kyme, the plan changes resulting from the rapid development process of the Aliğa settlement were also discussed due to their indirect effects on the area. Figures 8 and 9 provide visuals and summary information regarding the Changes in the 1/100.000 Scale Territorial Plan and 1/25.000 Scale Territorial Plan (MEUCC, 2022b; MEUCC, 2022c; MEUCC, 2022d; MEUCC, 2019).



**Figure 9:** 1/25000 Scale İzmir Metropolitan Entire Territorial Plan Changes (İzmir-Manisa TP (İzmir METP (left), İzmir METP Plan Change for the Relevant Area (right))

## 4. Results

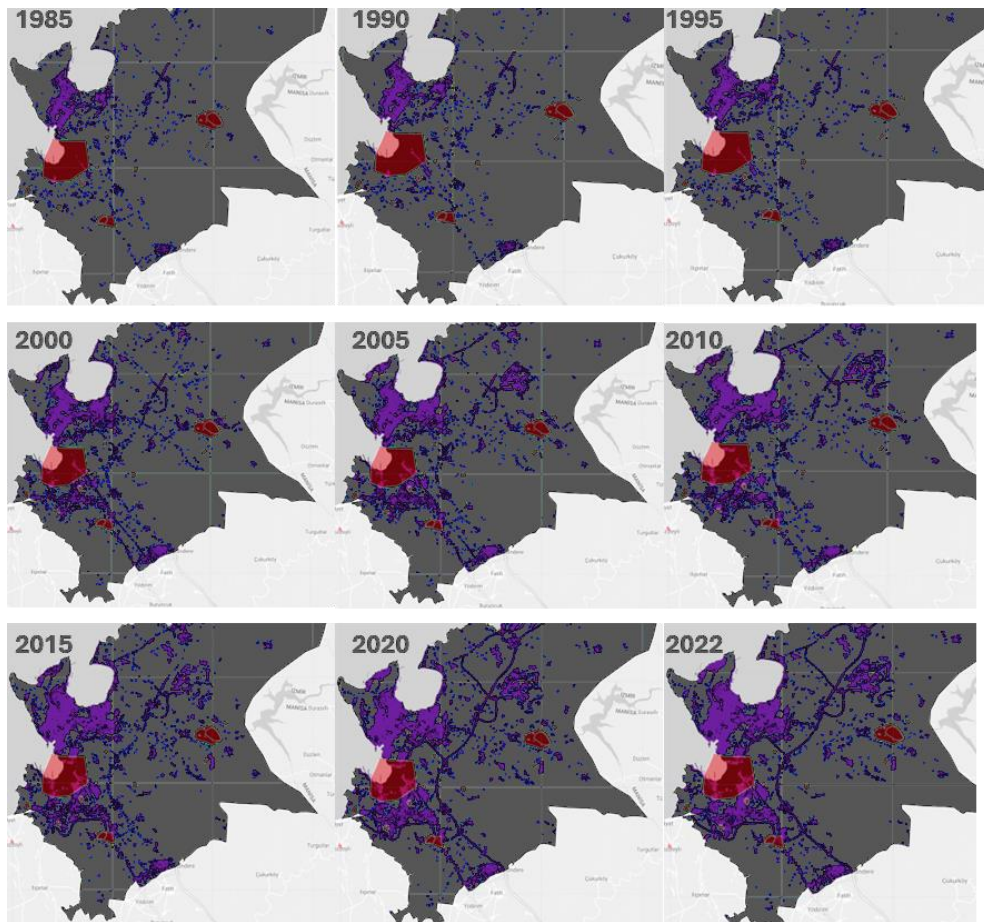
As shown above, in line with capital concentration, most of the plan changes in the Aliğa district are focused on industry and industrial zones. Plan revisions have been made to address the technical infrastructures to meet urban and other sector needs arising from the increasing industrial presence over the years. This finding reveals that increased technical infrastructure within capitalist production relations will result in more population and growth in all land uses.

Aliğa district, which is approximately 60 km away from İzmir's metropolitan center and has a population of 4 million, attracts investments that require more technical infrastructure daily due to the use of technical infrastructure such as highways, railways, organized industrial zones (OIZs), special industrial zones, and ports, which require intense capital accumulation. The spatial change and transformation caused by the plan revisions of the industrial areas that developed within the historicity of the Aliğa district are visualized in Figure 10 in 5-year periods. The area selected for refinery and petrochemical facilities in the Second and Third Development Plans is on the peninsula consisting of



the Arap Ciftlik location and Paşaçiftliği location, located in the west of the Aliğa district. The fact that there is a gulf on both sides of the peninsula provides strategic advantages in terms of sea connection for the transportation of goods. Ports, piers, and breakwaters for the refinery and petrochemical industries are in both gulfs. Although choosing the location for constructing a refinery and petrochemical facility in the 1970s on a peninsula by the sea provided strategic advantages, the fact that the area was a peninsula also created a limitation. In the context of capitalist production relations and capital accumulation cycles, it is inevitable that the refinery and petrochemical sector, a strategic and high-value-added sector, needs territorial expansion with new investment decisions due to its high profitability after privatization. It is possible to monitor the expressed spatial expansion trend and related processes from the plan revisions made in industrial, special, and industrial areas.

Another important landmark in the historical development process of Aliğa district is the Fourth Development Plan; the iron and steel industry, which is based on converting scrap iron and steel into liquid steel, will be transferred to Aliğa district. Site selection: The industry based on the production of liquid steel from scrap iron, which was determined as the Aliğa district, chose a location in the Horozgedik and Çakmaklı localities south of the Aliğa settlement, and then private iron and steel companies also chose a location in the same area during the process, resulting in the formation of an industrial cluster based on iron and steel and complementary sectors in the area. The choice of this location is related to the proximity of the area to the Gulf of Nemrut.



**Figure 10:** Changes in Industrial and Urban Presence Around the 1st and 3rd Degree Conservation Areas of Kyme Ancient City (To analyze the development and transformation of industrial and urban areas over the years in Aliğa district, algorithms proposed by Zhang et al. (2024) were utilized.)

Aliğa and Nemrut Gulfs were chosen for industrial and port activities because they are natural harbors. However, many civilizations have benefited from the strategic advantages provided by these

gulfs throughout their history; therefore, ruins are defined as cultural heritage sites from different civilizations. As highlighted in this paper, this condition represents the causality of the struggle between preserving cultural heritage places and the growth tendency of industrial districts toward intensifying capitalist production dynamics.

During the change and transformation process of the Aliğa district, the ancient city of Kyme was located between an area that would later be converted into a private industrial zone, including refineries and petrochemical facilities in the north, and an iron and steel industry cluster in the south and west. During this process, construction continued, and within the borders of the ancient city of Kyme and the 3rd-degree archaeological site, the Ege Gübre factory and port operation was opened in 1975, and the Nemport container port was commissioned in 2010. Figure 11 illustrates the development of the industrial areas surrounding the ancient city of Kyme and the conservation areas in its basin over time.

During the transformation process of the Aliğa district described above, the area where the ancient city of Kyme existed continued to change and transform uninterruptedly in line with capitalist production relations and accumulation processes. The need for spatial growth emerged concurrently with the capital accumulation of industrial and port sectors, leading to conflict areas because of the ancient city of Kyme, which is protected as a special status area under the conservation legislation. The fact that the parcels within the Kyme Ancient City conservation areas are private property and contain high rent due to the location of the area has caused the boundaries of the Kyme Ancient City Conservation Area to change over time.



**Figure 11.** Change of 1st and 3rd Degree Site Borders of Kyme Ancient City (For more detail, please see Appendices 1)

The area in question was declared an Archaeological Conservation Area for the first time on 30.09.1990. The site borders consist of the outermost 3rd-degree archaeological site and the 1st-degree archaeological site covering a relatively small area, including the ancient city ruins. The 1st-degree archaeological site area was narrowed on the seaside and turned into a 3rd-degree archaeological site by the Board's decision dated 28.08.2019. Figure 11 shows the area previously determined as a 1st-degree archaeological site and the area re-designated in 2019. When the change of borders is examined, it is seen that the area to the east of the pier of the Ege Gübre port, located to

the west of the 1st-degree archeological site border of the Kyme ancient city, and the area to the south of the Nempot breakwater, located to the north of the 1st Degree archaeological site border of the Kyme ancient city, were narrowed by the decision of the Board in line with scientific opinions on the seaside.

Figures 10 and 11 reveal the change and transformation of the bay where the ancient city of Kyme was located and its surroundings throughout the historical process. This is a unique example of the changing and transformative power of capitalist production and accumulation relations, and Aliğa's change, and transformation process continue uninterruptedly. In the uninterrupted processes of change and transformation, when capital needs to expand spatially, it is seen that it changes the boundaries that determine the areas with special status that protect immovable cultural assets and transform the area through building uses such as ports and industrial areas within these areas.

## DISCUSSION AND CONCLUSION:

Practices that embody capitalist production and accumulation processes manifest themselves as neoliberal policies prioritizing space's rapid transformation. "Development" and "growth" policies that accelerate capitalist production relations are organized by lawmakers and practitioners under the hegemony of capitalism (Harvey, 2018). The stated regulations include the marketization of public assets through privatization and the operation of processes that may destroy cultural heritage and conservation areas under development pressure, such as changing the conservation area boundaries determined by legislation for the protection of areas (Tekeli, 2009). In line with this, territorial plans are subject to plan revisions due to the development and growth motivation of the market dynamics.

The development of capitalist production relations and the establishment of the institutional capacity required by production relations determine the level of capital accumulation of capitalism (Harvey, 1978). The primary of capitalist production cycles is the determinant of the process in which greater capital and accumulation intensity result in greater capital and accumulation intensity, in other words, population, economy, and settlement growth (Harvey, 2018). The surplus value obtained from commodities produced faster, transported, and sold to the market causes more accumulation and concentration of capital in certain areas (Majumder, 2022). Because the speed expressed is the primary determinant of accumulation processes, governments and policymakers who support neoliberal policies organize practices that increase the speed of capitalist production cycles (Şenses, 2009). The course and process of neoliberal policies can be defined as a series of social, economic, and spatial regulations leading to greater accumulation and concentration of capital in cities. In addition, different causalities exist that interrupt capitalist production and accumulation cycles' speed. The restriction factor is the most effective and undesirable factor that interrupts capitalist production relations (Arrighi, 1978). Theorists who analyze the causality of capitalist production relations generally deal with the phenomenon of interruption at economic and social levels and conduct analyses in this context. Parallel to the deepening and increasing visibility of capitalist production and capital concentration tendencies, spatial and environmental restrictions have come to the fore, and several theoretical analyses have been conducted that examine the concept of restriction in terms of space and environment (Zhang, 2013).

The development of concept sets, such as the commodification of nature, sustainability, and conservation-use balance, is related to the capacity of capitalist production relations to transform the environment (Tekeli, 2009). The process results in the transformation of agricultural areas into industrial and urban areas, and the transformation of forest areas into industrial, commercial, and urban areas reveals the risk of ancient cities and cultural heritage sites being under the pressure of trends such as capital concentration and industrialization. Cultural heritage sites or cultural assets are



movable or immovable works of cultural and scientific value created by a certain society, and the basic elements and cultural accumulation that make up a society are considered cultural heritage.



**Figure 12.** News about the Iron and Steel factory Built on the Tumulus in the Study Area (Egede Son Söz, 2025)

Planning is seen as an important tool in terms of directing the tense relationship between cultural heritage areas and archaeological sites that need to be protected and urban development and capital concentration in a healthy way. In academic studies evaluating the relationship between cultural heritage protection and urban planning in our country, the lack of long-term plans paving the way for instant decisions (Atabeyoğlu et al., 2019), the lack of an attitude towards protection since the first planning studies (Yılmaz, 2005) and the independent operation of urban planning and conservation planning applications (Yücel and Zeren Gülersoy, 2006) have been listed as important problems. Again, Ertaş (1991), in areas that remain in development areas and are legally planned and constructed

according to these plans, the designation of them as archaeological areas later, plans approved by local administrations without consulting the conservation board despite the existence of archaeological sites being known and structures constructed in line with these plans; It touched upon the problems arising from the development rights granted by the relevant institutions within the boundaries of the archaeological site and the reduction of the boundaries of the archaeological site over time and the opening of the areas removed to construction.

As can be seen from the results of this study, in the example of Aliğa, the planning studies in the archaeological site and the surrounding areas developed independently of each other, the plan integrity could not be achieved with the frequent plan changes made in line with the demands in the upper-scale plans, which should have been long-term plans, the main focus of the plans was to support development trends rather than the protection of cultural heritage, and as a result, boundary changes regarding the site areas came to the agenda. In addition, according to the news dated April 2025 (Figure 12), it is claimed that an iron and steel factory cold rolling mill was built on the tumulus grave located in the area and designated as a 1st degree archaeological reservation area (Egede Son Söz, 2025). In terms of these features, the results of the study support the results of previous studies and clearly reveal the development pressure of industrial areas on the protected areas in the area.

The existence of a dense industrial area surrounding the area where the ancient city was located, as well as the transformation of the space due to the change of the conservation area protection boundary and the status of the ancient city of Kyme, isolates the ancient city from its surroundings and context. Completely ignoring the relationship between conservation areas and the city, in other words, limiting conservation actions only to areas within the site boundaries, is the most important obstacle to protect areas' perception, their integration with new development areas, and their perceptibility, accessibility, and usability.

Decision makers and central and local governments need to develop policies that prioritize measures to ensure protection in special status areas, which will protect immovable cultural assets in cultural heritage sites. Again, upper-scale plans are an important tool in ensuring a holistic evaluation of the relationships between natural and cultural landscapes, traditional and new construction, tangible heritage, and intangible heritage values. Not limiting the sensitivity toward the protection of cultural heritage values to only the regions designated as conservation areas in upper-scale plans may contribute to reducing the pressure of construction and transformation caused by urbanization and industrialization on regions where immovable cultural assets are located. To achieve this, conservation development plans should be considered as a part of the general plan, conservation policies, and approaches should be considered together with the planning of the urban whole, and the planning institution should be restructured with a conservation focus (Dinçer, Enlil and Evren, 2009; Örnek Özden, 2005; Yücel and Zeren Gülersoy, 2006).

On the other hand, it is important to develop mechanisms that will ensure the participation of local stakeholders/actors and the local community in decision-making and planning processes in areas of significant conservation importance, such as ancient cities and archaeological sites under development pressure and their immediate surroundings. In the decisions regarding plans and plan changes for these areas, it is deemed important to evaluate the impact of the decisions taken on cultural heritage areas, not limited to the sites, and to ensure the participation of all urban actors in this evaluation process.



## Compliance with Ethical Standards

**Conflict of Interests:** [EN] *The author(s) declare that they do not have a conflict of interest with themselves and/or other third parties and institutions, or if so, how this conflict of interest arose and will be resolved, and author contribution declaration forms are added to the article process files with wet signatures.*

**Ethics Committee Approval:** *Ethics committee approval is not required for this study. The original signed consent form is attached to the article process file.*

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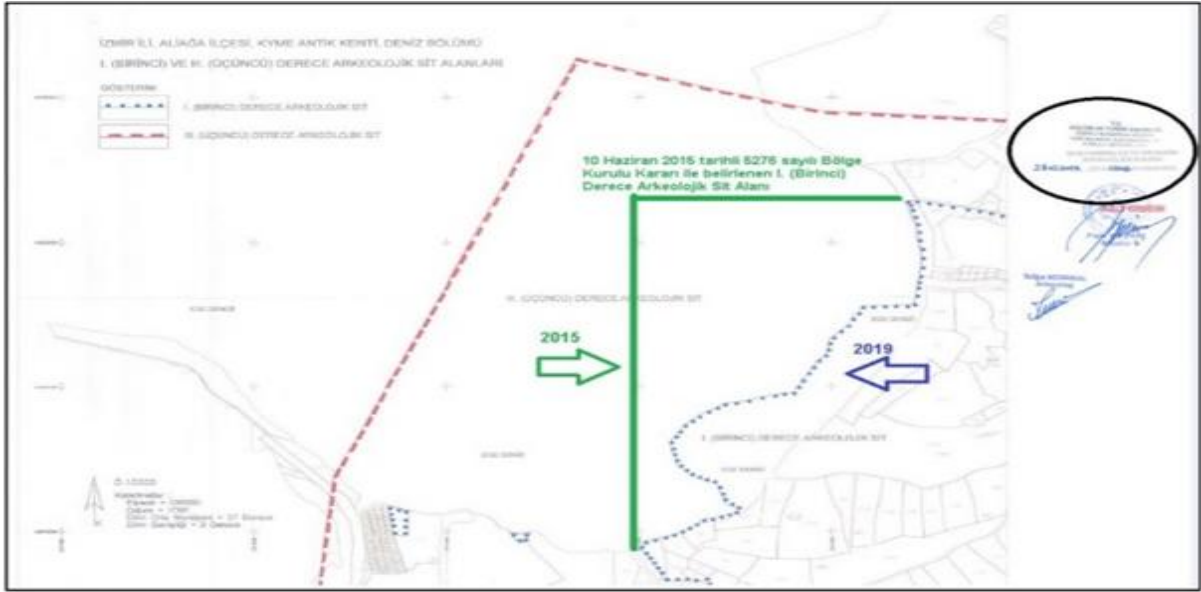
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## Appendices-1



### Research Problem:

This research investigates the impact of capitalist accumulation and urbanization on cultural heritage sites, specifically focusing on the archaeological site of the ancient city of Kyme. This ancient city, located in Nemrut Bay, Aliğa district, İzmir, is increasingly threatened by surrounding industrialization and urban development. The conflict arises as urban expansion pressures are encroaching on the boundaries of protected cultural areas, putting the site at risk. The core problem is that the ancient city's conservation areas have been compromised by industrial and commercial growth. The study aims to explore how these pressures have led to changes in the site's conservation area.

### Research Questions:

How has urbanization and industrialization affected the surroundings of the Kyme archaeological site?

How have the boundaries of the Kyme ancient city's conservation area changed over time?

What role do territorial plans, and their revisions play in archaeological sites and their surroundings, like Kyme?

### Literature Review:

Previous studies have examined the impact of urbanization on cultural heritage sites and highlighted the conflict between development and conservation. Scholars have discussed how capitalist accumulation often leads to industrial and residential exploitation of land, affecting archaeological sites. The literature also highlights the changing boundaries of conservation areas due to development pressures and the need for adaptive strategies in urban planning. The case of Kyme is particularly important because it illustrates the conflict between economic growth-driven industrialization and cultural heritage conservation.

### Methodology:

This study focuses on the ancient city of Kyme and the time-spatial change in the protection borders of the ancient city caused by the upper-scale investment decisions in the Aliğa district. Within the scope of the study, land use decisions and changes affecting the area were investigated by examining development plans, regional plans and environmental plans within a historical framework. In addition, satellite images and GIS tools were used to analyze the land use changes caused by investment decisions in the Aliğa district and the changes in the archaeological site protection borders caused by urban dynamics.



**Results and Conclusions:**

Capitalist production and accumulation processes, driven by neoliberal policies, prioritize rapid spatial transformation, often at the expense of cultural heritage damage. These policies encourage marketization through privatization and the alteration of conservation area boundaries, putting conservation areas under development pressure. The growth of capitalist relations accelerates the pace of production cycles, which, in turn, increases capital accumulation, particularly in urban and industrial zones. The speed of these cycles leads to a concentration of capital, causing environmental and spatial issues that disrupt cultural heritage sites. Crisis factors, such as economic downturns, further disrupt these cycles, impacting the preservation of cultural assets.

The commodification of nature and the transformation of agricultural and forested areas into industrial zones threaten the integrity of ancient cities and cultural heritage sites. Cultural heritage, both movable and immovable, represents the societal and scientific values of a community, and its preservation is under increasing pressure. The lack of a holistic approach to cultural heritage sites, particularly when their boundaries are altered, isolates these sites from their surroundings and historical context. Ignoring the relationships between these areas and the broader urban environment hinders effective conservation and limits accessibility. To ensure protection, decision-makers must develop policies that focus on preserving both cultural and natural landscapes.

Upper-scale planning is essential for integrating cultural heritage sites with new urban developments. Protecting cultural assets requires extending sensitivity beyond just the designated conservation areas to include the broader surrounding environment. This comprehensive approach can reduce the pressures of industrialization and urbanization on cultural heritage sites, promoting better conservation practices.