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Local attraction centre Kızkalesi: the natural and cultural assets for sustainable tourism

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Introduction

To discuss challenges and opportunities to achieve sustainable tourism development in undermined tourism destinations is the main idea of the Turkish case study investigated under the project “SPOT. Sustainable Spatial Planning of Tourism Destinations”. Kizkalesi is a remarkable local tourism attraction centre in Southeaster Mediterranean with its diverse and unique cultural and natural assets. It is a small settlement in Mersin province with 1,619 inhabitants. The case study area is approached beyond the administrative boundaries of the neighbourhood, as being an important component of a settlement system in which tourism is one of the basic economic sectors. Despite the potentials and already existing tourism facilities in the settlement, there are challenges to be overcome to achieve a sustainable tourism development. The pressure for development while the settlement is surrounded by natural and cultural conservation areas, huge population increase during tourism season that creates carrying capacity and management problems, having difficulties in accessibility from distant locations, and the lack of an updated spatial plan to direct changes in physical environment create uncertainties in tourism development in Kizkalesi.

Kizkalesi hosts approximately 40,000 visitors during peak tourism season. Tourism in Kizkalesi is mainly based on activities and facilities for domestic visitors; however, the contribution of tourism on local economy is less than expected. There is a need for a comprehensive tourism development and spatial planning approach to utilize tourism potential of the destination. **So the main questions to be discussed in the case will be how to cope with uncertainties and how to manage tourism facilities for a sustainable future in Kizkalesi.**

General profile of Kızkalesi

The study area, Kızkalesi is located in south eastern Mediterranean coastline in Turkey in Erdemli Sub-province in Mersin (Figure 1). Kızkalesi is at a distance of about 23 km southeast from Erdemli centre and 59 km southeast from Mersin city centre. Kızkalesi connects to Erdemli and Mersin city centre through Mersin-Antalya regional highway (D-400 Highway). Kızkalesi is one of the neighbourhoods of Erdemli district including an important archaeological site inside, the ancient city of Korykos. The total area of the neighbourhood is 20.147 km².

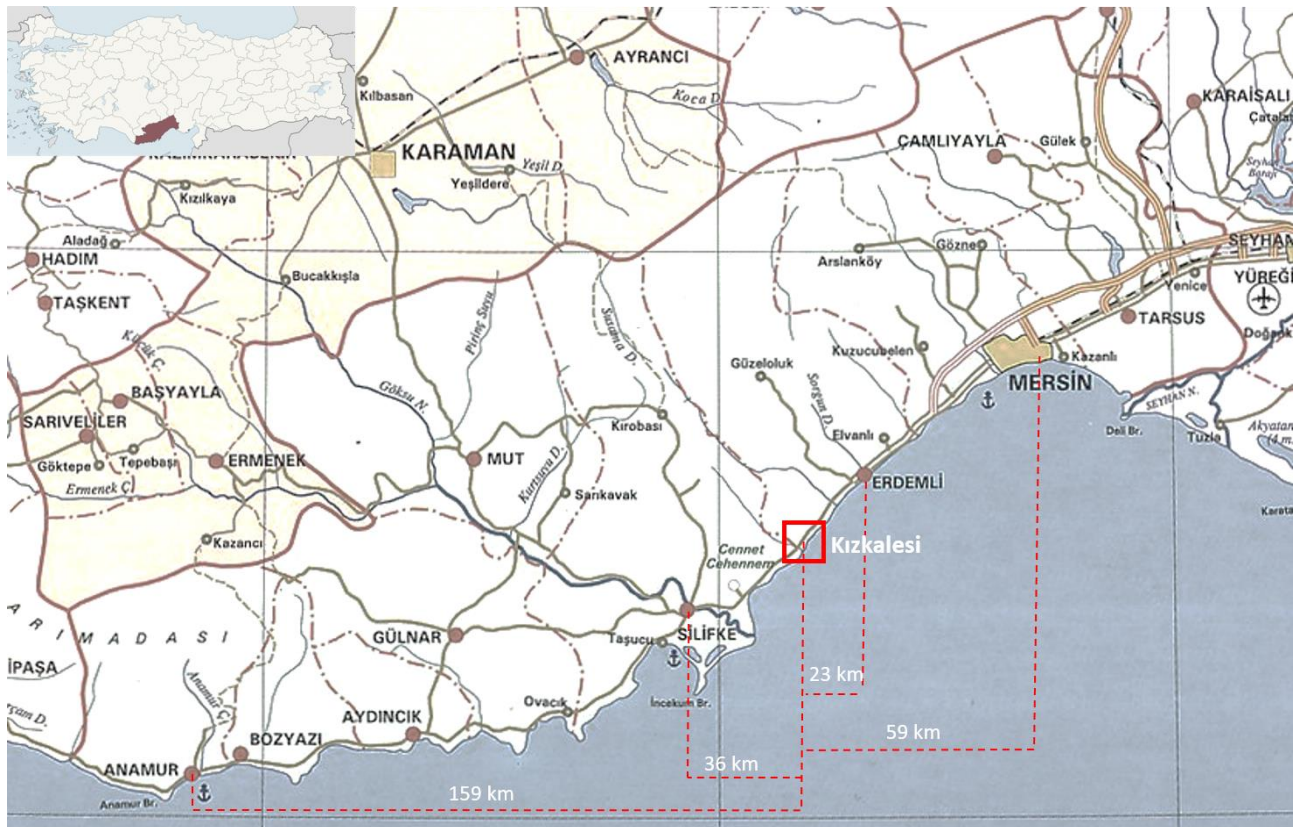


Figure 1. Location of the case study area, Kızkalesi in Mersin, and actual distances to settlement centres. Source: own elaboration.

The administrative boundary of Kızkalesi neighbourhood is defined by Mintan River and Boynuinceli neighbourhood in the west, Ayaş neighbourhood in the east, Hüseyinler neighbourhood in the north and Mediterranean Sea in the south (Figure 2). Kızkalesi is in close relation with neighbouring settlement Boynuinceli in terms of tourism flow and continuity of settlement system. There are two nodes of settlements within the boundary of Kızkalesi neighbourhood – the urban/tourism centre in the southern part and the village/rural centre in the northern part. D-400 Highway divides the urban centre into two parts. There are also individual rural residential units, farms and agricultural lands along roads leading to the north.

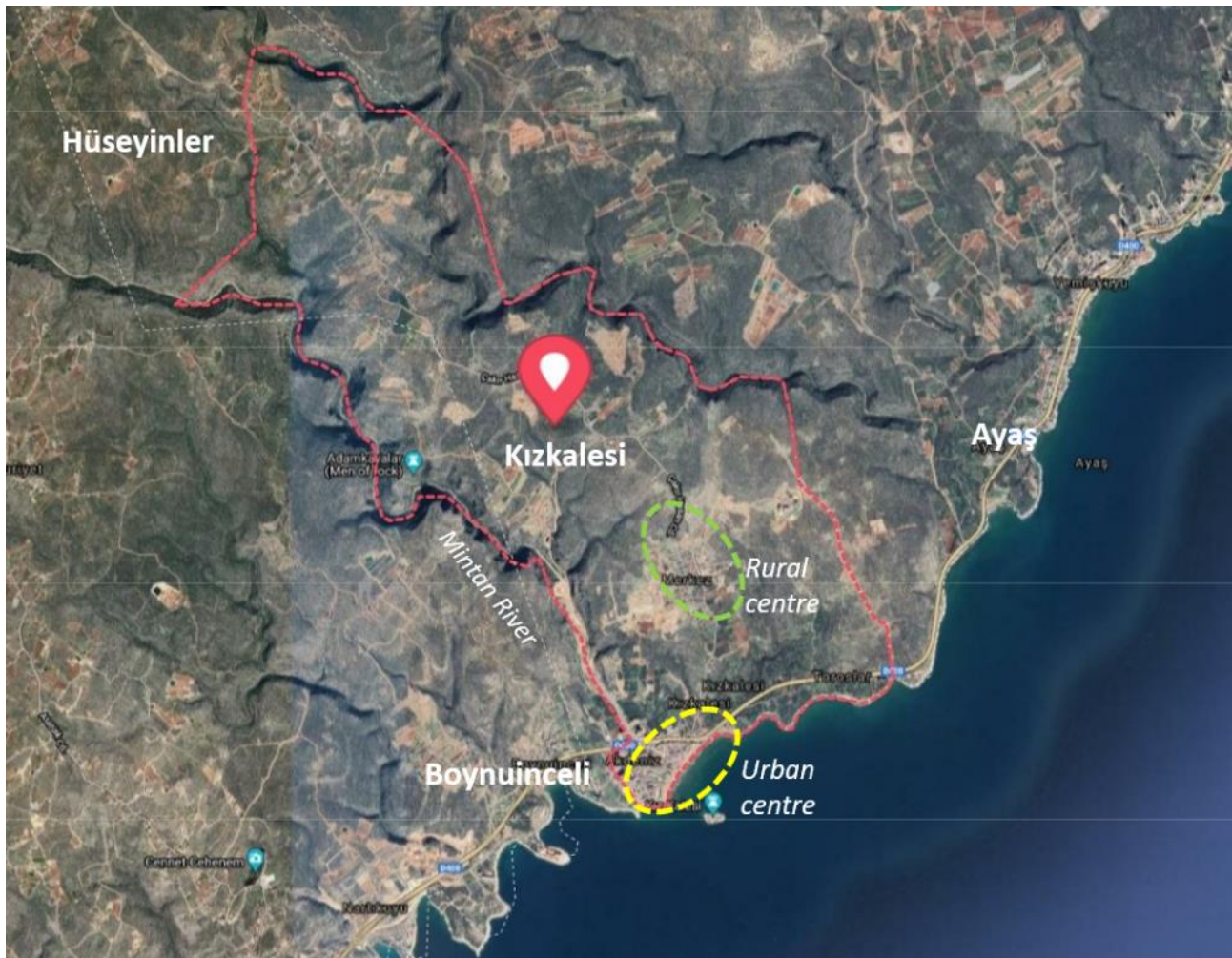


Figure 2. Administrative boundary of Kızkalesi neighbourhood and location of settlement centres. Source: own elaboration base on map obtained from Endeksa (2021).

Kızkalesi is populated by 1,619 inhabitants in 2020 (TÜİK, 2021). Its summer population increases approximately up to 40,000 people together with domestic tourists in short/medium-term stay and during weekends up to 100,000 people together with daily visitors. Main economic activity in the settlement is tourism, which lasts for approximately eight months a year – from April to November (Koca & Şahin 1998). Accessibility of the settlement from close vicinity, moderate climate conditions, a long sandy beach with Blue Flag (*Blue Flag...*) and the presence of ancient ruins in the neighbourhood centre has been attracting tourism activities since the 1970s, thus urbanization has been increasing from then on especially along the coastline. The main components of the urban centre are tourism accommodation units such as hotels, motels and pensions serving mainly for domestic tourists and service activities both for daily visitors and short/medium-term tourists. Except for the tourism activities, there are agricultural activities in the rural areas, mainly in the form of vegetable production. Although the inhabitants of the neighbourhood mostly dealing with agricultural activities and husbandry all through the year, they also contribute to tourism activities during the tourism season.

From past to present (environmental, cultural, social, and economic contexts towards sustainability)

Climate, geology, flora and fauna

Mersin Province has geographically two diverse parts – coastal zone as an extension of Çukurova Plain towards west to Silifke sub-province and mountainous areas (Figure 3). This geographical feature has a direct impact on climate difference within the province. Mild Mediterranean climate is commonly observed in the coastal areas. 15-20 km towards the Taurus Mountains in the north, the climate turns into continental, so that 10°C difference between coastal zones and mountainous areas is observed. It is sunny and dry in summers, and mild and rainy during winters in the coastal zone, whereas mild in summers and snowy in winters in the northern parts. Total rainy and sunless days within one year is maximum 70 days. Average rainy days per year is 79 days. Snow and frost is rarely observed in the coastal zone. August is the hottest month of the year, whereas January is the coldest. Annual average temperature is 19.2°C, whereas maximum is 38.5°C and minimum -0.4°C (MGM, 2021).

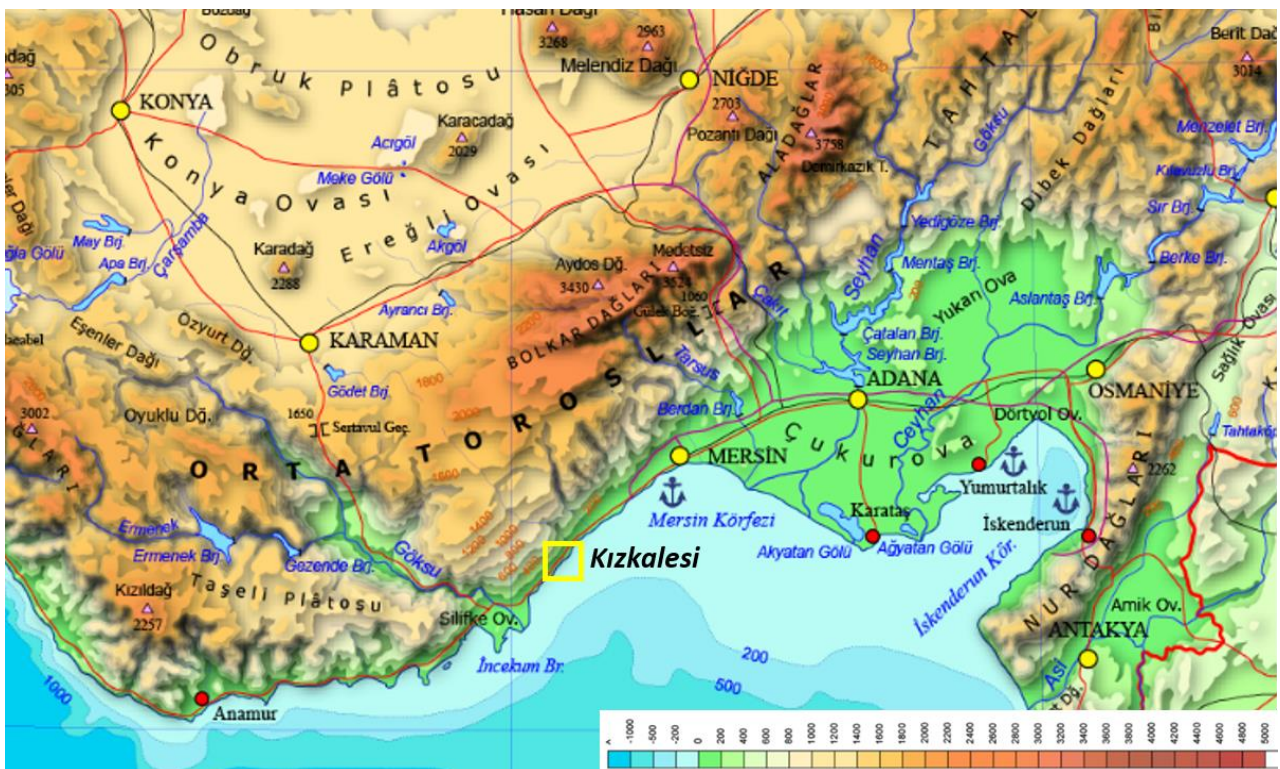


Figure 3. Hypsometric map of Mersin province.

Source: *Türkiye Su Kaynakları...*

The study area is located at sea level and the geographical location is 36° 27' 24" North and 34° 8' 53" East. Being located in the coastal zone, the Mediterranean climate is observed in Kızkalesi. Due to the mild climate, the region has a long tourism season potential and is suitable for agricultural activities.

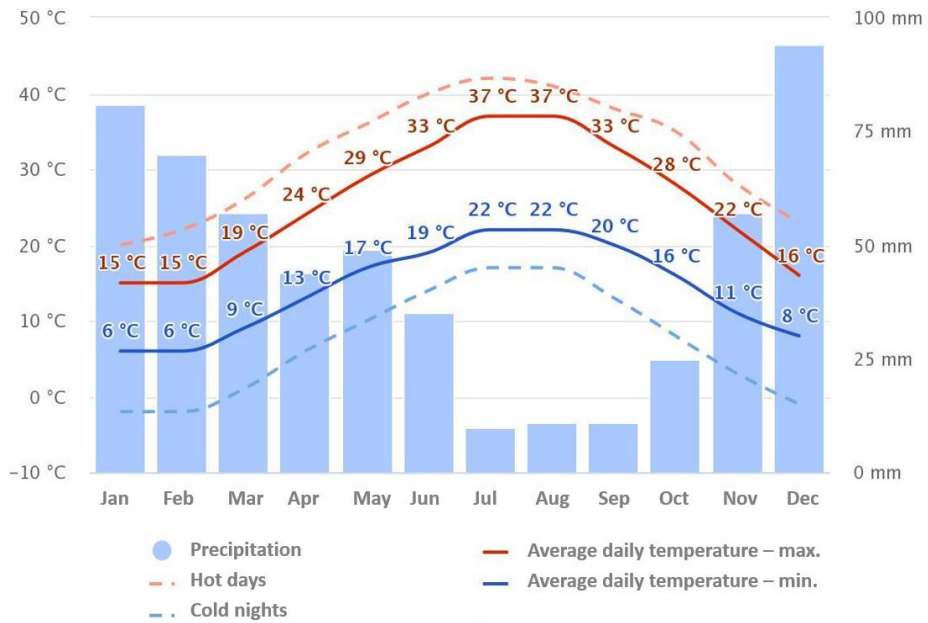


Figure 4. Average temperature and precipitation in Kizkalesi for the past 30 years. Source: *Meteoblue* (2021).

Kizkalesi is located on flat terrain, but towards northern parts, sloppy and rocky areas are observed. The altitude of the settlement starts by the sea-level and then reaches up to 400 meters towards north. The flora of the region is mostly transitional woodland and shrub between 0-300 m Wild olive trees are common in the northern rocky areas. As topography increases towards inlands, oak between 100-1,000 m and Calabrian pine between 100-1,200 m are observed (Essahlaoui, 2019).

Between May and November, the average sea temperature is over 20°C which is favourable for tourism activities in the case study area. During summer the wind direction is from south to north. Especially the wind from southwest with high speed and continuity is also favourable for sea sports.

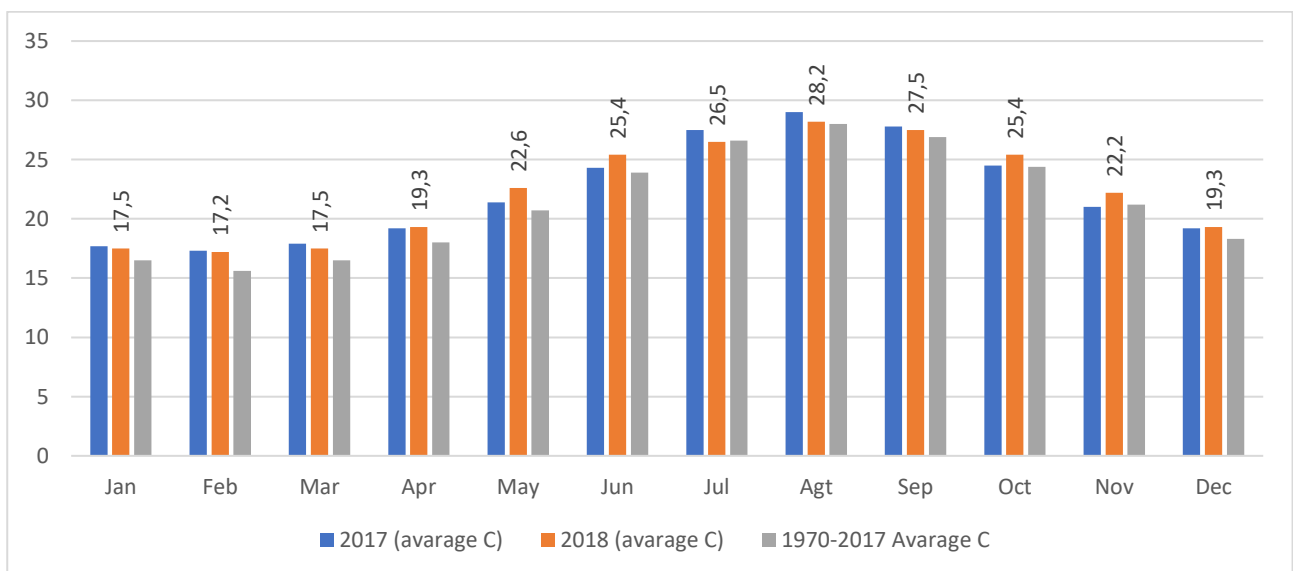


Figure 5. Mediterranean Sea water temperature. Source: Own elaboration by using the data from *Akdeniz Deniz Suyu...*

Development of Kızkalesi as an urban centre

Kızkalesi has been settled for centuries, traces of which are still visible in the region. Archaeological studies have dated the first settlement to 4 BC (Essahlaoui, 2019). The ancient city had been first settled in Hellenistic period. After being invaded in 72 AD, Korykos had been ruled by the Roman Empire administration for 450 years. The city had grown up during the Roman and then the Byzantine Empire periods as an important harbour/trade city in relation with other important ancient settlements in the Olba Territory (Figure 6) which was an ancient political and socio-economical region governed as a unified settlement context (Naycı, 2010: 155).



Figure 6. Location of Olba Territory and ancient settlements.

Source: Naycı (2010: 154).

During Roman times olive production had increased considerably, and the settlement had become the centre for vine and olive oil export. During the Byzantine period, the settlement had been surrounded by walls against Arab attacks. The settlement had continued its importance and port city identity during the Armenian Kingdom period. The settlement then had been ruled by the Cyprus Kingdom. Although the settlement had been rebuilt after being occupied by Karamanoğulları, it had lost its importance after being occupied by Ottomans in 1471 (Essahlaoui, 2021). Losing its importance, the settlement has been used as winter quarters (*kışlak*) for nomad tribes of *Boynuinceliler* and *Sarıkeçililer* (Koca & Şahin 1998). The rural characteristics of the settlement continued through centuries since the 1970s, during which tourism activities have started to gain importance in the region. Due to the presence of sandy beaches and rich archaeological

remains, the settlement has attracted daily visitors coming from close urban centres – such as Mersin and Silifke, by the 1970s. Increase in tourism attraction has resulted in supply of tourism infrastructure, yet those were mostly for daily tourists such as banks, showers and recreational services in the 1980s (Figure 7). Later in the 1990s, by the increase in demand for longer touristic stays, accommodation units were constructed. Second house development during the 1990s has been very influential on the urban characteristics of the settlement. From then on the settlement has turned into an urban centre. Özüpekçe (2019: 956) determined that the urban part of the settlement has grown physically twenty times, especially towards the north between years 1984 and 2018 – from 16,000 m² to 320,000 m². The major increase in urban areas is observed after the 2000s. This enormous increase in the urban built-up area towards north has caused deterioration on forests, agricultural lands and also coastline.

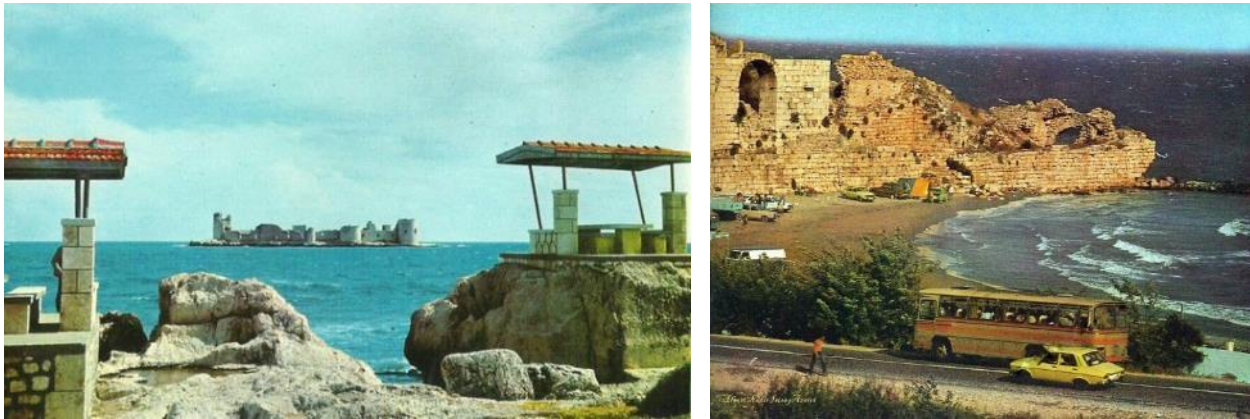


Figure 7. Kızkalesi in the 1980s.

Source: (left) *Pinterest*, no author, (right) *Pinterest*, Ömer Atman.

Current spatial organisation of Kızkalesi

The settlement consists of four distinctive sections in accordance with natural, cultural and human geographical features (Figure 8). One is the coastline with its rich tourism potential regarding sea and sandy beaches. This section is the most urbanized part of Kızkalesi including secondary residential units, tourism accommodation units and commercial units serving the tourism sector mainly. This part is the densest part of Kızkalesi including high-rise modern buildings. Secondary houses are generally located both on western and eastern entrances of the settlement. Hotels and tourism related commercial activities are located along D-400 Highway or in the southern part of the highway in a more central position, whereas motels and pensions are mostly located in the northern part of D-400 Highway and in the older section of Kızkalesi.

The second section is in the northern part of the urban centre including rural residential units having generally 1-2 storey heights located within the gardens. This old section of Kızkalesi has developed on remains of the ancient city of Korykos, so traditional houses and ancient remains are integrated with each other. The northern part of the settlement includes sloppy, mountainous area with rocky landscape covered by scrub. Local population conduct agricultural activities in suitable lands and on sloppy lands by using agricultural terraces. The third section consists of rural residential units and agricultural farms spread along the road leading northern parts to Hüseyinler neighbourhood. There recently started intense agricultural activities as contemporary large-scale agricultural terraces along Hüseyinler road (Naycı, 2010). The fourth section could be considered as the ancient city – which has an extensive conservation area for the ancient city of Korykos. The ancient city is under legal protection as 1st degree and 3rd degree archaeological site

according to the Conservation Law No: 2863. The Land and Sea Castles are open for visitation and operated by DÖSİM. Ancient city of Korykos has been listed in UNESCO World Heritage Tentative List since 2014 (UNESCO, n.d.).



Figure 8. Basic components of the settlement and its vicinity.

Source: Own elaboration based on *Google Earth* satellite image.

The western and eastern sections of the Land Castle are used for the purpose of daily tourism activities and as camping sites. The beach located by the Mainland Castle is one of the most crowded beaches especially by daily trips of visitors during weekends. The beaches are operated by Mersin Metropolitan Municipality.

Kızıkalesi and its vicinity is mostly covered by transitional woodland and shrub. The agricultural lands and farms cover a small portion of the neighbourhood. Kızıkalesi is the largest site with ancient monuments and remains in the region. Archaeological site lies on non-built-up area, mostly covered with shrub, and partly occupied by rural residential units and agricultural activities. The settled area is located mainly along the coastline and partly inland as rural settlement.

The settlement is accessible mainly from land by highway that connects Mersin and Antalya city centres. The highway connection to eastern direction is easier than the connection to western direction due to geographical formations of Taurus Mountains reaching to the coastline between Silifke District of Mersin and Gazipaşa District of Antalya. The highway acts as an intercity highway along which city buses are operated between southeaster Anatolia region and Antalya. There is no direct sea and train access or airport in the settlement. Closest sea base is Taşucu Port and the closest airport is Adana Airport. There are ferries and sea buses to Cyprus from Taşucu Port. Adana Airport is an international airport despite number of international flights are limited and mostly seasonal. Closest train station is located in Mersin city centre (Figure 9). The station acts as an end point and mainly serves as a basis for logistic purposes rather than passengers. The main passenger load is between Adana-Mersin centres. Having based on highway transportation mainly towards eastern direction has affected a domestic tourism concentration within the settlement, and foreign tourists are under expectations.

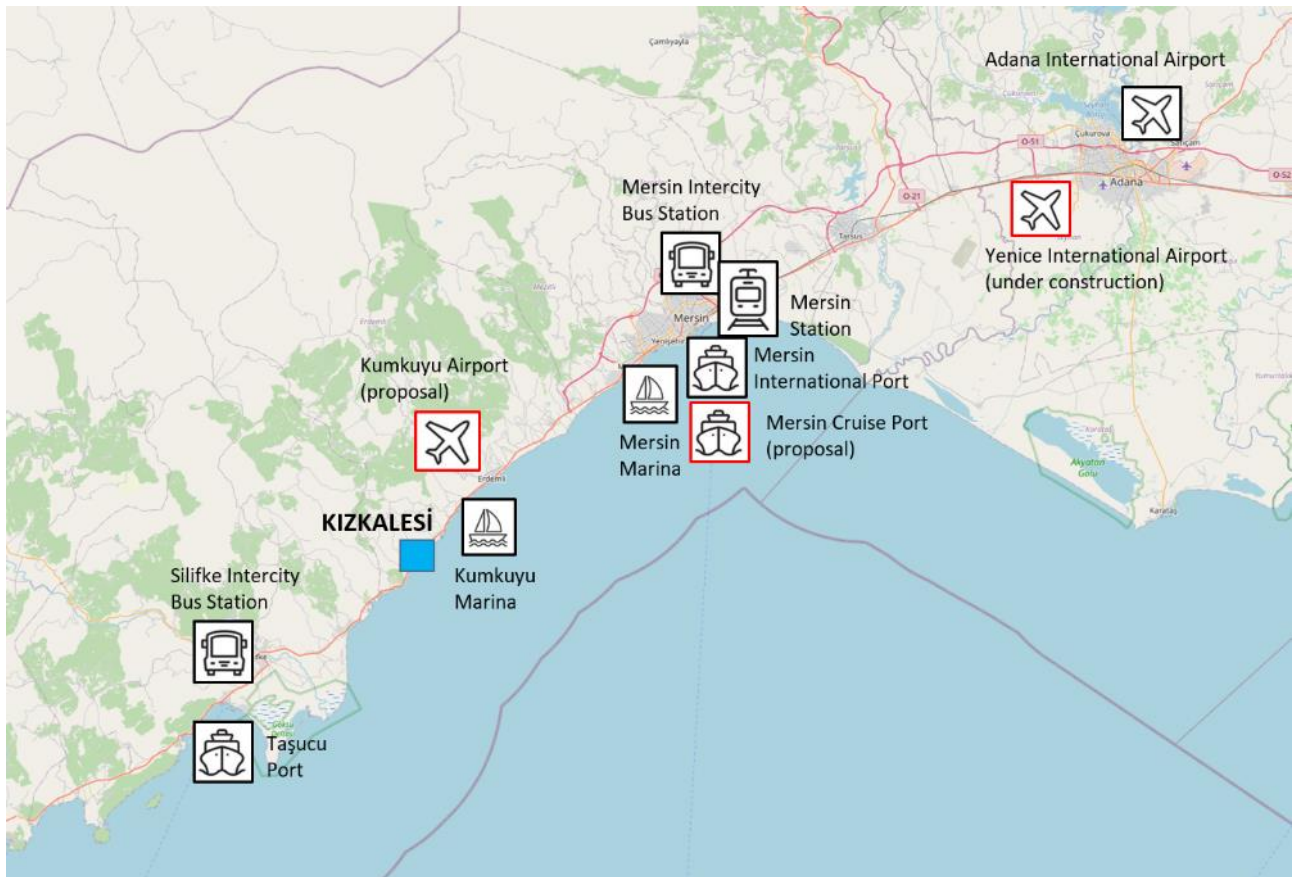


Figure 9. Main transportation nodes serving Kızkalesi.
Source: Own elaboration based on *OpenStreetMap*.

Socio-economic structure

Even though it has a long settlement history, modern Kızkalesi is considerably a recent settlement with a population of 1,619 inhabitants. The local population consists of nomads - mainly *Ayaş Türkmenleri*, who have permanently settled down in the area due to settlement policies of the Ottomans during the 18th and 19th centuries (Nida, 2010; Çetin, 2014). Yet, there are still nomad groups – *Sarıkeçilliler* is the well-known group, continuing a temporary life during summer and winter seasons (Naycı, 2010).

The settlement is densely populated in the coastal zone due to tourism activities. Gross density within the administrative boundary of the neighbourhood is 115.643 person/km² and average household size is 2.42 people (Endeksa, 2021). The majority of local inhabitants are involved in agriculture, and partly they deal with tourism, fishery and husbandry. Managing pensions during the tourism season is another common economic activity among inhabitants (Naycı, 2010: 191).

The population of Kızkalesi in 2006 was 2,169. Within the last decades, this value stayed nearly constant with slight decrease. Yet, the settlement hosts almost 20-folds population during the tourism season. In parallel to increase in tourism activities within the last decades, the built-up area has also expanded along the coastal line. Increase in built-up area, yet a stable population indicates that most of the new buildings were constructed as tourism facilities, including secondary houses, or supplementary services (Özüpekçe, 2019: 958).

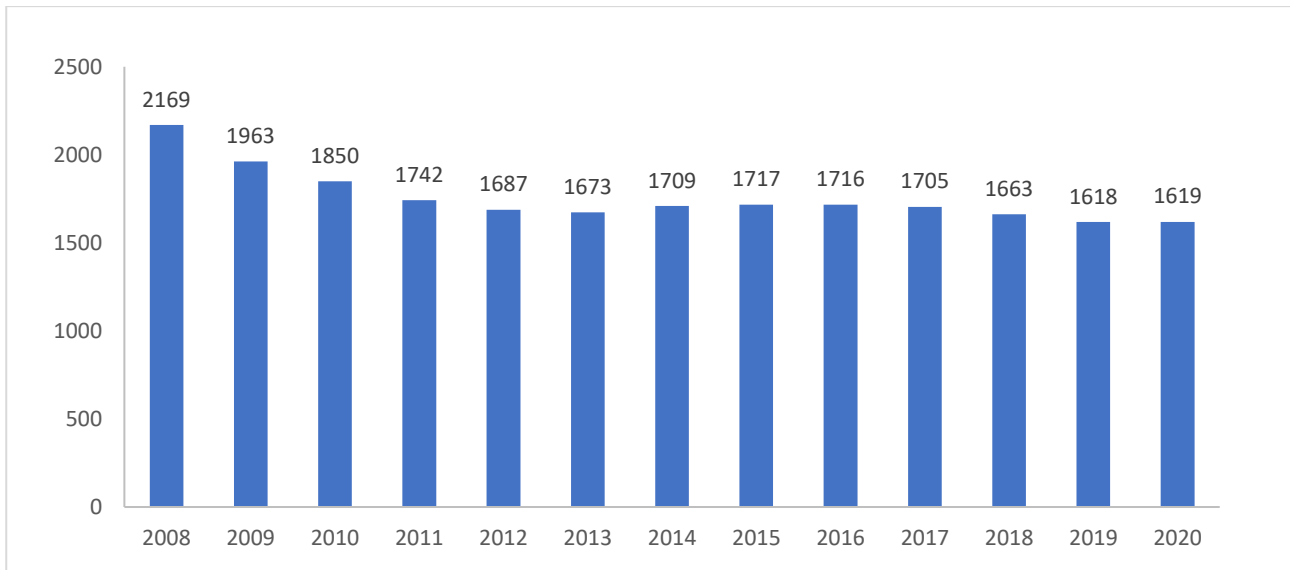


Figure 10. Population change in Kızıkalesi neighbourhood.

Source: Own elaboration based on TÜİK (2021).

Tourism development in Kızkalesi

History of tourism development

Tourism activities have started in the settlement by the 1960s. The first tourism facility in the region was BP Camping Area with 36 rooms and 72 bed capacity. During the 1990s, summer population was increasing up to 15,000 people (Koca & Şahin, 1998). In 1994, there were 14 hotels with 615 bed capacity, 18 motels with 430 bed capacity, 38 pensions with 1,740 bed capacity and 2 camping areas with 200 bed capacity, as well as 856 summer houses, which in total have accommodated approximately 30,000 foreign and 146,000 domestic tourists – in total 176,000 tourists in 1994. Total bed capacity together with summer houses in 1994 was 5,400. Koca & Şahin (1998) estimate that during the summer season in 1994, the total number of visitors reached 800,000 people including daily visitors.

Tourism capacity of the settlement has been developed since then by construction of new accommodation units as well as secondary houses, enhancement of tourist experiences by providing facilities on public beaches, provision and improvement of technical infrastructure, and increasing accessibility of the settlement by scheduled public transportation opportunities and expansion of main highway.

Tourism infrastructure

The tourism infrastructure in Kızkalesi has rapidly increased within the last three decades. By the year 2021, there are 104 tourism accommodation facilities in the neighbourhood with 2,100 room capacity including 4,750 bed capacity (Kızkalesi Culture and Tourism Association). Including the thousands of private apartments built as secondary houses in Kızkalesi within the last 30 years, the destination has the capacity to accommodate hundreds of thousands of tourists and temporary residents during summer months.

Tourism accommodation units in Kızkalesi are hotels and motels, pensions, and secondary houses. Hotels as touristic establishments are licenced by the Ministry of Culture and Tourism. Different from hotels, motels are smaller in scale. Both establishments are active all through the year. Occupancy rate of hotels and motels are 70% between May-November, reaching 100% between July-August. December-April occupancy rate for tourism licenced hotels decreases to 50%. Another common accommodation type in Kızkalesi is pension. Pensions could be considered into two categories according to operational organisation. The first category is the accommodation unit specially constructed as a pension, including small flats rental for families. These pensions are owned by investors mostly from other cities, and seasonal workers from the vicinity of Kızkalesi are commonly hired. The second category is regular houses used by locals during winter, but rented to tourists during summer months when locals move to highlands. These pensions are not tourism licenced units, and they are rental mainly during July-August months. Secondary houses in Kızkalesi could be considered as another accommodation facility even though they have different characteristics than other facilities. These houses are generally owned by private households permanently living in the cities such as Adana, Mersin, Gaziantep, Niğde and Ankara who spend whole or a part of their summer vacations in Kızkalesi. Mostly these houses are not fully used all through the tourism season. Some of these houses are rented weekly, monthly or seasonally to other families by their owners.

There are commercial, cultural and public services supporting tourism activities. Commercial units (Table 1) are very active during the tourism season, whereas most of them are closed in winter. Museums and attractions with controlled entry are important cultural facilities in Kizkalesi and its vicinity (Table 2). As a cultural activity, the International Kizkalesi Tourism Festival is held annually every August during which several activities are organised such as water sports, beach volley, concerts etc. This festival aims to increase tourism activities and to support tourism destination promotion and branding. There are police station, health care unit, and gendarme office as public services.

Public transportation is mainly based on private companies. Despite being 63 km away from Mersin city centre, there are also regular public buses operated by Metropolitan Municipality running between Mersin and the destination throughout the year. There are more than 200 scheduled services between Kizkalesi and Mersin daily during summer months. The settlement is also accessible by intercity buses operated between Antalya and Southeaster cities. There is no intercity bus station in the settlement.

Table 1. Other tourism establishments in Kizkalesi in 2021.

Establishment type	Number
Restaurants	22
Cafeterias	25
Live music bars	11
Disco	1
Grocery stores	10
Convenient stores	15

Source: *Kizkalesi Culture and Tourism Association*.

Table 2. Number of visitors to Kizkalesi and Attractions in 2019.

Name of the museum/attraction	Number of visitors
The ancient city of Korykos (Land Castle, Sea Castle and Beach)	47,829
The ancient city of Kanytelleis (Kanlıdivane)	37,112
The ancient city of Olba-Diocaeseria (Uzuncaburç)	13,255
Narlıkuyu Mosaic Museum	1,989
Korykon-Antron Pits (Cennet-Cehennem)	87,636
Asthma Cave	170,722

Source: *Kizkalesi Culture and Tourism Association*.

Tourism flows

Even though Mersin has a high tourism potential with its natural and cultural assets, and various opportunities and alternatives for different groups, the share of tourism in the provincial economy remained considerably low (Duman & Öztürk, 2005; Şengül, 2017). Despite having the potential to be an important tourism destination, Mersin could obtain neither high tourism mobility nor desired number of tourists (Oskay, 2017). On the other hand, Kizkalesi is one of the most important tourism attraction centres in the

Eastern Mediterranean coastline, yet it attracts mainly domestic tourists and it has branding problems (Duman & Öztürk, 2005; Unur & Çetin, 2017).

Kızkalesi serves as the tourism centre for the Eastern and Inner Anatolia settlements, and mostly attracts daily visitors and tourists from Mersin, Adana, Gaziantep, Konya, Kayseri, Kahramanmaraş and Niğde (Özüpekçe, 2019). There are different tourist profiles regarding their duration of stay and the purpose of visit. The first group consists of daily visitors either visiting cultural attraction centres or for enjoying the sea and beach. This group is mainly from close settlements or Mersin city, and their final destination is Kızkalesi. There is another category of daily visitors whose final destination is not Kızkalesi, but visiting Kızkalesi within their tour program. The second group consists of tourists visiting Kızkalesi for short/medium terms to spend their vacations. They mainly ask for entertainment, rest and enjoy the sea, sand and sun. Scholars claim that domestic tourists consist of different age groups with different educational backgrounds, but mainly with low/medium or medium income levels (Naycı, 2010). Researches also mention that domestic tourists have a tendency to visit Kızkalesi more than once. This indicates that “*Kızkalesi is a well-known tourism area having regular native tourists*” (Naycı, 2010: 193) satisfied by the tourism services. The third group consists of tourists who spend their summers in secondary houses with their families for medium or long terms. Their duration varies from 15 days to 2 months. Based on findings of different researches on duration of stay, daily visits are 35% of all visits, short/medium term stays are 55%, and long term stays are about 10%.

Tourism attractions

Kızkalesi, together with its vicinity has an ancient settlement system including remarkable cultural attraction nodes such as the ancient city of Korykos (Kızkalesi), located in the northern edge of the urban centre, Land Castle and Sea Castle from the 13th century, Adamkayalar located 3 km north of the urban centre, the ancient city of Elauissa-Sebaste located 5 km east of the urban centre in Ayaş neighbourhood, the ancient city of Olba-Diocaeseria (Uzuncaburç) located 32 km northeast of urban centre in Uzuncaburç neighbourhood, the ancient city of Kanytelleis (Kanlıdivane) located 12 km northeast of urban centre, and the ancient harbour of Porto-Calamie (Narlıkuyu). Not only archaeological remains and ancient sites, but also rural traditional villages established on ancient remains during the 18th and 19th centuries by local *Türkmen* groups (Naycı, 2010: 167). The case study area is also well known with its natural beauties. Kızkalesi has a long sandy beach with Blue Flag, and there are small bays and natural beaches close to Kızkalesi. There are natural geological formations caused by collapse of terrain due to depression of earth by underground waters. These geological formations are named as pits, some of which also include cultural heritage inside. Asthma Cave and Korykon-Antron Pits (Cennet-Cehennem) in the close vicinity of the case study area attract visitors all year.

The ancient city of Korykos lies 1,250 meters along the coastline towards east of the modern settlement of Kızkalesi, covering 1,134 km² area including ancient agricultural terraces and necropolis valley. The ancient city of Korykos “... sits on the slopes of the mountain where it reaches the coast. As the mountain approaches the sea, two small bays are formed. The city lies alongside the northeast and southwest axis reaching Elauissa-Sebaste at the east and Korykon-Antron Pits at the west. It is surrounded by a natural harbour, where it has been always settled around in all periods” (UNESCO, n.d.). The remains of the ancient city are located in the northeast part of the urban centre of Kızkalesi, expanding towards east and north along the ancient road. D-400 Highway divides the ancient city into two parts. Grave rooms as the oldest ancient architectural elements are from the Hellenistic period. Land Castle from the Middle Ages is the most preserved structure of the ancient city. Sea Castle (Kızkalesi means Maiden Castle) is the most known

monument of the settlement. Built on the small island/rock at a distance of 200 meters from the shore, Sea Castle is one of the landmarks of Mersin province. Together with Land Castle, Sea Castle had been constructed in the 13th century for defensive purposes. The ancient city also embraces remains of temples, colonnaded streets, monumental graves, workshops and farm houses which had been exposed to remarkable damages over centuries. The ancient site reaches towards northern mountainous areas reflecting ancient rural settlement patterns with agricultural terraces and *villae rusticae* (Roman farmhouses).



Figure 11. Sea and land castles in Kizkalesi.

Source: *Kizkalesi...*

Adamkayalar (literally Man-Rocks) is the local name given to a group of ancient human figure reliefs depicted on the rock-cut tombs on rocky slopes of Taurus Mountains. It is located 3 km northwest of Kizkalesi at the eastern facade of Şeytan River. The ancient remains include statues carved on rock surfaces. Although there is no documented evidence regarding the origins of these ancient stone figures, it is estimated to be dated to the 2nd century. Adamkayalar is one of the important tourism attraction centres in the region to be very close to Kizkalesi and to provide an alternative for visitors and groups who prefer trekking tours through the valley (Naycı, 2010). There are no spatial arrangements for visitors in Adamkayalar and tours or visits to the area are coordinated by local guides or the visitors themselves. There is only a natural platform in front of reliefs providing a stage for visitors.

The ancient city of Elauissa-Sebaste was one of the important port/trade towns of Olba Territory together with the ancient city of Korykos. It possesses rich and diverse examples of archaeological remains and monumental structures that have spread in a wide geographical context. On the north-eastern sections rural settlement lies together with ancient remains. Accommodation facilities are located along D-400 Highway both in the western and eastern parts of the ancient settlement. There is a natural beach on both sites operated by Mersin Metropolitan Municipality as camping areas.

The ancient city of Olba-Diocaeseria embraces the Temple of Zeus where people worshiped during Hellenistic period. After the Romans had ruled the locality, they gave special importance to the place where the Temple of Zeus was located toward the end of the 1st century AD and separated it from Olba and made it an independent site with the name of Diocaeseria. As a matter of fact, all the ancient ruins except the Temple of Zeus belong to the Roman period. Diocaeseria had been connected to Kizkalesi in a stone-paved way on the Olba surrounded by the city walls in antiquity. There is also traditional rural settlement in Uzuncaburç including traditional buildings with single and two storeys constructed in rough-cut stone masonry technique (Naycı, 2010). Some of the traditional buildings have been built on ancient structures by converting them according to their spatial needs (Naycı, 2010). The ancient site is open for visit and operated by the Ministry, yet there are no tourism facilities in the area.



Figure 12. Zeus Temple in the ancient city of Olba-Diocaeseria.

Source: *Uzuncaburç...*

The ancient city of Kanytelleis is located around an astounding geologically depressed formation of pit called as Kanytelleis Pit with 60 m depth and approximately 170x200 m widths (Naycı, 2021) surrounded by the remains of many basilicas and cisterns. The ancient city was built during the pre-Roman era and later turned into a Christian religious centre named Neapolis. The archaeological site is open for visits. The visits to the archaeological site are operated by DÖSiM, and the visitor centre includes ticket office, WCs, a small cafe, souvenir shop and exhibition units. The spatial arrangement of the site has been completed recently in line with an environmental design project to provide a better and safer circulation system for pedestrians, well defined facilities and a proper entrance and parking spaces for cars and tour buses. There are concerts in the area performed during the International Mersin Music Festival.



Figure 13. The ancient city of Kanytelleis.

Source: *Kanlı Divane...*

The ancient harbour of Porto-Calamie (Narlıkuyu) had been connected to the ancient administrative centre of Olba-Diocaeseria passing through **Korykon-Antron** (Cennet-Cehennem). Narlıkuyu is located 2 km

east of Kizkalesi and 1 km southeast of Korykon-Antron. Porto-Calamie was one of the small port-towns of ancient Cilicia, which had served people visiting the religious cult area of Korykon-Antron during Christianity period. Narlıkuyu is famous for the mosaic of “Three Beauties” presented in-situ within the local museum. The settlement is also an attraction centre for local visitors with its seafood restaurants located around the small bay serving all year.

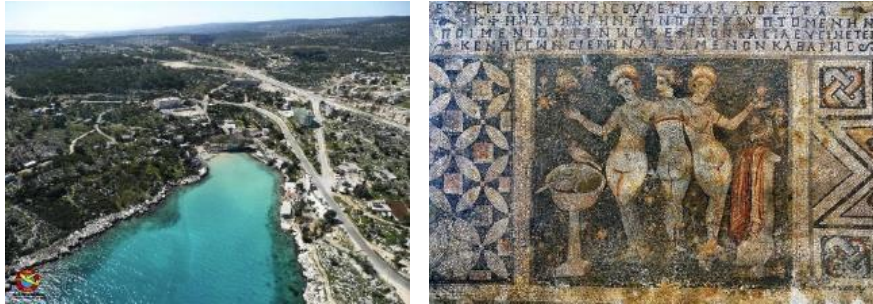


Figure 14. Narlıkuyu Bay and the mosaic of “Three Beauties”.

Source: *Narıkuyu Mozaik...*

Korykon-Antron is founded by significant geological depressions of pits which are locally named as “Hell and Heaven”. The Heaven Pit has an elliptical form with 250 m diameter at top and 110 m radius at bottom having 70 m height, whereas Hell Pit, which is 75 m northeast of Heaven Pit, has 50 m and 75 m diameter and 128 m height (Naycı, 2010). There is a cave in the bottom of Heaven Pit with 200 m length and 135 m height at its highest point where underground water is passing through and pouring into the sea from Narlıkuyu shore. The Virgin Mary Church is also located on the bottom of the Heaven Pit, which dates back to the 5th century, while fresco paintings located inside walls are dated to the 12th century (Naycı, 2010). Korykon-Antron has always been an important cult area continuously during Hellenistic, Roman and Byzantine periods, so there are remains of ancient religious buildings around, one of which is the Zeus Temple located on the southern part of Heaven Pit. Another important cave in the region is called **Asthma Cave** (Astım/Dilek Mağarası), which is located 300 m east of Heaven Pit. It has 200 m length and is believed to be curing for asthma sickness (Naycı, 2010).



Figure 15. Korykon-Antron Pits.

Source: *Silifke Cennet...*



Figure 16. Virgin Mary Church on the bottom of Heaven Pit.

Source: *Cennet ve cehennem...*

Heaven Pit and Asthma Cave are open for visits, yet there is no entrance to Hell Pit due to its steepness. Facilities for serving visitors were provided by a visitor centre including cafes and souvenir shops, parking lots, and security precautions around the pits. The area has a significant tourism attraction and has been visited by a large number of visitors. There are also visitors coming to the area as a part of cultural tours or educational tours organised by schools in Silifke, Erdemli and Mersin. Especially during the summer months, the area is being used beyond the carrying capacity.

Long-term strategy for spatial planning of Kizkalesi

Tourism became one of the major economic sectors in Turkey especially after the 1980s by the enactment of Tourism Incentive Law no: 2634. The Law has been effective in increasing tourism activities by directing tourism investments on potential areas through incentives and financial supports and subsidies (Oskay, 2012). The tourism activities in Mersin, especially along the western coastline has accelerated after the 1980s through construction of secondary houses and hotels serving mainly for domestic tourism. Since then, Kizkalesi has been an attraction centre, and tourism investments has increased. In order to direct tourism investments, **Western İçel Coastal Development Plan** has been prepared by the Ministry of Public Works and Housing (of that time) in 1988 (Figure 17). The plan included the whole western coastline of Mersin province from Erdemli district to Anamur district, proposing tourism areas, daily tourism activity areas and tourism centres (*Mersin'de Turizm...*). The eastern and southern parts of Kizkalesi was proposed as a tourism development area within the plan. This initial planning effort to direct tourism investments started by 1988 has turned into more comprehensive planning processes after the 2000s both at regional and local levels.

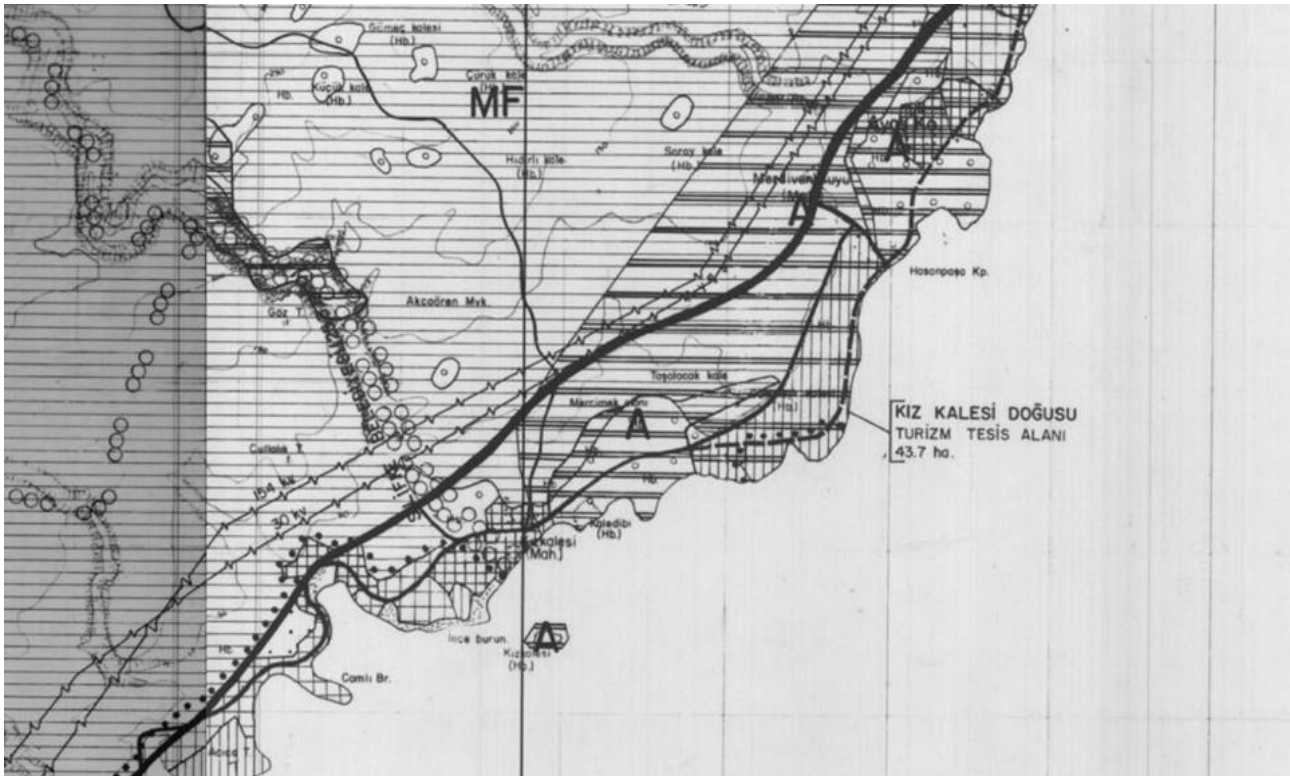


Figure 17. Kizkalesi and its vicinity in Western İçel Coastal Development Plan.

Source: personal archive of Yasemin Sarıkaya Levent.

Planning at regional level

One of the regional attempts to revitalize economy after 2000 was **Mersin Regional Innovation Strategy** as the first innovation strategy of Turkey (MTSO, 2008). It is the end product of RIS-Mersin Project, which was conducted between 2006 and 2008. The strategy document is not an official plan; yet, a bottom-

up advisory document by the local initiatives to direct investments and planning decisions (Levent & Sarıkaya Levent, 2011).

The basic achievement of the Strategy is to determine the key sectors for innovation based local economy. These sectors are logistics, agriculture-food industry, tourism (Gök, 2009: 94). Since these leading economic sectors are quite sensitive to international financial and economic crises, the local initiatives wanted to increase the level of thickness of local economic structure as much as possible. To achieve this thickness, for each sector, sector-specific platforms were formed by representatives of relevant public and private sectors. These platforms developed sector-specific visions, determined priorities for each sector and proposed relevant projects and then sector-specific master plans (MTSO, 2008; Levent, 2016).

One of sector-specific master plans is **Mersin Tourism Master Plan – 2010**, including strategies about the socio-cultural, economical and organizational issues of tourism. However, spatial dimension within this Master Plan is relatively weak. Determining sub-regions of tourism activities in Mersin and general bed capacities in these regions are the only spatial dimension of this conventional Tourism Master Plan (Mersin İl Özel İdaresi, 2010) which means that the innovative capacity is also limited. Despite the limited spatial dimension, Mersin Regional Innovation Strategy triggered local economical enthusiasm; increased trust and confidence at local level (Metin, 2010; Levent & Sarıkaya Levent, 2013). Additionally, the proposals of Mersin Tourism Master Plan became determinant in other regional planning processes.

There are two plans at regional level including Kızkalesi and its rural hinterland. The first one is the “Çukurova Regional Plan 2014-2023” prepared by Çukurova Development Agency for TR62 NUTS-2 region which includes Adana and Mersin provinces. As all the other regional plans prepared by development agencies, the spatial emphasis of this plan is abstract and conceptual, while there are well-developed sectoral analysis and proposals. The second regional plan is “1/100,000 scale Environmental Master Plan for Adana and Mersin Planning Region” revised and approved in 2017 by the Ministry of Environment and Urbanization (*Mersin-Adana Planlama...*). Different than Çukurova Regional Plan, it focuses on the physical dimensions of the development in the region.

The strategic aim of **Çukurova Regional Plan 2014-2023** is to make the region an international centre of attraction and production base. It defines the active use of the regional tourism potential as one of the priorities of this strategic aim (Figure 18). In order to produce planning decisions, it firstly conducts analytical studies to examine the existing situation in relation to tourism. According to this examination, tourism is considered as one of the fastest growing sectors, not only in the world, but also in Turkey; since the tourist numbers and the tourism revenues have presented an increasing trend. However, the plan indicates that this fact is not valid for Çukurova Region, because the region could not receive a sufficient share from tourism despite the presence of the natural and cultural values as a significant potential for different types of tourism. According to the plan, the coastal areas of Adana and Mersin are suitable for mass coastal tourism, and the cultural heritage especially in relation to faith tourism and local cuisine for gastronomy tourism are the most important assets presenting potentials for alternative tourism (ÇKA, 2015: 60). The significant fact related to these tourism potentials is that the potentials for coastal tourism are spatially distributed all over the coastal areas of the region, whereas the ones for faith and gastronomy tourism are highly concentrated, especially in Tarsus. The existing tourism infrastructure also creates a potential for certain types of tourism. As declared in “Tourism Strategy of Turkey – 2023” (Ministry of Culture and Tourism, 2007), relatively-high number of the operation licenced 4- and 5-star city hotels would make Mersin a suitable location for congress tourism. The Strategy also mentions that new investments in Mersin International Port, Anamur Marina Project, and the preparation of eco-tourism zone management plans could support cruise tourism, yacht tourism and

ecotourism. Along with the infrastructural advantages, there are also organizational advantages of Mersin such as the determination of tourism as one of the locomotive sectors within the scope of Mersin Regional Innovation Strategy, the establishment of the Mersin Tourism Platform in 2007, and the production of Mersin Tourism Master Plan – 2010 and 2010-2016 Action Plan (ÇKA, 2015: 61).

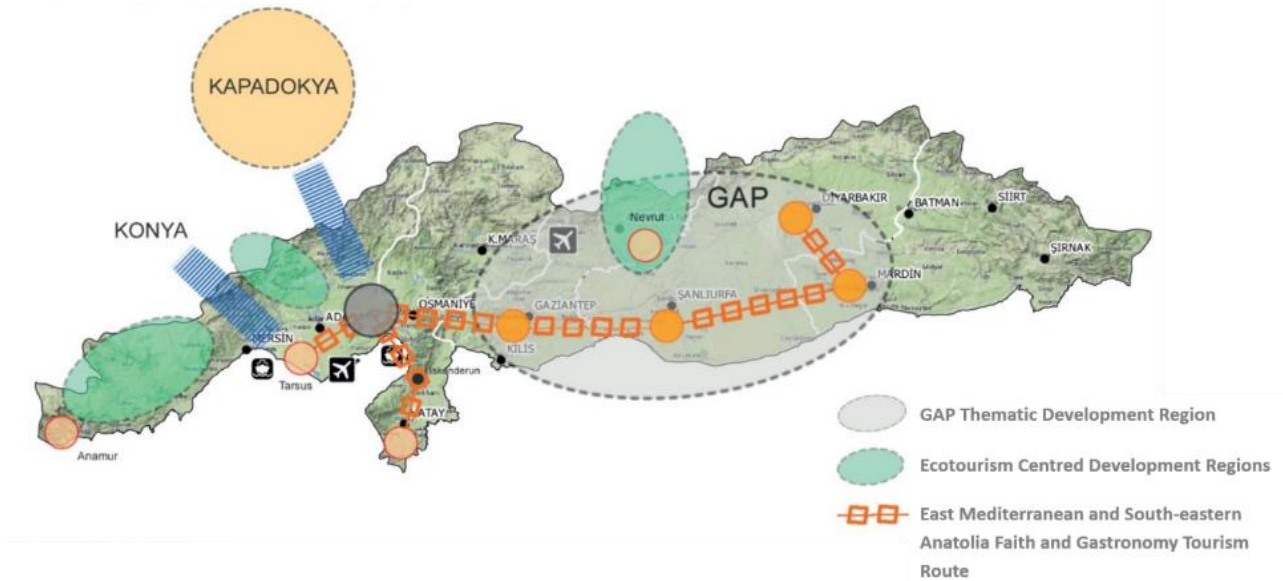


Figure 18. Conceptual studies about tourism in Çukurova Regional Plan 2014-2023.

Source: ÇKA (2015: 62).

Çukurova Regional Plan had four actions for the priority of “*activating the tourism potential of the region*”. The first of these actions is “*developing tourism infrastructure in the region*”. In order to develop this infrastructure, not only the projects contributing to tourism like the Historical City Centre Revitalization Project in Mersin should be implemented, but also the touristic bed capacity should be increased. In order to increase bed capacities, tourism zones are declared in Mersin in 2006: Tarsus Culture and Tourism Conservation and Development Zone (for coastal tourism) and Gülek-Karboğazı Culture and Tourism Conservation and Development Zone (for winter tourism) and six tourism centres (for coastal tourism), namely Silifke Narlıkuyu-Akyar, Taşucu-Boğsak, Kargıcak, Ovacık, Gülnar-Ortaburun, Anamur-Melleç. In 2018 all tourism centres are renamed as culture and tourism conservation and development zones by the amendment of the legislation. The transportation investments such as Çukurova Regional Airport, High Speed Train Project and extension of highway projects are also considered in this category as they could improve the accessibility to tourism facilities (ÇKA, 2015:63). The second action focuses on “*achieving diversification of tourism activities in the region*”. In addition to coastal tourism, the investments for congress tourism, cruise tourism, faith tourism in Tarsus, and winter tourism in Karboğazı are recommended for Mersin province. There is also a potential for sport tourism due to the sport infrastructure built for the Mediterranean Games in 2013 and health tourism because of the mild climatic conditions (ÇKA, 2015:64). The third action is “*increasing the quality of tourism services*”. With the increase in the quality of tourism services, it becomes possible to fulfil the demands and expectations of domestic and foreign tourists in the tourism sector, which is a key factor to increase the number of visits in the region. Since high qualities of tourism services depend on qualified human resources, the level of vocational education should be increased. In addition, the satisfaction levels of tourists could be raised by increasing the amount of diversity of local handicrafts, touristic events organized by tour operators, daily tours and outdoor sport activities (ÇKA, 2015:64). The fourth action is “*supporting the promotion and cooperation activities in tourism*”. The promotion in this action

mainly includes marketing activities. It should start with a region-specific branding activity. This branding activity should depend on the existing festivals such as Citrus Festival, the international dimension of which has to be strengthened. By using this branding activity, promotional organizations for local and foreign tour operators, travel agencies and tourism investors have to be accomplished. To achieve the cooperation, working groups and the tourism lobby should be formed with the participation of general public, NGOs and the representatives of the private sector (similar to Mersin Tourism Platform) in order to increase the organizational capacity in tourism (ÇKA, 2015: 64-65). In general, Çukurova Regional Plan includes broader tourism strategies for the region, most of which could not turn into spatial decisions. General strategies are set to connect the region to tourism destinations in south-eastern Anatolia and inner Anatolia, yet the western part of Mersin has not been considered in detailed. Thus, there is no special emphasis on Kızkalesi and its rural hinterland within the context of the plan.

In order to create a sustainable and liveable rural and urban environment in Mersin and Adana provinces by targeting the year 2025; **1/100000 Environmental Master Plan for Adana and Mersin Planning Region** has been prepared with the aim to protect agricultural, touristic and historical identity and to direct development in a planned manner in line with the planning principles determined in accordance with the sectoral development targets within the scope of Turkey's development policies. The first plan has been approved in 2013 and then revised in 2017. The tourism policies of the Environmental Master Plan are to support 3S (sun-sand-sea) tourism, but also to diversify alternative tourism activities in the region (Figure 19), and so to increase tourism income and number of visitors.

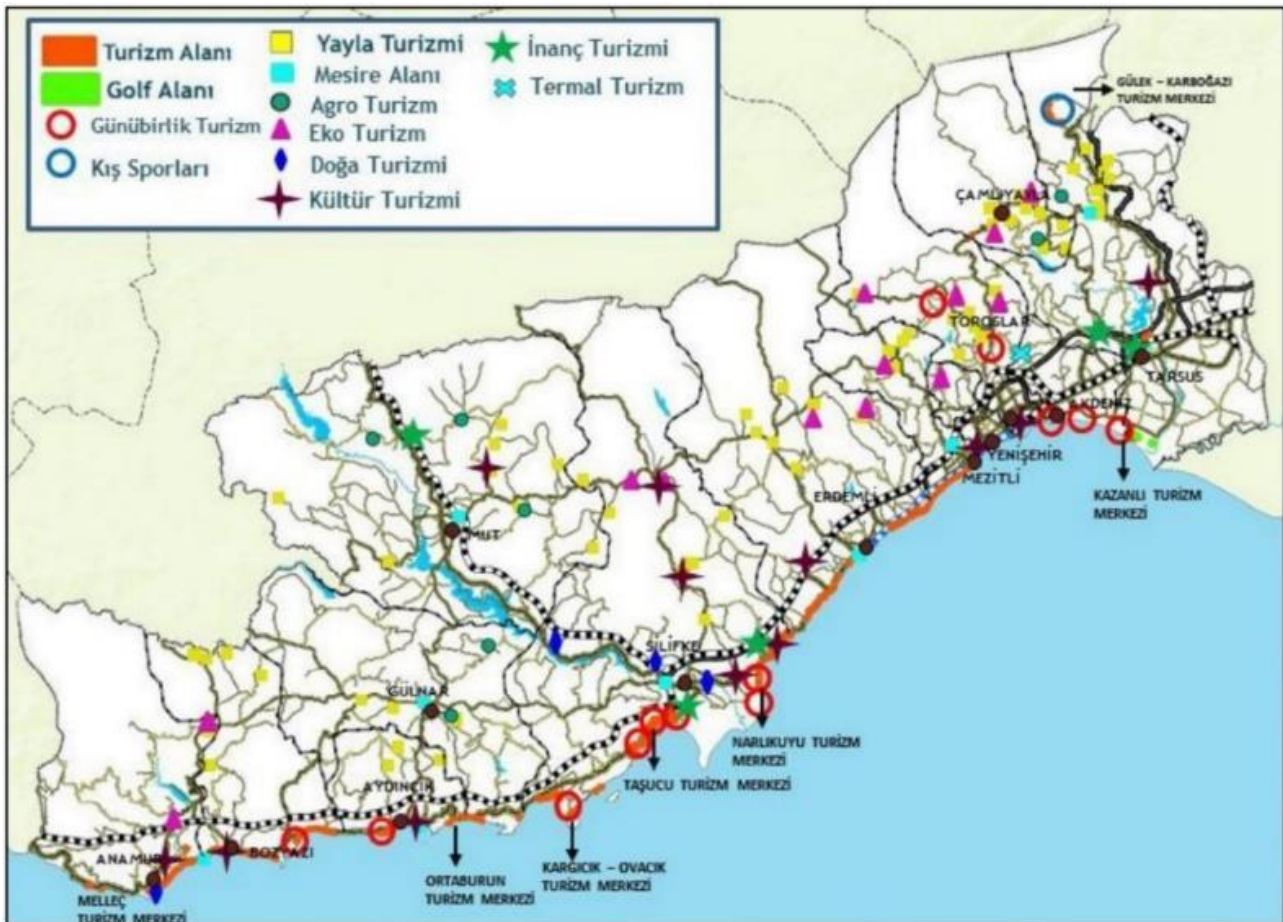


Figure 19. Alternative tourism nodes in Mersin as proposed by the Environmental Master Plan.

Source: Ministry of Environment and Urbanization (2017a: 44).

The planning decision of the Environmental Master Plan for Kizkalesi and its rural hinterland is to continue its existing situation (Figure 20). There is no specific legend category for the existing tourism facilities and they are all considered in the “*preferential land use areas*”. This legend category is defined as “*commonly tourism, but may also include housing, complementary commercial activities, and social, cultural and technical infrastructure areas*” in the Planning Decisions Report (Ministry of Environment and Urbanization, 2017b: 4). These preferential land use areas are the legend categories that give possibility for mixed-use areas. This means that the tourism facilities are proposed as a part of mixed-use areas. Although the size of tourism areas is not precisely given in the plan, 50% of all preferential land use areas are expected to have tourism facilities and all the projections are made with reference to this assumption as it is stated in the Planning Report (Ministry of Environment and Urbanization, 2017a: 20).

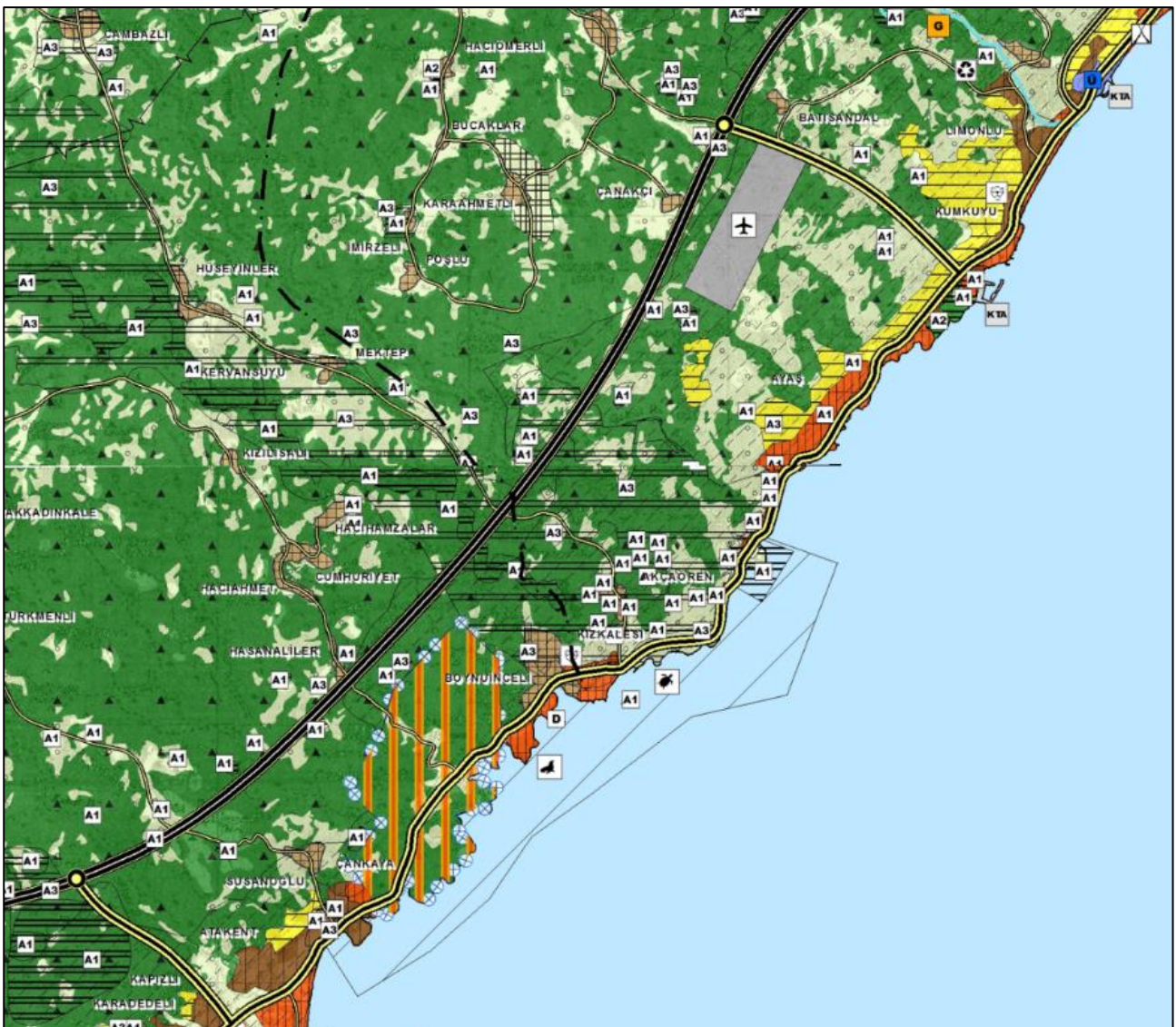


Figure 20. Kizkalesi and its vicinity in 1/100000 Environmental Master Plan for Adana and Mersin Planning Region.

Source: P32 map of *Mersin-Adana Planlama...*

The Environmental Master Plan also proposes investments in transportation modes as new motorway, railroad and airport constructions to increase accessibility of the region and so to increase the tourism capacity of the region, as well as Kizkalesi. Yet, these proposals were criticized by locals as not

considering the archaeological remains and cultural landscape of the region (Naycı, 2021) and as difficult to implement due to property ownership.

The main planning decision about tourism in the vicinity of Kızkalesi is the Silifke Narlıkuyu-Akyar Tourism Centre. The area officially declared as tourism centre in 2006 covering 1,046.0 hectares' area, later decreased to 1,025.3 hectares in 2013 and officially declared as culture and tourism conservation and development zone in 2018. The tourism zone locates between two important tourism nodes of the region, namely Kızkalesi and Susanoğlu (*Turizm merkezleri...*). In order to connect these two tourism attraction centres to each other actively, the tourism centre includes Narlıkuyu settlement, Korykon-Antron Pits, Asthma Cave as the significant local tourism nodes. The spatial planning studies of this tourism centre are in progress. It is expected that the tourism activities will surge after the spatial planning studies are completed.

Spatial planning at local level

The administrative system in Kızkalesi has changed over the last decades which has directly affected the spatial planning system. Changes in the administrative system also resulted in changes in administrative boundaries. In order to understand the challenges of spatial planning, these changes should be overviewed.

Kızkalesi has been a rural neighbourhood of Ayaş village in Erdemli District since 1989. In the 1990 Census, the population of Kızkalesi increased to 3,091 in parallel to increasing tourism activities. Aiming to manage administrative issues and to direct urbanisation in the settlement, Kızkalesi was declared as Town Municipality in 1994 (Koca & Şahin, 1998). Since 2013, together with Limonlu, Kocahasanlı and Narlıkuyu, Kızkalesi has been one of the four town municipalities under Erdemli District. Kızkalesi was a town itself governed by the local municipality in charge of spatial planning rights and authority. After 2013 with the amendments in administrative system and redefinition of administrative boundaries of metropolitan municipalities, Kızkalesi town municipality was disbanded and the settlement is given neighbourhood status under the authority of Erdemli district municipality.

Due to these changes in administrative boundaries of municipalities, the planning history of the settlement can be examined in three periods – initial planning implementations since 1989, partial and comprehensive planning studies between 1989-2013, and central planning after 2013.

The settlement was developed piecemeal by partial development plans during the early urbanisation period in the 1980s and the 1990s. The preparation of the spatial development plan started right after the establishment of Kızkalesi Municipality in 1993. Since there were no base maps for spatial plans, the municipality applied to the Provincial Bank – a former central public institution in charge of planning and infrastructure investments – for the preparation of them. The base maps were produced in 2004. Due to the urgent need to control and direct increasing demands for new constructions especially in the southern part of D-400 Highway, 1/1000 scale implementation development plan was prepared and approved by Kızkalesi Municipality (of the period) in 2005 (Figure 21). The main aims of the implementation plan were to control changes in the physical environment, to direct especially tourism related investments and to achieve a healthier development in the urban centre. Yet, the major justification of the plan was to legalize partially developed plots into a legal framework of a planning framework. Implementation plan proposed a building layout with maximum 5 storey height. Outside the planning boundary, development based on partial plans has continued (Figure 22).

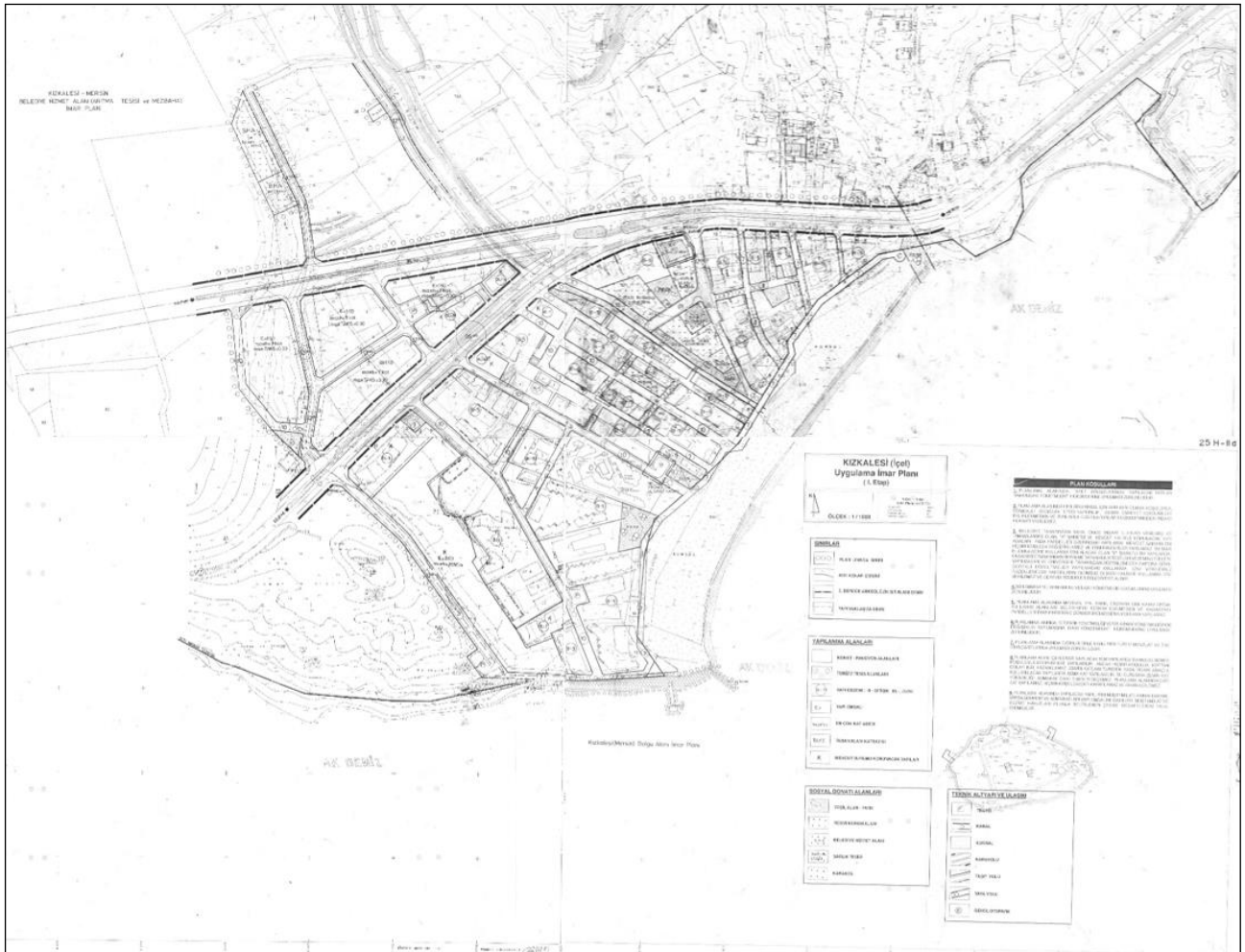


Figure 21. 1/1000 scale implementation plan of Kizkalesi urban centre.

Source: personal archive of Yasemin Sarıkaya Levent.

By the termination of Kizkalesi Municipality right after the local elections in March 2014, spatial planning authority and the responsibility to monitor spatial development and implementation plans were transferred to Erdemli Municipality. By the new administrative system at the local level, Mersin Metropolitan Municipality has been assigned as the final approval authority for all spatial planning actions within the boundaries of the province.

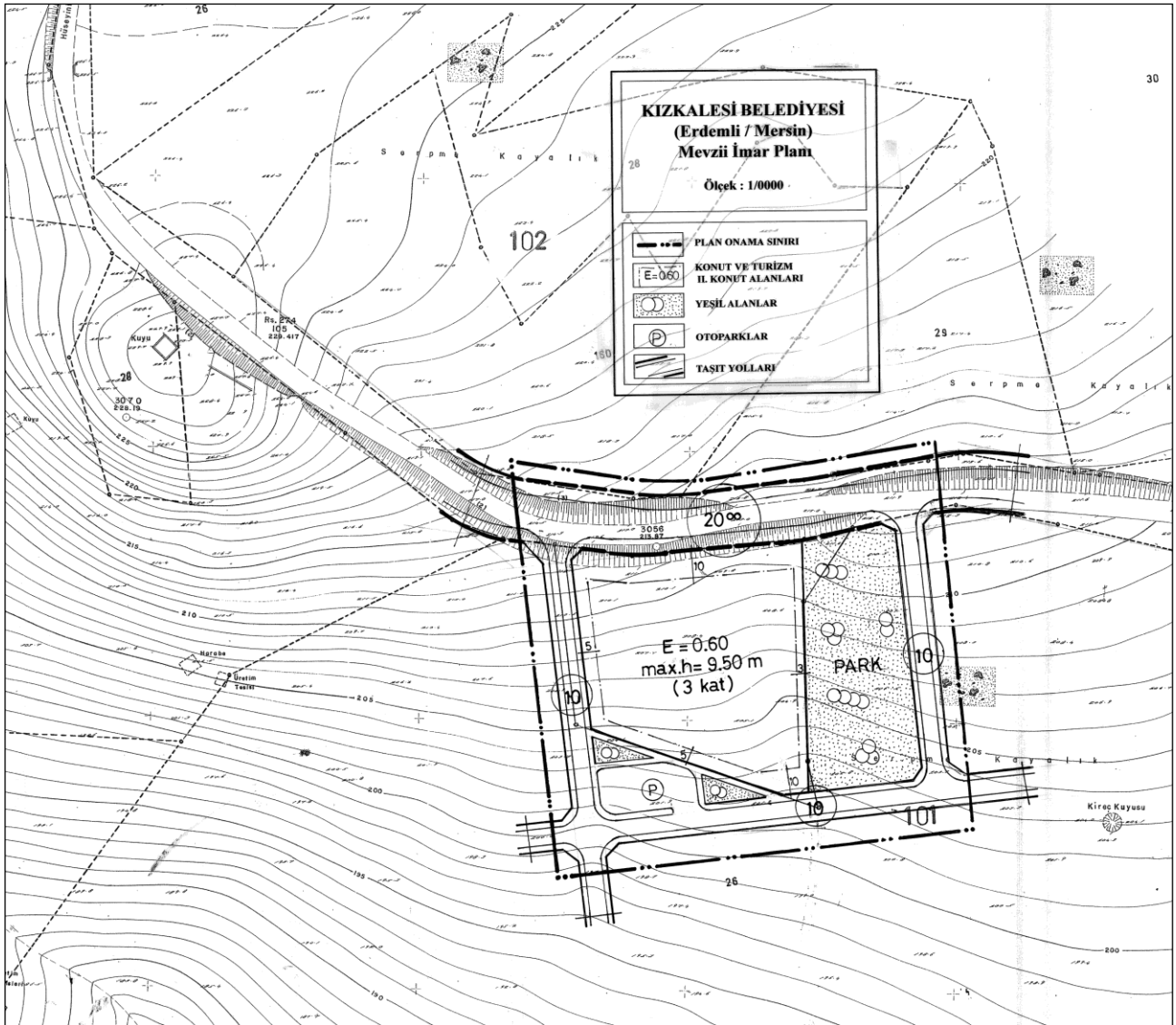


Figure 22. 1/1000 scale partial development plan in Kızıkalesi and its application as secondary houses 3.2 km north of the urban centre of Kızıkalesi along Hüseyinler road.

Source: personal archive of Yasemin Sarıkaya Levent.

Right before the disbandment of Kızıkalesi Municipality, spatial implementation plan has been revised in December 2013. The major land use proposal of the revision plan is tourism and secondary housing areas (as indicated by yellow in Figure 23) alongside limited proposals for tourism facilities (as indicated light pink/orange in Figure 23) and public uses such as administrative units, schools, health care centres and green areas. All buildings are given the right to use their ground floors for commercial purposes by getting permit from the municipality. The revision plan has increased development rights and expanded the boundaries of the built-up area. The maximum height for buildings, which was 5 floors in previous plan, has been increased up to 12 floors in specific sections. The increase in development rights, which was demanded by landowners during the plan preparation period (*Kızıkalesi Municipality Council...*) has been accepted by the municipality council and then approved by the plan.

1/1000 scale revision implementation plan prepared and approved in 2013 is still in force. Plan modifications, when needed or proposed by landowners, are prepared or evaluated by Erdemli Municipality and sent to Mersin Metropolitan Municipality for final approval.



Figure 23. 1/1000 scale revision implementation plan of Kizkalesi urban centre.

Source: *Mersin Metropolitan Municipality*.

Along with the spatial planning, Kizkalesi Municipality (of the period) had also started the conservation planning process for archaeological areas in order to control development and determine protection measures in 1998. Archaeological conservation areas are subjected to different spatial planning procedures in Turkey - namely conservation development plans. These plans are prepared for 3rd degree archaeological conservation areas where the intensity of archaeological remains are considerably low in comparison to 1st degree areas and in which development is permitted after a scientific survey is conducted in the property. Conservation development plans could be considered as implementation plans defining development rights of private properties, as well as restrictions in order to ensure the protection of cultural heritage. These plans are different, especially in terms of the approval process. Conservation Development Plans prepared by the related planning authority should be evaluated and approved by Regional Conservation Councils before implemented. Similar to the implementation development plan process, the conservation planning processes in Kizkalesi started in 2004 after the base maps produced by the Provincial Bank. By the application of Kizkalesi Municipality (of the period) to Adana Regional Conservation Council for updated designation decisions and site boundaries, in-situ investigations by officials were carried out and boundaries of designated areas were determined. Yet, during this process conservation legislation has changed and the conservation plan preparation process could not be completed. After the disbandment of the Kizkalesi Municipality in 2013 and transferring planning rights to Erdemli Municipality, the conservation development plan studies were undertaken by Erdemli Municipality, and this process is still continuing. In 2021, the plan

was approved by Mersin Metropolitan Municipality and sent to Adana Regional Conservation Council to be examined and approved. Although studies related to the conservation development plan of Kizkalesi has started after the establishment of the Municipality, it hasn't been completed since then due to financial and technical shortages, lack of base maps, long spatial planning and conservation procedure and changes in administrative boundaries and responsibilities, amendments in legislative system. Thus, spatial planning implementations within the 3rd degree archaeological conservation area have been continuing piecemeal on plot scale (Naycı, 2010). Kizkalesi Neighbourhood archaeological and natural conservation areas 1/5000 conservation development plan and 1/1000 scale conservation implementation plan" prepared by Erdemli Municipality on September 1, 2020, and submitted to Mersin Metropolitan Municipality Council for approval. Both plans are still in progress.

Other than these spatial plans prepared or still on progress by local municipality, there is one specific local spatial plans ongoing in 2021: "Kizkalesi Neighbourhood Coastal Defence and Recreation Facilities 1/5000 scale spatial development plan and 1/1000 scale implementation plan" being prepared by the Ministry of Urbanisation, Environment and Climate Change (Figure 24). The plan proposes green areas on the seaside of the coast line and a sea structure (pier) at the southern edge of Kizkalesi. This plan has been proposed by the central government in 2021, yet there has been a rejection from Mersin Metropolitan Municipality Council. The planning process is still ongoing.



Figure 24. Kizkalesi Neighbourhood Coastal Defence and Recreation Facilities proposal by the Ministry of Urbanisation, Environment and Climate Change.

Source: *Mersin Metropolitan Municipality*.

Other than spatial plans, there have been local initiatives and projects to foster tourism development in Kizkalesi and its vicinity. In 2000, a local initiative has determined and organized a trekking route named as "Footpath of the Princess" (*Prencesin Ayak İzleri...*). The trekking tour starting from Olba-Diocaeseria ends in Kizkalesi following through the ancient trade route between two important ancient settlements of the

region. This organization aimed to present the potentials of the area by introducing an alternative tourism route. Although the continuity of the project has not been achieved at expected level, some of the tour organisations still tend to use the concept and organise trekking tours in the region (*Prencesin Ayak İzleri Parkuru...*).

In 2021, another tourism project named as “Olba Cultural Route” (*Olba Kültür Yolu...*) has been developed for the area with the collaboration of Erdemli Chamber of Commerce, Mersin University and Erdemli Municipality and financed by Çukurova Development Agency (*Olba Kültür Yolu...*). The project aims to achieve sustainability in tourism activities, to support local development with tourism activities, and to increase the visibility and recognition of the region by proposing alternative tourism destinations. The project proposed different cultural routes one of which is “Pirates, Towers and Castles” route including a stop in Korykos ancient city. The project is completed in 2021, and local activates are being organised to disseminate the results of the project.

Recent challenges of spatial planning in Kizkalesi

Kizkalesi is a remarkable local tourism attraction centre in South-eastern Mediterranean region of Turkey with its diverse and unique natural and cultural assets. Yet, there are specific challenges; such as the pressure for development while the settlement is surrounded by natural and cultural conservation areas, huge population increase during tourism season that creates carrying capacity and management problems, difficulties in accessibility from distant locations, and the lack of comprehensive local spatial plan to direct changes in physical environment. These challenges create uncertainties in tourism development in Kizkalesi.

The high level of seasonal population differences due to tourism activities creates carrying capacity and management problems in Kizkalesi.

Being an important tourism destination in the region, the number of tourists visiting Kizkalesi reflects an increasing trend year by year. Especially domestic tourists from close provinces prefer to spend their vacations in Kizkalesi as it is relatively cheaper and closer than other tourism attraction centres such as Alanya, Side or Bodrum. Accommodation occupancy rates reach nearly 100% during July – August and 70% in June and September. Besides, Kizkalesi is an important tourism destination for daily trips. This demand creates a considerable difference in seasonal populations. Tourism activities attract an additional population during the summer months on a daily basis and by short/medium/long term stays, which increases the summer population approximately up to 40,000 people, whereas the winter population of the settlement is only 1,619 people. This seasonal increase in population creates a carrying capacity problem for Erdemli Municipality in terms of public service provision.



Figure 25. Kizkalesi beach during 2020 summer season.

Source: *Kizkalesi'nden korkutan...*



Figure 26. D-400 Highway traffic during 2020 summer season.

Source: *Kizkalesi'nden korkutan...*

By the changes in administrative boundaries in 2013, the responsibility area of Erdemli Municipality has been extended to include rural settlements in the northern parts. Moreover, municipalities receive budget share from the central government according to their permanent population. Especially for those municipalities with dense tourism activities, providing services with limited personnel and budget could be a burden during the tourism seasons.

The lack of sustainable approach for developing while preserving creates negative impacts on cultural and natural assets.

Tourism and agriculture are the main economic activities of Kizkalesi and its vicinity. Both of these economic activities could be enhanced by sustainable use of cultural and natural assets. Without a sustainable approach, however, they could produce direct or indirect negative impacts on diverse and unique cultural and natural assets merged with each other. The dense urban development along the coastal line creates a threat on the natural habitats for Mediterranean monk seals and sea turtles. This dense development emerges due to the cultural and natural assets that block the growth of the urban part of Kizkalesi. The lack of available lands for urban development around the urban settlement causes demands for plan modifications increasing building heights from 5 or 7 storeys to 12 storeys. This is a process of densification decreasing the physical quality of urban environments and producing adverse impacts on tourism activities. Not only in the urban part of Kizkalesi, but development trends in the rural hinterland as mass agricultural activities and new residential complexes in rural areas do not consider the cultural landscape of the settlement.

The urbanisation has increased rapidly in Kizkalesi by the 1990s and continued during the 2000s. During this rapid and partly unplanned urbanisation process, technical infrastructure has not been considered as much as superstructure. Infrastructure projects to solve the problems of existing settlement are important and most of the time compulsory implementations to achieve liveable urban environments. Yet, such projects can have negative impacts on cultural or natural assets. The project for enlarging D-400 Highway in 2005 has been discussed about its possible benefits for the accessibility of the settlement that

might speed up the tourism development, but also about its actual damage to archaeological remains, especially in the necropolis area of Korykos. Not considering the critiques, the intercity road with two lanes that has already been passing through the 1st degree archaeological conservation area has been enlarged into a four-lane divided road. Similarly, the location proposal for Kumkuyu Airport in the north of Kanytelleis and the new settlement proposed around the airport again has been objected to by NGOs and stakeholders. It is commonly agreed that transportation facilities in the region should be improved to increase tourism capacity, yet the location is very close to the ancient city of Kanytelleis so that the project would have direct and indirect negative impact on the cultural assets.

Current transportation system in Kizkalesi is limited in terms of regional accessibility especially for foreign tourists.

Kizkalesi is one of the most important tourism attraction centres of the region, yet there are problems accessing Kizkalesi due to the insufficient intercity transportation. The settlement is accessible only through D-400 Highway, and due to geographical thresholds, it is in closer relation with eastern Mediterranean and southeaster Anatolia than western Mediterranean. The node for air transportation, namely Adana Şakir Paşa International Airport is 143 km far from Kizkalesi and it takes more than 3 hours to go to that airport. Çukurova Regional Airport (under construction and will be completed in 2022) is closer to Kizkalesi (12 km), the duration of the trip will only be slightly shorter than the existing situation. Actually, there is another airport proposal (a STOL type airport) in Kumkuyu, which is very close to Kizkalesi, approximately 15 km in the northeaster direction. This proposal was made in 2001, yet there has been no development to construct this airport since then. What could be concluded is that accessing Kizkalesi by air transportation is very difficult, especially for foreign tourists. The only ports for the ones who want to go to Kizkalesi via sea transportation are Mersin International Port and Taşucu Port. They are 70 km and 35 km far from Kizkalesi respectively and their passenger capacities are considerably limited. The same is true for rail transportation. The only connection to rail transportation is the Mersin Station located in the city centre. Since there is no high speed train connection to Mersin, tourists from other cities do not prefer rail transportation due to the long duration of the trips.

Within this context, road transportation becomes the main mode of transportation. However, the lack of motorway in northeast and southwest direction and the existing highway passing through the all settlements between Mersin and Kizkalesi increases the duration of time of the travel by road. There is a motorway proposal from Mersin to Silifke and Karaman; yet similar to Kumkuyu Airport proposal, it is not within the short-term investment programs of central and local administrations. Due to these limitations in regional transportation, Kizkalesi becomes accessible only for domestic tourists mainly from southeaster and central Anatolia, but not for domestic tourists from other regions and for foreign tourists.

Lack of comprehensive local spatial plans resulted in fragmented and piecemeal development in the settlement in the last 30 years.

Kizkalesi started to grow during the 1980s under the influence of increasing tourism demand in the region. Yet, this development was directed by partial plans. The spatial development plan for the urban part

of the settlement came into force in 2005. But from then on, not only the changing local dynamics but also large scale investments proposed in regional plans call for a revision in the spatial development plan to meet the needs of local people as well as to coordinate tourism development in the region.

When the population of Kızkalesi settlement has increased up to 3,000 inhabitants in the 1980s, traditional rural settlement has been administratively changed from village to town status and it was given the planning authority. This change was basically on an administrative level and it was not backed up by increasing technical and financial capacities of newly founded municipalities. However, Kızkalesi includes conservation areas and coastal areas, both of which are vulnerable against development impacts (Naycı, 2010) and requires a special knowledge and technical expertise for spatial planning. Therefore, the planning process conducted without that special knowledge and technical expertise within the last 30 years also brought additional problems to Kızkalesi.

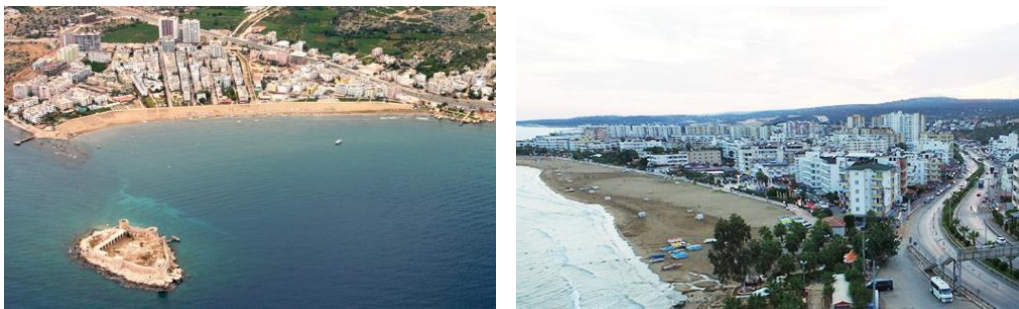


Figure 27. General view of urban centre of Kızkalesi where tourism facilities are concentrated.

Source: *Kızkalesi gezi...* and *Kızkalesi/Erdemli...*

At present, Kızkalesi administratively is located at the periphery of Erdemli district while neighbouring Silifke district. Both municipalities have the authority to prepare and implement spatial plans within their boundaries. These administrative boundaries are determinant in planning authority and responsibilities; however, Kızkalesi is a part of a coastal settlement system, parts of which are located within the administrative boundaries of both municipalities. Adamkayalar, located 3 km north of Kızkalesi is within the administrative boundary of Silifke Municipality, however it is spatially more integrated with Kızkalesi, which is administratively within the responsibility area of Erdemli Municipality. There is a lack of collaborative and coordinated spatial planning studies between these two municipalities to direct and control urban development and to enhance tourism development in a collaborative manner. Regional plans provide a broad perspective for the future of the region, yet they do not point out detailed spatial proposals. There is an apparent need for a spatial development plan for Kızkalesi prepared in collaboration of both municipalities.

The change in administrative status of Kızkalesi has also caused fragmentations in the continuity of the planning processes over the last 30 years. The settlement still lacks a conservation implementation plan even though planning studies started in 1993.

Lack of technical and social infrastructure create a barrier for tourism development.

Kızkalesi and its vicinity have high potential for cultural tourism with the diverse and unique cultural and natural assets. Tourists are expected to visit historical sites and attraction centres, to learn local culture, and to experience daily life of the settlements by using the transportation possibilities. Adamkayalar, Korykon-Antron Pits (Cennet-Cehennem), Narlıkuyu Mosaic Museum, Kızkalesi Land and Sea Castles,

Elauissa-Sebaste, Kanytelleis, Olba-Diocaeseria (Uzuncaburç), Asthma Cave all together constitute a tourism destination offering different alternatives for foreigners to domestic visitors, for daily visitors to long-term visitors, for high income groups to low income groups, for young to old, or for single to families. Out of these cultural and natural attraction nodes, only Adamkayalar, Elauissa-Sebaste and Olba-Diocaeseria do not have visitor centres, and there are problems regarding reaching to the site, service facilities, visitor paths, information boards and security.

Climate change threatens the cultural landscape of Kizkalesi.

The Mediterranean region is under the effect of sea level rise that has caused submergence of various ancient coastal cities. The coastal structures of Korykos and Elauissa-Sebaste have submerged, and their coastline has undergone changes (Naycı, 2010). This has been a continuing process for centuries, yet it has been accelerated in recent decades as a result of climate crises. Another possible impact of climate change is irregular precipitation regime, which could cause floods in settlements. Heavy rainfalls have resulted in flooding of Mintan River in 2002, 2006 (Naycı, 2010), 2012 (*Kizkalesi'ni sel aldı...*) and 2017 (*Mersin'de yağışlar...*) which had inverse impacts on the settlement. Billows during the storm in 2006 have also caused extreme damage to accommodation facilities located along the coastline (*Kizkalesi sele teslim...*). Aiming to minimise negative impacts of storm water overflows, the Metropolitan Municipality implemented the storm water system project in 2021. Additionally, the increase in temperatures and decrease of humidity would cause more and longer wildfires in the near future. Vegetation characteristics of the northern parts of the settlement and hot-arid climate of the region would increase territorial wildfire risk which could directly threaten the settlement as well as the natural and cultural assets of the region.



Figure 28. Impact of heavy rainfall as flood on D-400 Highway in December 2012, and November 2017.

Source: *Kizkalesi'ni sel aldı...* and *Mersin'de yağışlar...*

Actionable policy recommendations

Kızkalesi is one of the most important tourism destinations in Mersin. The destination includes various cultural and natural assets, a sandy beach, a long summer season, and different types of accommodation units affordable for different income groups and different types of tourists. Tourism development in Kızkalesi started in the 1980s and accelerated especially during the 2000s. However, the rapid development brought different problems alongside, such as over-tourism, especially during the summer period. The high number of visitors results in insufficiency of public services and technical infrastructure. Over-tourism also creates traffic congestion and parking problems due to the lack of proper public transportation and high level of private car usage in accessing the destination.

The aim of this section is to propose solutions for these problems and identify sustainable development directions at local, regional and national levels. Aiming this, actionable policy recommendations to enable sustainable development goals in the case study area are formulated. Actionable policy recommendation process has two phases: firstly, student studies during the study visit in Kızkalesi in December 2021 are reviewed, and then review of studies are gathered under one complete policy recommendation set constituting relations with sustainable tourism development and by considering beneficiaries of actions.

Policy recommendations from students' studies during the SPOT project's study visit

To deal with the problems and the potentials of Kızkalesi, a study visit was conducted in December 2021. During this study visit, students from different countries came together in a multidisciplinary and multicultural study environment and proposed actionable policy recommendations to achieve sustainable tourism development in Kızkalesi. The study visit included the presentation of the case study area, different workshops, technical excursion to the case study area, panel discussions with local stakeholders, and group studies conducted by students. After the technical excursion to Kızkalesi and surrounding tourism spots, students were divided into three study groups to propose actionable policy recommendations with different points of view.

Study Group 1 – Make Kızkalesi Vibrant Again

The study group focused on specific problems, as transportation and accessibility, the seasonality in tourism, the insufficiency of public services, and mass tourism. To solve these problems in a sustainable way, they proposed straightforward simple strategies to make Kızkalesi a vibrant tourism destination all year long by considering the stakeholders related to the solutions to these problems.

The transportation and accessibility problems are considered at both interurban and intraurban levels. To increase the accessibility of Kızkalesi at the interurban level, they propose both water transportation as an alternative to road transportation and new shuttle services from the Adana Şakirpaşa Airport in order to improve the quality of journeys and shorten their duration. At the intraurban level, there are three different types of policy recommendations for urban transportation and intraurban accessibility. The first one is the proposal of an alternative highway to the D-400 Highway in the east and west direction

in order to decrease the level of congestion along it during the high season. The second policy recommendation focuses on pedestrians. There are not only pedestrianisation proposals on specific streets but also the transformation of certain streets into pedestrian-friendly environments by using special infrastructure and having speed limits for vehicular traffic. The last policy recommendation concerning the transportation and accessibility at the intraurban level is about parking spaces. Although there is an apparent need for additional parking spaces, the recommendation concentrates on the qualitative reorganization of them instead of increasing their numbers. It is assumed that the reorganization of accessible public transportation directly would lead to a decline in the use of private cars, which consequently might decrease the parking spaces needed.

To overcome the problems related to seasonality in tourism, the introduction of new types of off-season activities with reference to a strategic master plan is considered a policy recommendation. Along with this introduction, proposing new forms of accommodation such as camping, glamping, guesthouses, and hotels and transforming a certain amount of secondary houses to the hospitality industry, especially in high seasons, are proposed as tools to attract different types of tourists to Kizkalesi.

The provision of public services such as a high school, a cultural centre, and a sports complex is considered another policy recommendation. Those kinds of facilities would not only support the inhabitants but also tourism activities. If high school is specialized in tourism, it might support the development of human capital in the region. A cultural centre or a sports complex would be used by both existing and new forms of tourism such as sports tourism as one of the fastest growing forms in tourism.

To overcome the problem of mass tourism, an increase in the quality of products offered by the small businesses in Kizkalesi is proposed as a policy recommendation. It is conceptualized as a tool not only to attract high-income tourists to Kizkalesi but also to maximize the income of small business owners.

Study Group 2 – All Roads Lead to Kizkalesi

The study group defined problems as seasonality and over tourism - which in turn creates traffic congestion along D-400 Highway, lack of accommodation units during high season, and huge population difference between off and peak seasons. Tourism in the destination is mainly based on local tourists and only the sun-sea-sand tourism type is observed. On the other hand, having ancient roads that connect different archaeological sites with each other and with the coastline, the destination has the opportunity to diversify tourism activities and spread tourism activities all over the year. The study group put their main strategy as to promote and disseminate the destination to attract tourists also during off-season periods by using the historical assets in and around Kizkalesi. The strategy is based on connecting existing archaeological sites by reconstruction of the ancient Roman road in the form of a tourism path for walking and cycling. The main purpose of the strategy is to create a sustainable and accessible centre in Kizkalesi destination.

Considering the over-tourism problem in the destination during summer seasons and also considering the global tourism expectations, the strategy aims to change tourist behaviours by promoting and improving the existing attractions of the destination. Based on local interviews and by evaluating the local tourism potential, the policy recommendation is based on using historical assets to create a sustainable and accessible all-season touristic hub, which can transport tourists to ancient times and make them familiar with the current cultural mix occupying the region. This strategy would also help to diversify the tourist profile

in the destination, and foreign visitors would be attracted all through the year, as well as local visitors for shorter or longer terms.

Actions to be implemented are (1) to connect the town with the sea castle using boats and/or a portable bridge and/or sea bikes to make the main attraction point more accessible, (2) to organize a nomad festival in the open spaces throughout the year to attract tourists, (3) to create bicycle and pedestrian routes, one alongside the coast connecting Kanytelleis, Elaiussa-Sebaste and other ancient ruins with Kızkalesi – named as Steps of Abba, and second leads along the river that connects the ancient city to northern parts, (4) to promote organic agriculture and agritourism in the northern parts in order to attract tourists even in winter months.

These actions should be realized by the collaboration of local municipalities and provincial directorates of culture and tourism. Considering the richness of cultural assets in the destination, all actions should be carried out under the supervision of the regional council. The strategy would be beneficial for local people and tourism agencies, but especially hotel owners as the most important structural element of tourism development in the destination.

Study Group 3 - Erasmus+ Opportunities as a Chance for Developing Tourism in Kızkalesi

Out of the determined problems such as over-tourism, seasonality, accessibility, and infrastructure, the study group focused on seasonality problems and proposed an innovative, easy-to-implement, and effective policy recommendation to achieve a sustainable tourism destination in Kızkalesi. Using, the policy recommendation aims to overcome seasonality problems by making the Kızkalesi more attractive, sustainable and active all throughout the year by using the opportunities of the Erasmus+ Programme. Erasmus+ Programme including student and researcher exchange projects with medium-term stays in different seasons can create an internationally functioning tourism destination active all through the year. The recommendation includes different activities conducted in different places within and near Kızkalesi.

The policy recommendation proposes to increase the awareness of local people and local government about the Erasmus+ Programme and how to set up NGOs and take part in projects in collaboration with researchers, academicians, and students. Kızkalesi presents opportunities for diverse research areas including protecting natural life such as sea turtles, tourism, sports, history, archaeology, and agriculture.

The main beneficiaries of the recommendation are local people, local government, participants of the Erasmus+ Programme, tourist offices, and transportation companies. As the Erasmus+ Programme is funded by the European Commission, the main financial support will be obtained from that source, yet the recommendation also requires knowledge, time, and experience.

Policy recommendations for sustainable development goals

In the year 2015, governments have adopted the 2030 Agenda for Sustainable Development (UN, 2015), along with the Sustainable Development Goals (UN, n.d.). The agenda has determined goals and specified actions in order to set out a global framework for governments how to deal with diverse problems of humanity – from hunger to peace, from energy sources to economy. Acknowledging that tourism is one

of the most important economic sectors, it is underlined by UNWTO that tourism can contribute, directly or indirectly to sustainable development goals (UNWTO, n.d.).

Table 3. The contribution of tourism for achieving sustainable development goals.

No. of SDG	Goal	Tourism...
1	No Poverty	fosters economic growth and development at all levels provide income through job creation, and promotes entrepreneurship and small businesses
2	Zero Hunger	spurs sustainable agriculture by promoting the production and supplies to hotels, and sales of local products to tourists, and generates additional income through agro-tourism
3	Good Health and Well-Being	reinvests tax income generated from tourism and visitor fees can in health care and services
4	Quality Education	provides opportunities for direct and indirect jobs for youth, women, and those with special needs, who should benefit through educational means
5	Gender Equality	empowers women, particularly through the provision of direct jobs and income-generation from SMEs in tourism and hospitality related enterprises
6	Clean Water and Sanitation	safeguards water sources by the efficient use of water in tourism, pollution control and technology efficiency
7	Affordable and Clean Energy	accelerates the shift towards increased renewable energy shares in the global energy mix by promoting investments in clean energy sources
8	Decent Work and Economic Growth	enhances tourism positive socio-economic impacts by decent work opportunities, particularly for youth and women
9	Industry, Innovation and Infrastructure	influences public policy for infrastructure upgrade and retrofit, making them more sustainable, innovative and resource-efficient and moving towards low carbon growth
10	Reduce Inequalities	reduces inequalities if it engages local populations and all key stakeholders in its development
11	Sustainable Cities and Communities	advances urban infrastructure and accessibility, promotes regeneration and preserve cultural and natural heritage, assets on which tourism depends
12	Responsible Consumption and Production	adopts sustainable consumption and production (SCP) modes, accelerating the shift towards sustainability
13	Climate Action	plays a leading role in the global response to climate change by reducing its carbon footprint, in the transport and accommodation sector
14	Life Below Water	helps conserve and preserve fragile marine ecosystems and serves as a vehicle to promote a blue economy, contributing to the sustainable use of marine resources

No. of SDG	Goal	Tourism...
15	Life on Land	plays a major role if sustainably managed in fragile zones, not only in conserving and preserving biodiversity, but also in generating revenue as an alternative livelihood to local communities
16	Peace, Justice and Strong Institutions	fosters multicultural and inter-faith tolerance and understanding, laying the foundation for more peaceful societies
17	Partnerships for the Goals	has the ability to strengthen private/public partnerships and engage multiple stakeholders – international, national, regional and local – to work together to achieve the SDGs and other common goals

Source: own elaboration based on UNWTO (n.d.).

It is a fact that Kizkalesi deals with several problems from tourism development and spatial planning perspectives. These problems have accumulated over time since the 1980s. Although there have been strategic, spatial and tourism-related planning interventions within the last decades, they were not efficient enough to call solutions to the problems. Considering the role and power of tourism in enabling sustainable development goals, a set of actionable policy recommendations are proposed.

Table 4. Actionable policy recommendations towards sustainable tourism development in Kizkalesi.

Areas of intervention	SDGs	Recommendations
Transportation	9, 11, 13	(1) increasing the accessibility of the tourism destination by providing new modes of transportation, namely public buses that connect the city centre and other districts in the province with the destination, shuttles between Adana Airport and the destination, using sea transportation as an alternative mode of transportation
		(2) promoting pedestrian movement and bicycle use within the settlement by pedestrianisation of roads towards sea
		(3) locating new parking lots within the settlement in relation to pedestrianisation
		(4) construction of a new bypass road on the northern part of the settlement to take interregional traffic out of the settlement
Technical infrastructure	6, 9, 13	(1) construction of storm water system all over the settlement in order to decrease the storm water overflow risk
		(2) rehabilitation of the streams to collect and direct storm water properly towards sea
		(3) providing additional waste collection services during the peak seasons
		(4) promoting recycling of wastes in tourism facilities

Areas of intervention	SDGs	Recommendations
		(5) implementing early detection system for territorial wildfires especially on the northern parts of the settlement
Social infrastructure	1, 3, 4	(1) establishment of new life-long-learning education facilities for local people about tourism service provision
		(2) establishment of new vocational schools on tourism to support the human capital development
		(3) increasing the number of public services for local people to control depopulation in the settlement
		(4) increasing number of sport facilities and green spaces for local people and also for alternative tourism activities
Resilience to climate change	7, 13	(1) monitoring the sea level rise systematically to control the risk on cultural and natural assets
		(2) supporting the use of renewable energy sources in tourism facilities
		(3) promoting the use of climate-friendly materials in all kind of constructions
Diversification of economic activities	1, 2, 8, 12	(1) promoting alternative tourism activities considering the natural and cultural potentials of the destination
		(2) promoting theme-oriented tourism activities such as agritourism, educational tourism, culture tourism
		(3) diversification of tourism facilities for different groups of visitor by giving supports and incentives to tourism investors
		(4) supporting agricultural activities around the settlement and fostering circular economy between tourism facilities and agricultural producers
Protection of natural and cultural assets	1, 2, 14, 15	(1) protection of agricultural lands around the settlement and using those lands only for agricultural purposes
		(2) controlling the urban growth towards north and east to protect natural and cultural landscape
		(3) having additional precautionary measures for the protection of natural habitat of Mediterranean monk seals and sea turtles especially during peak seasons
New organizational bodies and financial tools	10, 16, 17	(1) establishing an intermediary administrative body between Kızıkalesi neighbourhood, Erdemli and Silifke District Municipalities, and Mersin Metropolitan Municipality mainly responsible for the management of tourism related activities and for the preparation of a comprehensive spatial development plan
		(2) proposing a new city tax to finance technical and social infrastructure in the settlement under the control of new intermediary administrative body

Areas of intervention	SDGs	Recommendations
		(3) promoting new organizations for agriculture and tourism sectors to increase the coordination and cooperation within and between these sectors

Source: own elaboration based on UNWTO (n.d.).

The main problem of Kizkalesi is the inefficient use of its tourism potential. The seasonality problem could be overcome if tourism facilities and tourism activities are diversified. Policy recommendations on supporting alternative tourism types, increasing accessibility of the destination with different modes of transportation, and triggering the interest and awareness of local community to new tourism types would help to extend tourism activities all over the year. Diversification of tourism activities would also economically empower the local community.

In relation with over tourism during peak seasons, insufficiency of the technical infrastructure creates problems both for local community and the visitors. Existing technical infrastructure should be renewed by considering the increasing population during peak seasons. Environmental risks, such as flood risk and wild fire risk should also be considered alongside the capacity increase in technical infrastructure.

In order to empower the local community, tourism activities should be diversified. Yet, this requires human capital and there is a need for community education and vocational schools in the region to support tourism facilities. Circular economy between tourism and agriculture sector would also empower the local economy and support sustainable development goals. Also tourism entrepreneurs and employees should be trained to increase the quality of tourism services in the destination, and to increase their awareness how to be more sustainable in service provision.

Finally, most of the policy recommendations could be implemented on local level; however, the financial and human capacity of local authorities is limited in Turkey. Thus, a collaborative action between local, regional and national authorities is required. Not only a collaboration between authorities, but also there is a need for public-private partnerships and strong non-governmental organisations to improve the quality of tourism facilities in Kizkalesi.

References

1. Akdeniz Deniz Suyu Sıcaklığı Analizi, <https://www.mgm.gov.tr/FILES/resmi-istatistikler/denizSuyu/Akdeniz-DenizSuyu-Sicakligi-Analizi.pdf>, (last accessed October 31, 2021)
2. Blue Flag, Kilikya Hotel, Kizkalesi Public Beach, <https://www.blueflag.global/all-bf-sites>, (last accessed October 31, 2021)
3. Cennet ve cehennem obrukları, <https://rehber.kim/turkiye/mersin/2020/07/cennet-ve-cehennem-obrukleri-mersin/>, (last accessed September 14, 2021)
4. Çetin, N. (2014). *Kızkalesi'nin Turizm Destinasyonu Olarak Marka Algısı*. Unpublished Master Thesis, Mersin University, Mersin.
5. ÇKA (Çukurova Kalkınma Ajansı / Çukurova Development Agency) (2015). *Çukurova Bölge Planı 2014-2023*, Adana.
6. Duman, T., & Öztürk, A. B. (2005). Yerli Turistlerin Mersin Kızkalesi Destinasyonu ve Tekrar Ziyaret Niyetleri ile İlgili Algılamaları Üzerine Bir Araştırma. *Anatolia: Turizm Araştırmaları Dergisi*, 16(1), 9-23.
7. Endeksa. (2021). *Kızkalesi*, <https://www.endeksa.com/en/analiz/mersin/erdemli/kizkalesi/demografi>, (last accessed October 31, 2021)
8. Essahlaoui, N. (2019). *Antik Kentlerde Kireçtaşı Yapı Taşlarındaki Bozunma Derecelerinin Değerlendirilmesi (Kızkalesi ve Kanlıdivane, Mersin)*. Unpublished Master Thesis, Mersin University, Mersin.
9. Gök, T. (2009). RIS Mersin Projesi Üzerine Bir Özet Değerlendirme. *Planlama*, 3-4, 93-95.
10. *Kanlı Divane Ören Yeri – Mersin*, <https://www.kulturportali.gov.tr/turkiye/mersin/gezilecekyer/kanlidivane>, (last accessed September 14, 2021)
11. *Kızkalesi gezi rehberi*, <https://neredegezilir.com/kizkalesi-gezi-rehberi>, (last accessed September 14, 2021)
12. *Kızkalesi Municipality Council Decision*, dated on 23.12.2013 and no. 23. Mersin Metropolitan Municipality Archive, Mersin.
13. *Kızkalesi sele teslim*, <https://www.hurriyet.com.tr/gundem/kizkalesi-sele-teslim-5356379>, (last accessed September 14, 2021)
14. *Kızkalesi*, <https://www.adamkayalarholiday.com/en/default.asp?id=6>, (last accessed September 14, 2021)
15. *Kızkalesi/Erdemli Mersin*, <https://fotopanorama360.com/kizkalesi-erdemli-mersin/>, (last accessed September 16, 2021)
16. *Kızkalesi'nde bayram yoğunluğu*, <https://www.trthaber.com/haber/turkiye/kizkalesinde-bayram-yogunlugu-506278.html>, (last accessed September 14, 2021)
17. *Kızkalesi'nde korkutan görüntü. Şezlonglarda sabahladılar, sosyal mesafe unutuldu!*, <https://www.hurriyet.com.tr/gundem/kizkalesinde-korkutan-goruntu-sezlonglarda-sabahladilar-sosyal-mesafe-unutuldu-41578374>, (last accessed September 14, 2021)
18. *Kızkalesi'ni Sel Aldı*, <https://www.haberler.com/kizkalesi-ni-sel-aldi-4161338-haberi/> (last accessed September 14, 2021)
19. Koca, H., & Şahin, İ. F. (1998). Turistik Aktiviteye Katkıları Yönünden Kızkalesi Kasabası. *Türk Coğrafya Dergisi*, 33, 349-375.
20. Levent, T. & Sarıkaya Levent, Y. (2011). Türkiye'nin İlk Bölgesel Yenilik Stratejisi: RIS-Mersin Projesi. In *1. Uluslararası Bölgesel Kalkınma Konferansı*, 22-23 Eylül 2011, Malatya, 177-184.

21. Levent, T. & Sarıkaya Levent, Y. (2013). RIS-Mersin Projesi ve Mersin Bölgesel Yenilik Stratejisi: Yenilik Üzerine Yerel Bir Değerlendirme. In *VII. Ulusal Coğrafya Sempozyumu*, 18-19 Ekim 2012, TÜCAUM, Ankara, 207-216.
22. Levent, T. (2016). RIS-Mersin Project: The First Regional Innovation Strategy in Turkey and Its Spatial Dimensions. *Folia Geographica SocioOeconomica*, 24, 5-16.
23. Mersin İl Özel İdaresi. (2010). *Mersin İli Turizm Master Planı*, Mersin.
24. *Mersin'de Turizm*, <http://www.mertid.org.tr/mersinturizm.asp>, (last accessed November 20, 2021)
25. *Mersin'de yağışlar Sele Neden Oldu, Denizin Rengi Kızıla Döndü!* <https://www.haberler.com/mersin-de-yagislar-sele-neden-oldu-d-100-10210376-haberi/> (last accessed September 14, 2021)
26. *Mersin-Adana Planlama Bölgesi*, <https://mpgm.csb.gov.tr/mersin-adana-planlama-bolgesi-i-82221>, (last accessed September 14, 2021)
27. Meteoblue. (2021). *İklim Kızıkalesi*. https://www.meteoblue.com/tr/hava/historyclimate/climatemodelled/k%c4%b1zkalesi_t%c3%bcrkiye_437794, (last accessed August 30, 2021)
28. Metin, H. (2010). *Social and Institutional Impacts of Mersin Regional Innovation Strategy: Stakeholders' Perspective*. Unpublished Master Thesis, Middle East Technical University, Ankara.
29. MGA (Meteoroloji Genel Müdürlüğü / Turkish State Meteorological Service). (2021). *Resmi İstatistikler – Mersin*. <https://mgm.gov.tr/veridegerlendirme/il-ve-ilceler-istatistik.aspx?k=A&m=MERSIN>, (last accessed: October 31, 2021).
30. Ministry of Culture and Tourism. (2017). *Tourism Strategy of Turkey – 2023 and Activity Plan for Tourism Strategy of Turkey 2007-2013*. https://www.ktb.gov.tr/Eklenti/43537_turkeytourismstrategy2023pdf.pdf, (last accessed: October 31, 2021)
31. Ministry of Culture and Tourism. (2020). *Museum and Ancient Site Visitor Statistics*. <http://www.dosim.gov.tr/assets/documents/2019-ZIYARETCI-WEB-SITESI.pdf>, (last accessed September 14, 2021)
32. Ministry of Environment and Urbanization. (2017a). *Mersin – Adana Planlama Bölgesi 1/100.000 Ölçekli Çevre Düzeni Planı Revizyonu (Mersin İli) Plan Açıklama Raporu*. https://webdosya.csb.gov.tr/db/mpgm/editordosya/file/CDP_100000/ma/PLANACIKLAMARAPORU_mersinrevizyon_03042017.pdf, (last accessed September 14, 2021)
33. Ministry of Environment and Urbanization. (2017b). *Mersin – Adana Planlama Bölgesi 1/100.000 Ölçekli Çevre Düzeni Planı Revizyonu Plan Hükümleri*. https://webdosya.csb.gov.tr/db/mpgm/editordosya/file/CDP_100000/ma/PLANHUKUMLERI_03042017.pdf, (last accessed September 14, 2021)
34. MTSO (Mersin Ticaret ve Sanayi Odası/ Mersin Chamber of Commerce and Industry). (2008). *Mersin İnovasyon Stratejisi 2006 – 2016*, Mersin.
35. *Narlıkuyu Mozaik Müzesi*, <https://www.kulturportali.gov.tr/turkiye/mersin/gezilecekyer/narlikuyu-mozaik-muzesi>, (last accessed September 14, 2021)
36. *Narlıkuyu*, <https://alselon.com/blog/narlikuyu/>, (last accessed September 14, 2021)
37. Naycı, N. (2010). *Integrated Management Policies for Coastal Archaeological Environments of Turkey: Erdemli-Silifke Coastal Region, Mersin*. Unpublished PhD Thesis, Middle East Technical University, Ankara.
38. *Olba Kültür Yolu*, <https://www.olbakulturyolu.com/>, (last accessed November 21, 2021)
39. Oskay, C. (2012). Mersin Turizminin Türkiye Ekonomisindeki Yeri ve Önemi. *Ç.Ü. Sosyal Bilimler Enstitüsü Dergisi*, 21(2), 185-202.

40. Özüpekçe, S. (2019). Turizme Bağlı Olarak Büyüyen Bir Yerleşme: Kızkalesi, Erdemli/ Mersin. In *the Proceedings of VIII. National IV. International Eastern Mediterranean Tourism Symposium*, 19-20 April 2019 Anamur/ Mersin / Turkey, 954-959.
41. Pinterest, no author, <https://pin.it/7BNWhWP>, (last accessed September 14, 2021)
42. Pinterest, Ömer Ataman, <https://pin.it/ZLXrn91>, (last accessed September 14, 2021)
43. *Prencesin Ayak İzleri (Dağlık Kilikya'dan Göksun Havzasına 19-22 Mayıs)*, <https://patikatour.com/tour/prencesin-ayak-izleri/>, (last accessed November 20, 2021)
44. *Prencesin Ayak İzleri Parkuru – Mersin*, <https://www.kulturportali.gov.tr/turkiye/mersin/turizmaktiviteleri/prencesin-ayak-izleri-parkuru>, (last accessed November 20, 2021)
45. Şengül, F. (2017). Yeni Kültür Turizmi Destinasyonu: Olba Antik Kenti. *Türk Turizm Araştırmaları Dergisi*, 1(2), 20-28.
46. *Silifke Cennet Cehennem Obrukları*, <https://muze.gov.tr/muze-detay?SectionId=CCO01&DistId=CCO>, (last accessed September 14, 2021)
47. TÜİK (Türkiye İstatistik Kurumu / Turkish Statistical Institute). (2021). *Population and Demography Statistics – Address Based Population Registration System*. <https://data.tuik.gov.tr/Kategori/GetKategori?p=nufus-ve-demografi-109&dil=2>, (last accessed September 14, 2021)
48. *Turizm Merkezleri*, <http://www.metab.gov.tr/tmerkezleri>, (last accessed September 14, 2021)
49. *Türkiye Su Kaynakları Haritası*, <https://i.pinimg.com/originals/19/c2/6d/19c26dbf840d0f6435f6000281e10155.png>, (last accessed October 31, 2021)
50. UN. (2015). *Transforming our world: the 2030 Agenda for Sustainable Development*. Resolution adopted by the General Assembly on 25 September 2015, <https://sdgs.un.org/2030agenda>, (last accessed November 7, 2022)
51. UN. (n.d.). *The 17 Goals*. <https://sdgs.un.org/goals/>, (last accessed November 7, 2022)
52. UNESCO. (n.d.). *Ancient City of Korykos*, <https://whc.unesco.org/en/tentativelists/5909/>, (last accessed September 14, 2021)
53. Unur, K. & Çetin, N. (2017). Kızkalesi'nin Turizm Destinasyonu Olarak Marka Algısı. *İşletme ve İktisat Çalışmaları Dergisi*, 5(2), 63-79.
54. UNWTO. (n.d.). *Tourism for SDGs*, <https://tourism4sdgs.org/>, (last accessed November 7, 2022)
55. *Uzuncaburç – Mersin*, <https://www.kulturportali.gov.tr/turkiye/mersin/gezilecekyer/diokaesareia-uzuncaburc>, (last accessed September 14, 2021)