

NATURE PARKS IN THE SCOPE OF RECREATION LANDSCAPES: CASE STUDY OF DEGİRMENBOĞAZI NATURE PARK (BALIKESİR-TURKEY)



REKREASYON PEYZAJLARI KAPSAMINDA TABİAT PARKLARI: DEĞİRMENBOĞAZI TABİAT PARKI ÖRNEĞİ (BALIKESİR-TÜRKİYE)

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ABSTRACT: Since the beginning of the 19th century, with the development of transportation opportunities due to population growth and diversification of economic activities, people have turned to recreational activities in their spare time from their busy work schedule. The economic, social, cultural and societal changes that have arisen due to the increasing urbanization have also changed the relations of people with nature. People have started to escape from the stressful, boring and noisy world of working life and the city to natural and semi-natural areas in their spare time. At this point, nature parks, which are often very close to the cities and easily accessible, have been one of the most preferred areas in terms of outdoor recreation activities. The aim of this study is to examine the recreational use of nature parks, which is also a protected area in Turkey, in daily life, in particular Degirmenbogazi Nature Park, and to determine what changes or transformations these usage patterns cause in nature parks. For this purpose, the field research method, one of the qualitative research methods, was used in the study. Field studies were carried out in the area at different times of the week, on different days of the week, in 2021 and 2022. In order to determine the usage patterns and effects of the nature park on site, the local people using the area were found by participant observation method, and they were included in recreational activities. The results of the research show that Degirmenbogazi Nature Park is the scene of intense use in and around Balıkesir, and the area comes first in terms of outdoor recreational activities. Although the nature park is used all year, the most intense use is witnessed in the spring-autumn period and especially on weekends (saturdays and sundays). The usage pressure on the nature park, which is very close to the city of Balıkesir, whose population is approaching 350 thousand, is quite high. This pressure brings pollution, environmental degradation and irreversible environmental losses in the field. Arrangements made in the area, which is planned to host more visitors, damage the natural structure of the area, and the second residences built near the nature park increase the already intense pressure on the area. At this point, the issue of how nature parks, which are recreational landscapes, should be managed gains importance.

Keywords: Nature Park, Recreation, Degirmenbogazi, Balıkesir.

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ÖZ: 19. yüzyılın başlarından itibaren nüfus artışı ve ekonomik faaliyetlerin çeşitlenmesine bağlı olarak ulaşım olanaklarının gelişmesiyle insanlar, yoğun iş tempolarından arta kalan zamanlarda rekreatif faaliyetlere yönelmişlerdir. Giderek artan kentleşmeye bağlı olarak ortaya çıkan ekonomik, sosyal, kültürel ve toplumsal değişimler insanların doğa ile olan ilişkilerini de değiştirmiştir. İnsanlar, boş zamanlarında çalışma hayatının ve kentin stresli, sıkıcı ve gürültülü dünyasından doğal ve yarı doğal alanlara kaçmaya başlamışlardır. Bu noktada çoğu zaman kentlere oldukça yakın olan ve kolay ulaşılabilir durumdaki tabiat parkları açık alan rekreasyon faaliyetleri açısından en çok tercih edilen sahaların başında gelmişlerdir. Bu çalışmanın amacı, Türkiye’de aynı zamanda bir koruma alanı statüsü olan tabiat parklarının günlük yaşamda rekreasyonel anlamda kullanım şekillerini Değirmenboğazı Tabiat Parkı özelinde incelemek ve bu kullanım şekillerinin tabiat parklarında ne gibi değişim ya da dönüşümlere neden olduğunu tespit etmektir. Çalışmada bu amaçla nitel araştırma yöntemlerinden saha araştırması yöntemi kullanılmıştır. Alanda 2021 ve 2022 yılları içerisinde farklı dönemlerde, haftanın farklı günlerinde arazi çalışmaları yapılmıştır. Tabiat parkının kullanım şekillerini ve etkilerini yerinde tespit edebilmek amacıyla alanı kullanan yerel halkın arasında katılımcı gözlem metodu ile bulunulmuş, rekreasyonel faaliyetlere dahil olunmuştur. Araştırma sonuçları Değirmenboğazı Tabiat Parkı’nın Balıkesir ve çevresinde oldukça yoğun bir kullanıma sahne olduğunu, açık hava rekreasyonel faaliyetleri kapsamında alanın ilk sırada geldiğini göstermektedir. Tabiat parkı tüm yıl kullanılmakla beraber, en yoğun kullanıma ilkbahar-sonbahar döneminde ve özellikle de hafta sonları (cumartesi ve pazar günleri) sahne olmaktadır. Nüfusu 350 bine yaklaşan Balıkesir şehrine oldukça yakın olan tabiat parkının üzerindeki kullanım baskısı oldukça fazladır. Bu baskı alanda kirliliği, çevresel bozulmaları ve geri döndürülemez çevresel kayıpları da beraberinde getirmektedir. Daha fazla ziyaretçiyi ağırlaması planlanan alanda yapılan düzenlemeler alanın doğal yapısına zarar vermekte, tabiat parkının yakınına inşa edilen ikinci konutlar ise alan üzerinde zaten var olan yoğun baskıyı iyice artırmaktadır. Bu noktada birer rekreasyon peyzajları olan tabiat parklarının nasıl yönetilmesi gerektiği konusu önem kazanmaktadır.

Anahtar Kelimeler: Tabiat Parkı, Rekreasyon, Değirmenboğazı, Balıkesir.

1. Introduction

The origin of the word recreation comes from the Latin word “recreatio”, which means “to revive, to give fresh life, to refresh” (Kabağaç & Alova, 1995). Later, this term was translated into Turkish from the English word “recreation”, which means “rest, rest, recovery, entertainment and leisure activity” (Özbalkan, 1999). The term has been defined in different ways by different researchers. It is seen that the definition of the word recreation was made even in ancient times. In ancient times, Aristotle defined recreation as “being involved in an activity without any other purpose” (Kraus, 1971). In the later definitions of recreation, it was emphasized that individuals or groups generally evaluate their free time, voluntarily participate in relaxing and entertaining activities, and thus what kind of occupations they engage in their spare time (Baud-Bovy & Lawson, 1998; Doğan & Sertkaya Doğan, 2018).

Historical records show that almost all of the past civilizations gave importance to rest and entertainment. It is known that even in the ancient times, when humanity led a nomadic life, people participated in recreational activities, either in their daily lives or in their spare time, consciously or

unintentionally (Özcan, 2009). The discovery of fire has brought along important changes in the evaluation of free time and recreation habits (preferences) of humanity. Although it was used in line with the needs of people especially for nutrition, shelter and security at the first stage after the fire was discovered, it also took on a ceremonial and religious structure over time; it has also undertaken a recreational function, especially within the scope of evening (night) activities (Cordes & Ibrahim, 2003).

The Hanging Gardens of Babylon, which was established by the Sumerian State in 3500 BC within the Mesopotamian culture, is a very important historical development in terms of free time and recreation. In addition to the progress seen in astronomy, architecture, agriculture and engineering in the Ancient Egypt period, it is known that the people were interested in education, recreational activities such as wrestling, gymnastics, weight lifting and ball games. In this period, especially religious ceremonies became an important element in terms of recreational activities. Among these, dances performed for religious purposes (for worship), various shows and bullfights were prominent events. Again in this period, musical activities, tracking and hunting activities, making sculptures or rock paintings were among the daily recreational activities of the members of this civilization (McLean & Rogers, 2008).

Humanity has experienced significant philosophical and cultural changes since 500 BC. During this period, Ancient Greek culture witnessed important developments especially in the fields of art, education and sports. In the ancient Greek culture, a lot of importance was given to free time, and some sports games (competitions) were organized in this direction. The most prestigious of these games is the Olympic Games held in the name of Zeus since 776 BC. The Olympic Games, which were held every 4 years in ancient times, were held in Olimpia, in the city of Elis, Greece, with 40 thousand people, and athletes and participants from distant areas such as Africa and Spain came to participate in these games. It is known that the winner's prize is a ring made of olive branches (Cordes & Ibrahim, 2003; Sweet & Segal, 1987; Swalding, 2008). The gladiator fights organized by the ancient Romans in 264 BC were among the most important recreational activities of the period in terms of the audience, if not the participants (Meijer, 2008).

It has been observed that the share of leisure activities in human life has gradually increased since the beginning of the 19th century. When people have more free time left over from their busy working life, their behaviors and preferences in daily life have started to change (Pearson, 2008). This change has been accelerated by the developments in technology and social-political and cultural changes, and significant differences have occurred in people's perspectives on nature. When the increasing urbanization pressure is added to all these, the said differentiations are well riveted. During this period, romanticism movements that sanctified and

glorified nature in the western world lived their golden age. This process has triggered mass movements towards recreation areas and brought to the fore the open-air life in peace with nature, based on enjoyment.

It is known that wealthy families living in the Far East, especially in China, had separate buildings built for leisure activities in the Middle Ages. In this period, it is seen that separate buildings were built in the far east (China, Japan and India) for observing the Moon, making music and banquets. It is also known that during this period, wealthy families brought painters, storytellers, dancers and musicians to entertain their family members and guests and allocated a significant budget for them (Cordes & Ibrahim, 2003).

During the Islamic period, recreation and leisure activities were encouraged. In this period, holy days were celebrated in the form of folk feasts. For example, it has been recorded that events that could last 10-15 days were held in Egypt (Cairo) during this period. It is also known that Muslims engage in various recreational activities during holy months such as Ramadan (Cordes & Ibrahim, 2003). In this period, recreational activities were generally linked to religious activities. The time and duration of recreational activities were determined by considering religious responsibilities, family responsibilities and other vital necessities. Active life and sports were encouraged in terms of physical and mental health of people during the Islamic period (Martin & Mason, 2003).

With the invention of steam engines and the continuation of the Industrial Revolution, there has been a radical change in recreational activities. As a result of this change, the rich recreational life that we are currently leading has emerged. Recreation has become an area accessible to all segments of society as a result of free time and economic growth in industrial societies (Kraus, 1971). With the technological developments and automation, the leisure time of the individual has also increased. In the following period, the increase in the exit from the agricultural economy brought with it a shorter working time; thus, people were given more free time to participate in recreational activities (McLean & Rogers, 2008).

All these developments show that recreation is necessary for the immediate use of leisure activities, individually or collectively, and for the immediate fulfillment of needs filled with freedom and pleasure. Therefore, recreation has been valuable both in the past and today. Recreation is a free time experience in which individuals participate voluntarily and supports their individual development and quality of life (Rossman & Schlatter, 2000; Yeşil et al., 2014; Tunçer, 2016).

Today, recreational activities are examined within certain classifications. The people of the 21st century want to spend their free time by participating in recreational activities in open or closed areas, passively or actively, in urban or rural areas, in order to spend their free time with many different reasons and expectations. People's recreation preferences

can vary according to space, time, type of action or the way it is done. At the same time, the individual, physical, mental or therapeutic aspects of the activity can cause this differentiation. One of them is open space recreation activities included in spatial classification. In this context, the nature parks discussed in the study are among the elements that can be evaluated within the scope of open space restoration within the spatial classification.

Nature parks are areas that have responded to the desire of people to turn to nature and spend their free time in nature for many years. Today, nature parks form the closest natural environments to the city in many places, where one escapes from the artificial world of the city to nature. Both this proximity and the rapid increase in recreational activities in open spaces in the world have also increased the pressure on these areas. In today's world, the use of nature parks as a recreational value required them to be seen, arranged and operated in a value-creating focus.

Currently, there are 6 protected area status in Turkey. The number of protected areas within the scope of these statutes is increasing day by day (Derinöz, 2022). Nature parks are in the nature of the protection area status, which is the largest in number among the protected areas in Turkey. As of 2022, there are 259 nature parks in total in Turkey. The total surface area of these areas has exceeded 105 thousand hectares (Table 1 and Table 2).

Table 1. Protected area types and sizes in Turkey (2022)

Type	Number	Area (hectare)
National Park	46	881.907
Nature Park	259	106.775
Nature Reserve Area	31	46.787
Wildlife Sanctuary	85	1.162.788
Natural Monument	114	9.239
Wetland	93	1.068.697
Total	602	2.044.665

(Source: Modified from URL-1)

Table 2. Nature parks in Turkey (2022)

Nature Park (NP)	Province	Anno. Date	Nature Park (NP)	Province	Anno. Date
Abant Lake	Bolu	1988	Ağaçbaşı	Giresun	2010
Ahatlar	Bartın	2011	Akdağ	A. Karahisar	2000
26 August	A. Karahisar	2008	Akgöl	Sinop	2018
Aksu	Çorum	2021	Akyokuş	Konya	2011
Allaben-Yamaçt.	Gaziantep	2016	Altıparmak	Artvin	2013
Aluçdağı	Ankara	2011	Amazon	Samsun	2015
Artabel	Gümüşhane	2018	Aşıkpaşa	Kırşehir	2010
Avcıkoru	İstanbul	2011	Ayazmapınarı	Çanakkale	2011
Aydınşınar	Düzce	2014	Ayıkayası	Bolu	2014
Aymaç	Giresun	2017	Ayvalık Islands	Balıkesir	1995
Ayvadbendi	İstanbul	2011	Bafa Lake	Aydın	1994
Baklabostan	Karabük	2017	Balamba	Bartın	2011
Balıklı-Güneşli	Artvin	2017	Balıca Cave	Tokat	2007
Ballıkayalar	Kocaeli	1995	Başpınar	Isparta	2011
Bayraktepe	Samsun	2015	Belemedik	Adana	2014
Belen Gateway	Hatay	2014	Bentler	İstanbul	2011
Beşikdağ	Trabzon	2016	Beşkayalar	Kocaeli	1998
Beşpınarlar	Bolu	2011	Beydağı	Malatya	2014
Bolu-Gölcük	Bolu	2011	Borabay	Amasya	2013
Borçka-Karagöl	Artvin	2002	Burç	Gaziantep	2012
Buzluk	Sinop	2020	Büyükada	İstanbul	2011
Canköy	Sivas	2018	Cehennem Stre.	Artvin	2018
Cemal Tural	Ardahan	2011	Çağlayan	Aydın	2014
Çağlayandibi	Gümüşhane	2014	Çalcamili	Trabzon	2011
Çamburnu	Trabzon	2011	Çankoru	Ankara	2008
Çamlıca	Kütahya	2011	Çamlık	Karabük	2011
Çamlıköy	Tekirdağ	2021	Çatak	Çorum	1984
Çatak Canyon	Sinop	2017	Çavdarhisar Dam	Kütahya	2021
Çınarsuyu	Ordu	2011	Çiçekli	İzmir	2011
Çiftmazı	Osmaniye	2011	Çilingöz	İstanbul	2011
Çubucak	Muğla	2011	Dağlıcak	Adana	2011
Danaağzı	Zonguldak	2014	Danamandıra	İstanbul	2015
Danişment	Edirne	2011	Darıdere	Balıkesir	2011
Değirmenboğazı	Balıkesir	2011	Değirmenburnu	İstanbul	2011
Delmece	Yalova	2011	Derebağ Waterf.	Kayseri	2011
Dikilitaş	Mersin	2011	Dilburnu	İstanbul	2011
Dinar-Pınarlı	Afyonkarahisar	2020	Dipsizgöl	Kastamonu	2021
Dumanlı	Erzincan	2017	Durasan Şah	Ankara	2018
Dülükbaba	Gaziantep	2011	Efendioğlu	Giresun	2020
Efeoğlu	İzmir	2011	Eğriova	Ankara	2011
Ekmeksiz Beach	İzmir	2011	Elmabaşburnu	İstanbul	2011
Enne Dam	Kütahya	2011	Erikli	Bilecik	2018
Eriklitepe	Kocaeli	2011	Erkmen	A. Karahisar	2018
Ersizlerdere	Kastamonu	2020	F. Rifki Atay	İstanbul	2011
Fatih Fountain	İstanbul	2011	F. Sultn Mehmet	İstanbul	2011
Frig Valley	Afyonkarahisar	2017	Gap Waterfall	Mardin	2017
Millî Mücadele	Gaziantep	2018	Gazilerdağı	Kocaeli	2013
Geyiklibel Canyon	Düzce	2016	Gilindere Cave	Mersin	2021
Göğem-Zafer	Uşak	2018	Gökçetepe	Edirne	2021
Göksu	Bolu	2011	Göktürk Pond	İstanbul	2011
Gölbaşı Lakes	Adıyaman	2008	Gölcük	Isparta	1991
Göldağı	Zonguldak	2011	Gölpınar	Şanlıurfa	2011
Görnek	Trabzon	2011	Göztepe	İstanbul	2013
Gümüldür	İzmir	2011	Gümüşkum	Mersin	2015

Günpınar Waterf.	Malatya	2018	Gürcüoluk Cave	Bartın	2013
Gürleyen Canyon	Konya	2021	Güver Canyon	Antalya	2020
Güvercinlik	Muğla	2011	Güzeldere Waterf.	Düzce	2011
Hacet Deresi	İstanbul	2012	Hamsilos	Sinop	2007
Handüzü	Rize	2014	Harmankaya	Yalova	2011
Harmankaya Can.	Bilecik	2012	Harmankaya Wtf.	Zonguldak	2021
Harşit	Giresun	2019	Hazar Lake	Elâzığ	2011
Hazım Dağlı	Çankırı	2009	Hemşin Waterf.	Rize	2014
Hızırilyas	Giresun	2020	Hisar Pine Grove	Kilis	2011
Huzurlu	Gaziantep	2021	Irmak	İstanbul	2011
Isırlık	Rize	2015	Provincial Forest	Sakarya	2011
İnalıtı Cave	Sinop	2020	İnbükü	Muğla	2011
İncekum	Antalya	2006	Aydıncık	Mersin	2011
İncüvez Pine Grov.	Zonguldak	2011	Kadıncayırı	Çankırı	2012
Kadıpınarı	Yozgat	2011	Kadıralak	Trabzon	2017
Kapıçam	K. Maraş	2008	Karaahmetli	Kırıkkale	2009
Karaekşi	Mersin	2011	Karagöl	Ankara	2011
Karagöl	Bolu	2011	Karagöl	İzmir	2011
Karamanastr Wtf.	Mersin	2021	Karanlıkdere Can.	Burdur-Muğ.	2018
Karataş	Adana	2011	Kargalı-Gölcük	Bolu	2014
Karşıyaka	Gümüşhane	2015	Karşıyaka	Sivas	2011
Kartaltepe	Ankara	2011	Kartaltepe	Tekirdağ	2014
Katrançı Bay	Muğla	2011	Kavaklımeşe Can.	Kırklareli	2011
Kayabaşı	Trabzon	2011	Kelebekler Valley	Ankara	2016
Çenbağ	Çankırı	2011	Kınık Waterf.	Bilecik	2018
Kirazlıbent	İstanbul	2011	Kocakoru Forest	Konya	1998
Koçkayası	Giresun	2011	Kovanlık	Muğla	2011
Kömürçübent	İstanbul	2011	Köroğlu	Giresun	2017
Köse	Gümüşhane	2016	Kuğulu	Konya	2018
Kurşunlu Waterf.	Antalya	1991	Kurugöl	Düzce	2011
Kuyuluk	Mersin	2011	Kuzalan	Giresun	2013
Kuzuluk	Sakarya	2011	Kuzuuyayla	Kocaeli	2011
Küçük Kargı	Muğla	2011	Küçükelmali	Bilecik	2011
Limni Gölü	Gümüşhane	2011	Malabadi	Batman	2011
Marmaracık Cany.	İstanbul	2011	Mavikent	Antalya	2009
M. Akif Ersoy	İstanbul	2011	Meryemana	İzmir	2008
Mesir	Manisa	2008	Mihrabat	İstanbul	2011
Milli Egemenlik	Zonguldak	2011	Musaözü	Eskişehir	2011
Neşetsuyu	İstanbul	2011	Obruk Şelalesi	Adana	2018
Oluközü	Yozgat	2011	Ormanya	Kocaeli	2011
Oymalık	Sivas	2018	Ölüdeniz-Kıdrak	Muğla	2017
Ömer Eşen	Muğla	2011	Örenönü	Tunceli	2011
Parkorman	İstanbul	2008	Paşaca	Giresun	2020
Pergamberler	Diyarbakır	2017	Polonezköy	İstanbul	1994
Poyrazlar Lake	Sakarya	2011	Pullu	Mersin	2011
Sadağı Canyon	Bursa	2014	Salda Lake	Burdur	2011
Sansarak Canyon	Bursa	2021	Sarıgazel	Samsun	2011
Sarıkayalar	Mersin	2017	Sarımsaklı	Balıkesir	2011
Sazlıkbaşı	Muş	2019	Sera Lake	Trabzon	2010
Serenler Hill	Burdur	2011	Sıklık	Çorum	2009
Sis Mountain	Trabzon	2019	Soğuksu	Kars	2011
Sorgun Pond	Ankara	2011	Suadiye	Kocaeli	2011
Sultandağı	Afyonkarahisar	2020	Suuçtu	Bursa	2011
Sülüklügöl	Bolu	2011	Sünnet Lake	Bolu	2011
Süreyya	Manisa	2011	Şaban Castle	Giresun	2019
Şahin Hill	Hatay	2018	Şahinkaya Canyon	Samsun	2015
Şahinler	Ankara	2009	Şamlar	İstanbul	2011
Şarlan	Aydın	2014	Şehit Şerifebacı	Kastamonu	2011
Şehitlik	Mersin	2011	Talat Göktepe	Mersin	2011

Tanay	İzmir	2011	Taşyaran Valley	Uşak	2016
Tatlıca	Sinop	2011	Tavşan Hill	Artvin	2017
Tavşanburnu	Aydın	2011	Tekirova	Antalya	2016
Tekkeadağı	Ankara	2011	Telme	Gümüşhane	2021
Tillo	Siirt	2014	Tomara Waterf.	Gümüşhane	2011
Topalçam	Sinop	2011	Topuk Plateau	Kütahya	2017
Tunca Valley	Rize	2013	Turgut Özal	Malatya	2009
Türkmenbaşı	İstanbul	1998	Ulubey Canyon	Uşak	2013
Ulugöl	Ordu	2009	Usuluk Bay	Muğla	2011
Uzungöl	Trabzon	1989	Uzunkum	Kocaeli	2014
Üçtepeler	Yozgat	2011	Vakıf	Edirne	2018
Vezirsuyu	Samsun	2011	Yakama Nastr	Konya	2011
Yakupabdal	Bayburt	2014	Yamanlaradağı	İzmir	2011
Yavşan Plateau	K. Maraş	2009	Yazılı Canyon	Isparta	1989
Yedideğirmenler	Giresun	2013	Yedikapı	A. Karahisar	2018
Yerköprü Waterf.	Mersin	2021	Yeşilyuva	Kastamonu	2011
Yozgat Fatih	Yozgat	2013	Yunus Emre	Eskişehir	2017
Zinav Lake	Tokat	2011	Total: 259	-	-

(Source: Modified from URL -2)

2. Purpose and Method of the Study

The aim of this study is to reveal the landscape formed by nature parks, which are pieces of nature designed for recreational purposes, and to reveal the characteristics of this landscape and how it is evaluated; the aim is to determine the problems faced by nature parks, which are used extensively in terms of open space recreation in spatial recreation activities, and to offer solutions to the identified problems. For this purpose, within the scope of the study, field studies lasting 1 year were carried out in Degirmenbogazi Nature Park, which is located in Balıkesir city. In these field studies, the situation of the area was observed both in quiet periods when it is used very rarely and in crowded periods when it is used very intensively. In addition, during the spring-autumn period, when the area is used intensively, especially on weekends, the usage patterns, preferences and perspectives of the visitors who use the area for recreational activities were evaluated with the participant observation method.

3. Results and Discussion

Degirmenbogazi Nature Park is located in the west of Turkey, in the south of the Marmara Region, within the borders of Balıkesir Province (Figure 1). The nature park covers an area of approximately 25 hectares and was declared a "Nature Park Protection Area" in 2011 by the General Directorate of Nature Conservation and National Parks. Located on the Balıkesir-Bursa highway route, the nature park is 5 km from Balıkesir city, side by side with the city. Access to the nature park is by road and it is very easy to reach the area (Figure 2).

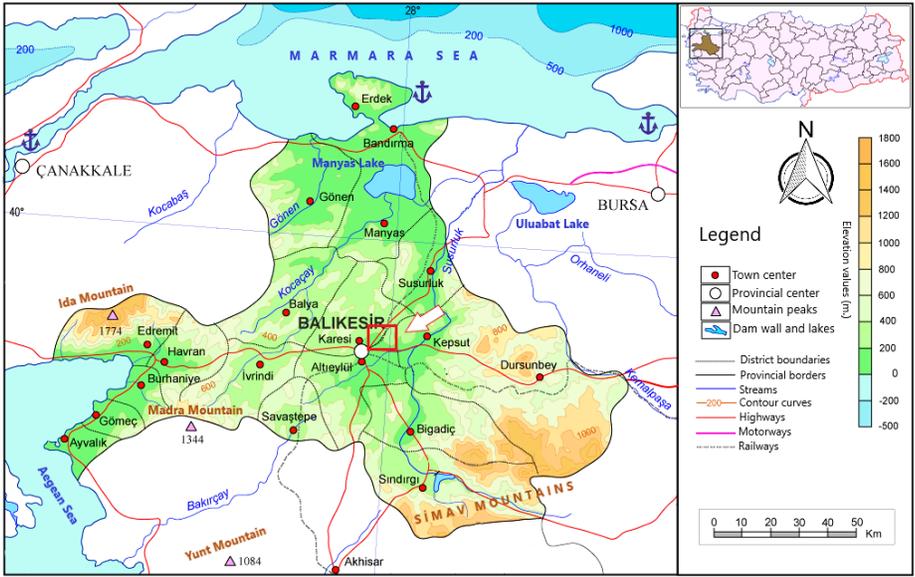


Figure 1. Location map of the area
(Source: Modified from Saygılı, 2015)



Figure 2. The entrance point of the Degirmenbogazi nature park

Degirmenbogazi Nature Park is located in the Ortaca Stream Valley in a roughly north-south direction. Ortaca Stream, which passes through the nature park, originates near the Ovacık Village in the northwest of Balıkesir, continues in the northeast-east direction and reaches the area from the north of the Degirmenbogazi Nature Park. Ortaca Stream, which continues roughly in the north-south direction within the nature park, takes the name Kazıklı Stream in the east of Balıkesir, near Köşeler Village, and is included in the Nergis Stream, which takes its sources from the vicinity of Kütahya in the southwest of Yakup Village. Approximately 3 km of Ortaca Stream is located within the nature park.

When the study area is evaluated in terms of climate characteristics over a 20 year period, it is seen that it reflects the typical characteristics of the Mediterranean climate. The degraded Mediterranean climate, also known as the Marmara Type of Mediterranean climate, is observed in the area. In this climate type, as in the Mediterranean climate, summers are hot and dry, and winters are warm and rainy. The hottest and driest month is August with an average of 25 °C. The coldest month is January with an average of 1.1 °C. The rainiest month is December with 87.2 mm (Table 3 and Figure 3).

Table 3. Climatic characteristics of the study area (1999-2021)

<u>Average</u>	<u>Jan.</u>	<u>Feb.</u>	<u>Mar.</u>	<u>Apr.</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>Aug.</u>	<u>Sep.</u>	<u>Oct.</u>	<u>Nov.</u>	<u>Dec.</u>	<u>Annual</u>
<u>Temperature</u>	4.8	5.7	7.9	13.1	18.2	23.0	24.9	25.0	21.1	16.6	9.9	6.6	14.7
<u>Highest temperature</u>	8.8	10.4	13.2	19.1	24.2	29.3	30.8	31.1	28.0	22.7	15.0	9.9	20.2
<u>Lowest temperature</u>	1.1	1.5	3.1	7.4	12.1	16.1	18.4	18.9	14.5	11.0	5.4	3.1	9.4
<u>Sunshine duration (hours)</u>	3.0	3.6	4.4	5.7	7.2	9.2	9.5	9.0	7.8	5.2	3.5	1.7	5.8
<u>Number of rainy days</u>	13.25	13.63	12.50	11.00	10.88	5.00	3.63	2.13	2.75	8.00	10.25	14.75	107.8
<u>Monthly total rainfall (mm)</u>	47.9	54.1	65.1	55.7	46.5	16.2	10.0	9.4	20.7	44.4	67.0	87.2	524.2

(Source: Modified from URL-3)

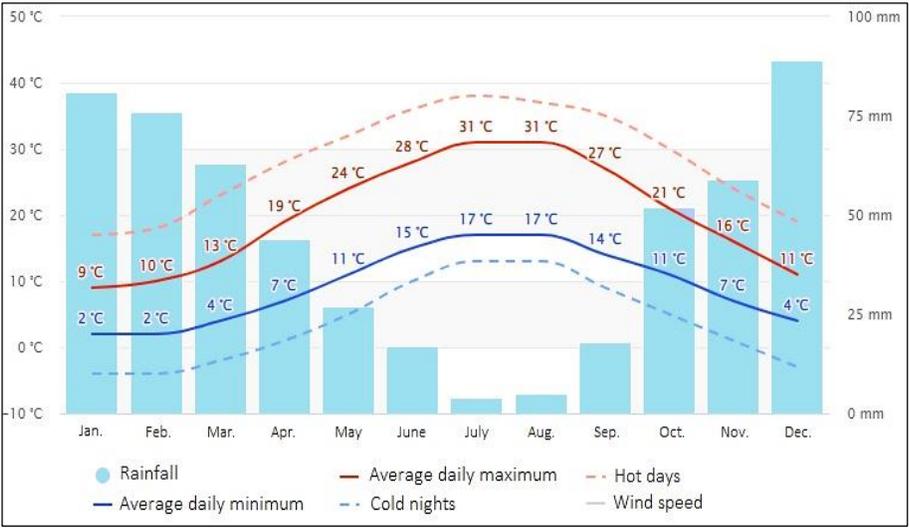


Figure 3. Indicators of precipitation and temperature of the study area (1999-2021)

(Source: Modified from URL-3)

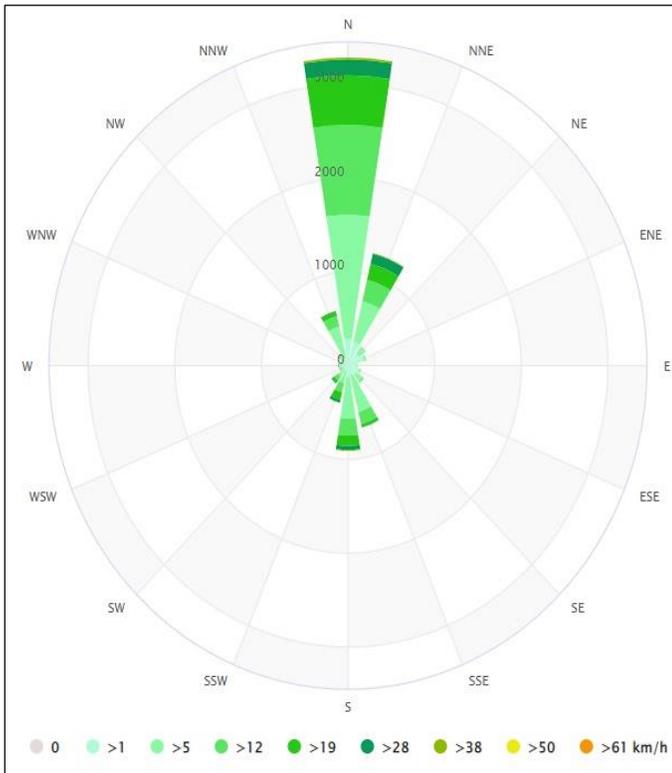


Figure 4. Graph of prevailing wind direction in the research area (1999-2021)

(Source: Modified from URL 3)

Precipitation usually falls in the form of rain throughout the year. The number of snowy days in the study area is usually small and does not exceed 10 days. This value decreases towards the city center (decreases to 4-5 days), and reaches up to 8-10 days in high lands. The prevailing wind direction in the area is north. Wind speed varies between 5-28 km/h throughout the year (Figure 4).

When the soil structure characteristics of the area are evaluated, brown forest soil and non-calcareous brown forest soils and terra rossa-like red soils are observed. Alluviums can be seen along the Ortaca Stream valley, which passes through the nature park. However, since the valley was shaped by human intervention and the direction of the stream was changed with artificial levees, alluviums do not form continuity. In some areas where the stream changes its bed, it has left its alluvial base. It is possible to examine the soil structure in more detail in the road cuts where the routes created for walking in the area pass. In some parts of the nature park, which is organized as a recreation area, it is seen that the soil cover is covered with artificial filling materials.

When the vegetation characteristics in the study area are examined, it is seen that Oak (*Quercus sp.*), Cypress (*Cupressus sp.*) and Red Pine (*Pinus brutia*) dominate the area. Along the Ortaca Stream valley passing through the nature park, there are generally water-loving species such as Sycamore (*Platanus orientalis*), Willow (*Salix sp.*), Poplar (*Populus alba*), Maple (*Acer sp.*), Aspen (*Populus tremula*); these are accompanied by species such as Walnut (*Juglans sp.*), Linden (*Tilia sp.*), Horse Chestnut (*Aesculus sp.*). Oak (*Quercus sp.*), Cypress (*Cupressus sp.*) and Red Pine (*Pinus brutia*) can be seen towards the slopes as it rises from the valley. Among these species, species such as Carob (*Ceratonia siliqua*), Maple (*Phillyrea latifolia*), Laurel (*Laurus nobilis*) are scattered among these species. The forest flora in the nature park is also quite dense. In most places (especially in the northwest of the area), the under-forest flora forms dense areas (usually in the form of bushes and reeds in wetlands) that cannot be entered.

Water pollution is among the most important factors that threaten the vegetation in the area. Ortaca Stream, which passes through the area, absorbs many pollutants from the region where it was born until it reaches the nature park. At the beginning of these pollutants are agricultural pesticides, poultry waste and other domestic wastes. In addition to these, the facilities and settlement activities in the northwest and west parts of the nature park also increased the pollutant pressure in the area (Figure 5). It is also known that domestic pollutants originating from this region were mixed with Ortaca Stream until recently. It is extremely wrong to build such sites, luxury residences and villas right next to the nature park. This situation causes the nature park, which already has enough pressure to use, to suffer more pressure and to deteriorate the natural resource values it has.

Intensive use of the nature park by visitors is among the most important causes of deterioration. The area is located very close to Balıkesir city, which is a metropolitan city with a population approaching 350 thousand. Therefore, the area alone meets the majority of the recreational needs of the population of a big city. For this reason, it has become inevitable that this intense pressure on the area will deteriorate the natural resource values in the area. It is seen that the nature park has started to be used frequently, especially from the spring period, with the warming of the weather. This frequent usage traffic increases in the summer season and the situation continues in a similar way until the autumn period. The winter period corresponds to the quiet period when the area is used less.

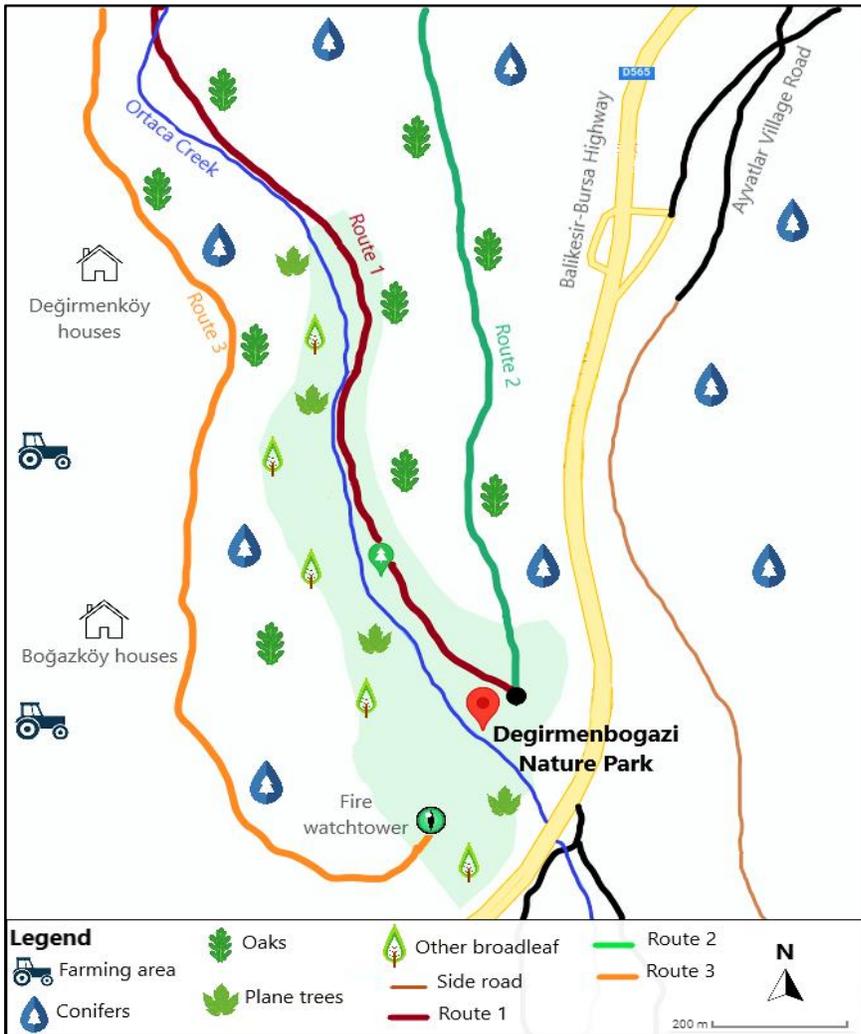


Figure 5. Land use status in Degirmenbogazi nature park

When the usage patterns of the visitors are examined, it is seen that the first purpose of use is picnic visits, which are considered within the scope of recreational activities. The area is generally used intensively for daily picnic activities. It is seen that the picnickers come early in the morning (between 9 and 10 am) in order not to have trouble finding a place in the area. The number of picnickers who eat their breakfast, lunch and dinner in the nature park is high. Most of the visitors who visit the area spend almost the whole day in the area during their daily visit. During this time, the number of visitors who use the facilities in the nature park while cooking their food, while brewing their tea or for activities such as heating and cooking other foods is not small. These visitors, in return for a somewhat nostalgic passion, light a fire by using the trees and tree remains obtained from the forest cover in the nature park for related cooking-heating-brewing activities. During this use, the flora (especially the branches of the trees) in the area is destroyed to the extent that the forest cover is damaged. This situation creates a serious problem in terms of fauna in the area. In addition, the scattering of the remains of the burning trees and the ashes that have not yet completely extinguished in the area by the wind or other factors pose a serious danger for the nature park.

Natural parks are undoubtedly areas that are used by large masses, organized, managed and used for public benefit, for people who want to get away from their living environments for various reasons, even for a while, who want to get rid of the stress and monotony of their lives with recreational activities, and who want to lead a healthier and fitter life. The main thing is to use these areas in accordance with this purpose. However, for many years, such natural-semi-natural areas have been seen as rent centers by certain individuals or groups, and they have been the scene of arrangements in this direction, and thus, examples of desperate use of natural resource values belonging to the public are unfortunately frequent. Luxury estates built just to the west and northwest of Degirmenbogazi Nature Park are examples of this (Figure 6). In fact, it is not appropriate to have some public areas of use in this area. It is also seen that special roads and entry points have been created for the use of the residents of the buildings mentioned in the relevant area. Such special regulations are against the establishment and usage criteria of these areas. At the point of protection, use and management of natural resource values in the area, such personalized practices do more harm than good, these practices should be abandoned immediately.



Figure 6. The current state of the nature park and its surroundings (2022)

There is a business logic in nature parks as in almost all nature protection areas in Turkey. The management of almost all of these areas, which were operated and protected by the state in the past, has been transferred to companies by tender procedure. With the ruthless capitalist logic of the private sector, companies unfortunately see these areas as a tool of exploitation. These areas, which are managed only with business logic, are almost under exploitation. With this management logic, it is not possible to use nature parks in a conservation-utilization balance, to transfer the natural resource values they contain to future generations, and to sustain them. These areas should either be managed by the state again or serious control mechanisms should be applied to private sector operators.

The use of nature parks is subject to a fee. There is also an entrance fee in Degirmenbogazi Nature Park. In the area operated by the private sector and Balıkesir Metropolitan Municipality (BALPAŞ-Balıkesir Pamukçu Thermal Tourism and Trade Joint Stock Company), there are different fare tariffs such as individuals, students, martyrs and relatives of martyrs, veterans, automobiles, bicycles, pickup trucks, motorcycles, ATVs, minibuses, midibuses and buses (Table 4). In return for the fee received, the relevant business is responsible for cleaning the toilets in the nature park, supplying hygiene materials (such as liquid hand soap, toilet paper), building and repairing barbecue areas, providing and repairing seating and tables, creating and maintaining playgrounds and playgrounds. Cleaning and rehabilitation of the Ortaca Stream, placing garbage cans and collecting garbage, creating prayer facilities (such as prayer rooms, ablution rooms), establishing and maintaining walking routes, taking care of trees, providing drinking and utility water, parking facilities, lighting works. It is responsible

for carrying out the construction of the building, the creation of security opportunities and the provision of other environmental regulations and recreational opportunities. It cannot be said that all of these facilities are carried out smoothly in the nature park. There are deficiencies in the area, especially in the hygiene of toilets, cleaning of Ortaca Stream, collection of garbage and providing security facilities. There is no fee for those who only want to do sports and walk on a daily basis at the entrance to the nature park.

Nature park entrance fees	TL (Turkish Lira)
Bus	189
Midibus	105
Minibus	63
Car, Van, Pickup (5 people including car-driver)	20
Motorcycle, ATV	10
Bicycle	7
One person	7
Student (and other discounted individuals)	3.5
Martyrs, relatives of martyrs and veterans	Free
Daily sports and walkers	Free

Table 4. Degirmenbogazi nature park visitor fees (2022)

(Source: MAF, 2022)

There are no facilities or businesses in the area where visitors can shop. Visitors visiting the area have to bring all their needs from the city with their own vehicle while coming to the nature park. However, there is more than one empty (unused) building at a suitable point just at the entrance of the area (Figure 7). These structures can easily be transformed into structures that offer shopping opportunities to visitors or serve for other purposes. In fact, as in many nature parks, some of these structures can even be used for accommodation services. The fact that the relevant structures have been idle for years causes both the deterioration and decay of the structures due to external factors and creates an aesthetically negative image within the natural structure of the nature park.

The revision development plans of Degirmenbogazi Nature Park, which was declared as a protected area in 2011, were submitted to the relevant Ministry in 2014. Rather, this plan includes arrangements to expand the physical possibilities of the area. It is controversial to what extent the carrying capacity of the area is taken into account in the revision plans. In addition, there are no accommodation, tent camping and caravan camping facilities in the area, which are in many other nature parks of Turkey. No studies have been planned for these yet. The information about the nature park on the website of the General Directorate of Nature Conservation and

National Parks is incomplete, unscientific, outdated and does not reflect the current situation. For example, in the relevant information section, it is stated that there are country casino, stands and buffet facilities in the nature park. However, these possibilities are not seen in the field today.



Figure 7. The current layout of the nature park entrance zone (2022)

4. Conclusion and Recommendations

The efforts to return to nature within the scope of spatial recreation activities have preserved their existence from the past to the present and have become indispensable in today's global world. Urban people of the 21st century prefer to turn to nature from the stressful and artificial world of cities, and create escape routes that include different times and places. Today, nature parks in Turkey often appear as the shortest way and place of these escape routes.

Today, Degirmenbogazi Nature Park is sandwiched between the Bursa-Balikesir Highway in the east and the luxury second residences built in the west. Intensive use, especially on weekends, traffic density, the effect of usage pressure on fauna and flora, water pollution caused by domestic and industrial pollutants, air pollution, noise pollution caused by visitors and other infrastructure deficiencies are the main factors that threaten the future existence of the nature park.

Degirmenbogazi Nature Park is the only open-air recreation area in the immediate vicinity of Balikesir, a big city with a population of 350 thousand. The excess demand for the area and the limited supply opportunities offered by the area have turned into an intense pressure on

the nature park. It is seen that this pressure intensifies between the spring-autumn seasons, and there is almost an explosion of visitors (usage) especially on Saturdays and Sundays, which are weekends. In fact, since the extraordinary increase in the traffic density in the area in the relevant period creates various security weaknesses, the gendarmerie and law enforcement officers have to manage the traffic and security in the area on weekends. In addition to all these pressures of use, the construction of various estates (luxury residences and villas) in the immediate vicinity of the nature park (on the west-northwest edge) is like giving the final blow to a dying creature. It is clear that these later built facilities and residences, which turn the attraction of the attractive natural resource values of the area into rent, are not at peace with the nature of the area. It will be beneficial for the area to either remove these structures from the area, change their use functions by both the public and private sector, or transform them into a state that will continue their new functions in line with the use plans suitable for the nature park.

In the use and revision plans of the Degirmenbogazi nature park, the practices aimed only at increasing the number of visitors in the area and generating more income should now be abandoned. The carrying capacity of the area should be taken into consideration first, sustainable projects that are environmentally friendly and have a vision for the future should be given priority, the logic of service and practice in harmony with the local people should be adopted, and possible irreversible loss of natural resource value should be prevented.

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