How to cite: Çelik Çanga, A. & D. Şenay, 2023. Opportunities of using rural areas for recreational purposes: The case of the Karacabey District, Bursa Province. Ege Univ. Ziraat Fak. Derg., 60 (1-17), https://doi.org/10.20289/zfdergi.1182317

Research Article
(Araştırma Makalesi)

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Keywords: Landscape planning, recreational potential, rural land use, rural tourism, tourism and recreation, tourism resources

Anahtar sözcükler: Peyzaj planlama, rekreasyonel potansiyel, kırsal alan kullanımı, kırsal turizm, turizm ve rekreasyon, turizm kaynakları

Ege Üniv. Ziraat Fak. Derg., 2023, 60 (1):1-17
https://doi.org/10.20289/zfdergi.1182317

Opportunities of using rural areas for recreational purposes: The case of the Karacabey District, Bursa Province

Kırsal alanların rekreasyon amaçlı kullanım olanakları: Bursa İli Karacabey İlçesi örneği

Received (Alınış): **30.09.2022** **Accepted** (Kabul Tarihi): **13.12.2022**

ABSTRACT

Objective: Empty and wide areas, including settlements outside the city center, are rural areas. These areas have great importance in recreational use in terms of their natural and cultural landscape values. Within the scope of the study, it aims to calculate the potential of the Karacabey district of Bursa, one of these areas, in terms of recreational use.

Material and Methods: The main material of the study consists of 64 villages located in the Karacabey district of Bursa province. The method of the study is based on the principle of assigning weighted points to five items of recreation areas. After scoring, calculations were made with basic mathematical operations, and the obtained quantitative data were interpreted.

Results: As a result of the study, it was determined that there are no villages in the Karacabey district with very low recreation potential (30%>); 40 villages are low (30-45%), 17 villages are medium (45-60%), 5 villages are high (61-75%) and 2 villages were also found to have a very high (75%<) recreational potential.

Conclusion: Within the scope of the study, it has been determined that the existing natural and cultural landscape values and infrastructure facilities add great value to the villages with high recreation potential. Therefore, various recreation types in which these values will be protected and used have been evaluated within this framework and new proposals have been developed.

ÖZ

Amaç: Kent merkezi dışındaki yerleşimler de dahil olmak üzere boş ve geniş alanlar kırsal alanlardır. Bu alanlar sahip oldukları doğal ve kültürel peyzaj değerleri açısından rekreasyonel kullanımda büyük öneme sahiptir. Çalışma kapsamında bu alanlardan biri olan Bursa'nın Karacabey ilçesinin rekreasyonel kullanım açısından potansiyelinin hesaplanması amaçlanmıştır.

Materyal ve Yöntem: Çalışmanın ana materyalini Bursa ilinin Karacabey ilçesinde bulunan 64 köy oluşturmaktadır. Çalışmanın yöntemi ise rekreasyon alanlarının beş maddesine ağırlıklı puan verilmesi esasına dayanmaktadır. Puanlama sonrası matematiksel işlemle hesaplamalar yapılmış ve elde edilen nicel veriler yorumlanmıştır.

Araştırma Bulguları: Çalışma sonucunda Karacabey ilçesinde rekreasyon potansiyeli çok düşük (%30>) köy bulunmadığı; 40 köy düşük (%30-45), 17 köy orta (%45-60), 5 köy yüksek (%61-75) ve 2 köyün de çok yüksek (%75<) rekreasyon potansiyeline sahip olduğu tespit edilmiştir.

Sonuç: Çalışma kapsamında mevcut doğal ve kültürel peyzaj değerleri ile altyapı tesislerinin, rekreasyon potansiyeli yüksek olan köylere büyük değer kattığı belirlenmiştir. Dolayısıyla bu değerlerin korunacağı ve kullanılacağı çeşitli rekreasyon türleri bu çerçeve içerisinde değerlendirilerek yeni öneriler geliştirilmiştir.

INTRODUCTION

Rapid and unplanned urbanization movements due to rapid population growth cause the decrease or even disappearance of green areas, which are the most important areas that increase the quality of life of people living in cities (Karaşah, 2017; Yang et al., 2017). The loss of these areas, on the other hand, puts urban people under the pressure of intense urban life, causing them to experience some physical, psychological and socio-cultural problems and to feel their recreation needs seriously (Kaya et al., 2009; Uzun & Müderrisoğlu, 2010; Zhang et al., 2013; Romagosa, 2018; Li, 2020). The concept of recreation mentioned here is to renew and improve the physical and mental health of individuals affected by "heavy workload, habitual lifestyle or negative environmental" (Koçyiğit & Yıldız, 2014; Önaç et al., 2018) factors, "depending on social, economic, cultural opportunities and the structure of the society they live in" (Bozkurt, 2016), it is defined as the whole of active or passive activities that they can participate in as an individual or group voluntarily (Nowaczek, 2003; Lindholst et al., 2015).

People who are overwhelmed by urban life and want to get closer to nature, prefer rural areas to spend their free time. Thus, rural areas have become destinations that meet the recreational need of urban residents (Çetin & Sevik, 2016; Surat, 2017; Burton et al., 2021). According to Gülümser et al. (2011), rural areas are "non-urban areas that are the place of agricultural activities"; according to Kuter & Ünal (2013), "it is outside of urban settlements and has descriptive concrete-objective elements"; it is defined as areas where land uses are managed simultaneously by nature and humans, with a much more dispersed population distribution than urban settlements (Grimes, 2000; Zaizhi, 2000). These areas, with their natural wealth, are the areas where people find the opportunity to be alone with nature, renew themselves, and prefer to spend their leisure time with outdoor recreation activities in these areas by getting away from their monotonous working life (Mumcuoğlu, 1996; Zhang et al., 2013; Surat, 2017). Also, landscapes with the highest visual qualities provide valuable aesthetic, ecological, cultural recreational and economic benefits for human well-being (Çetinkaya et al., 2014). Rural areas have the potential to host a wide variety of recreational activities due to their natural, cultural, and visual landscape values (Peroff et al., 2017; Aazami & Shanazi, 2020). The interaction of natural and cultural resources, particularly with people, is important for the identification of the landscape (Uzun et al, 2011).

The wide variety of recreational activities in an area increases the touristic attractiveness of those areas (Kutvan & Kutvan, 2013; Göker & Ünlüönen, 2019; İskender, 2019). The tendency of people to seek different tourism from the usual seasonal mass tourism has caused rural areas to become the focal point with their wealth of natural and cultural resources. Thus, the concept of rural tourism has come to the fore on a global scale (Özer & Çavuşoğlu, 2014; An & Alarcón, 2020). Rural tourism, which is compatible with the understanding of sustainable tourism, is a concept that "tries to meet the touristic supply resources without destroying them" (Çeken et al., 2012) and plays an important role in the protection and promotion of these resources. Recreational activities based on the protection of natural and cultural landscape values play an important role in the sustainability of rural tourism (Wanner et al., 2020; Liu et al., 2021).

The main material of this study is Bursa province Karacabey district, which is a very important place with its natural and cultural landscape richness. There are 64 villages in the Karacabey district and this area shows a high rural landscape character. For this reason, it was chosen as the subject of study. In the study, Gülez method was used to determine the recreational potential of 64 different study areas. In this direction, the landscape value, climate, accessibility, recreational convenience, and negative factors of the district were evaluated separately for each village. As a result, the recreational potentials and the current recreational activities of the area were determined, and new recreational activities were proposed within the framework of protection-utilization balance.

MATERIALS and METHODS

The main material of the study is the Karacabey district of Bursa. Karacabey, which is the 5th largest district of the city with an area of 1,285 km^2, is surrounded by Mudanya and Nilüfer from the east, Balıkesir from the west, Mustafakemalpaşa from the south and the Marmara Sea from the north. Being located at the intersection of intercity highways, it has the feature of being one of the most easily accessible districts of the city (Karacabey Municipality, 2021). The geographical location of the district is given in Figure 1.

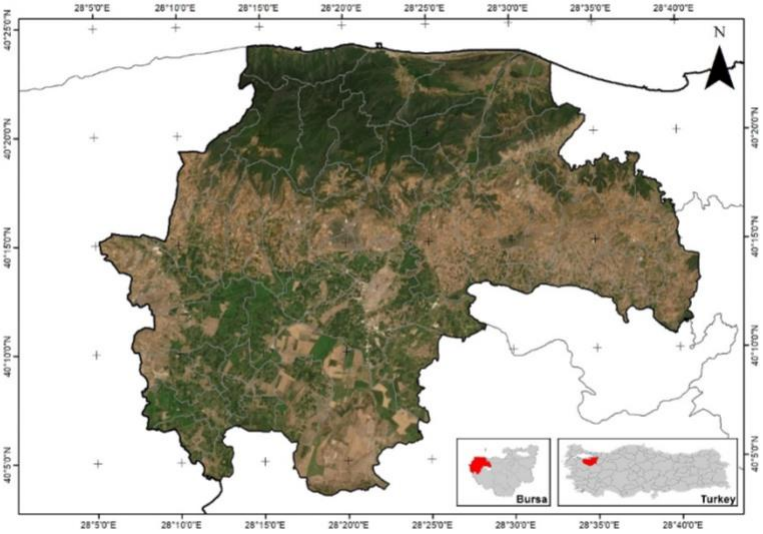

Figure 1. The geographic location of the study area.

Şekil 1. *Çalışma alanının coğrafi konumu.*

In the study, the "determination of the recreational potential of open air and forest areas" method, which was introduced by Kiemstedt (1967) and Buchwald (1973) and developed by Gülez (1989), was applied. Within the scope of the study, suggested recreational activities were developed according to the existing recreational activities and characteristic features of the villages whose recreational potentials were calculated according to the Gülez method. The Gülez method is based on the principle of giving weighted points to the items determined under five headings: landscape value, climate, accessibility, recreational suitability, and negative factors of outdoor recreation areas (Çelik Çanga et al., 2016). The recreational potential evaluation form of the villages of Bursa province Karacabey district is given in Table 1.

Scoring-based information was obtained by scanning domestic and foreign scientific resources, making field investigations and observations, making face-to-face and telephone conversations with the headmen and local people, examining the photographs of the land, and making analyzes in the GIS environment. The information obtained was evaluated and scored by two landscape architects who knew the study areas. Scoring was made according to the weight scores of each item given in Table 2.

Since the total score will theoretically be a maximum of 100, the sum of the points that the items in the formula can get will give the outdoor recreation potential of an area as a percentage. The scores of the items were calculated with the formula below and interpreted according to their suitability classes (Gülez, 1989).

Landscape Value (L) + Climatic Value (C) + Accessibility (A) + Recreational Convenience (RC) + Negative Factors (NF) = Recreation Potential (RP)

Accordingly, the suitability classes of recreation potential values are <30% very low, 30-45% low, 46-60% medium, 61-75% high, and >75% very high.

Table 1. Recreation potential evaluation form (Gülez, 1989)

Çizelge 1. *Rekreasyon potansiyeli değerlendirme formu (Gülez, 1989)*

	Properties	Explanation	Score		Properties	Explanation	Score
LANDSCAPE VALUE (L)	Size of the Area	10 ha<	4	ACCESSIBILITY (A)	Touristic Importance of the Area	Mediterranean, Aegean, Marmara Black Sea Coastline	3-4
		5 – 10 ha	3			Important Highway Routes	2-3
		1 – 5 ha	2			Priority Places in Tourism	1-3
		0,5 – 1 ha	1		Having a City Nearby with a Population of at least 100,000	Up to 20 km	4-5
	Surface Condition	Plain	5			Up to 50 km	3-4
		Slightly Wavy	4			Up to 100 km	2-3
		Little Inclined, plain in some areas	3			Up to 200 km	1-2
		Slightly Rough	2			1 hour by walking	4
		Medium Rough	1			0-1/2 hours by a vehicle	3
	Vegetation	Woodland, Shrubbery, Meadowland	7-8			½-2 hours by a vehicle	2
		Only Woodland, Meadowland	6-7			1-2 hours by a vehicle	1
		Shrubbery, Meadowland, Woodland	5-6		Transportation (other than a taxi or private vehicle)	Walkability	3-4
		Shrubbery, Sparse Woodland	4-5			Finding a Vehicle all the Time	2-3
		Only Shrubbery, Meadowland	3-4			Finding a Vehicle at Certain Times	1-3
		Meadowland, Sparse Shrubbery	2-3		Other	Cable car, Access from the Sea, etc.	1-3
		Only Meadow	1-3	RECREATIONAL CONVENIENCE (RC)	Picnic Facilities	Stationary picnic table, barbeque, etc. (according to their quality)	1-4
	Sea, Lake, Rivers	Seaside	7-8				
		Lakeside	6-7		Water Condition	Drinking and tap water conditions (according to their quality)	1-3
		Riverside	1-4		Accommodation Facilities	Stationary accommodation facilities	2
	Visual Quality	Panoramic Views	3-4			Camp with ten tor no tent	1-2
		Beautiful Views and Vistas	2-3		Restrooms	According to their quality	1-2
		Visual and Aesthetic Value	1-4		Car Park	According to their quality	1-2
	Other Features	Cave, Waterfall, Historical and Cultural Values, etc.	1-6		Open-air Cafe, Kiosk	According to their quality	1-2
CLIMATE VALUE (C)	Temperature	Average of Summer Months (°C) 16-17-18-19-20-21-22-23-24-25	1-10		Guard and Officier	Continuously guard/officer	2
						Attendant on weekends	1
		Average of Summer Months (°C) 34-33-32-31-30-29-28-27-26-25	1-10		Other Conveniences	Beach, cabin and shower, rental row boats, etc. (according to their quality)	1-3
	Precipitation	Total Precipitation of Summer Months (mm) 50-100-150-200-250-300-350-400	1-8	NEGATIVE FACTORS (NF)	Air pollution	According to the degree of pollution	(-1)-3
	Insolation	The average Cloudiness of Summer Months 0-2, 2-4, 4-6, 6-8, 8-9	1-5		Being unsafe	According to the degree of safety	(-1)-2
					Water pollution	For sea, lake, and rivers	-1
	Windiness	The average wind speed in summer is less than 1 m/s	2		Neglect	Not doing enough maintenance	-1
					Noise	Noises from traffic, crowd, etc.	-1
		The average wind speed in summer is 1-3 m/s	1		Other negative factors	Quarry and gravel pit, construction and factory ruins, etc.	(-1)-2

Table 2. Factors in the evaluation form and maximum score to be taken (Gülez, 1989)

Çizelge 2. *Değerlendirme formunda bulunan faktörler ve alabilecekleri maksimum puan (Gülez, 1989)*

Symbol	Meaning	Maximum Score (Weight Score of Factors)
L	Landscape Value	35
C	Climate Value	25
A	Accessibility	20
RC	Recreational Convenience	20
NF	Negative Factors	0 (Minimum -10)
%RP	Recreation Potential	100

RESULTS

The population of the area, its distance from the centers and its infrastructure opportunities play an important role in determining the recreational activities to be brought to an area. For this reason, the existing infrastructure opportunities of the villages within the scope of the study were determined by on-site examinations and the results are given in Table 3.

Table 3. Population, distance to centers, and existing infrastructure opportunities of the villages
Çizelge 3. *Köylerin nüfusu, merkezlere uzaklığı ve mevcut altyapı olanakları*

Village Name	Population	Distance		Existing Infrastructure	Village Name	Population	Distance		Existing Infrastructure
		B	K				B	K	
Akçakoyun	296	68	7	1, 2, 3, 4, 6, 7, 8	İkizce	469	39	30	1, 2, 3, 4, 5, 6, 7, 8
Akçasusurluk	204	66	12	1, 2, 3, 4, 5, 6, 7	İnkaya	113	55	27	1, 2, 6, 7
Akhisar	283	89	19	1, 3, 4, 5, 6, 7, 8	İsmetpaşa	551	90	20	1, 3, 4, 5, 6, 7, 8
Arız	191	85	15	1, 2, 3, 4, 6, 7	Karakoca	856	51	27	1, 3, 4, 5, 6, 7
Bakırköy	537	56	8	1, 3, 4, 5, 6, 7, 8	Karasu	99	78	8	1, 2, 6, 7
Ballıkaya	102	77	27	1, 2, 6, 7	Kedikaya	75	85	15	1, 2, 6, 7
Bayramdere	1.486	83	29	1, 3, 4, 5, 6, 7	Keşlik	485	81	12	1, 3, 5, 6, 7, 8
Beylik	609	92	22	1, 3, 5, 6, 7	Kıranlar	181	80	10	1, 2, 3, 4, 5, 6, 7
Boğazköy	341	90	24	1, 2, 3, 4, 6, 7	Kulakpınar	236	72	10	1, 3, 4, 6, 7
Cambaz	310	60	21	1, 3, 4, 5, 6, 7	Kurşunlu	709	96	42	1, 3, 4, 5, 6, 7
Çeşnigir	150	68	21	1, 2, 3, 6, 7	Küçükkaraağaç	253	80	10	1, 2, 6, 7
Çamlıca	222	59	23	1, 2, 3, 4, 6, 7	Muratlı	289	49	35	1,2, 3, 4, 6, 7
Çarık	58	67	10	1, 2, 5, 6, 7	Okçular	175	91	22	1, 2, 3, 4, 6, 7
Çavuşköy	280	95	26	1, 2, 3, 4, 5, 6, 7, 8	Orhaniye	123	42	34	1, 2, 3, 4, 6, 7
Dağesemen	133	77	16	1, 2, 6, 7	Ortasarıbey	414	85	16	1, 3, 6, 7
Dağkadı	698	87	17	1, 3, 4, 5, 6, 7, 8	Ovaesemen	330	94	24	1, 2, 3, 6, 7
Danişmend	367	96	22	1, 3, 4, 5, 6, 7	Örencik	81	87	18	1, 2, 6, 7
Doğla	305	89	19	1, 2, 3, 4, 6, 7	Sazlıca	235	87	17	1, 2, 3, 6, 7
Ekinli	282	75	30	2, 3, 4, 6, 7, 8	Seyran	416	60	16	1, 3, 4, 5, 6, 7
Ekmekçi	297	70	16	1, 2, 3, 4, 6, 7	Subaşı	683	55	23	1, 3, 4, 5, 6, 7, 8
Eskikaraağaç	227	45	29	1, 2, 3, 4, 6, 7	Sultaniye	782	96	26	1, 3, 4, 5, 6, 7
Eskisarıbey	334	86	16	1, 2, 3, 4, 5, 6, 7, 8	Şahinköy	280	74	4	1, 2, 3, 6, 7, 8
Fevzipaşa	240	80	10	1, 2, 3, 4, 6, 7	Şahmelek	215	97	27	1, 2, 3, 4, 6, 7
Gölecik	72	82	12	1, 2, 3, 4, 6, 7	Taşlık	247	66	3	1, 3, 4, 6, 7
Gölkıyı	176	52	17	1, 2, 6, 7	Taşpınar	237	46	31	1, 2, 3, 6, 7
Gönü	394	77	15	1, 2, 3, 4, 6, 7	Tophisar	348	91	15	1, 3, 4, 6, 7
Güngörmez	95	77	15	1, 2, 6, 7	Uluabat	497	59	11	1, 2, 3, 6, 7
Hamidiye	3.306	89	19	1, 2, 3, 4, 6, 7, 8	Yarış	211	74	12	1, 2, 3, 6, 7
Harmanlı	537	60	7	1, 3, 4, 5, 6, 7	Yenikaraağaç	629	42	26	1, 3, 4, 5, 6, 7, 8
Hayırlar	139	63	14	1, 2, 6, 7	Yenisarıbey	342	85	15	1, 2, 3, 4, 5, 6, 7
Hotanlı	363	75	5	1, 2, 3, 4, 6, 7	Yeşildere	195	92	22	1, 2, 3, 4, 6, 7
Hürriyet	240	49	34	1, 2, 3, 4, 6, 7	Yolağzı	574	75	13	1, 2, 3, 4, 6, 7

Abbreviations: **Distance:** B=Bursa, K=Karacabey; **Existing Infrastructure:** 1=Primary School, 2=Bussed Education, 3=Drinking Water Network, 4=Sewerage Network, 5=Health Unit, 6=Electric, 7=Land Phone, 8=Internet. Distance is in km and population is in person.

The natural and cultural landscape values of an area ensure that the recreation potential of that area is high. Areas with high landscape values also have high visitor potential (Çetin et al., 2018). In order for the users to meet their recreational needs and experience these values, the touristic and recreational activities that will ensure the development of the areas both economically and socially should be well planned within the framework of the protection-use balance (Çetin & Sevik, 2016). Karacabey, which is the study area, consists of villages with wealth and unique values. The natural and cultural landscape values of these villages are given in Table 4.

The most important feature in determining the outdoor recreation potential is the landscape values of the area (Çetin, 2015). The size of the area, its surface condition, vegetation, presence of the sea, lake, stream, visual quality, and other features carve out landscape values. These values increase the attractiveness of the area and play an important role in the preferences of the visitors. The size of the area is important in choosing a place for recreational activities. The village with the largest area of the district is Sultaniye, with 3,931 ha; the village with the smallest area is Çarık, with 323 ha.

The surface condition of the area not only affects its recreational potential, but it is also considered as an opportunity for recreational activity diversity as long as it is suitable for visitor use and transportation. Although the topographic structure of the Karacabey district is rough in its southern and northern borders, it is generally plain. The district has 0-936.8% average slope values, and 0-7.3% slope

group dominates 59.55% of the area; to 7.4-25.7% slope group 21.51%; to 25.8-51.4% slope group 15.78% and 51.5%< slope group dominates the remaining 3.16% of the area. This diversity in slope groups offers various recreational activities to the villages.

Table 4. Natural and cultural landscape values of the villages

Çizelge 4. *Köylerin doğal ve kültürel peyzaj değerleri*

Village Name	Natural and Cultural Landscape Values	Village Name	Natural and Cultural Landscape Values
Akçakoyun	Koca Taş, Sarnıçtepe, Talaştepe Hills, Pheasant breeding station	İkizce	Uluabat Lake, Fertile Soil, Church and monastery ruins
Akçasusurluk	Old mosque ruins	İnkaya	Nilüfer River, Pond
Akhisar	Fertile Soil	İsmetpaşa	Karaçay River, Fertile Soil, Hacıaliağa Mosque
Arız	Karaçay River, Fertile Soil, Byzantine ruins,	Karakoca	Uluabat Lake, Fertile Soil, Zoodohos Piyi Church
Bakırköy	Fertile Soil, Vasil farm, Arap Ali Investment	Karasu	Karaçay River, Fertile Soil, Byzantine ruins
Ballıkaya	Marmara Sea	Kedikaya	Tekke Dede Investment
Bayramdere	Marmara Sea, Yeniköy Beach, Forest, Maiden Castle ruins, Pond	Keşlik	Fertile Soil, Pond, Byzantine ruins
Beylik	Fertile Soil	Kıranlar	Dedebayırı Investment, Byzantine ruins, Old mosque
Boğazköy	Marmara Sea, Dalyan Lake, Longoz Forest, Fertile Soil, Pheasant breeding station, Ova Grove Bear Sanctuary	Kulakpınar	Forest, Monument tree, Pond, Historical mosque, Arnavut Dede Investment
Cambaz	Nilüfer River	Kurşunlu	Marmara Sea, Forest, Church and monastery ruins, Skylake ve Plakia settlements
Çeşnigir	Nilüfer River, Theotos Church, Settlement ruins,	Küçükkaraağaç	Fertile Soil, Byzantine ruins
Çamlıca	Nilüfer River, Old mosque ruins, Ayios Georgios	Muratlı	Nilüfer River
Çarık	None	Okçular	Forest
Çavuşköy	Byzantine ruins	Orhaniye	Fertile Soil, Church ruins
Dağesemen	None	Ortasarıbey	Fertile Soil, Ancient settlement ruins
Dağkadı	Koca River, Fertile Soil, Pond, Old Inn	Ovaesemen	Fertile Soil
Danişmend	Fertile Soil, Byzantine ruins	Örencik	Forest, Settlement ruins
Doğla	Fertile Soil	Sazlıca	Fertile Soil
Ekinli	Marmara Sea, Arap Çiftliği Lake, Bakacak Hill,	Seyran	Uluabat Lake, Fertile Soil, Issız Inn, Settlement ruins
Ekmekçi	None	Subaşı	None
Eskikaraağaç	Uluabat Lake, Mound, Fertile Soil, Church and monastery ruins	Sultaniye	Karaçay River, Fertile Soil, Old Inn and ruins, Pond
Eskisarıbey	Fertile Soil	Şahinköy	Karaçay River, Fertile Soil
Fevzipaşa	Karaçay River, Fertile Soil, Old mosque	Şahmelek	Forest
Gölecik	Monument tree, Pond	Taşlık	Karaçay River, Fertile Soil, Roman ruins
Gölkıyı	Uluabat Lake, Fertile Soil, Old village ruins	Taşpınar	Fertile Soil, Church ruins
Gönü	Byzantine ruins	Tophisar	Fertile Soil, Byzantine ruins, Fatma Tutut Mosque and Complex ruins, Tophisar Castle
Güngörmez	Forest	Uluabat	Uluabat Lake, Susurluk River, Fertile Soil, Uluabat Castle, Mikhael Archestatego, Konstantin Bridge
Hamidiye	Karaçay River, Fertile Soil	Yarış	Forest
Harmanlı	Uluabat Lake, Susurluk River, Fertile Soil, Ancient Period, Agios Theodoros Church ruins, Windmill	Yenikaraağaç	Uluabat Lake, Fertile Soil, Old settlement ruins, Hamdibey Farm
Hayırlar	None	Yenisarıbey	Fertile Soil
Hotanlı	Fertile Soil, Old village ruins	Yeşildere	Koca River, Pond
Hürriyet	Nilüfer River, Fertile Soil, Church ruins	Yolağzı	Susurluk River, Fertile Soil, Old village ruins

The vegetation of Karacabey reflects the general characteristics of the Marmara Region. Mediterranean plants and moisture-loving forests grow in the north of the district. Longoz Forest is located in Boğazköy village, and has a high value as it is Turkey's largest flooded forest. Often in forests, *Quercus* spp. (Oak) species are found. Besides *Tilia* spp. (Linden), *Laurus* spp. (Bay), *Cyrtisus scoparius* (Scotch broom), *Arbutus unedo* (Big berry), *Paliurus spina-christi* (Gorse) species are also abundant (Karacabey Municipality, 2021). The green texture that dominates the district not only appeals to the aesthetic values of the visitors but also is very beneficial for their physical and mental health. In addition, green texture elements create a spatial effect where they are located and directly affect the recreation potential.

Considered as the most important source of aesthetic and visual appeal in the landscape, water elements increases the visual quality of the environment and creates areas that are preferred by users in the first place for recreational services with its relaxing and healing effect (Sarıçam & Hepcan, 2015; Aşur, 2017). The coastal part of Karacabey district, 35 km away from the district center, is one of the regions with high tourism potential. The most important rivers of the district are Nilüfer, Susurluk, Karadere and Kocadere Rivers. In addition, due to the topography of the northern part of the region, many seasonal rivers flow. Uluabat Lake is the most important wetland in the district.

Karacabey district consists of villages with high visual quality, with its coastal wetlands, and wealth vegetation. This area also includes coastal dunes with vegetation quite different from other areas (Çelik Çanga, 2020). Especially in the coastal areas, the sea, lake, and forest complement each other aesthetically. For this reason, the visual quality of the villages offers recreational appeal in all seasons.

The landscape values, which are considered with a weight of 35% in determining the recreation potential of the villages, were determined by the interviews with the headmen, literature reviews, the documents of Karacabey Municipality and the studies carried out in the ArcGIS program. Landscape values are given in Table 5 by scoring according to the Gülez method.

Table 5. The Scores of landscape values of the villages

Çizelge 5. *Köylerin peyzaj değerlerinin puanları*

Village Name	Landscape Value (L)		Village Name	Landscape Value (L)	
Akçakoyun	A=4 E=2 G=7 U=2	T= 15	İkizce	A=4 D=3 I=5 O=6 P=2 U=1	T= 21
Akçasusurluk	A=4 E=2 H=7 P=3 U=1	T= 17	İnkaya	A=4 E=2 I=6 O=7 P=4 T=2 U=2	T= 27
Akhisar	A=4 B=5 M=3	T= 12	İsmetpaşa	A=4 B=5 M=2 P=3 U=1	T= 15
Arız	A=4 B=5 L=2 O=6 P=1 U=1	T= 19	Karakoca	A=4 E=2 J=4 O=6 P=3 U=1	T= 20
Bakırköy	A=4 B=5 M=3 U=3	T= 15	Karasu	A=4 C=4 J=4 P=4 U=1	T= 17
Ballıkaya	A=4 E=2 H=6 N=7 O=6 R=3 S=2 T=2	T= 32	Kedikaya	A=4 E=2 I=6 P=1 U=3	T= 16
Bayramdere	A=4 F=1 H=7 N=8 S=3 T=3 U=3	T= 29	Keşlik	A=4 D=3 I=5 O=7 P=3 T=2 U=2	T= 26
Beylik	A=4 B=5 L=3	T= 12	Kıranlar	A=4 D=3 G=7 P=2 U=1	T= 17
Boğazköy	A=4 D=3 H=6 N=8 O=7 P=1 R=3 S=2 T=4 U=4	T= 42	Kulakpınar	A=4 C=4 I=6 O=7 P=4 T=2 U=4	T= 31
Cambaz	A=4 C=4 J=4 P=2	T= 14	Kurşunlu	A=4 F=1 G=8 N=8 P=1 R=4 S=2 T=4 U=2	T= 34
Çeşnigir	A=4 D=3 H=6 P=3 U=1	T= 17	Küçükkarağaç	A=4 B=5 M=2 P=3 U=1	T= 15
Çamlıca	A=4 C=4 J=4 P=1 S=2 T=2 U=1	T= 18	Muratlı	A=4 C=4 I=6 P=1	T= 15
Çarık	A=4 C=4 J=4 P=3 S=2 T=3	T= 20	Okçular	A=4 C=4 I=5 O=6 P=3	T= 22
Çavuşköy	A=4 C=4 L=2 P=2 U=1	T= 13	Orhaniye	A=4 C=4 L=3 O=6 U=1	T= 18
Dağesemen	A=4 D=3 H=7 S=2 T=2	T= 18	Ortasarıbey	A=4 B=5 L=2 P=1 T=2 U=2	T= 16
Dağkadı	A=4 C=4 L=2 O=6 P=2 U=1	T= 19	Ovaesemen	A=4 B=5 M=3 P=1 U=1	T= 14
Danişmend	A=4 C=4 L=3 P=1 U=1	T= 13	Örencik	A=4 F=1 G=8 P=4 T=2	T= 19
Doğla	A=4 C=4 I=5 O=6 P=3 U=1	T= 23	Sazlıca	A=4 B=5 L=2 P=1	T= 12
Ekinli	A=4 D=3 H=6 N=7 O=6 R=3 S=2 T=4 U=1	T= 36	Seyran	A=4 D=3 H=6 O=6 P=1 U=3	T= 23
Ekmekçi	A=4 E=2 H=7 P=3 S=2 T=3	T= 21	Subaşı	A=4 E=2 H=6 O=6 P=2	T= 20
Eskikaraağaç	A=4 B=5 H=6 O=6 R=4 S=3 T=4 U=4	T= 36	Sultaniye	A=4 C=4 L=3 P=4 U=1	T= 16
Eskisarıbey	A=4 B=5 L=2	T= 11	Şahinköy	A=4 C=4 I=5 P=1 U=1	T= 15
Fevzipaşa	A=4 C=4 L=2 P=4 U=1	T= 15	Şahmelek	A=4 E=2 G=8 P=1 S=2 T=2	T= 19
Gölecik	A=4 E=2 H=6 O=7 P=3 T=2 U=3	T= 27	Taşlık	A=4 C=4 L=3 P=1 T=2 U=3	T= 17
Gölkıyı	A=4 B=5 L=2 O=6 P=2 R=3 S=2 T=2 U=2	T= 28	Taşpınar	A=4 C=4 L=2 P=2 U=1	T= 13
Gönü	A=4 C=4 L=3 P=1 U=1	T= 13	Tophisar	A=4 B=5 M=3 P=5 T=2 U=1	T= 20
Güngörmez	A=4 D=3 G=8 P=3 S=2 T=2	T= 22	Uluabat	A=4 B=5 I=6 O=6 P=1 R=3 S=2 T=2 U=4	T= 33
Hamidiye	A=4 B=5 L=2 P=1	T= 12	Yarış	A=4 C=4 H=7 P=3	T= 18
Harmanlı	A=4 C=4 I=5 O=6 P=4 U=1	T= 24	Yenikaraağaç	A=4 C=4 I=5 O=6 P=2 T=2 U=2	T= 25
Hayırlar	A=4 C=4 I=6 P=4 S=2 T=2	T= 22	Yenisarıbey	A=4 B=5 M=3 U=1	T= 13
Hotanlı	A=4 B=5 M=2 P=4 U=2	T= 17	Yeşildere	A=4 D=3 I=6 P=5 T=2	T= 20
Hürriyet	A=4 C=4 I=6 P=3 U=1	T=18	Yolağzı	A=4 C=4 K=4 P=1 U=1	T= 13

Abbreviations: **Size of the Area:** A=Bigger Than 10 ha; **Surface Condition**: B=Plain, C=Slightly Wavy, D=Little Inclined, E=Slightly Rough, F=Medium Rough; **Vegetation**: G=Woodland, Shrubbery, Meadowland, H=Only Woodland, Meadowland I=Shrubbery, Meadowland, Woodland J=Shrubbery, Sparse Woodland K=Only Shrubbery, Meadowland, L=Meadowland, Sparse Shrubbery M=Only Meadowland; **Sea, Lake, River**: N=Seaside, O=Lakeside, P=Rivers; **Visual Quality**: R=Panoramic Views, S=Beautiful Views and Vistas, T=Visual and Aesthetic Value**; Other Features**: U=Cave, Waterfall, Historical and Cultural Values. **T=**Total Evaluation Score

The Marmara climate is dominant in the Karacabey district of Bursa. The annual average temperature of Karacabey, which is under the influence of hot and mild weather, is 14.6 °C. The highest precipitation falls in the district in December, January, and February. The district, which receives precipitation on average 12 days a year, has an average of 704.9 mm of total precipitation. With an average insolation duration of 74.7 hours, the city has an average of 76 sunny days; cloud days are on average 170 days. It is seen that the Karacabey district has the potential to serve recreational use throughout all seasons with suitable climatic conditions. The climatic value evaluation score, which plays

an important role in the recreation potential of the area and affects it with a weight of 25%, is given in Table 6 (Kaya et al., 2009; Çelik Çanga et al., 2016; Meteoblue, 2021).

Table 6. The scores of climate value of villages

Çizelge 6. *Köylerin klimatik değerlerinin puanları*

Village Name	CLIMATE VALUE (C)	
All Villages	A=8 B=2 C=3 D=2	**T=15**

Abbreviations: **Temperature:** A=Average of Summer Months (°C) 16-17-18-19-20-21-22-23-24-25; **Precipitation:** B= Total of Summer Months (mm) 50-100-150-200-250-300-350-400; **Insolation:** C=Average of Summer Months 0-2, 2-4, 4-6, 6-8, 8-9; **Windiness:** D= Average wind speed in summer is less than 1 m/s **T=**Total Evaluation Score

Accessibility is one of the most important issues to consider when determining to recreation potential of the area. Karacabey district is approximately 60 km away from Bursa city center with Mudanya and Nilüfer districts in the east and Mustafakemalpaşa district in the west. Manyas, Bandırma, and Susurluk districts of Balıkesir are located in the west of the district. Located at the intersection of Bursa-İzmir and Çanakkale-Bursa highways, Karacabey is one of the most easily accessible districts of Bursa.

Transportation to the villages of the district is usually provided by private vehicles, besides, bus services are organized to most villages at certain times. Infrequent departure times of buses are restrictive factor for visitors. The transportation information obtained as a result of the BURULAŞ (Bursa Transportation Public Transportation Management) website and the interviews with the village headmen were scored according to the Gülez method and the effect on the recreation potential was determined by considering it with a weight of 20%. This scoring is given in Table 7.

Table 7. The scores of accessibilities to the villages

Çizelge 7. *Köylerin ulaşılabilirliklerinin puanları*

Village Name	ACCESSIBILITY (A)		Village Name	ACCESSIBILITY (A)	
Akçakoyun	C=1 E=3 G=1 H=2 I=1	T=8	İkizce	B=3 C=1 D=3 F=2 H=2 I=1	T=12
Akçasusurluk	E=3 G=1 H=2 I=1	T=7	İnkaya	C=1 E=3 G=1 H=2 I=1	T=8
Akhisar	E=2 G=1 H=2 I=2	T=7	İsmetpaşa	E=2 G=1 H=2 I=2	T=7
Arız	C=3 E=2 G=1	T=6	Karakoca	B=3 C=1 E=3 G=1 H=2 I=2	T=12
Bakırköy	C=1 E=3 G=1 H=2 I=2	T=9	Karasu	B=3 E=2 G=1 H=2 I=1	T=9
Ballıkaya	A=3 C=2 E=2 G=1	T=8	Kedikaya	C=1 E=2 G=1	T=4
Bayramdere	A=4 C=3 E=2 G=1 H=2 I=1	T=13	Keşlik	B=2 E=2 G=1 H=2 I=1	T=8
Beylik	E=2 G=1 H=2 I=2	T=7	Kıranlar	E=2 G=1 H=2 I=1	T= 6
Boğazköy	A=4 C=3 E=2 G=1 H=2 I=1	T=13	Kulakpınar	C=3 E=3 G=1 H=2 I=2	T= 11
Cambaz	B=3 E=3 G=1 H=2 I=2	T=11	Kurşunlu	A=4 C=2 E=2 G=1 H=2 I=2	T= 13
Çeşnigir	C=1 E=3 G=1	T=5	Küçükkarağaç	E=2 G=1	T= 3
Çamlıca	E=3 G=1 H=2 I=3	T=9	Muratlı	B=2 D=3 F=2 H=2 I=1	T= 10
Çarık	E=3 G=1 H=2 I=1	T=7	Okçular	E=2 G=1	T= 3
Çavuşköy	B=2 E=2 G=1 H=3 I=3	T=11	Orhaniye	B=3 D=3 F=2	T= 8
Dağesemen	E=2 G=1	T=3	Ortasarıbey	C=1 E=2 G=1 H=2 I=2	T= 8
Dağkadı	B=3 E=2 G=1 H=2 I=1	T=9	Ovaesemen	E=2 G=1 H=2 I=1	T= 6
Danişmend	E=2 G=1 H=2 I=1	T=6	Örencik	C=1 E=2 G=1	T= 4
Doğla	C=1 E=2 G=1 H=2 I=2	T=8	Sazlıca	E=2 G=1 H=2 I=2	T= 7
Ekinli	A=3 E=3 G=1	T=7	Seyran	B=3 C=3 E=3 G=1 H=3 I=2	T= 15
Ekmekçi	E=3 G=1 H=2 I=1	T=7	Subaşı	B=3 E=3 G=1 H=2 I=2	T= 11
Eskikaraağaç	B=3 C=2 D=3 F=2 H=3 I=2	T=15	Sultaniye	E=2 G=1 H=2 I=2	T= 7
Eskisarıbey	E=2 G=1 H=2 I=1	T=6	Şahinköy	B=2 E=3 G=1 H=2 I=1	T= 9
Fevzipaşa	B=3 E=2 G=1 H=2 I=1	T=9	Şahmelek	C=1 E=2 G=1 H=2 I=1	T= 7
Gölecik	C=1 E=2 G=1 H=2 I=1	T=7	Taşlık	C=1 E=3 G=1 H=2 I=2	T= 9
Gölkıyı	C=2 E=3 G=1	T=6	Taşpınar	D=3 F=2 H=2 I=1	T= 8
Gönü	B=3 E=2 G=1 H=2 I=1	T=9	Tophisar	E=2 G=1 H=2 I=2	T= 7
Güngörmez	C=1 E=2 G=1	T=4	Uluabat	B=3 C=3 E=3 G=1 H=2 I=2	T= 14
Hamidiye	E=2 G=1 H=2 I=1	T=6	Yarış	C=1 E=3 G=1 H=2 I=1	T= 8
Harmanlı	B=3 E=3 G=1 H=2 I=2	T=11	Yenikaraağaç	B=2 D=3 F=2 H=2 I=1	T= 10
Hayırlar	E=3 G=1 H=2 I=1	T=7	Yenisarıbey	E=2 G=1 H=2 I=1	T= 6
Hotanlı	C=1 E=3 G=1 H=2 I=2	T=9	Yeşildere	E=2 G=1	T= 3
Hürriyet	D=3 F=2 H=2 I=1	T=8	Yolağzı	B=3 E=3 G=1 H=2 I=1	T= 10

Abbreviations: **Touristic Importance of the Area:** A=Akdeniz, Ege, Marmara, Karadeniz Coastline, B=Importance Highway Routes, C=Priority Areas in Tourism; **Having a City Nearby with a Population of at least 100,000:** D=Within the Distance of 50 km, E=Within the Distance of 100 km, F=1/2-1 hours by a vehicle, G=1-2 hours by a vehicle; **Transportation**: H=Finding a Vehicle, I=Finding a Vehicle at Certain Times **T=** Total Evaluation Score

Recreational conveniences, which play an important role in determining the recreation potential of an area, depend on the quality and quantity of the existing recreational equipment in the area. The recreational equipment of the area is effective in increasing the quality of the environment and creating more attractive spaces for visitors. For this reason, in determining the recreational potential of the study areas, the value of recreational convenience was considered with a weight of 20%. The determination of the recreational conveniences of the villages in Karacabey and the calculation of the score according to the Gülez method were carried out as a result of the interviews with the village headmen and the analyzes made on GoogleMap. The scoring of the analyzes according to the Gülez method is given in Table 8.

Table 8. The scores of recreational conveniences of the villages
Çizelge 8. *Köylerin rekreasyonel olanaklarının puanları*

Village Name	RECREATIONAL CONVENIENCE (RC)		Village Name	RECREATIONAL CONVENIENCE (RC)	
Akçakoyun	A=1 B=1 E=1 G=1 J=1	T=5	İkizce	B=2 E=1 G=2 J=1	T=6
Akçasusurluk	B=1 E=1 G=2	T=4	İnkaya	B=2 G=2 J=1	T=5
Akhisar	B=1 E=1 G=2 J=1	T=5	İsmetpaşa	A=2 B=1 C=2 D=1 E=1 G=2 J=1	T=10
Arız	B=2 G=1 J=1	T=4	Karakoca	A=2 B=2 D=1 E=2 G=2 J=2	T=11
Bakırköy	A=3 B=1 G=2 J=1	T=7	Karasu	E=1 G=1 J=1	T=3
Ballıkaya	B=1 E=1 G=1 J=1	T=4	Kedikaya	E=1 G=1 J=1	T=3
Bayramdere	A=4 B=1 C=2 E=2 F=2 G=2 J=3	T=16	Keşlik	B=3 E=1 G=2 J=2	T=8
Beylik	B=1 G=2 J=1	T=4	Kıranlar	B=1 E=1 G=1 J=2	T=5
Boğazköy	A=4 B=3 C=2 D=1 E=2 F=2 G=2 J=3	T=19	Kulakpınar	B=3 E=1 G=2 J=1	T=7
Cambaz	B=1 E=1 G=2 J=1	T=5	Kurşunlu	A=3 B=2 C=2 D=1 E=2 F=2 G=2 J=3	T=17
Çeşnigir	B=1 E=1 G=1 J=1	T=4	Küçükkarağaç	A=2 E=1 G=1 J=1	T=5
Çamlıca	B=1 G=1 J=1	T=3	Muratlı	B=1 E=1 G=2 J=2	T=6
Çarık	B=1 E=1 J=1	T=3	Okçular	B=2 E=1 G=2 J=1	T=6
Çavuşköy	A=1 B=1 E=1 G=2 J=1	T=6	Orhaniye	B=2 E=1 G=1 J=2	T=6
Dağesemen	J=1	T=1	Ortasarıbey	B=1 E=1 G=2 J=1	T=6
Dağkadı	B=2 E=1 G=2 J=2	T=7	Ovaesemen	B=1 E=1 G=2 J=1	T=5
Danişmend	B=1 E=1 G=2 J=1	T=5	Örencik	E=1 G=1 J=1	T=3
Doğla	A=1 B=2 E=1 G=2 J=1	T=7	Sazlıca	B=1 G=2 J=1	T=4
Ekinli	B=2 E=1 G=2 J=1	T=6	Seyran	B=1 E=1 G=2 J=1	T=5
Ekmekçi	B=1 E=1 G=1 J=1	T=4	Subaşı	B=1 E=1 G=2 J=2	T=6
Eskikaraağaç	A=2 B=2 D=1 E=1 G=2 J=2	T=10	Sultaniye	B=1 E=1 F=1 G=2 J=1	T=6
Eskisarıbey	B=1 E=1 G=2 J=3	T=7	Şahinköy	B=1 E=1 G=2 J=1	T=5
Fevzipaşa	B=1 E=1 G=2 J=1	T=5	Şahmelek	B=1 E=1 G=2 J=1	T=5
Gölecik	A=1 B=3 E=1 G=2 J=1	T=8	Taşlık	A=3 B=1 E=2 F=1 G=2 J=2	T=11
Gölkıyı	A=2 B=1 E=1 G=1 J=1	T=5	Taşpınar	B=1 E=1 G=2 J=1	T=5
Gönü	B=1 E=1 G=2 J=2	T=6	Tophisar	B=1 E=1 G=2 J=2	T=6
Güngörmez	E=1 J=1	T=2	Uluabat	B=2 C=2 E=1 F=1 G=2 J=1	T=9
Hamidiye	B=1 E=1 G=2 J=1	T=5	Yarış	A=2 B=1 D=1 E=1 G=2 J=1	T=8
Harmanlı	A=2 B=2 E=1 G=2 J=2	T=9	Yenikaraağaç	B=2 E=1 G=2 J=2	T=7
Hayırlar	A=1 D=1 E=1 G=1 J=1	T=5	Yenisarıbey	B=1 E=1 G=2 J=1	T=5
Hotanlı	B=1 E=1 G=1 J=1	T=4	Yeşildere	B=1 E=1 G=1 J=1	T=4
Hürriyet	B=1 E=1 G=2 J=1	T=5	Yolağzı	A=1 B=2 E=1 F=1 G=2	T=7

Abbreviations: **Picnic Facilities:** A=Stationary Picnic Table, Barbeque, etc. (According to their Quality); **Water Condition:** B=Drinking and Tap Water Condition (According to their Qaulity); **Accommodation Facilities:** C=Stationary Accommodation Facilities, D=Camp with Ten tor No Tent; **Restrooms:** E=According to their Quality; **Car Park:** F=According to their Quality; **Open-air Cafe, Kiosk:** G=According to their Quality; **Guard and Officier:** H=Permanent Guard/Officier, I=Attendant on Weekends; **Other Conveniences:** J=Beach, Cabin, and Shower, etc. (According to their Quality) **T=**Total Evaluation Score

According to Table 8, it is stated that there are no guards or officers working continuously or on weekends in any village in the Karacabey district, but only servants. Apart from the picnic facilities in Bayramdere, Boğazköy, Kurşunlu, and Yolağzı villages, it has been determined that private parking areas are created only in the squares of Uluabat and Taşlık villages, and the roadside is used as parking lot in other villages except these villages. Except for Akçasusurluk, every village has a playground. Although

some of these areas are considered inadequate in terms of maintenance and equipment; it has been reported that the villagers are conscious of the necessity of playgrounds, and requests have been made to the municipality for the renewal and regular maintenance of these areas.

The negativities caused by various factors such as physical and biological also play an important role in determining the recreation potential of an area. Air, water, and environmental pollution caused by these factors reduce the quality of life and restrict the use of the area for recreational purposes, as it creates an undesirable visual effect. Each negative factor a village has is calculated by subtracting from the total evaluation score. For this reason, in determining the recreation potential, the value of negative factors is considered with a weight of 0%.

As a result of the examinations and evaluations made, it has been determined that the most common negative factor in the Karacabey district is neglect. The biggest reason for this is that garbage is collected at very sparse intervals. Another common negative factor of the district, which is at the intersection of important highway routes, is noise pollution caused by traffic. At the same time, it is known that the high level of agricultural activities in the district and the use of chemical fertilizers and pesticides play a role in the pollution of water resources. The factors that negatively affect the recreation potential of the villages in the Karacabey district are given in Table 9 according to the method of the study.

Table 9. The scores of factors affecting recreation negatively in villages

Çizelge 9. *Köylerde rekreasyonu olumsuz etkileyen faktörlerin puanları*

Village Name	NEGATIVE FACTORS (NF)		Village Name	NEGATIVE FACTORS (NF)	
Akçakoyun	B= (-1) D= (-1) F= (-1)	T= (-3)	İkizce	D= (-1) E= (-1)	T= (-2)
Akçasusurluk	D= (-1) F= (-1)	T= (-2)	İnkaya	D= (-1)	T= (-1)
Akhisar	A= (-1) D= (-1)	T= (-2)	İsmetpaşa	A= (-1) C= (-1) D= (-1)	T= (-3)
Arız	D= (-1) E= (-1)	T= (-2)	Karakoca	D= (-1) E= (-1)	T= (-2)
Bakırköy	D= (-1)	T= (-1)	Karasu	D= (-1) E= (-1)	T= (-2)
Ballıkaya	D= (-1)	T= (-1)	Kedikaya	D= (-1)	T= (-1)
Bayramdere		T= 0	Keşlik	C= (-1) D= (-1) E= (-1)	T= (-3)
Beylik	D= (-1)	T= (-1)	Kıranlar	D= (-1)	T= (-1)
Boğazköy	C= (-1)	T= (-1)	Kulakpınar	D= (-1)	T= (-1)
Cambaz	D= (-1) E= (-1)	T= (-2)	Kurşunlu	F= (-1)	T= (-1)
Çeşnigir	C= (-1) D= (-1)	T= (-2)	Küçükkarağaç	C= (-1) D= (-1)	T= (-2)
Çamlıca	D= (-1)	T= (-1)	Muratlı	D= (-1) E= (-1)	T= (-2)
Çarık	C= (-1) D= (-1)	T= (-2)	Okçular	D= (-1)	T= (-1)
Çavuşköy	D= (-1) E= (-1)	T= (-2)	Orhaniye	D= (-1) E= (-1)	T= (-2)
Dağesemen	D= (-1)	T= (-1)	Ortasarıbey	C= (-1) D= (-1)	T= (-2)
Dağkadı	E= (-1)	T= (-1)	Ovaesemen	C= (-1) D= (-1)	T= (-2)
Danişmend	D= (-1)	T= (-1)	Örencik	C= (-1) D= (-1)	T= (-2)
Doğla	D= (-1)	T= (-1)	Sazlıca	D= (-1)	T= (-1)
Ekinli	D= (-1)	T= (-1)	Seyran	D= (-1) E= (-1) F= (-1)	T= (-3)
Ekmekçi	D= (-1)	T= (-1)	Subaşı	A= (-1) D= (-1) E= (-1) F= (-1)	T= (-4)
Eskikaraağaç	D= (-1) E= (-1)	T= (-2)	Sultaniye	A= (-1) C= (-1) D= (-1)	T= (-3)
Eskisarıbey	D= (-1)	T= (-1)	Şahinköy	D= (-1)	T= (-1)
Fevzipaşa	D= (-1) E= (-1)	T= (-2)	Şahmelek	D= (-1) F= (-1)	T= (-2)
Gölecik	D= (-1)	T= (-1)	Taşlık	D= (-1)	T= (-1)
Gölkıyı	C= (-1) D= (-1)	T= (-2)	Taşpınar	D= (-1)	T= (-1)
Gönü	D= (-1) E= (-1)	T= (-2)	Tophisar	A= (-1) C= (-1) D= (-1)	T= (-3)
Güngörmez	C= (-1) D= (-1)	T= (-2)	Uluabat	D= (-1) E= (-1)	T= (-2)
Hamidiye	D= (-1)	T= (-1)	Yarış	C= (-1) D= (-1)	T= (-2)
Harmanlı	D= (-1) E= (-1)	T= (-2)	Yenikaraağaç	D= (-1) E= (-1)	T= (-2)
Hayırlar	C= (-1) D= (-1)	T= (-2)	Yenisarıbey	D= (-1)	T= (-1)
Hotanlı	D= (-1)	T= (-1)	Yeşildere	D= (-1)	T= (-1)
Hürriyet	D= (-1)	T= (-1)	Yolağzı	D= (-1) E= (-1)	T= (-2)

Abbreviations: **Air Pollution:** A=According to the Degree of Pollution; **Being Unsafe:** B=GüvAccording to the Degree of Safety; **Water Pollution:** C=For Sea, Lake, and Rivers; **Neglect:** D=Not Doing Enough Maintenance; **Noise:** E=Noises from Traffic, Crowd, etc.; **Other Negative Factors:** F=Quarry and Gravel Pit, Construction and Factory Ruins, etc. **T=**Total Evaluation Score

In this study, all villages in the Karacabey district of Bursa province were evaluated and scored in accordance with the criteria and scores in the 'Recreation Potential Evaluation Form'. The 'Total Evaluation Score', obtained by adding the scores, expresses the recreation potential of each village. The scores of the villages in terms of landscape values, climate, accessibility, recreational convenience, and negative factors are given in Table 10 together with their totals.

According to Table 10, villages have a recreational potential of at least 36%, and at most 88%. There are no villages in the district that fall under the class of very low (<30%) recreation potential. It has been determined that 40 villages in the district have low (between 30-45%), 17 villages have medium (between 46-60%), 5 villages have high (between 61-75%) and 2 villages have very high (75%<) recreation potential. Figure 2 shows the recreational potential of the villages of the Karacabey district.

Table 10. The scores of recreational potentials of the villages

Çizelge 10. *Köylerin rekreasyonel potansiyellerinin puanları*

Village Name	Recreation Potential		Village Name	Recreation Potential	
Akçakoyun	L:15 C:15 A:8 RC:5 NF: (-3)	T=%40	İkizce	L:21 C:15 A:12 RC:6 NF: (-2)	T=%52
Akçasusurluk	L:17 C:15 A:7 RC:4 NF: (-2)	T=%41	İnkaya	L:27 C:15 A:8 RC:5 NF: (-1)	T=%54
Akhisar	L:12 C:15 A:7 RC:5 NF: (-2)	T=%37	İsmetpaşa	L:15 C:15 A:7 RC:10 NF: (-3)	T=%44
Arız	L:19 C:15 A:6 RC:4 NF: (-2)	T=%42	Karakoca	L:20 C:15 A:12 RC:11 NF: (-2)	T=%56
Bakırköy	L:15 C:15 A:9 RC:7 NF: (-1)	T=%45	Karasu	L:17 C:15 A:9 RC:3 NF: (-2)	T=%42
Ballıkaya	L:32 C:15 A:8 RC:4 NF: (-1)	T=%58	Kedikaya	L:16 C:15 A:4 RC:3 NF: (-1)	T=%37
Bayramdere	L:29 C:15 A:13 RC:16 NF:0	T=%73	Keşlik	L:26 C:15 A:8 RC:8 NF: (-3)	T=%54
Beylik	L:12 C:15 A:7 RC:4 NF: (-1)	T=%37	Kıranlar	L:17 C:15 A:6 RC:5 NF: (-1)	T=%42
Boğazköy	L:42 C:15 A:13 RC:19 NF: (-1)	T=%88	Kulakpınar	L:31 C:15 A:11 RC:7 NF: (-1)	T=%63
Cambaz	L:14 C:15 A:11 RC:5 NF: (-2)	T=%43	Kurşunlu	L:34 C:15 A:13 RC:17 NF: (-1)	T=%78
Çeşnigir	L:17 C:15 A:5 RC:4 NF: (-2)	T=%39	Küçükkaraağaç	L:15 C:15 A:3 RC:5 NF: (-2)	T=%36
Çamlıca	L:18 C:15 A:9 RC:3 NF: (-1)	T=%44	Muratlı	L:15 C:15 A:10 RC:6 NF: (-2)	T=%44
Çarık	L:20 C:15 A:7 RC:3 NF: (-2)	T=%43	Okçular	L:22 C:15 A:3 RC:6 NF: (-1)	T=%45
Çavuşköy	L:13 C:15 A:11 RC:6 NF: (-2)	T=%43	Orhaniye	L:18 C:15 A:8 RC:6 NF: (-2)	T=%45
Dağesemen	L:18 C:15 A:3 RC:1 NF: (-1)	T=%36	Ortasarıbey	L:16 C:15 A:8 RC:6 NF: (-2)	T=%43
Dağkadı	L:19 C:15 A:9 RC:7 NF: (-1)	T=%49	Ovaesemen	L:14 C:15 A:6 RC:5 NF: (-2)	T=%38
Danişmend	L:13 C:15 A:6 RC:5 NF: (-1)	T=%38	Örencik	L:19 C:15 A:4 RC:3 NF: (-2)	T=%39
Doğla	L:23 C:15 A:8 RC:7 NF: (-1)	T=%52	Sazlıca	L:12 C:15 A:7 RC:4 NF: (-1)	T=%37
Ekinli	L:36 C:15 A:7 RC:6 NF: (-1)	T=%63	Seyran	L:23 C:15 A:15 RC:5 NF: (-3)	T=%55
Ekmekçi	L:21 C:15 A:7 RC:4 NF: (-1)	T=%46	Subaşı	L:20 C:15 A:11 RC:6 NF: (-4)	T=%48
Eskikaraağaç	L:36 C:15 A:15 RC:11 NF: (-2)	T=%75	Sultaniye	L:16 C:15 A:7 RC:6 NF: (-3)	T=%41
Eskisarıbey	L:11 C:15 A:6 RC:7 NF: (-1)	T=%38	Şahinköy	L:15 C:15 A:9 RC:5 NF: (-1)	T=%43
Fevzipaşa	L:15 C:15 A:9 RC:5 NF: (-2)	T=%42	Şahmelek	L:19 C:15 A:7 RC:5 NF: (-2)	T=%44
Gölecik	L:27 C:15 A:7 RC:8 NF: (-1)	T=%56	Taşlık	L:17 C:15 A:9 RC:11 NF: (-1)	T=%51
Gölkıyı	L:28 C:15 A:6 RC:5 NF: (-2)	T=%52	Taşpınar	L:13 C:15 A:8 RC:5 NF: (-1)	T=%40
Gönü	L:13 C:15 A:9 RC:6 NF: (-2)	T=%41	Tophisar	L:20 C:15 A:7 RC:6 NF: (-3)	T=%45
Güngörmez	L:22 C:15 A:4 RC:2 NF: (-2)	T=%41	Uluabat	L:33 C:15 A:14 RC:9 NF: (-2)	T=%69
Hamidiye	L:12 C:15 A:6 RC:5 NF: (-1)	T=%37	Yarış	L:18 C:15 A:8 RC:8 NF: (-2)	T=%47
Harmanlı	L:24 C:15 A:11 RC:9 NF: (-2)	T=%57	Yenikaraağaç	L:25 C:15 A:10 RC:7 NF: (-2)	T=%55
Hayırlar	L:22 C:15 A:7 RC:5 NF: (-2)	T=%47	Yenisarıbey	L:13 C:15 A:6 RC:5 NF: (-1)	T=%38
Hotanlı	L:17 C:15 A:9 RC:4 NF: (-1)	T=%44	Yeşildere	L:20 C:15 A:3 RC:4 NF: (-1)	T=%41
Hürriyet	L:18 C:15 A:8 RC:5 NF: (-1)	T=%45	Yolağzı	L:13 C:15 A:10 RC:7 NF: (-2)	T=%43

Abbreviations: **L=**Landscape Value, **C=**Climate Value, **A=**Accessibility, **RC=**Recreational Convenience; **NF=**Negative Factors, **T=**Total Evaluation Score

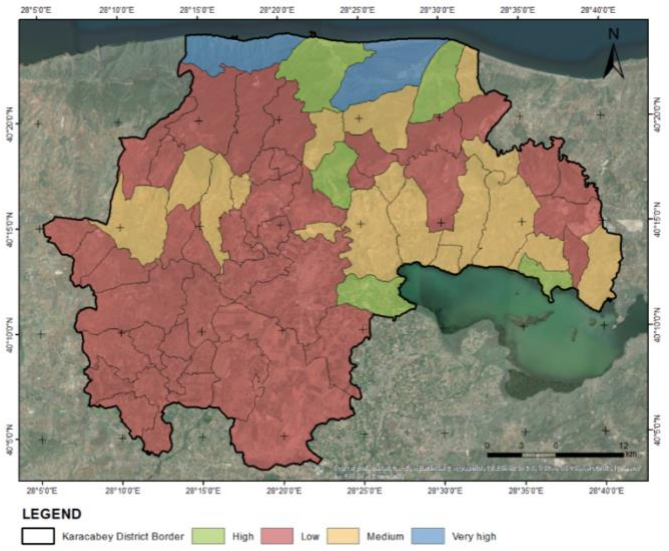

Figure 2. The recreational potentials of the villages.
Şekil 2. *Köylerin rekreasyonel potansiyelleri.*

According to Figure 2, it is seen that the villages, which are far from the shores of Uluabat Lake and the Marmara Sea, which are among the important natural values of Karacabey, and which have dense forest areas, have low recreation potential and cover 62.5% of the district. It is seen that the villages of the Karacabey district with medium recreation potential are generally located in densely wooded areas close to the Uluabat coast. The villages with medium recreation potential, covering 26.6% of the district, consisting of 17 villages with the highest ratio after the villages with low recreation potential. The villages of Karacabey district with high recreation potential cover 7.8% of the district, and it is seen that these villages are located on the shores of Uluabat Lake and the Marmara Sea and in forest areas. In addition, it has been determined that the accessibility values of these 5 villages are higher than almost all of the villages with low and medium recreation potential. The villages of Karacabey district with a very high recreation potential are given in Figure 2. It has been determined that these villages are located on the coast of the Marmara Sea, have much higher scores than other villages, particularly in terms of recreational conveniences, and cover 3.1% of the district.

DISCUSSION and CONCLUSION

In studies conducted by different researchers with the same method and in different places the recreational potentials of various urban forests and natural landscape areas were determined. Sibel & Aslan (2017) evaluated the Istranca Yıldız Forests in Kırklareli; Yeşil & Güzel (2021) Asakarya and Yoroz Urban Forests in Ordu; Çalışkan & Çelik (2017) Mustafakemalpaşa district in Bursa province; Çelik et al. (2016) Gölyazı village in Bursa province. Tülek (2021) Kadınçayırı Natural Park, Yeşil & Güzel (2021) Çınarsuyu and Ulugöl Nature Parks in Ordu, Yulu et al. (2021) Ararat National Park in Ağrı, Çavuş & Aker (2021) Turgut Özal Nature Park in Malatya, Polat & Polat (2016) examined 8 nature parks in Mersin and concluded that these areas have very high recreation potentials. In this study, in the Karacabey district of Bursa, each of the 64 villages was evaluated by not limiting the analyzed areas to forests and parks, and it was concluded that 40 villages in the district had low, 17 villages had medium, 5 villages had high and 2 villages had very high recreation potential.

Yılmaz et al. (2009) conducted a correlation analysis between the 5 items specified in the Gülez method, and it was stated that the most influential elements on the recreation potential were landscape value, accessibility, recreational conveniences, and climate, respectively. In this study, the maximum

points that the items in the evaluation form can get were taken into consideration. In this context, the items that have the most impact on the determination of the recreation potential of an area are determined as landscape value, climate value, accessibility, recreational convenience, and negative factors, respectively. Tozkoparan et al. (2020) evaluated Altınpınar (Limni) Lake and its immediate surroundings in Gümüşhane province and determined the water shores as important recreational areas that people prefer in the first place to spend their leisure time. In addition, Tozkoparan et al. (2020) stated that the most important items affecting the recreation potential of the area are landscape value, climate, and accessibility, respectively, and the recreation potential of the lake and its immediate surroundings is medium (51%); Surat (2017) examined the surroundings of Deriner Dam and Lake in Artvin, stated that the most important items affecting the recreation potential of the area are the landscape value and climate of the area, and the recreation potential is high (63%); Gül & Yılmaz (2019) examined the coastline in Samsun and determined the recreational potential of the coastline as (78%), stating that the most important items affecting the recreation potential of the area are, respectively, recreational convenience, accessibility, climate, and landscape value. In this study, 2 villages (Boğazköy 88%, Kurşunlu 78%) with a very high recreation potential in the Karacabey district met the sea and lake shore criteria under the landscape values item with high scores; of the 5 villages with high recreation potential (Bayramdere 73%, Ekinli 63%, Eskikaraağaç 75%, Kulakpınar 63%, Uluabat 69%), 1 village (Bayramdere) is located in the sea, 3 villages (Eskikaraağaç, Kulakpınar, Uluabat) is in the lake and the other 1 village (Ekinli) on the other hand, it has been determined that it has shores to both the sea and the lake. Çetin & Sevik (2016), Gül & Yımaz (2019) scored the items in the evaluation form as a result of on-site observation and internet research. Surat (2017), Tozkoparan et al. (2020) have made their scoring and evaluation by an expert group consisting of various businesses, directorates, and academicians. In this study, evaluations, and scoring to determine the recreation potential; literature information, on-site observation, face-to-face interviews with village headmen and local people who know the areas very well, telephone conversations, and information obtained from photo analysis were evaluated and interpreted from the perspective of landscape architects.

Karacabey district has the potential to host a multifarious of recreational activities with its geographical location, infrastructure opportunities, natural, cultural, and visual landscape values. However, in most of the villages in the district, there are no recreational types with defined areas. Almost all of those found are picnic and football activities, and the recreation potential of these areas is not used enough. Waterfront areas are the most preferred areas for recreational activities as relaxing and resting areas and almost all of the villages within the scope of the study have waterfronts. For this reason, it is necessary to include recreational activity areas in these villages where visitors can use the water directly or provide visual satisfaction. Most of the villages of the Karacabey district have fertile soil where agricultural activities can be carried out. This provides an important opportunity for visitors who prefer rural areas for outdoor recreational activities, agritourism, and gardening activities where they can experience agricultural activities. For this reason, recreational activity areas within the scope of agritourism should be included in these villages. The fact that the villages have sloping lands creates dynamic-moving-dominating landscapes; the presence of historical areas, forested areas, and sacred areas are opportunities that can provide recreational diversity. It is necessary to include activity areas where all these opportunities can be evaluated.

In line with all this information, recommended recreation types have been developed for villages with low, medium, high, and very high recreation potential. Meanwhile, a classification has been made according to the natural and cultural resource values of the villages, in this context, the recreational resource values of the villages are 'Landscape Dominate (LD)', 'Sloping Land (SL)', 'Waterfront (W)', 'Sacred Area (SA)', 'Fertile Soil (FS)', 'Historical Area (HA)' and 'Forested Area (FA)', and also considering the currently defined recreation types, recreational activity types are recommended (Table 11).

Table 11. Suggested recreational activity types developed for Karacabey villages

Çizelge 11. *Karacabey köyleri için önerilen rekreasyonel aktivite türleri*

Recreation Potential	Village Name	RP	Possibilities	Current Defined Recreational Activity Types	Suggested Types of Recreational Activities
LOW (%30-45)	Akçakoyun	%41	LD, FA	Picnic, landscape view	LD: Landscape view, kite flying, painting, watching clouds, bird watching, photo-safari; SL: Trekking, off-road, tough bike, and walking; W: Boat ride, canoe, oarsmanship, water skiing, examining water area, photo-safari, landscape view, painting; SA: Health tourism activities FS: Agritourism activities, gardening; HA: Village tour, rural heritage recognition, documentary film recording, cultural tourism activities, examining historical places, photo-safari, painting; FA: Watching nature, picnic, camping, running, walking, paintball, orienteering, collecting, painting, yoga-meditation, photo-safari, listening to nature symphony, examining vegetation, watching wildlife; To villages with no recreational opportunities, singing a song, picnic, handball, running, walking, martial arts, driving a car, riding a bike, feeding animals, folk dances, tennis, paintball, golf, camp, basketball, village tour, live in nature, collecting, volleyball, reading a book, bowling, eating-drinking, painting, football, dancing, kite flying, horse riding, playing an instrument, making a model, ping pong, aerobics-gymnastics, cooking, all kinds of games, watching to clouds, going to concerts and theater, local souvenir shopping, fair-entertainment visit
	Akçasusurluk	%37	W, FA, HA		
	Akhisar	%42	FS		
	Arız	%45	W, L, HA		
	Bakırköy	%37	FS, HA	Picnic	
	Beylik	%43	FS		
	Cambaz	%39	W		
	Çeşnigir	%44	W, FA, FA		
	Çamlıca	%43	SL, W, HA		
	Çarık	%43	W		
	Çavuşköy	%36	HA	Picnic	
	Dağesemen	%38	SL, FA		
	Danişment	%38	FS, HA		
	Eskisarıbey	%42	FS	Picnic	
	Fevzipaşa	%41	W, FS		
	Gönü	%41	HA	Football	
	Güngörmez	%37	SL, W, FA		
	Hamidiye	%44	FS		
	Hotanlı	%45	W, FS, HA		
	Hürriyet	%44	W, FS, HA		
	İsmetpaşa	%42	W, FS, HA	Picnic, camp	
	Karasu	%37	W, FS		
	Kedikaya	%42	SA		
	Kıranlar	%36	FA, HA, SA	Football	
	Küçükkaraağaç	%44	W, FS, HA	Picnic	
	Muratlı	%45		Football	
	Okçular	%45	W, FA		
	Orhaniye	%43	W, FS, HA	Football	
	Ortasarıbey	%38	FS, HA	Football	
	Ovaesemen	%39	FS		
	Örencik	%37	SL, W, FA, HA		
	Sazlıca	%41	FS		
	Sultaniye	%43	W, FS, HA		
	Şahinköy	%44	FS		
	Şahmelek	%40	FA		
	Taşpınar	%45	FS, HA		
	Tophisar	%38	W, FS, HA	Football	
	Yenisarıbey	%41	FS		
	Yeşildere	%43	SL, W		
	Yolağzı	%40	FS, HA	Picnic	
MEDIUM (%46-60)	Ballıkaya	%58	W, FA		
	Dağkadı	%49	W, FS, HA	Football	
	Doğla	%52	W, FS, HA	Picnic	
	Ekmekçi	%46	W, FA		
	Gölecik	%56	W, FA	Picnic	
	Gölkıyı	%52	W, FS, HA	Picnic	
	Harmanlı	%57	W, FS, HA	Picnic, football	
	Hayırlar	%47	W	Picnic, camp	
	İkizce	%52	SL, W, FS, HA		
	İnkaya	%54	W		
	Karakoca	%56	W, FS, HA	Picnic, football	
	Keşlik	%54	SL, W, FS, HA	Football	
	Seyran	%55	SL, FA, FS, HA		
	Subaşı	%48	W, FA	Football	
	Taşlık	%51	FS, HA, SA	Picnic, football	
	Yarış	%47	W, FA	Picnic, camp	
	Yenikaraağaç	%55	W, HA	Football	
HIGH (%61-75)	Bayramdere	%73	SL, W, FA, HA	Picnic, swimming, football, basketball	
	Ekinli	%63	SL, LD, W, FA, HA		
	Eskikaraağaç	%75	W, FA, HA	Picnic, camp, bird watching, football	
	Kulakpınar	%63	W, HA, SA		
	Uluabat	%69	W, FS, HA	Landscape view, boat ride	
VERY HIGH (%75<)	Boğazköy	%88	SL, W, FA	Picnic, camp, bird watching, swimming	
	Kurşunlu	%78	SL, W, FA, HA	Picnic, camp, swimming, basketball	

Abbreviations: **LD:** Landscape Dominates; **SL:**Sloping Land; **W:**Waterfront; **SA**: Sacred Areas; **FS:** Fertile Soil; **HA:** Historical Areas; **FA**: Forested Area

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