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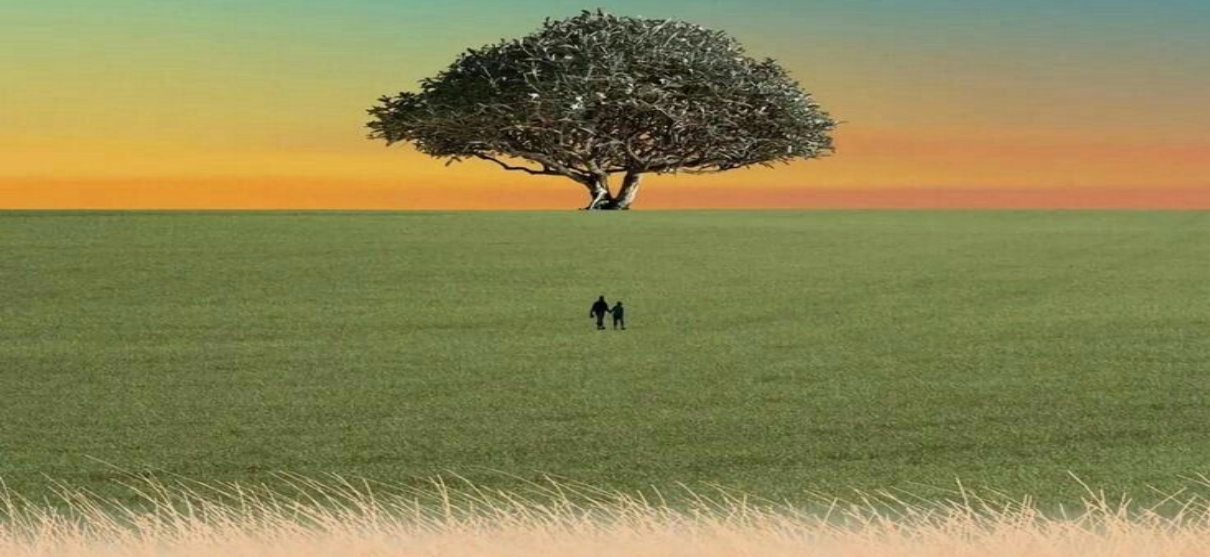

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ORMAN PARKLARININ REKREASYONA KATKISI: ARDAHAN İLİ ÖRNEĞİ

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1. GİRİŞ

Kent içi mekanlar, sosyal etkileşimde sürdürebilirlik olanağı sunan mekanlar olarak kabul edilmektedir. Sanayileşme sonrası şehirleşme sürecinin hızlanmasıyla birlikte, insanların kentlerde zaman geçirebilecekleri alanları incelediğimizde, kapalı ve açık mekanlar olarak iki ana kategoriye ayırabiliriz. Ancak hızlı kentleşmenin bir sonucu olarak plansız yapılaşmanın yarattığı olumsuz etkiler göz önüne alındığında, yeşil alanlara ayrılan bölgeler sürekli olarak daralmaktadır. Günümüzde, şehirlerde, betonarme yapılar dışında, insanların sosyal etkileşimde bulunabilecekleri açık yeşil alanların önemi sürekli olarak artmaktadır (Eminağaoğlu vd. 2016; Kuzulugil, Aytatlı ve Demircioğlu Yıldız, 2020; Demircioğlu Yıldız et al, 2023).

Hızla artan nüfus ve bu artışa paralel olarak ortaya çıkan talepler, doğal kaynaklar üzerinde ciddi baskılara yol açmıştır. Plansız ve sağlıksız şehirleşmeler, aynı zamanda çevresel sorunları da beraberinde getirmiştir. Yaşanan tüm bu olumsuzluklar insanları, doğal kaynakların sürdürülebilir bir şekilde kullanılması ve gelecek nesillerin ihtiyaçlarının karşılanabilmesi için daha etkili yönetim çözümleri aramaya

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itmiştir. Bugün, doğal ve kültürel kaynakları koruma çabaları artarak devam etmektedir. Bu çabalardan biri, uluslararası alanda da kabul görmüş olan korunan alan sınıflandırmalarıdır. Bu sınıflandırmalar, doğal ve kültürel değerlere sahip alanların sürdürülebilir biçimde kullanılmasını sağlamak ve gelecek nesiller için korumak amacıyla geliştirilmiştir (Kurdoğlu, 2007; Koç ve Soykan, 2020).

Kentsel alanlarda yaşayan insanlar, şehir içindeki olumsuz şartlar ve açık hava rekreasyon alanlarının sınırlı olması nedeniyle, doğa içindeki rekreasyon kaynaklarına yönelmektedirler. Bu bağlamda, ormanlar, halkın spor yapma, ekoturizm faaliyetlerine katılma, piknik yapma, dinlenme ve eğlenme ihtiyaçlarını karşılamak amacıyla büyük yerleşim bölgelerinin yakınında orman parkları olarak ayrılmakta, planlanmakta ve halkın kullanımına sunulmaktadır. Bu sayede, ormanlara verilen değer, toplumun bilinci ve orman sevgisi artırılmaya çalışılmaktadır (Demircioğlu Yıldız ve Yılmaz, 2003; Yücel ve Babuş, 2005; Başaran vd. 2020; Demir vd, 2020).

Günümüzde, insanların rekreasyon ihtiyaçlarını en fazla karşılayan mekanlardan biri, kırsal rekreasyon alanlarıdır. Bu mekanlar, doğal kaynak değerleri ve çeşitlilikleriyle, şehirlerde yaşayan insanlara kendilerini yenileme ve dinlenme fırsatı sunmaktadır. Özellikle şehirlere yakın bölgelerde bulunan ve orman yönetimi altına alınmış olan "orman içi dinlenme yerleri," halkın rekreasyon ihtiyacını karşılamak amacıyla tahsis edilen ve bu bağlamda önemli kırsal rekreasyon alanları olarak kabul edilirler (Korkmaz, 2001). Son on yılda Türkiye genelinde tüm illerde ve büyük yerleşim bölgelerinde kurulan kent ormanları ve mesire alanları, özellikle rekreasyon talebinin giderek arttığı, doğal güzellikleri, temiz hava ve kolay ulaşılabilirlikleri ile kent sakinlerini cezbetmekte olan önemli orman rekreasyon alanlarıdır (Özer ve Demircioğlu Yıldız, 2010; Kurdoğlu, Düzgüneş ve Kurdoğlu, 2011; Demircioğlu Yıldız, 2024).

Orman içi dinlenme bölgelerinin ekonomik uygunluğu, ulaşılabilirlikleri, rekreasyon seçenekleri ve doğal güzellikleri, bu bölgelere olan talebi büyük ölçüde etkilemektedir. Bu artan talebi karşılamak ve orman içi dinlenme bölgelerinin kullanıcı deneyimini iyileştirmek amacıyla, bu bölgelere yönelik uygun planlama kararlarının alınması giderek daha fazla önem taşımaktadır (Uzun ve Müderrisoğlu, 2010).

"Mesire kavramı," "mesire yeri" terimi kullanıldığında, "rekreasyon alanı" kavramıyla benzer bir anlam içermektedir. Bu bağlamda, "mesire" terimi, rekreasyonun taşıdığı anlamı taşır ve açık alanlarda gerçekleştirilen rekreasyon etkinliklerinin gerçekleştiği bölgeleri tanımlamak amacıyla kullanılır. Bu bölgeler, toplumun çeşitli dinlenme, eğlence ve spor ihtiyaçlarını karşılamayı, ülkenin doğal güzelliklerine katkıda bulunmayı ve turistik aktivitelere imkan tanımak amacıyla gerekli yapılar, tesisler ve donatılarla donatılmıştır (Demircioğlu Yıldız, Demir and Yılmaz, 2011; Altuntaş, 2020; Yiğit, 2021). Ayrıca, halkın günlük veya gece konaklama ihtiyaçlarını karşılayabilirler ve rekreasyonel etkinliklerin yanı sıra estetik kaynakları da bünyelerinde barındırırlar. Bu bölgeler, orman yönetimi altındaki alanları ifade ederler. Mesire yerleri, genellikle yerleşim alanlarına yakın konumda bulunur ve su kıyıları, koru ve orman gibi ağaçlarla zenginleştirilmiş bölgelerde yer alır. Bu alanlar, planlı veya plansız bir şekilde düzenlenir ve çeşitli tesisler ile olanaklar sunarlar, böylece rekreasyon amacıyla kullanıcılarına hizmet sunarlar. (Arnberger, 2012; Koşan, 2021; Şahin ve Önder, 2021).

Bu açıklamalarla, "mesire" kavramının rekreasyonel aktivitelerin gerçekleştirildiği açık alanları ifade eden bir terim olduğunu ve bu alanların toplumun dinlenme ve eğlenme ihtiyaçlarını karşılamak, doğal güzelliklere katkıda bulunmak ve turistik etkinliklere hizmet etmek amacıyla tasarlandığını sonucuna varılmaktadır (Atmış et al, 2017).

Türkiye'de orman alanlarına olan rekreasyonel talebin her geçen gün artmasıyla beraber, bu mekanların tahribatın önüne geçerek bilinçli bir şekilde piknik, kamp vb. kullanımına izin vermek amacıyla 1956 yılından günümüze kadar yapılan kurumsal organizasyon planlamaları neticesinde orman idaresi tarafından bu alanlar A, B, C ve D tipi Orman İçi Dinlenme Yerleri (Mesire Yeri) adıyla tesis edilmektedir (Tapan, 2022).

Tarım ve Orman Bakanlığı, Orman Genel Müdürlüğü tarafından 22 Mayıs 2022 tarihinde yayınlanan Orman Parkları Yönetmeliği ile A tipi, B tipi, C tipi mesire yerleri ile şehir veya kent ormanı olarak isimlendirilen D tipi mesire yerleri, "Konaklamalı veya Konaklamasız" Orman Parkı olarak değiştirilmiştir. Bu kapsamda çalışmaya konu olan 8 adet mesire yeri, Konaklamasız Orman Parkı olarak adlandırılmaktadır.

Bu çalışmada, Artvin İli sınırları içerisinde yer alan ve Orman Parkları Yönetmeliği (2022)'ne göre konaklamasız orman parkı olarak kabul edilen 8 adet alanın, halihazırdaki durumu ve sahip olduğu rekreasyon potansiyelinin ortaya konulması, doğal kaynak değerlerinin korunması ve geliştirilmesiyle sürekliliğin sağlanması amaçlanmıştır.

2. MATERYAL VE YÖNTEM

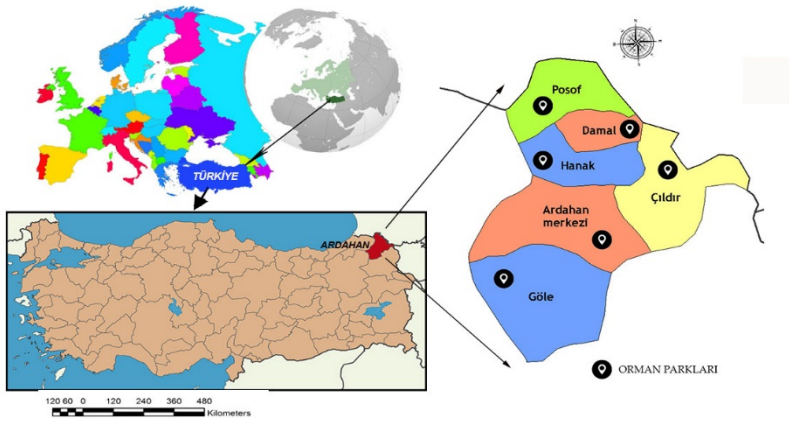
2.1. Materyal

Bu çalışmanın ana materyalini, Erzurum Bölge Müdürlüğü'ne bağlı ve Ardahan İli sınırları içerisinde yer alan 8 adet Konaklamasız Orman Parkı (Köprülü Yayla, Çakıruzum Mesire Yeri, Posof Mesire Yeri, Damal Mesire Yeri, Hanak Mesire Yeri, Ardahan Kent Ormanı, Göle Mesire Yeri ve Çıldır Mesire Yeri) oluşturmaktadır. Artvin İl merkezi ve 5 İlçenin sınırları içerisinde yer alan bu orman parkları toplam 91,98 ha'lık

alanı kaplamaktadır. 8 adet orman parkına ait bilgiler Tablo 1'de ve konumsal bilgiler de Şekil 1'de verilmiştir.

Tablo 1. Çalışmanın Materyalini Oluşturan Mesire Yerlerine Ait Bilgiler (OBM, 2023)

İlçe	İşletme Şefliği	Adı	Alan (ha)	Eski Tipi	Yeni Tipi	Tescil Tarihi	İşletme Şekli
Göle	Uğurlu	Köprülü	2,95	C	Konaklamasız	2012	OGM
Göle	Koroglu	Çakıruzum Mesire Yeri	15,29	C		2007	OGM
Posof	Posof	Posof Mesire Yeri	2,8	C		2006	OGM
Damal	Ardahan	Damal Mesire Yeri	1,0	C		2007	OGM
Hanak	Ardahan	Hanak Mesire Yeri	5,36	C		2011	OGM
Merkez	Yalnızcam	Ardahan Kent Ormanı	24,08	D		2005	OGM
Göle	Köroğlu	Göle Mesire Yeri	8,3	C		2014	OGM
Çıldır	Ardahan	Çıldır Mesire Yeri	32,2	B		2016	OGM



Şekil 1. Çalışma Alanı Olarak Seçilen Mesire Yerlerinin Konumsal Bilgileri

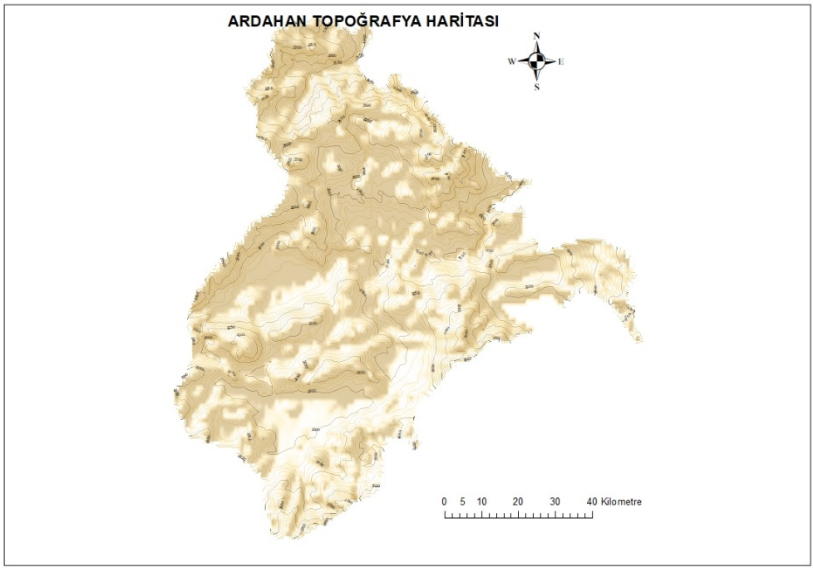
2.2. Yöntem

Bu çalışmanın yönteminde; veri toplama, verileri analiz etme, sentez ve değerlendirme metodu kullanılmıştır. Erzurum Orman Bölge Müdürlüğü'ne bağlı olan ve Ardahan İli sınırlarında bulunan 8 adet Orman Parkı Alanının kırsal peyzaj tasarımı açısından uygunluğunu incelenmiştir. Bu incelemede bahse konu mesire yerlerinin, tesis ve donatı elemanları, doğal ve kültürel kaynak değerleri, rekreasyon çeşitliliği, gelişim potansiyeli, koruma-kullanma dengesi değerlendirmiştir. Değerlendirme yapılırken, Orman Parkları (2022) standartları dikkate alınmış ve ayrıca kırsal peyzaj ve kırsal rekreasyon alanlarında uzmanlaşmış kişilerin bu konularda yapmış oldukları önceki çalışmalarından; Şener, 1987; Tanrıverdi, 2001; Yılmaz ve Ark. 2012; Irmak, Bilge ve Demir, 2013; Başaran ve Ark. 2020, faydalanılmıştır.

3. BULGULAR

3.1. Topoğrafya

Ardahan bölgesi genel olarak değişkenli ve yüksek rakımlı yüzeylere sahiptir. Merkez rakımının 1800 m olduğu Ardahan'da yüksekliği 3000 m'yi bulan birçok doruk bulunmaktadır. İlin doğusunda Akbaba Dağı, kuzeyinde Keldağ ve güneyinde ise Allahu Ekber Dağları yer almaktadır (Şekil 2). Topoğrafyanın yüzeyinde meydana gelen püskürmelerden kaynaklı oluşan; Ilgar Dağı (2.918 m), Cin Dağı (2.957 m), Kel Dağı (3.033 m) ve Kısır Dağı (3.197 m) gibi önemli volkan konilerini oluşturmuştur (Kayatürk, 2022; Aykır, 2023).



Şekil 2. Ardahan İli Topoğrafya Haritası

3.2. İklim

Ardahan, sert, bol kar yağışlı ve uzun kış bir mevsiminin yaşandığı karasal iklime sahiptir. Ekim ayı gibi etkisini göstermeye başlayan kış şartları neredeyse Mayıs ayı başlarına kadar sürmektedir. Yıllık ortalama en yüksek sıcaklığın 35 °C olduğu Ardahan'da yıllık en düşük ortalama sıcaklık -39.8 °C olarak hesaplanmıştır (MGM, 2022; Kaltakkıran ve Bakırcı, 2023).

Yıllık yağış miktarının 550 mm olduğu Ardahan İlinde bulutlu gün sayısının fazla olmasından dolayı mevsimler serin geçmektedir. Kuzey bölgelerinde Karadeniz iklimi etkin olduğu için bitki örtüsü de iklime göre şekillenmiştir (Alan, 2023).

3.3. Bitki Örtüsü

Ardahan, topoğrafya bakımından değişkenli bir yüzeye sahip olmasından dolayı bitki örtüsü açısından da bölgesel olarak değişkenlik göstermektedir. Kuzey kesimler Karadeniz ikliminin

etkisinde kaldığı için ormanlık alanlar görülmekte iken iç kesimlerde ise, çayır ve meralar gözlemlenmektedir. Orman alt sınırı 1800-1900 m yükseltide başlamakta ve 2800 m'ye kadar ulaşmaktadır. 2000-2100 m aralığında çayır-step bitkileri, 2100-2700 m aralığında yüksek yayla stepleri ve 2700 m üzerindeki alanlarda ise, yüksek dağ çayır bitkileri görülmektedir (Taşçı, 2015; Daşkan, 2021).

Bölgenin sahip olduğu bitki vejetasyonu; *Pinus sylvestris* (Sarı çam), *Picea orientalis* (Ladin), *Abies normanniana* (Göknar), *Fagus orientalis* (Kayın), *Salix Alba* (Söğüt), *Alnus glutinosa* (Kızılağaç), *Quercus* (Meşe türleri), *Populus alba* (Ak kavak), *Populus nigra* (Kara kavak), *Populus tremula* (Titrek kavak), *Cotinus coggyria* (Duman ağacı), *Rhus coriaria* (Sumak), *Paliurus spina christii* (Kara çalı), *Fraxinus angustifolia* (Dışbudak), *Frangula alnus* (Barut ağaçı), *Clematis vitalba* (Akasma), *Rosa pimpinellifolia* (Kuşburnu), *Rubus platyhyllos* (Böğürtlen), *Astragalus microceplhalus* (Geven), *Pyrus communis* (Ahlat), *Sorbus aucuparis* L. (Üvez), *Rhododendron luteum* (Orman gülü), *Juniperus communis* var. Saxatilis (Adi ardıç), *Viburnum orientale* (Kat kat çalısı), *Rosa pisiformis* (Ardahan gülü), *Vaccinium myrtillus* (Ayı üzümü) şeklinde sıralanabilir (Özhatay, Eminağaoğlu ve Esen, 2010; Yılmaz, 2013; Gültekin, 2019).

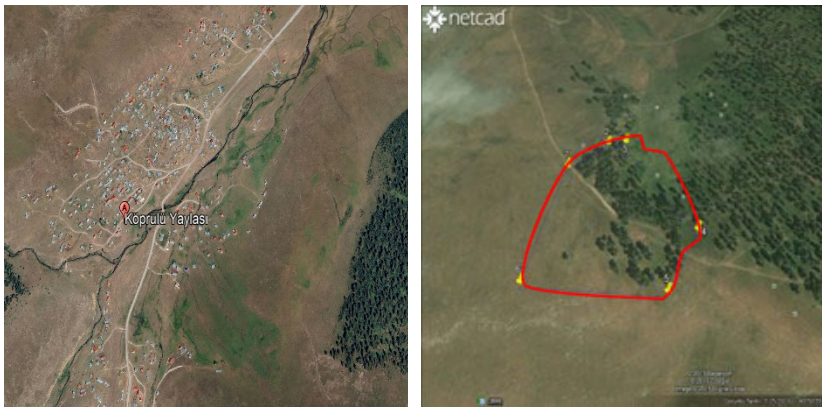
3.4. Kırsal Rekreasyon Alanları

Ardahan İli sınırları içerisinde yer alan 8 adet Orman Parkı, Orman Genel Müdürlüğü'ne bağlı Erzurum Orman Bölge Müdürlüğü'nden alınan veriler neticesinde incelenerek değerlendirilmiştir.

3.4.1. Köprülü Yayla

Ardahan İli, Göle İlçesi sınırları içerisinde yer alan Köprülü Yaylası; 14.08.2012 tarihinde tescillenmiştir. Uğurlu

İşletme Şefliği sorumluluğunda ve Köprülü mevkiinde yer alan mesire yeri toplan 2,95 ha alana sahiptir (Şekil 3).



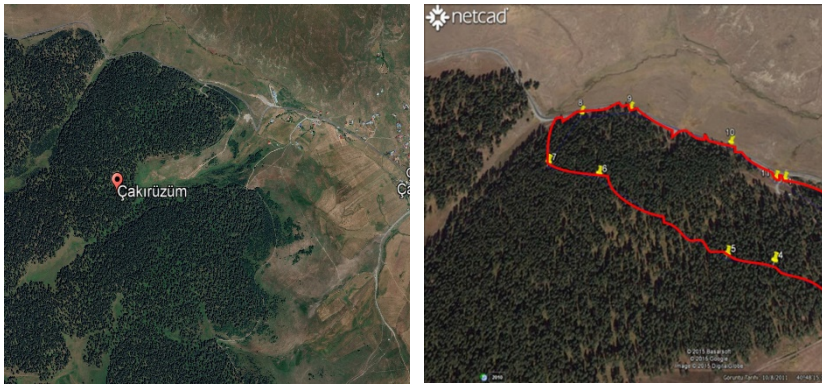
Şekil 3. Köprülü Yayla Mesire Yeri Konum Bilgileri (OBM, 2023)

İl merkezine uzaklığı 64,4 km'dir. Bünyesinde; 1 adet WC, 2 km yürüyüş yolu, 6 adet kamelya bulunmakta ve 3 ayda 850 kişi ziyaret etmiştir (Şekil 4).

Şekil 4. Köprülü Yayla Mesire Yerine Ait Görüntüler (OBM, 2023)

3.4.2. Çakırüzüm Mesire Yeri

Ardahan İli, Göle İlçesi sınırlarında yer alan Çakırüzüm Mesire Yeri; 02.11.2007 tarihinde tescillenmiştir. İl merkezine 59,4 km uzaklıkta, Çakırüzüm mevkiinde ve Koroğlu İşletme Şefliği sorumluluğundadır (Şekil 5).



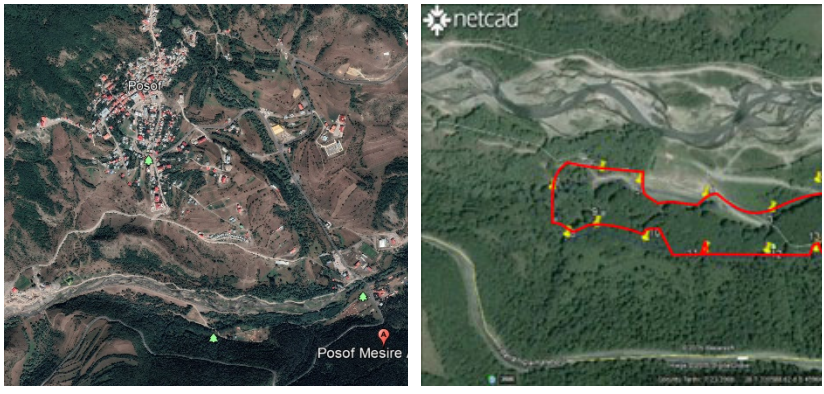
Şekil 5. Çakırüzüm Mesire Yerine Ait Konum Bilgileri (OBM, 2023)

Toplam 15,29 ha'lık alana sahip olan mesire yerinin içerisinde; 1 adet WC, 2 km yürüyüş yolu, 6 adet kamelya ve 1 adet çocuk oyun alanı bulunmaktadır. 3 aylık ziyaretçi sayısı 1400 kişidir (Şekil 6).

Şekil 6. Çakırüzüm Mesire Yerine Ait Görüntüler (OBM, 2023)

3.4.3. Posof Mesire Yeri

Ardahan İli, Posof İlçesi sınırları içerisinde yer almakta ve 16.10.2006 tarihinde tescillenmiştir. Posof İşletme Müdürlüğü sorumluluğunda ve Bükler mevkiinde yer almaktadır. İl merkezine 79 km uzaklıktadır (Şekil 7).

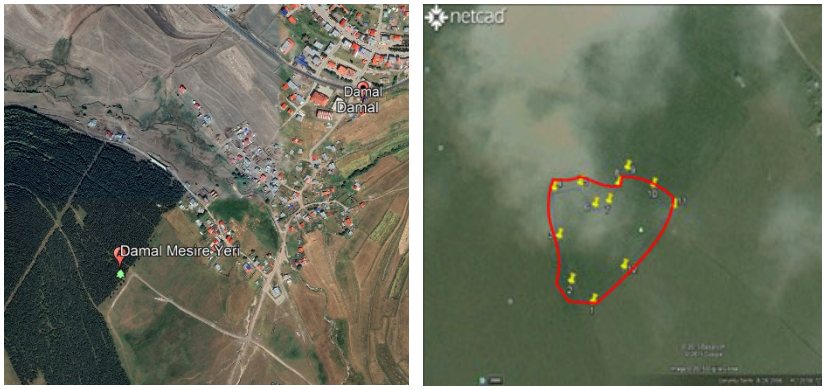


Şekil 7. Posof Mesire Yerine Ait Konum Bilgileri (OBM, 2023)

2,8 ha alana sahip olan ve 3 ayda 1500 kişinin ziyaret ettiği mesire yerinde halihazırda; 1 adet WC, 3 km yürüyüş yolu, 8 adet kamelya ve 1 adet çocuk oyun alanı bulunmaktadır.

3.4.4. Damal mesire yeri

Ardahan İli, Damal İlçesi sınırları içerisinde yer almaktadır. Konum olarak Ziyarettepe mevkiinde yer alan mesire yeri, 29.01.2007 tarihinde tescillenmiş ve Ardahan İşletme Şefliği bünyesindedir (Şekil 8).



Şekil 8. Damal Mesire Yerine Ait Konum Bilgileri (OBM, 2023)

İl merkezine uzaklığı 49 km'dir. 3 aylık ziyaretçi sayısı 1200 kişidir. Toplam alanı 1 ha olmakla birlikte bünyesinde, 1 adet WC, 4 km yürüyüş yolu, 10 adet kamelya ve 1 adet de çocuk oyun alanı bulunmaktadır (Şekil 9).

Şekil 9. Damal Mesire Yerine Ait Görüntüler (OBM, 2023)

3.4.5. Hanak Mesire Yeri

Ardahan İli, Hanak İlçesi sınırları içerisinde yer alan mesire yeri, 07.12.2011 tarihinde tescillenmiştir. Ardahan İşletme Şefliği sorumluluğunda olan Kadıgüneyi mevkiinde yer almakta ve 5,36 ha alana sahiptir. Konum olarak Arhan İl merkezine 40 km mesafede yer almaktadır (Şekil 10).

Şekil 10. Hanak Mesire Yerine Ait Konum Bilgileri (OBM, 2023)

3 aylık periyot da 1800 kişinin ziyaret ettiği mesire yerinin içerisinde; 1 adet WC (dörtlü), 1 adet kır gazinosu, 1 adet basketbol sahası, 3 km yürüyüş yolu, 13 adet kamelya, 40 adet piknik masası ve 1 adet çocuk oyun alanı bulunmaktadır (Şekil 11).

Şekil 11. Hanak Mesire Yerine Ait Görüntüler (OBM, 2023)

3.4.6. Ardahan Kent Ormanı

Ardahan İli merkezinde Tepeler mevkiinde yer alan kent ormanı, Yalnızçam İşletme Şefliği sorumluluğundadır. 18.08.2005 tarihinde tescil edilmiştir (Şekil 12).

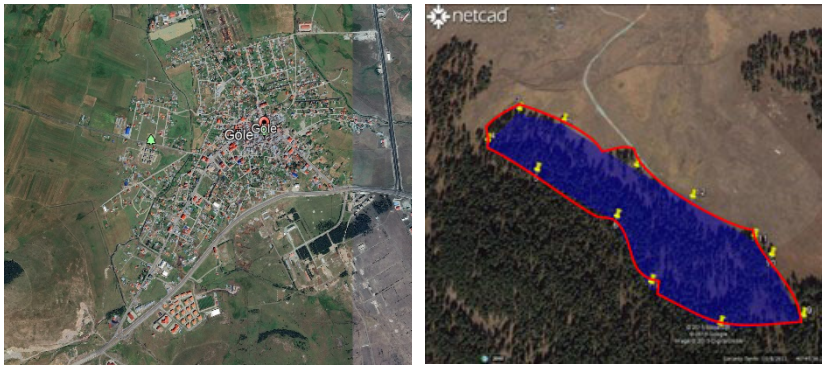
Şekil 12. Ardahan Kent Ormanına Ait Konum Bilgileri (OBM, 2023)

24,08 ha alana sahip ve 3 aylık periyot da 2500 kişinin ziyaret ettiği kent ormanının içerisinde; 1 adet WC, 2 km yürüyüş yolu, 6 adet kamelya ve 1 adet çocuk oyun alanı bulunmaktadır (Şekil 13).

Şekil 13. Ardahan Kent Ormanına Ait Görüntüler (OBM, 2023)

3.4.7. Göle Mesire Yeri

Göle Mesire Yeri Ardahan İli, Göle İlçesi sınırları içerisinde yer almakta ve 08.07.2014 tarihinde tescillenmiştir. Toplam 8,3 ha alana sahiptir (Şekil 14).



Şekil 14. Göle Mesire Yerine Ait Konum Bilgileri (OBM, 2023)

İl merkezine ortalama 50 km mesafede, Yayla mevkiinde ve Köroğlu İşletme Şefliği sorumluluğundadır. Bünyesinde; 2 adet WC, 2 km yürüyüş yolu, 6 adet kamelya ve 1 adet çocuk oyun alanı bulunmaktadır (Şekil 15).

Şekil 15. Göle Mesire Yerine Ait Görüntüler (OBM, 2023)

3.4.8. Çıldır Mesire Yeri

Ardahan İli, Çıldır İlçesi sınırları içerisinde yer almaktadır. 2016 yılında tescil edilmiştir. İl merkezine 50 km uzaklıkta, Yıldırım Tepe mevkiinde ve Ardahan İşletme Şefliği sorumluluğundadır (Şekil 16).

Şekil 16. Çıldır Mesire Yerine Ait Konum Bilgileri (OBM, 2023)

Toplam 32,2 ha alana sahiptir. Bünyesinde; 2 adet seyir terası, 1 adet kır lokantası, 2 adet otopark, 1 adet dini tesis, 2 adet çocuk oyun alanı, 17 adet kameriye, 2 adet tuvalet ve 1 adet spor kompleksi bulunmaktadır (Şekil 17).

Şekil 17. Çıldır Mesire Yerine Ait Görüntüler (OBM, 2023)

4. TARTIŞMA VE SONUÇ

Günümüz kentleri, birçok avantaj sunmasının yanı sıra, insanları önemli zorluklarla da karşı karşıya bırakmaktadır. Özellikle plansız ve düzensiz kentleşme, aşırı nüfus artışı ve yoğun çalışma temposu gibi faktörler hem fiziksel hem de psikolojik olarak bireyleri olumsuz etkilemektedir (Caner ve Demir, 2020; Rüzgar ve Demir, 2023). İnsanlar, çalışma hayatının yanı sıra dinlenmeye, eğlenmeye ve boş zamanlarını değerlendirmeye ihtiyaç duyarlar. Bu nedenle, insanların rekreasyon ihtiyaçlarını sürekli ve düzenli bir şekilde karşılayabilmek için rekreasyon faaliyetlerinin planlanması büyük bir öneme sahiptir. Kullanıcı odaklı yaklaşım ve çevreye minimum zarar verme prensipleri, sürdürülebilir rekreasyon alanlarının oluşturulması açısından son derece kritik bir rol

oynamaktadır (Sağlık ve Kelkit, 2014; Yalçınyavuz ve Yılmaz; 2016).

Rekreasyon alanlarının yoğun talep görmesinin temel nedeni, kent yaşamının getirdiği stres ve baskıdan sıkılan bireylerin doğayla bütünleşme arzusudur. Rekreasyonel alanlar, ziyaretçilere sunulurken, bu alanların korunması ve kullanılmasındaki denge gözetilerek, alanın doğal özelliklerine uygun projelerle tasarlanmalıdır. Bu nedenle, rekreasyonel faaliyetlerin planlanması ve alan içinde gerçekleştirilmesi, alanın doğal yapısını bozmamalı ve olumsuz etkilere yol açmamalıdır (Demir, Güven ve Okutucu, 2013; Yılmaz ve ark. 2003; Demircan ve ark. 2018; Demircioğlu Yıldız ve ark. 2003; 2023; 2024; Yılmaz ve ark. 2009). Ardahan İli sınırları içerisinde yer alan ve bu çalışmanın materyalini oluşturan C ve D Tipi 7 adet mesire yerinin bölgedeki halka hizmet edebilmesi doğal kaynak değerlerinin korunması, tahribatın önlenmesi ve rekreatif etkinliklerin yeterliliğine bağlıdır.

Orman Parkları Yönetmeliği (2022)'ne göre, konaklamasız orman parkları; devlet ormanları sınırları içerisinde planlanan, toplumun farklı dinlenme, eğlence ve spor gereksinimlerini karşılamak, ülkenin doğal güzelliklerine katkıda bulunmak ve turistik etkinliklere olanak tanımak amacıyla ayrılan alanlardır. Bu parklar, sadece günlük ziyaretlere açık olup, çevreye uyumlu çok katlı olmayan doğal yapılar ve tesisler, yöresel ürünlerin sergilendiği ve satıldığı alanlar, piknik alanları, gölgelikler ve diğer rekreasyon yapıları içermektedir. Ayrıca, bu parklar, rekreasyonel ve estetik değerlere sahip bölgelerdir.

Bu çalışmanın materyalini oluşturan; Köprülü Yayla, Çakırüzüm, Posof, Damal, Hanak, Ardahan, Göle ve Çıldır Orman Parkları, sahip oldukları yapı, tesis, donatı ve rekreasyon imkanları ile gerek Ardahan kenti insanlarının gerekse yakın çevredeki ziyaretçilerinin rekreasyon ihtiyaçlarına cevap

verebilecek kapasitede değildir. Özellikle bu mekanların alan büyüklükleri ile konum olarak yer aldıkları ilçelerin nüfusu karşılaştırıldığında, orantılı bir dağılım olmadığı gözlemlenmektedir. Ayrıca, planlamadaki eksiklikler; aileler veya bireysel kullanıcılar için yeterli düzeyde rekreasyon çeşitliliğinin sunulamamasına sebep olmaktadır. Bu durum, alanın rekreasyon kalitesini ve ziyaretçi memnuniyet düzeyini olumsuz etkileyebilecektir.

Ardahan, sahip olduğu iklim değerlerinden anlaşılacağı üzere uzun kış sürelerine ve yüksek yağış değerlerine sahiptir. Bu durum insanların kapalı mekan rekreasyon aktivitelerine olan taleplerinin yüksek olacağını göstermektedir. Araştırma alanlarının sahip olduğu mevcut yapı ve donatılarının yetersiz olması ve kapasitelerinin düşük olması, rekreasyon potansiyelini ve ziyaretçi sayısını etkileyen en önemli etkendir. Kullanıcı deneyimlerinin iyileştirilmesi ve ziyaretçi potansiyelinin artırılması amacıyla; aileler ve bireysel kullanıcılara yönelik rekreasyon çeşitliliğini sağlayacak yeni alanların tasarlanması, özellikle kış mevsiminde hizmetin sürdürülebileceği kapalı mekanların planlaması büyük önem arz etmektedir.

Orman Parkları Yönetmeliği (2022)'ne göre; Orman parkları içinde, gerektiğinde, özel kanunlarla belirlenen bölgeler ve sınırlar çerçevesinde, koruma ve kısıtlama hükümlerine tabi olan alanlarla ilgili olarak, ilgili kurumlardan uygun görüş alındıktan sonra sözleşmelere dayandırılarak çadır, lüks çadır ve karavan alanlarının yeniden düzenlenmesine izin verilerek konaklamasız orman parklarının bir kısmı da olsa konaklamalı hale getirilecek şekilde yeniden planlanabilmektedir.

Gülez (1990), geliştirdiği yöntem ile Orman içi Rekreasyon Alanlarının Potansiyelinin belirlenmesini hedeflemiştir. Bu yöntemde seçilen alanın rekreasyon potansiyelinin belirlenmesinde etkili olan kriterler (Peyzaj değeri,

İklim değeri, Ulaşım, Rekreatif kolaylıklar, Olumsuz etkenler) alanda yapılan yerinde gözlemler ve incelemeler doğrultusunda puanlanarak alanın rekreasyon potansiyeli belirlenmektedir. Çalışmanın materyalini oluşturan orman parklarının, Gülez (1990) yöntemine göre rekreasyon potansiyelleri belirlenerek, eksik olan yönlerinin tespit edilerek koruma-kullanma dengesini bozmadan yeni planlamaların yapılması, sürdürülebilir kırsal rekreasyon için büyük önem taşımaktadır.

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PARKING PROBLEMS IN TURKEY AND LEGAL REGULATIONS REGARDING PARKING LOTTS[1]

Fatma ÖZKAN BAYINDIR[2]

Atila GÜL[3]

1. INTRODUCTION

The automobilization process in North America in the first half of the 20th century spread to European cities from the 1950s onwards. The fact that cities in North America, especially on the Pacific coast, have become highly dependent on automobiles is due to the central role that automobiles play in the development process of these cities. Although automobilization began in different periods worldwide, its effects on cities are similar. Today, both active (mobile) and passive (stationary) use of automobiles causes multifaceted problems such as traffic congestion in city centres, inefficient land use, environmental damage, air and noise pollution, increased transportation costs and loss of time. In this context, automobile-based transportation models must be controlled and strategically managed to maintain sustainable urban life and environmental quality (ISPARK, 2016). The concept of a parking lot is defined as follows:

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1 The study is based on the doctoral thesis 'Determination of Parking Lot Location Selection by Numerical Modeling'.

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According to the Turkish Standards numbered TS 10551 published in 1992, a Parking Lot is a place or facility that is open to everyone's use and reserved for parking vehicles, which has two types: roadside and off-road Parking (TSE, 1992). According to Naasra (1998), it is a place or facility that is reserved for parking vehicles that are private or public and which has two types: "roadside parking" and "off-road parking", depending on the type of ownership and the purpose of its design. In the Turkish Language Association dictionaries, Parking is "an open or closed place where vehicles are parked for a certain period and suitable for traffic, a parking lot, a park" (TDK, 2010). Meeting parking needs plays a critical role in the spatial organization of cities and the efficiency of transportation systems. Inadequate or irregular planning of parking lots can cause inefficient use of urban land, loss of green areas and environmental problems. In cities with intense private vehicle use, parking arrangements directly affect individuals' access to urban areas and shape their transportation preferences. The space constraints experienced, especially in city centres, require parking lots to be designed in more compact and multi-storey forms. In this context, solutions that aim to use parking areas more efficiently and provide service to more vehicles in limited areas have become a priority issue in urban transportation planning (Yetişkul & Şenbil, 2018).

2. PARKING PROBLEMS IN TURKEY

Parking lots are not only physical infrastructure elements; they are also complex systems at the intersection of multidimensional problems in urban transportation, land use, social accessibility and sustainability. Therefore, in order to plan parking lots effectively, holistic, multi-scale and data-based strategies need to be developed. In the location selection process of parking lots, spatial suitability, user behaviour, demographic

structure, and regional socio-economic factors should be considered (Figure 1). For effective parking lot planning, analyzing the demand levels of users for Parking within the potential impact area of the region where the application will be made forms the basis of strategic decisions. In order to create an accessible parking system that will appeal to all segments of society, the policies to be developed should be addressed in an integrated manner with transportation investments. Among the main reasons for parking problems, especially in metropolitan cities, are insufficient integration of public transportation systems, inadequacy of the current transportation infrastructure in terms of physical capacity, lack of classification of parking areas .according to their types and failure to reflect this classification in spatial analyses (Asal & Küçükali, 2021).

Figure 1. Inappropriate Vehicle Parking (Photograph by the author, 2025)

To solve these problems, new parking management strategies have begun to be developed. These strategies include increasing parking areas and using existing areas more effectively, supporting user guidance with digital systems, and integrating parking demand management principles into local government policies. In planning parking lots, location selection decisions should be addressed within the framework of multi-criteria decision-making (MCDM) approaches, in which social and economic variables, as well as technical criteria, are taken into account.

The accelerated urbanisation process in Turkey since the 1950s brought about population growth and urban densification. However, due to low car ownership and urban transportation relying primarily on public transportation, planning parking areas was not a priority (Burchel et al., 2005). With the amendment made to the Zoning Law in 1972, the provision of parking areas became mandatory, and this regulation was taken from the highway traffic legislation and included in the scope of the zoning legislation. Accordingly, the concepts of "building parking lot", "regional parking lot", and "general parking lot" were defined with the Additional Regulation to the Zoning Regulations of Municipalities that entered into force in 1976 and parking types were placed in a legal framework. Accordingly, building parking lots refer to open or closed areas arranged to serve the everyday use of more than one building located on a single parcel or the same block. In contrast, regional parking lots are defined as facilities that aim to meet the needs of buildings whose parcels cannot accommodate parking. Public parking lots were planned to be open to use all motor vehicles (Additional Regulation to Municipalities' Zoning Regulations, 1976).

However, the regulation granted local governments a certain discretionary power and provided flexibility to municipalities in arranging parking areas. This situation, combined with the low car ownership rates of the period, resulted in many municipalities not implementing the obligation to reserve parking areas; therefore, the regulation's implementation effect remained limited.

The rapid increase in car ownership in Turkey since the 1990s has led to the need for parking becoming an increasingly important and complex problem, especially in urban areas. The legal regulations in response to the developments experienced during this period preserved the basic structure and conceptual framework of the 1976 regulation while revising the amount of

parking space per unit. In the 2000s, the increase in individual car use made it necessary to increase the amount of parking space and diversify the forms of parking provision. Despite this, parking lots were still considered mainly within the scope of public service during this period; Private sector participation and market-oriented approaches have remained limited. This has caused difficulties in managing the demand for private vehicles in urban transportation and developing sustainable parking strategies (Şenbil & Yetişkul Şenbil, 2022).

3. LEGAL REGULATIONS REGARDING PARKING LOTS IN OUR COUNTRY

When official texts regarding parking lots are examined, it is stated that the parking needs of vehicle users are primarily resolved within the parcel (Parking Lot Regulation, 2018). Parking lots are physically shown on maps as part of the planning process and included in plan decisions in line with the use principles. The basic legal regulations that guide parking lot planning in Turkey are Articles 37 and 44 of the Zoning Law No. 3194. Official legislation prepared within this framework (Parking Lot Regulation, 2018; Regulation on the Procedures and Principles for Increasing Energy Efficiency in Transportation, 2019) clarifies issues such as how to meet the parking lot needs, which areas can be used as parking lots, minimum parking area standards according to vehicle types, and solutions to be applied in cases where parking facilities are insufficient. Laws and Regulations

2918 Highway Traffic Law (Date: 18/10/1983)

- The Provincial and District Traffic Commissions' duties include determining and managing parking areas.

- Empty areas belonging to real and legal persons or official institutions can be declared temporary parking areas. Permission can be granted to the owners or third parties to operate these areas.
- The purpose is to regulate urban traffic and meet the parking needs.

3194 Zoning Law (Date: 9/5/1985, Number: 18749)

- Article 37:

When preparing zoning plans, parking areas should be allocated based on the current status and future needs of the town and region. A building permit cannot be issued without a parking lot being built, and a usage permit cannot be obtained before the parking lot is completed. Parking areas cannot be used for other purposes.

- Article 44/3

The regulations to be issued by the Ministry regulate the determination of buildings and facilities requiring parking, the measurement of the amount of parking and other conditions, and how this need will be met.

Metropolitan Municipality Law No. 5216 (Date: 23/7/2004, Number: 25531)

- Metropolitan municipalities are responsible for constructing, commissioning, operating, and licensing open and closed parking lots.
- Municipalities are responsible for preparing and implementing metropolitan transportation master plans. These plans aim to determine parking areas, organize public transportation services, and ensure integration.

Metropolitan municipalities are responsible for regulating elements such as parking areas, stops, and roadside parking areas in urban traffic regulations.

Municipality Law No. 5393 (Date: 13/7/2005, Number: 25874)

It is stated that municipalities are responsible for carrying out urban infrastructure (such as zoning, water, sewage, transportation) services.

However, there is no direct regulation or statement regarding parking lots. The Metropolitan Municipality Law mostly regulates these issues.

Energy Efficiency Law No. 5627 and Related Regulation (Date: 09/06/2008, Number: 26901)

- It has been stated that measures such as road widening, junction arrangement and parking lot construction should be taken to relieve inadequate roads and congested traffic within the city.

These regulations aim to reduce energy consumption and regulate traffic within the city.

Regulation on Construction of Spatial Plans (Date: 14/06/2014, Number: 29030)

- Article 4(g):

In urban design projects, a holistic approach should be taken to address elements such as parking lots, vehicle transportation, service relations, and pedestrian circulation.

- Article 5(k):

Parking lots should be planned in accordance with cities' social, cultural, and economic characteristics within the scope of technical infrastructure areas.

- Article 11:

Parking arrangements should be made in zoning plans by considering the traffic density that the current and future population will create.

- Article 21:

It has been emphasized that the "park-and-ride" system should be expanded to encourage public transportation.

- Article 24:

It has been stated that social and technical infrastructure areas such as parking lots, roadside parking lots, and bus stop pockets can be separated in implementation zoning plans.

Planned Areas Zoning Regulation (Date: 03/07/2017, Number: 30113)

- It has been made mandatory to indicate parking areas in layout plans in implementation projects.

The relationship between parking lots, building entrances and exits, fire escape areas, and technical infrastructure elements should be specified.The dimensions and standards of parking lots should be detailed in architectural projects.

The Planned Areas Zoning Regulation has been updated on various dates between 2018 and 2025. Among these updates, there is no direct regulation regarding parking lots. However, with the latest amendments published in the Official Gazette dated March 11, 2025, regulations have been introduced regarding the installation of rainwater and greywater systems in private and public buildings of a specific size, the obligation of green certificates for new public buildings, barrier-free children's playgrounds and the installation of electric vehicle charging units. These amendments may indirectly affect the planning of parking areas. For example, providing the necessary infrastructure for

installing electric vehicle charging units may require new regulations in parking lot arrangements.

Parking Regulation (Date: 22/02/2018, Number: 30340)

The Parking Regulation, published in the Official Gazette dated February 22, 2018, and numbered 30340, entered into force to determine how the parking needs will be met in buildings for which a building permit will be issued. This regulation includes comprehensive provisions on parking lots' arrangement, dimensions and other technical details. Determining the need for parking lots has made it mandatory to have parking lots in buildings and facilities to solve parking and traffic problems caused by vehicles. The planning of parking lots is determined in line with the mandatory parking lot requirements that vary according to the purpose of use of the buildings. According to the regulation published in the Official Gazette dated March 25, 2021, the parking requirement for residences has been graded according to the size of the apartment. Accordingly, it is mandatory to allocate one parking lot for every three apartments under 80 m², one for every two apartments between 80–120 m², one for every apartment between 120–180 m² and two for every apartment over 180 m². In commercial buildings, it is mandatory to allocate at least one parking lot for every 50 m² for units such as shops, stores and banks, one parking lot for every 35 m² in shopping malls and one parking lot for every 40 m² in markets. The parking requirement in accommodation facilities varies according to the type of facility; for example, while one parking area is required for every three rooms in four and five-star hotels, one parking area is required for every 80% of the number of rooms in motels. One parking area is required for every four rooms/units in guesthouses and rural tourism facilities.

In food and beverage and entertainment venues (e.g. restaurants, nightclubs, discos), a parking area is required for

every 20–30 m² on average. For social, cultural and sports facilities (theatres, cinemas, libraries, swimming pools, etc.), calculations are generally made based on the number of seats. For example, a parking area should be planned for every 10 seats. In educational facilities, one parking area must be allocated for every 200 m² for universities and colleges and one for every 300 m² for primary, secondary and private schools. The highest ratio is taken as the basis in healthcare facilities, with two parking areas for every 75 m² or hospital patient bed. In addition, it is legally obligated to allocate parking areas in variable square meter ratios according to different types of use, such as public buildings, places of worship, industrial and wholesale trade areas, open entertainment and sports areas. These regulations are critical in terms of the sustainability of urban infrastructure, reducing traffic density and directing construction in a controlled manner. The Parking Regulation, which was made in 2018, has introduced various regulations to solve the parking problem in today's conditions where urbanization is rapidly increasing and the number of motor vehicles is constantly increasing. This regulation determines the basic principles regarding planning parking areas, the necessity of vehicle parking spaces in residential areas and how these areas will be used.

- Determination of Parking Requirements

The regulation comprehensively regulates parking requirements for residential and commercial buildings and all types of construction. For residential buildings, allocating a specific parking area for each independent section is mandatory. For commercial and office buildings, the parking area varies depending on the type of structure and the purpose of use. This regulation foresees that the parking requirement will be calculated depending on factors such as the size of the structure, the type of construction and the population density.

- Minimum Dimensions of Parking Areas

The regulation also determines specific minimum dimensions for each parking area. For example, a minimum width of 2.5 meters and a length of 5 meters have been set for single-car parking spaces. These criteria have been kept wider for double-car parking spaces. Thus, vehicles can park comfortably, and parking spaces can be used effectively.

- Location of Parking Lots

Parking lots should generally be located on the ground floors of buildings or in closed areas. This ensures that parking areas are accessible and functional, especially considering the dense construction in city centres. Underground parking lots can also be preferred, but since constructing such lots is more costly, this option should be carefully considered in planning.

- Calculation of the Number of Parking Lots

The number of parking lots is calculated according to the type of building and the purpose of use. For example, one parking space is required for each 1+1 apartment in residential buildings, and 1.5 or 2 parking spaces are required for 2+1 and larger apartments. In commercial areas, parking lots are increased depending on the size of the stores and offices. This regulation aims to prevent parking shortages, especially in commercial and mixed-use areas.

- Management of Parking Lots

The regulation responsibilities of site management ensure the effective management of parking lots. Site managements are held responsible for the regular use and maintenance of parking lots, and it is also stated that the number of parking spaces reserved for disabled vehicles should be increased.

- Regulations for Electric Vehicles

Considering the increasing use of electric vehicles, charging stations for electric vehicles should be included in newly constructed buildings. This regulation is important for future energy requirements and supporting environmentally friendly transportation options.

- Types of Parking Lots

Parking lots can be divided into two types: open and closed. Open parking lots are usually built on the exterior of buildings. Indoor parking lots can be located on the lower or upper floors of buildings. Due to space shortages, underground parking lots are another preferred option, especially in city centres.

- Sharing of Parking Lots

Parking lots are encouraged to be shared in dense areas within the city. Multiple structures can be created to use parking lots jointly. Such arrangements offer an important solution for parking needs, especially in city centres.

Regulation on Amendments to the Parking Lot Regulation (March 25, 2021)

With this amendment published in the Official Gazette on March 25, 2021, it was stated that areas such as parking lots, pocket parking lots, roadside parking lots, and parking bays could be increased in the implementation zoning plans according to the region's needs and that these functions would not require changes in the master zoning plan. In addition, amendments were made to Sections 1, 2, and 11 (Table 1).

Regulation on Amendments to the Parking Regulation (August 12, 2023)

With this amendment published in the Official Gazette dated August 12, 2023, additions were made to Article 4 of the Parking Regulation. With these additions, new provisions were introduced regarding parking regulations.

Table 1. Regulation Amending the Parking Regulation

1. Residential Buildings	
Below 80 m²	1 space per 3 apartments
80 m² - 120 m² (excluding 120 m²)	1 space per 2 apartments
120 m² - 180 m² (excluding 180 m²)	1 space per apartment
180 m² and above	2 spaces per apartment
2. Commercial Buildings	
Shops, Stores, Banks	At least 1 space per unit, plus 1 per 40 m²
Market, Supermarket	1 space per 40 m²
Shopping Mall	1 space per 35 m²
3. Industrial, Storage, Wholesale Trade, and Industrial Zones	
Industrial and Storage Facilities	At least 1 space per unit, plus 1 per 200 m²
Wholesale Trade	At least 1 space per unit, plus 1 per 200 m²
Industrial Zones	1 space per 500 m²
Area Type	Parking Requirement

In the solution of the parking needs of newly constructed buildings on parcels where buildings that were demolished were identified as risky within the scope of disaster preparation, the procedures specified in this Regulation may be applied without any order of priority, and the authorized administration may determine different procedures to issue licenses by taking a council decision, provided that the provisions regarding the parking fee and the minimum parking amounts that form the basis of this fee are reserved.

4. CONCLUSION AND RECOMMENDATIONS

When the current legal regulations on parking and the legal regulations on parking lots in urban areas are examined, it has been determined that sufficient and detailed information is not

provided on the conceptual, planning and design project, standards, implementation and management dimensions, inspection and control related to transportation infrastructure and parking and that they are not compatible with each other (Gül et al., 2019).

The fact that automobile users create irregular parking areas due to non-compliance with parking regulations and arrangements leads to problems ranging from micro to macro on the urban scale. Parking problems that cannot be solved locally can pose serious threats to transportation infrastructure in the long term. While such problems create adverse effects such as slowing down traffic flow, decreasing transportation quality and decreasing road capacity, they can also significantly reduce the fluidity of urban traffic and bring it to a standstill. In particular, the formation of volume-capacity imbalance in transportation infrastructure, i.e., the increase in vehicle volume over the current capacity, is considered one of the main reasons for the problems experienced in urban transportation.

To ensure the sustainability and accessibility of urban transportation, local governments' transportation policies that shape parking supply need to be designed holistically. In this context, it is of great importance that strategies that encourage different transportation modes are implemented at the local level and that central governments create large-scale transportation plans in an integrated manner. Creating off-street parking areas alone is not enough to solve parking problems; therefore, on-street parking arrangements should also be integrated in a supportive manner and used with maximum efficiency.

In addition, in selecting parking lots within the scope of zoning plans, a balanced distribution of functions that create high demand, such as social facilities, public institutions and educational structures, will effectively reduce city centres' density

pressure. Instead of locating large-scale parking facilities directly in central areas, planning these structures around the centre or in nearby areas necessitates the rearrangement of parking pricing policies to be implemented in the city centre in this direction. Thus, reducing individual vehicle use and promoting orientation towards public transportation systems will be encouraged.

In the future, it is foreseen that the impact of artificial intelligence on parking management and transportation policies will increase even more. Technologies such as autonomous vehicles, intelligent transportation systems, dynamic pricing algorithms, and AI-supported mobile applications reduce urban traffic congestion, reduce parking search times, and increase overall transportation efficiency (Alam et al., 2021; Wang et al., 2020). At the same time, AI-based decision support systems allow city managers to produce more transparent, data-driven, and environmentally impact-conscious policies. In this direction, artificial intelligence is considered a technological innovation and a fundamental planning tool for rebuilding cities in line with livability, accessibility, and sustainability criteria. In complex and multi-actor processes such as parking lot location selection and management, an interdisciplinary approach should be adopted, and AI solutions should be implemented ethically, safely, and effectively. In this context, coordination between planners, designers, engineers, data scientists, and local administrators will play a critical role in creating future resilient, inclusive, and environmentally friendly urban structures (Chen et al., 2020; Liu et al., 2021). In this context, the fundamental factor that determines the success of developed policies, strategies and artificial intelligence-supported systems is the human factor. Education and awareness studies are to be disseminated nationally to create conscious and responsible individuals who are critical in increasing the effectiveness of parking lot management and urban transportation.

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LANDSCAPING IN PUBLIC OPEN SPACES DESIGN APPROACHES; HOPA EXAMPLE

Emine TARAKCİ EREN[1]

1. INTRODUCTION

Public open spaces can be defined as open green areas outside the buildings, where many functions coexist in the city, serving the common needs of the city people (Eren and Özbilen 2019). Public open spaces are areas where mobility and access exist, where so-cial, cultural and sports activities, shopping, gathering, waiting, dispersing, and commercial functions take place (Gökgür, 2008). It is not possible to talk about 'public spaces' without 'public' (Sta-uskis and Eckardt, 2011). Public open green spaces, on the other hand, are the basic elements of the quality of life that are impor-tant in cities because of the opportunities they provide for people to come into contact with nature and each other, and they can be developed with the participation of the real owners of the cities, the citizens (Otaner and Keskin, 2005). In planning processes, which are in a sense "spatial scenarios produced for society", the emphasis on public open spaces has been strengthened with qua-lities that can solve urban problems. While creating an urban aest-hetic value, it creates an urban image and urban identity with the artistic environment it creates by drawing the attention of the pub-lic to the focal point. It brings new meanings to the city and urban space and improves the perceptual and functional aspects of urban areas with designs carried out in an environment easily accessible to the

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public. It should be planned by considering the socio-cul-tural and economic structure, trends, change and development dynamics of the society. The production of public space that will respond to the changing and transforming social and cultural structure of society should create a variety of structural and vegetative space solutions that will allow for all segments of society and versatile human activities (Düzenli et al., 2018a; Düzenli et al., 2018a; Alpak et al., 2018; Sarı, 2019; Karaşah et al., 2013). The process and tool that will create this and give life to planning decisions is urban design. Public spaces (streets, avenues, squares, marketplaces, etc.), which are shaped in planning processes involving two-dimensional physical plans, gain a third dimension in the urban design process. Urban design is a design process that takes into account the social environment and society as well as the physical space of cities while bridging the gap between planning and architecture (Çelikyay, 2016). Urban design projects (Eren, 2022; Eren et al., 2018), which construct pedestrian passage axes (Eren et al., 2018), stop and rest areas, communication and socialization areas (Alpak et al., 2018), activity areas (Düzenli et al., 2018) in three dimensions in a visual composition within the public spaces that are shaped in two dimensions in the planning process where it is decided for which actions the area will be used, create social living spaces by creating space for human actions in space.

In this research, within the scope of the Project 3 course of the Department of Landscape Architecture, students were given a public space, Hopa Municipality Building, District Governorship Building and an area where pedestrian transportation and many functions coexist. This area is a public space. However, the exis-ting area is an area that emerged spontaneously within the fra-mework of needs. There is no planned and realized landscape de-sign for this area. For this reason, a landscape design study was

considered for this area. In this study, one of the most successful landscape design projects realized for this area will be analyzed from start to finish. Strategies of the designer;

1. Creating a strong visual image
2. Regulation of social interactions
3. A pedestrian-first spatial arrangement and
4. Improving the environment and quality of life (Özer, 2017).

2. MATERIAL AND METHODS

2.1. Study Area

The study area is located in Hopa district of Artvin province in the Eastern Black Sea Region. Our study area is in the Central Kuledibi neighborhood. The area is 12.561 square meters. The population density of Hopa is 27.176 people. Hopa is at an alti-tude of 42 m and is located on the sea coast. Hopa is bordered by the Black Sea to the west, Kemalpaşa to the northeast, Borçka to the east, Murgul to the southeast, and Arhavi to the southwest. Hopa, an important port city of Turkey, is located about 20 kilo-meters from the Sarp border gate on the border with Georgia. This area is located at the coordinates 41°23'43 "N 41°25'16 "E.

Table 1. Location information of the study area

Türkiye	Artvin	Hopa
		

2.2. Study Material

The main material of the study is one of the landscape projects developed in the Project 3 course given in the fall semester of the 2024-2025 academic year in the Department of Landscape Architecture at AÇÜ.

3. FINDINGS

Figure 1. Survey and analysis of the landscape project evaluated within the scope of the study

At the beginning of the landscape design project, the designer candidate students carry out field studies. They determine all the data that will provide data for the design from the field by using one-to-one on-site observation and measurement tools. Accor-dingly, in the field analysis and

inventory study; both as a desig-ner and as a user, they spend a lot of time in the study area and experience this area in every way. The three-week-long inventory of the site and the analysis of the data obtained are collected on a sheet, which is a survey and analysis study (Figure 1).

3.1. Findings on Creating a Strong Visual Image

Visual images create the identity of urban spaces and increase the memorability of those spaces in people's minds. The right textures and images created with the right designs make the urban space readable. Architectural style, details, colors and materials, and the creative use of landscape elements contribute to the visual image of spaces. The City of Harlow, created in 1947 by Frederick Gib-berd with the slogan of a strong city image, has established certain principles:

- Creating neighborhood spaces that are attractive to the pedestrian and at a pedestrian scale,
- Designing by taking into account the natural structure and landscape and creating green areas connected to open spaces that are easily accessible to pedestrians,
- Development of public transportation points at strategic movement points,
- Contemporary designs built to high standards,
- Designing attractive and diverse neighborhood groups (Şala, 2023).

In line with this information, the landscape architect candidate student (Sedanur Kepenekçi) tried to contribute to the visual image by emphasizing the local characteristics of the area in her landscape design project. For this, she designed a structural ent-rance unit at the entrance of the area and used the name of the district where the area is located in the door design. In the continuation of the gate he used delimiter columns separating the road and the work area. Thanks to this designed gate and entrance, it aimed to create a strong effect on the image of the users who use this place. He also increased this effect by using red color here. The door of a space should give the user an idea of what kind of space awaits the users inside (Table 2). This was one of the ideas that influenced the door design here.

Table 2. Creating a visual image: door design

Entrance and door design to the area	
	

Pedestrians have been prioritized in the design of the entire area, and the entrance of vehicle traffic into the area is planned only for emergencies. The need for parking was met with the parking ga-rage under the municipality and government mansion building. Thus, the open space is given more opportunity to be used only by pedestrians (Figure 2). Close neighborhood relations have been designed. That is to say; when we look at the design, all open spaces are designed in a grifted and interrelated manner. While privacy is provided where necessary, all facades are left open where necessary, allowing users to use them comfortably.

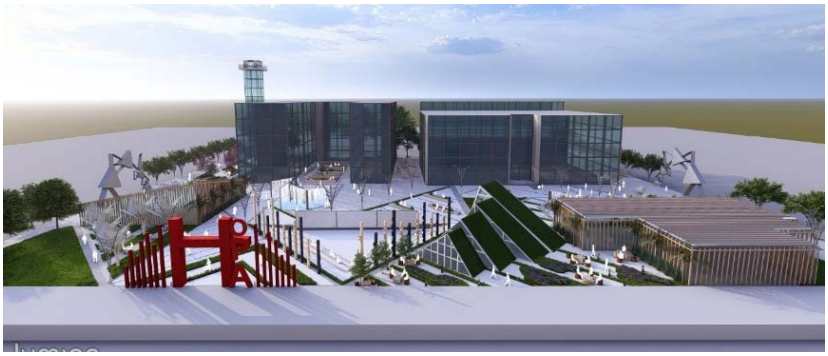


Figure 2. Creating pedestrian-scale spaces and neighborhood relations

While emphasizing the local identity in the study area, modern and contemporary designs were prioritized at the same time. While shaping the design formally, the golden ratio in nature was used, inspired by the greatest creator. The golden ratio is a mat-hematically interesting correlation between the parts of a whole. The mathematical expression of the golden ratio as a decimal number is 1.618. If the ratio of a large area or part and a small area or part overlaps with 1.618, it has the golden ratio feature (figure 3).

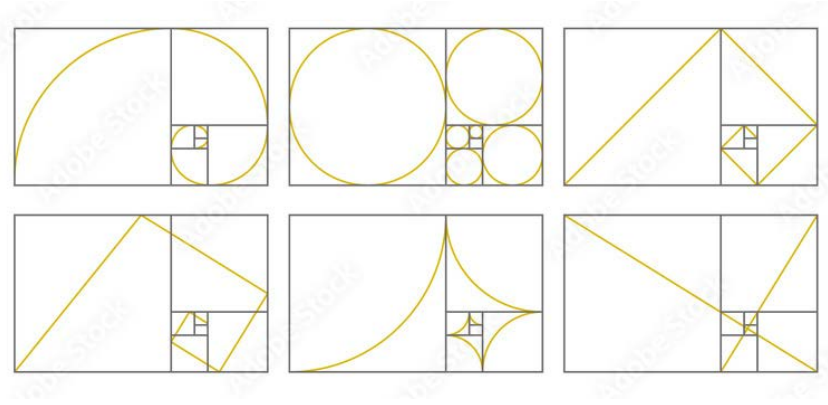
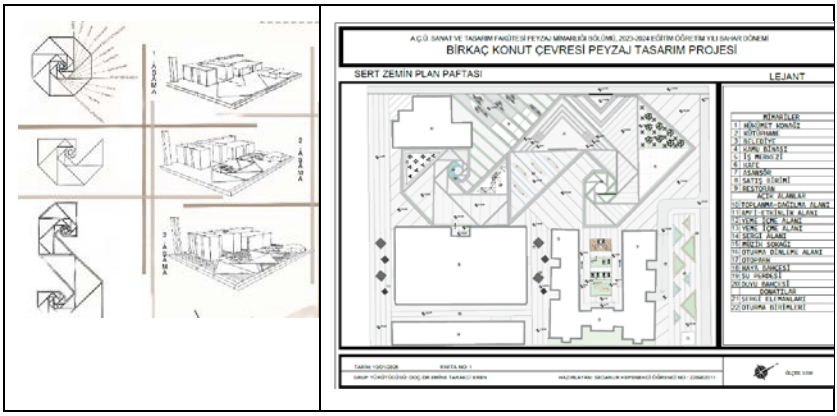


Figure 3. Golden ratio drawings (URL-1)

Landscape architect candidate students applied the golden ratio in different forms in different areas, but in this landscape design, tri-angular forms were applied as in Table 3.

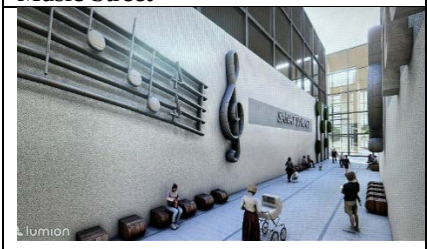
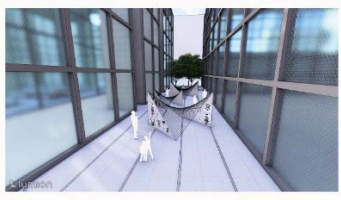
Table 3. Design phases



3.2. Findings Regarding the Organization of Social Interactions

In addition to the needs and expectations of the local users of the area, the designer also considered foreign users due to the cosmo-politan structure of Hopa district and took them into consideration in the landscape design. In addition to the buildings in the area; government mansion, library, municipality building, business center, cafe, elevator, sales units and restaurant, he designed a gathering and dispersal area, amphitheater show area, food and beverage areas, exhibition area, music street, sitting rest areas, parking lot, rock garden, water curtain, sensory garden in open spaces. All these areas and the social facilities they offer to the users are as follows.

Table 4. Social interaction areas in the study area

Water curtain	Public building courtyard
	
Music Street	Restaurant front garden
	
Sitting and resting areas	Rock garden
	
Exhibition Street	Amphitheatre and performance area
	

3.3. Findings Regarding a Pedestrian Prioritized Space Arrangement

The entire study area has vehicular traffic on three sides. In the northern part of the area, there is an intercity road and a main ur-ban road. In other words, the study area is right in the

middle of vehicle traffic. Although it is difficult to separate vehicular traffic from pedestrian traffic in such an area, the designer has prioritized pedestrian traffic by excluding vehicles from the area except for hard surfaces that will allow vehicle access to the area in case of emergency. The parking area was solved as a parking garage un-der the municipality and government building (Figure 4).

Figure 4. Parking garage entrance

Roads, hard surfaces, stairs and ramps have been designed so that healthy and disabled people can move easily throughout the entire area (table 5).

Table 5. Pedestrian spaces

Direction for pedestrians	Bench designs in circulation areas
	

3.4. Findings on Improvement of Environment and Quality of Life

Increasing the quality of environment and life is possible with the solution of environmental problems. Today, the source of envi-ronmental problems in urban areas stems from the fact that people see the environment as an unlimited resource and use it unlimi-tedly for their own needs. The ability of green areas to fulfill their ecological functions, which are important for human health, de-pends primarily on the presence of clean air necessary for their survival. In this respect, these issues should be taken into consi-deration in the design and implementation works to be carried out at macro or micro level in and around the city. The basic condition for achieving success in the creation of green areas in cities is to be able to make an assessment that will reveal the ecological re-lations between plants and environmental conditions. A healthy ecological evaluation in this direction ensures the correct selec-tion of plant species that can adapt to the existing environmental conditions. This is achieved by knowing the growing environment requirements of plant species. In line with all this informa-tion, landscape architect candidate student project includes tilia tomentosa (linden), platanus orienatlis (eastern sycamore), liquidamber orientalis (sweetgum tree), malus floribunda (orna-mental apple), lagerstroemina indica (lace tree), cercis siliquast-rum (redbud), hydrangea macrophylla (hydrangea), lavandula an-gustifolia (lavender), viburnum opulus (white flowering vibur-num) (Table 6).

Table 6. Examples of planting designs in the design area

Cushioned seating area	Rock garden
	
Sitting under the tree	Evergreen plants
	

4. RESULTS

The main objective in the design of public spaces is to preserve local identity, to functionalize undefined areas, and to make open green spaces more attractive. When public spaces are considered in the dimensions of activity, comfort and image, form, meaning and identity, and access, it is observed that they positively affect the quality of public space. The design of public spaces is a met-hod of analyzing and organizing the details of open spaces in phy-sical, cultural and social contexts. Design practices in public spa-ces create quality, aesthetic and sustainable living spaces for pe-ople. Public space quality has become an important concept to improve the quality of life of individuals. The concept of public space quality gains importance in increasing the quality of life and creating areas with identity, quality and character. Public space design offers application methods to ensure the comfort of space users, to improve the quality of space and life in open green areas, and to create areas with identity and character. In this con-text, the design of public

spaces improves the quality of space in public open spaces with the right orientation and tools and offers more attractive environments to its users. The aim of this research is to make the landscape architect candidate designer practice in public space design.

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SOUNDSCAPES EVALUATION

Emine TARAKCİ EREN[1]

Didem ŞENTÜRK[2]

1. INTRODUCTION

Sounds can provide listeners with information about the material, size and weight of the sound source. In general, sound is not only a physical phenomenon and an acoustic process, but also includes cultural, artistic, national, historical and other characteristics. Therefore, how sound is heard and what is heard determines the content and nature of sound. The concept of soundscape is the listener's understanding of sound in a particular environment. So-und is an objective entity, but its receiver is human. The listener's psychoacoustic perception conveys the power of sound as a me-dium of communication. The listener's social background and current situation will influence his/her assessment of the so-undscape. Therefore, the listener is the subject in the soundscape and the direct perceiver of the soundscape. When evaluating the soundscape, the psychological and physiological needs of the lis-tener should be taken into account.

The term "soundscape" was defined in 1977 by composer R. Mur-ray Schafer as "the aural equivalent of landscape" (Lavandier and Defréville, 2006). The concept of soundscape refers to a subjec-tive component of the environment perceived

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by the individual or society (Dubois et al., 2006). Humans actively use their five sen-ses to sustain and improve their daily lives from past to present. However, among these senses, the sense of sight is usually more dominant and prioritized. Nevertheless, the importance of hearing in increasing functionality and standard of living cannot be denied because all senses influence and support each other in the percep-tion process (Lynch K., 2017). Therefore, the landscapes of the environments where people live contain auditory data that enable them to interact with those spaces. Thus, soundscape studies have emerged in order to evaluate the positive or negative effects of auditory data.

In a study conducted by Ulrich, he observed a decrease in blood pressure and improvement in blood pressure in stressed partici-pants after only 4-6 minutes of exposure to the natural environ-ment (Ulrich and Parsons, 1992). It was also found that they were in a good mood in such an area (Russell and Snodgras, 1987). In studies conducted with people who do not have health problems, it has been revealed that natural areas or natural area simulations have significant psychological repair effects even in a short pe-riod of 3-5 minutes (Ulrich et al., 1991; Hartig et al., 1995; Fred-ricksan & Levenson, 1998; Parsons & Hartig, 2000; Vanden Berg et al., 2003; Sakıcı, 2009). Since watching nature can lower heart rate and blood pressure and stimulate the parasympathetic ner-vous system, it calms the sympathetic nervous system and incre-ases the user's experience of relaxation, pleasure, and energy (Zhang, S., Zhao, X., Zeng, Z., & Qiu, X. 2019). On the other hand, urban green spaces are recognized as a factor that can imp-rove people's psychology. Because the environment in green spa-ces helps to reduce stress and psychological recovery. Therefore, open green spaces are very important for people's mental health (Düzenli 2017; Düzenli et al., 2018, Eren et al., 2016). Two the-ories, namely stress relief

theory (SRT) (Ulrich et al., 1991), which focuses on stress relief through attention to contact with nature, and attention restoration theory (ART) (Kaplan, 1995), which focuses on mental fatigue relief through attention to con-tact with nature (Zhang et al., 2019; Yılmaz et al., 2017), have been frequently used to investigate the psychological healing ef-fects of the natural environment on mental fatigue relief through the natural environment. Viewing natural landscapes contributes to stress reduction, promotes more positive moods and emotions, and can facilitate recovery from illness (Moore, 1981; Ulrich, 1981, 1984; Verderber, 1986; Parsons, 1991; Ulrich et al, 1991; Cimprich, 1992, ; McAndrew, 1993; Laumann et al, 2001). Au-ditory interactions in green spaces are important for mental health and well-being

Research has shown that people perceive a place with their senses and that 60% of this is perceived with our sense of sight, 30% with our sense of hearing, 10% with touch and smell (Xu et al., 2025; Haochen, 2025; spence, 2020; Blesser & Salter, 2007; Hall, 1966; Özgür, 2021). This tells us that in perceiving a space, other sensory features, especially auditory landscape features, are as important as the visual landscape features of that space. However, the impact of auditory interactions on psychological responses is still understudied (Zhang et al., 2019; (Özkan, 2015). In this con-text, the lack of studies investigating the effect of auditory lands-cape on landscape preferences and evaluations in Turkey reveals the importance of this research. It has been stated that the auditory features of natural environments are more appreciated and prefer-red than artificial and mechanical auditory features (Li and Liu, 2024; Luo et al., 2020).

2. MATERIALS AND METHODS

For each implementation phase, the most appropriate data collec-tion method was selected. Considering the purpose of each

stage and the information to be obtained, a multi-method approach was used in the research model. Thus, it was ensured that the strengths of one method overcome the weaknesses of the other. In line with these views, a research model using different survey techniques was designed. The main mass of the study consists of people li-ving in Trabzon. Trabzon city According to TUIK data for 2023, its population is 824352 people. The population of Trabzon constitutes the population of the study. In order to determine the sample size, it was determined as 384 people. Sample sizes according to the study areas are as in Table 1.

Table 1. Sample sizes according to study areas 1

1	Meydan Park	384 people
2	Trabzon Botanical Garden	384 people
3	Boztepe Observation Terrace	384 people
4	Ganita Beach Park	384 people
5	Sera Lake Nature Park	384 people

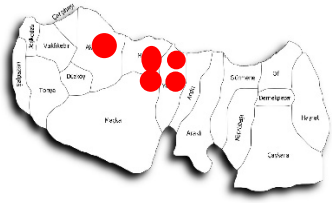
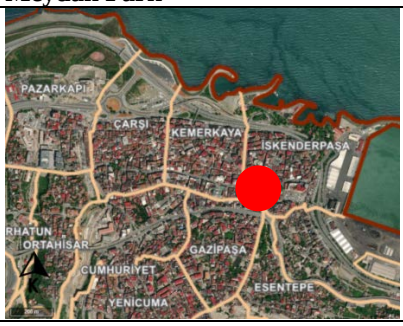
The survey was conducted using face-to-face and Google survey techniques. The semantic differentiation technique was used to measure auditory values (Osgood, 1975). According to this tech-nique, 8 pairs of opposite adjectives were selected for the evalua-tion of photographs, videos and audio recordings. Of these, the adjectives relaxing- pleasant- natural- lively- interesting- attractive- charming- energetic were used in the evaluation of the auditory characteristics of open green spaces depending on the perceptual processes of the users. The audio recordings were played to the users and they were asked to evaluate each adjective pair on the questionnaire form by giving one of the 1,2,3,4 and 5 points.

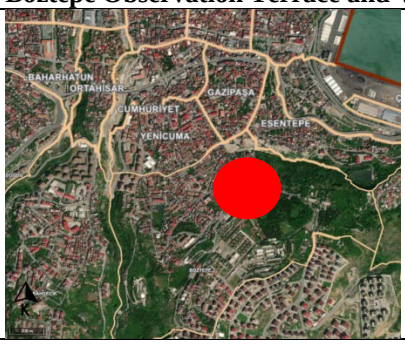
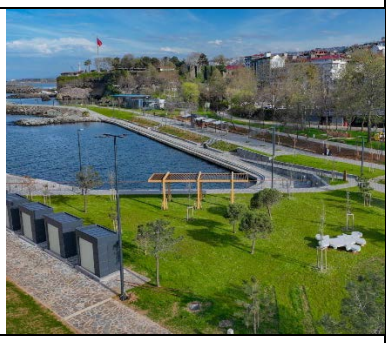
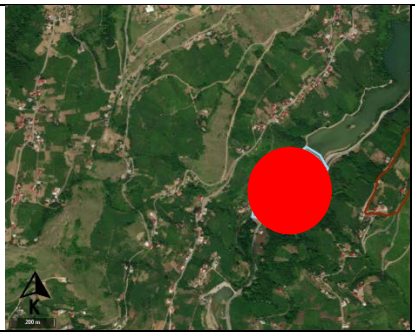
2.1. Selecting and Defining the Study Area

In this study on auditory and visual landscape preference and eva-luation, Trabzon Meydan Park, Ganita Coastal Park, Boztepe Ob-servation Terrace, Sera Lake Nature Park and

Trabzon Botanical Garden were selected as the study areas among the open green areas with different visual and auditory characteristics in Trabzon province located in the eastern Black Sea region of Turkey (table 2).

Table 2. Study areas

Trabzon in Turkey	**Study areas in Trabzon**
	
Meydan Park	
	
Botanical park	
	

Boztepe Observation Terrace and Walkway	
	
Ganita beach park	
	
Sera Lake and Nature Park	
	

3. FINDINGS

3.1. Findings on Socio-Demographic Characteristics of Users

Since the population of Trabzon constitutes the universe of the study, its population is 824,352 according to 2023 data. The sample was calculated as 384 over this number. The 384 people

who participated in the survey were asked about their gender, age, education level, undergraduate degree, if any, which department they studied and their occupation.

Accordingly, Table 3 shows the socio-demographic characteris-tics of the sample in the study areas. According to this, there were a total of 384 participants, of which 249 were female with a rate of 64.8% and 135 were male with a rate of 35.2% (Table 3).

Table 3. Demographic data of the participants

		Frequency	Percentage	Valid percentage	Total percent
Valid	Woman	249	12,5	64,8	64,8
	Male	135	6,8	35,2	100,0
	Total	384	19,2	100,0	
Missing	System	1616	80,8		
		Frequency	Percentage	Validpercentage	Total percent
Valid	18-25	177	8,9	46,1	46,1
	26-35	121	6,1	31,5	77,6
	36-40	47	2,4	12,2	89,8
	41 and above	39	2,0	10,2	100,0
	Total	384	19,2	100,0	
Missing	System	1616	80,8		
		Frequency	Percentage	Valid percentage	Total percent
Valid	Primary education	5	,3	1,3	1,3
	Secondary Education	2	,1	,5	1,8
	High School	110	5,5	28,6	30,5
	License	201	10,1	52,3	82,8
	Postgraduate	66	3,3	17,2	100,0
	Total	384	19,2	100,0	
	System	1616	80,8		
	Total	2000	100,0		
		Frequency	Percentage	Valid percentage	Total percent
Valid	Worker	27	1,4	7,0	7,0
	Tradesmen	3	,2	,8	7,8
	Officer	68	3,4	17,7	25,5
	Private sector	101	5,1	26,3	51,8
	Student	137	6,9	35,7	87,5
	Selfemployment	9	,5	2,3	89,8
	Housewife	6	,3	1,6	91,4
	Notworking	33	1,7	8,6	100,0
	Total	384	19,2	100,0	
Missing	System	1616	80,8		
Toplam		2000	100,0		

3.2. Making Sense of Auditory Landscape Features of Open Green Spaces

In the questionnaire, depending on the perceptual processes of the participants, firstly only the auditory features of the study areas were made meaningful through adjective pairs. As a result, the participants' most preferred auditory landscape feature and how it was interpreted or the least preferred auditory landscape feature and how it was interpreted were revealed. It also revealed which sounds characterize the selected areas. The survey was conducted with 384 respondents. Range width of the five-point Likert scale;

- 5 (weight), strongly agree, 4.21-5.00 (range)
- 4 (weight), agree, 3.41-4.20 (limit)
- 3 (weight), partially agree, 2.61-3.40 (range)
- 2 (weight), disagree, 1.81-2.60 (limit)
- 1 (weight), strongly disagree, 1.00-1.80 (limit).

3.3. Findings Regarding the Most Frequently Heard Sounds and Favorite Sounds in the Study Areas

The participants were first questioned about the auditory characteristics of the study areas. Accordingly, the participants were made to listen to the audio recordings of the study areas and asked which sounds they heard the most in this area. Thus, it was aimed to determine what are the sounds that define these areas. In other words, it was aimed to define the auditory landscape features that define the study areas. When the auditory features of the square park were listened to by the participants, they stated that the sounds they heard the most were human voice with a rate of 58.9%, traffic sound with a rate of 19.3%, sounds of nature with a rate of 10.9%, music sound with a rate of 5.7%, and noise with a rate of 5.2%. Only the sound recording of the square park

was played without visual recording and then the participants were asked which of the sounds they heard they liked the most. Accordingly, the most liked sounds and percentages are as follows; 29.9% of the participants stated that they did not like any sound, 29.4% of them liked human voices, 27.3% of them liked natural and natural sounds, 3.9% of them preferred music, and 9.4% of them preferred other options (Table 4).

Table 4. Most heard sounds and most liked sounds in the square park

The most heard sounds in Meydan Park

Frequency		Percent	Valid Percent		CumulativePercent
Valid	Human Vo-ice	226	11,3	58,9	58,9
	Traffic So-und	74	3,7	19,3	78,1
	Nature So-und	42	2,1	10,9	89,1
	Music Sound	22	1,1	5,7	94,8
	Noise	20	1,0	5,2	100,0
	Total	384	19,2	100,0	
Missing	System	1616	80,8		
Total		2000	100,0		

Most Popular Sounds in Meydan Park

		Frequency	Percent	Valid Per-cent	Cumulative Percent
Valid	Human Voice	113	5,7	29,4	29,4
	None of them	115	5,8	29,9	59,4
	Natural Sounds	105	5,3	27,3	86,7
	Music Sound	15	,8	3,9	90,6
	Other	36	1,8	9,4	100,0
	Total	384	19,2	100,0	
Missing	System	1616	80,8		
Total		2000	100,0		

In order to determine how Boztepe observation decks are defined au-rally by the participants, the audio recording of Boztepe observation decks was played to the participants and they were asked to indicate the sounds they heard the most. Accordingly, when the responses of the participants were analyzed, the most common sound heard by the par-ticipants at Boztepe observation decks was the sound of steps with a rate of 32.6%, traffic sound with a rate of 20.6%, human voice with a

rate of 17.7%, wind sound with a rate of 14.3%, other options with a

rate of 11.7%, and finally bird sounds with a rate of 3.1%. After liste-ning to the sound recording of Boztepe observation terraces, the parti-cipants were asked which of the sounds they heard they liked the most. Accordingly, the most liked sounds and percentages are as follows; 15.6% of the participants stated that they liked the sound of wind, 14.1% liked bird sounds, 10.7% liked the sound of steps, and 7.3% liked human voices. An interesting result here is that 51.6% of the participants stated that they liked other sounds (Table 5). The sounds they predominantly identified among these other sounds were natural sounds.

Table 5. The sounds they hear the most at Boztepe observation terraces and their percentages

The Most Heard Sounds at Boztepe Observation Terraces					
	Frequency		Percent	Valid Per-cent	Cumulative Percent
Valid	Step Sounds	125	6,3	32,6	32,6
	Human Voices	68	3,4	17,7	50,3
	Wind Sound	55	2,8	14,3	64,6
	Traffic Sound	79	4,0	20,6	85,2
	Bird Song	12	,6	3,1	88,3
	Other	45	2,3	11,7	100,0
	Total	384	19,2	100,0	
Missing	System	1616	80,8		
Total		2000	100,0		
Most Popular Sounds at Boztepe Observation Terraces					
	Frequency		Percent	Valid Percent	Cumulative Percent
Valid	Step Sound	41	2,1	10,7	10,7
	Wind Sound	60	3,0	15,6	33,6
	Vehicle Sound	3	0,2	0,8	34,4
	Bird Song	54	2,7	14,1	48,4
	Other	198	9,9	51,6	100,0
	Total	384	19,2	100,0	
Missing	System	1616	80,8		
Total		2000	100,0		

How is Ganita described aurally by the participants? In order to deter-mine this, the audio recording of Ganita was played to the participants and they were asked to indicate the sounds they

heard most . Accor-dingly, when the responses of the participants were analyzed, the most common sound heard by the participants in Ganita was the sound of the sea with a rate of 40.4%, the sound of seagulls and birds with a rate of 35.9%, the sound of wind with a rate of 8.6%, the sound of boats and kayaks with a rate of 7.3%, and the sound of human voice with a rate of 3.1%. 4.7% of the participants selected other options. After identif-ying the auditory characteristics that define Ganita, the participants were asked which of these sounds they liked the most. Accordingly, 44.8% of the participants stated that they liked the sounds of the sea the most, 45.1% of the participants liked the sounds of seagulls and birds, and 1% of the participants liked the sounds of vehicles. 9.1% of the participants stated that they liked other sounds (Table 6).

Table 6. The sounds that the participants heard the most in Ganita and their percentages

The Most Common Sounds in Ganita

Valid	Sea Sound	155	7,8	40,4	40,4
	Seagull-Bird Song	138	6,9	35,9	76,3
	Boat/Kayak So-und	28	1,4	7,3	83,6
	Wind Sound	33	1,7	8,6	92,2
	Human Voice	12	,6	3,1	95,3
	Other	18	,9	4,7	100,0
	Total	384	19,2	100,0	
Missing	System	1616	80,8		
Total		2000	100,0		

Most Popular Voices in Ganita

		Frequency	Percent	Valid Per-cent	Cumulative Percent
Valid	Sea Sound	172	8,6	44,8	44,8
	Seagull-Bird Song	173	8,6	45,1	89,8
	Vehicle Sound	4	,2	1,0	90,9
	Other	35	1,8	9,1	100,0
	Total	384	19,2	100,0	
Missing	System	1616	80,8		
Total		2000	100,0		

How is Sera Lake Nature Park defined aurally by the participants? In order to determine, the participants were played the sound recording of the Sera Lake Nature Park and asked to indicate the sounds they heard the most. Accordingly, when the responses of the participants were analyzed, the most common sound heard by the participants in the Sera Lake Nature Park was the sound of birds with a rate of 59.4%, water sound with a rate of 19.5%, leaf rustling with a rate of 6%, human voice with a rate of 5.2%, and wind sound with a rate of 3.1%. 6.8% of the participants selected other options. After determining the auditory fea-tures that define the Sera Lake Nature Park, the participants were asked which of these sounds they liked the most. Accordingly, 62.8% of the participants stated that they liked the sound of birds the most, 18.8% said they liked the sound of water, 4.7% said they liked the rustling of leaves, and 1.6% said they liked the sound of wind. 12.2% of the parti-cipants stated that they liked other sounds (Table 7).

Table 7. The sounds that the participants hear the most in Sera Lake Nature Park and their percentages

Greenhouse Lake Nature Park Most Heard Sounds					
		Frequency	Percent	Valid Percent	Cumulative Percent
Human Voice	20	1,0	5,2		5,2
Water Sound	75	3,8	19,5		24,7
Bird Song	228	11,4	59,4		84,1
Leaf Rustle	23	1,2	6,0		90,1
Wind Sound	12	,6	3,1		93,2
Other	26	1,3	6,8		100,0
Total	384	19,2	100,0		
System	1616	80,8			
Total		2000	100,0		
Greenhouse Lake Nature Park Most Popular Sounds					
		Frequency	Percent	Valid Percent	Cumulative Percent
Water Sound	72	3,6	18,8		18,8
Bird Song	241	12,0	62,8		81,5
Leaf Rustle	18	,9	4,7		86,2
Wind Sound	6	,3	1,6		87,8
Other	47	2,4	12,2		100,0

How is Trabzon Botanical Garden described aurally by the participants? In order to determine, the participants were listened to the audio recor-ding of Trabzon Botanical Garden and asked to indicate the sounds they heard the most. Accordingly, when the responses of the participants were analyzed, the most common sound heard by the participants in Trabzon Botanical Park was bird sound with a rate of 45.3%, human voice with a rate of 17.2%, water sound with a rate of 3.4%, and wind sound with a rate of 3.9%. 30.2% of the participants selected other options. After determining the auditory features that define Trabzon bota-nical garden, the participants were asked which of these sounds they liked the most. Accordingly, 69% of the participants stated that they liked natural sounds (water, wind, bird, animal, etc.) the most, 23.7% of them liked human voices, and 1.6% of them liked traffic sounds. 5.7% of the participants stated that they liked other sounds (Table 8). The sounds described as other are mainly natural sounds.

Table 8. The sounds that the participants heard the most in Trabzon Botanical

Trabzon Botanical Garden Most Frequent Sounds

	Frequency		Percent	Valid Per-cent	Cumulative Per-cent
Valid	Human Voice	66	3,3	17,2	17,2
	Water Sound	13	,7	3,4	20,6
	Wind Sound	15	,8	3,9	24,5
	Other	116	5,8	30,2	100,0
	Total	384	19,2	100,0	
Missing	System	1616	80,8		
Total		2000	100,0		

Trabzon Botanical Garden Most Liked Sounds

		Frequency	Percent	Valid Per-cent	Cumulative Percent
Valid	Natural Sounds	265	13,3	69,0	69,0
	Traffic Sound	6	,3	1,6	70,6
	Human Vo-İce	91	4,6	23,7	94,3
	Other	22	1,1	5,7	100,0
	Total	384	19,2	100,0	
Missing	System	1616	80,8		
Total		2000	100,0		

3.4. Semantic differential Analysis Findings Regarding the Auditory Characteristics of the Study Areas

As a result of the analyzes made according to the answers given by the participants, the auditory landscape features of all study areas were evaluated in the context of all adjective pairs. Accor-dingly, in the evaluation made in terms of the adjective pair of disturbing or relaxing, the participants found the auditory lands-cape features of Sera Lake Nature Park relaxing with a value of 4,44531. In terms of the adjective pair pleasant and unpleasant, the auditory features of Ganita Coastal Park received the highest value of 4,1849. Then, Sera Lake Nature Park (4,01042), Meydan Park (3,08073), Botanical Garden (2,95573) and finally Boztepe Observation Terraces (2,71875) respectively (figüre, 1).

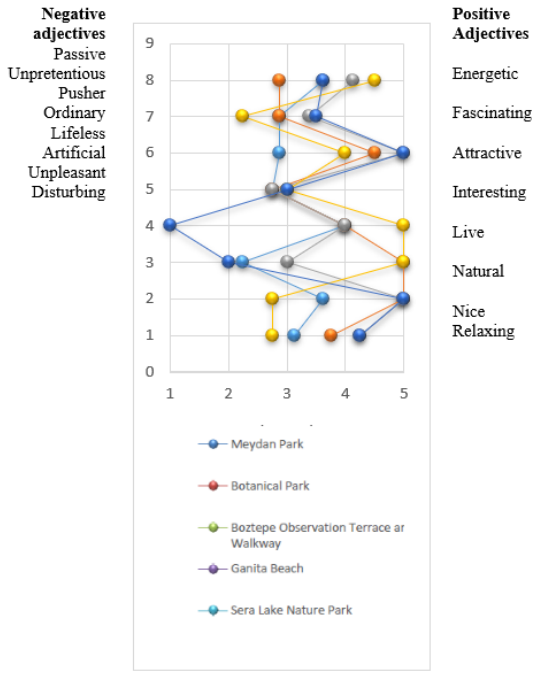


Figure 1. Semantic differentiation graph of the auditory lands-cape features of the study areas

According to this result, participants perceived the auditory lands-cape features of all areas as pleasant. In the evaluations made in terms of artificial and natural adjective pair, the study areas are listed as follows from the highest value to the lowest value res-pectively; Sera Lake and Meydan, Boztepe, Ganita and Botanical Garden. Looking at the adjective pair of interesting and ordinary; Sera Lake Nature Park (4,10938), Ganita Coastal Park (3,51302), Meydan Park (3,46354), Boztepe Observation Terraces (2,236979) and finally Botanical Garden (1,92708). Looking at the pair of inanimate and animate adjectives, Ganita Beach Park (4,30469), Meydan Park (4,02313), Sera Lake Nature Park (4,00781), Boztepe Observation Terraces (3,052083) and finally Botanical Garden (2,90885). The result of the analysis of the par-ticipants' responses on determining whether the auditory charac-teristics of the study areas were repulsive or attractive was as fol-lows; while the auditory characteristics of the areas other than the square park were interpreted as attractive, the auditory characte-ristics of the square park were interpreted as repulsive. The audi-tory characteristics of the Square Park were characterized as re-pulsive with a value of (1,74479), while the auditory characteris-tics of the Botanical Garden were characterized as attractive with a value of (3,625) by the participants. Boztepe Observation Ter-races (3,476563), Ganita Coastal Park (2,90365) and finally Sera Lake Nature Park (3,91667) were found attractive. It was analy-zed whether the auditory landscape features of the study areas were found fascinating by the participants or, on the contrary, whether they were described as unpretentious. Accordingly, the auditory features of Meydan Park were found fascinating, albeit at a moderate level (3,23698). The auditory landscape features of Boztepe Seyir Teras were found to be unpretentious with a value of (1,789063). All other areas except this area were found to be fascinating in terms of auditory landscape features, albeit at dif-ferent levels, Boztepe (1,789063), Ganita (2,77865), Sera Lake

Nature Park (3,82813). Are the auditory landscape features of the study areas static or energetic? As a result of the answers given by the participants to the question; Ganita Coastal Park (4,16406), Meydan Park (2,94792), Sera Lake Nature Park (4,21354), Boztepe Seyir Teras (1,976563) and finally Botanical Garden (2,24479).

4. DISCUSSION AND CONCLUSION

The perceptions, tastes and preferences of users regarding auditory landscape elements in open green spaces were evaluated; user experien-ces were analyzed comparatively through five sample areas with diffe-rent qualities. The main results of the study show that users evaluate the auditory landscape more positively in areas where natural elements are dense, whereas preference and satisfaction levels decrease in areas where artificial and urban pressure is felt. In the auditory landscape evaluations, the highest appreciation belongs to Sera Lake Nature Park and Ganita Beach, while the lowest evaluation was given to Meydan Park in the city center. This result shows that natural sounds (bird sounds, water sounds, wind sounds) are perceived more positively by users and are more emotionally welcomed. Schafer (1977) defined natural sounds as "hi-fi" (high quality) sound environments and stated that these envi-ronments strengthen the individual's relationship with the environment. The positive effects of natural sounds have been demonstrated by various studies on both aesthetic and psychological levels (Alvarsson, Wi-ens & Nilsson, 2010; Ratcliffe, Gatersleben & Sowden, 2013). Alvars-son et al. (2010) proved the stress-reducing effect of natural sounds in an experimental setting and showed that such sounds provide higher well-being than city noise. In areas close to the city center (e.g., Meydan Park), the predominance of heavy traffic, crowds of people and mecha-nical noises caused users to

find the area aurally unpleasant. This result is in line with the findings of Jennings and Bamkole (2019), who emp-hasize that the quality of the auditory environment directly affects the use of urban open spaces. One of the important aspects of this study is that it recognizes that human perception is a guide to the space preferences of the auditory landscape features of urban open green spaces. The principle of "Holistic Landscape Perception" should be adopted in open green space design and sensory landscape components should be evaluated together with urban psychology, environmental psychology and perception theories. This principle involves planning and organizing a space not only visually but also aurally, and creating spaces that are not only visually beautiful but also emotionally pleasing can positively influence user preferences. Auditory landscape research needs to be integrated with visual landscape perception studies to develop more holistic models and sensory landscape components need to be evaluated together with urban psychology, environmental psychology and perception theories.

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