

# A study on the determination of the natural park's sustainable tourism potential

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**Abstract** The surface site of Yesilyuva Nature Park encompasses natural, social, economic, and cultural characteristics and has become a marker of the region's natural and cultural heritage. To support the preservation of this site, promotional activities should be planned. In this study, because of tourism and related opinions of residents and visitors alike in terms of their natural determination, an important cultural and historical feature is aimed at evaluating the tourism potential of Yesilyuva Nature Park. This framework is designed to establish prospective tourism sustainability. As a result, Yesilyuva Nature Park's natural and cultural properties have been determined to be suitable for sustainable tourism activities using geographic information systems (GIS). This protection in the field, which balances sustainability and landscape design, will provide for the development of tourism activities. In the Strengths, Weaknesses, Opportunities and Threats (SWOT)

analysis and survey, residents and visitors reported that the most important feature of the Yesilyuva Nature Park was its natural beauty. Visitors often come to observe traditional and natural life and to engage in tourism activities. All the data, which includes maps derived from GIS, represents landscape planning for sustainable tourism areas in Yesilyuva Nature Park.

**Keywords** Landscape planning · Nature park · Protected area · Sustainability · Natural and cultural resources · Use-protection · Strengths, weaknesses, opportunities and threats (SWOT)

## Introduction

In Turkey, environmental problems associated with cities are increasing rapidly. The population flow from rural to urban areas has created slums and increased the demand for large, multistory buildings, and cities are undergoing significant changes along with industrialization. In cities that have ignored ecological relationships, the reduction of natural areas has resulted in changes in climatic and soil conditions, as well as an artificial living environment in which harmful substances emanating from industrial and vehicle pollution prevail. There is concordance between people living in the artificial city who are looking for a niche within the ecosystem and those longing for a cleaner environment that is beyond reach because of overpopulation, air pollution, noise, and fatigue. The latter factors have caused people to develop psycho-physiological imbalances. In this way, the environment

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has changed people's desire to live in cities and pushed them out (Alesheikh et al. 1999; Alesheikh et al. 2007; Cetin 2008; Cetin et al. 2010; Barros et al. 2013; Brooks and Cetin 2013a; Brooks and Cetin 2013b; Chhetri and Arrowsmith 2008; Kaya et al. 2009; Tomczyk 2011; Topay 2013; Cetin 2013; Cetin 2015a; Cetin and Sevik 2016a; Cetin and Sevik 2016b; Cetin 2017; Cetin et al. 2016; Alesheikh et al. 2003; Cetin et al. 2017c; Yucedag et al. 2018).

The increase in demand for relaxation, fun, and mental rebooting among city populations calls for the identification of and planning for suitable areas in the forest for recreational use (Kushi 2011; Golumbeanu et al. 2014; Cetin 2015b; Cetin 2015c; Cetin 2015d; Cetin 2015e; Cetin and Sevik 2016c; Cetin and Sevik 2016d; Cetin 2016a; Cetin 2016b; Cetin 2016c; Cetin 2016d; Cetin et al. 2016; Cetin 2017; Cetin et al. 2017a). The Kastamonu Province branch office of the 10th Regional Directorate of the Ministry of Forestry and Water Affairs is located within Kastamonu Province, near Abana District, in the Haciveli region. The Kastamonu Yesilyuva Nature Park is located on Catalzeytin Road, 101 km from the center of Kastamonu, 3 km from the town of Abana, 20 km from the district of Catalzeytin, and 126 km away from Sinop (National Parks 2016; Cetin et al. 2017b).

In 1966, Yesilyuva Nature Park was registered as a "Type B Recreational Area." It possessed a field, cultural value, and recreational potential, and, due to Statute 2873 on national parks, in accordance with Article 3 of the law, it was considered appropriate for the Ministry of the Natural Park Office to declare it a natural park. On November 7, 2011, Yesilyuva Nature Park was established. The area of the park was 5 ha. The access control module area door Access, Buffet, Tent Place, and General Land Clearing Works management ended in December 2014, and the bidding process for the operation of the field subsequently began (National Parks 2016).

Yesilyuva Nature Park consists of deciduous tree species (such as the Oriental beech (*Fagus orientalis*), hornbeam (*Carpinus betulus*), chestnut (*Castanea sativa*), and oak (*Quercus* spp.)) and conifers (such as the Scots pine (*Pinus sylvestris*) and red pine (*Pinus brutia*)). They largely constitute the green space and sea area of Kastamonu Province, which has the potential to meet the requirements for recreational use of the environment by the people of the province (National Parks 2016; Cetin et al. 2017c).

Yesilyuva Nature Park will be an important location on the transport axis. Moreover, the sloping terrain

constitutes a significant response to the need for public recreation: It is suitable for picnics and prevents environmental pollution by minimizing the use of unauthorized picnic structures in the woods.

## Materials and methods

Yesilyuva Nature Park is located in Kastamonu Province on the boundary of Abana District at an altitude of 22 m. The Black Sea Region is an area bordering the western Black Sea, and Abana is a district in the province of Kastamonu that covers an area of 5 ha. On a 1:25,000 scale topographic map of Kastamonu, it covers 36 parcels. The urban center nearest Yesilyuva Nature Park on the Kastamonu Province scale is Sinop, while the nearest residential center at the district scale of Abana and Catalzeytin is Inebolu County. Figure 1 shows the surrounding geographical area.

Kastamonu is located in the western Black Sea region and partially experiences the Black Sea climate. Moreover, Kastamonu features the continental climate of the coast. Abana District is also located in the western Black Sea climatic zone. The Black Sea coastline and the northern forests have been maintained and show all the characteristics of the marine climate. The effect is a climate that is quite humid and mild. Although it rains during all seasons, the Black Sea climate influences the rain during the drought period that coincides with July and August. In Kastamonu, the Black Sea climate produces considerably less rain than the climate on the coast. July and August are the driest months. According to the monthly observation records of the Kastamonu Inebolu Meteorological Observation Station during the year, the seasonal average low temperatures in January and February are 3.2 and 2.6 °C, respectively, while the highest average temperatures in July and August are 27.3 and 27.6 °C, respectively. The average annual temperature in the planning area is 13.4 °C, and the average temperature in June is 17.5 °C, when the area is generally most heavily used. The average temperature for June is the same as that for September. Yesilyuva Nature Park does not have any water sources within its boundaries (Cetin 2015d; Cetin and Sevik 2016c; Cetin and Sevik 2016d; Cetin 2016a; Cetin 2016b; Cetin 2016c; Cetin et al. 2016; Meteorology 2016; Cetin et al. 2017c).

In general, the western Black Sea Region comprises brown forest soils around Kastamonu with colluvial soils in a small river valley. Some parts of Kastamonu have

**Fig. 1** Yesilyuva nature park districts and surrounding geographical location

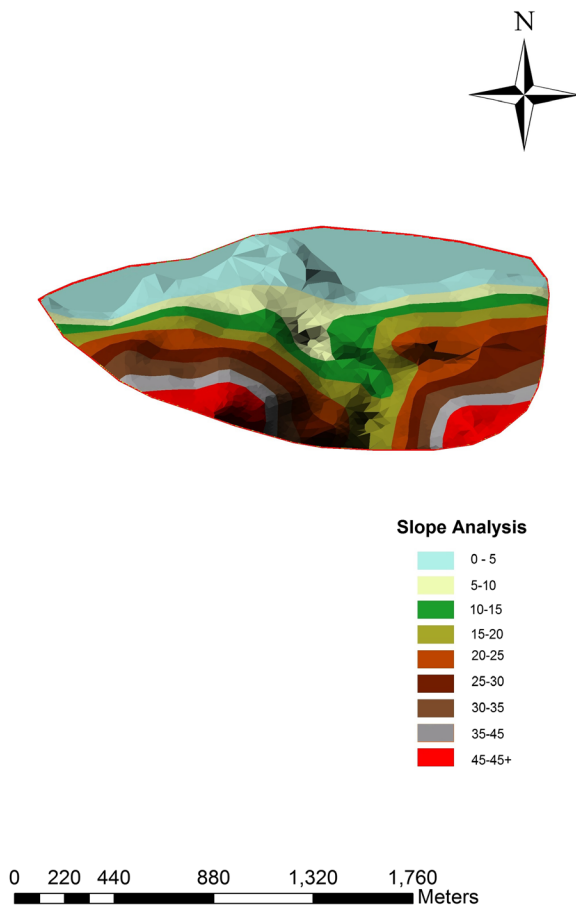


gray-brown podzolic soils. In the Abana district, of 3322 ha, 1743 ha (52.5%) are used for dry farming, 2 ha for irrigated land, 199 ha for gardens, and 58 ha for olive groves. In addition, of 1092 ha (32.9%) of forest heather, 74 ha are used as residential areas. Approximately 16.1% of the area under dry farming slopes moderately, while 83.9% of the area slopes steeply; 1.8% of the soils are medium-deep, and the remaining soils are shallow or very shallow. Figure 2 shows a slope analysis. In Abana District, land class III is prevalent. However, land classes IV, V, and VI are also present. The Yesilyuva Nature Park region consists of limestone bedrock, mica schists and gneisses, and amphibolites. The soil, which is sandy loam in character, varies from place to place with different proportions of sand and gravel (Zeren 2016; Cetin et al. 2017c).

To serve visitors, Yesilyuva Nature Park has one wooden entrance door to the west of the planning area

and an entrance-control unit, which continues into the southeastern edge of the driveway entrance gate. The car park is 50 m further, to the left of the gate. A children’s playground and buffet and cafeteria facilities are situated there. Fifty meters from the cafeteria area is a tent camping area, in addition to sanitary facilities and a paintball area next to the plant, 50 m closer to the forest. The non-operational nature park entrance gate is 9 m from the site of the future septic tank on the left side and 40 m from the unused inputs and the input-control unit that regulates the water tank (which is located 10 m away). There is a trailer parking area on the left side, 70 m down the road from the unused entry-control point. There are also existing collective power lines in Yesilyuva Nature Park.

The nature park is located at the boundary of Abana District and features a wealth of plants and animals and activities such as summer camping, hiking, and a day-



**Fig. 2** Slope analysis of Yesilyuva nature park districts

long picnic event. To maintain the unspoiled natural structure of the park's forest landscape, it is located in an easily accessible part of Abana District. The fact that it accommodates flora and fauna gives it one of the area's most significant recreational potentialities.

Local people use nature parks for recreation, especially during the summer. Electricity and sewage infrastructure are available in the area. In the plan area and the nearby water, air, and soil, pollution has been observed.

## Results and discussion

The most important resource value of the Yesilyuva Nature Park is that it borders a natural forest and the sea. Today's planning area receives a boost from its forest ecology, landscape aesthetic, and functional values. Moreover, it is characterized by green space for the rest of the people, entertainment and sports facilities associated with daily and overnight stays

(e.g., tent, trailer) that meet the regional requirements for nature-oriented recreational activities, and attractions that are close enough to Abana District to allow for ease of transportation. The 5 ha of the nature park region, described as a small, protected area, are evaluated in terms of their location in the country and internationally. Yesilyuva and other leafy nature parks are at the forefront of mixed forests, particularly in areas that contain the Scots pine and red pine, mainly because the ecosystems teem with flora and fauna. It is important that they offer a nice view of the nature park and take the necessary measures to ensure the protection of the rich bottom flora in the forests. Despite the fact that any structure for visitors here is located in an area that has long been registered and there is no editing facility, the natural structure of the area has been preserved to date.

Tourism in the district is much more advanced than other sectors. They have failed to improve due to the lack of industrial development and the absence of raw materials and transportation to the market or town. One of the sources of income in the district is fishing; this amateurish industry is sustainable and can achieve small gains. It is possible for a family to continue fishing and to make a living. There is not much progress in agriculture as there is almost no farmland. Commercial firms are unlikely to be interested in discussing agriculture. However, in recent years, kiwi cultivation has been carried out and has achieved efficiency and success.

There are several options for accommodation 98 km away, in Abana, Kastamonu. In addition to camping at Yesilyuva Nature Park, caravan parks in town center locations can also be utilized, along with existing accommodations such as resorts, rental homes, hostels, and affordably priced hotel-type facilities. Numerous trails in the area offer opportunities for trekking and mountain hiking, which have been preferred activities in recent years.

Kastamonu's Yesilyuva Nature Park is an area of natural forests; it allows for recreational and tourism activities because it is near the sea. This position and the value of its resources, which include activities such as picnics, scenic cruising, walking and jogging, paintball, and flora and fauna monitoring, can be appropriately controlled within the nature park. Table 1 shows a SWOT analysis of the study areas. Figure 3 shows a sustainable tourism suitability map for Yesilyuva Nature Park districts.

A 1:10,000 scale objective of the development plan remains within the Abana, Kastamonu, district boundaries. A 5-ha natural park the size of Yesilyuva offers

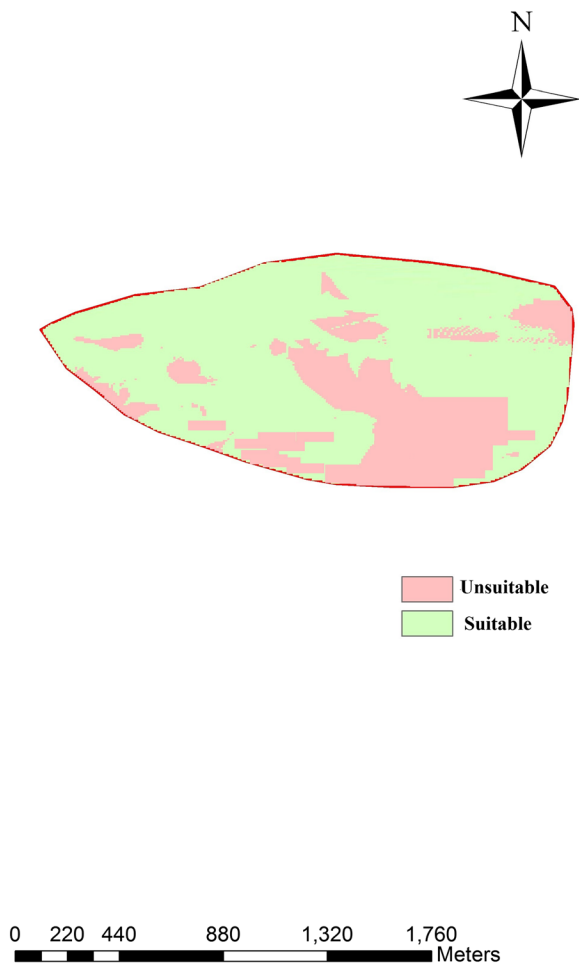
biodiversity, geology, and the protection of natural and cultural landscape resource values, which can be developed and passed on to future generations in the long term. It takes the establishment of an organic link between the urban and natural areas owned by the planning area of natural, recreational opportunities and providing various recreational activities combined with visual resource values. Raising visitors’ awareness of nature and the sustainability of the mandatory regulatory

protections and using the balance to meet basic needs point to the decisions that need to be made.

The aim of Yesilyuva Nature Park’s ecological development plans is the improvement of biological and environmental quality within the planning area by providing climatic benefits (linking CO<sub>2</sub> and oxygen production, removing solid contaminants from the air via filtration, etc. to reduce the effects of poison gas), preserving the soil and protecting the water, improving the

**Table 1** SWOT analysis of Yesilyuva nature park

Topic	Threats–Weaknesses	Opportunities–Strengths
Accessibility and location in the region	<ul style="list-style-type: none"> <li>• Intensive pressure in forest areas with the decline of rapid population growth</li> </ul>	<ul style="list-style-type: none"> <li>• The lack of any agricultural or residential land in the area</li> <li>• The field of Kastamonu Abana-Catalzeytin because that side of the highway lends itself to ease of transportation</li> <li>• The sea view</li> <li>• The district is reachable and in proximity to the center</li> </ul>
Soil structure	<ul style="list-style-type: none"> <li>• Visitors contribute to the deterioration of the soil structure and the potential for jams in the area</li> </ul>	<ul style="list-style-type: none"> <li>• Uneven and sloping land that, in some parts of the slope, is exposed to human pressure</li> <li>• Keeping the forest intact raises ecosystem values</li> <li>• Area in settlement to be replaced</li> </ul>
Natural, cultural, and recreational resource values	<ul style="list-style-type: none"> <li>• Nature parks with areas of insufficiency or misrepresentation do not have enough accurate information about the value of the area’s resources</li> </ul>	<ul style="list-style-type: none"> <li>• Higher potential for daily recreational activity areas</li> <li>• Maintenance of unspoiled natural resource values</li> <li>• Joining the resources that society owns to the values of protected areas with increasing environmental awareness and protection</li> </ul>
Biology and ecology building	<ul style="list-style-type: none"> <li>• Lack of scientific studies on all suppliers</li> <li>• Insufficient; lack of effective maintenance work in the field</li> </ul>	<ul style="list-style-type: none"> <li>• Intact and has not been exposed to human intervention in the natural forest ecosystem structure; the possession of cultural values</li> <li>• Has rich diversity: flora and fauna</li> <li>• Areas absent of a dominant economic activity originating from agriculture and livestock</li> <li>• No settlement in area</li> </ul>
Technical and social infrastructure	<ul style="list-style-type: none"> <li>• To provide field service structure; lack of facilities and equipment</li> <li>• Lack of sewerage system</li> </ul>	<ul style="list-style-type: none"> <li>• The existence of orientation and equipment information</li> </ul>
Legal framework		<ul style="list-style-type: none"> <li>• The nature park has been declared to be a protected area</li> <li>• Lack of ownership issues</li> </ul>



**Fig. 3** Sustainable tourism suitability map for Yesilyuva nature park districts

water quality, and preserving plant communities and wildlife to ensure the continuity of suitable habitats.

The recreational purposes of Yesilyuva Nature Park development plans entail encouraging different types of visitors to come to forest areas with natural charm so they can spend their leisure time having fun, relaxing or engaging in recreational sporting activities, and being introduced to natural habitats.

To assuage the effects of industrialization and urbanization in the artificial environment by allowing individuals opportunities for physical and mental regeneration while serving emerging outdoor recreation needs, Yesilyuva Nature Park provides access to unspoiled segments of nature. Moreover, the area has been able to preserve its natural qualities in keeping with prevalent preferences. This situation allows visitors to the nature

park to engage in a variety of mental and physical activities in a specific forest ecosystem.

Yesilyuva Nature Park's capacity building in relation to recreational facilities should be determined according to usage and demand intensity, and spatial solutions must comply with the standards. The properties of Yesilyuva Nature Park that are to be determined include an appropriate visitor management model and public relations support to ensure that work carried out in the public space is assigned to the appropriate workers. In this context, the individual characteristics of visitors to the area—using relationships, factors that impact on the relationships and their use—are given to augment protection when visitors feel uncomfortable about people who should be investigated during certain periods.

## Conclusions

Over the long term, tourism, alternative tourism, ecotourism, and nature tourism, all based on the sustainable use of natural resources, are becoming important choices for travelers. Within this context, the responsible use of the natural park can demonstrate the potential of ecotourism. This study determines that the natural park's existing potential will not harm the natural or cultural environment and aims to gain ground by advising the tourism sector on alternative products that could offer economic benefits. The natural park hosts many endemic plant species and alternative tourism and recreational opportunities. Moreover, it has superior resources with valuable wildlife. This study emphasizes the natural and cultural values of the natural park, closely revealing its potential in terms of the environment, recreational activities, and tourism. In addition, it emphasizes the need for sustainable tourism planning. Natural areas are in line with the objectives of sustainable development. These objectives seek to determine whether the areas can be assessed in a holistic analysis of the features of the natural environment. Such an analysis, in turn, is important to and necessary for the sustainability of the area.

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**Compliance with ethical standards**

**Conflict of interest** The authors declare that they have no conflict of interest.

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