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Evaluating Ecotourism Opportunities for a Sustainable Environment: The Case of Lake Beysehir (Türkiye)

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Abstract

Research The environment not only provides the basic needs for all living things to survive, but also offers the financial means necessary to maintain the social order. One of the primary resources used by the tourism sector is the environment. Ecotourism and other environmentally conscious tourism initiatives have the power to promote environmental sustainability. In this context, the aim of the current research is to investigate the ecotourism opportunities of Lake Beysehir and the surrounding, to provide several recommendations for improving the ecotourism potential of the area and for supporting a sustainable environment in the region. For this purpose, a study was conducted with a quantitative research design. A survey form suitable for SWOT analysis was preferred as the data collection tool. Data for the study were obtained from participants determined using the guided sampling technique, which is preferred for quantitative studies. By analyzing the obtained data, research area's strengths, weaknesses, opportunities in terms of ecotourism, and possible threats to the region's tourism are revealed. In the conclusion of the study, strategies that will enable the identified strengths and opportunities to be transformed into sustainable and environmental friendly tourism activities have been developed. Strategies to counter threats and strengthen weaknesses have also been developed and are included in the conclusion.

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INTRODUCTION

Because of its high added value, favorable effects on employment, other industries, infrastructure, and superstructure the tourism industry is regarded as a significant one. It's an important source of revenue, particularly for developing nations, and it's still growing globally. For many years, mass tourism has been the foundation of the global tourism industry. However, given the harm that mass tourism causes to the natural and social environments, it is now necessary to reduce the negative effects of tourism. Consequently, both the environment and tourism will be sustained.

Sustainable environment notion aims to improve, protect and develop environmental values in all areas (social, economic, physical, etc.) without endangering the existence and quality of the resources that generations to come will need. Tourism that is both economically sustainable and does not deplete resources that must be transferred to future generations is referred to as sustainable tourism (Saarinen, 2006). One of a tourist destination's main draws is its natural settings. However, there's a chance that tourism will degrade the environment. As one of the most significant of the fundamental resources of tourism, the environment can be protected by acting sustainably when engaging in recreational activities.

Due to people's growing interest in nature and biodiversity worldwide, in addition to the well-known traditional tourism activities, there is a trend towards nature-based alternative tourism activities. Among these, ecotourism is a substitute mode of tourism that is kind to the environment and draws travelers who are eager to see life in unspoiled places. The term "ecotourism" has gained popularity due to the increasing significance of the relationship between tourism and the environment and conversations about sustainability (Kaypak, 2010: 94).

With its abundance of natural resources, including mountains, forests, plateaus, beaches, lakes, rivers, flora, and fauna, Türkiye is one of the most favorable countries for ecotourism. Türkiye's largest freshwater lake and largest national park, Lake Beyşehir and its surroundings have suitable conditions for many ecotourism activities with its natural areas, superior landscape beauties, forest ecosystem rich in species diversity, endemic plants, historical and cultural values. In the literature, studies on tourism in Beyşehir Lake and its surroundings include; the general situation of tourism opportunities in the region (Güngör & Arslan, 2004; Tuncer et al., 2017), the perception of local people towards alternative tourism opportunities in the area (Ünüvar & Atalay, 2019; Karipçin & Ateş, 2022), the tourism potential of the caves in Beyşehir (Öcal & Özcan, 2013), the relationship between the landscape potential of the region and tourism (Güngör & Arslan, 2003), the examination of the region in terms of ecology and tourism (Dinç & Öztürk, 2013) and the flora tourism potential (Temizel et al., 2024) of the area. To the best of the researchers' knowledge, no study has been found in the existing literature to examine ecotourism opportunities related to the research area using the sustainable environment orientation. Following a brief overview of tourism in Lake Beyşehir and the surrounding area, the study presents a review of the literature on the relationship between the environment, sustainable tourism, and ecotourism. The study's methodology was then thoroughly described. Next, the results of the study are given. At the end of the study, several strategies for improving the region's current ecotourism potential are provided along with a summary of the findings.

2. CONCEPTUAL FRAMEWORK

2.1. Relationship Between Environment, Sustainable Tourism and Ecotourism

The notion "sustainable tourism" started to be used in the 1980s and is a phenomenon based on the concept of "sustainable development". Development that satisfies the needs of the current generations without compromising the ability of future generations to meet their needs is referred to as sustainable development (Brundtland Report, 1987). Sustainable development is a three-dimensional concept that includes economic growth, social progress and environmental protection (Munier, 2005: 1). The concept aims to prevent cultural, environmental, natural and economic systems from being damaged and eliminated over time (Todorov & Marinova, 2011: 1404). Thanks to the sustainable development approach and the optimum use of resources, later generations will be able to benefit from the natural capital stock just like current ones.

The environmental protection sub-dimension of sustainable development is a phenomenon that should be emphasized more in the tourism industry than in all other sectors. One of the most important supply sources of the tourism industry is the environment. Protecting non-substitutable natural resources and the environment is very important for the sustainability of tourism. The concepts of environment, economy and tourism are increasingly developing as parts of each other (Beyhan & Ünügör, 2005: 80). For this reason, the concept of sustainable tourism should be emphasized in order to sustain the natural environment and ensure economic development. Implementing eco-friendly practices in the industry will support both the long-term viability of tourism—which is largely dependent on the sustainability of the environment—and the sustainability of tourism itself. Considered within this framework, sustainable tourism aims to eliminate the negative effects of tourism on natural resources by supporting the long-term, stable and optimal management of the relationship between the environment and tourism. Aside from helping to preserve the environment and biodiversity, sustainable tourism also involves activities that respect the sociocultural

traits and way of life of the host community, that aim to achieve harmony and balance between the needs of visitors and local people, and that create jobs and other sources of income for the host community. Thus, the World Tourism Organization defines sustainable tourism as; “tourism that addresses the needs of visitors, industry, the environment and host communities, taking full account of its current and future economic, social and environmental impacts” (World Tourism Organization, 2013).

The main goal of sustainable tourism is to sustain economic development without harming the environment, natural and cultural assets, historical texture and social structure. In order to increase tourism revenues and guarantee that this industry benefits the entire nation, sustainable tourism is also a crucial tool for diversifying and extending tourism activities throughout the year. With sustainable tourism, which aims to preserve historical, natural and cultural assets and bring them into tourism, the contribution of these resources to the regional economies will increase. In this way, not only the coastline that serves mass tourism on the sea-sun-sand axis, but also all regions with touristic potential throughout the country will be able to benefit from tourism revenues.

The tourism industry has focused on mass tourism for many years. However, when the changing tourist profiles and expectations and the negative effects caused by mass tourism on the natural and social environment began to be seen, new alternative tourism types to mass tourism were developed in order to ensure the sustainability of tourism. Thanks to alternative tourism types that emerged from the perspective of diversifying tourism, countries can diversify their tourism activities within the framework of their touristic potential and spread the income they earn from tourism throughout the country. Ecotourism is a form of alternative tourism that has emerged in this sense. The term ecotourism was first used by Hector Ceballos-Lascurain in 1983 and defined by the researcher as “environmentally sensitive and respectful tourism activities that recognize the value of natural life, do not harm natural resources and the environment, contribute to the socio-economic life of the local people without leaving a negative visitor impact” (Ceballos-Lascurain, 1996). Various terms that can be considered related to ecotourism are used in the literature. Among these; nature-based tourism, special interest tourism, responsible tourism, soft tourism, green tourism, wildlife tourism, agrotourism, rural tourism, low-impact tourism, wildlife tourism, environmental tourism can be counted (Stonehouse, 1999: 176-177; Newsome & Rodger, 2013; Çağatay et al., 2002; Kaypak, 2010). Activities that can be practiced within the scope of ecotourism vary depending on people's interests. However, forest areas, national parks, nature conservation areas, nature parks, wetlands, wildlife development areas, regions with a strong cultural identity and beautiful scenery are generally preferred areas for ecotourism activities. Some examples of ecotourism activities are hiking, trekking, camping, caravan tourism, agriculture and farm tourism, edible, drinkable and medicinal plant (ethnobotany) tours, monumental tree tours, safari tourism, photo safari, flora tourism, fauna tourism, cave tourism, horseback trekking, bird watching, orienteering, hunting, sports fishing, rock climbing, alpinism, bicycle tourism, paragliding, river tourism (canoe-rafting), water sports, diving, wind surfing, balloon tourism, etc. (Erdoğan, 2003; İrmak & Yılmaz, 2011; Kaypak, 2010; Erken et al., 2019; Aklıbaşında et al., 2012).

2.2. Tourism in Lake Beyşehir and the Surrounding Area

The study area of this research is Lake Beyşehir and the surrounding area, located within the borders of Beyşehir district of Konya province. It's the third largest lake in Türkiye with an altitude of 1,121.5 m and a surface area of 651 km². Its waters are fresh and it is also the largest freshwater lake in Türkiye. Beyşehir district, within the borders of which the lake is located, is 90 km away from Konya province. Konya is one of the largest industrial cities in Türkiye.

Beyşehir's historical context makes it stand out as well. The history of the district dates back to neolithic times. The area was used as a settlement center by the Hittites, Phrygians, Lydians, Persians, Romans, Anatolian Seljuks, Eşrefoğulları, Karamanoğulları and Ottoman Empire civilizations, and this allowed the district to host important values in terms of historical and cultural assets (Konya Turizm Envanteri, 2000: 144). One of the important historical ruins of the district is the Eflatunpınar Monument near Sadıkhacı Village, 22 km away from Beyşehir. The structure is a Hittite Fountain built during the Hittite period between 1300-1200 BC. It has survived to the present day without losing its monumental character, consisting of reliefs carved on 14 large rectangular cut stone blocks next to a water source.

Another historical value of the district is the Fasıllar Monument, located on the western skirt of a hill in the south of Fasıllar Village of Beyşehir. The structure is one of the largest rock monuments in the world. Fasıllar, a monument from the Hittite period, consists of reliefs of two gods and two lions, one on top of the other, carved on a 20 square meter face of a giant rock weighing 72 tons. The Lukyanus Monument, located to the east of the Fasıllar Monument, is a monument dating back to the Roman Empire period, famous for its horse relief carved on the rock. The monument, consisting of two parts, is 10 meters high. There is a 19-line inscription engraved on the surface of a rock 5 meters above the ground on the right side of the monument (Önder et al., 2006: 680).

Kubadabad Palace is yet another significant historical site in Beyşehir. Built by Alaeddin Keykubad in 1228 on the shores of Lake Beyşehir, at the foot of Mount Anamas, the building is one of the most important works of the Seljuk

and Principality periods (Dinç & Öztürk, 2012). The palace exists today as ruins, archaeological excavations are still continuing. The tiles and other artifacts found in the excavations are exhibited in the Karatay Museum in Konya. Eşrefoğlu Mosque, located in the Beyşehir district center, is an important work that was built in 1134 by the order of the Seljuk Khan Sultan Sancar, and was later rebuilt in its current form by Eşrefoğlu Süleyman Bey in 1297. The mosque is the most important structure that has survived from the Eşrefoğulları period. The mosque, designed in the grand mosque style in accordance with the Seljuk tradition, is the most developed and largest example of mosques with wooden pillars and flat earthen roofs in Anatolia (Yavaş, 1995: 480). The mosque is still open for use today. Other important historical monuments in the district are the Taş Madrasa and the historical Beyşehir Stone Bridge.

Beyşehir has an important tourism potential with its natural beauties as well as its history. The area is an important transition point between the Central Anatolia and the Mediterranean Regions. Beyşehir Lake Basin, located within the district borders, was declared a national park under two different names, "Beyşehir Lake National Park" and "Kızıldağ National Park" in 1993 (Korucu Üçüncü and Muşmal, 2014: 25; Erdoğan et al., 2006: 62). There are many diverse and rare plant species on the southwestern and northwestern shores of the lake, in the Dedegöl Mountains and Anamas plateaus (Ter et al., 2006: 732; Önder et al., 2006: 682). The biological diversity of the lake and its surroundings is determined by the climatic and geological structure of the region. In this respect, the region has the status of an important plant area and constitutes the third largest ecosystem of Türkiye (Korucu Üçüncü & Musmal, 2014: 30; Yavuz Özdemir, 2006: 192).

The study area has suitable conditions for many ecotourism activities. Details about these activities are given below:

- There are many islands, large and small, in Lake Beyşehir. The lake and some of its islands have important habitats for birds. It has been recorded that 245 bird species live in the lake (Korucu Üçüncü & Muşmal, 2014: 35). Lake Beyşehir is home to many fish species as well as birds. The ecosystem around the lake also creates a habitat for wildlife (Yavuz Özdemir, 2006: 192). Thanks to these qualities, Lake Beyşehir is an important attraction point for bird watching, wildlife watching, and amateur fishing activities.
- Karaburun Beach, which is on the shore of Lake Beyşehir, is 2 km long and provides a suitable environment for swimming and water sports. There is also a camping area on the beach. The beach is an important tourism attraction for the local people and visitors from the city of Konya, which is 90 km away from the lake.
- Another important feature of Lake Beyşehir is its sunset view. The lake is considered one of the places in the world where the most beautiful sunset can be watched (Alperen, 2001: 9). Lake Beyşehir has a significant potential for nature photography, thanks to both the sunset view specific to the lake and the natural beauties of the region.
- Lake Beyşehir and its surroundings are also popular in terms of cave tourism. The longest and deepest caves in Konya are located in the high mountainous areas in the western parts of the Beyşehir Lake basin (Nazik, 2005). Balatini, Suluin, Körükini, Pınargözü, Pınarbası, and Büyük Düden Caves in the region are important attraction points.
- The forested areas around Lake Beyşehir and the hiking trails in this region have a significant potential for hiking activities, camping, and caravan tourism. There are lanes on the lake shores suitable for bicycle, motorcycle, off-road, and jeep safari trips (Dinç & Öztürk, 2013: 121). There are also suitable tracks for rock climbing and mountaineering in the region (Önder et al., 2006: 680; Ter et al., 2006: 732).
- The geographical features of the region create a suitable environment for nature-based activities. Plateau tourism is one of them. Local people go to the plateaus during the summer months and nomadic festivals are held there. The region has favorable conditions for plateau tourism.
- The other activities that can be done in the region are paragliding and motorized parachuting. A track built by Beyşehir district municipality in 2009 in Yakamanastır, locating 6 km away from the district center, serves in a position overlooking the district and the lake (beyşehir.gov.tr).
- Daily tours and optional concept tours are also organized through various yacht tourism companies that serve visitors who want to see the islands and beaches of Lake Beyşehir. The natural beauty and climate of the lake provide a suitable environment for these tours.
- There are also thermal resources in and around Lake Beyşehir that can be used within the scope of thermal tourism. The springs around Beyşehir serve the local people with their healing waters (Alperen, 2001; Önder et al., 2006).

3. METHODOLOGY

As part of this investigation, a study employing a quantitative research pattern was conducted to ascertain the ecotourism potential of the research area. A survey form was used as a data collection tool. The sample group of the study consists of public organization managers or representatives, local people, ecotourism participants visiting the region, and academicians who have conducted studies on the research area (n = 270). The sample group was determined by the guided sample selection technique and the participants of the group were assumed to have expert opinions about the research area. A summary of the respondents is presented in Table 1. According to the table, 27% of the participants are private sector employees, 43% are public officers, 14,1% are retired people and 15,9% are people from other occupations such as housewives or students.

The survey form of this study was created using data gathered from academicians with expert opinions regarding the ecology and tourism of Lake Beysehir & its environs, as well as the pertinent literature (Temizel et al., 2024; Dinç & Öztürk, 2013; Erken et al., 2019; Ünüvar & Atalay, 2019; Güngör & Arslan, 2004). A five-point Likert scale survey form was created in accordance with SWOT analysis method. In order for the data obtained through SWOT analysis to be supported and interpreted with numerical results, the statements made regarding the strengths, weaknesses, opportunities and threats of the research area were turned into a survey form. There are two sections to the form. Five questions are asked in the first section to ascertain the participants' demographic details. There are 46 statements in total in the second section: 19 are about strengths, 10 are about weaknesses, 10 are about opportunities, and 7 are about threats. The statements in the survey form aim to identify the ecotourism potential of the region and its strengths and weaknesses in terms of environmental, social, cultural and historical assets. The survey also aims to determine the opportunities and threats that the study area may face in the future. The developed survey form was given its final form after a pilot application. The surveys were administered during face-to-face interviews with participants in February and March 2024. Using the SPSS software, the frequency, reliability, mean, and standard deviations of the data were assessed; tables were used to interpret the findings.

The study obtained ethical approval from “Scientific Ethics and Evaluation Committee of Selcuk University, Faculty of Tourism”, with the letter dated 04.03.2024 and numbered 715470.

Table 1: Respondent Characteristics (n = 270)

Characteristics	Frequency	Percentage
<i>Gender</i>		
Male	169	62,6
Female	101	37,4
<i>Marital Status</i>		
Married	206	76,3
Single	64	23,7
<i>Age</i>		
20 and below	29	10,7
21-30	33	12,2
31-40	71	26,3
41-50	67	24,8
51 and above	70	25,9
<i>Education</i>		
Junior School & High school	60	22,2
College	30	11,1
Degree	126	46,7
Master and above	54	20,0
<i>Occupational Status</i>		
Private sector employee	73	27,0
Public officer	116	43,0
Retired	38	14,1
Others (Housewife, student etc.)	42	15,9

4. FINDINGS

4.1. Reliability and Validity Analyzes of the Research Scale

The accuracy and reliability of research data are very important for results of analysis. For this reason, the accuracy of the data is tested with different methods. One of the most commonly used is Cronbach's Alpha coefficient. Cronbach's Alpha coefficient is preferred to determine the distribution of data, errors and outliers (Hair et al., 2010). Reliability and validity analysis results of the scale used in the research are shared in Table 2. In reliability and validity analyzes, if the scale's Cronbach's Alpha coefficient is less than 0.40, it indicates a lack of reliability; if it is between 0.40 and

0.60, it indicates a low level of reliability; if it is between 0.60 and 0.80, it indicates a degree of reliability; and if it is between 0.80 and 1.00, it indicates a high level of reliability (Hair et al., 2010). When Table 2 is examined, it is clear that the scale is highly reliable since Cronbach's Alpha values for all dimensions are higher than 0.80.

Table 2: Reliability and Validity Analyzes of the Research Scale

	Frequency	Mean	Cronbach's Alpha	Skewness	Kurtosis
<i>Strengths</i>	19	4,048	0,944	-1,078	1,175
<i>Weaknesses</i>	10	4,087	0,918	-1,418	1,984
<i>Opportunities</i>	10	3,800	0,912	-0,601	-0,259
<i>Threats</i>	7	4,337	0,861	-1,857	1,872

In order to make comparisons between variables, normality analyzes of the data must first be determined. In this regard, skewness and kurtosis values are examined (George and Mallery, 2010). However, it seems that researchers do not fully agree on the distribution of data. For normal distribution of the data, Huck (2012) states that it should be within ± 1 , Tabachnick and Fidell (2015) within ± 1.5 , and George and Mallery (2010) within ± 2 . In the research conducted by Kline (2011: 63), it is stated that the skewness and kurtosis values should be between ± 3 for the assumption of normality. According to Table 2 it was determined that the skewness and kurtosis values of all statements related to SWOT analysis were within the range of ± 2 and the relevant analyzes were carried out assuming that the data showed normal distribution.

4.2. Findings of SWOT Analysis

Within the scope of the research, the data obtained from the survey form was subjected to SWOT analysis with the SPSS program. The results were shared in Table 3.

Table 3: SWOT Analysis of the Ecotourism Opportunities of Lake Beysehir and the Surrounding Area

Strengths	\bar{x}	(σ)
Beysehir is Türkiye's largest freshwater lake	4,59	1,00
<i>Esrefoglu</i> Mosque and Social Complex	4,50	1,05
Historical Beysehir stone bridge	4,41	1,07
Nature photography opportunities around the lake	4,40	0,98
<i>Eflatun Pınarı</i> (Hittite Fountain) water monument	4,25	1,11
Hiking trails around the lake	4,22	1,08
<i>Lake Beysehir National Park</i> and <i>Kızıldağ National Park</i>	4,21	1,12
Topographic features suitable for bicycles/motorcycles around the lake	4,17	1,10
<i>Kubad-Abad Palace</i> ruins	4,13	1,13
Balatini, <i>Körükini</i> and <i>Suluin</i> caves	4,10	1,10
<i>Karaburun</i> beach	4,07	1,16
<i>Fasillar</i> Monument	4,04	1,17
Natural environment and wildlife around the lake	4,00	1,16
Flora and fauna biodiversity	3,80	1,25
Paragliding opportunities	3,77	1,23
<i>Yaka Manastır</i> recreation area	3,76	1,24
Landscape beauties	3,71	1,26
Hunting tourism opportunities (pig, partridge, quail, fish)	3,62	1,31
Weaknesses	\bar{x}	(σ)
Promotion and marketing problems	4,35	1,12
Limited public transportation facilities	4,22	1,13
The area is far from the airport and high-speed train station	4,19	1,23
Insufficient number and quality of accommodation facilities	4,11	1,26
Incomplete lake landscaping	4,10	1,20
Few social and cultural activities	4,09	1,19
Limited availability of caravan and camping areas	4,07	1,21
Lack of infrastructure in rural areas	4,03	1,27
Lack of infrastructure in historical and touristic places	3,98	1,18
Insufficient number and quality of food and beverage establishments	3,73	1,33
Opportunities	\bar{x}	(σ)
Suitable as a camping center for sports clubs with its clean air and abundant oxygen	4,14	1,12
Located in the Lakes Region Eco Tourism Development Zone	4,13	1,20
Tourism potential of the islands in the lake	3,93	1,31
Recreational activities are possible throughout the year due to climatic conditions	3,90	1,20
Climatic conditions suitable for water sports such as canoeing, boating and windsurfing	3,79	1,33
Agrotourism (agricultural tourism) potential	3,74	1,29
Threats	\bar{x}	(σ)

Construction of touristic facilities in coastal protection zones	4,61	0,92
Decreasing water level in the lake due to global warming and unconscious use	4,21	1,13
Discharging sewage water into the lake	4,32	1,11
Increase in illegal and unconscious hunting in and around the lake	4,31	1,10
Increasing pollution in the lake and its surroundings	3,92	1,40
Insufficient support from local governments to tourism	4,40	1,10
Non-overnight / daily tourism activities	4,59	1,00

(1= I strongly disagree; 5= Absolutely I agree)

As can be seen Table 3, mean values were calculated for each expression in the form, and the expressions were ranked from highest value to lowest. Standard deviation values were also examined in order to express to what extent the data in the table varied around the arithmetic mean. In scientific studies the arithmetic mean ranges of descriptive findings is considered to express: 1.00-1.80; “very low level”, 1.81-2.60; “low level”, 2.61-3.40; “medium level”, 3.41- 4.20; “high level” and 4.21-5.00; “very high level” of participation (Yaman & Tekin, 2010). In the light of this information, statements with a mean value of 3.41 and above for the strengths, weaknesses, opportunities and threats determined by the SWOT analysis are included in the table. Accordingly, five statements in the survey form with a mean value below 3.41 were not included in the results. The ecotourism potential of Lake Beyşehir and its surroundings is presented in Table 3, along with its strengths, weaknesses, threats, and opportunities. According to the table it was observed that the participants generally agreed at a very high level (mean between 4.21 and 5.00) on the statements in the survey form. This situation is noteworthy for the consistency of SWOT analysis results. Examining Table 3, it is evident that the mostly agreed strength of the study area in terms of ecotourism is that Lake Beyşehir is the largest freshwater lake in Türkiye (\bar{x} =4.59). This expression also has the smallest value (σ =1.00) for its standard deviation. This finding indicates that the research participants' perspectives on the related statement are fairly similar to one another. According to Table 3, among the weaknesses identified by the SWOT analysis, the fact that there are marketing and promotion problems has emerged as a weakness that was accepted by the respondents with a very high level (mean between 4.21 and 5.00) of participation (\bar{x} =4.35). Additionally, the standard deviation of this expression is the lowest (σ =1.12). This result suggests that the viewpoints of the research participants regarding the relevant statement are rather similar to each other. Table 3 also lists the strengths and weaknesses identified by the SWOT analysis, as well as the opportunities and threats regarding the ecotourism potential of the research area. Accordingly, the fact that the lake and its surroundings are suitable for being a camping center for sports clubs with its clean air and abundant oxygen was expressed as an opportunity with a high level (mean between 3.41 and 4.20) of participation by the respondents (\bar{x} =4.61). Also in Table 3, construction of touristic facilities in coastal protection zones was expressed as a threat with a very high level (mean between 4.21 and 5.00) of participation by the respondents (\bar{x} =4.14).

CONCLUSION

Sustainable tourism aims to eliminate the negative effects of tourism on natural resources by supporting long-term, stable and optimal management of the relationship between the environment and tourism. Ecotourism is an environmentally friendly tourism activity that promotes the sustainability of the environment and tourism. With its natural settings, Lake Beyşehir and its surroundings make ideal locations for a variety of ecotourism activities. This study uses the sustainable environment concept as a guide to investigate and evaluate Lake Beyşehir's ecotourism opportunities, and to suggest sustainable strategies to protect the environment. For this purpose, the SWOT analysis method was preferred in the study. According to the SWOT analysis results, the strengths of Lake Beyşehir and its surroundings in terms of ecotourism opportunities highlight the important natural and cultural assets of the region. The fact that Lake Beyşehir has the largest fresh water reserve in Türkiye is a feature that makes the lake stand out on a national scale. It is Türkiye's largest national park, with an area of 88 thousand 750 hectares covering the lake and its shores. There are two separate national parks in the area: Beyşehir National Park and Kızıldağ National Park. National parks are protected areas that play a vital role in both preserving the environment and providing tourists with eco-friendly travel experiences. Nature photography opportunities, hiking trails, topographic features suitable for bicycles and motorcycles, natural environment, wildlife, flora and fauna biodiversity, landscape beauties, paragliding opportunities, caves, Karaburun beach and hunting tourism opportunities are among the strengths of the study area. The region is also rich with its historical and cultural heritage. Esrefoglu Mosque and Social Complex, Historical Beyşehir Stone Bridge, Eflatun Pınarı (Hittite Fountain) water monument, Kubad-Abad Palace ruins and Fasillar Monument are the prominent structures according to the SWOT analysis results.

The SWOT analysis also revealed some issues that might present opportunities for ecotourism activities in the study area. Accordingly, it is an important opportunity for the region to be suitable as a camping center for sports clubs due to its clean air and abundant oxygen. In addition, the climatic conditions are suitable for water sports such as canoeing, boating, windsurfing and the area is suitable for a set of recreational activities in all seasons. In addition to the lake and its surroundings, the large and small islands within the lake also have tourism potential.

The study's findings indicate that Lake Beyşehir and the surrounding area have a number of weaknesses when it comes to tourism-related activities, including insufficient promotion and marketing, poor public transportation options, incomplete landscaping of the lake and. In addition, the region's distance from the airport and high-speed train station appears to be a poor quality in terms of accessibility. The region has deficiencies in terms of accommodation and food & beverage facilities, social and cultural activities, caravan and camping areas. The lack of infrastructure in rural, historical and touristic areas is also striking.

Some features that may ultimately pose a threat to Lake Beyşehir's ecotourism potential were also looked at as part of the research. Accordingly, the construction of touristic facilities in the coastal protection zones around the lake and the increasing environmental pollution are noteworthy issues. The lake's water level is dropping as a result of global warming and careless usage. The natural environment is also threatened by the discharge of sewage water into the lake, the rise in illegal and careless hunting in the lake's vicinity.

Considering the findings mentioned above regarding SWOT analysis, a number of strategies can be created to enhance the region's current ecotourism potential and to enable the identified strengths and opportunities to be transformed into sustainable and environmentally friendly tourism activities. Strategies to counter threats and strengthen weaknesses can also be developed. One of these strategies can be for local authorities to develop an ecotourism management plan tailored to the area. The sustainability of the environment can be supported by a number of projects that will be developed under the guidelines of this plan, as well as by controlled and ecologically friendly investments.

Preserving the natural settings in the research area is crucial. In this regard, a number of initiatives could be created to preserve and enhance Lake Beyşehir's biodiversity. These initiatives can aid in improving the ecosystem and preserving the local flora and fauna. For example, local governments can organize environmental education programs in the region. These programs will encourage environment friendly tourism behaviors by providing tourists and local people with information about the protection of natural resources, environmental awareness and sustainable tourism practices. These programs can also support sustainable tourism by increasing community involvement in protecting natural and cultural heritage.

There are a lot of advantages to ecotourism at Lake Beyşehir. Certain tactics can be created to enhance current operations in a way that promotes tourism and a sustainable environment. Road transportation is available all around the lake. The road that circles the lake is about 130 kilometers long. Nevertheless, the lake is not entirely encircled by well-kept walking trails. The surrounding area has a few walking trails and natural paths. Some sections of these roads may not provide ideal conditions for hiking because they are irregular and neglected. Because of this, it is important to preserve already-existing natural paths and create hiking and cycling routes without endangering the environment. The region's topography makes it ideal for motorcycle and cycling activities. Considering the possibility of motor vehicle-induced environmental damage, establishing motorcycle trails in restricted areas will also enhance the appealing nature of the lake environment.

Caves such as Balatini, Körükini and Suluin around Lake Beyşehir are open to visitors. These caves have significant potential to expand ecotourism options in the region. In order to provide a better experience for visitors, tours to these caves, which are remarkable natural formations, can be organized with expert guides. In order to create visitor demand for these tours, cooperation can be made with travel agencies serving in the cities of Konya and Antalya. However, during these visits, care should be taken to ensure that the natural structure of the caves is not damaged by considering the balance of protection and use.

The region, with its temperate climate, is an ideal place for water sports and recreational activities throughout most of the year. Environmentally friendly water sports activities such as sailing, windsurfing and canoeing that can be done on the lake should be increased. Additionally, the islands in the lake have potential for tourism. Environmentally friendly activities such as hiking, bird watching, camping and guided tours can be organized on the islands in order to protect wildlife and stimulate tourism.

Among the ecotourism activities available in the area are paragliding and paramotoring. From a location with a view of the lake, either solo or tandem flights can be undertaken from the Beyşehir Aviation Sports Club on Yaka Manastır Hill in the Anamas Mountains that encircle Lake Beyşehir. In Türkiye, there are well-known paragliding locations within the borders of Antalya and Muğla, two nearby cities. However, one of the few locations in the Central Anatolia Region is the Yaka Manastır paragliding hill at Beyşehir Lake. Nevertheless, Lake Beyşehir and its environs are not particularly conducive to paragliding. Because of this, marketing initiatives aimed at raising awareness of the area should be continued by highlighting the advantage of proximity to big cities such as Konya and Ankara.

With its clean air and plenty of oxygen, the research area's national parks and forest areas make it a potential great place for sports clubs to camp. In marketing and promotional efforts for the area, it could be important to draw attention to this feature. Furthermore, there aren't enough eco-camping and caravan camping areas in the region, both

in terms of quantity and quality. Development of these areas will increase tourists' environmentally friendly accommodation experiences.

The findings of the study show that some actions are necessary to strengthen the weaknesses of Lake Beyşehir in tourism. In this case, more marketing and promotional activities are needed to increase awareness of the region throughout the country and even internationally. The region can be promoted to wider audiences through events such as tourism fairs, social media campaigns and digital marketing strategies. These campaigns can also highlight the unique historical and cultural characteristics of the region.

Enhancing the area's service infrastructure is another component of tourism that needs to be reinforced. Infrastructure improvements for lodging and food & beverage should be funded. It should be encouraged to build more lodging and food & beverage facilities, both in terms of quantity and quality. Furthermore, the design and operation of tourism facilities that serve or will serve the region should consider environmental sustainability. Within the framework of sustainable tourism practices, businesses can implement environmentally beneficial strategies such as building energy-producing structures with eco-friendly designs, managing facilities using a green management approach, promoting eco-friendly employee attitudes, implementing energy and water-saving measures, using eco-friendly cleaning products, and paying close attention to waste management. In order to preserve the environment and raise environmental awareness, businesses in the area should also be encouraged to obtain environmental certifications like Green Globe, Green Hotels, and Green Star. These certificates are awarded to establishments that fulfill the requirements set forth by different organizations. High environmental sensitive ecotourism participants will also be drawn to these certificates.

Projects for the development of the region's infrastructure should start in its rural and historic areas. Such initiatives can aid in the preservation of historical and cultural assets while also developing fresh tourist destinations. Besides, enhancing the area's connectivity to the airport and high-speed rail hubs will facilitate tourist access to the region.

It is also important to take precautions against tourism-related environmental damage in the area. Increased investments in environmentally friendly infrastructure by local governments in the region are necessary for the sustainability of the environment. The environmental impact of tourism may be decreased by bolstering waste management and recycling initiatives, making investments in renewable energy sources, implementing water-saving techniques, promoting recycling and waste management policies in tourist destinations, and reducing plastic waste. Additionally, local governments can create environmentally friendly transportation options by enhancing public transportation infrastructure, bike lanes, and hiking trails.

Combining these strategies could make it feasible to promote sustainable tourism practices and grow eco-friendly tourism in Lake Beyşehir and the surrounding area. In this sense, protecting the area's natural and cultural treasures can enhance the benefits of tourism.

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Ethical Approval

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Researchers' Contribution Rate

The authors contributed equally to the study.

Conflict of Interest

There is no potential conflict of interest in this study.