Determination of Strategies of Ecotourism in Protected Areas with SWOT-AHP Method: The Case of Aksaray – Ihlara Special Environmental Protection Zone (SEPZ)*

**SWOT-AHS Yöntemi ile Korunan Alanlarda Ekoturizm Stratejilerinin Belirlenmesi: Aksaray-Ihlara Özel Çevre Koruma Bölgesi (ÖÇKB) Örneği**

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**ABSTRACT**

The need to overcome the problems created by human impact in protected areas has today necessitated the creation of various ways of sustainable development. The sustainability paradigm has become an important framework in tourism as in many other fields. Ecotourism is seen as a key element in the sustainability of tourism. It is defined as a tourism approach that protects and develops natural and cultural values, and at the same time enables the participation and development of local people. The aim of this study was to develop suitable ecotourism strategies for Aksaray's Ihlara Valley which is a Special Environmental Protection Zone (SEPZ). For this purpose, SWOT-AHP technique, which is a hybrid method, was used. In this study, after conducting the SWOT analysis which clarified the strengths-weaknesses and opportunity-threats of the Ihlara Valley, the weightings of SWOT groups and factors were determined by Analytical Hierarchy Process (AHP). Developed strategies for environmental, socio-cultural and economic sustainability are: “Determination of carrying capacity with effective ecotourism planning”, “the creation of a new image of the region within the scope of international protection status”, “elimination of tourism infrastructure- superstructure deficiencies”, “diversification of tourist activities”, “organizing training programs and courses of ecotourism for stakeholders” and “ensuring economic prosperity through the participation of local people in tourism”. These strategies are thought to be beneficial for stakeholders in developing protection-use practices in a possible ecotourism planning process in Ihlara SEPZ.

**Keywords:** Ihlara Valley, AHP-SWOT, Ecotourism

**ÖZ**

Beşeri etkilerin korunan alanlarda yarattığı sorunların aşılması, günümüzde sürdürülebilir gelişim yollarını zorunlu kılmıştır. Sürdürülebilirlik paradigma, birçok konu alanında olduğu gibi turizmde de önemli bir çerçeve haline gelmiştir. Turizmin sürdürülebilirliğinde ise ekoturizm anahtar bir unsur olarak görülmektedir. Ekoturizm, doğal ve kültürel değerlerin korunması, geliştirilmesi ve aynı zamanda yerel halkın koruma ve kalkınmasının sağlanması bir turizm anlayışı olarak tanımlanmaktadır. Bu araştırmada, bir Özel Çevre Koruma Bölgesi (ÖÇKB) olan Aksaray Ihlara Vadisi için uygulan ekoturizm stratejilerinin geliştirilmesi amaçlanmıştır. Bu amaçla, bir öncelikle SWOT-AHS analizi ile bölgenin güçlü ve zayıf yönleri, fırsat ve tehditleri tespit edilmiştir. Bu analizde, bölgenin sürdürülebilirlik konusundaki stres seviyesi belirlenmiştir. Stratejiler ise, bölgenin turistik potansiyelini ve yerel halkın turizme katılımını artırmak için geliştirilmiştir. Çalışmanın sonuçları, bölgemin turistik potansiyeline dönüştürülmesi ve yerel halkın turizme katılımını artırması için öncelik alıyor. Bu stratejiler, bölgenin turistik potansiyeline dönüştürülmesi ve yerel halkın turizme katılımını artırması için öncelik alıyor.

**Anahtar kelimeler:** Ihlara Vadisi, AHS-SWOT, Ekoturizm

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1. INTRODUCTION

Within the context of environmental protection, many activities are carried out in all protected areas, from natural heritage sites to national parks, from geoparks to nature conservation areas (Kostopoulou and Kyritsis, 2011). These various activities refer to enterprises such as conserving existing natural resources, scientific research and environmental education, nature-based tourism and recreation (Valdivieso et al., 2015; Bello et al., 2016; Kervankuran and Eryılmaz, 2016). Tourism is particularly seen as an important activity for the future of these areas by financing the management of protected areas (Buckley, 2000; Eagles, 2002; Holden, 2016; do Val Simardi Beraldo Souza et al., 2017; Somuncu and Yiğit, 2009). However, it is clear that tourism management in protected areas is generally difficult in terms of balancing the protection of natural heritage and providing access to visitors (McCool, 2009). According to Akbulak and Cengiz (2014), economic and social activities in protected areas may lead to degradation of landscape character-habitat and increase the density of land use. Thus, it is claimed that despite the sensitivity of ecosystems and species in protected areas, indiscriminate and uncontrolled tourism development may have greater negative effects in these areas (Higham and Lück, 2007; Weaver, 2002; Valdivieso et al., 2015). Currently, the relationship between visitors and protected areas is continuing to grow as more travel options are becoming available, thus making the picture even more complex. Tourism to these areas includes visiting aspects of natural life, contact with local communities and learning about special ecosystems (Eagles, 2002; Plummer and Fennell, 2009; Frost and Hall, 2009). At this point, new types of tourism have emerged such as ecotourism, green tourism, nature based tourism and heritage tourism. Ecotourism is used as a tool of local development and protection, as a means of providing the socio-economic needs of local communities, and to balance the conservation of biodiversity (Robinson, 1993; Tosun and Jenkins, 1996; Bushell and Eagles, 2007; Gale and Hill, 2009; Mccool, 2009; Snyman, 2016; Akbulak and Cengiz, 2014; Sara Demir, Esbah and Akgün, 2016; Turoğlu and Özdemir, 2005).

Most ecotourism practices in protected areas seek to balance heritage conservation and local development goals (Mccool, 2009; Balmford et al., 2015; Mellon and Bramwell 2016). Therefore, tourism planning in protected areas should address competitiveness and heritage conservation objectives at the same time (McCool, 2009). Poorly managed tourism can have a negative impact on the environment, but at the same time an important environmental resource can add a positive attraction to the region (Valdivieso et al., 2015). If protected areas are appropriately designed and effectively managed, tourism can be a means of enhancing the well-being of local communities, providing funding for environmental protection efforts and creating alternative opportunities (Jamaliah et al., 2019).

In order to ensure the sustainable development of tourism in protected areas and to prevent negative consequences, strategies should be identified and activities planned and managed within the framework of these strategies (Akbulak and Cengiz, 2014). One of the commonly used techniques to determine strategies is the Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis technique. SWOT analysis is an approach that analyzes internal and external factors that affect an organization or action plan (Kangas et al., 2003). The purpose of any SWOT analysis is to identify the key strengths and weaknesses of an organization, as well as the opportunities and threats in the environment. However, one of the most important limitations of SWOT analysis is the inability to quantitatively determine the weight and importance of the factors on the plan or strategy (Kangas et al., 2003; Masozer et al., 2006; Yüksel and Dagdeviren, 2007; Akbulak and Cengiz, 2014).

Some researchers have proposed the use of multi-criteria decision-making techniques to address the inadequacies of SWOT analysis (Kurttila et al., 2000; Shrestha, Alavalapati, and Kalmbacher, 2004; Kajanus, Kangas and Kurttila, 2004). The Analytical Hierarchy Process (AHP) is one of the most commonly used multi-criteria decision making techniques and it can be successfully implemented with SWOT analysis (Kurttila et al., 2000; Kajanus et al., 2004; Öztürk, 2015; Yüksel and Dagdeviren, 2007; Akbulak and Cengiz, 2014; Giran Taşcioğlu and Akpınar, 2016; Arsić, Nikolić and Živković, 2017; Demir et al., 2016; Yılmaz and Zorlu, 2018; Demir and Atanur, 2019). First developed by Saaty in 1971-75 to solve complex problems, AHP is a multi-criteria decision making technique that enables the evaluation of qualitative and quantitative variables together (Saaty, 1987).

With SWOT-AHP integration, quantitative values can be obtained by defining strengths, weaknesses, opportunities and threats related to an action plan. In this way, it is possible to determine SWOT factors and strategies more accurately (Kurttila et al., 2000; Kajanus et al., 2004; Arsić et al., 2017). This hybrid method increases the availability of qualitative SWOT analysis for strategic planning processes. When the literature is examined, there are many studies in which SWOT-AHP methods have been used.
In these studies, it is seen that SWOT-AHP method is adapted to different disciplinary areas for different purposes, some of which are basin and water resources management planning (Öztürk and Tönük, 2014; Karatayev et al., 2017), natural resource management and planning (Kangas et al., 2001; Kajanus et al., 2012), forest area management and environmental assessment (Kurttila et al., 2000; Grošelj, Hodges and Stirn, 2016; Etongo et al., 2018; Rachid and El Fadel, 2013; KC, Stainback and Chhetri, 2014), determining conservation-use strategy in national parks (Görmüş, 2012; Arsić et al., 2017; Arsić et al., 2018) and buffer zone management and planning (Margles et al., 2010).

SWOT-AHP application is also mostly used in tourism. Examples of this are determining tourism potential and strategy in tourism in general (Akbulak, 2016; Görener, 2016; Kajanus et al., 2004), determining destination management strategy (Öztürk, 2015; Boz and Karakaş, 2017), identifying alternative tourism types (Gıran Taşçıoğlu and Akpınar, 2016), ecotourism development strategy identification and prioritization (Akbulak and Cengiz, 2014; Demir et al., 2016; Demir and Atanur, 2019; Kişi, 2019), prioritizing tourism strategy (Fabac and Zver, 2011; Taşçıoğlu, 2011; Yücenur, 2017; Kaygısız, Ongun and Gövdere, 2016; Yılmaz and Zorlu, 2018).

Special Environmental Protection Zones (SEPZ) are areas that have integrity in terms of natural, historical, cultural and similar values and have economic value both in the country and the world. (Kaya, Aslan and Yılmaz, 2011). The operations in the Special Environmental Protection Areas declared by the Council of Minister, is carried out by the Ministry of Environment and Urbanization General Directorate of Protection of Natural Assets in accordance with the Decree Law No. 383. Today in Turkey, there are 18 areas of land listed as SEPZ. In this study we discuss Ihlara SEPZ in Aksaray Province. In this context, in Ihlara SEPZ, a methodology was proposed with the aim of developing strategies for appropriate ecotourism planning and management. Because of the advantages of SWOT-AHP technique, it was used as the main method in this study.

2. MATERIALS AND METHODS

2.1. Research Area-Ihlara SEPZ

The Ihlara Valley (Figure 1), located in the Güzelyurt District of Aksaray Province, was declared a Special Environmental Protection Zone (SEPZ) by the Council of Ministers Decision dated 22.10.1990 and numbered 90/1117.

Figure 1: Location of Ihlara SEPZ.
Ihlara SEPZ covering an area of 5,434 ha. includes the towns of Ihlara and Selime and the villages of Belisırma and Yaprakhisar. The total population of these four settlements in 2018 was 5,246 people (TUİK, 2019). The Ihlara Valley (Figure 2) located in the center of Ihlara SEPZ is described as an epigenic throat split deeply by the Melendiz Stream after a volcanic field was formed by the eruption of the volcano Mount Hasan (Kopar, 2010). The Ihlara Valley is an important area both in terms of diversity of natural ecosystem and historical and cultural heritage values.

Due to its particularly morphological structure, the valley has been used as a shelter and place of worship by people since the early Christian period (Varnacı Uzun and Somuncu, 2011). It is also an area of rich biodiversity and of a great variety of species due to its isolated structure. At the base of the valley, there is the Melendiz Stream, which is fed from the Melendiz Mountains and the Kırkgöz springs in Ihlara Town.

256 taxa belonging to 185 genera of 55 families have been determined, which illustrates the great biodiversity in the valley, and 32 of these taxa (12.5%) have been found to be endemic for Turkey (Ören and Keçeli, 2014). According to international protection criteria (IUCN), three of the species are vulnerable (VU), four are threatened (EN) and seven are near threat (NT) status (Ören and Keçeli, 2014). In previous studies, 20 species (Eulipotyphla, Chiroptera, Lagomorpha, Rodentia, Carnivora) belonging to various classes of mammals were identified in the valley (Toyran, Yorulmaz and Gözütok, 2017). In addition, Tabur (2014) identified a total of 171 bird species belonging to 16 families and 45 families in his research in Ihlara and the surrounding area conducted between 2010 and 2011. Of these species, 60 were identified as native, 77 as summer migrants and 34 as winter migrants. In addition, 48 species use continuous wetlands, with the remaining 123 species being directly or indirectly dependent on wetlands (Tabur, 2014).

Çarşıci, Kayaardı, Karşı and Kayabaşı neighborhoods, Selime Town, Belisırma and Yaprakhisar Villages, all old districts of Ihlara Town, were registered as urban and third degree archaeological sites under the number 10.10.1991-1150 upon a decision made by the Konya Regional Board for the Protection of Heritages of Cultural and Natural Value. (Aksaray Governorship, 2009). In 2018, Aksaray Ihlara Valley was ranked the sixth most visited (492,672) archaeological site in Turkey. (Turkey’s Culture and Tourism Ministry, 2019). Ihlara SEPZ clearly requires sustainable ecotourism planning and management due to its annual population of around 500 thousand and a population of around 5 thousand.

The sensitive zone A corresponds to a first degree natural and archaeological site. The sensitive zone B is found in a...
and second degree natural and archaeological site, and sensitive zone C is in a third degree natural and archaeological site. Settlement areas are located within in the boundaries of third degree natural and archaeological sites (Figure 3).

2.2. Method

In this study, the steps of SWOT-AHP applied to Ihlara SEPZ are as follows: (1) Determination of ecotourism potential and current status of the region by SWOT analysis, (2) Hierarchical structure of the model with binary comparisons for groups and factors of SWOT (3) Evaluation of decision-making group and calculation of weightings for each of the SWOT groups and factors (4) Determination of strategies.

1. Stage: At this stage, the ecotourism potential and current status of Ihlara SEPZ was determined by SWOT analysis. SWOT analysis was developed as a result of the evaluation of scientific literature and field studies.

2. Stage: In order to find out the weighting and ranking of the SWOT group and factors, we started to apply the AHS technique. After having constructed hierarchy of the problem, the matrices of pair-wise comparisons (Eq. (1)) were obtained. Binary comparisons of each SWOT group and factors were carried out. The purpose of the comparisons was to determine which of the two factors compared was more important. In the comparisons, a significance scale of 1-9 developed by Saaty (1987) was used to assign value. In this matrix, the element $a_{ij} = 1/a_{ij}$ and thus, when $i = j$, $a_{ij} = 1$. The value of $w_i$ may vary from 1 to 9, and 1/1 indicates equal importance while 9/1 indicates extreme or absolute importance (Kahraman, Demirel and Demirel, 2017).

$$A = (a_{ij}) = \begin{bmatrix} 1 & w_1 w_2 & \cdots & w_1 w_n \\ w_2 w_1 & 1 & \cdots & w_2 w_n \\ \vdots & \vdots & \ddots & \vdots \\ w_n w_1 & w_n w_2 & \cdots & 1 \end{bmatrix}$$ (1)

In the comparisons, some inconsistencies can be expected and accepted. When $A$ contains inconsistencies, the estimated priorities can be obtained using the matrix (Eq. (1)) as the input using the eigenvalue technique (Eq. (2)) (Saaty, 1990).

$$\lambda_{max} I - A q = 0$$ (2)

Where $\lambda_{max}$ is the largest eigenfactor of matrix $A$; $q$ is its correct eigenfactor; and $I$ is the identity matrix.

3. Stage: After comparing each group and all the factors of SWOT, it was submitted to the evaluation of the decision-making group. This group was composed of experts in ecotourism and people, institutions and non-governmental organizations who are relevant for academic study on the Ihlara Valley. 23 questionnaires were obtained from e-mail and face-to-face meetings. Then, the process of calculating the relative local and global priority values of the factors was started by calculating the geometric mean of each question in which there were binary comparisons.

Expert Choice 11 program was used to calculate mathematical operations.

4. Stage: In the final stage, 7 strategies were determined in Ihlara SEPZ for strengthening the existing strengths, eliminating weaknesses, evaluating opportunities and reducing threats for ecotourism. Global weightings of SWOT factors were taken into consideration for determining these strategies.

3. RESULTS

In Ihlara SEPZ, a situation analysis of 9 strengths, 5 weaknesses, 6 opportunities and 5 threats was made (Table 1).

When the results obtained by calculating the weights of the SWOT group and factors are examined (Table 2), the consistency ratio (CR) of the binary comparison matrix of the general SWOT groups is found to be 0.03. Generally, if the consistency ratio is less than 10%, that is, 0.10, the matrix is considered to be consistent (Saaty, 1987).

Strengths from the SWOT main group are ranked first with 0.463 (46.3%) average value. Opportunities are ranked second with 0.272 (27.2%), Threats are ranked third with 0.156 (15.6%), and Weaknesses are ranked last with 0.109 (10.9%) (Table 2).
While the strengths and opportunities in the first two ranks indicate that the region has a significant potential for ecotourism, it was concluded that the threats are significant issues to which more attention needs to be paid than to the existing weaknesses.

While the G3 factor, which is one of the 9 strengths of Ihlara, is ranked first in the strengths category with a local priority value of 0.256 (25.6%), the G9 factor with the local priority value of 0.052 (5.2%) is ranked last among the 9 strengths (Table 2). The W2 factor, one of the five weaknesses, is found to be 0.385 (38.5%) with a local priority value and is ranked first among the weaknesses. The W4 factor, with a local priority value of 0.089 (8.9%) is in last place in the weaknesses group (Table 2). The O2 factor, which is one of the 6 opportunities, takes the first...
The inadequacy of the tourist awareness and experience. This situation is one of the weak points of the region's location. As a matter of fact, the most important factor in the weaknesses is the insufficiency of tourism infrastructure and its superstructure. Intensive visits and limited activities by excursionists in İhlara SEPZ cause insufficient infrastructure and superstructure in and around the valley. Thus, visitors do not benefit from the goods and services provided by tourism. Since there is no demand for tourism goods and services, the region is deprived of tourism investments. This situation also constitutes an obstacle for the economic development of the region. When tourism activities in the region are diversified by means of ecotourism planning, the tourism infrastructure will develop and the industry will grow.

3.2. Socio-Cultural Sustainable

**Strategy 3. The creation of a new image of the region within the scope of international protection status:** The international protection of İhlara SEPZ as well as the acquisition of an important destination image can be achieved by including it in an international protection status. The decisions taken in the SEPZ, which has the status of national protection, will be insufficient for the protection of İhlara in the long term. The fact that Göreme National Park and Cappadocia Rock Sites, two of the most important tourism areas of Cappadocia, are included in the UNESCO World Heritage List provides international protection and high tourist image. The İhlara Valley of Aksaray has similar features to those of Göreme, Ürgüp and Avanos in terms of their natural and cultural geography. However, this region has been excluded from the UNESCO Göreme National Park and Cappadocia Rocky Sites as a result of past policies. In this context, studies should be carried out for İhlara SEPZ to enable it to be included in this area or to be accepted as a UNESCO heritage site in its own right. In addition, studies should be carried out in order to include İhlara SEPZ and Güzelyurt District to which it is administratively affiliated, with its geological and geomorphological heritage values, in the UNESCO Global Geopark Network. In this way, the region will be protected both under international status and thus increase its recognition as a new image. In order to achieve this, studies should be carried out with the active participation of all stakeholders (local authorities, experts, local people, local guides, travel agencies, operators, local-national and international press units).

**Strategy 4. Organizing training programs and courses for ecotourism for stakeholders:** İhlara SEPZ’s local people are found to be enthusiastic about tourism but insufficient in terms of tourism awareness and experience. This situation is one of the

6 ecotourism development strategies were proposed for İhlara SEPZ after considering the global weight values of SWOT factors.

3.1. Environmental Sustainability

**Strategy 1. Determination of carrying capacity with an effective ecotourism planning:** İhlara SEPZ has both an isolated habitat for plants and wildlife in terms of endemism and an important tourist supply with its historical and cultural values. The factors that have the most important priority from the strengths of the region are related to natural, historical and cultural values. The most important factor to be taken into consideration from the threats is that mass tourism might put pressure on the natural, historical and cultural values of the region. As a matter of fact, tourism activities in the region are carried out in an unplanned way. İhlara SEPZ, which has around 500 thousand visitors annually, must have an established sustainable ecotourism plan against mass tourism activities and to determine the SEPZ’s physical, social, administrative and ecological carrying capacities. According to the 2015-2019 management plan for İhlara SEPZ, 3 sensitive zones are found within the valley. However, there are no restrictions for visitors in these zones. In general, it is aimed to prevent settlement structuring in these zones. Applications to restrict visitors in sensitive zones identified in İhlara SEPZ should also be included in ecotourism planning.

**Strategy 2. Elimination of touristic infrastructure and superstructure deficiencies:** The inadequacy of the tourist infrastructure and superstructure in and around İhlara is one of the reasons why the region cannot reach the desired position in tourism. When the global weight values of the SWOT factors are examined, 7 factors with a value over 5% are determined. S3 factor (11.9%) and S4 factor (10%) are in the first two ranks with global weighting while the S5 factor (5.1%) is found to be in the seventh rank with its global weighting. O2 factor (6.7%) third and O3 factor (6.4%) fifth global weight values are found to be important factors in the opportunities group. T3 factor (6.5%) is ranked fourth and T4 factor (5.9%) ranked sixth, while threats are identified as important factors in the group.

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important weaknesses of Ihlara and it needs to be carefully emphasized. It is stated that Ihlara SEZ local people have a positive attitude towards the development of tourism and tourists (Varnaci Uzun and Somuncu, 2011). The problem of qualified personnel will be solved and employment will be provided if certificate courses and training programs were organized for the purpose of increasing the awareness of local people about tourism and ecotourism in region. In this way, participation of local people in tourism, which is one of the important principles of ecotourism, will be ensured.

3.3. Economic Sustainable

Strategy 5. Diversification of tourist activities: Ihlara SEZ welcomes a lot of excursionist visitors. However, the diversity of tourism activities in and around the valley is limited. As a matter of fact, it is seen that limited tourism activities are an important factor in the weaknesses group. While this situation causes intense pressure on natural and cultural values, it cannot provide a significant economic return to the region. The SEZ should be integrated with the tourist supply in its vicinity and diversified tourism activities should be provided. In this way, both the reduction of pressure caused by intensive use and economic input to the region will be provided. It is seen that the existence of natural and cultural values that can be the source of different activities in the opportunity group is an important factor.

Strategy 6. Providing economic prosperity through participation of local people in tourism: In Ihlara SEZ, the use of valley by private companies and its intensive use only with daily visitors causes tourism in the region to be completely disconnected from the local people. Most of the current economic activities in the SEZ are still based on agriculture and stockbreeding. In addition, local people are still migrating to the outside world. It has been stated that the local people in Ihlara SEZ do not benefit from tourism but they want to generate income from tourism (Gülkal, 1999) (Varnaci Uzun and Somuncu, 2011). Economic participation and diversity can be achieved by integrating agricultural activities in the SEZ with ecotourism. Within the scope of agricultural tourism, products grown by the local people can be presented to tourists through established eco markets. In addition, Ihlara can be turned into an important viticulture center. Local people in Ihlara SEZ think that they can make handicrafts and local products, as well as show hospitality and local guidance in tourism but they do not have enough knowledge and experience in these issues. (Varnaci Uzun and Somuncu, 2011). The idyllic historic civil architectural buildings can be restored and converted into family-run pensions and boutique hotels. Thus, effective participation of local people in tourism will be ensured.

4. DISCUSSION AND CONCLUSION

Ecotourism in protected areas has become an increasingly important concept for the sustainability of tourist destinations. Many ecotourism studies on protected areas in the literature are based on multi-criteria decision making techniques (Kajan et al., 2004; Akbuluk and Cengiz, 2014; Akbuluk, 2016; Fabac and Zver, 2011; Arsić et al., 2017; Demir et al., 2016; Yılmaz and Zorlu, 2018; Demir and Atanur, 2019; Kiji, 2019). In this article, we aimed to develop ecotourism strategies with multi-criteria decision making techniques in order to minimize the effects of tourism on a natural and culturally sensitive area. In this context, Ihlara SEZ, one of the 18 SEZ, is discussed. This region was chosen because of its natural, historical and cultural values as well as the high number of visitors that it attracts and the fact that tourism is disconnected from the people of the region. Ecotourism is seen as the most suitable activity that can contribute to its sustainability and local development with its sensitive natural areas and rooted history. Strategic approaches are needed to develop, manage and monitor the ecotourism project in the region. For this reason, strategies for sustainable ecotourism planning and management in Ihlara SEZ have been determined using a multi-criteria decision making technique. In Ihlara SEZ, SWOT analysis for ecotourism consisting of strengths and weaknesses, and opportunities and threats were developed and 7 ecotourism strategies were proposed by digitizing the relevant SWOT groups and factors using AHP method. Although SWOT is an effective strategic planning tool, it can not quantitatively determine the burden and impact of factors on alternatives and strategies (Kangas et al., 2003; Lee, 2013). The Analytical Hierarchy Process (AHP) is one of the most commonly used multi-criteria decision making techniques and can be successfully implemented with SWOT analysis. This hybrid method increases the availability of qualitative SWOT analysis for strategic planning processes in ecotourism.

In this study, a methodology was proposed in Ihlara SEZ with the aim of developing strategies for appropriate ecotourism planning and management. When the results of this study carried out with SWOT-AHP technique are considered by the stakeholders, it is predicted that they will make various contributions to the region. In practical terms, the proposed model is expected to contribute to the preservation of natural,
historical and cultural heritage values in the SEpz and to the local development of the region. This proposed model has been applied for the first time in Turkey within the framework of SEpz. The model is thought to provide an operational framework for the sustainable development of the concept of ecotourism in protected areas. Theoretically, it is thought that the validity of the proposed model will contribute to tourism literature. Furthermore, the SWOT-AHP technique is thought to be a useful and effective methodology for developing ecotourism planning strategies. In this study, in order to test the validity of the proposed model, the geometric mean of the comparisons was used in order to prevent the subjectivity of the decision-making group (experts).

Future research may apply other multi-criteria decision making techniques such as Fuzzy Analytic Hierarchy Process (BAHP), Analytical Network Process (AAP) to various research areas. In addition, only expert opinion was used in the decision-making group in this study. The results obtained by including different stakeholder groups in the decision-making group can be compared. Findings from such research can improve and broaden the overall methodology.

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