

## A new approach to the ecotourism potential of Yusufeli district within the framework of AHP-SWOT

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**Abstract:** In this study, it is aimed to determine what can be realized in the scope of ecotourism in Yusufeli district of Artvin, which has moved to a new settlement. For this purpose, A'WOT analysis, in which SWOT analysis and AHP method are used together, was used in the study. In this context, firstly, a SWOT matrix was formed with the support of the relevant literature. In order to determine the degree of importance of the matrix factors, the AHP method was used and the opinions of local tour agencies, academicians, NGOs, local administrators in the region and managers at the Yusufeli Forest Management Directorate who live in Yusufeli district or have information about Yusufeli district were obtained. According to the results of the study, while the strengths of Yusufeli district are the presence of places with magnificent natural beauty, the presence of places that will serve the belief and cultural heritage with historical importance and the presence of places based on river tourism (rafting, canoeing, boat tours, etc.) (33.3%); the weakest aspect is lack of activities for activities such as accommodation, pensions, restaurants, tour trips, etc. due to the relocation to a new settlement and the lack of related promotions (59.4%). In addition, the fact that Yusufeli district allows different ecotourism activities (41.3%) is seen as the biggest opportunity, while the relocation of the old Yusufeli district to another place due to dam construction (41.3%) is seen as the biggest threat.

**Keywords:** Yusufeli, SWOT analysis, AHP method, A'WOT analysis, Ecotourism

## Yusufeli ilçesi'nin ekoturizm potansiyeline AHP-SWOT çerçevesinde yeni bir yaklaşım

**Öz:** Bu çalışmada, yeni yerleşim yerine taşınmış olan Artvin'in Yusufeli ilçesinde ekoturizm kapsamında neler yapılabileceğinin belirlenmesi amaçlanmıştır. Bu amaçla, çalışmada SWOT analizi ve AHP yönteminin birlikte kullanıldığı A'WOT analizi kullanılmıştır. Bu kapsamda, öncelikle ilgili literatür desteği ile Yusufeli ilçesinin mevcut durumuna yönelik SWOT matrisi oluşturulmuştur. Oluşturulan matris faktörlerinin önem derecelerinin belirlenmesi için Analitik Hiyerarşi Prosesi (AHP) yöntemi ile Yusufeli ilçesinde yaşayan/bilen yerel tur acentaları, akademisyenler, STK, bölgedeki yerel yönetimlerin ilgili birimleri ve Yusufeli Orman İşletme Müdürlüğü'ndeki ilgili kişilerin görüşlerine sunulmuştur. Çalışma sonuçlarına göre, Yusufeli ilçesinin en güçlü yönleri olarak muhteşem doğal güzele sahip yerlerin bulunması, tarihi öneme sahip inanç ve kültür mirasına hizmet edecek yerlerin bulunması ve akarsu turizmine dayalı yerlerin bulunması (rafting, kano, tekne turu vb.) (%33.3) iken; en zayıf yönü yeni yerleşim yerine taşınmasından kaynaklı konaklama, pansiyon, restoran, tur gezileri vb. faaliyetlere yönelik faaliyetlerin olmaması ve buna bağlı tanıtımların yapılamaması (%59.4) olarak belirtilmiştir. Ayrıca Yusufeli ilçesinin farklı ekoturizm faaliyetlerine imkân vermesi (%41.3) en büyük fırsat olarak görülürken; eski Yusufeli ilçesinin baraj nedeniyle su altında kalması nedeniyle ilçe merkezinin başka bir yere taşınması da (%41.3) en büyük tehdit olarak görülmüştür.

**Anahtar kelimeler:** Yusufeli, SWOT analizi, AHP yöntemi, A'WOT analizi, Ekoturizm

### 1. Introduction

Recently, as a result of changes in people's expectations and lifestyles, their demands for tourism activities have also changed. Especially with the COVID-19 period, significant differences have been observed in people's understanding of tourism and as a result, tourism activities for natural areas have become more popular. In tourism, natural areas have positive environmental and socio-cultural impacts and are also economically important due to their contribution to the balance of payments, investments, employment and development. With the increase in demand for tourism, the demand for new types of tourism has recently started to

increase with the efforts of product diversification and people's search for various innovations. One of these tourism types is ecotourism.

The International Ecotourism Society defines ecotourism as "responsible travel to natural areas that conserves the environment, sustains the well-being of the local people, and involves interpretation and education" (TIES, 2023).

In terms of ecotourism, Türkiye has an important place in the world with its geopolitical position, rich geography and cultural richness. In Türkiye, the Eastern Black Sea Region is a very popular and remarkable region in terms of ecotourism compared to other regions. Yusufeli district of Artvin

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province is one of the prominent destinations with its natural and cultural richness.

With its existing potential natural and cultural resources, Yusufeli district is a center of interest for both local people and domestic and foreign tourists (Surat et al., 2015). However, despite its natural and cultural richness in terms of tourism, the development of tourism activities is hampered by the economic poverty, employment problems, rural migration, inadequacies in agricultural production and the intensity of uncertainties in the tourism-mining-industry sectors due to the relocation to a new settlement (Küçükbaşol, 2015; Dama and Yılmaz, 2020).

Yusufeli district was a center of attraction and opportunity in terms of ecotourism in its old settlement. However, with the construction of the dam, this opportunity has been hampered. In fact, the people of Yusufeli, who face settlement, infrastructure and transportation problems due to the relocation of the district center, are also struggling with economic difficulties. In this respect, it is important to focus on ecotourism activities as an alternative source of livelihood for the local people. This study was carried out in order to provide a solution to the economic problems of the local people in Yusufeli district and to determine what can be done within the scope of ecotourism activities (such as mountain, agricultural tourism, tableland tourism, trekking/nature walking, wildlife observation, flora tourism, river tourism).

In this study, A'WOT analysis, which is a hybrid method created by using SWOT analysis and AHP method together, was utilized. With the SWOT analysis of Yusufeli district, which has moved to a new settlement, it is aimed to determine the strengths and weaknesses of the district in terms of ecotourism, to recognize the existing threats in the area and to reveal the opportunities that the area has. Through SWOT analysis, it will be possible to plan and manage ecotourism activities more effectively. Afterwards, the priorities of the identified SWOT sub-factors were quantified. AHP method was utilized at this stage. The opinions of 16 experts were utilized for quantitative analysis. As a result, alternative strategies for the enrichment of Yusufeli district in terms of ecotourism were also developed. Therefore, this study is an important study in terms of both drawing attention to the problems in Yusufeli district and contributing to sustainable tourism planning and ecotourism.

## 2. Materials and methods

### 2.1. Material

In this study, which focuses on the evaluation of the ecotourism potential of Yusufeli district, which has moved to a new settlement, the opinions of local tour agencies, academicians, NGOs, relevant units of local governments in the region and Yusufeli Forest Management Directorate were utilized to provide the primary data needed. In addition, in this context, written publications such as books, journals, articles, papers, etc. that may be directly or indirectly related to the subject were examined and various A'WOT, SWOT and AHP application examples were accessed, and these sources were also utilized.

### 2.2. Description of the research area

In the study, Yusufeli district of Artvin province was selected as the research area. Yusufeli district is located in the

southwest of Artvin provincial center of Türkiye, the largest district of Artvin and a settlement with an area of approximately 2327 km<sup>2</sup> (Surat et al., 2015).

Yusufeli district is located within the boundaries of the Çoruh Valley, one of the richest natural vegetation diversity areas in Türkiye. The Çoruh Valley is classified by the World Wildlife Fund (WWF) as one of the world's 34 hotspots, as one of the 200 priority ecoregions of the temperate forests of the Caucasus, and as one of the 217 priority bird protection areas of Birdlife International (Demirel, 1997).

Within the borders of Yusufeli district is the Çoruh River, one of the fastest flowing rivers in Türkiye, and there are many places along the river that offer hiking and nature exploration opportunities. Other places with ecotourism potential include the Kaçkar Mountains in the west of the district, a paradise for nature lovers with its rich vegetation and wildlife, Barhal Valley, Çat Plateau, Yaylalar Village and Sarıgöl Plateau, which are famous for their natural beauty and historical buildings. It is very important to realize sustainable tourism planning to discover and protect these beauties and to support ecotourism activities in the district in order to create regional development and provide economic support.

However, after the completion of the Yusufeli Dam, the construction of which started in 2012, the district center was moved to another location in 2022.

### 2.3. Method

In the study, the AHP method was used together with SWOT analysis and A'WOT analysis was utilized, which facilitates the systematic evaluation of SWOT factors and supports strategic decision-making processes. However, sometimes SWOT analysis cannot provide quantitative data that will enable the quantitative analysis of the identified factors, and this is considered as an important limitation (Helms and Nixon, 2010; Nguyen and Truong, 2022). For this purpose, the most frequently preferred method in studies to eliminate this limitation is the AHP method and, in addition, A'WOT analysis, where AHP can be successfully applied with SWOT analysis (Yılmaz and Zorlu, 2018; Kişi, 2019; Zorlu and Yılmaz, 2020; Nyguyen and Truong, 2022; Türk, 2022).

The term A'WOT was first proposed in the literature by Kurttila et al. (2000). The term "A'WOT" is an advanced version, similar to the classical SWOT analysis, with A: Advantages (Strengths), W: Weaknesses, O: Opportunities and T: Threats. A'WOT analysis is an analysis that refers to the use of SWOT analysis as a mixed method by associating it with the AHP method and provides a more in-depth examination of these elements as well as a specific strategic objective (Kurttila et al., 2000; Shrestha et al., 2004). In other words, while SWOT analysis reveals the most important internal and external factors including the internal and external situation analysis of a country, region or organization; with A'WOT analysis, four SWOT groups and SWOT factors in each group are given numerical values, making the SWOT analysis results analytical, revealing what the values of internal and external factors are, and determining these numerical priorities with the AHP method, making them measurable and comparable with each other.

With the A'WOT analysis applied in the study, each SWOT factor and the selection alternatives within each SWOT factor can be evaluated. In the A'WOT method used for this purpose, the SWOT analysis is performed first, then

pairwise comparisons are made between the SWOT factors, the mutual importance of the evaluation factors within the SWOT factors is determined, and the strategy alternatives are evaluated according to each SWOT factor as in AHP and the overall priorities are calculated for the strategy alternatives in accordance with the general A'WOT decision hierarchy (Kurttila et al., 2000; Kangas et al., 2003; Kajanus et al., 2004; Yuksel and Dağdeviren, 2007; Demir et al., 2016; Arsić, 2018; Etongo et al., 2018).

### 2.3.1. SWOT Analysis

In the first stage of A'WOT analysis, SWOT analysis is required to establish the hierarchical structure. SWOT analysis is a management technique preferred to guide managers in strategic planning processes involving the analysis of the internal and external situation of a country, region or organization, and is an analysis method that requires systematic thinking and extensive research of the factors subject to analysis. These factors are divided into internal and external factors. Internal factors include strengths (S): factors that can lead forward and weaknesses (W): factors that can lead backward and make it difficult, while external factors include opportunities (O): factors that create favorable conditions for achieving a particular goal and threats (T): factors that create problems in achieving a particular goal, and these are classified into four groups (Kurttila et al., 2000; Kajanus et al., 2004; Ajmera, 2017; Kumar et al., 2017; Ervural et al., 2018).

In order to determine the evaluation factors by utilizing SWOT analysis, relevant evaluation factors were determined by reviewing the literature on the ecotourism activities of Yusufeli district (Tıraş, 2002; Sever and Kalm, 2011; Bakırcı, 2012; Yılmaz and Surat, 2015; Küçükbaşol, 2015; Surat et al., 2015; Bahçeli and Bay, 2017; Uzun, 2017; Surat, 2017; Türk and Erkan, 2018; Yıldız and Şengün, 2019; Dama, 2020; Torun, 2021; Polat, 2023).

Although a large number of evaluation factors were identified as a result of the literature review, the number of evaluation factors was limited due to the existence of pairwise comparisons in A'WOT analysis and the idea of moving away from the scope of the subject. For this purpose, the most demanding problems, opportunities, advantages and threats in Yusufeli district, which has moved to a new settlement, have been prioritized and the values that are related to each other in this direction have been combined as much as possible. In this way, 12 evaluation factors were identified, including 3 strengths, 3 weaknesses, 3 opportunities and 3 threats.

### 2.3.2. Analytic hierarchy process (AHP) Method

In the second phase of the A'WOT analysis, the AHP method based on pairwise comparison was preferred to determine the priority values of the evaluation factors. The

AHP method, developed by Thomas L. Saaty in 1996, is a structuring, measurement and synthesis method that facilitates the solution of multi-criteria decision-making problems, based on pairwise comparison and where the weights of the criteria are determined based on expert opinion (Saaty, 1996; 2004; 2008). This method lists criteria and sub-criteria by taking into account the interrelationships between factors and sub-factors (Niemira and Saaty, 2004).

Thus, in this study, the priorities and importance of the factors that are effective in evaluating the ecotourism potential of "New Yusufeli" district were determined by making a weighted prioritization of the evaluation factors. For this purpose, a questionnaire consisting of forty-seven pairwise comparison questions were prepared.

In the selection of the participants in this survey, people living in Yusufeli district and having knowledge about the area were selected and tour agencies, academics, NGOs, relevant units of local governments in the region and Yusufeli Forest Management Directorate were included in the prioritization process, resulting in interviews with 16 experts. While making evaluations according to the opinions of the relevant people, Saaty's recommended 1-9 scale was used (Saaty, 2004).

### 2.3.3. Calculation of priorities and inconsistencies of SWOT factors

At this step of the A'WOT analysis, it was determined that in similar studies (Tam and Tummala, 2001; Saaty, 2008; Şahin, 2017), in order to ensure consensus in the answers of the selected people and to reach a common structure in the answers, the geometric mean was taken as the basis for reaching a common structure in pairwise comparison questions and then the consistency ratios of each pairwise comparison matrix were calculated. Since the consistency ratio of all pairwise comparison judgments was less than 0.10 in the analyses, the stage of determining the priority values was started.

### 2.3.4. Evaluation of SWOT factors

In this last stage, IBM SPSS 29 statistics (IBM Corp., 2023) software was used for statistical analysis of the survey results and frequency and percentage ratios were used.

## 3. Results

### 3.1. SWOT Analysis of Yusufeli District

The evaluation factors determined as a result of the SWOT analysis carried out in order to reveal the current problems of Yusufeli district, which has moved to the new settlement in line with the literature review and expert opinions on the subject, and to emphasize the most frequently expressed situations in the region are shown in Table 1.

Table 1. SWOT analysis of Yusufeli district

Strengths		Weakness	
S1	Having places with magnificent natural beauty	W1	Lack of activities for activities such as accommodation, pensions, restaurants, tour trips, etc. due to the relocation to a new settlement and the lack of related promotions
S2	Having places that will serve faith and cultural heritage with historical importance	W2	The lack of cooperation and business culture among people/institutions/organizations related to tourism
S3	Having places based on river tourism (rafting, canoeing, boat tours, etc.)	W3	The promotion, awareness and scope of traditional festivals narrowed due to moving to a new settlement
Opportunities		Threats	
O1	Various universities, especially ACU, and public institutions and organizations such as the relevant district governorship and municipality attach importance to research, workshops and symposiums related to ecotourism and carry out related studies	T1	Relocation of the district center to another place due to the flooding of the old Yusufeli district due to the dam
O2	Having a high potential to compete with existing touristic places if technology is used wisely	T2	Inadequate access roads to places that are important for spiritual tourism
O3	Yusufeli district allows for different ecotourism activities	T3	Lack of awareness-raising and training activities on ecotourism issues due to moving to the new settlement

The experts participating in the study answered the SWOT groups specified in the scope of the SWOT analysis based on pairwise comparisons. After the SWOT analysis, the priority values of the SWOT groups were calculated. When the general priority values of the SWOT groups are analyzed, it is determined that the SWOT group with the highest priority is “Weaknesses” with a priority value of 0.605, followed by “Advantages” with a priority value of 0.284, and then “Opportunities” and “Threats” SWOT groups with equal priority values of 0.056. The average consistency ratio of the comparisons between the four SWOT groups was 0.062.

### 3.2. Strengths in Yusufeli District

The experts who participated in the study were asked to answer the advantages stated within the scope of the study based on pairwise comparisons and the results obtained are presented in Table 2.

Accordingly, among the 3 sub-factors presented to the experts, it was determined that the statements “Having places with magnificent natural beauty”, “Having places that will serve belief and cultural heritage with historical importance” and “Having places based on river tourism (rafting, canoeing, boat tours, etc.)”, which were stated as superiority, had an equal level of importance with a rate of 33.3%.

As can be seen, although Yusufeli district is in the process of moving to a new settlement, it has rich and remarkable features in terms of natural and historical beauties, although there are no job opportunities that can create added value and provide employment in the name of industrialization. There are remarkable botanical tourism areas in Yusufeli district, especially in Altıparmak, Kılıçkaya, Yaylalar Village and Tekkale plateaus. These areas are very suitable for river and mountain sports such as mountaineering, camping, trekking, hunting, rafting, etc. (Torun, 2021). However, after the construction of the dam, these riches were considered as idle capacity and no work could be carried out for these places.

In addition to this, before moving to the new settlement of Yusufeli district, there was 1 artificial river canoeing track on Altıparmak Stream and rafting activities on the Çoruh River and Altıparmak Stream and competitions could be organized by the federation in these areas; however, these areas were also flooded due to the dam. Bringing these areas into ecotourism is required.

### 3.3. Opportunities in Yusufeli District

The experts participating in the study were asked to answer the opportunities identified as a result of the SWOT analysis and specified within the scope of the study based on pairwise comparisons and the results obtained are presented in Table 3.

Accordingly, among the 3 sub-factors presented to them, the experts emphasized the statement “Yusufeli district allows for different ecotourism activities” with a rate of 41.3% as the first of the factors that are opportunities in Yusufeli district. An evaluation towards this determination was also determined by Bakırcı (2012). This statement was followed by the statements “Having a high potential to compete with existing touristic places if technology is used wisely” with a rate of 32.7% and “Various universities, especially AUC, and public institutions and organizations such as the relevant district governorship and municipality attach importance to research, workshops and symposiums related to ecotourism and carry out related studies” with a rate of 26%.

### 3.4. Weaknesses in Yusufeli District

The experts participating in the study were asked to answer the weaknesses identified as a result of SWOT analysis based on pairwise comparisons and the results obtained are presented in Table 4.

Table 2. Strengths according to SWOT and AHP analysis in Yusufeli district

Main factors	Sub-factors	Weights	%
Strengths	Having places with magnificent natural beauty	0.333	33.3
	Having places that will serve belief and cultural heritage with historical importance	0.333	33.3
	Having places based on river tourism (rafting, canoeing, boat tours, etc.)	0.333	33.3
CR: 0.0%			

Table 3. Opportunities according to SWOT and AHP analysis in Yusufeli district

Main factors	Sub-factors	Weights	%
Opportunities	Yusufeli district allows for different ecotourism activities	0.413	41.3
	Having a high potential to compete with existing touristic places if technology is used wisely	0.327	32.7
	Various universities, especially ACU, and public institutions and organizations such as the relevant district governorship and municipality attach importance to research, workshops and symposiums related to ecotourism and carry out related studies	0.026	26.0
CR: 5.6%			

Table 4. Weaknesses according to SWOT and AHP analysis in Yusufeli district

Main factors	Sub-factors	Weights	%
Weaknesses	Lack of activities for activities such as accommodation, pensions, restaurants, tour trips, etc. due to the relocation to a new settlement and the lack of related promotions	0.594	59.4
	The lack of cooperation and business culture among people/institutions/organizations related to tourism	0.249	24.9
	The promotion, awareness and scope of traditional festivals narrowed due to moving to a new settlement	0.157	15.7
CR: 5.6%			

Accordingly, among the 3 sub-factors presented to them, the experts ranked the factor “Lack of activities for activities such as accommodation, pensions, restaurants, tour trips, etc. due to the relocation to a new settlement and the lack of related promotions” in the first place with a rate of 59.4%, in the second place with a rate of 24.9%, the second factor was “The lack of cooperation and business culture among people/institutions/organizations related to tourism” and the third factor was “The promotion, awareness and scope of traditional festivals narrowed due to moving to a new settlement” with a rate of 15.7%.

The most important obstacle to the development of tourism activities in Yusufeli district is the problems arising from the relocation to a new settlement. Especially since the basic needs arising from the move to the new settlement are the problems of the local people, not much attention has been paid to changes and developments in terms of tourism. Therefore, no studies have been carried out to meet the needs of the tourists who will visit the area. In fact, there is no facility in the new Yusufeli district for accommodation facilities, which is one of the basic elements of touristic activities and one of the basic needs for a place to be visited, to increase the number of tourists and to ensure its development. Even the construction of accommodation facilities in the district before the construction of the dam has not yet started. Even the construction of accommodation facilities in the district before the dam construction has not yet started. Therefore, in the current situation, tourists do not come and economic gain cannot be achieved due to the lack of allocation of places for accommodation facilities. Again, the inability to realize festivals and festivals, which were of great importance before moving to the new settlement, is another problem, which is a weakness, in other words, a problem.

### 3.5. Threats in Yusufeli District

The experts answered the threats identified as a result of the SWOT analysis based on pairwise comparisons (Table 5).

Accordingly, among the 3 sub-factors presented to them, the experts stated that the current threats of Yusufeli district, which has moved to the new settlement, are “Relocation of the district center to another place due to the flooding of the old Yusufeli district due to the dam” with a rate of 41.3%, “Lack of awareness-raising and training activities on ecotourism issues due to moving to the new settlement” with a rate of 32.7% and “Inadequate access roads to places that are important for spiritual tourism” with a rate of 26%.

The problem of insufficient transportation to places that are important for spiritual tourism before moving to the new settlement of Yusufeli district continues to be multiplied in Yusufeli district, which has moved to the new settlement. Consequently, this situation leads to a decline in transportation activities, increased costs, delays in transportation infrastructure and failure to develop ecotourism. In addition, one of the reasons why ecotourism has not developed in Yusufeli district is that the business owners, staff and Yusufeli people did not have sufficient knowledge and awareness about touristic services and behaviors towards tourists and ecotourism before moving to the new settlement (Uzun, 2017; Surat, 2017).

### 3.6. Possible ecotourism activities in Yusufeli District

The experts who participated in the study answered the possible ecotourism activities identified as a result of the SWOT analysis based on pairwise comparisons (Table 6).

Table 5. Threats according to SWOT and AHP analysis in Yusufeli district

Main factors	Sub-factors	Weights	%
Threats	Relocation of the district center to another place due to the flooding of the old Yusufeli district due to the dam	0.413	41.3
	Lack of awareness-raising and training activities on ecotourism issues due to moving to the new settlement	0.327	32.7
	Inadequate access roads to places that are important for spiritual tourism	0.260	26.0
CR: 5.6%			

Table 6. List of possible ecotourism activities in Yusufeli district

Types of ecotourism	Weights	%
Festivals	0.204	20.4
Plateau tourism	0.169	16.9
Stream tourism	0.139	13.9
Faith/culture tourism	0.112	11.2
Nature walk	0.105	10.5
Mountaineering	0.085	8.5
Botanical tourism	0.063	6.3
Off-road	0.062	6.2
Bird/butterfly watching	0.060	6.0
CR: 3.9%		

According to these evaluations, festivals (20.4%), plateau tourism (16.9%), river tourism (13.9%), faith/cultural tourism (11.2%), trekking (10.5%), mountaineering (8.5%), botanical tourism (6.3%), off-road (6.2%) and bird/butterfly watching (6.0%) were listed as ecotourism types in order of importance (Table 6). These activities were also found to be the most preferred ecotourism types in various studies (Nayir, 2009; Kavak, 2015).

#### 4. Discussion and conclusions

As a result of this research carried out in Yusufeli district, which has moved to a new settlement, it has been tried to reveal the strengths and weaknesses of Yusufeli district with SWOT analysis and the threats and opportunities it faces and to examine which of the existing ecotourism types can be done in parallel with this. The use of both SWOT and AHP methods in the evaluation of the ecotourism potential of Yusufeli has shed light on the strengths, weaknesses, opportunities and threats of the region.

According to the evaluations made; while the strongest aspects of Yusufeli district are the existence of places with magnificent natural beauty, the existence of places that will serve the belief and cultural heritage of historical importance and the existence of places based on river tourism (rafting, canoeing, boat tours, etc.) (33.3%); the weakest aspect is the lack of activities for activities such as accommodation, pensions, restaurants, tour trips etc. due to the relocation to the new settlement and the lack of related promotions (59.4%). In addition, the fact that Yusufeli district allows different ecotourism activities (41.3%) is seen as the biggest opportunity, while the relocation of the district center to another place due to the flooding of the old Yusufeli district due to the dam (41.3%) is seen as the biggest threat. In addition, it was determined that the most suitable ecotourism types for Yusufeli district can be realized with highland tourism and water-based ecotourism activities, while festivals should also be realized.

The results obtained from this study can be considered as a pioneering study for the ecotourism activities that will be carried out and are likely to be carried out in Yusufeli district, which has moved to a new settlement, and can be used as a

tool in determining mission, vision and goals. For this purpose, economic production should be realized urgently by utilizing the tourism sector, which is one of the sectors that will provide economic benefits to the district after the Yusufeli Dam.

Places of great natural beauty that support ecotourism activities in Yusufeli district, places of historical importance that will serve faith and cultural heritage, and places based on river tourism such as rafting, canoeing, boat tours etc. should be protected. In addition, decisions should be taken urgently to carry out ecotourism activities in these areas, technology should be used wisely, and public institutions and organizations such as the district governorship and municipality, with the support of Artvin Çoruh University, which is located within the borders of the province, should attach importance to research, workshops and symposiums related to ecotourism and carry out related studies.

In addition, the relocation of the district center to another place due to the flooding of Yusufeli district due to the dam, the still inadequate access roads to places that are important in terms of spiritual tourism, and the lack of awareness-raising and training activities on ecotourism issues due to the move to the new settlement have also paved the way for the lack of awareness of ecotourism in Yusufeli district.

In this sense, by evaluating the factors that support and weaken the ecotourism activities in Yusufeli district, the factors that represent the strengths of ecotourism in the district should be increased and the weaknesses should be strengthened by removing the obstacles to the development of ecotourism activities.

In addition, the following strategies can also be recommended for Yusufeli district, which has moved to a new settlement, to benefit from and strengthen its ecotourism potential opportunities:

- *Education and awareness raising programs:* Raising awareness of local people and visitors about ecotourism activities contributes to the protection of natural and cultural values in the region. Through education programs, local people can learn about the economic benefits of ecotourism.
- *Nature-themed events and festivals:* Nature-themed festivals and events can be organized to increase the attractiveness of ecotourism. Such events create a platform where local culture and nature merge.
- *Develop sustainable infrastructure:* To ensure the sustainability of ecotourism activities, infrastructure (accommodation, transportation, waste management) in the region should be improved, taking into account environmental impacts.
- *Promotion of local products:* Handicrafts, organic agricultural products and traditional cuisine specific to Yusufeli district should be introduced to visitors and contribute to the local economy.

## References

- Ajmera, P., 2017. Ranking the strategies for Indian medical tourism sector through the integration of SWOT analysis and TOPSIS method. *International Journal of Health Care Quality Assurance*, 30(8): 668-679.
- Arsić, S., Nikolić, D., Mihajlović, I., Fedajev, A., Živković, Ž., 2018. A new approach within ANP-SWOT framework for prioritization of ecosystem management and case study of National Park Djerdap, Serbia. *Ecological Economics*, 146: 85-95.
- Bahçeli, S., Bay, A., 2017. Effects of population and settlement movements of HEPP: Yusufeli Dam Sample. *Aegean Geographical Journal*, 26(2): 107-125.
- Bakırcı, M., 2012. The effect of tourism on diversification of economic activities in rural settlements: Yaylalar Village Case (Yusufeli/Artvin). *Turkish Journal of Geography*, 57: 71-85.
- Dama, N., Yılmaz, M., 2020. Social Policy Perspective of Yusufeli Dam: Problems, Opportunities and Expectations. Artvin: Yusufeli Municipality Publications, Bizim Büro Printing House, Ankara.
- Demir, S., Esbah, H., Akgün, A.A., 2016. Quantitative SWOT analysis for prioritizing ecotourism-planning decisions in protected areas: Igneada case. *International Journal of Sustainable Development & World Ecology*, 23(5): 456-468.
- Demirel, Ö., 1997. A research on the evaluation of natural and cultural resource values of the Çoruh Basin (Yusufeli section) in terms of tourism and recreation potential. PhD Thesis, Black Sea Technical University, Trabzon.
- Ervural, B.C., Zaim, S., Demirel, O.F., Aydın, Z., Delen, D., 2018. An ANP and fuzzy TOPSIS based SWOT analysis for Turkey's energy planning. *Renewable and Sustainable Energy Reviews*, 82(1): 1538-1550.
- Etongo, D., Kanninen, M., Epule, T.E., Fobissie, K., 2018. Assessing the effectiveness of joint forest management in Southern Burkina Faso: A SWOT-AHP analysis. *Forest Policy and Economics*, 90: 31-38.
- Helms, M.M., Nixon, J., 2010. Exploring SWOT analysis-where are we now?: A review of academic research from the last decade. *Journal of Strategy and Management*, 3(3): 215-251.
- IBM Corp., 2023. IBM SPSS Statistics for Windows, Version 29.0.2.0 Armonk, NY: IBM Corp.
- Kajanus, M., Kangas, J., Kurttila, M., 2004. The use of value focused thinking and the A'WOT hybrid method in tourism management. *Tourism Management*, 25(4): 499-506.
- Kangas, J., Kurttila, M., Kajanus, M., Kangas, A., 2003. Evaluating the management strategies of a forestland estate-the SOS approach. *Journal of Environmental Management*, 69(4): 349-358.
- Kavak, M., 2015. Consciousness and perception attitudes of local people towards ecotourism on the northern coast of Edremit Gulf. Master's Thesis, Çanakkale Onsekiz Mart University, Institute of Educational Sciences, Çanakkale.
- Kişi, N., 2019. A strategic approach to sustainable tourism development using the A'WOT hybrid method: A case study of Zonguldak, Turkey. *Sustainability*, 11(4): 964.
- Kumar, A., Sah, B., Singh, A.R., Deng, Y., He, X., Kumar, P., Bansal, R.C., 2017. A review of multi criteria decision making (MCDM) towards sustainable renewable energy development. *Renewable and Sustainable Energy Reviews*, 69: 596-609.
- Kurttila, M., Pesonen, M., Kangas, J., Kajanus, M., 2000. Utilizing the analytical hierarchy process (AHP) in SWOT analysis-a hybrid method and its application to a forest-certification case. *Forest Policy and Economics*, 1: 41-52.
- Küçükbaşol, Y., 2015. Çoruh River and Yusufeli Dam: A dam review in terms of social, economic and environmental impacts. *Individual and Society Journal of Social Sciences*, 5(2):133-158.
- Yıldız, S.G.M., Şengün, H., 2019. An evaluation on relocation and expropriation problem caused by dam project in Coruh Valley. *Journal of Ömer Halisdemir University Faculty of Economics and Administrative Sciences*, 12(1): 48-60.
- Nayır, O., 2009. Determination of ecotourism TALWEP and trends in protected natural areas of Isparta region. Master's Thesis, Süleyman Demirel University, Institute of Science, Isparta.
- Niemira, M.P., Saaty, T.L., 2004. An analytic network process model for financial-crisis forecasting. *International Journal of Forecasting*, 20(4): 573-587.
- Nguyen, T., Truong, C., 2022. Integral SWOT-AHP-Tows model for strategic agricultural development in the context of drought: A case study in Ninh Thuan, Vietnam. *International Journal of the Analytic Hierarchy Process*, 14(1): 1-30.
- Polat, P., 2023. GIS of pre-dam natural environmental features in Yusufeli (Artvin) determination by methods and ecological sensitivity, NDVI, NDMI analysis. *Manas Journal of Social Research*, 12(1): 1-24.
- Saaty, T.L., 1996. *The Analytic Network Process*. RWS Publications, Pittsburgh.
- Saaty, T.L., 2004. Fundamentals of the analytic network process-multiple networks with benefits, costs, opportunities and risks. *Journal of Systems Science and Systems Engineering*, 13(3): 348-379.
- Saaty, T.L., 2008. Decision making with the analytic hierarchy process. *International Services Sciences*, 1(1): 83-98.
- Sever, R., Kalın, Ö. U., 2011. Artvin ilinde yapılan/yapılmakta olan barajlar hakkında Artvin halkının bazı görüşleri. *Doğu Coğrafya Dergisi*, 15(23): 65-80.
- Shrestha, R.K., Alavalapati, J.R., Kalmbacher, R.S., 2004. Exploring the potential for silvopasture adoption in south-central Florida: An application of SWOT-AHP method. *Agricultural Systems*, 81(3): 185-199.
- Surat, H., Yılmaz, H., Surat, B.Z., 2015. A research on the ecotourism use potential of Yusufeli and its immediate surroundings. *Eastern Geography Journal*, 20(34): 61-88.
- Surat, H., 2017. The perception and attitude of the local people towards the ecotourism in Artvin Yusufeli. *Journal of Forestry*, 13(2): 9-19.
- Şahin, G., 2017. A research on the perceptions and attitudes of local people living in Artvin towards tourism. Master's Thesis, Istanbul University, Institute of Social Sciences, Istanbul.
- Tam, M.C.Y., Tummala, V.M.R., 2001. An application of the AHP in vendor selection of a telecommunications system. *Omega*, 29: 171-182.
- TIES, 2023. What is ecotourism? <https://ecotourism.org/what-is-ecotourism/>, Accessed: 04.11.2023.
- Tıraş, M., 2002. The village settlements in Yusufeli administrative district. *Journal of Turkish Geography*, 38: 133-147.
- Torun, A., 2021. The memory of the sunken city: Changes in Yusufeli's urban identity. *Journal of Urban and Environmental Research*, 3(2): 56-80.
- Türk, B., 2022. Evaluation of Pamukkale's sustainable tourism potential via SWOT-AHP (A'WOT). *Pamukkale University Journal of Social Sciences Institute*, 53(2): 235-251.
- Türk, E., Erkan, G.H., 2018. Poor planning: A critical inquiry of the Artvin-Yusufeli involuntary resettlement process. *Planning*, 28 (2): 218-235.
- Uzun, F., 2017. Tourism potential in Yusufeli and its surroundings. Master's Thesis, Giresun University, Institute of Social Sciences, Giresun.
- Yılmaz, H., Surat, H., 2015. Determination of the most convenient ecotourism activity by using analytic hierarchy process. *Turkish Journal of Forestry*, 16(2): 164-176.
- Yılmaz, A., Zorlu, K., 2018. Prioritization of sustainable tourism strategies in Sinop using SWOT-AHS analysis. *Journal of International Social Research*, 11(61): 390-403.
- Yüksel, I., Dagdeviren, M., 2007. Using the analytic network process (ANP) in a SWOT analysis-a case study for a textile firm. *Information Sciences*, 177(16): 3364-3382.
- Zorlu, K., Yılmaz, A., 2020. Determination of strategies of ecotourism in protected areas with SWOT-AHP method: The case of Aksaray-Ihlara special environmental protection zone (SEPZ). *Journal of Geography*, 40: 1-12.