



Research Article

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Assessing the Eco-Tourism Potential of Tehsil Bahrain, Swat Valley, Khyber Pakhtunkhwa, Pakistan

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Abstract: This study assesses the eco-tourism potential of Tehsil Bahrain, a prominent tourist destination in the Swat Valley of Khyber Pakhtunkhwa, Pakistan, through field-based observations. The study identifies and evaluates various natural resources, including rivers, waterfalls, lakes, forests, and mountain landscapes, that provide opportunities for nature-based tourism activities such as hiking, camping, nature walks, and wildlife observation. Using a qualitative research approach, the study involved direct site visits to assess the area's environmental characteristics, natural attractions, and suitability for ecotourism development. The findings indicate that Tehsil Bahrain possesses diverse landscapes and rich ecological resources that offer considerable potential for ecotourism development. However, several challenges, including inadequate basic infrastructure, environmental mismanagement, and limited awareness of sustainable tourism practices, were also observed. A SWOT analysis was conducted to systematically assess the strengths, weaknesses, opportunities, and threats associated with ecotourism development in the area. The study concludes that, with appropriate planning, community participation, improved infrastructure, and sustainable environmental practices, Tehsil Bahrain has significant potential to develop as a valuable ecotourism destination while generating socioeconomic benefits for the local population and contributing to environmental conservation.

Keywords: Eco-tourism, Tourism Potential, Tehsil Bahrain, Swat Valley, Sustainable Tourism, Natural Resources, Community Participation.

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INTRODUCTION

Tourism is one of the fastest and largest-growing industries in the world, generating millions of jobs and revenues in different sectors such as hospitality, transportation, and services. It supports millions of people and contributes over 10 percent to the world's economy. It helps reduce poverty and brings people from different cultures together, promoting cultural understanding. It also encourages countries to invest in better roads, hotels, airports, and other facilities, which benefit both visitors and local people. However, the rapid growth of tourism has also raised concerns because, when tourism grows too fast, it can harm the environment, overcrowd natural and popular places, and damage local cultures. Because of these issues, the importance of sustainable tourism and ecotourism has increased, and people are paying more attention to them than ever.

In Pakistan, tourism is also becoming more important, especially in Khyber Pakhtunkhwa, which is famous for its natural beauty, mountains, rivers, forests, wildlife, and cultural heritage. Tourism contributes to the national economy by creating jobs, generating income, and helping local businesses such as hotels, transport

services, shops, restaurants, and handicrafts. In areas like Swat, tourism has improved people's livelihoods and helped develop local communities. It also helps present a positive image of Swat to the world and allows cultural exchange. However, without proper planning, tourism can cause problems such as damage to the natural environment, overcrowding, and the loss of indigenous traditions.

Ecotourism is becoming more popular as people want to visit natural places and learn about local cultures without harming the environment. Ecotourism means travelling to relatively undisturbed natural areas responsibly to protect nature and help local communities earn a living. It helps protect endangered species because it generates income for conservation and teaches visitors about nature. Ecotourism creates jobs for local people as tour guides, traditional performers, craftsmen, and providers of handicrafts and eco-friendly accommodation. It helps visitors learn about biodiversity, conservation issues, and traditional lifestyles, making travel more interesting and meaningful.

Tehsil Bahrain, located in the upper part of the Swat Valley, is a place full of natural beauty and

biodiversity. It has high peaks, snow-covered mountains, lush green forests, alpine meadows, and beautiful lakes such as Kajiri, Spin Khwar, Mushroom, and Izmis Lake. The weather is pleasant in summer and harsh in winter, attracting tourists in both seasons. Visitors come to enjoy the pleasant weather in summer and snowfall in winter. The area is home to diverse wildlife, including birds such as the Himalayan Monal, Western Tragopan, and Himalayan Snowcock, as well as animals such as snow leopards, Asiatic black bears, markhors, and wolves. There are also useful plants such as Indian spikenard, Himalayan rhubarb, and different types of pine, fir, and other local trees, which are important for local people and species. Besides its natural beauty and biodiversity, Tehsil Bahrain has a rich culture. People in the area speak languages such as Pashto, Torwali, Gawri, Gujro, and others, and have unique traditions, music, cuisine, dress, and crafts that attract tourists. Activities such as cultural tours, conservation volunteering, and ethnobotanical tours can provide tourists with opportunities to experience local life and help preserve cultural traditions.

Ecotourism in Bahrain can include many activities such as hiking, camping, paragliding, nature photography, rock climbing, ice climbing, mountaineering, and learning about local cultures. Places such as Anakar, Mankial, and Bashigram Valley are suitable for bird watching and photography, while meadows such as Deesan, Chukail, and Janshai, and lakes such as Kajiri, Shetangwat, and Musteej, are suitable for hiking, camping, and enjoying nature. Despite having so much potential, ecotourism in Tehsil Bahrain is still not fully developed. Tourism often takes place only during certain seasons and focuses on crowded or popular places, which can cause problems such as littering, damage to fragile ecosystems, and harm and disturbance to wildlife. The area also lacks adequate facilities such as waste management systems, proper trails, trained guides, and clear information for tourists. Local people also need more support and knowledge to participate in ecotourism in ways that protect nature and improve their incomes.

That is why it is important to assess the ecotourism potential of Tehsil Bahrain by exploring its natural and cultural resources and identifying which activities could be developed in a sustainable way. This study aims to identify the ecotourism potential and possible activities in Tehsil Bahrain so that tourism development can be better understood and planned in a way that protects the environment and brings benefits to local communities.

The results of this paper will provide useful information to tourism departments, policymakers, and local organizations about the ecotourism potential of Tehsil Bahrain and its prospects for sustainable development.

LITERATURE REVIEW

Tourism has become an important sector of the global economy and contributes to employment generation, income, infrastructure development, and cultural exchange. However, uncontrolled tourism can create environmental pressure, overcrowding, and negative impacts on local cultures and natural resources. Therefore, sustainable tourism and ecotourism have gained increasing attention as approaches that seek to balance tourism development with environmental protection and community benefits (UNWTO, 2020; Honey, 1999; Fennell, 2015).

Tourism and Ecotourism in Pakistan and Khyber Pakhtunkhwa

Pakistan possesses considerable tourism resources, including mountains, rivers, forests, wildlife, lakes, and diverse cultural heritage. Tourism provides employment opportunities, generates income for local communities, supports local businesses, and contributes to community development. Khyber Pakhtunkhwa is particularly rich in natural and cultural resources because of its mountainous landscape, forests, valleys, wildlife, and diverse indigenous communities. These resources provide significant opportunities for tourism and ecotourism development (Ali et al., 2021; Khan & Shah, 2022).

Despite this potential, tourism development in Pakistan also faces several challenges. Poor planning, inadequate infrastructure, overcrowding, environmental degradation, and insufficient management can negatively affect natural and cultural resources. Therefore, sustainable tourism practices are necessary to ensure that tourism contributes to local development without damaging the resources on which tourism depends.

Ecotourism provides an important approach in this regard. It emphasizes responsible travel to natural areas while protecting the environment and improving the well-being of local communities. In areas such as Khyber Pakhtunkhwa, ecotourism can create employment opportunities for local people through guiding, accommodation, traditional food, handicrafts, cultural performances, and other tourism-related activities.

Concept and Principles of Ecotourism

The concept of ecotourism developed in response to the environmental and social impacts associated with conventional tourism. Ziffer (1989) described ecotourism as a form of tourism that focuses on natural areas and seeks to minimize negative environmental and social impacts. Boo (1990) also emphasized travel to natural areas and the importance of conservation and local benefits. The International Ecotourism Society (TIES) defines ecotourism as responsible travel to natural areas that conserves the environment, sustains the well-being of local people, and involves interpretation and education.

Ceballos-Lascurain (1991, 1996) emphasized the relationship between tourism, natural environments, and conservation. Similarly, Wallace and Pierce (1996) highlighted environmental protection, local participation, and economic benefits as important elements of ecotourism. Fennell (2003) and Honey (2008) further explained that ecotourism should contribute to conservation, provide benefits to local communities, and promote responsible interaction with natural and cultural environments.

Thus, ecotourism is not limited to visiting attractive natural places. It also involves conservation, environmental awareness, community participation, and sustainable use of natural and cultural resources. For a destination such as Tehsil Bahrain, these principles are particularly important because its tourism potential is closely connected with its mountains, forests, lakes, wildlife, biodiversity, and local cultures.

Ecotourism Activities Relevant to Tehsil Bahrain

Ecotourism can involve a variety of low-impact activities that allow visitors to experience natural and cultural resources while encouraging environmental protection. Among these activities, hiking, nature walks, camping, bird watching, wildlife watching, wildlife photography, ethnobotanical tours, cultural tours, conservation volunteering, mountaineering, rock climbing, ice climbing, and paragliding can be relevant to mountainous destinations such as Tehsil Bahrain.

Hiking and guided nature walks provide opportunities for tourists to explore forests, mountains, meadows, and other natural landscapes. Camping allows visitors to experience natural environments more closely, while bird and wildlife watching can promote awareness of local biodiversity. Wildlife photography can also provide an educational and recreational experience without directly disturbing wildlife when properly managed.

Ethnobotanical tours can introduce visitors to local plants and their traditional uses. Such activities can connect tourism with local knowledge and cultural heritage. Similarly, community-based cultural tours can provide opportunities to experience local traditions, music, cuisine, dress, handicrafts, and lifestyles while generating income for local communities. Conservation volunteering and tree planting can further connect tourists with environmental protection and habitat restoration.

For mountainous areas, mountaineering, rock climbing, ice climbing, and paragliding can provide additional opportunities for adventure tourism. However, these activities require appropriate management, safety measures, trained guides, and environmental considerations to ensure that tourism does not negatively

affect fragile ecosystems (Pomfret, 2006; Beedie & Hudson, 2003; Ewert & Jamieson, 2003).

Natural and Cultural Resources of Swat Valley

Swat Valley is well known for its natural beauty and diverse landscapes, which provide a strong foundation for tourism and ecotourism. The valley contains mountains, forests, rivers, lakes, alpine meadows, and diverse flora and fauna. These resources attract tourists interested in nature, adventure, photography, wildlife, and outdoor recreation.

The cultural diversity of Swat also increases its tourism value. Local communities possess distinctive traditions, languages, music, cuisine, dress, crafts, and lifestyles. Cultural and community-based tourism can therefore complement nature-based activities and provide visitors with opportunities to understand local communities and their cultural heritage.

The combination of natural and cultural resources makes Swat Valley suitable for different forms of sustainable tourism. However, the development of these resources requires proper planning and management because increasing tourist activities can also create pressure on the environment and local communities.

Ecotourism Potential of Tehsil Bahrain

Tehsil Bahrain possesses considerable potential for ecotourism because of its natural landscapes, biodiversity, cultural diversity, and opportunities for outdoor activities. The area contains high mountains, snow-covered peaks, forests, alpine meadows, and lakes, including Kajiri, Spin Khwar, Mushroom, and Izmis. These attractions can support activities such as hiking, camping, nature photography, bird watching, wildlife watching, and nature walks.

Different locations within Tehsil Bahrain provide opportunities for specific ecotourism activities. Anakar, Mankial, and Bashigram Valley have potential for bird watching and nature photography, while the meadows of Deesan, Chukail, and Janshai can provide opportunities for hiking, camping, and nature-based recreation. Similarly, lakes such as Kajiri, Shetangwat, and Musteej can attract visitors interested in hiking, camping, photography, and natural landscapes.

The biodiversity of the area further increases its ecotourism potential. The presence of birds such as the Himalayan Monal, Western Tragopan, and Himalayan Snowcock, along with wildlife such as snow leopards, Asiatic black bears, markhors, and wolves, provides opportunities for wildlife observation and photography. The area's vegetation, including pine, fir, Indian spikenard, Himalayan rhubarb, and other local plants, can also support nature-based and ethnobotanical tourism.

In addition to natural resources, the cultural diversity of Tehsil Bahrain provides opportunities for community-based cultural tourism. The presence of Pashto, Torwali, Gawri, Gujro, and other cultural groups contributes to the cultural richness of the area. Local traditions, music, cuisine, dress, handicrafts, and lifestyles can be incorporated into tourism activities while providing economic opportunities for local communities.

Therefore, Tehsil Bahrain has the potential to develop a range of ecotourism activities based on its natural and cultural resources. However, this potential needs to be assessed carefully in relation to infrastructure, environmental protection, community participation, and sustainable tourism practices.

Challenges and Research Gap

Despite the considerable ecotourism potential of Tehsil Bahrain, several challenges may limit its sustainable development. Tourism is often concentrated during particular seasons, which can increase pressure on natural resources and local infrastructure. Littering, inadequate waste management, disturbance of wildlife, and damage to fragile ecosystems are important environmental concerns. The shortage of proper trails, information facilities, trained guides, and other tourism infrastructure can also reduce the quality and sustainability of the tourism experience.

Community participation and awareness are equally important for sustainable ecotourism. Local people need appropriate knowledge, skills, and opportunities to participate in tourism-related activities so that they can benefit economically while contributing to environmental conservation.

Although previous studies have discussed tourism, ecotourism, natural resources, and tourism activities in Pakistan and Swat Valley, limited attention has been given to a focused assessment of the ecotourism potential of Tehsil Bahrain by examining its natural and cultural resources, possible ecotourism activities, environmental challenges, infrastructure needs, and opportunities for local community participation. Therefore, the present study seeks to assess the ecotourism potential of Tehsil Bahrain, Swat Valley, and identify opportunities and challenges for its sustainable development.

RESEARCH METHODOLOGY

Research Design

This study used a qualitative research design to identify the ecotourism potential of Tehsil Bahrain in Swat Valley. The aim was to describe the natural and cultural resources of the area and identify the ecotourism activities that could be developed there. The study did not test any specific hypotheses or use statistical analysis; rather, it focused on collecting and describing relevant information about the study area.

The main method used was field observation. The researcher visited different places in Tehsil Bahrain to observe the natural landscapes, cultural attractions, and possible tourism activities. Photographs and videos were taken to record important details. Some information was also collected through informal conversations with local people who shared their knowledge about the area. This research design was suitable because it helped the researcher gain a clear understanding of the natural and cultural resources and ecotourism opportunities in the study area.

Study Area

The study area for this research is Tehsil Bahrain, which is part of Swat Valley in Khyber Pakhtunkhwa, Pakistan. It is located in the upper part of Swat Valley, about 60 kilometers from Mingora, the main city of Swat. It covers an area of about 2,899 km² and includes the union councils extending from Bahrain town through Mankial, Utror, Gabral, and parts of Tirat, forming the upper half of Swat District. Tehsil Bahrain is known for its beautiful natural scenery, including mountains, rivers, forests, meadows, and lakes such as Kandol and Bashigram Lake. The area has a moderate climate, with pleasant weather in summer and cold winters.

Tehsil Bahrain is also rich in cultural heritage. People in this area speak languages such as Torwali, Gawri, Pashto, and others. They have unique traditions, music, food, clothes, and crafts. Tourists visit the area to enjoy its natural beauty and experience its cultural heritage.

This area was chosen for the study because it has great potential for ecotourism due to its natural and cultural resources. However, limited research has focused specifically on the ecotourism potential of Tehsil Bahrain. This study therefore aims to identify suitable ecotourism activities and opportunities for the area and examine their potential for sustainable tourism development.

Methods of Data Collection

The main method used for collecting information in this study was field observation. The researchers visited different places in Tehsil Bahrain to observe the natural landscapes, rivers, lakes, forests, and cultural sites. During these visits, photographs and videos were taken to record important details about the natural beauty and possible ecotourism activities.

Some information was also collected through informal conversations with local people. These people shared their knowledge about the area, local traditions, and places that could be interesting for tourists. No formal interviews or surveys were conducted. The information collected through observations and informal conversations helped the researcher to better understand the ecotourism potential of Tehsil Bahrain.

Data Analysis

The information collected during the field visits was carefully studied and organized. The photographs and videos were reviewed to identify the natural and cultural resources and possible ecotourism activities in Tehsil Bahrain. Notes were made about important features, such as natural beauty, cultural sites, and places suitable for tourism activities.

The details shared by local people during informal conversations were also considered to help understand the special attractions and traditions of the area. The data was analyzed in a descriptive manner, meaning that the information was organized and described without using statistical tests. This helped to present a clear picture of the ecotourism potential of Tehsil Bahrain.

RESULTS AND DISCUSSION

Summary of Field Observations

The following observations were recorded during field visits to various locations in Tehsil Bahrain. These observations focused on identifying the natural and cultural resources that can support ecotourism activities. Different areas were visited, including forests, riversides, valleys, mountain trails, meadows, lakes, and local settlements. The study is based on personal observation without conducting any formal surveys or interviews.

During the field visits, various ecotourism activities were found to be possible, including wildlife watching, hiking and trekking, ethnobotanical tours, forest bathing, camping, photography, cultural tourism, and community-based tourism. These activities were identified based on the suitability of the locations, natural conditions, and cultural atmosphere observed during the fieldwork. The detailed observations and photographic evidence for these activities are presented in the relevant sections and plates of this chapter.

Natural and Cultural Resources of Tehsil Bahrain

Natural Resources

During the field visits, it was observed that Tehsil Bahrain has many natural attractions. These include rivers such as Daral Khwar (Plate 1), Gabral Khwar (Plate 2), and Ushu Khwar (Plate 3); forests such as Bahrain Forest (Plate 4) and Tirat Dara Forest (Plate 5); green valleys such as Kalam Valley (Plate 6) and Bashigram Valley (Plate 7); and beautiful landscapes such as Chukail Meadows (Plate 8), Janshai Meadow (Plate 9), Baksar Meadow (Plate 10), and Deesan Meadow (Plate 11).

The areas of Utror, Kalam, Mankial, Bahrain, and Madyan were observed to be rich in natural beauty. These natural places are attractive and peaceful and have considerable potential for ecotourism. Activities such as hiking (Plate 12), nature photography (Plate 13), and camping (Plate 14) can be developed in these areas.

The combination of mountains, forests, rivers, valleys, meadows, and lakes provides a suitable natural environment for different forms of nature-based tourism. However, these resources require proper management and protection to ensure that increasing tourism does not negatively affect the natural environment.

Cultural and Traditional Attractions

The cultural resources of Tehsil Bahrain were also observed during the field visits. Traditional wooden houses (Plate 15), local food (Plate 16), traditional dress, and handicrafts were observed in different areas. These cultural resources can attract tourists who are interested in local lifestyles, traditions, and culture.

Local food and handicrafts can also be promoted through ecotourism and community-based tourism. Such activities can provide visitors with opportunities to experience the local culture while creating income-generating opportunities for local communities.

Existing Tourism Situation in Tehsil Bahrain

Current Tourism Activities

Tourism is already present in Tehsil Bahrain, but it is not well organized. Most visitors are domestic tourists who visit popular spots such as trout farms, parks, riversides, and nearby valleys. Tourists are mainly attracted by the natural scenery, pleasant climate, rivers, mountains, lakes, and other recreational places.

According to the Tourism Department of Khyber Pakhtunkhwa, from January to May 2025, the province received 296,830 domestic tourists and 2,499 foreign tourists (The Express Tribune, 2025). During Eid-ul-Adha in June 2025, tourism increased significantly, with more than 932,000 visitors arriving in Khyber Pakhtunkhwa within three days (Lead Pakistan, 2025; Travel and Tour World, 2025).

During the same period, Swat Valley received 288,424 domestic tourists and 63 foreign tourists (The Nation, 2025; Travel and Tour World, 2025), while some reports estimated the number at around 300,000 visitors (Xinhua, 2025). Outside the holiday season, the number of tourists is much lower, with only a few hundred people visiting Swat on normal days.

These figures show that Swat Valley already attracts a large number of visitors, particularly during holidays and peak tourism seasons. This existing tourism provides an opportunity to promote more organized and environmentally responsible forms of tourism in Tehsil Bahrain.

Existing Facilities and Services

Although tourism is already established in the area, the existing facilities and services are not sufficient to support well-managed ecotourism. There are no proper ecotourism centers, adequate guiding services, or

clearly marked trails in many natural areas. Tourism facilities are generally basic, and natural areas are not adequately protected from waste and pollution.

Better planning and management are therefore needed to improve tourism facilities while protecting the natural and cultural resources of Tehsil Bahrain. The development of appropriate infrastructure, tourist information facilities, trained local guides, waste-management systems, and eco-friendly facilities can contribute to sustainable tourism development.

Opportunities for Ecotourism Development

Even though there are challenges, many opportunities were also observed during the field visits. The area has important resources for ecotourism, including natural beauty, cultural richness, and friendly local communities. Based on field observations, several activities have potential for development in Tehsil Bahrain.

Trekking and Hiking

In Tehsil Bahrain, locations such as Chukail Meadows, Palanchai Meadows, Daral Lake, Kajiri Lakes, Bashigram Lake, and Izmis Lake offer excellent opportunities for trekking and hiking. These routes pass through alpine meadows, dense forests, and clear lakes, providing both adventure and scenic beauty for nature lovers (Plate 17).

The development of properly managed hiking and trekking routes can provide recreational opportunities for visitors while also creating employment opportunities for local guides. However, such routes should be properly marked and managed to minimize damage to vegetation and fragile natural areas.

Bird Watching and Nature Photography

Areas such as Anakar, Mankial, Bashigram, Ayeen, and Utror Valley offer opportunities for bird watching and wildlife and landscape photography in a natural setting. These areas contain diverse habitats, including forests, meadows, and riversides, which provide suitable environments for different bird and animal species throughout the year.

The scenic views of mountains, waterfalls, and green valleys also make these locations suitable for landscape photography (Plate 18). Bird watching and nature photography can provide low-impact tourism opportunities while increasing visitors' interest in the natural environment.

Cultural Tourism in Local Villages

Villages such as Gournai, Torwal, Kalam, and Madyan offer opportunities for tourists to experience traditional wooden houses, local music, handicrafts, and traditional food. Local dishes such as *Chapli Kabab*, *Chukarn*, trout fish, and *Kwanjai* can provide visitors

with an opportunity to experience the traditional food and culture of the area.

Cultural tourism can also provide economic opportunities for local people by promoting local food, handicrafts, traditional performances, and other cultural products. At the same time, it can encourage the preservation of local traditions and cultural heritage.

Homestays and Eco-Lodges

In areas such as Utror, Madyan, Gabral, and Bahrain, local families can offer homestay or eco-lodge services. This can provide tourists with an authentic local experience while creating income opportunities for local communities.

Homestays can also allow visitors to experience local lifestyles, food, traditions, and hospitality more closely. If properly managed, eco-lodges and homestays can provide more sustainable accommodation options and distribute tourism benefits among local communities.

Environmental Awareness and Clean-Up Activities

Environmental awareness campaigns and clean-up activities can be organized in areas such as Madyan, Bahrain, Gabral, and Kalam. These initiatives can engage both local communities and visitors in keeping the environment clean and protecting natural resources.

Such activities can increase awareness about responsible tourism and encourage visitors to avoid littering and damaging natural resources. They can also create livelihood opportunities for local people while promoting environmental protection and sustainable tourism for future generations.

Challenges to Ecotourism Development

Several challenges were also observed during the field visits. These challenges can affect the sustainable development of ecotourism in Tehsil Bahrain.

Littering and Pollution

In many popular areas, such as Mahodand Lake, Taip Meadow, riversides, and picnic spots, plastic bottles, food wrappers, and other waste were found scattered (Plate 20). This waste reduces the beauty of these locations, pollutes water, can harm nature, and may disturb wildlife.

The problem of littering can become more serious during peak tourism seasons when large numbers of visitors enter the area. Proper waste-management facilities, awareness campaigns, and responsible tourism practices are therefore necessary to protect these natural attractions.

Damaged Roads and Deforestation

Access roads to scenic spots such as Kalam, Ushu Valley, and Gabral were found to be damaged, making travel difficult. Poor road conditions can limit access to potential ecotourism destinations and reduce the overall tourism experience.

Tree cutting for commercialization and illegal logging also contribute to deforestation. This can increase the risk of landslides, cause soil erosion, and negatively affect the natural environment (Plate 21). Protection of forests is therefore important for maintaining the ecological value and tourism potential of the area.

Lack of Awareness About Ecotourism

Many local residents in areas such as Kalam and Bahrain town were observed to have limited awareness of the concept of ecotourism. Tourists also often lack awareness about responsible tourism practices.

This lack of awareness can contribute to littering, disturbance of wildlife, and inappropriate use of natural resources. Awareness programs for both local communities and visitors can therefore play an important role in promoting sustainable tourism practices.

Lack of Eco-Friendly Rules and Framework

There are no clear and widely implemented eco-friendly guidelines for tourist activities in Tehsil Bahrain. In areas such as Kalam, Bahrain, Gabral, and Madyan Valley, unplanned and cemented construction in natural areas can damage the fragile environment.

Unmanaged camping and overuse of natural areas can also create additional environmental pressure. Clear environmental guidelines and proper monitoring are needed to ensure that tourism development does not damage the natural resources of the area.

Lack of Official Guidance and Tourist Information

Visitors to popular destinations in Tehsil Bahrain, such as Kalam, Mahodand Lake, Ushu Valley, and Gabral, often rely on personal knowledge or informal assistance from local people. There are limited tourist information centers, official guiding services, and clear signboards to assist visitors with navigation and promote responsible tourism practices.

The availability of trained local guides, information centers, maps, signboards, and environmental information can improve the tourist experience and encourage visitors to follow responsible tourism practices.

Discussion of Findings

The field observations indicate that Tehsil Bahrain has considerable potential for ecotourism because of its combination of natural and cultural resources. Mountains, forests, rivers, lakes, meadows,

valleys, wildlife, traditional houses, local food, handicrafts, and cultural traditions provide opportunities for different forms of nature-based and community-based tourism.

The findings show that several activities can be developed according to the natural and cultural conditions of the area. Hiking, trekking, camping, bird watching, wildlife and nature photography, cultural tourism, homestays, and environmental awareness activities can provide opportunities for both visitors and local communities.

The natural resources observed during the field visits are particularly important for ecotourism development. Locations such as Chukail Meadows, Palanchai Meadows, Bashigram Lake, Daral Lake, Kajiri Lakes, and Izmis Lake provide opportunities for hiking, trekking, camping, photography, and other nature-based activities. Similarly, Anakar, Mankial, Bashigram, Ayeen, and Utror provide opportunities for bird watching and nature photography.

The cultural resources of the area also provide an important foundation for ecotourism. Traditional wooden houses, local food, handicrafts, music, dress, and local lifestyles can be incorporated into community-based tourism. Homestays and local cultural experiences can allow tourists to interact with local communities while providing additional income opportunities.

However, the findings also indicate that the existing tourism system is not sufficiently organized to support sustainable ecotourism. Littering, pollution, damaged roads, deforestation, lack of awareness, inadequate tourist information, limited guiding services, and unplanned construction are important challenges. These problems can reduce the quality of the tourism experience and place pressure on the natural environment.

The findings therefore suggest that the ecotourism potential of Tehsil Bahrain can be better utilized through proper planning, environmental protection, community participation, improved infrastructure, trained local guides, tourist information facilities, waste management, and eco-friendly regulations. Such measures can help balance tourism development with the protection of natural and cultural resources.

Chapter Summary

This chapter presented the results and findings of the study based mainly on field observations. It was observed that Tehsil Bahrain has considerable potential for ecotourism because of its natural and cultural resources. The area provides opportunities for hiking, trekking, camping, bird watching, nature photography, cultural tourism, homestays, and other nature-based activities.

At the same time, the area faces challenges such as pollution, littering, deforestation, poor infrastructure, lack of awareness, limited tourist information, and inadequate organized tourism services. These challenges can affect the sustainable development of ecotourism in the area.

Overall, the findings indicate that Tehsil Bahrain has strong potential for ecotourism, but this potential requires proper planning and management. If environmental protection, community participation, eco-friendly infrastructure, awareness, and organized tourism services are improved, Tehsil Bahrain can develop into a more sustainable and attractive ecotourism destination.

Table 1: Proposed Ecotourism Activities in Tehsil Bahrain

Activity	Resources	Location
Wildlife Watching	Himalayan Monal, Western Tragopan, Koklass Pheasant, Himalayan Bulbul, White-cheeked Bulbul, Blue Whistling Thrush, Eurasian Sparrowhawk, Eurasian Magpie, Grey-headed Woodpecker, Scaly-bellied Woodpecker, Great Tit, Coal Tit, Fire-fronted Serin, Grey-hooded Warbler, Cheer Pheasant, Grey Bushchat, Long-tailed Shrike, Eurasian Wryneck, Indian Roller, Verditer Flycatcher, Snow Pigeon, Himalayan Snowcock, Plumbeous Water Redstart, White-capped Redstart, Grey Wagtail, Brown Dipper, Wallcreeper, Common Kestrel, Himalayan Griffon Vulture, Golden Eagle, Steppe Eagle, Red-billed Chough, Yellow-billed Chough, Green Sandpiper, Common Sandpiper, Little Ringed Plover, Ruddy Shelduck, Eurasian Coot, Grey Heron, Little Egret, Great Egret, Little Cormorant, Pied Kingfisher, Common Snipe, Brown-headed Gull, Whiskered Tern.	Shunju Bahrain, Chukail Mankial, Janshai Kalam, Khanako Mankial, Safara Tirat Dara, Anakar Kalam, Baboky Tirat Dara, Taip Mankial, Mahasar Chail, Kafir Ghar Bashigram, Panjao Ghar Madyan, Shengrai Madyan, Gurnal Darra Bahrain, Shaldar Dara Torwal, Laikot Forest, Karin Forest, Beshai Kalam Forest, Gul Bela Utror, Deesan, Izmis Utror, etc.
Ethnobotanical Tours	West Himalayan Fir; Himalayan Alder; Indian Horse Chestnut; Tree-of-Heaven; Himalayan Bugle; Small-flowered Bugle; Yellow Cobra Lily; Indian Barberry; Common Barberry; Hairy Bergenia; Deodar Cedar; Chir Pine; Himalayan White Pine; West Himalayan Spruce; Himalayan Rhubarb; Indian Spikenard; Himalayan Gentian; Kutki; Pushkarmool; Moorcroft's Sage; Royal Columbine; Royle's Mint; Himalayan Monkshood; Himalayan May Apple.	Tirat Kandaw; Jonu Sar; Gournai; Bahrain; Bashigram Valley; Palanchai; Mankial Valley; Anakar Valley; Deesan Banda; Boyun; Kalam; Torwal; Laikot; Daral; Gabral Valley; Shahi Bagh; Utror Valley; etc.
	Mahodand Lake	Matiltan
	Saifullah Lake	Matiltan
	Kundol Lake	Utror
	Spin Khwar Lake	Utror
	Janshai Meadows	Kalam
	Chukail Meadows	Mankial
	Palanchai Meadows	Bahrain
	Deesan Meadows	Kalam
Camping	Khanako Meadow	Mankial
	Byoun	Kalam
	Beshai meadows	Kalam
	Panashai meadows	Gournal
	Baksar Meadow	Gournal
	Taip Meadow	Mankial
	Shahi Bagh	Utror
	Safara etc...	Tirat Madyan
Kayaking	Mahodand lake Daral River Swat	Utror valley, Bahrain, Daral Below Kalam.

Activity	Resources	Location
	Languages: Gawri, Badeshi, Torwali, Qashqri, Ushojo, Gujro	Kalam, Beshigram, Torwal, Gabral, Utror, Bahrain, Madyan,

Community-Based Cultural Tours	Foods	Tirat
	Music	Kalam, Beshigram, Torwal, Gabral, Utror, Bahrain, Madyan, Tirat
	Costumes	Kalam, Beshigram, Torwal, Gabral, Utror, Bahrain, Madyan, Tirat
	Archaeological Sites	Kalam, Beshigram, Torwal, Gabral, Utror, Bahrain, Madyan, Tirat
	Artisanship	
	Trout	Kalam, Beshigram, Torwal, Gabral, Utror, Bahrain, Madyan, Tirat
	Indigenous Fruits	Kalam, Beshigram, Torwal, Gabral, Utror, Bahrain, Madyan, Tirat
	Forests (Deodar, Pine, Himalayan Birch, etc...)	Kalam, Beshigram, Torwal, Gabral, Utror, Bahrain, Madyan, Tirat
	Birds (Himalayan Monal, Chakor, Golden Eagle etc...)	Bahrain, Kalam, Utror, Bashigram, Madyan etc...
Conservation Volunteering	Alpine Meadows and Natural Landscapes (Chukail, Desan, Shunju meadows etc...)	Kalam, Gabral, Anakar, Utror, Mankial, Daral etc...
		Mankial, Kalam, Madyan, Utror, Anakar, Bahrain etc.
		Gabral, Utror, Kalam, Bahrain etc...
		Mankial, Kalam, Gabral, Bahrain, etc...
	Kalam Forests	Kalam
	Mankial Forests	Mankial
	Ushu Forest	Ushu
Forest Bathing (Shinrin Yoku)	Bahrain Forest	Bahiran
	Bashigram Forest	Bashigram
	Gabral Forest	Gabral
	Utror Forest	Utror
	Madyan Forests, etc...	Madyan, etc...
	Kajiri Lakes	Gujjar Gabral
	Khanako Lake	Mankial
	Saifullah Lake	Matiltan
	Kundol Lake	Utror
	Daral Lake	Bahrain
	Spin Khwar Lake	Utror
	Paristan Lake	Utror
	Izmis Lake	Utror
	Bashigram Lake	Chail Madyan

	Andrab/kooh lake	Utror
	Shaitan Gwat Lake	Bahrain
	Godar Lake	Kalam
	Mastej Lake	Utror
	Janshai Meadows	Kalam
Hiking	Chukail Meadows	Mankial
	Palanchai Meadows	Bahrain
	Deesan Meadows	Kalam
	Khanako Meadow	Mankial
	Udlshahi sar	Mankial
	Byoun	Kalam
	Beshai meadows	Kalam
	Panashai meadows	Gournal
	Shengrai	Bahrain
	Baksar Meadow	Gournal
	Taip Meadow	Mankial
	Safara	Tirat Madyan
	Baboky	Tirat Madyan
	Mushroom Lake	Gabral
	Zomolo Lake	Matiltan
	Manial Pass etc...	Gabral5
	Chukail Meadows track	Mankial
	Khanako Meadow track	Mankial
	Desan Meadows track	Kalam/Utror
	Palancahi Meadows track	Bahrain
	Taip Meadow track	Mankial
	Baksar Meadow track	Gournal Bahiran
	Kajiri Lakes trac	Gabral
Guided Nature	Shetangwat Lake track	Bahrain
Walks and	Kooh Lake track	Bahndara Utror
Interpretive	Bashigram Lake track	Bashigram, Chail Madyan
Hikes	Tirat Kandaw Track	Tirat Madyan
	Janshae Meadow track	Anakar valley Utror
	Kandol Lake track	Utror
	Spin Khwar Lake track	Utror
	Izmis Lake Track	Utror
	Kaga Lake track etc...	Daral Bahrain
	Mankial Peak	Mankial Valley
	Falaksair Peak	Ushu Valley
	Khakhari Sar Peak	Gabral Valley
	Miangul Sar peak	Gabral Valley
Mountaineering		
	Berithorn Peak	Mankial Valley
	Thalo zoom	Gabral Valley
	Desan Meadows Utror ridge cliffs	Utror
	Mankial Peak cliffs	Kalam
	Saeri Cliffs	Mankial
Rock Climbing	Jabba Cliffs	Shahi Bagh Jabba Gabral
(Low Impact)		
	Jahaz pass cliffs, etc...	Izmis lake Utror
	Kajiri Lakes	Gujjar Gabral
	Khanako Lake	Mankial
	Saifullah Lake	Matiltan
	Kundol Lake	Utror
	Daral Lake	Bahrain
	Spin Khwar Lake	Utror
	Paristan Lake	Utror
	Izmis Lake	Utror

	Bashigram Lake	Chail Madyan
	Andrab/kooh lake	Utror
	Shaitan Gwat Lake	Bahrain
	Godar Lake	Kalam
	Mastej Lake	Utror
	Janshai Meadows	Kalam
Hiking	Chukail Meadows	Mankial
	Palanchai Meadows	Bahrain
	Deesan Meadows	Kalam
	Khanako Meadow	Mankial
	Udlshahi sar	Mankial
	Byoun	Kalam
	Beshai meadows	Kalam
	Panashai meadows	Gournal
	Shengrai	Bahrain
	Baksar Meadow	Gournal
	Taip Meadow	Mankial
	Safara	Tirat Madyan
	Baboky	Tirat Madyan
	Mushroom Lake	Gabral
	Zomolo Lake	Matiltan
	Manial Pass etc...	Gabral5
	Desan Meadows Utror ridge cliffs	Utror
	Mankial Peak cliffs	Kalam
	Saeri Cliffs	Mankial
Rock Climbing (Low Impact)	Jabba Cliffs	Shahi Bagh Jabba Gabral
	Jahaz pass cliffs, etc...	Izmis lake Utror
	Grey Wolves	Palanchai, Bashigram, Matiltan, Desan, Anakar etc
	Leopards	Mahodand, Mankial, Anakar, Palancahai
	Black Bears	Bashigram, Ayeen, Baboky, Deesan, Anakar
	Snow Leopard	Matiltan, Mankial, Desan, Batendar
	Markhors	Mankial, Ayeen, Laikot
Wildlife Photography	Ibex	Mankial, Anakar, Matiltan, Gabral
	Monkeys	Tirat Kandaw, Khanako, Dad sar, Goshai etc.
	Foxes	Gabral, Madyan, Bahrain, Kalam, Mankial etc
	Jackels	Madyan, Bahrain, Mankial, Kalam, gabral etc
	Golden Marmot	Kharkhari lake, Matiltan, Mankial, Desan, Anakar
	Wild Boar	Madyan, Utror, Kalam, Bahrian Kalam, Matiltan,
	Indian Crested –Porcupine	Madyan, Bahrain, Usho etc
Wildlife Watching	Asian Black Bears Markhor	Mankial Conservancy
	Beshigram valley Forests	Chail Madyan Utror Bahrain Kalam Gabral Mankial Utror Madyan
	Anakar Valley Forests	
	Bahrain valley Forests	
	Kalam Valley Forests	
Tree plantation and Habitat experience	Gabral Valley Forests Mankial Valley Forests	
	Utror Valley Forests	

	Madyan Valley Forests	
Zip Lining	Chukail forest Bahrain forest Tirat Kandaw forest Kamar khwa Forest Khanako Forest Jonu sar etc...	Saeri Mankial Bahrain Tirat Dara Madyan Mankial Mankial Shegal Madyan

SWOT Analysis table for Ecotourism Activities in Tehsil Bahrain:

Strengths Rich biodiversity Diverse landscapes Cultural richness Adventure potential Community involvement	Weaknesses Lack of formal infrastructure Limited awareness and promotion Seasonal limitations Low conservation enforcement Low community participation in eco development Environmental mismanagement and lack of waste control
Opportunities Sustainable tourism development Cultural tourism Nature education and volunteering Eco-employment Digital promotion	Threats Environmental degradation Risk of over development Wildlife disturbance Climate change Lack of policy support

Recommendations for the Promotion of Ecotourism in Tehsil Bahrain, Swat

Based on the observations and findings of this study, several recommendations are proposed to support the sustainable development and promotion of ecotourism in Tehsil Bahrain.

- Basic ecotourism infrastructure should be developed by establishing eco-friendly facilities, including marked hiking trails, campsites, rest areas, and information boards at key tourist sites to guide and facilitate visitors.
- Environmental awareness programs should be conducted for both tourists and local communities to promote cleanliness, respect for nature, and the importance of environmental protection. Local people, particularly youth, should also be trained as ecotourism guides, enabling them to work as tour guides, activity coordinators, or hosts for cultural tourism experiences.
- Natural areas and wildlife should be effectively protected through proper waste management, controlled tourist access to sensitive areas, and measures to prevent disturbance or damage to local species. Community-based tourism should also be encouraged by involving local families in providing homestays, traditional food, handicrafts, and cultural performances, thereby offering visitors authentic local experiences while creating economic opportunities for residents.
- Effective governance and enforcement of ecotourism regulations should be ensured. Local authorities should implement and enforce regulations to protect natural areas from pollution, overuse, and illegal activities, supported by regular monitoring and appropriate penalties for violations. Close coordination among the local administration, tourism authorities, and forest departments is essential for planning, monitoring, and

managing ecotourism development in a sustainable and organized manner.

CONCLUSION

Based on field observations, it is concluded that Tehsil Bahrain possesses diverse and valuable natural resources, including green valleys, snow-covered mountains, alpine meadows, waterfalls, rivers, and lakes. Scenic locations such as Utror, Anakar, Daral Lake, and Mankial offer exceptional natural beauty and tranquility, making them highly suitable for nature-based tourism. In addition to its natural attractions, the region possesses valuable cultural resources, including local foods such as chukarn, chapli kabab, dampukh, kargha jala, kwanjy, and trout, as well as traditional dress, handicrafts, music, and local languages such as Torwali, Qashqari, Badeshi, and others. These cultural resources can contribute significantly to the development of cultural and community-based tourism. Field observations further indicate that various ecotourism activities, including hiking, trekking, camping, wildlife watching, photography, ethnobotanical tours, and forest bathing, are suitable for many sites across the tehsil.

However, the area currently lacks organized ecotourism infrastructure, including ecotourism centres, marked trails, eco-lodges, and tourist information points. The local community also has limited awareness of ecotourism and sustainable tourism practices. Several environmental and management challenges were observed, including littering, pollution around tourist sites, damaged roads, and the absence of proper conservation planning. These issues may negatively affect both the environment and the quality of the tourism experience.

Despite these challenges, Tehsil Bahrain has considerable potential for sustainable ecotourism development. Well-planned and properly managed ecotourism can contribute to the conservation of natural

resources, promotion of local culture, and socioeconomic development of local communities. Therefore, appropriate planning, improved infrastructure, community participation, environmental awareness, and effective conservation measures are essential for transforming Tehsil Bahrain into a sustainable and valuable ecotourism destination.

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Plate 01: Daral Khwar



Plate 02: Gabral Khwar



Plate 03: Bahrain Forest



Plate 04: Usho Khwar



Plate 05: Tirat Dara



Plate 06: Bashigram Valley

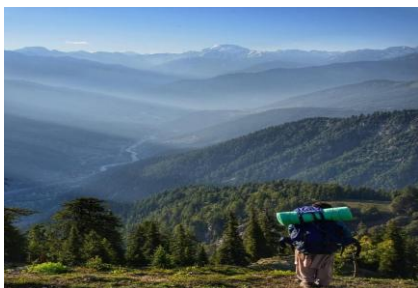


Plate 07: Kalam Valley



Plate 08: Chukail Meadows



Plate 09: Janshai Meadow



Plate 10: Baksar Meadow



Plate 11: Deesan Meadow



Plate 12: Hiking, Jahaz Pass



**Plate 13: Nature photography
Chukail Meadows**



Plate 14: Camping, Kooh Lake



**Plate 15: wooden houses,
Traditional dress, and local lifestyle.**



Plate 16: Local food Chukarn, Handi



Plate 17: Hiking, Izmis Lake



Plate 18: Bird Watching, Bashigram



Plate 19: Bird watching, Bashigram



Plate 20: Taip Meadow



Plate 21: Bahrain Road