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Identifying Afghanistan's Extraordinary Natural Sites for Ecotourism: A Review of Ideal Ecosystems

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ABSTRACT

Ecotourism is a type of nature-based tourism that supports conserving the natural environment. Afghanistan, at the crossroads of Central, West, and South Asia, is a beautiful and diverse nation that could be the best place for ecotourism. Afghanistan's unique geography and rich history make it an ideal ecotourism destination. The study aimed to understand potential ecotourism sites in Afghanistan and the environmental and economic impacts of ecotourism activities. Afghanistan's major ecotourism sites include biodiversity reserves, wildlife, rangelands, forests, lakes, wetlands, tourism sites, valleys, natural caves, deserts, natural springs, and cultural sites. Additionally, food tourism and medicinal plants play a significant role in ecotourism development. The Lonely Planet travel book highlights Afghanistan's appeal as "vastly appealing" due to its former popularity for hiking and nature sightseeing. In the 1970s, Afghanistan attracted over 100,000 tourists annually. Post-Soviet invasion, it experienced a decline. The Ministry of Information and Culture is supporting the growth of foreign tourism in Afghanistan, which rose from 691 visitors in 2021 to 2,300 in 2022. Sustainable ecotourism in Afghanistan demands effective management and planning to overcome misconceptions and bureaucratic obstacles. Afghanistan's ecotourism sites, like the Minaret of Jam, face threats from natural disasters and climate change, including landslides, earthquakes, and heavy snow, exacerbated by climate change. Afghanistan's ecotourism industry, despite its remote location, requires conservation and management, requiring collaboration among private, public, host community, and international organizations for sustainable development.

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INTRODUCTION

Tourism products combine natural, cultural, and man-made resources, attractions, facilities, services, and activities to create an emotional visitor experience (Haibo et al., 2020). Tourism is a multifaceted sector interconnected with infrastructure, communications, construction, transportation, accommodation, culture, food and beverage, handicraft, jewelry, textiles,

cosmetics, leisure, and recreation (Ahmad et al., 2018). Many other countries have established national tourism routes highlighting their natural resources, cultural heritage, religious or spiritual features, and other elements (Tiwari et al., 2013). Statistics show a significant rise in international tourism from 522.2 billion in 1995 to nearly 1.86 trillion in 2023 (World Bank, 2023). Tourism contributes 9% of global jobs and $1.8 trillion in the world's exports (MSUE, 2016). The various types of tourism—including cultural, business, ecotourism, and gastronomy—provide destination countries with many opportunities (WIPO and UNWTO, 2021). Ecotourism emerged in the 1980s as a sustainable alternative to traditional tourism, motivated by the need for sustainable development (Liu et al., 2023). Ecotourism is a valuable form of sustainable tourism closely linked to natural resources and subcultures, offering social, economic, and environmental benefits (Motlagh et al., 2020). It creates new jobs and economic opportunities, including service jobs in tour guides, hospitality, restaurants, and transport (Jalani, 2012; Reimer and Walter, 2013). Afghanistan is a beautiful and multifaceted nation (Hessami, 2021). Afghanistan is a landlocked country at the juncture of the Central, West, and South Asian regions (World Bank, 2020; Safi, 2023). Afghanistan is rich in historical and cultural monuments and is notable worldwide for ecotourism attractions and climate diversity. However, the few tourists who visit the country tend to go only to certain cities, such as Bamyan, Herat, Badakhshan, Balkh, and Kabul (Tomsen, 2013). Afghanistan is known as the land of mountains and valleys. Afghanistan analysts have said the country was once a popular destination for hiking and nature sightseeing, which may explain the "influx of tourists" mentioned in the guidebook. The Lonely Planet travel book portrays pre-1979 Afghanistan as "vastly appealing." (Fisher, 2012) Travel companies emerged in the 1930s and 1940s, providing accommodation, transportation, and guided tours during the "Golden Age of Tourism" from the 1950s to the 1970s. In 1974, 96,195 people visited Afghanistan, of which 38,831, or 40.3 percent, were European tourists. During the 1960s and 1970s, Afghanistan was part of the overland so-called "Hippy Trail" across Asia (Akbary and Goldbaum, 2024). The highest numbers among these tourists came from the British, with 10,112 visitors, followed by the Germans, with 7,157, and the French, with 6,541 (Azimi, 2017).

Afghanistan is an economically weak state struggling to provide its national budget (Safi et al., 2023). Therefore, tourism could be a sustainable and reliable economic resource for the country. Ecotourism can generate revenue for Indigenous peoples and provide employment opportunities for local communities, including Indigenous individuals. Hence, ecotourism reduces poverty and improves the country's economic conditions (Ralston, 2014). Each ecotourist annually contributes between 1,000 and 1,500 dollars in foreign currency income worldwide. If Afghanistan invests in and emphasizes attracting natural ecotourists, it can quickly achieve the anticipated income (Azimi, 2017). Local tourism businesses provided alternative income (Lin et al., 2023). In the 1970s, over 100,000 tourists per year visited Afghanistan. Tourism in Afghanistan decreased after the Soviet invasion in 1979 and the violent decades that followed. After the war's end in 2021, Afghanistan experienced a return to relative calm, making it an attractive destination for potential tourists (Hessami, 2021).

The number of foreign tourists visiting Afghanistan has significantly increased from 691 in 2021 to 2,300 in 2022, compared to 7,000 in 2023. The Ministry of Information and Culture (MoIC) provides services to tourists (Akbary and Goldbaum, 2024).

This review article identifies major ecotourism sites in Afghanistan that are needed attractions of tourists and the attention of policymakers for support and conservation; in addition, it will help future research into ecotourism as an important economic sector in the country. Ecotourism remained unrealized and poorly understood in Afghanistan. In order to ensure the development of rural ecotourism, it is necessary to identify and present core ecotourism sites. The main objectives of the review are as follows:

1. The study uses available literature and documentation to identify and evaluate the significance of ecotourism sites in Afghanistan.
2. To discuss the development of the ecotourism sector in Afghanistan and the threats posed by climate change to tourist sites.

METHODS & MATERIALS

The current study employs a comprehensive review method that synthesizes qualitative works. This synthesis is achieved through an in-depth analysis of published and unpublished journals, articles, reports from government and international organizations, books, and reputable media sources. The study employs a natural geography perspective to scrutinize international and national reports, including annual ones from renowned organizations, to identify patterns, trends, and discrepancies. The process includes identifying target journals, collecting relevant literature, conducting an in-depth analysis of each manuscript, and integrating data to create a cohesive and well-supported review. The indicators for ecotourism sites are not quantifiable and measurable; due to this limitation, we used a qualitative approach for studying ecotourism potential areas. This method is a simple qualitative approach to reviewing literature and descriptive studies. The study consists of documentation of existing ecotourism sites across Afghanistan to identify potential sites for further expansion and attraction. Secondary data refers to pre-existing information collected by someone else for purposes other than the current research. It includes data from published sources, databases, government records, and previous research studies. The data was the influx of tourists to Afghanistan in the pre-war and post-war times, onward to 2021. Natural resources, such as water, land, forest, rangeland, wetlands, and landscape, are the main assets of the ecotourism venture, which are thoroughly discussed in this paper. It is a qualitative and systematic identification of ecotourism sites in Afghanistan.

Ecotourism is a Significant Site in Afghanistan

Along parts of the Silk Road, National Tourist Sites in Afghanistan have long established the country as a crossroads of various cultural influences. Its diverse landscape features mountainous regions that rise to 7,000 meters and vast desert plains. Afghanistan is home to a rich ecosystem, encompassing four significant biomes and 17 ecoregions, contributing to its biological diversity and offering stunning scenery, beautiful national parks, and various

tourist attractions (Figure 1). To enhance ecotourism, it is essential to identify more potential ecotourism areas, many of which are abundant in Afghanistan's mountains and lowlands.

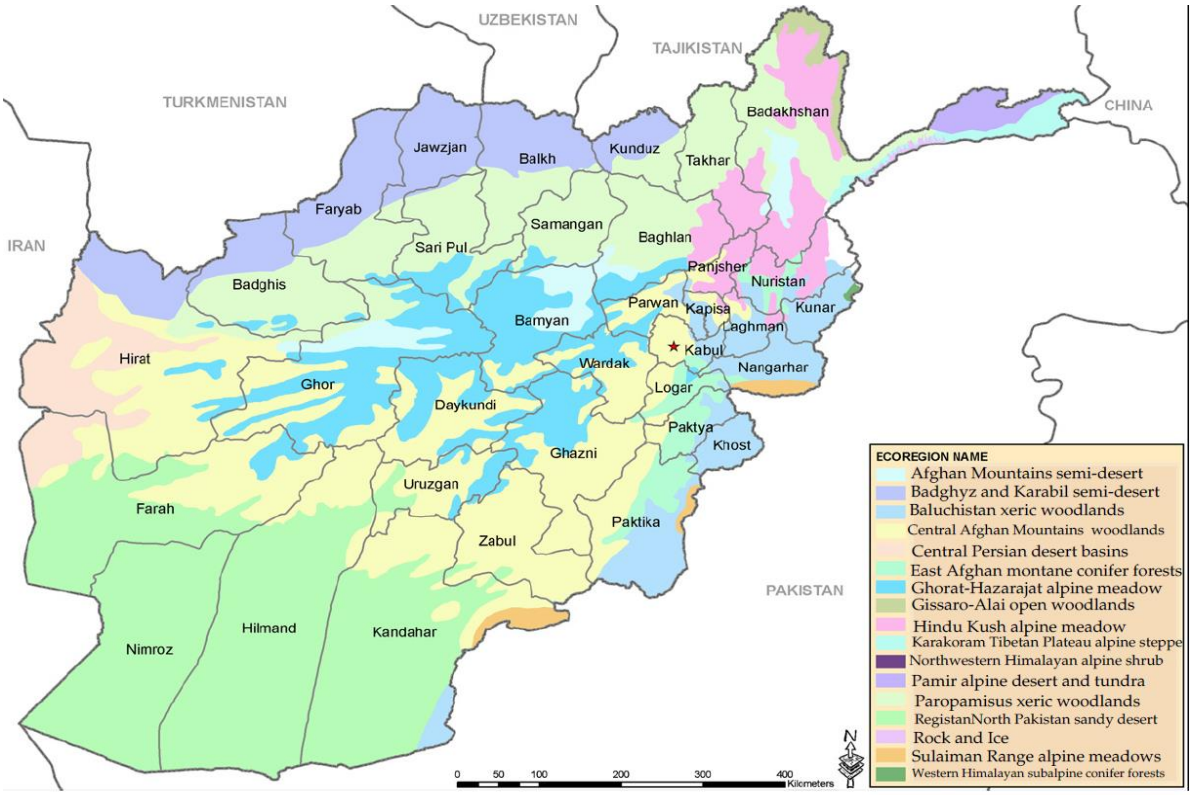

Figure 1. *Afghanistan's 17 ecoregions have great ecotourism potential (Johnson et al.,2012).*

With proper identification and development of these sites, Afghanistan could emerge as a significant tourism destination. The country offers various activities, including camping, hiking, trekking, angling, wildlife sanctuaries, nature tours, rafting, and cultural and religious visits. Afghanistan has various climate niches featuring snow-capped mountain ranges, hills, and valleys. The most appropriate ecotourism sites are comprehensively studied as follows:

Afghanistan Biodiversity and Wildlife

Afghanistan's ecosystem provides a suitable platform for profitability in the ecotourism sector. It is home to diverse animal and plant species across different climates, which can attract tourists if adequately managed (Howard 2014). Although smaller, the provinces of Badakhshan, Nuristan, Bamyan, Ghazni, Kunara, and Badghis boast high biodiversity. Afghanistan is comprised of 8 biogeographical areas that belong to the Palaearctic Realm, and a small area fits Indo-Malay in the lower Kabul River Valley. The ecoregions were divided into 15 smaller zones (Freitag, 2010). Information about Afghanistan's biodiversity is tiny and old (CBD, 2024). The records show that Afghanistan holds 515 birds, 150 species of mammals, 112 reptiles, 8 amphibians, 139 fish, and 245 butterflies. Also, 3500–4000 vascular plant species. Recent investigations suggest that Afghanistan's biodiversity has been devastatingly affected by the war and conflict during the last forty years. The IUCN Red List included 39 species and 8 subspecies threatened with extinction (CBD, 2024). Afghanistan was one of the

most significant centers for originating and developing humanity's crop plants. Afghanistan, with its five major ecosystems, including the highlands, central plains, semi-desert areas, southern forests with monsoon rains, and the eastern intermountain region, possesses a unique biological diversity. As a result, the geographical distribution of wildlife is heterogeneous. Most of Afghanistan's animals belong to the Palearctic type. Studies by zoologists in various regions of Afghanistan show that the animals of this land are similar to Mediterranean tropical animals (Freitag, 2010). Nationally, there are few national parks with unique wildlife attracting tourists and visitors, such as wild goats or wild sheep, wolves, foxes, snow leopards, bears, and Afghan snow finches. The Wakhan National Park in northeastern Afghanistan, established as the second national park in the Wakhan corridor, covers an area of 4,200 square miles (about a million hectares) between the borders of Pakistan in the south, China in the east and Tajikistan in the north (Howard 2014). In Wakhan National Park, rare wildlife, like urial, ibex, sheep, goats, cattle, yaks, donkeys, horses, and Bactrian camels (Moheb2023; Li et al., 2022). Wildlife suffered during the war, and the local people continued hunting them. Hunting and trapping of large mammals and birds is still widespread. Wildlife is the primary motivator and attraction for nature tourism, contributing US$343 billion annually and delivering 21.8 million jobs globally (LHI, 2022; WTTC, 2019). Wildlife of Afghanistan, if properly managed, can be worthy and attractive to tourists. Revenue from tourism will contribute millions of dollars to protected areas and conservation efforts in Afghanistan.

Rangeland of Afghanistan

The diverse forage and plant cover and the sight of grazing animals have made Afghanistan home to some of the most breathtaking ecotourism attractions (Jacobs et al., 2015; Ali and Shaoliang, 2013). The FAO land cover map from 2016 shows that rangelands, classified agroecologically, cover 47 percent of Afghanistan's total land area, which amounts to 30,243,985 hectares (Figure 2). Healthy rangelands benefit tourists and the tourism industry by supplying natural products extending well beyond their borders (Ghoryar and Roggero 2019). Additionally, pastoral systems in Afghanistan deliver numerous valuable services and products, including biodiversity, tourism opportunities, and raw materials. Rangeland tourism is becoming an increasingly important part of the tourism industry in Afghanistan. The pastoralists consume milk and produce various dairy products, often appealing to tourists (Hatfield and Davies, 2006). In Afghanistan, the Kochis traditionally distribute surplus dairy products like milk, yogurt, and buttermilk freely to relatives, needy individuals, and visitors. These dairy products from the Kochis are also sold in markets across Afghanistan. Pastoralists provide wool to manufacture famous Afghan carpets, astrakhan pelt, and handicrafts (Bedunah, 2010). Astrakhan pelt, produced from Karakul sheep in 1950s Afghanistan, controlled the major astrakhan markets. The raw products are also produced internationally competitively (Halbach and Ahmad, 2005).

Forests in Afghanistan

Forest ecosystems provide provisioning, regulatory, supporting, and cultural services; they play a crucial role in recreational and tourism opportunities for the public (Motlagh et al., 2020). Forest parks can promote sustainable development through recreation and tourism, fostering ecotourism (Dhami et al., 2014). This approach preserves natural resources, culture, the economy, and local communities. It protects ecological and cultural resources, provides local economic opportunities, and raises environmental awareness among travelers (Murgante et al., 2021). Afghanistan has 1.781 million hectares of forest that cover 2.879% of the country's total surface (Figure 2) (FAO, 2016). Afghanistan has two basic forest types: closed forests of oak and conifer in the monsoon-influenced areas of eastern Afghanistan. Forests in Afghanistan vary with region and elevation. Afghanistan's most significant forest area is in the country's southeastern region, where the Indian monsoon climate influences vegetation.

Noorsistan, Kunar, Paktika, Nangarhar, Khost, and Laghman provinces have good forest resources that attract tourists and visitors (Teimoory, 2022). The ecotourism alternative income resource encourages the development of non-timber product production and reduces forest dependency (Tang, 2015). Ecotourism development in a forest area could support conservation efforts and the rural economy. However, the tourism industry has been weak in Afghanistan due to war and social unrest. The Noorsitan, Kunar, Paktika, and Nangarhar provinces have several forest areas that are most attractive to ecotourism and recreation. The forests may be unique to tourists in these places because of their flora and fauna, landscape, and biodiversity. Therefore, forests in these provinces can be developed as suitable ecotourism sites because of their scenic beauty. Forest cover in Afghanistan declined steadily over three decades of armed conflict (Reddy and Saranya, 2017).

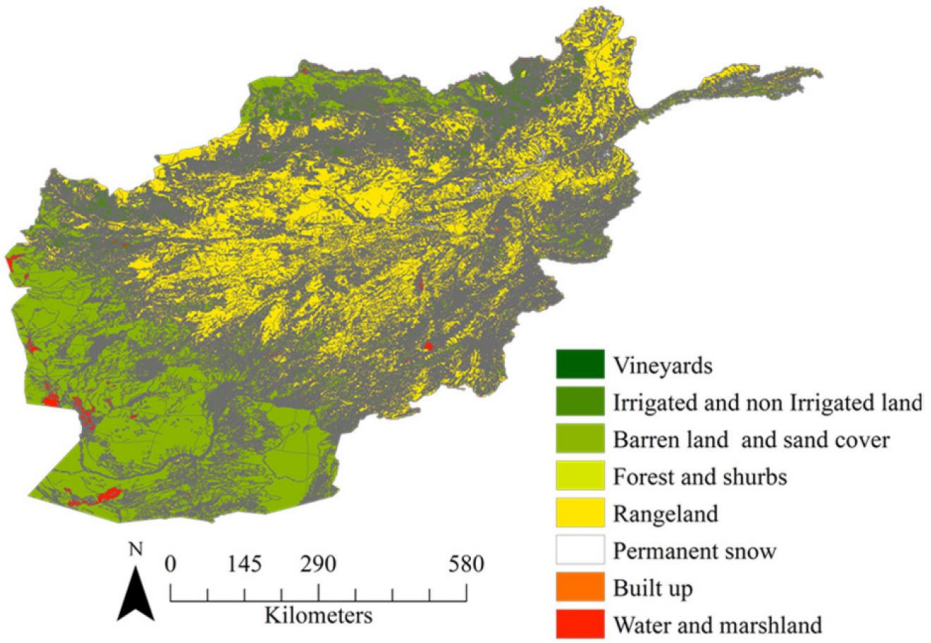

Figure 2: *Rangelands, forests, and other land types of Afghanistan (Arab and Ahamed, 2022).*

Food Tourism and Medicinal Plants in Afghanistan

Afghanistan has a four-season climate that provides suitable conditions for various medicinal plants, fragrant herbs, and wildflowers that flourish on its slopes and hillsides (Freitag, 2010). Afghanistan has around 650 types of medicinal plants that can grow commercially. Medicinal plants are indicators of indigenous knowledge and Afghanistan's sociocultural and ecological contexts. Most medicinal plants (62%) are also used as food, while the remainder is utilized solely for medicinal purposes (Kassam et al., 2010). Afghanistan is an important exporter of medicinal plants; each year, more than 45 species are exported to different countries (Ali and Shaoliang, 2013). Approximately 20% of Afghanistan's exports are medicinal plants. However, medicinal plants are presently exported in raw form, where they are processed, sorted, cleaned, packaged, labeled, and sold out at much higher prices to pharmaceutical companies. The medicinal plant has excellent potential for further contribution to the country's national income (Sediqi and Ayoubi, 2024). Food is crucial for organisms as it provides essential nutrients for energy, life maintenance, and growth promotion (Safi et al., 2018). Food tourism has become an integral part of the overall tourism experience. One-third of a tourist's total expenditure is spent on food, which generates significant revenue for the destination country (Bessiere and Tibere, 2013). Recently, many countries have started promoting tourism centered around their traditional foods (Tarcza 2012). In the social sciences, this aspect of tourism is often referred to as 'gastronomy' or 'culinary' tourism (Bjork and Kauppinen-Raisanen 2014). Food tourism involves understanding the origin and production of food resources, local food culture, and tourists' experiences in a destination, focusing on the consumption of food and beverages (Getz and Robinson 2014). A varied, seasonal diet rich in plant foods can attract tourists. Afghan cuisine consistently features multigrain breads, granola, beans, fruits, vegetables, salads, pickles, soups, toast, cheese, and dairy products.

Lakes and Waterbodies in Afghanistan

Afghanistan experiences significant seasonal variations in temperature and precipitation due to its arid continental environment. The country is home to several significant rivers, such as the Amu Darya, Arghandab, Farah, Hari, Helmand, Kabul, Kokcha, and Kunar (Safi and Safi 2024). Our country has few lakes due to the dry climate and the steepness of many regions (Mujeeb et al., 2024). Therefore, there are 30 natural lakes in Afghanistan, excluding artificial lakes (Azimi, 2017; Ahmad and Wasiq, 2004). One notable example is the fresh and blue lake, Chaqmaqtin Lake, in northeastern Afghanistan's Wakhan District of Badakhshan Province. Situated at approximately 4,024 meters in the Little Pamir, the lake stretches about 17 kilometers and is around 3 kilometers wide (Favre and Kamal 2004, MEW 2016). Also, Shiva Lake, a unique attraction in Afghanistan, is 11 km long and 8 km wide, renowned for its freezing water for nine months of the year (Bradfield and Rajabi, 2018). Another famous lake in Afghanistan is Band-e Amir Lakes. The Band-e Amir Lakes in central Afghanistan are a stunning chain of deep-sapphire lakes renowned for their unique beauty due to carbon dioxide-rich water. The lakes change color regularly, alternating between deep sapphire,

turquoise, green, and gray, reflecting the movement of minerals in the water. The deepest part of the lake is 492 ft (150 m) (Shroder and Ahmadzai, 2016). Tourism, national parks In 2009, Afghanistan opened its first national park, "Band-i-Amir," to attract tourists to Afghanistan. Since the 1950s, the lakes had been attracting tourists, but tourism slowed down with the beginning of the war in 1979. Today, the lakes are again attracting Afghan and foreign tourists. Another well-known destination is Qargha Lake, situated near Paghman Valley, approximately 20 km from Kabul, the capital of Afghanistan. Qargha Lake serves as Kabul's primary water reservoir. In addition to its stunning landscapes, there are many other notable sites to explore in the area (Ziaei, 2023).

Wetlands

Afghanistan has several wetlands; however, water diversion and drought increasingly threaten many of these resources (Mushwani et al., 2024; Khan, 2006a). Any area that benefits from reeds, water birds, meadow fish, and beneficial creatures is called a "wetland." One of Afghanistan's remarkable tourism sources is its unique wetlands (Shroder, 2014). Wetlands are among the most productive natural environments and provide numerous economic benefits. Additionally, wetlands are valuable for creating natural landscapes and vital habitats for rare plant and animal species (Ha et al., 2022). Afghanistan is an arid country, and the few existing wetlands are significant to biodiversity. The most important wetlands in Afghanistan include the Naver Ghazni Wetland, located 55 km west of Ghazni city. This wetland spans approximately 4,200 hectares and sits at an elevation of 3,200 meters above sea level (Khan, 2006b). Hamoun is another seasonal lake and wetland shared with Iran. The life of the local people depends on the Hamoun wetlands and their wildlife (Evenstar et al., 2018). During drought years in Afghanistan, the wetland dries up (UNEP, 2006). Afghanistan experiences significant winter rains and snowfall, while spring rain is more important for agriculture.

Geotourism in Afghanistan

Afghanistan's landscape is tall, forbidding mountains and deserts with treacherous, jagged. Geotourism, a sustainable tourism practice, benefits the environment and local communities by promoting abiotic nature and environmental protection (Maghsoudi et al., 2021). Geotourism complements ecotourism's primary focus on plants (flora) and animals (fauna) by introducing a third dimension: the abiotic environment (Sadry, 2023). The mountainous part of the Hindu Kush, Baba Mountain, Spin Ghar, and Tirband Turkestan have a high potential for tourism in the Geopark area (Bechert, 2008). As a mountainous land with heights, Afghanistan has strange geological landscapes, rich and diverse mines, natural and mineral springs, valleys, deserts, caves, and rare phenomena. The flow of rivers and the astonishing floods have reshaped the layers of the earth and created deep and long valleys in this country (Shroder, 2014). Afghanistan has contrasting landscapes featuring snow-capped peaks and arid, hot deserts. The glacial lakes, the salt marshes of the south, and the sweet and salty wetlands, swamps, plains, and steppes are geotourism sites in Afghanistan (Gritzner and Shroder, 2007). Afghanistan's unique geography and anthropological

perspectives make it an ideal location for expanding winter sports due to its rich natural environment and mountainous areas. Despite the natural potential, ski tourism in Afghanistan has always been neglected (Nordland, 2014). One of these rocky peaks is Nowshakh, the highest peak in the Hindu Kush Mountain range, located at the eastern point of Wakhan; its elevation reaches 7,492 meters (Shroder, 2014).

The Valleys of Afghanistan

Valleys and gorges are influenced by various factors such as conditions, climate, rock types, geological status, vegetation cover, river speed, slope, and the amount of water and materials the river carries (Favre and Kamal, 2004). Since these factors vary greatly, they are considered fundamental in attracting ecotourists. Fortunately, our country has numerous valleys with exclusive geographical and natural features (Shroder, 2014). The northern mountains surround them. The "Shakh Gerziwan Valley" in Faryab province is another valley that immerses every viewer's soul in pleasure due to its stunning natural landscapes (McCauley, 2002). This valley is part of a chain of valleys that begins in Salang in the north and ends in Shakardara in the south, neighboring Paghman and Kabul and many other valleys include "Shawa," "Tatmandara," "Hofiyan," "Golghandi," "Khwaja Siyaran Bala," "Topdara," "Sanjad Dara," "Rapisht," "Estarghach," "Khoshab," "Estalaf," "Farza," "Dako," "Goldara," and "Shakar Dara". All these beautiful valleys are considered the best ecotourism sites (FAO, 1996).

Natural Caves of Afghanistan

Caves are one of the Earth's natural features that have formed over many years through changes and transformations, often within mountains (GNU, 2014). Caves are considered valuable ecotourism attractions in the world. Some of Afghanistan's caves possess all aspects simultaneously, such as the Tora Bora caves in Nangarhar province. Among the beautiful caves of Afghanistan are the Deh Zindān Cave in Samangan, the Red Mountain Cave in Logar Province, the Zarmast Cave in Faryab, the Parandaz Cave in Turkman Valley of Parwan Province, and the Khwaja Ghar in Takhar Province (Smith, 1974). Unfortunately, caves are not considered a source of ecotourism and are not preserved; many natural and historical artifacts have been lost or transferred abroad, like the Tora Bora caves (Shroder, 2014).

Deserts of Afghanistan

Deserts harbor unique natural and cultural heritage found nowhere else in the world. Deserts, due to their abundant sunlight, clear and bright skies, vastness, sparse population, various minerals, and potential energies such as sunlight and strong winds, as well as their unique and untouched nature, can benefit humans (Santarém, 2020). In the southern part of Afghanistan, the Helmand Desert, Registan Plain, Dasht Marja, and Arbu Desert, as well as the rocky deserts in the west of the Great Arc of Helmand, such as the Khash Plain and Margu Plain, which have become rocky due to the erosion of fine sediment by winds, or the deserts in the southwestern part of Kandahar, southern Gereshk, Nimroz Province, and Farah Province can be mentioned (Whitney, 2006). However, despite Afghanistan having rich and

attractive deserts, it is very far from the concept of desert tourism and trekking (Wolf et al., 1994).

Natural Spring

Afghanistan, with its snow-capped heights, unique climatic conditions, and geological features, along with its other beautiful natural attractions, is home to numerous springs that flow and emerge from the embrace of passes and valleys, as well as from the crevices of sturdy rocks (Macpherson, 2015). Afghanistan's springs are a notable landscape feature that can attract tourists. Springs possess unique properties due to the presence of salts, elements, and natural chemical compounds, whose therapeutic effects have garnered interest for centuries (Zaryab et al., 2024). They are considered among the earliest human remedies for treating various diseases. Interestingly, medical trips have been taking place for thousands of years. These practices have led to countless visits to these areas over many years. Due to their value and unique natural landscapes, Afghanistan's springs and mineral waters can attract tourists worldwide (Bikse and Gavinolla, 2021).

Cultural Sites

Cultural sites and heritage promote cultural tourism. Cultural tourism refers to the movement of people to specific cultural attractions such as heritage sites, artistic manifestations, and arts outside their usual residence (Mckercher and du Cros 2002). Cultural tourism has potential benefits to local communities. Cities in both rural and urban areas facilitate cultural tourism. Cultural sites are the key factors that motivate tourists to visit (Boostani et al., 2018). Prehistoric sites, Buddhist stupas, Islamic architecture, and traditional bazaars are just a few examples of Afghanistan's rich cultural heritage and national sites. The Minaret and Archaeological Remains of Jam and the cultural landscape and archaeological remains of the Bamiyan Valley are recognized as properties on the World Heritage List. The tourist attraction sites portray significant symbols of religious values and heritage. Afghanistan has many cultural and historical sites, especially in larger cities like Kabul, Herat, Mazar-i-Sharif, Kandahar, and Bamiyan. Many cultural sites in Kabul can be attractive to tourists. The Darul Aman Palace, built in 1925 during Amanullah Khan's reign, is a historic structure in Kabul's 14th District. This site is open to the public and welcomes all tourists (AOP, 2023). The National Archives of Afghanistan, established by Abdur Rahman Khan for his son, houses over 15,000 late 19th-century documents, including some original and precious copies (Magacho et al., 2023).

The Herat Citadel is a historical structure in Herat that dates back to Alexander the Great. Babur's Gardens, located in Kabul, was established in 1528 by the Mughal Emperor Babur as a recreational and historical site. The Minaret of Jam, a 12th-century AD structure standing 65 meters tall in Ghor Province, Afghanistan, was designated UNESCO's World Heritage Site of the Year in 2012. The Hazrat Ali Shrine in Mazar-i-Sharif, Afghanistan, is a popular tourist destination known for its twin blue domes, attracting visitors from across the country. The Buddha statues in Bamiyan have long been iconic symbols of Buddhism, showcasing the

magnificence of the Bamiyan Valley in Afghanistan. The larger statue, Vairocana, stood at 53 meters, while the more miniature statue, Shakyamuni, measured 35 meters. Most of these statues have been destroyed (Mazloom-Yar and Yasouri 2023).

Ecotourism Development in Afghanistan

Ecotourism is a vital component of the sustainable tourism industry, emphasizing biodiversity conservation, environmental protection, poverty alleviation, and economic development. It prioritizes the integrity of ecological resources, environmental conservation, community development, and socio-economic advancement through local resources' low-impact and non-consumptive use (Liu et al., 2023). The expansion of ecotourism can boost domestic output and create revenue. Afghanistan must view the growth of the tourism industry as crucial to its attempts to increase employment and diversify its economy. Both domestically and internationally, tourism is essential to sustainable development. The UN Sustainable Development Goals, especially Goals 8, 12, and 14, which are especially focused on the tourism industry, are acknowledged to be largely achievable through ecotourism. Afghanistan needs to accept the moniker "Hippy Trail." A faculty of tourism and hospitality has been established at Kabul University for the first time, and the current administration has acknowledged the importance of the tourism industry as an economic sector. Additionally, there was a growth in the number of tourists in the nation; according to the Afghan Tourism Directorate in Kabul, there were roughly 2,300 tourists in Afghanistan in 2022 and 7,000 more in 2023.

In comparison, around 700 foreign visitors came to the nation in 2021. Afghanistan's GDP, economic growth, and social development can all be enhanced by the growth of ecotourism, which can provide valuable foreign exchange resources for the country. At the same time, it struggles with trade imbalance (Mazloom-Yar and Yasouri, 2023). The growth of ecotourism in Afghanistan will help with peacebuilding and upgrade the country's energy system, roads, hotels, airports, and healthcare facilities. The development of ecotourism in Afghanistan can boost the economy of rural communities in villages; by selling their handicrafts and regional goods to tourists and visitors, villagers can increase their income (Hessami, 2021).

Climate Change and Ecotourism in Afghanistan

Climate change significantly threatens ecotourism, threatening local livelihoods relying on natural resources and prompting communities to develop survival strategies (Scott, 2006). Ecotourism offers livelihood diversification and sustenance, but climate change impacts local communities, increasing vulnerability (Kaján and Saarinen, 2013; Hamilton and Tol, 2007). Climate change may alter the tourism resource base, negatively impacting local destinations' attractiveness, tourism demand, and local people's livelihoods, according to the literature on tourism-climate change (Becken and Hay, 2005; Hall and Higham). Climate change significantly impacts nature-based tourism, causing biodiversity loss and landscape appeal (Hemat,2024). Increased storms and extreme weather events, such as flooding, landslides, and forest fires, negatively affect tourism destinations' perceived attractiveness and resource base, affecting the overall tourism flow (Lin et al., 2023; Jamaliahand Powell, 2019).

Ecotourism's vulnerability to climate change is attributed to its dependence on protected areas and biodiversity, and understanding the relationship between tourism and climate change is growing (Weaver, 2011). Local people's dependence on nature raises the question of future adaptation capacity in the face of changing climate conditions (Safi et al., 2024). Climate change is expected to worsen Afghanistan's water scarcity, with glacier and snow cover losses accelerating, reducing water supplies and hydropower potential, and altering seasonal flows in basins prone to flash floods (Mujeeb et al., 2023). Despite frequent natural disasters and climate change impacts, Afghanistan has abundant natural resources like forests and rangelands, covering 2.879% and 46.97% of the country's surface, respectively (FAO, 2016; Mushwani et al., 2024). Ecotourism's vulnerability to climate change is due to its partial dependence on protected areas and biodiversity, and there has been an increase in understanding of the interaction between tourism and climate change. Afghanistan's biodiversity and ecological processes are crucial for local survival, with nearly all ecosystems used for ecotourism, except for arid deserts and frozen mountains (Mujeeb et al., 2023).

RESULT AND DISCUSSION

Afghanistan is a stunning country that may provide tourists with an unforgettable experience. Due to Afghanistan's distinct geography and high-altitude areas, the country's natural diversity has produced a wide range of ecotourism destinations and amazing sights. Adventure, eco-tourists, and those interested in its history and culture are drawn to Afghanistan because of its remarkable natural beauty and distinctive species. Afghanistan has many sites that can fulfill a wide range of recreational and spiritual needs for tourists. Ecotourism has the potential to be a significant driver of economic growth for Afghanistan, leading the country towards a stable and sustainable economy. Due to a lack of awareness among tourists about Afghanistan's lesser-known ecotourism sites, the country's potential as a travel destination remains underappreciated. Identifying and promoting these ecotourism sites is essential to highlight major tourist attractions. Ecotourism site identification in Afghanistan has often been limited. The study highlights the need for improved ecotourism site identification in Afghanistan to develop effective policies and understand local and national institutions involved in ecotourism development while also offering opportunities for future research.

Afghanistan's diverse ecosystem offers a profitable ecotourism sector due to its diverse animal and plant species. National parks like Wakhan National Park attract tourists with unique wildlife, contributing to global jobs. Afghanistan's 1.781 million hectares of forest cover 2.879% of the country's surface, with the largest being in the Southeastern region. Afghanistan's diverse forage, plant cover, and grazing animals make it a popular ecotourism destination, with rangelands providing natural products and pastoralists producing dairy, wool, and handicrafts. Afghanistan has 30 natural lakes, including Chaqmaqtin, Shiva, Band-e Amir Lakes, and Qargha. The country's first national park, Band-i-Amir, opened in 2009. Wetlands like Naver Ghazni Wetland and Hamoun are vital for biodiversity and economic benefits but are threatened by water diversion and drought. Wetlands, such as Naver Ghazni

Wetland and Hamoun, are significant for biodiversity and economic benefits. Qargha Lake near Paghman Valley is Kabul's primary water reservoir. However, water diversion and drought threaten many of these resources, affecting the country's natural landscapes and wildlife.

Geotourism in Afghanistan offers a unique perspective on the abiotic environment, focusing on geological landscapes, rich mines, and diverse natural and mineral springs. The country's mountainous terrain, including Hindu Kush, Baba Mountain, Spin Ghar, and Tirband Turkestan, is ideal for expanding winter sports. Afghanistan's caves, deserts, snow-capped heights, and geological features attract tourists for ecotourism. The country's springs, known for their therapeutic effects, have been used as medical remedies for thousands of years, attracting tourists worldwide due to their unique natural landscapes.

Cultural tourism involves visiting heritage sites and artistic manifestations outside one's home, benefiting local communities. Afghanistan's rich cultural heritage includes prehistoric sites, Buddhist stupas, Islamic architecture, and traditional bazaars. World Heritage-listed sites like Kabul, Herat, Mazar-i-Sharif, Kandahar, and Bamiyan showcase religious values. Ecotourism in Afghanistan is a sustainable tourism sector promoting biodiversity conservation, environmental protection, poverty alleviation, and economic development. It boosts GDP, social development, peacebuilding, energy system upgrades, and rural communities' income, contributing to the UN Sustainable Development Goals. Climate change threatens ecotourism, affecting local livelihoods and survival strategies, especially in Afghanistan, due to water scarcity and the vulnerability of nature-based tourism. Afghanistan's ecotourism sites, like Minaret of Jam, face threats from natural disasters and climate change, including landslides, earthquakes, and heavy snow, exacerbated by climate change.

Identifying potential tourist sites will aid in developing a demonstrative plan for ecotourism based on locally available natural resources. Identifying ecotourism sites in Afghanistan is crucial for creating a list of protected areas for conservation and enabling site-specific pricing. These sites are often far from major cities, requiring effective management and conservation. Identifying these sites promotes environmental awareness and responsibility for preserving natural heritage while distributing tourist traffic more evenly.

CONCLUSION

Identifying ecotourism sites in Afghanistan has often been constrained. It is crucial to pinpoint potential sites to create effective policies and plans for ecotourism. The current study opens avenues for future research on identifying potential ecotourism sites in various ecosystems. With its geographical location, historical trade significance, vibrant civilization, distinctive culture, hospitable people, and invaluable cultural, artistic, and natural heritage, Afghanistan has long attracted foreign tourists and travelers. However, income and international tourist arrival statistics indicate that the country has not fully utilized its potential. Afghanistan's high plateaus and diverse geography, including dense forests and

vast deserts, make it an ideal location for ecotourism investments. The country's rich history and diverse customs make it a prime destination for ecotourism, with resources readily available in ecotourism hubs. Afghanistan features towering hills, enchanting valleys, and stunning landscapes. Many outdoor activities, such as rock climbing, mountain biking, paragliding, trekking, rafting, and ice skating, are popular among tourists. The evidence indicates that most ecotourists travel to Badakhshan, Bamiyan, and Nuristan provinces. The major ecotourism sites in Afghanistan include Afghanistan's biodiversity and wildlife, its rangelands, forests, food tourism, and medicinal plants. Other notable attractions are the lakes and water bodies, wetlands, tourism sites, valleys, natural caves, deserts, natural springs, and cultural sites.

Afghanistan's ecotourism potential is significantly greater than other tourism sectors. Afghanistan's natural geography and potential ecotourism attractions suggest a unique and promising economic resource, although left to its own devices. Climate change threatens ecotourism, impacting local livelihoods and survival strategies. Nature-based tourism, reliant on protected areas and biodiversity, is vulnerable. Ecotourism relies on all ecosystems except arid deserts and frozen mountains. Afghanistan's water scarcity is expected to worsen due to glacier and snow cover losses. Many remote areas suffer from inadequate management and inefficient waste disposal systems. Additionally, the infrastructure for tourism remains underdeveloped in Afghanistan; for instance, the country has very few hotel rooms. Tourists predominantly visit well-known destinations, like Band-e Amir Lakes, resulting in lower visitor numbers at other ecotourism sites across Afghanistan. Therefore, identifying ecotourism sites will help distribute tourist traffic more evenly. In Afghanistan, inadequate management, waste disposal, and underdeveloped tourism infrastructure lead to lower visitor numbers at ecotourism sites, necessitating more equitable distribution of tourist traffic.

RECOMMENDATION

The ecotourism industry in Afghanistan requires extensive research, planning, and conservation. It is crucial for future generations to experience the country's natural beauty, culture, and local communities. Introducing ecotourism sites will support the local economy, address environmental concerns, and revive traditional culture and traditions. The introduction of ecotourism sites will present the natural beauty of Afghanistan to foreign and domestic ecotourists so they can enjoy the country's nature, culture, and local communities. Most of Afghanistan's ecotourism and natural heritage sites are far from the most significant cities, highlighting the need for effective conservation and management. Identifying these sites will create opportunities for nature engagement, raise awareness about environmental issues, and foster a sense of responsibility to protect our natural heritage. Natural attractions and diverse geographical climates have brought valuable resources to the economy, which certainly require various conditions for their utilization, all of which depend on stability in the tourism sector. For good management and planning of ecotourism, the following recommendation is given:

1. To develop effective policies and planning for ecotourism, it is essential to identify potential sites for ecotourism in Afghanistan.
2. The tourist sites should be preserved for future use. Thus, ecotourism will bring significant benefits without causing serious social and environmental problems in Afghanistan.
3. Attention should be paid to existing problems, such as the misconceptions of some foreign tourists about Afghanistan.
4. Tourism in Afghanistan is not yet considered as serious as it should be. Therefore, to progress in this field, especially in the natural resources sector, Afghanistan's tourism industry should be managed coherently, controlled, and sustainably based on effective planning.
5. In order to achieve sustainable ecotourism development, cooperation and coordination among influential forces, including the private sector, the public sector, the host community, and international organizations, are essential and should be considered.
6. With proper management, the ecotourist site management and conservation of Afghanistan will protect suitable sites and allow them to be utilized to a great extent. Instead of relying on the aid of the global community, we can focus on the tourism industry, especially ecotourism.
7. Ecotourism is multisectoral; only the Ministry of Information and Culture's responsibility as a public organization will not be efficient in managing the sectors. The other sectors, including the Environmental Protection Agency, the Ministry of Foreign Affairs, the Ministry of Transport and Aviation, the Ministry of Agriculture and Livestock, the Ministry of Public Works, the Ministry of Education, the Ministry of Higher Education, and media sectors, are needed to be involved in ecotourism management.

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