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The Essence and Theoretical–Methodological Foundations of Sport Tourism Resources

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Abstract: A sport tourism resource, when deployed in the process of delivering sport tourism services, yields a defined economic and social effect. However, the output of each resource in the sport tourism sector is bounded and is characterised by its finiteness. This article provides a scientific examination of the essence and the theoretical–methodological foundations of sport tourism resources. Drawing on scientific analysis, a comparative approach, survey data and the study of statistical sources, the paper classifies sport tourism resources into five interrelated categories—natural, infrastructural, financial, technological and labour resources—and evaluates their role in the sustainable development of sport tourism in the mountainous regions of Uzbekistan. Using the Omonqo‘ton (Amankutan) area of the Urgut district, Samarkand region, as a case study, the study assesses the territory’s potential for establishing a sustainable sport tourism zone. The results indicate that the country’s national nature parks alone hold a development potential of more than 213,000 hectares, and that several mountain districts of the Samarkand region possess a high capacity to form sustainable sport tourism zones. The study concludes that the rational, balanced and complementary use of an integrated resource base is the principal precondition for the efficient and sustainable development of sport tourism.

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1. Introduction

Tourism is a sector of major importance for national economies and for the development of socio-cultural ties between states. According to the World Tourism Organization (UN Tourism), in 2024 the tourism sector created an additional 27.4 million new jobs, supporting approximately 348 million jobs worldwide; 1.4 billion international tourist arrivals were recorded, and export revenues from tourism reached USD 1.9 trillion [1]. In the same year, the contribution of tourism to global gross domestic product (GDP) reached USD 11.1 trillion, equivalent to 10 per cent of world GDP [2]. Under conditions in which the quality of tourism services is increasingly prioritised worldwide—particularly in relation to raising living standards, strengthening public health and addressing the demand for recreation—the socio-economic significance of the sport tourism sector continues to grow. Accordingly, developing sport tourism services on a global scale and using their resources efficiently remain pressing problems.

The conceptual foundations of sport tourism have been examined in a substantial body of international literature. In his monograph *Tourism Management*, Stephen J. Page

analyses the ideas and approaches associated with sport tourism, treating it as a distinct segment of the tourism industry; he demonstrates that sport tourism destinations are directly linked to marketing and offers an interpretation of sport tourism resources [3]. The textbook *Sport Tourism* by Joy Standeven and Paul De Knop is regarded as one of the most important scholarly sources in the field and as one of the first comprehensive works to analyse systematically the interrelationship between sport and tourism; it studies sport tourism through a complex, multidimensional lens—as an economic phenomenon, a social process and a recreational activity—and sets out the types of natural and social resources that underpin it [4]. Simon Hudson’s monograph *Sport and Adventure Tourism* analyses the field from economic and marketing perspectives and treats sport tourism and adventure tourism as closely interrelated directions [5]. Heather J. Gibson, one of the most prominent American scholars in the field, examines primarily the social dimensions, motivational factors and the role of gender and family in sport tourism, proposing that sport tourism be studied not merely as an economic phenomenon but also as a social-psychological one [6].

The field has been further consolidated by a number of foundational works. Weed and Bull conceptualise sports tourism as a social, economic and cultural phenomenon arising from the unique interaction of activity, people and place, and structure the field around the perspectives of participants, policy and providers [7]. Hinch and Higham develop an integrated framework that positions sport as a tourist attraction and links sport tourism explicitly to questions of seasonality, space and sustainable destination development [8]. Earlier, Gibson’s critical analysis of research distinguished three principal forms of sport tourism—active, event and nostalgia sport tourism—and established a research agenda that continues to structure the field [9]. Gammon and Robinson clarify the conceptual boundaries of the field by differentiating “sport tourism” from “tourism sport” according to the primary motivation of the traveller [10], while the edited volume by Ritchie and Adair synthesises the interrelationships, impacts and issues of sport tourism across economic, socio-cultural and environmental dimensions [11]. Kurtzman and Zauhar, in turn, characterise the global expansion of the phenomenon and propose a typology of sport tourism categories ranging from attractions and resorts to cruises, tours and events [12].

Notwithstanding this rich literature, the resource basis of sport tourism—and in particular the systematic classification of sport tourism resources and the assessment of their territorial potential in the mountainous regions of Uzbekistan—remains insufficiently studied. The aim of the present study is therefore to clarify the essence of sport tourism resources, to substantiate their theoretical–methodological classification, and to evaluate the potential of selected mountain territories of Uzbekistan—above all the Omonqo‘ton (Amankutan) area—for the formation of sustainable sport tourism zones.

2. Materials and Methods

The study employed a combination of methods: scientific analysis, the comparative method, questionnaire surveys, and the study of statistical data. The theoretical component drew on the international scholarly literature on sport and tourism in order to define and classify sport tourism resources. The empirical component focused on the mountainous regions of Uzbekistan, with particular attention to the Samarkand region and, as a detailed case study, the Omonqo‘ton (Amankutan) area of the Urgut district.

Quantitative data on land areas, recreation zones and protected territories were obtained from official sources, including the data of the Ministry of Ecology, Environmental Protection and Climate Change of the Republic of Uzbekistan and relevant government decisions. The spatial assessment of the case-study territory was carried out using cartographic material generated with the earth.google.com (Google Earth) platform.

The attractiveness and suitability of the territory for sport tourism were evaluated by combining three complementary approaches into a single, refined method for determining the effectiveness of a sport tourism zone, based on the criteria of tourist–geographical taxa (the law of location), the size of the territory, and the composition of available objects.

3. Results

3.1 *The concept and classification of sport tourism resources*

Sport tourism resources are defined here as a complex of natural, cultural, infrastructural and human resources used in sport tourism economic activity, which together serve to satisfy the material and non-material needs associated with sport tourism. Even when sport tourism services are used rationally, it is impossible to create output beyond the defined limit of a given resource. This is especially important for the natural and cultural tourism resources of sport tourism, since their use without waste or degradation is required.

As a system, sport tourism resources perform a series of functional tasks and resolve a range of problems. They can be classified into five interrelated categories, as shown in Figure 1.

Tourism Resources of the Sport Tourism Sector				
Natural resources	Infrastructural resources	Financial resources	Technological resources	Labour resources

Figure 1. Classification of the tourism resources of the sport tourism sector.

The key elements of sport tourism resources within tourism are summarised in the form of a classification of natural resources and their influence on tourism (Table 1).

Table 1. Natural resources in the sport tourism sector and their influence on tourism.

Natural resource	Description	Influence on sport tourism
Natural scenery and landscapes	Mountains, riverbeds, ravines, deep lakes, and biological diversity	Touring, family recreation, and photography tourism
Ecosystems and biodiversity	Natural ecosystems and biological diversity	Ecology-based tourism and nature conservation
Climate and clean-air conditions	Climatic conditions, seasons, and exotic climatic zones	Recreation periods, exotic tourism, and seasonal travel
Natural monuments	Young lakes, geothermal zones, distinctive mountain formations, and marine areas	Exploration tourism, geographical research, and natural monuments
National parks and nature reserves	National parks and protected natural areas (reserves)	Ecological tourism, nature conservation, and preservation of biodiversity

3.2 *Natural resources and protected territories of Uzbekistan*

The national nature parks of Uzbekistan possess the potential to develop sport tourism on 213,251 hectares of land. It was established that ecotourism can be developed on the lands of forest and forest–hunting enterprises, mountainous areas and national nature parks without changing the designated category of the land. In particular, areas

have been allocated for economic activity and recreation within the national nature parks of “Omonqo‘ton” (Urgut district, Samarkand region), “Orolqum” (Mo‘ynoq district, Republic of Karakalpakstan), “Yuqori To‘palang” (Sariosiyo district, Surxondaryo region), “Pop” (Pop district, Namangan region) and “Bobotog’” (Uzun district, Surxondaryo region). On the basis of these data, it was established that, relative to the total national-park land area, the share allocated for recreation and economic use is 20 per cent for “Orolqum”, 30 per cent for “Pop”, 27 per cent for “Omonqo‘ton”, 24 per cent for “Yuqori To‘palang” and 25 per cent for “Bobotog’” (Table 2).

Table 2. Analysis of lands allocated for sports tourism in the regions of the Republic of Uzbekistan.

No.	Name of natural resource	Region of location	Total land area (ha)	Area allocated for recreation (ha)	Share of park land (%)
1	“Orolqum” NNP	Mo‘ynoq district, Republic of Karakalpakstan	1,000,000	200,000	20%
2	“Pop” NNP	Pop district, Namangan region	10,000	3,000	30%
3	“Omonqo‘ton” NNP	Urgut district, Samarkand region	1,500	400	27%
4	“Yuqori To‘palang” NNP	Sariosiyo district, Surxondaryo region	27,851	6,851	24%
5	“Bobotog’” National Nature Park	Uzun district, Surxondaryo region	12,064	3,000	25%
Total			1,051,415	213,251	

NNP = National Nature Park.

More than sixty sources of mineral water of varying chemical composition have been identified in the mountainous areas of Uzbekistan, on the basis of which balneological sanatoria and clinics have been established. The republic contains dozens of large caves—Obiraxmat, Teshiktosh, Omonqo‘ton, Machay, Amir-Temir and others. In the mountainous areas of the Zomin zone and of the Samarkand, Tashkent, Surxondaryo and Qashqadaryo regions—including the Qirq Qiz gorges, Qo‘ytosh and Guralash—there are botanical, geological and hydrogeological natural monuments, waterfalls and groundwater discharge points. Many remarkable monuments of antiquity have also been preserved: rock paintings and burial mounds, fortresses, traces of prehistoric settlements, the remains of mines and smelting furnaces, antique artefacts, dinosaur footprints and others, all of which may be used as sport tourism resources. On the basis of these data, the development of ecotourism in the mountainous regions of the Republic of Uzbekistan is analysed below.

Tashkent region. The mountains of the Tashkent region dominate the recreational system of the country’s mountain zone. The Western Tian Shan is the republic’s largest resort, medical, tourist and general health-improvement area, containing the “Xumson”, “Tovoqsoy” and “Oqtosh” sanatoria, the “Kumushkon”, “So‘qoq”, “Kristal” and “Sokol” rest houses, and numerous recreation sites, children’s camps, boarding houses, and tourist and sport bases. These include the following.

- **Chorvoq reservoir.** The modern “Chorvoq Oromgohi” tourist complex is located on the shore of the Chorvoq reservoir. Clean mountain air, a cool summer, abundant greenery, developed infrastructure, extensive water bodies and the reservoir’s convenient bathing shores have together transformed this area into a destination for mass recreation and treatment. The shoreline zone, extending for almost one hundred kilometres, contains numerous recreation sites and children’s camps near the villages of Bog’iston, Burchmulla, Yangiqo’rg’on and Yusufxon, linked by the ring road around the Chorvoq basin.
- **Chimyon (Chimgan) sport–tourist complex.** Situated in a beautiful valley at an altitude of 1,300–1,700 m above sea level, the Chimyon resort holds a special place. A tourist–health complex comprising sanatoria, tourist bases, boarding houses, recreation sites, children’s camps and sport facilities has been established here. Chimyon offers excellent conditions for recreation and skiing, especially in winter.
- **Oqtosh mountain sport tourism complex.** In this mountain recreation complex of the Tashkent region, health improvement and mountain tourism are well developed. It contains the “Oqtosh”, “Tavaksoy” and “Xumson” sanatoria, numerous children’s camps and enterprise recreation sites, and many natural attractions and historical monuments. To the south of the complex lies the Xojikent reservoir, whose shores host recreation sites and sport facilities.
- **Oqsoqota–Parkent and So’qoq recreation zones.** These recreation zones (Parkent district, Tashkent region) cover the low- and middle-mountain zone of the Chotqol range. The Chotqol mountain forest reserve and its museum, together with the abundance of remarkable landscapes, attract considerable interest among tourists.
- **Ohangaron valley.** A large recreation zone (Olmaliq, Ohangaron, Angren, Lashkarek, Yangiobod, Ko’lbuloq, Sinegore and others) has been established in the foothills and mountains of the Kuramin range. Clean air, mountain peaks, juniper and birch forests, and clear streams and waterfalls attract tourists and holidaymakers at any time of day. The many monuments relating to the region’s ancient history make it possible to expand the scope of educational tourism [13].
- **Amirsoy.** Located 80 km from Tashkent, Amirsoy is convenient for family holidays and for tourists of all ages. Rope-way (cable-car) lines with a total length of 15 km, the longest being 2,193 m, have been built here for skiers and snowboarders.

In order to develop further the tourist potential of the mountainous areas of the Bo’stonliq district of the Tashkent region, to improve the system for attracting foreign investment, to create additional jobs and modern all-season resorts, hotel complexes and cultural, health, retail, entertainment and other tourism facilities in remote areas, and to create favourable conditions for building modern engineering infrastructure in the country’s mountainous areas, the Cabinet of Ministers of the Republic of Uzbekistan adopted Resolution No. 559 of 17 August 2020 “On additional measures for the development of tourism infrastructure in mountainous areas” [14]. The Qashqadaryo, Surxondaryo, Jizzakh, Samarkand, Namangan and Fergana regions provide clear examples of the application of this policy.

The mountains of other regions are distinguished by a weaker development of recreation than in the Tashkent region. In the Qashqadaryo, Surxondaryo, Jizzakh and other regions there are few tourism and recreation centres; mountainous areas contain children’s camps and the rest houses or recreation sites of large enterprises. In the Sariosiyo district of the Surxondaryo region, at an altitude of 1,800 m in the area of the Hisor mountains, lies the Xondiza rest house—located on the highest mountain in Uzbekistan and operating only in summer. The “Omonxona” sanatorium in the Boysun district of the Surxon oasis is renowned for its handsome building, comfortable conditions, beautiful scenery and natural curative waters [15].

Although the mountains of the Samarkand, Namangan and Fergana regions are considerably lower than the Tashkent mountain recreation zone in terms of the level of

recreational development, they are distinguished by the diversity of services offered. A network of tourist bases, rest houses, recreation sites, children's camps and similar facilities exists. In the Fergana mountains there are the "Vuadil" sanatorium (for children), "Chortoq" (a balneological resort), the "Shohimardon" sanatoria and others [13].

The development of ecotourism in the mountainous regions of Uzbekistan was assessed according to the characteristics of tourist-geographical taxa. For the Tashkent region, the assessment yielded the following indicators: the number of complex tourism types exceeds five; the length of stay exceeds one week; the dimensions correspond to 1,000–10,000 km²; and the mapping form is a linear area. On the basis of these indicators, the Tashkent region may be characterised as a tourist zone. It is therefore necessary to determine the potential for developing ecotourism across the territories of the regions of the Republic of Uzbekistan.

3.3 *Infrastructural resources*

In the sport tourism sector, infrastructural resources are among the principal elements of tourism activity. They help to create convenience and efficiency for tourists and serve to provide complete, high-quality services for travellers. Infrastructure creates the foundations needed for each entity operating in the tourism sector to develop its production and service activity. The types of infrastructural resources of sport tourism are presented in Table 3.

Table 3. Description of infrastructural resources in the sport tourism sector.

Resource type	Description
Hotels and tourism facilities	Hotels, guesthouses and tourism-related facilities in rural areas serve to receive tourists and to satisfy their requirements.
Restaurants and catering services	Catering services are of major importance in tourism; restaurants and catering services help to increase the attractiveness of tourism.
Transport services	Buses, aircraft, trains, cars, bicycles and other means of transport ensure that tourists reach their destinations.
Tour operators and excursions	Tour operators organise tours and excursions and provide tourists with guidance and services along tourism routes.
Internet platforms	Online booking and the organisation of excursions and tours give tourists easy access to information and services.

3.4 *Financial resources*

Capital resources are among the principal factors for the development of the sport tourism sector. They exist in the form of investments, credit and financing, and are used to create and modernise tourism infrastructure. These resources are necessary for the sustainable growth of the sport tourism sector, for the creation of new facilities and services, and for the improvement of existing infrastructure.

Investments are important for implementing sport-tourism-related projects and improving infrastructure. For example, capital is required to build new hotels for sport tourism, to restore recreation sites, and to improve recreational and cultural services. This in turn can increase interest in sport tourism and bring benefits to the national economy. Credit and financing provide the resources needed to implement projects in the tourism sector: by lending to tourism companies and financing small and medium-sized businesses, banks and financial institutions support new projects—for instance, those aimed at improving transport infrastructure, introducing new sport tourism services and modernising existing facilities.

At the same time, these capital resources require operation in balance with economic, social and ecological factors. The principal types of financial resources—investments, grants and subsidies—each play an important role in strengthening and developing the sport tourism sector, as summarised in Table 4.

Table 4. Financial resources in the sport tourism sector and their benefits.

Type of financial resource	Meaning	Examples	Benefit and purpose
Investments	Investment of capital from the public or private sector into tourism projects.	Building new hotels, improving transport infrastructure, diversifying tourism services, introducing innovative technologies.	Benefits the development of the tourism sector and the economy; necessary for creating new facilities and modernising existing infrastructure.
Grants	Financial assistance from the state or international organisations aimed at implementing tourism projects.	Social and ecological projects; projects aimed at preserving natural and cultural heritage.	Ensures sustainable development; finances projects in disadvantaged areas or those of ecological importance.
Subsidies	Assistance provided by the state to finance projects in the tourism sector.	Supporting small and medium-sized businesses, creating tourism infrastructure, introducing new services.	Increases the competitiveness of businesses in the tourism sector and ensures their effective operation.

3.5 Technological resources

Technological resources are among the factors needed to apply complex and innovative methods and tools in the sport tourism sector and to raise the quality of service delivery. The introduction of new technologies helps to deliver numerous innovations and high efficiency in tourism. These resources are aimed at increasing the competitiveness of sport tourism infrastructure and services and at creating a convenient and efficient experience for tourists. The types of technological resources in sport tourism are presented in Table 5.

Table 5. Technological resources in sport tourism.

No.	Technological resource	Description	Examples
1	Online reservation systems	The ability to book tourism services via the internet.	Booking.com, Airbnb, Expedia, Agoda
2	Mobile applications	The ability for tourists to organise travel, obtain information and manage services.	Google Maps, TripAdvisor, Uber, Yelp

3	Virtual tours	The ability to visit physical sites and experience tourism online.	Virtual museums, historical monuments, excursions
4	Assistive technologies (chatbots, AI assistants)	Automating tourism processes and presenting services and information in a systematic way.	ChatGPT, online ticket booking, restaurant chatbots
5	Digital marketing and data analytics	Establishing contact with customers, personalising services and improving marketing strategies.	Google Analytics, Instagram and Facebook advertising campaigns

The introduction of technological resources into tourism helps to ensure the sustainable development of tourism, to satisfy customer needs and to maintain the competitiveness of the sector, enabling the creation of new business models and the improvement of service efficiency.

3.6 Labour resources

Labour resources differ from all other types of resource in that, by constituting the active workforce, they play the principal role in delivering tourism services. Labour resources ensure the production, marketing and advancement of all services and products in the sport tourism sector. The resource composition of tourism enterprises in the sport tourism service sector differs in certain respects from that of industrial enterprises. For example, labour costs in tourism may in many cases be considerably higher than in industrial enterprises, since tourism services require extensive use of human resources, skills and specialists. At the same time, alongside fixed assets, working capital and labour resources, information and intellectual resources are also of major importance in sport tourism. Under today's globalised and digitalised conditions, information technology and intellectual capacity occupy a central place in ensuring competitiveness in the sport tourism sector. The principal categories of labour resources are presented in Table 6.

Table 6. Labour resources in the sport tourism sector.

Category	Description
Guides	Guides explain to tourists the meaning and historical significance of historical and cultural monuments and help to direct them along tourist routes. They must have a good knowledge of tourism services and excellent communication skills.
Hotel staff	Hotel staff receive tourists, create comfortable conditions for them and remain competitive in service delivery. The qualifications and hospitality of these staff have a major influence on tourist satisfaction.
Excursion organisers	Excursion organisers arrange tours and excursions for tourists and provide them with comprehensive information. They are responsible for the content and historical expressiveness of the excursion and have a significant influence on travel impressions.
Other service providers	This category includes staff providing services in hotels, restaurants and other places. They ensure convenience and high-quality service for tourists.

3.7 Integration of sport tourism resources

In the effective management of sport tourism resources, the quantity and quality of the resources and their inherent production characteristics must be consistent with the

overall strategy of the tourism enterprise, because overall performance in tourism is in most cases determined by the “weakest link” —that is, by the least productive resource. For this reason, ensuring proportionality and mutual complementarity among resources acquires strategic importance. The integration of resources among sport tourism entities may yield the following effects:

- Raising the professional capacity of staff delivering sport tourism services and ensuring the supply of qualified personnel;
- The wide introduction of proven management technologies in organising sport tourism services;
- Capturing a large share of the sport tourism services market and covering new target segments;
- Ensuring the uninterrupted provision of sport tourism infrastructure and the optimal use of existing resources, in particular hotels, transport and guide services;
- Directing sport tourism resources towards active, high-demand destinations—that is, concentrating resources in priority areas;
- Increasing the investment attractiveness of integrated sport tourism clusters and raising the profitability of financial operations.

In this way, an integrated and unified resource base serves as an important foundation for raising the efficiency of tourism activity. In assessing the efficiency of using sport tourism resources, both aggregate and partial indicators are employed.

3.8 Case study: the Omonqo‘ton (Amankutan) area

In the course of studying the resources associated with sport tourism, it was established that, in the Samarkand region, the Zarafshon and Turkiston mountains on one side are bordered by the Nurota mountains on the other. As noted above, sport tourism is a narrow but highly specialised segment relative to tourism as a whole, encompassing travel, competitions, training and adventure elements associated with sporting activity. This segment covers the following directions: mountain and alpine tourism; ski and snowboard tourism; water sports (rafting, kayaking, surfing); cycling- and trekking-based tourism; and tourism associated with attending extreme and competitive sporting events.

From this perspective, the mountainous areas of the region were analysed by dividing them into zones on the basis of their similar characteristics, in order to support the sustainable development of sport tourism (Table 7).

Table 7. Analysis of the potential for establishing a sport tourism zone in the territory of the Samarkand region.

No.	District name	Distance from the city (km)	Number of objects	Description of sport-tourism objects
1	Urgut district, Qoratepa village, Taxta Qoracha pass	43	3	1. Rock formations of various shapes. 2. Forest. 3. Caves.
2	Urgut district, Omonqo‘ton village	40	5	1. Forest. 2. Rock formations. 3. Caves. 4. Stream.
3	Samarkand district, Ohalik village	16	6	1. River. 2. Mountains. 3. Gardens. 4. Open areas. 5. Qulbobob lake. 6. Rock formations.
4	Samarkand district, Mironko‘l village	18	4	1. Forest. 2. Rock formations of various shapes. 3. The “Cholbobob” height. 4. An 8 km-long stream.

On the basis of the analysed data, it can be stated that the six sport-tourism objects in and around Ohalik village (Samarkand district) and the five sport-tourism objects in and around Omonqo'ton village (Urgut district) possess a high potential for establishing a sustainable sport tourism zone. By distributing the tourists attracted to these villages among nearby sport-tourism objects in accordance with individual demand, it is possible to control the pressure on the territory. By dividing tourists into numerous small groups and providing systematically planned services to many tourists simultaneously, sport tourism can be developed with due attention to the concept of sustainability.

The Omonqo'ton area was selected as the object of study, because the research established that 400 hectares within this area have been legally allocated as a sport zone and, according to the data on the official website of the Ministry of Ecology, Environmental Protection and Climate Change, Omonqo'ton village has been included as a sport-tourism object, with a recreation site capable of being established on a 25-hectare mountainous area [16].

To determine the potential for developing sport tourism in the territory, the distinctive characteristics of the sport tourism resources located there were analysed. To assess the potential for establishing a sport tourism zone in the "Omonqo'ton" area, a refined method was used that combines three approaches to determining the attractiveness of the territory, taking into account the specific characteristics of sport tourism in mountainous areas. According to criterion I (tourist-geographical taxa, the law of location), the "Omonqo'ton" mountainous area in the Urgut district of the Samarkand region conforms to the status of a "sport tourism zone", as expressed by the map created on the basis of the earth.google.com platform (Figure 2).

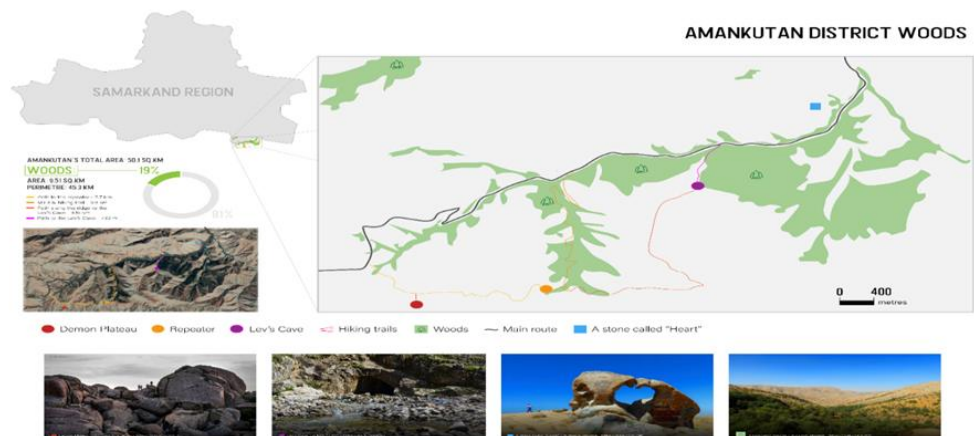


Figure 2. Map of the Omonqo'ton (Amankutan) area.

On the basis of this map, the area of the territory is 50 km², and the territory contains six objects: the forest; the trails and the historical sites located on them (the Amir route); the relay (transmission) installations near attractive mountain sites; the cave (Levs cave); the rocky landscape (the Valley of the Dragons); and a road with picturesque scenery. According to the characteristics of the tourist-geographical taxa, these indicators correspond to indicators 1, 2 and 3 of a sport tourism zone; however, with regard to indicator 4, the length of tourist stay in this territory does not reach one to two days.

4. Discussion

The findings confirm that sport tourism resources are most usefully understood not as a list of isolated assets but as an integrated system whose overall productivity is governed by its weakest component. This systemic view has direct practical consequences. The data on national nature parks (Table 2) show that, although Uzbekistan possesses a substantial resource endowment—more than 213,000 hectares allocated for recreation and economic use across five parks—the realisation of this potential depends on the balanced development of all five resource categories (natural, infrastructural, financial, technological and labour), rather than on natural endowment alone. The comparison between the Tashkent region and the other mountain regions illustrates this point: the Tashkent region's status as a fully developed "tourist zone" reflects not a superior natural endowment but a denser accumulation of infrastructural, financial and labour resources.

The Omonqo'ton case study refines this conclusion. The territory satisfies three of the four indicators of a sport tourism zone—type diversity, size and the composition of objects—but fails the fourth, length of stay, because tourists currently remain for less than one to two days. This shortfall is not a natural-resource deficiency; the area offers forest, trails, historical sites, caves and distinctive rocky landscapes across 50 km². Rather, it reflects underdeveloped infrastructural and service resources, which limit the territory's capacity to retain visitors. The practical implication is that interventions should prioritise the complementary resources—accommodation, guiding services, planned itineraries and the controlled distribution of small visitor groups—needed to convert a high natural endowment into sustained tourist stays while respecting the carrying capacity of the environment.

On the basis of these findings, the following practical recommendations may be advanced. First, the six sport-tourism objects around Ohalik village and the five around Omonqo'ton village should be developed as integrated, sustainable sport tourism zones, with visitor flows distributed among objects according to individual demand in order to control territorial pressure. Second, the 400-hectare sport zone and the 25-hectare recreation site already designated at Omonqo'ton should be equipped with the infrastructural and labour resources required to extend the average length of stay beyond the current threshold. Third, development should proceed within an explicit sustainability framework—serving many tourists in numerous small, systematically planned groups—so that growth in visitor numbers does not exceed the finite limits of the underlying natural resources.

5. Conclusion

This study has clarified the essence of sport tourism resources and substantiated their theoretical–methodological classification into five interrelated categories: natural, infrastructural, financial, technological and labour resources. The central theoretical proposition—that the output of each resource is finite and that the overall effect is determined by the least productive, "weakest" link—implies that the rational, balanced and complementary use of an integrated resource base is the principal precondition for the efficient and sustainable development of sport tourism. The empirical analysis of Uzbekistan's mountainous regions confirmed a substantial but unevenly developed resource potential, with more than 213,000 hectares of national-park land available for recreation and economic use, and identified several districts of the Samarkand region as possessing high potential for the formation of sustainable sport tourism zones. The Omonqo'ton (Amankutan) case study demonstrated both the strength of the territory's natural endowment and the infrastructural and service constraints that currently limit the length of tourist stays. Addressing these constraints through the integrated development of complementary resources, within an explicit sustainability framework, represents the

most promising direction for converting Uzbekistan's mountain resource potential into a competitive and sustainable sport tourism offering. Future research could extend the refined three-criterion assessment method applied here to other mountain territories and could incorporate quantitative carrying-capacity modelling to guide the staged development of designated sport tourism zones.

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