



ADVENTURE TOURISM DEVELOPMENT POTENTIAL: SAFETY, REGULATION, AND MARKET DEMAND

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Annotatsiya: Mazkur tadqiqotning maqsadi sarguzasht turizmining konseptual asoslari va rivojlanish tarixini tahlil qilish, ushbu turizm yo'nalishining jahon bozoridagi rivojlanish tendensiyalarini, xavfsizlikni boshqarish tizimini, shuningdek, O'zbekistonning noyob tabiiy va madaniy resurslarini o'rganishdan iborat. Mavjud tabiiy-rekreatsion va madaniy resurslardan samarali foydalanish mamlakatda sarguzasht turizmini rivojlantirish uchun katta imkoniyatlar yaratadi. Tadqiqot natijalari shuni ko'rsatadiki, O'zbekiston Markaziy Osiyoda turistik destinatsiya sifatida nisbatan yetarli darajada rivojlanmagan bo'lsa-da, sarguzasht turizmi yo'nalishida yuqori salohiyatga ega. Bunga mamlakatdagi turli tog'li hududlar, Buyuk Ipak yo'lining boy tarixiy-madaniy merosi, shuningdek, 2017-yildan boshlab amalga oshirilayotgan siyosiy va iqtisodiy liberallashtirish jarayonlari muhim omil bo'lib xizmat qilmoqda. Shu bilan birga, mazkur sohada hal etilishi lozim bo'lgan qator muammolar mavjud. Jumladan, turistik infratuzilmaning yetarli darajada rivojlanmaganligi, normativ-huquqiy tartibga solish mexanizmlarining takomillashtirilishi zarurligi, ochiq tabiat hududlarida faol dam olish madaniyatining yetarli darajada shakllanmaganligi hamda xalqaro turizm bozorida marketing va targ'ibot faoliyatining sustligi shular jumlasidandir. O'zbekistonning sarguzasht turizmi yo'nalishi sifatidagi xalqaro raqobatbardoshligini oshirish uchun sohani tartibga solish mexanizmlarini amaliyotga samarali joriy etish, jumladan, ISO 21101 xalqaro standartidan foydalanish, shuningdek, mahalliy hamjamiyatlarning faol ishtirokiga asoslangan barqaror turizm modellarini rivojlantirish muhim ahamiyatga ega.

Kalit so'zlar: sarguzasht turizmi, turizm salohiyati, xavfsizlik, tartibga solish, bozor talabi, barqaror turizm, O'zbekiston.

Abstract: The aim of this study is to analyze the conceptual foundations and history of adventure tourism, study the global market trends in the development of this type of tourism, the system of safety management and unique natural and cultural resources of Uzbekistan. There is great potential for the development of adventure tourism in the region using the resources. The research shows that despite Uzbekistan being an underdeveloped holiday destination in Central Asia, it has huge potential as an adventure tourism country. This is attributed to the Seven Mountain ranges in the country and the Chinese Silk Road heritage and political liberalization in the last 5 years (2017-). At the same time, however, there are a lot of problems left unresolved in the sector, including low standards of infrastructure, shaky legislation, the absence of an outdoor recreation culture, and weak international marketing. To continue to make Thailand more competitive as an adventure tourism destination, it is important to follow the trend of embedding the regulation into practice, with the utilisation of using the international standard of regulation, ISO 21101, along with sustainable community-based tourism, is needed.

Keywords: Adventure Tourism Development Potential: Safety, Regulation, and Market Demand in Uzbekistan.

Абстрактный: Целью данного исследования является анализ концептуальных основ и истории приключенческого туризма, изучение глобальных тенденций развития данного сегмента туристского рынка, системы управления безопасностью, а также уникальных природных и культурных ресурсов Узбекистана. Использование имеющегося природно-рекреационного и культурного потенциала создаёт значительные возможности для развития приключенческого туризма в стране. Результаты исследования показывают, что, несмотря на относительно недостаточный уровень развития Узбекистана как туристского направления в Центральной Азии, страна обладает значительным потенциалом для становления в качестве конкурентоспособной дестинации приключенческого туризма. Этому способствуют разнообразные горные территории страны, богатое наследие Великого шёлкового пути, а также процессы политической и экономической либерализации, осуществляемые с 2017 года. Вместе с тем в данном секторе сохраняется ряд нерешённых проблем, включая недостаточный уровень развития туристской инфраструктуры, несовершенство нормативно-правового регулирования, недостаточную сформированность культуры активного отдыха на открытом воздухе и слабое продвижение страны на международном туристском рынке. Для повышения конкурентоспособности Узбекистана как направления приключенческого туризма необходимо обеспечить практическое внедрение эффективных механизмов регулирования отрасли, применение международных стандартов, включая ISO 21101, а также развитие устойчивых моделей туризма, основанных на активном участии местных сообществ.

Ключевые слова: приключенческий туризм, туристский потенциал, безопасность, регулирование, рыночный спрос, устойчивый туризм, Узбекистан.

Introduction (Kirish/Vvedenie).

Concept and Essence of Adventure Tourism: Definition of concepts; Definition of essence of adventure tourism. The world tourism market is a dynamic and growing industry with adventure tourism being one of such markets. Adventure Tourism is considered to be touring together with the components of bodily activity, natural environment and cultural involvement, and is normally carried out in more distant, less hospitable regions that are away from the way and demand the tourist to deliver beyond his or her comfort zone. An adventure tourist activity is any kind

of physical activity, cultural exchanges, or any kind of activities in nature that are either done in the real world or simulated in a safe environment that involves adventure. The world's most important professional association of adventure tourism is the Adventure Travel Association (ATTA). The use of this three-part definition is gaining popularity in the research and policy world because success in the experience can be multidimensional. In essence, adventure tourism is a combination of risk, learning and development and therefore has a conceptual separateness. Adventure tourism is not about the tourists being passive bystanders of

the tourists' activity but about the experience of risk or that the risk is an integral part of the tourist's experience. This is elaborated by others such as Muller and Cleaver that describe adventure tourism as "the relatively high levels of sensory stimulation, usually offered through a physically challenging experiential component. The projective of uncertainty plus the satisfaction derived from facing the challenge, is the psychological aspect that makes adventure tourism different from other niche tourist experiences such as cultural and ecotourism experiences

Problem Statement. Although the political climate has been liberalized and the country is keen to promote tourism, it has a great potential for adventure tourism in its diverse mountain areas, where the Silk Road came to life. But there are several critical issues to be addressed for the current growth and development of the area. The current adventure tourism infrastructure is not adequate and international standards are not adhered to in terms of safety and quality of the adventure tours. Furthermore, the laws on adventure tourism are called 'shaky legislation' without specifying what type of activities are considered adventure, and without including it in the liability of adventure operators or guidelines for safety measures. In the absence of regulation, both providers and tourists are also unsure, this could affect safety and sustainable development. Lack of a strong adventure tourism culture in the open space and the poor international marketing also are contributing factors in underdevelopment of Uzbekistan's adventure tourism potential. The market for adventure tourism is growing, with even greater growth anticipated in the coming years, but these figures are far from what can be achieved in Uzbekistan. The overall condition that lacks clear security standards in the field of adventure tourism, insufficiency of infrastructure and insufficient promotion of the product is one of the most serious problems in the development of Uzbekistan as an attractive competitive tourism product.

The purpose of the study is. This study aims to analyze all aspects of the development of the adventure tourism of Uzbekistan, such as safety, regulation and market demand. This research will seek to uncover the actual issues and opportunities of these areas, and give practitioners and stakeholders some practical solutions. The purpose of the study is to give the information for the development of the institutional structure of Uzbekistan, its work and market conditions in order to take part in the strategic development and sustainable growth of adventure tourism. The objectives of this study were to clarify the importance of the study on the one hand, and to develop the policy and operational recommendations for the security and competitiveness of Uzbekistan as an adventure tourist destination and overall appeal on the other hand. This research has an interest for different stakeholders of tourism sector of Uzbekistan. The outcomes will play a crucial role for the policy makers and government organisations as they will give first-hand insight of existing policies and infrastructure, and what measures should be taken to make adventure tourism safer and more sustainable.

Significance of the Study. The market demand and international good practices for safety management will provide insights for tourism actors and businesses to develop more attractive and safe products in adventure tourism. The adventure tourism development in the local community could bring many benefits including, diversification of economy, new jobs creation and livelihood improvement, particularly to remote mountain communities. Furthermore, this work helps to enrich the academic discussion of adventure tourism in general, taking into account the advent of new adventure destinations within Central Asia. Consistent with the goals of the project, Study Uzbekistan is an innovative case study that can be used elsewhere in the world as an example of the development, safety, regulation and environmental issues of tourism. Regional balance between sustainability and other parameters can be achieved within areas of congruent parameters. The involvement of them in the local context as stated in the abstract of the thesis reflects the importance of the study and its implications in the real world.

Research Objectives. This study aims to: To research the problem of infrastructure and safety management system in the adventure tourism in Uzbekistan.

To analyze the current situation of the regulatory system of the activities of adventure tourism in Uzbekistan, as well as its weak and strong sides.

To analyze the market demand for the adventurous tourism in Uzbekistan, its trends, preferences of tourists and projections of its development. the main barriers and opportunities of sustainable development of adventure tourism in Uzbekistan.

To make recommendations on the level of security improvement, law observance and increasing of the demand for adventure tourism in Uzbekistan at strategic level.

Research Questions. This study aims at answering the following research questions as per the problem statement and research objectives:

How to develop infrastructure and safety management systems and what are gaps in Uzbekistan?

How effective is the existing regulatory body in Uzbekistan related to adventure tourism in terms of securing safety and quality of adventure tourism activities and what is yet to be improved?

What are the main touristic needs and tendencies of the adventurous tourism market of Uzbekistan and how they relate to the existing market of the national tourism products? What are the key problems and opportunities for sustainable development and competitiveness of adventure tourism in Uzbekistan?

What are the key problems and opportunities for sustainable development and competitiveness of adventure tourism in Uzbekistan?

It is necessary to develop a strategy of recommendations to make adventure activities safer, to improve and strengthen the regulation and increase the demand for adventure tourism in Uzbekistan. Recommendations should be developed as a tool to enhance the safety of adventure activities, enhance and reinforce regulation and boost the demand for adventure tourism in Uzbekistan.

To understand the nature and classification of adventure tourism and its economic impact and developments internationally. Adventure tourism is a much-changed term over the years. Over the years this term 'adventure tourism' has undergone a metamorphosis. Adventure tourism dates back to the early civilizations of the human beings. Early explorers like Marco Polo, Captain James Cook and Sir Ernest Shackleton were what can be termed "proto-adventure travelers" and travelled to achieve discovery, scientific research, or for endurance. The idea of making of an adventure a tourist experience is a more recent idea, with origin in the middle of 19th century in the mountain areas of Europe and North America. In 1869 the public started to be interested in physical activity and outdoor experience, and with the first ascent of the Matterhorn in 1865, modern adventure tourism started. In 1888, it was decided to form the National Geographic Society for the purpose of increasing and diffusing geographic knowledge and in 1904 the Explorers Club was founded to encourage the scientific exploration of land, sea, air, and space. It was a dream of an adventure and exploration, a dream of a normal and acceptable middle class and educated man. Another extreme 20th century time frame. The fame of mountaineering and trekking was landed on the sport by the exploits of Maurice Herzog in Annapurna (1950) and Sir Edmund Hillary and Tenzing Norgay on 29 May 1953 at the farthest peak of the mountain - the summit of Mount Everest. Post-War commercial aviation and better ground facilities started to enable more people to travel to remote destinations. In the 1970s and 1980s the organizations providing specific experiences, and then adventure travel, started to show up, making adventure travel a legitimate business with professional programs and safety measures. The first specific adventure travelling companies were established in the 1970s/1980s, and structured adventures and measures to make the adventures safe became commercial. However, during the late '80's and early '90's, several things led to the unprecedented rampage of exponential growth: tech was beginning to be more prevalent, travelling autonomy and self-sufficiency were catching on, social networks were growing worldwide, and the youngsters were starting to have fun. Adventurous toys like bungee jumping, zip-lining and white-water rafting (not as technologically advanced as toys were in the past) came into the masses in the new millennium.

Literature review (Mavzuga oid adabiyotlar tahlili/Обзор литературы).

Regional export diversification has become an important research area in international trade and regional economic development because the structure of exports increasingly determines the resilience, competitiveness, and long-term growth potential of territories. In recent studies, export diversification is considered not only in terms of increasing the number of exported products but also through changes in product concentration, destination markets, technological sophistication, and the complexity of regional export structures [1].

OECD research emphasizes that diversification of the export basket is closely associated with the ability of economies to reduce their dependence on a limited number of products and markets. In the case of Central Asian economies, the expansion of the range of exported products has been particularly important. Recent OECD analysis indicates that Uzbekistan substantially increased the number of products included in its export basket between 2010 and 2023, demonstrating a significant improvement in product diversification [1]. This finding is particularly relevant for regional-level research because national diversification may conceal considerable differences among individual regions.

A number of international studies use the Herfindahl–Hirschman Index (HHI) as one of the principal indicators for measuring export concentration. The advantage of this approach is that it allows the researcher to assess the degree to which total exports are concentrated among a limited number of products or destinations. A higher concentration index indicates stronger dependence on several export categories, whereas a lower concentration level reflects a more diversified export structure [2]. Therefore, the HHI can serve as an important methodological basis for assessing the diversification of regional exports.

The World Bank's methodological materials also distinguish export diversification from simple export growth. The export diversification index compares the structure of a country's or region's exports with the structure of world trade and is based on differences in product shares. This approach makes it possible to evaluate not only the number of exported products but also the degree to which the composition of exports differs from the international structure [2]. Such an approach is useful when regional export diversification is assessed from the perspective of competitiveness and integration into international markets.

Recent research also increasingly applies the concept of economic complexity to the analysis of export diversification. Economic Complexity Index (ECI) methodology considers the knowledge intensity and sophistication of products exported by an economy. Consequently, diversification cannot be interpreted only as an increase in the number of product categories; it should also reflect the transition toward technologically more sophisticated and knowledge-intensive products [1]. For regional economies, this creates an opportunity to combine traditional concentration indicators with measures of export sophistication.

The literature further demonstrates the importance of distinguishing between product diversification and geographical diversification. A region may have a relatively diversified product structure while remaining highly dependent on a small number of foreign markets. Conversely, a region may export to many countries but remain strongly concentrated in one or two product categories. Therefore, comprehensive measurement requires simultaneous consideration of both dimensions [3]. This methodological position is particularly important for regional studies because the sustainability of regional exports depends on both the structure of goods and the stability of external markets.

The development of Central Asian transport and trade infrastructure has also influenced the diversification potential of regional economies. Recent OECD research on the Trans-Caspian Transport Corridor highlights the importance of transport connectivity, trade facilitation, and regional integration for expanding export opportunities. Improved connectivity can reduce market-access barriers and create conditions for entering new geographical markets and expanding the range of exported products [4]. Thus, export diversification should be examined not only as a statistical phenomenon but also as an outcome of infrastructure and institutional development.

Uzbekistan's recent export statistics demonstrate substantial regional differences in export volumes. According to the National Statistics Committee, Uzbekistan's total exports reached approximately USD 33.8 billion in 2025, while Khorezm region's exports amounted to USD 435.7 million. Compared with 2024, the country's total exports increased substantially, whereas Khorezm's export growth was relatively moderate [5]. These differences demonstrate the importance of applying regional indicators rather than relying exclusively on national-level export statistics.

Official regional information also confirms the importance of export diversification for Khorezm. In 2024, the region's exports reached approximately USD 420 million, with export activities involving more than 73 new enterprises. The main export destinations included Russia, Kazakhstan, Kyrgyzstan, Türkiye, and China [6]. This indicates that the region has already established a relatively broad geographical orientation, although the degree of concentration by individual products and markets requires additional statistical assessment.

Recent statistics on Khorezm's export structure provide further evidence of the need for diversification analysis. During January–April 2025, the region exported goods and services worth USD 121.4 million. Food products and live animals accounted for 62.2% of exports, while manufactured goods accounted for 23.5% and miscellaneous manufactured articles for 4.6% [7]. Such a structure indicates a relatively high concentration in particular product groups and demonstrates why product-level diversification indicators are necessary for evaluating the sustainability of the region's export structure.

Another important methodological direction is the use of Theil-type entropy measures and other information-based indicators. Unlike the HHI, which emphasizes concentration, entropy-based measures can capture the distribution of export shares across a wider range of product categories. These indicators are useful when the research objective is to identify whether export growth is accompanied by a more balanced distribution of products or whether growth is concentrated in a small number of categories [8]. Combining concentration and entropy measures can therefore provide a more comprehensive picture of regional export diversification.

Recent studies also emphasize that diversification should be evaluated dynamically rather than through a single-year cross-sectional comparison. Changes in the number of exported products, concentration indices, destination markets, and technological sophistication should be examined over several years. Dynamic analysis makes it possible to identify whether a region is moving toward greater diversification or, conversely, becoming increasingly dependent on a narrow export base [9]. This approach is especially relevant for Khorezm because the region has experienced changes in export volumes, enterprise participation, and geographical orientation in recent years.

Overall, the reviewed literature demonstrates that there is no single universal indicator capable of fully describing regional export diversification. The most appropriate methodological approach is a multi-indicator system combining the Herfindahl–Hirschman Index, export diversification index, product-count indicators, geographical concentration measures, entropy-based indicators, and economic complexity measures. Such a system allows diversification to be assessed simultaneously from product, geographical, structural, and technological perspectives. The methodological framework proposed in this study is therefore aimed at adapting these approaches to the regional level and testing their applicability using Khorezm region as an empirical case.

Methods (Tadqiqotni amalga oshirishda foydalanilgan usullar/Методы). Adventure tourism dynamic and strategic introduction

In the emerging economies the way to alternative cultural tourism pathway is through adventure tourism, which is becoming the leading indicator of its development. The sector is expanding at a 9%-to-16% rate and will be worth \$1.6 trillion in the global market by 2030. Moreover, Uzbekistan's huge statistics from 2024, with 10.2 million tourists and \$3.5 billion in tourist revenues, only bolsters its tourism potential. But this is not all about nature, it is about a scientific process that is beyond even the strictest qualitative working methods, going from culture hotspot to global adventure-village. The methodology aims to incorporate both

sides of the industry: quantitative - the feelings of the market (“Demand”) and quantitative - the feelings of the governance complexities (“Supply”). The research collates the various viewpoints and talks about the critical linkages between potential geographical location and operating surroundings, on the one hand, and safety measures to minimize high risk situations on the other, in developing a national policy. Integration of these perspectives enables the better understanding of geographical position and operating environments and safety measures, that are necessary to reduce the high-risk situations, and a national policy is developed

Table 1. Research Pillar Integration¹

Methodological Component	Strategic Insight Provided
Quantitative Research	Captures statistical demand trends, traveler demographics, and the correlation between safety reputation and visit willingness.
Qualitative Research	Uncovers regulatory nuances, identifies infrastructure gaps, and explores stakeholder perspectives on licensing and liability.

Population and Sampling

A quantitative phase is a type of phase in which numbers are created. A Quantitative Phase is a phase in which a number (3) is made (Figure 8). Tourists will be surveyed and interviewed quantitatively and 400 tourists will be selected for the purpose of modeling adventure market emerging in Uzbekistan. This “sample size” is broad enough to encompass all that visitors have today rather than anecdotal information garnered from unscientific numbers. Sampling and Demographics: The sampling strategy was designed to achieve a cross section of a wide enough demographic to represent the scope of “youth and millennial” that the eco-adventure branding will focus on demographics of age segments: Ages 18 – 24, 25 - 34, 35 -44, and 45+. Education Levels: Respondents include those with a high school/vocational education up to those with a PhD. Experience levels: Beginning (0-2 trips), Intermediate (3-5 trips), Experienced (6+ trips) and Professional Guides/Instructors. Instruments used for the Survey: Key Performance Metrics – List of specific metrics based on international trends on security and the aim of the Expansion to the Vision 2025: Evaluation of Certified Guides, Mandatory Equipment Standards, Emergency Rescue Procedure, Weather monitoring technology requirements, Health insurance requirements and regular safety audits. Regulatory Challenges: Mapping of regulatory challenges – e.g. absence of consistency of standards between countries, lack of enforcement, compliance costs, insufficient training for operators.

Questionnaire design

Table 2. Comparative Regional Landscape²

Feature	Uzbekistan (Chimgan, Charvak, Charyn*)	Mature Benchmarks (Nepal/Costa Rica)
Market Positioning	Emerging Eco-adventure/Youth focus	Mare Mountaineering/Insurance-heavy
Safety Adoption	Emerging ISO 21101 alignment	Established strict liability and audit frameworks
Regulatory State	Vision 2025: expansion phase	Highly regulated; strict licensing for operators
Infrastructural Readiness	Poor all-season roads; rescue gear gaps	Advanced rescue protocols (e.g., helicopter networks)

The SWOT analysis also notes the fact that the number of tourists is reaching an impressive 10.2 million annually and “strict insurance and liability rules” within the tourism industry could hinder a similar development in Uzbekistan unless it is adapted to the country of Nepal. The 6th factor is “Ethical Considerations and Data Integrity”, in adventure tourism, the “Safety Reputation” is the prime asset of an adventure destination. Therefore, to develop strategies based on true and

uncorrupted data, research integrity is essential. Interviews with government officials are anonymized so that there is a free flow of information, including information on failures in policies and enforcement. Confidentiality in Data Security: Data regards information connected with operator entry cost, FDI funded training program are dealt with main confidentiality. Link synthesis and analysis to the Strategic Roadmap. Relate synthesis and analysis to Strategic Roadmap. The So What? layer comes as a result of the thematic coding and statistical correlation. The elements of this framework target elements of raw data in the identification of regulations gaps on the basis of 10.2M demands of visitors. All these measures contribute to increase the credibility, reliability and transferability of the results of the study for the implementation of the policy and practice of new adventure tourism in Uzbekistan. The Uzbekistan adventure tourism has a promising development opportunity in terms of safety improvements, alignment of regulations and specific marketing, yet it needs to address the infrastructure gaps in the context of the global development trends.

Table 3. SWOT Analysis of Adventure Tourism Development in Central Asia³

Strengths	Weaknesses
Diverse landscapes (Chimgan, Charyn Canyon) for trekking, rafting	Poor infrastructure (roads, rescue gear)
Tourism surge (10.2M visitors, \$3.5B revenue 2024)	Inconsistent safety regulations
Emerging ISO 21101 safety adoption	Guide shortages, underdeveloped marketing
Opportunities	Threats
Global market CAGR 9-16% to \$1.6T by 2030	Activity risks, liability issues
Digital tools, e-visas, FDI training	Seasonality, environmental damage
Eco-adventure branding for youth	Competition from Nepal, Costa Rica

Strengths

Since the landscape of Uzbekistan is quite diversified with the presence of Chimgan mountains and Charyn Canyon, even good trekking, rafting and climbing grounds have allowed most of the above-mentioned adventure activities with minimum entrance price. The growth of the number of tourists in the further (10.2 million in 2024, USD 3.5B) as well as governmental plans “Vision 2025” allow to implement the rapid expansion of the volume of ecological product. When it comes to safety adoption, people using hikes and those handling wardens are in a league of their own, particularly in the high demand market such as millennials, who likes experiential travel, through new safety adoption ISO 21101 alignments.

Weaknesses

The condition of infrastructure is bad (wilderness regions such as Charvak does not have emergency facilities and in summertime in local regions unpassable roads become visible, in winter the situation is similar) and it is hard to handle safety and accessibility. There are limited, inconsistent regulations and standards (Highlights in Chapter 5) and some of the unreachable activities are not safe because they lack the expertise of guides. In regards to the marketing of adventure niches it is underdeveloped and industry is dominated by cultural tourism, so that it is not raised international awareness of adventure niche.

Opportunities

Cost of living is accelerating its pace (9-16% to +\$1.6T by 2030) to meet the global demand for adrenalin costs of living of COVID-19 and Uzbekistan, despite the fact that they cannot wait to turn to others to join them in partnerships to hold their share between the quintuple display of post-COVID-19. There are ways to make bookings improve, including the use of e-visas and the development of mobile technology, as well as funding through foreign direct investment (FDI) to hike up the level of safety to that of other countries such as New Zealand. Eco-adventure

¹ author's development
² author's development

³ author's development

branding and aiming at youth markets in the shape of hybrids of eco vs adventure are now made possible by sustainability trends.

Threats

The risks of operations intrinsic to the activity (such as in mountaineering, accidents) means that it has to be covered with a significant amount of compliance, particularly in harsh international environments, that potentially leaves it in situations of undesirable liability if not met by a sound insurance. Seasonality issues, environmental distress and economic instability (geopolitical tension) can lead to the reduction of the condition. Getting rid of the competition is not an option for Mature markets such as Nepal and Costa Rica. Ensuring competition will not be coming in aggressively in mature markets such as Nepal or Costa Rica.

Analysis and results (Tahlil va natijalarlar /Анализ и результаты).

Demographic Profile of Respondents

This report presents responses to questionnaires that were received in structured format from travelers during January 2026 (N=58) on the following topics: Adventure tourism experiences of safety and regulatory compliance, market drivers and growth challenges in adventure tourism in Uzbekistan.

What is your highest level of education? Ma'lumotingiz darajasi qanday?
62 ответа

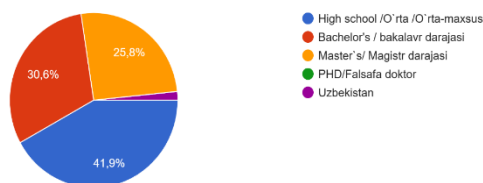
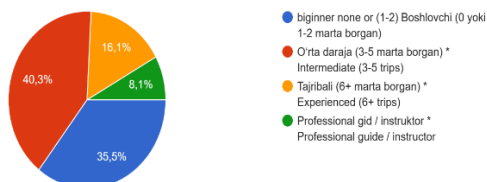


Figure 1. pondents' Educational Level Distribution⁴

How would you describe your experience with adventure tourism? Sarguzasht turizmi bo'yicha tajribangizni qanday tasvirlagan bo'lardingiz?
62 ответа



Certified guides (53.4%) of respondents were the third most mentioned issue of safety. This is consistent with the written evidence, for example, ISO/TR 21102:2013 (ISO's international guide competency standard) defines guide certification as the 'base of safety management systems'. ATTA Guide competency is also outlined in the ATTA's Adventure Travel Guide Qualifications Standard, describing the basic level of safety to expect from any adventure tourism operation, including emergency response, CPR and first aid. Last but not least, it was interesting to note that in Uzbekistan there is no practical some standards concerning the minimum insurance of the operator of adventure activity, but at the same time health insurance and emergency procedure for rescuing did not stand at the top of the list in other countries - much lower. There is an inconsistency between functions of regulation and participation in safety issues awareness-that their capacity to regulate is important and financial and emergencies infrastructure to support participation in regulation is limited in the context of the Uzbekistan, which is a vulnerability.

What is your primary occupation or field of interest related to tourism? Turizm bilan bog'liq asosiy faoliyat turingiz yoki qiziqish sohangiz nimalardan iborat?
62 ответа

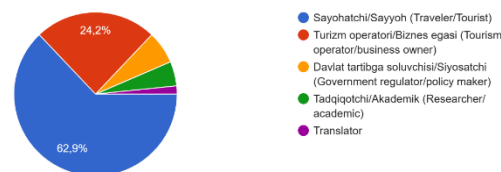


Figure 2. pondents' Educational Level Distribution⁵

Compares with International Standards.

4.Together, the two most prevalent concerns by regulatory officials are the lack of international consistency of standards (37.9%) and its enforcement (36.2%), totaling 74.1% of the responses. It is an on-the-record affirmation of the studies of regulatory gaps within the evolving/emerging AOTM. It has always been observed that there are similar difficulties faced by similar sites (e.g. Bir-Billing in India, Vietnam and Jordan) regarding the poorly harmonized

Which safety measures are most important for adventure tourism worldwide? Butun dunyo bo'ylab sarguzasht turizmi uchun eng muhim xavfsizlik choralarini qaysilar?
62 ответа

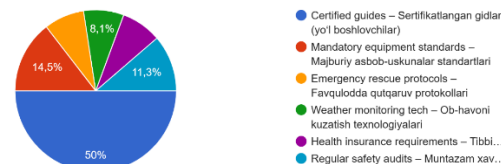
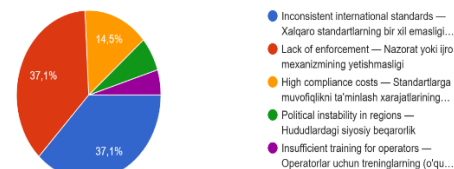


Figure 3. pondents' Educational Level Distribution⁶

What is the biggest regulatory challenge for adventure tourism development globally? Butun dunyo bo'ylab sarguzasht turizmini rivojlantirishdagi eng katta tartibga solish (regulyator) muammosi nima?
62 ответа



Regulatory Framework Comparison

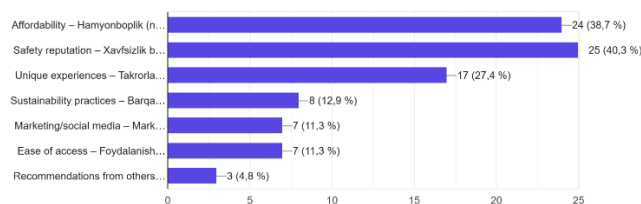
1.Together, affordability (39.7%) and safety reputation (34.5%) are responsible for 74.2% of the demand drivers, and are the two largest contributors to driving decisions on adventure tourism participation. This discovery nicely illustrates risk homeostasis theory, which states that tourists adjust their behavior to the financial accessibility (cost part of the risk-reward calculation) as well as perceived safety (physical part of the risk-reward calculation).

⁴ author's development
⁵ author's development

⁶ author's development

What factors most influence your demand for global adventure tourism? Sizning global sarguzasht turizmiga bo'lgan talabingizga qaysi omillar eng ko'p ta'sir qiladi?

62 o'tbata



Demand Drivers: A survey versus global market data for most of the industry participants.

2.The poor marketing (39.7%) is the primary factor which slows down growth of adventure tourism in Uzbekistan. The finding is important as it suggests that the lack of supply (Uzbekistan has the natural assets) and degree of safety (respondents believe it is possible to be a guide in Uzbekistan) is not a limitation, but the lack of communicating the adventure this country offers potential international tourists. This is confirmed by various research work done in Uzbekistan - adventure resources are not fully utilized in part because of the “limited promotion”. Safety concerns (22.4%) are also a top worry - this underscores the necessity of certified guides and enforcement made apparent even by domestic and regional neighbouring respondents who also know about Uzbekistan.

Chapter Five: Discussion

Recommendation 1: The thesis makes six specific recommendations based on the evidence from the survey and the benchmarks against international regulatory good practice. As a whole, they form a development agenda, a sequence of interventions, rather than individual interventions. Rigorous conformance of ISO 21101 through compulsory Audit and Registration, The gap: O'Z DST ISO 21101:2022 standard was adopted by Uzbekistan as their state standard (the standard will be effective since the 1st of April, 2023) without establishment of enforcement mechanisms, which results in a regulatory framework without effective enforcement power. Inconsistent standards are the top regulatory challenge in contradiction with nearly 36.2% of the respondents, who also cite lack of enforcement as top challenge. Survey data confirmed that almost half of the respondents (36.2%) named lack of enforcement as the greatest regulatory challenge, as nearly one-third also pointed out lack of consistency in standards. The suggestion: Adopt a New Zealand model for the implementation of the framework, following the scheme adopted in New Zealand for the Adventure Activity Regulations - that is, third party certification against ISO 21101:2022 with all commercial adventure operators, a certificate for a limited period (2-3 years), then register with a designated competent authority (Tourism and Swift Development Committee). Should encompass an emphasis on non-registered operators being barred from competing in commercial activity, thus removing the current competitive advantage non-compliant low-cost operators have. Measures with high implementation priority: This is the fundamental reform which will build the basis for the rest of the regulatory reforms.

Recommendation 2: Suggest Minimum insurance requirement by activity risk category. The gap: Minimum insurance coverage requirements are lacking from The Law on Tourism (2019) as it only sets the general obligations of safety for the tourist industry. Fewer than one in 11 (8.6%) of those surveyed listed insurance as a primary safety concern, indicating limited understanding of financial risks this represents for insurance consumers. The suggestion: Create a risk classification matrix in tune with the soft/ hard adventure typology. The extent to which public liability and medical evacuation (ME) insurance should exceed a given minimum should be established on an activity basis, and in the case of international best practice the minimums of USD 200,000 per traveler for medical, evacuation and repatriation costs in remote activity zones should be adopted. It is recommended that operator registration be based

on an insurance verification. Registration as an operator should follow an insurance verification. Incorporating directly into the registration system described in Recommendation 1: Medium-high - can be implemented directly in the registration system. Recommendation 3 is to develop a National Guide Certification Framework in accordance with ISO/TR 21102.

Therefore, the recommendation is 3 to build a National Guide Certification Framework in line with ISO/TR 21102. In the survey, the most important safety issue was also Guide certification (53.4%) - it was also the most often mentioned, improvement in Uzbekistan adventure safety regulations. However, systematic certification of adventure guides, especially for high-risk type activities such as mountaineering, white-water rafting and paragliding is still in its infancy. The recommendation is to implement a tiered nation-wide Guide certification system based on ISO/TR 21102:2013 competency standards: Level 1, novice trekking guide and nature guide, Level 2 and Level 3, advanced mountaineering and high-risk activity leader guide. However, these capacities are not assumed in the mountain areas of Uzbekistan, especially in Chimgan-Beldersay, the approaches of Fann Mountains, Karakalpakstan. The recommendation: Focus the investments to establish mountain rescue stations and to negotiate helicopter emergency access agreements in the adventure zones of the Ugam-Chatkal, Nuratau and Western Tian Shan as part of the 25-cable car and 25 mountain roads goals of the 2030 Strategy.

Conclusion and Recommendations (Xulosa va takliflar/Выводы и предложения).

The study demonstrates that regional export diversification should be assessed using a comprehensive system of statistical indicators rather than a single measure. Export volume alone does not adequately reflect the stability and competitiveness of a region's external trade. The analysis shows that product concentration, geographical distribution of exports, the number of exported product groups, market diversification, and the technological sophistication of exported goods are important components of regional export diversification.

The theoretical and methodological review confirms that the **Herfindahl–Hirschman Index (HHI)**, diversification and concentration indices, entropy-based indicators, and economic complexity measures can be effectively applied to evaluate the structure of regional exports. Their combined use makes it possible to identify the degree of dependence on individual products and markets and to determine the direction of structural changes in regional exports.

The approbation conducted using **Khorezm region** as an example demonstrates the practical relevance of the proposed methodological approach. The region has considerable export potential, particularly in food products, manufactured goods, textiles, agricultural products, and other processing industries. At the same time, the concentration of exports in certain product groups indicates the need for further diversification. Expanding the range of exported products and increasing the share of higher value-added goods can strengthen the resilience and competitiveness of the regional economy.

The study also confirms that geographical diversification is an important component of regional export sustainability. Expanding cooperation with new foreign markets can reduce the risks associated with excessive dependence on a limited number of destination countries. Therefore, export diversification policy should simultaneously address both **product diversification and geographical diversification**.

1.Develop a comprehensive regional export diversification indicator system. The statistical monitoring system should include product concentration, geographical concentration, number of export products, export market coverage, and economic complexity indicators.

2.Regularly calculate the Herfindahl–Hirschman Index. The HHI should be calculated annually by product groups and destination countries to identify changes in export concentration and potential external trade risks.

3.Increase the share of value-added products. Khorezm region should gradually move from the export of raw and low-processed

⁷ author's development

products toward processed, technologically advanced, and higher value-added goods.

4. Expand geographical export markets. In addition to existing trading partners, greater attention should be given to entering new markets in Europe, East Asia, the Middle East, and other promising regions.

5. Strengthen export-oriented enterprises. Small and medium-sized enterprises should be supported through export financing, market information, certification assistance, logistics services, and international marketing programs.

6. Introduce digital statistical monitoring of exports. A regional export information system could integrate data on products, enterprises,

destination countries, export values, and market dynamics, enabling more timely identification of diversification opportunities and risks.

7. Use dynamic forecasting methods. Statistical forecasting should be applied to identify future changes in the structure of regional exports and determine priority product groups and foreign markets.

In general, the proposed approach provides a methodological basis for **quantitative assessment of regional export diversification** and can be applied not only to Khorezm region but also to other regions of Uzbekistan. Its practical implementation can contribute to improving regional export policy, reducing concentration risks, increasing the competitiveness of local enterprises, and promoting sustainable integration of regional economies into international markets.

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