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KAZAKHSTAN'S GEOPARK POTENTIAL: CONSERVATION OF NATURAL HERITAGE SITES AND THE DEVELOPMENT OF SUSTAINABLE TOURISM

Annotation. The territory of Kazakhstan is distinguished by a wide variety of geological structures, unique terrain, canyons, caves, mountain systems, lakes and other natural objects. An assessment of the scientific, environmental, cultural and tourist significance of these objects is an important prerequisite for the formation of Geoparks. In the course of the study, the role of the geopark concept in the protection of natural heritage, the possibilities of sustainable management of geological objects and directions for the development of geotourism are considered. In addition, the effective use of natural and geological heritage sites through the preservation and development of sustainable tourism, the influence of the organization of Geoparks on the development of the local economy, increasing environmental education of the population and preserving natural territories will be determined. The effective use of the geopark potential of Kazakhstan, combined with the protection of natural heritage and tourist and recreational opportunities, will allow the socio-economic development of the regions and the implementation of the principles of sustainable development. The results of the study will serve as the basis for determining the prospects for the formation of a network of geoparks in Kazakhstan and developing scientific and practical recommendations aimed at preserving natural heritage sites.

Keywords: Kazakhstan, Geopark, geological heritage, natural heritage, geo tourism, Sustainable Tourism, Nature Protection.

Introduction

At the present stage of sustainable development, the conservation of natural and geological heritage, environmental protection, and the rational use of natural resources have become increasingly important. In many countries around the world, the geopark concept is widely applied as an effective approach to conserving natural heritage sites and promoting their sustainable use for scientific, educational, and tourism purposes.Geological heritage constitutes an important component of the natural environment. It provides valuable scientific information about the geological history of the Earth, including tectonic processes, rock formation, erosion, and other geomorphological processes. At the same time, geological sites often possess significant aesthetic, educational, and tourism value. Therefore, their conservation should be regarded not only as an important aspect of nature protection but also as a means of disseminating scientific knowledge, promoting environmental awareness, and enhancing the tourism attractiveness of local and regional areas.The territory of Kazakhstan is characterized by a remarkable diversity of natural and geographical conditions. The country

encompasses high mountain ranges, vast plains, desert and semi-desert landscapes, canyons, gorges, caves, waterfalls, lakes, unique geomorphological formations, and paleontological sites. Although many of these natural features possess considerable scientific, aesthetic, and educational value, not all of them have been systematically assessed, documented, and protected as geological heritage sites. In this regard, a comprehensive study of Kazakhstan's natural and geological heritage and an assessment of its potential for the establishment of geoparks represent an important and timely scientific research objective.

Methodology

In the course of the study, a theoretical review of scientific works related to the concept of geotourism, Geopark was carried out. To determine the potential of natural objects with geological and geomorphological features on the territory of Kazakhstan, SWOT and PEST - strategic assessment methods were used. SWOT analysis was used to determine the internal potential and external capabilities of the geopark, and PEST analysis was used to assess the macroeconomic factors of the environment that affect the development of Geoparks.

Results and analyzes

Geotourism and Geopark concept

Tourism plays an important role in the protection, promotion, and transmission of natural and anthropogenic (cultural) values to future generations. Ecotourism, as a form of tourism, is considered one of the most promising and economically beneficial approaches to achieving this important objective. At the World Ecotourism Summit held in 2002, ecotourism was defined as a form of tourism that contributes to the sustainable use of natural resources and the conservation of the Earth's natural and cultural values, supports the economic development of local and regional communities, and aims to preserve the social and cultural environment [1]. Geotourism has emerged as one of the rapidly developing forms of ecotourism in recent years. It is a form of tourism based on the sustainable use and appreciation of natural features that provide evidence of the Earth's geological history within a particular territory. The development of geotourism can contribute not only to improving the economic and cultural well-being of local communities but also to promoting education and scientific research at the regional level [2]. Natural sites with significant geological heritage value constitute an important component of a country's tourism resources. Particularly important are geological and geomorphological features that are unique or rare at the global level due to their formation history, evolutionary processes, and specific geographical characteristics. The concept of "geotourism" emerged in the 1980s and began to develop more rapidly in the early 2000s, subsequently spreading worldwide [3]. Geotourism is not limited to the preservation of the physical structure of natural areas; rather, it aims to protect and promote natural, landscape, and cultural values [4]. Heggie defines geotourism as "a type of tourism that preserves the geographical character, environment, culture, and cultural heritage of a region while also taking into account the interests of the local population" [5]. Gümüş (2009) defines geotourism as visits undertaken with the aim of observing and becoming familiar with geological and geomorphological formations in their natural environment [6]. According to another definition, geotourism is a form of tourism that requires interaction among various disciplines within the tourism sector in order to interpret and protect geological and non-biological natural and cultural heritage [7]. Vural (2019) argues that geotourism can appropriately be considered within the framework of "special-interest tourism," which refers to a form of tourism in which visitors select recreational activities based on their specific interests [8]. Tourism activities that combine natural and cultural values with geotourism resources can be considered a new form of ecotourism [9].

Pralong (2006) also considers geotourism to be a component of ecotourism, describing it as a tourism product based on natural resources [10]. Geotourism began to develop in England in the late 1980s, partly as a result of concerns raised by school, university, and museum geologists regarding the loss of geological features associated with mine and quarry restoration programmes [11]. Another concept that has gained importance alongside the development of geotourism is that of “geoparks” [12]. The primary objectives of geoparks are to protect geological and natural heritage, preserve it for future generations, and provide opportunities for visitors to learn about the geological history of the Earth through geotourism [4]. Geoparks are geographically defined areas that contain a significant concentration of geological heritage sites or geosites of different types. They are open to visitors and have an established management structure aimed at conservation, education, scientific research, and sustainable tourism development. A geopark is a multifunctional territory that integrates the conservation of geological and geomorphological features with scientific research, environmental education, and the development of sustainable tourism. A geopark can be defined as a geographically concentrated area containing geological and geomorphological heritage sites of high scientific, aesthetic, educational, ecological, and economic value, where the conservation of both natural and cultural resources is ensured [13]. Geoparks are territories containing geological heritage of international significance that can contribute to the long-term socio-economic development of local communities [14]. The Earth’s crust preserves extensive information about the geological history of our planet, which contributes significantly to the scientific value of geoparks. These scientific characteristics also provide substantial potential for the development of geotourism [15]. Geoparks are clearly defined territories containing geological heritage sites of high aesthetic, rarity, educational, and scientific value, supported by sustainable management systems and local development programmes. Such territories can function as natural laboratories for studying the formation and evolution of landscapes, as well as geological processes that occurred in the past and continue to operate in the present [16]. Although the conservation of geological heritage sites is one of the primary objectives of geoparks, their functions extend beyond conservation alone. Geoparks also aim to improve the educational level of local communities, contribute to regional economic development through various economic activities, and create favorable conditions for scientific research [17]. Şener et al. (2023) emphasize that geoparks and sites considered part of geological heritage can provide numerous benefits to the regions in which they are located [18]. Similarly, Lazzari and Aloia (2014) identify improving the local economy, stimulating economic development, and providing scientific education to local communities as among their most significant benefits [19]. Compared with national parks, geoparks have a more complex and multifaceted structure and pursue a range of cultural and natural conservation objectives, including education, the protection of nature and geological heritage, the preservation of socio-cultural structures, ensuring sustainable development for local communities, and conducting scientific research [20].Although the history of national parks and open-air museums established to protect important geological formations in different parts of the world dates back to earlier periods, the term “geopark” was first used in 1995 to designate the area containing petrified trees on the Greek island of Lesbos [21].In Dinh, France, in 1991, the first International Symposium on the Conservation of geological heritage was held with the support of UNESCO. It was attended by more than 120 experts from 30 countries. They witnessed the first major international scientific events dedicated to the defense.Many researchers see this symposium as an important milestone in the development of the concept of GeoPark. The final declaration of the conference" international

declaration of Land Memorial rights " included the issue of preserving geological heritage on the international agenda. In 1996, during the 30th International Geological Congress in Beijing, China, the idea of creating a European network of geological heritage sites to facilitate international cooperation, conservation and sustainable local development was developed by Guy Martini and Nicolas Zuros [6]. The main feature of the geopark concept is the integration of natural heritage conservation with its sustainable use for socio-economic development. Within a geopark, the conservation of geological heritage sites, scientific research, environmental education, the promotion of local cultural heritage, and the development of responsible tourism are implemented as an integrated system. This model can strengthen local community participation in the protection of natural areas and create new opportunities for small businesses and tourism-related services. Since geoparks contain extensive geological information related to the history of the Earth's crust, they are of considerable scientific importance. Moreover, for visitors interested in geological features, geoparks represent attractive destinations for education, recreation, and exploration. Therefore, they possess significant potential for geotourism development.

Geoparks are multifunctional geographical territories that can be used for scientific research, educational activities, conservation, and sustainable economic development. Owing to these characteristics, geoparks have received strong international support, including through UNESCO's Global Geoparks Programme. In addition, regional geopark networks, such as the European Geoparks Network, have been established to facilitate cooperation, knowledge exchange, and the promotion of geological heritage. The interest of countries in joining these international and regional networks has continued to grow.Natural sites with significant geological heritage value constitute an important component of a country's tourism resources. Particularly important are geological and geomorphological features that are unique or rare at the global level due to their formation history, evolutionary processes, and specific geographical characteristics. Geoparks therefore represent not only important areas for the conservation of natural and geological heritage but also significant destinations for ecotourism and geotourism. By integrating geological heritage conservation, environmental education, scientific research, and sustainable tourism, geoparks can contribute to the sustainable development of local communities and regions.

Assessment of Kazakhstan's Geopark Potential: Directions for Geological Heritage Conservation and Sustainable Geotourism Development

Currently, for a particular territory to obtain geopark status, it must meet the minimum requirements established by UNESCO (UNESCO, 2020b). As of 2024, 213 geoparks in 49 countries that meet these requirements are included in the UNESCO Global Geoparks Network (UNESCO, 2020a). These geoparks, whose areas range from several square kilometers to several thousand square kilometers, simultaneously perform the functions of conservation, education, and geotourism development. Today, the UNESCO Global Geoparks Programme is gaining increasing international recognition as an effective tool for nature conservation and sustainable development [22, 23]. In recent years, the development of geoparks has become one of the important initiatives in the field of nature conservation, both in Kazakhstan and globally. Kazakhstan seeks to become part of the international community dedicated to the conservation of geological heritage. In this regard, the establishment of geoparks has become increasingly relevant, particularly in terms of promoting sustainable tourism, ensuring the rational use of natural resources, conserving geological heritage sites, conducting scientific research, improving the quality of education, developing local entrepreneurship and self-governance, and enhancing the country's environmental image.

Saida Nigmatova, Chairperson of the UNESCO National Committee for Global Geoparks in Kazakhstan, noted: “Geoparks are one of the most promising models for the development of regions at both the local and international levels. At the same time, geoparks are becoming successful business initiatives that contribute to attracting a large number of tourists” [23]. Kazakhstan has several regions with significant potential for the establishment and development of geoparks. A comprehensive assessment of their geological heritage, landscape characteristics, biodiversity, historical and cultural values, and tourism potential can provide a scientific basis for identifying and developing prospective geopark areas (Figure 1,2,3)



Figure 1 Mangystau region. Bozjyra gorge
References: https://egemen.kz/news/article259441-bozdgyra-manhghystau

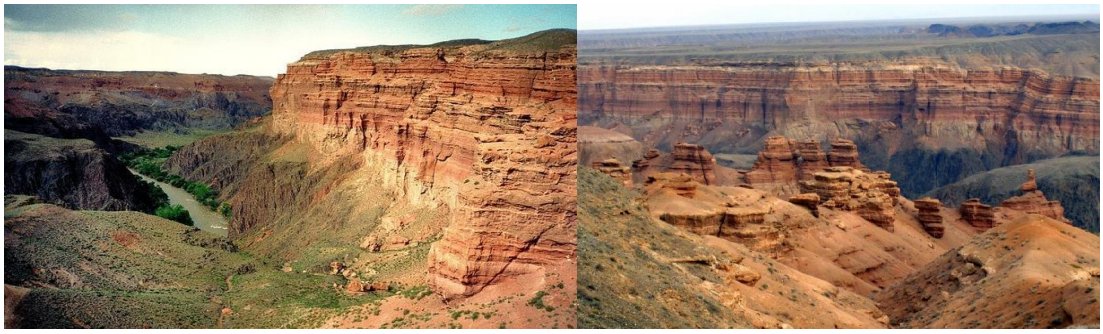


Figure 2 Sharyn region. Charyn gorge
References:https://massaget.kz/sayahatty-syemin/alemge-atyi-shyikkan-sharyin-shatkalyi-turalyi-22398/



Figure 3 Bayanaul Region
References: https://qazaqgeography.kz/kz

The establishment of geoparks in such areas can contribute not only to the conservation of natural and geological heritage but also to the socio-economic development of local communities, the promotion of sustainable tourism, and the effective utilization of the tourism and recreational potential of the regions. Potential

Table 1. Regions of Kazakhstan with Potential for Geopark Development

№	**Region**	**Potential**
1	Aral Region	The Aral Sea, the exposed seabed, desert landscapes, and areas characterized by significant geological and anthropogenic changes.
2	Ulytau Region	An area distinguished by unique geological structures and exceptionally rich historical and cultural heritage.
3	Karatau Range	Notable for its paleontological, mineralogical, and geological sites.
4	Charyn Region	The Charyn Canyon, distinctive erosional landforms, and a complex of sedimentary rock formations.
5	Altyn-Emel National Park	Contains prominent geomorphological features such as the Aktau Mountains, Katutau Mountains, and Singing Dune.
6	Mangystau Region	Geological and geomorphological sites including Bozzhyra, Torysh, Sherkala, and the Caspian Depression
7	Ustyurt Region	High escarpments, desert landscapes, and distinctive geological formations.
8	Bayanaul Region	Granite rock formations, distinctive landforms shaped by weathering processes, and a system of lakes.
9	Karkaraly Region	Granite massifs, mountainous forest landscapes, and geomorphological features
10	Katon-Karagay–Altai Region	The geological structure of the Altai Mountains, mountainous landscapes, glaciers and river valleys, sedimentary rocks, and mineral springs.
11	Zhetysu (Dzungarian) Alatau	Mountain geosystems, glaciers, and tectonic and geomorphological features.
12	Ile Alatau	Glaciers, rock formations, tectonic structures, and valleys of mountain rivers

Geoparks in Kazakhstan are not only areas of significant ecological and geological importance but also have considerable potential to contribute to regional economic development. Through nature conservation and the promotion of ecotourism, geoparks can contribute to improving the quality of life of local communities.

SWOT Analysis of the Potential for Geotourism Development in Geoparks in Kazakhstan

Strengths	**Weaknesses**
• **Geological and natural resources:** Geoparks in Kazakhstan, particularly regions such as Charyn Canyon, the Altai, and Zhetysu, are renowned for their natural wonders and geological heritage sites. These features represent major attractions for geotourism.	• **Insufficient infrastructure:** Many potential geopark areas in Kazakhstan still lack adequate infrastructure, including roads, recreational facilities, visitor centers, and public transportation services. • **Limited marketing and promotion:** Many geopark areas have limited international

• **Natural beauty:** Most geopark areas possess distinctive landscapes and scenic natural features that provide favorable conditions for the development of ecotourism and geotourism. • **Scientific interest:** Geoparks are important not only for tourists but also for scientists and researchers. Specialized tours, educational programs, and field activities can be developed to promote knowledge of geological heritage and ecosystems. • **Cultural and historical significance:** Geoparks are often located near historical monuments and archaeological sites, creating opportunities for the integrated development of geotourism and cultural tourism.	recognition. Information, branding, and promotional activities related to Kazakhstan's geopark potential remain insufficient. • **Service quality:** Tourism services, including qualified guides, visitor information materials, interpretation facilities, and multilingual services, remain underdeveloped in some areas. • **Conservation and protection challenges:** If tourism is developed without adequate conservation measures and environmental management, increased visitor pressure may cause ecological damage and threaten natural heritage sites
Opportunities	**Threats**
• **Growth of ecotourism and geotourism:** Ecotourism and geotourism are becoming increasingly popular worldwide. Kazakhstan's potential geoparks can benefit from this global trend and become important destinations for nature-based and educational tourism. • **International cooperation:** Kazakhstan has opportunities to pursue UNESCO Global Geopark recognition. International cooperation and recognition could increase the visibility of the country's natural and geological heritage and attract international visitors. • **Local economic development:** The development of geoparks can create new employment opportunities for local communities, stimulate entrepreneurship, and support the development of local products and services.	• **Environmental and natural disasters:** Environmental degradation, ecological disturbances, and natural disasters may adversely affect the development of tourism and the long-term sustainability of geopark areas. • **Overtourism:** Excessive tourism development may negatively affect natural environments, contribute to landscape degradation, and place pressure on local ecosystems and geological heritage sites. • **Competition from other destinations:** Kazakhstan may face strong competition from neighboring countries that possess a wide range of natural, geological, and historical attractions and have more developed tourism infrastructure.

The SWOT analysis demonstrates the significant potential of geoparks in Kazakhstan for tourism development, highlighting their rich natural and geological resources and their considerable ecological and cultural significance. However, challenges such as insufficient infrastructure and potential environmental risks need to be carefully considered. If the development of geoparks places greater emphasis on infrastructure improvement, scientific research, environmental protection, and support for ecotourism, Kazakhstan's geoparks have the potential to become successful tourism destinations at the international level.

PEST Analysis of the Development of Geoparks in Kazakhstan

1. Political Factors

Political factors play a significant role in the development of geoparks in Kazakhstan. Since geoparks are areas that require the protection of natural and ecological resources, strong support at the national governmental level is essential.

- **Government policies on environmental protection and tourism:** The stability of Kazakhstan's environmental policies, nature conservation measures, government programmes aimed at the protection and development of geoparks, and national initiatives supporting ecotourism can significantly influence tourism development. In particular, legislation and regulations concerning protected natural areas and natural heritage sites, as well as government measures to support tourism, are important factors.
- **Local and international cooperation:** As Kazakhstan's geoparks gain greater international recognition, political and institutional support will be necessary to obtain international status and establish cooperation with foreign partners. Such cooperation can contribute to the exchange of experience, implementation of joint conservation and research projects, and promotion of Kazakhstan's geological and natural heritage at the international level.

2. Economic Factors

Economic factors influencing the development of geoparks are closely related to the country's overall economic conditions, infrastructure, investment opportunities, and the development of local economies.

- **Economic importance of tourism:** Tourism is an important sector of Kazakhstan's economy. Geoparks can contribute to local economic development through the promotion of ecotourism and geotourism. The growth of the tourism sector can create new employment opportunities for local communities, stimulate the development of hotels, restaurants, and other tourism-related businesses, and support improvements in transportation and other infrastructure, thereby contributing to regional economic growth.
- **Investment:** Investment and financial support are essential for the development of geopark infrastructure. Capital attracted from both domestic and foreign investors can play a significant role in the development of tourism facilities, visitor infrastructure, and related services within geopark areas.
- **Natural resources and the environment:** The natural resources of geoparks represent important economic assets for local and regional development. Their conservation and sustainable use can generate long-term economic benefits. However, achieving these benefits requires effective management of natural resources, appropriate environmental protection measures, and a balance between economic development and conservation objectives.

3. Social Factors

Social factors influence public attitudes toward geoparks and determine the level of demand for tourism and nature-based recreational activities.

- **Environmental awareness and interest in tourism:** As environmental awareness and interest in ecotourism increase in Kazakhstan, the number of visitors to geoparks is likely to grow. At the same time, public discussions on environmental issues and the dissemination of information on nature conservation can contribute to increasing citizens' environmental responsibility and awareness of the importance of protecting natural and geological heritage.
- **Local community participation:** The involvement of local communities is essential for the successful development of geoparks. Their effective development depends on local support, the creation of employment opportunities, and the contribution of geoparks to

regional economic development. Involving local residents in tourism services, conservation activities, guiding, and the development of local products can further strengthen the socio-economic benefits of geoparks.

- **Cultural impact of tourism:** The preservation of cultural heritage and local traditions is important in promoting geoparks as tourism destinations. Each region of Kazakhstan has its own distinctive cultural characteristics and traditions, while the historical significance of geopark areas can contribute to the development of both social and cultural tourism.

4. Technological Factors

Technological factors play an important role in the development of geoparks by enabling more effective management, conservation, interpretation, and promotion of geological and natural heritage.

- **Information technologies:** New technologies, particularly digital technologies, play an increasingly important role in the development of tourism in geoparks. Virtual tours, mobile applications, interactive online maps, geographic information systems (GIS), and social media platforms can be used to promote geoparks, provide visitors with information, and enhance their accessibility and visibility.
- **Infrastructure development:** The improvement of tourism infrastructure through the adoption of modern technologies, including transportation networks, visitor information services, accommodation facilities, and communication systems, can enhance the attractiveness, accessibility, and overall visitor experience of geopark destinations.
- **Environmental technologies:** The application of environmentally friendly and innovative technologies is particularly important for the sustainable development of geoparks. The use of renewable energy, efficient waste management systems, water-saving technologies, and other environmentally sustainable solutions can help protect the environment, reduce the ecological footprint of tourism, and promote the sustainable use of natural resources.

Considering the opportunities and challenges associated with the development of geoparks in Kazakhstan, the **PEST analysis** provides a useful framework for supporting decision-making with regard to political, economic, social, and technological factors. To promote the sustainable development of geoparks, it is necessary to:

- strengthen government support and environmental policies;
- increase economic investment and develop tourism infrastructure;
- enhance public education and promote ecotourism and geotourism;
- introduce new technologies and promote tourism through digital tools and platforms.

These factors can contribute to the effective utilization of the tourism potential of geoparks and facilitate their recognition as internationally attractive destinations.

The study of Kazakhstan’s geopark potential is important not only for the conservation of natural heritage but also for ensuring the sustainable development of the country’s regions. In particular, identifying areas with a high concentration of natural and geological sites and assessing their scientific, ecological, aesthetic, cultural, and tourism values provide a scientific basis for the establishment and development of future geoparks. Such research can expand Kazakhstan’s opportunities to participate in international geopark initiatives and contribute to promoting the country’s natural heritage at the international level.

The research findings demonstrate that Kazakhstan possesses significant natural and geological resources with high potential for the establishment and development of geoparks. Mountainous areas, canyons, caves, gorges, distinctive landforms, and other geological heritage sites are considered valuable resources from both scientific and educational as well as tourism perspectives. The establishment of geoparks can contribute to the systematic

conservation of natural heritage sites, the promotion of environmental education, the development of geotourism, and the enhancement of the socio-economic opportunities of local communities.

Conclusion

The establishment of a geopark network in Kazakhstan can serve as an effective mechanism for the conservation of natural and geological heritage. Integrating the geopark concept with the principles of sustainable tourism can help reduce anthropogenic pressure on natural areas, enhance environmental responsibility, and promote the sustainable socio-economic development of regions. In this regard, a comprehensive assessment of Kazakhstan's geopark potential and the scientific identification of prospective areas represent important priorities for the conservation of natural heritage and the sustainable development of the country's regions.At present, work is underway in Kazakhstan to establish three geoparks: Aral, Ulytau, and Karatau. The country's first geopark, Geopark Aral, is being developed in the Kyzylorda Region. It is envisioned as the first tourism route in Central Asia aimed at preserving the natural environment and economic potential of the Aral Sea region and the surrounding areas. The geopark is conceived as an open-air museum incorporating geological and ethnographic tours, as well as other forms of tourism.Currently, local communities are actively involved in the development of Geopark Aral. In addition to providing various services to tourists, local residents contribute to the functioning of the geopark as artisans engaged in traditional handicrafts. This community-based approach can strengthen local livelihoods while supporting the conservation and promotion of the region's natural and cultural heritage. In Kazakhstan, national tourism development policies place particular emphasis on the effective use of natural and cultural heritage sites, the development of ecotourism, and the diversification of tourism destinations. In this context, geotourism is considered one of the promising approaches to the sustainable use of natural areas. Geotourism not only enhances visitors' knowledge and understanding of natural and geological sites but also creates opportunities for local communities to derive economic benefits from tourism. However, uncontrolled growth in tourism activities may lead to the degradation of natural sites, landscape disturbance, and increased anthropogenic pressure. Therefore, tourism development should be closely aligned with the requirements of natural heritage conservation and effective environmental management.

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ҚАЗАҚСТАННЫҢ ГЕОПАРК ӘЛЕУЕТІ: ТАБИҒИ МҰРА НЫСАНДАРЫН САҚТАУ ЖӘНЕ ТҰРАҚТЫ ТУРИЗМДІ ДАМЫТУ

Аңдатпа. Қазақстан аумағы геологиялық құрылымдардың алуан түрлілігімен, бірегей жер бедерімен, шатқалдарымен, үңгірлерімен, тау жүйелерімен, көлдерімен және басқа да табиғи нысандарымен ерекшеленеді. Бұл нысандардың ғылыми, экологиялық, мәдени және туристік маңызын бағалау геопарктерді қалыптастырудың маңызды алғышарты болып табылады. Зерттеу барысында геопарк тұжырымдамасының табиғи мұраны қорғаудағы рөлі, геологиялық нысандарды тұрақты басқару мүмкіндіктері және геотуризмді дамыту бағыттары қарастырылады. Сонымен қатар, табиғи және геологиялық мұра нысандарын сақтау мен тұрақты туризмді дамыту арқылы тиімді пайдалану, геопарктерді ұйымдастырудың жергілікті экономиканың дамуына, халықтың экологиялық білімін арттыруға және табиғи аумақтарды сақтауға ықпалы айқындалады. Қазақстанның геопарк әлеуетін табиғи мұраны қорғау және туристік-рекреациялық мүмкіндіктермен ұштастыра тиімді пайдалану өңірлердің әлеуметтік-экономикалық дамуына және тұрақты даму қағидаттарын іске асыруға мүмкіндік береді. Зерттеу нәтижелері Қазақстанда геопарктер желісін қалыптастыру перспективаларын айқындауға және табиғи мұра нысандарын сақтауға бағытталған ғылыми-практикалық ұсынымдарды әзірлеуге негіз болады.

Кілт сөздер: Қазақстан, геопарк, геологиялық мұра, табиғи мұра, геотуризм, тұрақты туризм, табиғатты қорғау.

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ПОТЕНЦИАЛ ГЕОПАРКОВ КАЗАХСТАНА: СОХРАНЕНИЕ ОБЪЕКТОВ ПРИРОДНОГО НАСЛЕДИЯ И РАЗВИТИЕ УСТОЙЧИВОГО ТУРИЗМА

Аннотация. Территория Казахстана отличается большим разнообразием геологических структур, уникальным рельефом, каньонами, пещерами, горными системами, озёрами и другими природными объектами. Оценка научной, экологической, культурной и туристической значимости данных объектов является важной предпосылкой для формирования геопарков. В рамках исследования рассматриваются роль концепции геопарков в сохранении природного наследия, возможности устойчивого управления геологическими объектами и основные направления развития геотуризма. Кроме того, определяется значение эффективного использования природных и геологических объектов наследия посредством их сохранения и развития устойчивого туризма, а также влияние создания геопарков на развитие местной экономики, повышение экологической культуры населения и сохранение природных территорий. Эффективное использование геопаркового потенциала Казахстана в сочетании с охраной природного наследия и туристско-рекреационными возможностями позволит содействовать социально-экономическому развитию регионов и реализации принципов устойчивого развития. Результаты исследования могут послужить основой для определения перспектив формирования

сети геопарков в Казахстане и разработки научно-практических рекомендаций, направленных на сохранение объектов природного наследия.

Ключевые слова: Казахстан, геопарк, геологическое наследие, природное наследие, геотуризм, устойчивый туризм, охрана природы.