

# Sustainable Development Opportunities Driven by Geotourism in the Republic of Bashkortostan (Toratau Geopark, Republic of Bashkortostan, the Russian Federation)

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This article presents a proposal for the development of the Toratau Geopark in the Republic of Bashkortostan in the Russian Federation. This proposal is based on the broad appeal of the geopark's unique natural objects, including hills known as "shikhans" and the Usolka section (GSSP<sup>1</sup>), which has been cited as a new stratigraphic unit of global significance. The article describes the proposed approach to the spatial, infrastructural, and experiential development of the territory as a centre for geotourism. The article concludes that the proposed geopark model is beneficial for the development of the region's local and indigenous communities, economy, and entrepreneurship.

**Keywords:** geopark, Toratau, Republic of Bashkortostan, UNESCO, ecology, tourism, geotourism, local communities, entrepreneurship

## Introduction

The developmental philosophy for the Toratau Geopark project is based on the principle of non-industrial development. This practice of contributing to sociocultural and economic growth, while preserving and conserving valuable natural objects, is gaining international popularity. Unlike national parks, conservancies, and nature reserves, geoparks do not include any restrictions and regulations against conducting economic activity involving natural objects. Moreover, the geopark's strategic goals include the preservation and development of the livelihoods of people indigenous to this area, as they are the most important resource for conserving the geological, biological, historical, and cultural heritage of the land, as well as for promoting

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<sup>1</sup> Global Stratotype Section and Point for the lower boundary of the Sacmarian stage Permian.

tourism and local entrepreneurship.

The geopark occupies the essential part of Gafuriysky and Ishimbaysky Districts and comprises the territories of Meleuzovsky and Sterlitamaksky Districts. The geopark includes 146 rural communities, which compose 31 rural settlements. The total population within the territory of the Geopark amounts to 48,300 people, 25% of whom live in the district centre of the Krasnousolsky rural locality. Eight more settlements have a population of more than 1,000 people.

The geopark, which is equal to 4,727 km<sup>2</sup>, includes unique sites of geological and natural heritage: Toratau, Kushtau, the Yuraktau shikhans, the Karaultau Mountain, the Kuk-Karauk waterfall, the Askinskaya ice cave, and hundreds of other geomorphological, archaeological, speleological, hydrological, tectonical, and mineralogical objects. In addition, the Usolka section is a key natural site of the geopark. A number of objects are well-studied; however a great number of others present a wide field for further research and the popularisation of geological and ecological knowledge.

The geopark presents significant potential for improvement in both tourist and recreational activity of the region through increased awareness of and convenient access to natural objects and the existing, though currently underdeveloped tourist infrastructure. In the nearest future, Toratau Geopark is expected to be included in the UNESCO Global Geoparks Network. The first territory to be included in the network is the 2,299 km<sup>2</sup> centre. The long-term strategy includes a plan to nominate the whole territory of the Geopark for inclusion. This two-step model is widely practiced in China, which leads the world in both quantity and design of such models for geological conservation and geotourism.

Since the creation of the geopark in 2018, Toratau has become widely recognised. In 2019, the Toratau Geopark Centre for Science, Education, Economy, Culture, and Tourism established an active communication policy to manage the geopark. According to API data, the number of search requests including the keyword “Toratau” has increased from less than 100 per month in 2018 to up to 14,500 per month in 2021.

The essential goal of the geopark is to make Toratau a centre for geotourism and to increase tourist flows as the primary source for expanding entrepreneurship in the field of tourism and services in the region.

## **Geological and Natural Heritage**

Toratau Geopark is situated in the Eastern Hemisphere, in the mainland of Eurasia. It is located at the southernmost tip of the Ural Mountains, where the geographical border between Europe and Asia lies. The geopark's territory stretches from north to south, between the mountain range and the middle reaches of the Belaya River. Its major natural objects are Toratau, Kushtau, and the Yuraktau shikhans—the remains of a gigantic barrier reef which rose to the surface as the result of diastrophic movements (Kulagina, Skuin, & Kossovaya, 2015).

Among other important objects are the following sections: Riphean in the Southern Urals and deposit sections, which were used to delineate new stratigraphic subsections of world importance. This group includes the Usolka GSSP, a continuous section stretching from the Moscovian Stage to the Sakmarian Stage (Chernykh, Chuvashov, Shen, & Henderson, 2013), the Dalniy Tyulkas, a candidate for GSSP of the Artinskian Stage qualification with terrigenous-carbonate rocks, and the remains of conodonts, foraminifera, ammonoids, radiolarians, vegetable remains, as well as with fragments of fish skeletons (Kulagina & Signatullina, 2018).

Within the development of the nomination dossier for the geopark, the scientists from the Institute of Geology, Institute of Biology, and Institute for History, Language and Literature of UFRC RAS compiled a list

of sites of geological, natural, historical, and cultural heritage totaling 227 sites, including 103 geological, 42 natural, 44 historical and cultural, and 88 archaeological sites.

### **Opportunities Offered by the Geopark's Model for Sustainable Development**

In the concept of non-industrial sustainable development, Toratau Geopark is an ecosystem that maintains the balance between preserving natural objects and their exposition with the inclusion in tourist trails, as well as various activities, such as recreational, teaching, sporting, health supporting activity, etc., within the geopark's territory. The geopark does not interfere in any crucial way in the existing livelihood models (so long as those models do not present any threat to the ecology). On the contrary, it creates a foundation for broadening the range of services involving traditional local manufacturing through their incorporation into local tourist services.

### **Tourist Flow Analysis**

Even prior to the development of the Geopark, its primary natural objects were attractive sites for tourists. The current epidemiological situation in the world, along with the growing popularity of activities and self-planned trips among Russians, exhibits clear demand for ecological tourism.

According to a poll conducted in 2020, the general, estimated tourist flow in the geopark amounts to nearly 300,000 people per year. The geopark attracts tourism in the form of ecological tourism (62% of respondents), event tourism (15%), rehabilitative tourism (11%), and cultural and educational tourism (9%). The first two types constitute 77% of the tourist flow, with the overall percentage of scientific, educational, and religious tourism amounting to no more than 3%.

The major part of the tourist flow occurs during the summer (77%), with an average duration of recreation of two-three days. Clients of the *Krasnousolsk* spa retreat spend an average of 12 days in the geopark.

Comparative tourist flow assessments show significant growth during the last year. For example, assessments near Krasnousolsk spa retreat saw an increase of 142%, as compared with the same period of the previous year.<sup>2</sup>

Table 1

*Krasnousolsk Spa Retreat Assessment Results (Comparative Assessment of 2020 and 2021)*

Assessment results											
Wednesday (Thursday), afternoon			Saturday, daytime and afternoon				Sunday, daytime and afternoon				Total
2020	2021	2020	2021		2020		2021		2020		2021
afternoon	afternoon	daytime	afternoon	daytime	afternoon	daytime	afternoon	daytime	afternoon	afternoon	
118	174	145	42	551	308	221	68	359	47	594	1439

<sup>2</sup> In 2020, as a result of the COVID-19 pandemic and quarantine established in the spa retreat, the assessment for 2020 reflected the visits by uncoordinated tourists. In 2021, the spa retreat opened operations to the full volume of clients with significantly modified restrictions, including those for visiting tourist attractions. Considering these factors, it would be premature to state, according to the comparison of the assessments made within the two years, that the tourist flow increased, as the conditions of research would not be equal. Nevertheless, the proportion of curated (staying at the spa retreat) and uncoordinated tourists can be estimated at 60%:40%. The most remarkable growth in the number of visitors is observed on Saturdays: 360% in 2021, in comparison to 2020. This confirms the spa retreat's popularity among "day-off" tourists.

## Cluster Model of the Territory

The cluster model presents a foundation for the spatial and informational programme of the geopark's development. It establishes various visitation regulations to preserve the natural heritage (including 27 natural objects of Special Protected Natural Areas within the Geopark's borders), as well as concentrates teaching, economic, entertaining, sporting, scientific, and research functions, etc., in the so-called centres of the lands. There are seven lands in total: Shikhany, Usolka, Mendim, Zilim, Kukrauk, Berkhomut, and Tor.

In areas of active use, the cluster model is designed to create tourist, ethnocultural, and scientific centres. Within these areas, hotels, rental housing, campings, ecologic farms, and event grounds can be built. At the natural object sites, the geopark issues rules of conduct for tourists.

Developing the territorial centres of the geopark permits customized responses to the sociocultural needs of visitors, as well as personalization of tours: Tourists can book accommodations and travel on their own, creating trails according to their abilities and interests. Infrastructure development will be conducted with regard to the character of the land, including the creation of objects of various formats, among which there are visitor centres, tourist information points, motorway service stations, viewpoints, photo zones, and parking. Their concentration considers the location of the natural objects and their surroundings with buffer areas of low-use built in.

Toratau cultural and administrative centre, which is the main event ground of the geopark, is the centre of Shikhany land. Toratau shikhan is a spacious and culturally dominant part of the geopark that acts as "the main entrance" to the territory of the tourist and recreational complex. At the base of the mountain, there is a temporary visitor centre, next to which, an ethnical village is being built. The plans for developing the complex include an exhibition area, cultural and business areas, and a lecture centre to form the core of the educational and scientific cluster.

The Toratau, Kushtau, and Yuraktau Mountains within the geopark are regarded as "outdoor museums". The shikhans' surroundings will be kept construction-free, with nature trails designed for safe hiking.

The system of trails throughout the geopark is an efficient measure to decrease man-made anthropogenic burdens caused by uncontrolled tourist flow. Today, the geopark offers guided walking and cycle tours by accredited guides. These tours are designed with regard to scientifically-grounded changes in the regulation of natural sites. There are six types of tours: walking, cycling, equestrian, water, winter, and off-roading.

The character of the lands is determined by the location of the cultural and natural objects. Thus, in Krasnousolsk (the Usolka land centre), rehabilitative activity is stimulated by an operating health complex and mineral springs. In Makarovo (Kukrauk land), a centre for scientific and expeditional tourism has been organized. Saitbaba (Mendim land) has a Bashkir ethnical and cultural centre. In Khazinovo (Berkhomut land), there is a centre of agri-tourism. In Tash-Asti (Zilim land), a centre for sports and extreme tourism is being built. And in Voskresensky (Tor land), there is a centre of Slavic culture.

## Impact of the Geopark on the Economy of the Region

Support of geotourism and other types of ecologically responsible tourism, such as athletics, scientific, educational, photographic, ethnical, and bird watching, that permit use of the territory, including its mineral resources, for recreational and educational purposes while bringing profit to the local people, is one of the main instruments of sustainable development associated with the geopark's territory. Tourists contribute to the

creation of new enterprises in the field of tourism, as well as to the development of local entrepreneurs.

A sociological study conducted in 2019-2020 analyzed the approximate amount of tourist income associated with Toratau Geopark. Based on its results, more than half of the tourists expected to visit the geopark will need accommodation and catering. People visiting from the neighboring towns of the Republic of Bashkortostan constitute 46% of the overall tourist flow. They mainly seek one- to two-day stays in tents. The number of children and adolescents (up to 17 years old) ranges from 80,000 to 100,000 people. During their stay at the geopark, tourists are expected to spend 980-1,200 rubles per day. For instance, at the Shikhan location, based on expected tourist flow from April-October and given the average stay and spendings, tourists could theoretically spend, during the spring, summer, and autumn period, approximately 177 million rubles per year.

The geopark is designed to ensure the most efficient platform of interaction for society and nature with regard to the interests of both. In particular, the commitment to preserve the natural objects and regulations for their use should not invade the livelihood of the indigenous population of the territory. Management of the geopark will include members of local guide associations, artisans, folklore associations, organic, and other agricultural production cooperatives.

On the other hand, involving the inhabitants in tourist activity helps not only increase the quality of life, but also preserve the ethnical culture. Historically, the territory of the geopark has been inhabited by a multicultural population—the Bashkirs (57%), the Russians (20%), the Tatars (15%), the Chuvash, and other nations. Representatives of different cultures are involved in manufacturing items such as national clothes and household items as souvenirs; establishing restaurants of national cuisines, organising workshops for handicraft object manufacturing. In its turn, the revival of traditional production, including local products, helps raise awareness of Bashkir brands and attract an additional flow of tourists.

Enlarging the network of partners is a significant resource for the geopark. New partners, such as international institutes, academic figures, commercial companies, funds that share priorities of sustainable development, are expected to join the network. These partners own or rent commercial elements of the geopark's territory or plan to do so in the future. Such elements include glamping sites, camping sites, infrastructure and service development, private museums, platforms for additional education, and so on. For example, in the nearest future, there are plans to build an ethnical village in Shikhan village, a glamping site near the Ukle-kaya rocks of the Gafuriysky District, and an apitherapy centre in the Ishimbaysky District.

Projects for creating low-budget objects, modular structures, and simplified constructions, are offered for implementation, first of all, by locals with governmental support for initiatives. Such objects can include ecologic farms, apitherapy centres, dressage centres, extreme sporting parks, sports equipment rental centres, tourist bases, cafés, guest houses, and *objects d'art*. The 2021-2022 Plan to develop the infrastructure of Toratau Geopark includes the construction of a number of infrastructure objects, including nature trails for hiking Toratau and the Yuraktau shikhans.

## Conclusion

The tourist and recreational potential of unique natural and cultural sites within geoparks is one of the innovative and efficient methods of economic development of the region. Geoparks do not prohibit the use of the natural objects, but rather allow for the improvement of the territory and ensure its security by means of

ecological monitoring, imposed use regulations and tourist conduct rules, participation in various programmes for environmental revival, and so on. As a result, this model allows the use of preexisting natural objects as an instrument for the economic growth of the region. Accessibility to Toratau objects and their scientific value present an enormous potential for instructive and educational activity as well as for recreational, athletic, and rehabilitative activity. Investing in the territories and creating new jobs will make a significant contribution to enhancing the quality of life of the local population.

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