

NATURAL-GEOGRAPHICAL FEATURES OF THE SURKHAN STATE RESERVE AREA AND ITS IMPORTANCE IN PRESERVING BIODIVERSITY

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ABSTRACT

This article examines the natural and geographical features of the Surkhan State Reserve, including its relief, climate, soil cover, flora, and fauna. The study also highlights the importance of the reserve in preserving biodiversity, protecting rare and endangered species, and maintaining ecological sustainability in the region.

Keywords: Surkhan State Reserve, natural-geographical features, biodiversity, flora, fauna, environmental protection, endemic species, mountain ecosystem, biological resources, nature conservation.

INTRODUCTION

Natural and geographical features of the Surkhan State Reserve and its importance in preserving biodiversity Surkhan State Reserve is one of the most important protected natural areas in Uzbekistan. The reserve is located in the southern part of the country, in the mountainous regions of the Surkhandarya region, and is tasked with preserving unique types of natural ecosystems, protecting biodiversity, and conducting scientific research¹. The geographical location, relief, climate, and natural resources of the area determine its unique ecological significance. The Reserve is located mainly on the southern slopes of the Hisor range, characterized by a sharp alternation of heights. The absolute height of the territory varies from about 850 meters to 3137 meters². Such vertical zonation leads to the formation of various landscape complexes, with natural zones ranging from low-lying foothills to high-altitude pastures.

The reserve has a complex mountainous terrain, consisting of deep gorges, steep cliffs, mountain valleys, and narrow ravines. Geologically, the area is covered with rocks from the Paleozoic and Mesozoic eras. The diversity of mountain rocks has also had a significant impact on the soil formation process. The region is characterized by dense mountain soils, hungry-toned peat soils, and mountain meadow soils The climate is sharply Continental in nature, with high temperatures during the summer months and relatively cold during the winter season³.

The amount of precipitation varies with altitude and falls mainly during the winter and spring months. The high amount of precipitation in mountainous areas allows for the rich formation of vegetation cover⁴. The hydrographic network in the area consists of seasonal streams, small

¹ Tukhtaev B.Y. Natural geography of Uzbekistan. – Tashkent: Teacher, 2010.

² Hasanov I.A., Gulomov P.N. Natural geography of Uzbekistan. – Tashkent: University, 2008.

³ Soliyev A.S. Geography of Uzbekistan. – Tashkent: University, 2014.

⁴ Academy of Sciences of the Republic of Uzbekistan. Red Book of the Republic of Uzbekistan. – Tashkent, 2019.

rivers, and springs, which are important for maintaining the stability of the ecosystem. The flora of the reserve is very rich and diverse. Here, spruce forests, shrubbery, mountain meadows, and steppe vegetation are widespread. In particular, the Zarafshan fir and other fir species are one of the main components of mountain ecosystems. The area is home to many species of medicinal, forage, and endemic plants. Vegetation plays an important role in preventing soil erosion, regulating water regimes, and creating habitats for wildlife.

The fauna is also very rich, and the reserve is an important area for the conservation of Uzbekistan's rare animal species. Mammals such as the Bukhara mountain goat, Markhor goat, Snow leopard, Wolf, and Fox are found here⁵. The area is also the habitat of various reptiles, amphibians and birds. Some species are listed in the Red Book of the Republic of Uzbekistan, the conservation of which is one of the main areas of activity of the Reserve. The Reserve is of great importance as a gene pool reservoir in biodiversity conservation. Maintaining natural populations of rare and endangered plant and animal species is an important environmental task for future generations. In addition, the reserve serves as an important scientific base for conducting ecological monitoring, organizing scientific observations, and conducting nature conservation experiments.

Reducing anthropogenic pressure is an important factor in maintaining the ecological stability of the area. Factors such as illegal hunting, livestock pressure, shrinking forests, and climate change can negatively impact biodiversity. Therefore, a strict protection regime has been introduced in the reserve area, and the use of natural resources is limited.

CONCLUSION

Today, the Surkhan State Reserve plays an important role in ensuring the ecological safety of not only Uzbekistan, but also the entire Central Asian region. Its natural and geographical features and unique biological resources are of great importance for scientific research, environmental education, and nature conservation activities.

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⁵ Ministry of Ecology, Environmental Protection and Climate Change of the Republic of Uzbekistan. Specially protected natural areas of Uzbekistan. – Tashkent, 2020.