FLORA AND FAUNA IN UZBEKISTAN

Teshaboyeva Nafisa Zubaydulla qizi

nafisateshaboyeva@gmail.com

Jizzakh branch of the National University of Uzbekistan named after Mirzo Ulug'bek The Faculty of Psychology, the department of Foreign languages Scientific advicor

Davletova Charosxon Muhammad qizi

davletovacharos40@gmail.com

Jizzakh branch of the National University of Uzbekistan named after Mirzo Ulug'bek The Faculty of Psychology, the department of Foreign languages Student of group 401-22

Annotation: *This article delves into the diverse and fascinating world of flora and fauna found within Uzbekistan, a Central Asian country renowned for its varied landscapes and rich biodiversity. The author explores the unique ecosystems present in Uzbekistan, ranging from arid deserts and vast steppes to towering mountains and fertile valleys, and how these environments have shaped the evolution and distribution of plant and animal life. Also, in this article provides a comprehensive description of the different ecological regions within the country, highlighting the unique characteristics and adaptations of flora and fauna in each zone. From the iconic saxaul trees of the Kyzylkum Desert to the vibrant fruit orchards of the Fergana Valley, the article showcases the remarkable diversity of plant life found in Uzbekistan. The article explores the rich array of animal species inhabiting Uzbekistan, including endangered mammals like the snow leopard and Bukhara deer, along with a variety of birds,*

reptiles, and amphibians. It provides a comprehensive overview of the various mineral deposits found within the country, including gold, copper, uranium, natural gas, coal, and various industrial minerals.

Key word: *Biodiversity, Endemic species, Desert flora (saxaul, ephemeral plants), Mountain ecosystems (juniper forests), Fergana Valley (fruit orchards), Snow leopard, Bukhara deer, saiga antelope, Birds of prey, Protected areas (national parks, reserves), Conservation efforts, Ecotourism, Gold, copper, uranium, Natural gas, coal, Industrial minerals (phosphates, kaolin), Construction materials (limestone, marble), Mining industry, Resource extraction, Economic significance, Industrial applications, Infrastructure development, Environmental impact, Sustainable mining practicesl*

Uzbekistan's natural world is very diverse. It is composed of desert areas and snowy mountains, rivers and completely dry lands. The most part of its territory lies in the Turon plain, where there are no sudden steep-drops and hills. The Turon plate and mainland, which later became the Tian Shan and Pamir -Alai Mountains, were formed in the Paleolithic period. Later, the sea covered the plate for a long time. The mountain chains are thought to have fully developed during the Alps orogenesis. The mountain ranges blocked the humidity from the Indian Ocean. It caused considerable climatic change: the weather became dry and huge desert areas appeared. As rivers and winds kept changing their directions, the upper layer of soil was continuously displaced from one place to another. It led to the formation of the Kyzyl Kum and Kara Kum deserts. Mountains and foothills make up about one-fifth of the territory of Uzbekistan. The highest point is 4,643 meters. Mountains cover the east of the country. Uzbekistan embraces western parts of the Tian Shan and Pamir-Alai mountain ranges, respectively. The mountain ranges are very different: there is a sharp contrast of heights, foothills, canyons, and watersheds. There are also small mountains such as Aktau, Karakchitau and the western part of the Zarafshon mountain range with their

smooth shape. Rather big depressions stretch between the mountains: Kashkadarya, Surkhandarya, Zarafshon, and Samarkand. The largest depression is the Ferghana Valley - 370 km long and 190 km wide. It is surrounded by mountain ranges on three sides except on the western face. On the border with Afghanistan, there is the huge Amu Darya depression.

Flora Of Uzbekistan

Due to its various relief features, Uzbekistan has quite diverse flora. More than 3,700 types of plants have been recorded on the territory of Uzbekistan. Twenty percent of them grow only in Uzbekistan. Most of them grow on the mountains and only a few - in the desert and steppe areas. The desert plants are particularly interesting. They are mainly there to protect soil from being swept away by constant desert winds. Only a few of the 400 types of plants that grow on the Usturt Plateau are important for the landscape. Most of the plateau is covered with haloxylon or saxaul. The black saxaul is the only plant that can grow in saline areas. It grows fast but lives too short. Saxaul is also a source of food for some desert animals like sheep and camels. Desert plants are well adjusted to grow in moving and poor soils and in conditions of long drought or overheating. These plants adjust to desert condition by simply being leafless or having tiny leaves (for instance, saxaul or Calligonum). The river valleys are vast in plains. The flora of the valleys is very diverse. In foothills covered with grass, trees are rarely seen. Besides some cereals, these areas have different types of onion, tulip, rhubarb, iris, and other plants. These plants do not live long under the heat of the sun. As they disappear, other types of plants, which do well in heat, like the wormwood, occupy their place. In foothills and semi-desert areas most of the plants are ephemeral. There are about 15-20 different types of ephemeral plants per square meter. These kinds of plants are hardly noticed in the landscape. In the past, these foothills and semi- desert areas had pistachio plants but now they grow only in areas difficult to access. There are forests in low foothills. However, green plantation has been preserved only in areas difficult to access or unfit for

agricultural purposes. The main plants in these areas are fir trees, the timber of which is highly valued. The fir trees grow very slowly and live quite long. There are fir trees more than 1,000 years old in the country. Besides fir trees, there are deciduous trees like maple, cherry plums, and hawthorns. In some mountainous areas there are different types of wild apple trees. There are pistachio trees on Bobotag (mountain) and nuts in the Pskem valley. The western Tian Shan areas are rich in birch woods. Plum trees, willow and poplar trees grow in most parts of the country. In the lower mountain areas there are honeysuckle, dog roses, barberry, and wild grapes. Also, there are a wide variety of herbs such as the Muscat sage, rhubarb, sorrel, and others. There are plenty of Pskem onions - the wild type of onion used for medical purposes - found in the valleys of Chirchik River. The middle-size mountain areas are also rich in different types of herbs. Only 30 percent of high mountain areas are covered with plants.

Fauna of Uzbekistan

As for the wildlife on the territory of Uzbekistan , it has formed in concordance with the flora. The fastest animals live in desert areas. Even the type of hedgehog that lives in desert areas has longer legs than those found in Europe. Also, desert birds are different in terms of running and flying speeds than those found in other habitats. Lizards are also among the fastest desert animals. Even the desert beetles have longer legs compare to those that live in a damp climate. Among the fast runners are ground beetles, phalanx, and, particularly, tarantula. Among invertebrates there are phalanx, scorpion, tarantula, beetle, mosquitoes, and others. There are reptiles such as round-heads, steppe agama, lizards, as well as birds - the nightjar, buzzard, saxaul jay, desert sparrow, shrike, and others. Among mammals, there are ground squirrel, jerboa, and others. Also, there are different types of wolves, hedgehogs, foxes, and other animals. Many wood louses, phalanx, ants, and cicadas inhabit the loamy desert areas. Besides, other animals such as the Central Asian turtle, yellow ground squirrel, arrow snake, gazelle, and others are found in the area. It is typical to run across the Central

Asian cobra in the Karshi desert, other species of venomous snakes- in the Golodny Desert, as well as saygak and the four-striped runner - in the Usturt Plateau. The fauna of mountainous and plain areas is alike. Of course, it does not include some birds and animals that inhabit the rocks. Among birds, there are reels, buntings, lentils, black vulture, and others. Also, there are mammals such as wild boars, wild goats, mountain sheep, badger, marten, fox, wolf, and others. Papilio machaon. In general, the list of animals and birds that inhabit different areas of the country includes green toad, bear, panther, wolf, Siberian goat, mountain sheep, pheasant, cuckoo, magpie, jackal, black crow, southern nightingale, rat, Bukhara deer, and many others. There are more than 70 types offish in the water reservoirs of the country. Besides, there are more than 300 types of invertebrates including 80 types of Crustaceans.

Mineral resources of Uzbekistan

Uzbekistan, with a total population of 28,394,180 as of July 2012, is located in Central Asia, to the north of Turkmenistan and south of Kazakhstan. The country mostly has a midlatitude desert climate and covers a total area of 447,400 km2.Since its independence in 1991, the country has been making efforts to expand its agricultural sector and simultaneously develop its petroleum and mineral reserves and hence increase its production in order to stabilize its financial sector. Uzbekistan is the fifth-largest producer of cotton and the second-largest exporter of cotton in the world. Besides cotton, the country also exports gold, natural gas and hydrocarbons. The global increase in prices over the past years for cotton, gold and natural gas brought about a positive impact on the country’s GDP. Uzbekistan’s GDP as of 2011 was $96.46 billion. Uzbekistan’s mineral resources include petroleum, natural gas, gold, silver, uranium, molybdenum, tungsten, coal, copper, zinc and lead. Uranium, copper and gold are the country’s chief minerals. The country has mineral reserves amounting to more than 1800 in number. In 2010, the country’s mining sector was affected due to decrease in the

production of minerals. This decrease was mainly because of insufficient foreign investments, lack of infrastructure and remote location.

Oil and Gas: The oil and gas industry is one of the main sources of Uzbek GDP, its budget revenues and foreign exchange earnings, and also plays a significant role in the structure of industrial production and attracting investment. Uzbekistan is the second largest natural gas producer in Central Asia, and is believed to have significant hydrocarbon reserves. Currently, the Ministry of Energy coordinates the development of the entire fuel and energy complex of Uzbekistan. In 2019, the government broke up the national monopoly UzbekNefteGaz into three independent companies focused on production (UzbekNefteGaz), transmission (UzTransGaz), and domestic sales (HududGazTaminot), with the goal of improving transparency and operating on market-based price standards. Implementation of an automated system for monitoring and metering of natural gas started in 2020, and should dramatically improve resource accountability. UzbekNefteGaz and UzTransGaz have been instructed to file for an IPO by 2023. Country's ambition is to triple its gas output by 2030 alongside pushing for growth of renewable energy projects with solar, wind and hydropower in the mix. In order to achieve this goal, the Ministry of Energy of the Republic of Uzbekistan is gradually implementing large-scale projects for the deep processing of natural gas and renewable generation, vigorously coordinating the processes of reforming the industry in order to increase its efficiency and transfer to market relations as well as attracting investment. As a result, there could be increasing opportunities for Canadian technology and equipment providers in Uzbekistan as they pursue these steps towards modernization of the industry. In order to increase the effectiveness of scientific and practical research in the fields of renewable and hydrogen energy, as well as to ensure the transition of the Republic of Uzbekistan to a "green" economy, a resolution of the President of the Republic of Uzbekistan of 09.04.2021 was adopted. №PP-5063 "On measures for the development of renewable and hydrogen energy in the Republic of Uzbekistan". Together with

the World Bank and international consultants, an assessment of the technical potential of the Republic of Uzbekistan for the production of "blue" hydrogen is planned in 2022, in the context of its comparative advantages and disadvantages, as well as the expected development of regional and global demand for low-carbon hydrogen. Based on the results of the study, a "Roadmap" will be developed for the development of "blue" and "green" hydrogen in Uzbekistan. The anticipated outcomes of these developments may also provide additional opportunities for Canadian companies.

CONCLUSION

Uzbekistan's diverse tapestry of flora and fauna, coupled with its abundant mineral resources, paints a picture of a nation blessed with natural wealth. The country's unique ecosystems, from arid deserts to towering mountains and fertile valleys, harbor a remarkable array of plant and animal life, including endemic species found nowhere else on Earth. This natural bounty has played a pivotal role in shaping Uzbekistan's history, culture, and economy. The fertile lands have sustained agricultural communities for centuries, while the mineral resources have driven industrial development and contributed significantly to the nation's economic growth. However, this wealth also comes with a profound responsibility.

The delicate balance of Uzbekistan's ecosystems is facing challenges posed by human activities and environmental pressures. Sustainable management practices, conservation efforts, and a commitment to responsible resource extraction are crucial to ensure the long-term preservation of this natural heritage for future generations. Uzbekistan has the potential to serve as a model for sustainable development, demonstrating how a nation can harness its natural resources while safeguarding its biodiversity and protecting the environment. By embracing responsible practices and fostering a culture of conservation, Uzbekistan can ensure that its natural treasures continue to flourish, enriching the lives of its people and contributing to the global tapestry of life.

REFERENCE

1. «Опыт типологии растительности земного шара на примере Средней Азии», К.З. Закиров, П.К. Закиров, «ФАН УзССР» Ташкент 1978.

2. Энциклопедический однотомник «Узбекская ССР», «Главная редакция Узбекской Советской Энциклопедии» Ташкент 1981.

3. «Лекарственные растения Ташкентской области», Т.П. Пулатова, Х.Х. Халматов, И.Н. Джураев, «Медицина УзССР» Ташкент 1980.

4. Lazkov G.A., Sultanova B.A. (2011): Checklist of vascular plants of Kyrgyzstan. Norrlinia, 24: 1-116.

5. Cherneva O.V. (1962): Cousinia Cass. In Komarov V.L. ed., Flora of USSR, XXVII. Leningrad, 108-357.

6. Schreder R.R., Vvedenskyi A.I. eds. (1941-1962): Flora of Uzbekistan. In VI volumes. Tashkent, Fan press.

7. Teshaboyeva, N., & Mamayoqubova, S. (2020). COMMUNICATIVE APPROACH TO LANGUAGE TEACHING. In МОЛОДОЙ ИССЛЕДОВАТЕЛЬ: ВЫЗОВЫ И ПЕРСПЕКТИВЫ (pp. 409-414).

8. Teshaboyeva, N. (2020). LINGUISTIC PERSONALITY, ITS STRUCTURAL CHARACTERISTICS IN THE NEW PERSPECTIVE DIRECTIONS. In МОЛОДОЙ ИССЛЕДОВАТЕЛЬ: ВЫЗОВЫ И ПЕРСПЕКТИВЫ (pp. 415-420).

9. Teshaboyeva, N. Z. (2019). TEACHING ENGLISH THROUGH LITERATURE INTESL AND TEFL CLASSROOMS. In СОВРЕМЕННЫЕ ТЕХНОЛОГИИ: АКТУАЛЬНЫЕ ВОПРОСЫ, ДОСТИЖЕНИЯ И ИННОВАЦИИ (pp. 82-84).

10. Teshaboyeva, N. (2023). THE IMPORTANCE OF TOURISM IN PRESENT DAY. Журнал иностранных языков и лингвистики, 5(5).

11. Teshaboyeva, N. (2023). THE MODERN INNOVATIVE TECHNOLOGIES IN TEACHING FOREIGN LANGUAGES. Журнал иностранных языков и лингвистики, 5(5).

12. Teshaboyeva, N. Z. (2023, November). Adjective word group and its types. In " Conference on Universal Science Research 2023" (Vol. 1, No. 11, pp. 59-61).

13. Teshaboyeva, N. Z. (2023, November). Modifications of Consonants in Connected speech. In " Conference on Universal Science Research 2023" (Vol. 1, No. 11, pp. 7-9).

14. Маърипов Д. Psychological value of the novels by agatha christie //Информатика и инженерные технологии. – 2023. – Т. 1. – №. 2. – С. 630-632.

15. Teshaboyeva, N., & Rayimberdiyev, S. (2023, May). THE IMPORTANCE OF USING MULTIMEDIA TECHNOLOGY IN TEACHING ENGLISH CLASSES. In Academic International Conference on Multi-Disciplinary Studies and Education (Vol. 1, No. 8, pp. 149-153).

16. Nafisa, T., & Marina, S. (2023). TEACHING AND LEARNING OF ENGLISH VOCABULARY IN TESL AND TEFL CLASSROOMS. International Journal of Contemporary Scientific and Technical Research, 465-469.

17. Teshaboyeva Nafisa Zubaydulla qizi, & Davletova Charosxon Muhammad qizi. (2023). Conversion and it's origin. International Conference on Multidisciplinary Science, 1(6), 12–14. Retrieved from https://mjstjournal.com/index.php/icms/article/view/414