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BIODIVERSITY LOSS AND ITS IMPACT ON ECOLOGICAL SYSTEMS

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ABSTRACT. *Biodiversity is the variety of all living organisms on Earth, including plants, animals, fungi, and microorganisms. It is divided into three main levels: 1. Genetic diversity - the genetic variation within a species (for example, different varieties of apples). 2. Species diversity - the variety of organisms in a given area or ecosystem (for example, birds, insects, trees in forests). 3. Ecosystem diversity - the variety of natural environments and ecosystems on Earth (for example, deserts, rainforests, seas, wetlands). Biodiversity is essential for the stability of ecosystems and human life. It provides food, medicine, oxygen, soil fertility, and natural resources. However, biodiversity is currently under threat from human activities - deforestation, pollution, and climate change are leading to the extinction of many species. Biodiversity is the variety of all living organisms on our planet and is essential for the stability of ecosystems and human life. If this diversity is reduced, ecosystems can fail, food chains can be disrupted, and environmental balance can be lost. If biodiversity is not protected, future generations may lose the opportunity to see many unique species.*

Keywords: *Biodiversity, genetic diversity, ecotism, fauna, flora, poaching, biological resources, migration, "Red Book", global warming.*

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INTRODUCTION. Biodiversity is the stability of the ecosystem, each species plays an important role in the ecosystem. For example, bees and butterflies pollinate plants and ensure their reproduction. Food security is a source of food for humanity, as a variety of plant and animal species. Medicines are obtained from plants and animals. For example, the main ingredients of aspirin come from trees. Climate regulation is ensured by forests and marine ecosystems, which absorb carbon dioxide and help prevent global warming. Examples of threats to biodiversity include deforestation, pollution, climate change, hunting and poaching. Habitat loss leads to the extinction of many animal and plant species. Plastic waste, chemical fertilizers and toxic substances harm nature. Rising temperatures and rising sea levels have a negative impact on many ecosystems. Some species are becoming extinct due to illegal hunting and trade. The impact on the ecological system is that the reduction of biodiversity causes serious damage to the stability of ecosystems, namely the disruption of ecosystem functions, soil degradation, atmospheric deterioration due to accelerated climate change, and negative impacts on human life. The loss of pollinating insects makes it difficult for plants to reproduce, disrupting food chains. The reduction in the diversity of plants and microorganisms reduces soil fertility. Deforestation and the disruption of ocean ecosystems disrupt the carbon balance. The risk of food shortages, the loss of natural medicinal plants, and the spread of diseases increases. [8: 102].

RELEVANCE OF THE TOPIC. To preserve biodiversity, it is necessary to reduce deforestation and plant more trees, reduce recycling and waste, expand protected areas and protect endangered species, develop environmental education and support sustainable lifestyles. Biodiversity is not only the environment, but also the flora and fauna. The plant world is the primary source of life on earth. They produce 380 billion tons of organic matter per year, of which 330 billion tons are marine and ocean plants, 40 billion tons are forests, and 8-10 billion tons are grasslands. Plants are the basis of life on earth. Plants absorb carbon dioxide from the air as a result of photosynthesis and release oxygen. Animals are also an integral part of biological resources, they play an important role in the exchange of matter

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and energy in nature. Animals are in close contact with plants. Animals are the most important part of the biosphere and, together with plants, play a major role in the migration of chemical elements in the geographical shell. Animals consume ready-made organic products created by plants from organic matter under the influence of solar energy. Animals that feed on each other and plants take an active part in the biological and metabolic processes of our planet. Plants are also of great importance in human daily life. Also, plants, as an important natural geographical factor, have a great influence on the flow of water on the Earth's surface, evaporation, moisture retention in the soil, air flow in the lower part of the atmosphere, the strength and direction of the wind, and the life of animals. Plants are the main source of countless food, raw materials, medicines, building materials and other areas for society. Plants are also considered the main source of food for the preparation of various types of clothing, beverages, as well as for livestock, and are also important as an aesthetic pleasure that gives people pleasure. Of the 500,000 plant species on Earth, 6,000 are used by humans in everyday life. Of these, 1,500 are medicinal plants. There are 4,148 plant species in Uzbekistan, of which 577 are medicinal plants, 103 are dye plants, and 560 are essential oil plants. The positive and negative effects of humans on plants are distinguished. The positive effects include reforestation, landscaping, the creation of high-yielding varieties of plants, and others. As a result of the negative impact of humans, 2/3 of the forests on our planet have been destroyed, and many valuable plant species have disappeared. Hundreds of plant species are disappearing due to the development of new lands and environmental pollution. As a result of the uncontrolled use of plants in various directions, their species are decreasing and becoming rare plants. In order to increase attention to the protection of rare and endangered species, the International Union for Conservation of Nature established the International Red List in 1966. The Red List is not only a list of threats, but also a program of conservation actions. The protection of plants and animals can only be successfully carried out through cooperation between different countries. Plant and animal protection can only be successfully carried out through cooperation between different countries. The Republic of Uzbekistan has its own

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unique flora and fauna, but in recent years, human economic activity has increased the negative impact on flora and fauna. The fauna of Uzbekistan consists of 682 species of vertebrates and 32,484 species of invertebrates. In 1983, the 1st volume of the Red Book of Uzbekistan was published. The Red Book of Uzbekistan includes 65 species of vertebrates, 22 species of mammals, 33 species of birds, 5 species of reptiles, and 5 species of fish. Ustyurt sheep, ibex, snow leopard, Bukhara reindeer and other animals are on the verge of extinction. Of the more than 4,000 plant species in Uzbekistan, 10-12% require protection (4,148 species). The area of the most valuable mountain forests has decreased dozens of times. Groves and pine forests have been cut down in large numbers. The area of natural pastures has decreased by 6.5 million ha. Therefore, in 1984, the 2nd volume of the Red Book of Uzbekistan was published. It includes 163 species of 400 plants that need to be protected. For example, Circassian, isiryk, etmak, shovul, anzur onion, wild fig, walnut, hyacinth, almond, tulip, clove and other plants. [12: 293]. The further increase in the number of rare and endangered species of animals is under threat. Currently, such species are under state protection. In some places, reserves have been established for valuable animals such as bison, river beaver, sable, kulon, and water vole. For example, saigas are being bred in the Borsa Kelmas reserve on the Aral Sea. The kulon (wild ass) is being kept in the Bodhiz reserve. In addition, the Red Book and international agreements are of great importance in the protection of animals. Such changes in the natural environment encourage peoples of the world to work together to protect them. More than 70 agreements have been concluded on fishing and hunting other marine animals. [12: 293].

SUMMARY. The loss of biodiversity is one of the most pressing environmental problems of the modern world. The loss of various animals, plants and microorganisms not only eliminates their existence, but also poses a serious threat to the stability of entire ecological systems. Each species has a specific role in the ecosystem: some participate in pollination, others in important links in the food chain. If these different species disappear, food chains are disrupted, land fertility decreases, and water and air quality deteriorates. The loss of biodiversity is caused

by natural disasters, climate change, and human activities - in particular, deforestation, land degradation, and excessive use of chemicals. This directly affects not only wildlife, but also human health and economic stability. For example, the decline in biodiversity can lead to the proliferation of pest-resistant crops in agriculture and the spread of new diseases. Therefore, preserving biodiversity should become a task for each of us, both globally and locally. Through legal measures, education, sustainable agriculture and green technologies, we can reduce this problem. Understanding the important role of each species for life is a prerequisite for restoring harmony between humanity and nature. Biodiversity is the wealth of nature, a source of life, and losing it is putting our own future at risk.

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