

***B.T. Jobborov, N.X.Xurramov, M.SHermamatova***

*National University of Uzbekistan named after Mirzo Ulugbek,*

*Tashkent, Uzbekistan, E-mail: [bakhrom.jobborov@mail.ru](mailto:bakhrom.jobborov@mail.ru)*

***Abstract:*** *In this article, the changes in the biosphere during the development of coal mines and the resulting changes in the life of living organisms, i.e. plants, animals and people, and its impact on the social life of people and natural ecosystems. Information about studying the secret is given.*

***Key words:*** *Biosphere, Angren, Boysun, Shargun coal deposits, changes in the biosphere, coal mining, crater, anthropogenic impact.*

**INTRODUCTION.** The biosphere is the life shell of the earth, the term "biosphere" was introduced into science in 1875 by the Australian geologist E. Zuss, and the "teaching of the biosphere" was developed by the Russian scientist V. I. Vernadsky in 1926. All living organisms in the biosphere, including humans, use all the resources available in nature to satisfy their needs. As a result, environmental problems are increasing. Including the use of coal mines by humans, its impact on the biosphere and all living organisms is changing in a negative direction. As a result of exploitation of coal mines, first of all, the destruction of the ecosystem in this area, the reduction of natural resources there, and the living organisms in this area, i.e. the world of flora and fauna, the world of microorganisms, and the social life of people living in that area have their impact. shows the secret. That is, as a result of the operation of coal mines, a large amount of harmful substances are being produced in the environment, causing harmful consequences. As a result of this, the natural condition of the land in the area may be disturbed, its chemical composition may change, the number of useful microorganisms in it may decrease, and it may lead to a number of problems. In addition, it also leads to the disturbance of the stability of the ecosystems in the area. In order to satisfy their needs, people are exploiting coal

mines, and the environment is showing its negative impact on the natural environment and the way of life of Christians.

**Research results.** Currently, in the process of development of coal mines, several changes are taking place in the biosphere. In general, a person lives in harmony with nature and uses all natural resources, including mines of coal, oil, gas and other resources. Our republic is geologically developed and consists of various natural resources. To date, more than 2,700 potential new mineral deposits have been identified in Uzbekistan, more than 60 of which are important for the national economy. In addition, according to the year 2000, the coal reserve is about 2 billion tons. More than 3,600 coal mines and basins have been identified on Earth, and if we take 220 of them, the reserves of coal mines in them exceed 0.5 billion tons. Including, more than 20 coal mines and basins have been identified in the territory of our Republic, and 3.5 billion tons of coal are being mined from them. China, USA, Russia, Poland, Germany, Czech Republic, Great Britain, India and Australia are the 9 countries that have the largest coal reserves in the world and are mining a large amount of coal. included. About 87% of the coal mined in the world is found in these countries, and the remaining 13% is accounted for by other countries. In Uzbekistan, coal is mined from 3 main mines, namely Angren and Shargun coal mine and Boysun coal mine. The largest of these is the Angren coal mine, whose reserves are more than 100 years old. 80,000 and 10,000 tons of coal are mined per year in Boysun and Shargun mines. There are 3 ways to extract this coal from the mines, namely; open, underground and combined methods are used. As a result of open pit mining, artificial mounds are created, harmful substances are released into the atmosphere, besides, coal residues have a self-combustible property, burning situations are observed, and because of this, the soil composition changes. change is observed. In the case of underground mining, there are negative consequences for the life of the soil layer and living organisms in the soil. Coal from coal mines in Uzbekistan contains on average 0.5-2.5% sulfur, 8.5-20.0% ash, and 1g of coal gives 6500-7200 kcal of heat. Changes in the biosphere as a result of the development of such coal mines are reflected in all living organisms and all living environments. This, in turn, has

an impact on sustainable development. As a result, there is a decrease in the number of species and a radical change in the environment. In the process of coal mining, many landslides appeared around the mines at the foot of the mountain. For example; Angren coal mine is the Atchi mine, its volume is 700 million m<sup>3</sup>. The emergence of this trend has been going on since 1975.

Boisun coal mine has been exploited since 1940. It is located on the southern slope of the Ketmonchopti ridge, which is the southwestern branch of the Boisun Mountains. Shargun coal mine is located in the southwestern branch of the Hisar mountain range. It was mastered and opened in 1941. The reserve of this coal mine is 36 million tons, of which 50,000 tons of coal are mined per year. The annual capacity of the mine is 100,000 tons. At present, as a result of exploitation of such coal and other mines, the condition of the soil layer is being disturbed. As a result of open mining of coal from coal mines, the lower and upper layers of the soil are severely damaged. Coal mining in this way has a direct impact on the soil. The indirect effect of this is a change in the water regime of underground waters, pollution of underground waters, disruption of the way of life of the world of animals, plants and microorganisms living underground and on the surface of the earth, pollution of underground waters, damage to atmospheric air. brings about. In addition, air pollutants create dust and gas, which in turn causes a number of diseases in the population living in this area. In our country, in the process of using the underground method of mining, methane (CH<sub>4</sub>) and carbon dioxide (CO<sub>2</sub>) and other similar substances are released into the atmosphere. According to the account books, their amount is 680 million m<sup>3</sup> on average every year. Pollution of atmospheric air with these and similar substances causes a number of respiratory diseases, bronchitis and a number of allergic diseases in people's social life and health, and leads to a number of negative consequences. Even if mining benefits the state economically, its damage to the biosphere is equal to the benefit it brings, but such issues are largely ignored. Coal deposits themselves are developed under the influence of humans, i.e. anthropogenic factors, and at the same time, under the influence of this human factor, changes occur in the biosphere, and it has its own negative impact on

humans and living organisms in the biosphere. reveals its secret and causes several problems. In addition, as a result of the development of coal mines, the state of sustainable development of ecosystems is observed.

The loss of the number of natural rhesus on the earth and the disturbance of the relationship to the land are also caused by the development of coal deposits, as a result of which there is a reduction of biological diversity and a reduction of the area of plants and animals, and the limitation of the activity of microorganisms in the soil and as a result decrease of soil fertility and erosion of soils. The formation of large craters in the process of mining coal from mines causes a number of problems related to the above-mentioned land resources and soil. If we look at the history of exploitation of coal mines, the establishment of this network was opened before the beginning of the Second World War, and the exploitation of the Angren mine, which is considered one of the largest mines in Central Asia, began in 1940-1943. The development of the coal industry in Uzbekistan is associated with the commissioning of the Angren open-pit coal mine in 1948. During these periods, as a result of the operation of coal mines, the problems listed above also occurred, but by the present time, these problems have escalated to a noticeable extent. As a result of the exploitation of such coal mines and their operation, not only atmospheric air, but also waste water contaminated with mechanical impurities and mineral salts formed during the mining process are released into the environment. According to the accounting books, every year as a result of the operation of coal mines, approximately 2.5 billion cubic meters of contaminated water filled with harmful substances are released to the surface of the earth. Open pit coal mining primarily reduces fresh water resources. The increase in the number of the population, that is, the occurrence of a demographic explosion, is the reason for the increase in the demand for solid fuel. It is the growth of such demand that is of great importance in the more rapid development of coal mines. The increase in demand for solid fuel is determined based on the population's needs. Several changes occur in the biosphere during the process of this solid fuel and its extraction and use. Changes in the biosphere cause a certain amount of dust, various types of harmful gases and harmful substances rising into

the atmosphere from coal mines, causing a number of problems. In other words, the problems of current climate change are having a certain impact on the development of coal mines, but also the use of coal and coal products in people's social life is causing a number of problems. and these problems are having an impact on the current environmental situation, and as a result, people themselves are suffering from harmful effects. the main pollutants in mining mines are coal-stone particles, which are added to clean waters as waste water, reducing the transparency of water and disrupting the physical and chemical condition of waters. Water pollution with coal waste is typical for the Karaganda coal basin. As a result of this type of water pollution, living organisms in water; it has a devastating effect on all groups of animals, i.e. plankton, nekton, benthic organisms, groups of algae and causes the disappearance of several of their species.

Since its inception, the coal mining industry has long had serious negative environmental impacts on local ecosystems, including those located where it is mined, local communities, the local population around the mine, and the workers working in the mine. affects the health of the population and contributes significantly to environmental crises such as poor air quality and climate change. It is for these reasons that coal is one of the first types of fuel to be phased out of various parts of the global energy economy. Coal use is being reduced to prevent global climate change.

Impact of coal mining on people living in the biosphere; Coal mining has historically been considered a very dangerous activity. If we take the United States as an example, 90% of these deaths occurred in the first half of the 20th century, where 104,895 people died since 1900. By 2020, 5 people have been killed. In addition, a number of human diseases, namely chronic lung diseases, for example, pneumoconiosis (black lung) disease, this disease is more common in miners than in the general population, and it leads to a reduction in life expectancy. The disease is common in countries with a developed mining industry, including 400 new cases of pneumoconiosis in the United States and 10,000 new cases in China each year. The use of water sprinklers on mining equipment is used to reduce the

risk to the lungs of miners there. Several ways have been developed to reduce the impact on the health of mining workers and the surrounding local population. In addition, noise is a factor that negatively affects the health of coal mine workers. Excessive noise can also cause hearing loss in workers. The loss of developed hearing ability of workers as a result of occupational exposure is called occupational hearing loss. As a result of exploitation of coal deposits, it brings about changes in the biosphere and people's lives.

**Conclusion.** In conclusion, it should be said that changes in the biosphere as a result of exploitation of coal mines serve as a limiting factor in the life of all living organisms. Such changes in the biosphere change the state of the natural environment. As a result of exploitation of coal deposits, changes in the biosphere, deterioration of the state of natural ecosystems, deterioration of the state of land resources, atmospheric air pollution, deterioration of the condition of soils and changes in the condition of water resources are caused. The activity of these mines also affects global climate change. In addition, it causes the workers working in the mine to get various diseases and shorten their life expectancy. The particles rising into the atmosphere as a result of the coal mining activities have an impact on the local population. Thus, while the exploitation of coal mines brings economic benefits, it also affects the biosphere from an ecological point of view.

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**MA’LUMOT**

**Anjuman ishtirokchilarini ro‘yxatga olish kartochkasi**

Familiyasi, ismi va otasining ismi (to'liq)	Жобборов Бахром Турғунович
Ish yoki o'qish joyi	Ўзбекистон Миллий университети
Lavozimi	доцент
Ilmiy darajasi va unvoni	Б.ф.д
Elektron pochta manzili	<a href="mailto:bakhrom.jobborov@mail.ru">bakhrom.jobborov@mail.ru</a>
Telefon raqami (shahar kodi bilan)	+998911928692
Ma'ruza mavzusi	Changes in the biosphere during coal mining
Anjuman yo'nalishi	Qishloq xo'jalik ekinlaridan mo'l va sifatli hosil yetishtirishda innovatsion, resurstejamkor agrotexnologiyalardan foydalanish, muammolar va ularni innovatsion yechimlari;
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