

# **THE ORIGIN OF GEOECOLOGICAL CIRCULATION UNDER THE INFLUENCE OF ANTOPOGENIC FACTORS IN THE NAVOI REGION**

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## **ABSTRACT**

To comprehensively research the geo-ecological problems of Navoi region and to study the environmental and geo-ecological problems that have arisen in geocomplexes and prevent the acceleration of natural geographical processes occurring in the territory of the region. Identifying the sources of existing environmental problems, classifying them, mapping them, and developing their scientific solutions.

**Key words:** Navoi region, Kyzylkum desert, Zarafshan river, ecology, geoecological, geocomplex, mapping, atmosphere, air pollution, pollution source.

## **INTRODUCTION**

Man can never live without nature, because he is an integral part of nature. The world in which we live and surrounds us is as kind and lively as our mother. In every particle of the sun, in every body of the soil, we feel the loving touch of nature as a mother to us. It embodies thousands of elements necessary for man in every aspect. What is the state of our beautiful nature today? Who is responsible for this? How can this be prevented? These questions are becoming a hot topic today. Unfortunately, humans have an unprecedented impact on nature. It cannot be compared to anything that can be influenced by human intelligence and work.

## **MAIN PART**

According to the natural conditions, the territory of Navoi region is divided into 3 parts: the northwestern part of the region is occupied by the Kyzylkum desert - there are closed bogs (Karaqota, Molali, Mingbulok), aeolian sandy plains

and residual mountains (Ovminzatog, Yetimtog, Bokantov, Tomditov, etc.). ; the south-eastern part, the western part of the Nurota mountain ranges is occupied by low and medium-height mountains (Koratog, Oktog, etc.) and intermountain bogs (Nurota bog, etc.); The region's cotton-growing zone is located in the middle of the Zarafshan River oasis. The mountains in the Navoi region are mainly composed of rocks of the Silurian, Devonian, Coal, Burian, Paleogene, and Neogene periods. Plains and sand dunes have changed under the influence of complex natural factors of the Quaternary geological period. Gold was found in Muruntov, and graphite was found in the north of Ovminzatog. The region has reserves of tungsten, phosphorites, quartz sand, cement, and limestone. Mineral healing, saline and deep underground water reserves have been identified in Navoi region.

For example, the waters found in Tomdibulok, Karaqota and their surroundings are widely used in agriculture. The province is seismically located in the 7-point earthquake zone. Due to the Kyzylkum desert, the climate is a harsh continental desert climate: summer is long and dry. It is hot, the average temperature in July is 27.2-29.6, in the sand the temperature rises to 60-70 in the sun. Average temperature in January is from 1.9 to -0.6. The climate in deserts and pastures, oases is average. Precipitation occurs mainly in spring and winter. Annual precipitation is 125-282 mm. The vegetation period is 177-212 days. The main water source of Navoi region is Zarafshan river. Konimex channel was released from Zarafshan. Kuyimozor, Todakol reservoirs, Konimekh canal are of great importance in supplying water to Navoi region. Most of the northern and western parts of the region consist of shifting sand dunes and occasional clay deserts.

Modern technological development has increased the negative impact of man on nature. In the Navoi region, it is important to protect nature, maintain the balance between man and nature, and create ecological culture among the population. Geo-ecological security has become the most important problem for people today and tomorrow. This problem exists in all parts of the country or the

world, where the degree of change of the geo-ecological environment is different, especially nowadays, the rapidly developing process of urbanization is turning the main agglomerations of cities into the most polluted places. We can see this in the example of the city of Navoi. It is known that one of the most important components of nature is the environment, which is very necessary for the survival of living organisms. The environment is mainly two sources; anthropogenic sources pollute the product of natural factors and human activities. If the environmental conditions of the region are polluted by desertification, erosion of rocks and other natural factors; anthropogenic pollutant sources include industrial enterprises, automobile, air, and railway transport emissions, as well as harmful substances produced as a result of the use of various fuels. Currently, it is necessary to take measures to protect the atmospheric air in the city from various pollutions, reduce the amount of harmful substances in the air, and at least maintain it in the current state. Air pollution, in particular, leads to extreme deterioration of geo-ecological conditions. The negative impact of polluted atmospheric air on the environment, plants, human health and lifestyle is huge. Research results show that there are more diseases in areas with air pollution. The city of Navoi is considered a city with a developed light and food industry in our republic. According to the end of 2010, there are about 50 joint enterprises in the city, almost the majority of them are light and food industries.

**Sources of air pollution.** Physical, chemical and biological changes in the atmosphere affect living organisms. In recent years, changes in gas balance have been observed as a result of increasing human influence. Changes in the constant amount of gases in the atmosphere have been found to have negative consequences for our planet.

As the great thinker Abu Ali Ibn Sina said, "If there were no dust and smoke in the air, a person would live up to a thousand years." Atmospheric pollution means changes in its physical and chemical properties as a result of the addition of toxic compounds to the air. In the past 4 years, the number of industrial

enterprises, the volume of construction works has doubled, and the number of vehicles has quadrupled in the Navoi region. As a result, the amount of dust and gas increased by 4-5 times. Green areas are decreasing year by year.

The information about this was disclosed at the press conference on the theme "Completion of the work carried out by the administration in the first quarter of 2022 and future plans" in cooperation with the regional branch of the Creative Union of Journalists of Uzbekistan in the Department of Ecology and Environmental Protection of Navoi region.

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It is noted that in 2021, 91 thousand 258 tons of gas and dust were released into the atmosphere in the region. 51 thousand tons of them are contributed by industrial enterprises and more than 40 tons by motor vehicles. The highest "share" is occupied by the city of Navoi, Konimekh, Karmana and Tomdi districts.

Although the gas and dust trapping devices installed in the chimneys of the enterprise are installed, they trap 97.2% of the dust and harmful gases. The movement of polluted air over the city is due to wind burning. East and northeast winds blow 300-310 days a year in the city of Navoi, and winds blow in the west direction the rest of the days. Therefore, residents of Tinchlik Gorgoncha, Dormon, and other villages around the airport in the western part of the city breathe polluted air for 3/2 days. Navoiy GRES can be included among such enterprises. For example: in 1997, 111.9 tons of toxic substances were released into the atmosphere, in 1998, this figure was equal to 95.58 tons, now it is more than 50 tons. At the Navoi thermal power station, NO<sub>2</sub> oxides produced by gas burning have been built. The Navoi cement plant is located far from the city in the southwest, and its product is cement of various colors. Each year, a single cement plant

emits more than 10,000 tons of harmful substances into the atmosphere and pollutes the environment. In order to reduce harmful substances released into the atmosphere, 546 dust gas cleaning devices are currently operating. With the help of this equipment, 423,000 tons of harmful substances are retained in 1 year. More than 55,000 vehicles are registered in the region, but not all of them meet the state control standards.

In particular, necessary measures will be taken to install dust-gas cleaning equipment in 67 economic entities, and 43 dust-gas trapping equipment in industrial enterprises will be modernized. Large leafy trees that trap dust and gases are planted in the territory of 26 industrial enterprises and adjacent areas.

So, the pollution of atmospheric air with harmful gases, soot, fogs, in turn, will not fail to have a complicated effect on the body of people living in this area.

### **CONCLUSION**

In conclusion, in order to reduce the waste of industrial enterprises, we should first of all introduce the use of zero-waste technology using advanced technologies that meet the requirements of the present time. As, the issue of waste is one of the important problems in ecology, and if they are processed or processed according to hygienic requirements, we will not only benefit economically but also prevent pollution of the earth, air, water, food products, and people's health will be of great importance in the protection of nature and we will deliver our nature for the next generation while preserving its purity.

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