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THE STUDY OF THE GEOECOLOGICAL PROBLEMS OF A BIG CITY

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ABSTRACT

This article analysis the system of studying the geoecological problems of large cities, in particular cities, assessing its complex indicators such as: the state of atmospheric air, soil, hydrogeological and engineering and geologists.

Keywords: air pollution, soil, surface and underground water, engineering and geological conditions.

INTRODUCTION

The problem of the geoecology of the urban environment is the subject of studying various branches of knowledge: ecology, geography, geology, biology, soil science, and hydrogeology. Geoecological features of the urban environment, for example, the city of Tashkent is also determined by its geographical The city is located on the right bank of Chirchik in the zone of influence of emissions into the atmosphere of waste from the industrial objects around its industrial facilities. Gorodiecology of the city has a specific place in the entire complex of environmental sciences. This is due to the functioning of the city in a limited territory and conditions for the high concentration of people, which leads to the formation of almost all existing types of anthropogenic pollution, which determines its geoecological state. One of the main issues in the study of the modern geoecological state of the city of Tashkent under the influence of natural and techno genic factors is to assess its complex indicators such as: the state of atmospheric air, soil, hydrogeological and engineering and geological conditions The purpose of the study is to oborimize the complex indicators as: the state of atmospheric air, soil, the hydrogeological and engineering and geological conditions of the city of Tashkent in recent years. Geoecological studies are aimed at resolving issues of interactions between nature and society related to the geoecological assessment of the economic activity

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consequences, the quality of the environment and the development of environmental management recommendations.

METHODOLOGY

Geoecological studies operate on the following set of methods: geological, geochemical, geophysical, hydrogeological, geomorphological, geocryological. Because of the obtained data interpretation, phenomena, processes, properties and dependencies are established. They act as geoecological factors, so reflect certain interaction aspects of the lithosphere, atmosphere, and hydrosphere with the biosphere. Geological studies include those aimed at studying the properties of the geological environment, the petrological nature of rocks, and geodynamic processes. The petrological properties of rocks are due to their mineral and chemical composition, structure and texture, occurrence conditions and the changes that they undergo in earth's crust depths and on its surface. Geodynamic processes occurring both inside the crust and on its surface are expressed in the form of tectonic movements, seismic and volcanic processes. Petrological rocks properties in combination with geodynamic processes determine the place and time of occurrence, as well as the nature of geoecological factors. Practice shows that the lack or poor knowledge of the geological environment state often leads to disastrous consequences. A striking example of this are large-scale damage during earthquakes. Tragic situations also arise during the underground and surface mine works, especially, when previously unknown and not mapped in time faults and floods make themselves known. Because of geological studies, they reveal features of geological processes manifestation, outline geopathogenic zones, determine their nature and degree of functioning. Geochemical studies study the distribution of chemical elements or chemical compounds in rocks, atmosphere, natural waters, vegetation, and animals. In recent years, they are widely used in the practice of geoecological work. Particularly special geochemical surveys techniques and mapping of certain areas are attractive, including urban agglomerations. They are carried out in order to identify places of elevated concentrations of chemical elements, delineate and assess the magnitude of geochemical anomalies, and primarily to determine the distribution contours of toxic and radioactive elements. More than 57 thousand business entities are registered in Tashkent, of which about 20 thousand, or more than 35%, have a direct impact on the geoecological state of the city. The city of the city from industrial enterprises and autotran of these, motor vehicles in 2018 accounted for 97% of all emissions. This situation is characteristic of all major cities, where

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emissions from road transport are 80-99% of the total volume of outlied pollutants in the air pool. The share of motor vehicles exploited in the city is over 20% on the total number of cars in the republic as a whole. Approximately the number of cars in the city increases to 12-14 thousand units per year. An indicator of the level of pollution of atmospheric air is a complex index of the atmosphere contamination, which is calculated in five priority pollutants (dust, carbon monoxide, nitrogen dioxide, and dioxide. The level of air pollution is considered low at from 0 to 4, elevated - from 5 to 6, high - from 7 to 13, very high – with more than 14. Observations on the quality of atmospheric air of the city of Tashkent, nitrogen dioxide - from 0.04 to 0.02 mg per cubic without a change, the content of sulfur and ammonia dioxide - 0.003 and 0.01 mg per cubic meter, respectively remained. Surface and groundwater. An irrigation network through a Bozsu water system, the main power source of which is the Chirchik River, irrigates the territory of Tashkent. The main trunk channels is Bostsu, South Karasu, Salar, Anhor, Damashi, Karakamysh. There are 129 watercourses with a total length of 417.5 km; there are also several artificial water-based lakes with a total area of 91 hectares and a volume of 1.4 million m3.

RESULTS AND DISCUSSION

As of 2018, the level of pollution of the watercourses of the city in the index of pollution of the main watercourses has changed positively from IV-V to II-IV classes, and exceeding those fixed in certain cases are At the same time, the condition of the channels and collectors of the city cannot be recognized as satisfactory, this problem remains one of the most acute geoecological problems of Tashkent. The groundwater is characterized by the pollution of industrial facilities. The unsatisfactory condition of the treatment facilities and underground communications, low level of technological operation and insufficient environmental control are the main causes of the poor state of groundwater.

In terms of bacteriological indicators, 36.1% do not correspond to the normative indicators. We believe that the main source of pollution is solid household waste. Engineering and geological conditions of the city of Tashkent. Geoecological state the city has changed significantly due to the change in the relief of the city. Because of these studies, it was found that change in relief and engineering and economic impact on urban territory, leads to the formation of negative processes, such as suffusion, landslides, and rise in the level of groundwater. It was found that most intensively under the influence of technogenic load the upper part of the lithosphere changes, so the main attention is paid to the study changes in relief, engineering-geological and hydrogeological conditions to pay special attention to the

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core - the impact zone of ground and underground structures. As a result, it was revealed that the relief within the city varies unevenly. Within the city of Tashkent distinguishes four zones characterized by different geological structure, located in different conditions of engineering economic impact, different capacities of technogenic deposits in valleys of the erosion network and watercourses, various morphometric characteristics, direction and intensity of relief changes. The zone of intensive relief changes is located in the southwestern part of the city. And is confined to areas of new development of industrial enterprises and residential arrays. Negative landforms, ravines, covered with ravines. Should note that the thickness of technogenic deposits, represented by household and industrial waste in the valleys of these ravines is tens of meters. In the northern, northeastern and western areas of new and residential development is zone of strongly changed relief. Small landforms and erosional relief incisions covered with fabricated deposits. Areas of old buildings, which are located in the central parts of the city, because of backfilling of erosional cuts in the valleys of ancient watercourses, reduced dissection of the relief.

CONCLUSION

The southeastern and eastern part of the city, the surface of the floodplain and the second above the floodplain terrace of Chirchik, which is composed mainly of pebbles, overlapped from the surface by loams with a thickness of 0.5 to 5.0 is considered as zone of practically unchanged relief. Insignificant dissection and a small number of watercourses and shallow erosional incisions characterize the territory. Changing the form of relief in the city of Tashkent, associated with the high rates of housing and industrial construction, redevelopment of the city, the reduction and destruction of the existing hydrographic and erosion network, an increase in the capacity of this city. There is a violation of the water balance and the groundwater balance, the level of groundwater and the formation of the flooding process occurs. From the above, it should be studied by the geoecological state of the city of Tashkent showed that there is no uniform methodology for comprehensive research. Currently, there is no unified methodology for organizing research activities. Analysis and evaluation of the environmental situation in the city is a challenging task and its successful solution depends on the proper choice of the technique.

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