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<b>G.N.Shokirova</b> Amaliy ishlatiladigan yakka insektitsidlarni g'o'za tunlamiga qarshi qo'llash va ularning samaradorligini aniqlash.....	734
<b>G.N.Shokirova</b> Aralashma insektitsidlarni g'o'za tunlamiga qarshi qo'llash samaradorligini aniqlash .....	738
<b>M.A.Abdurahimova</b> O'zbekiston hududida o'suvchi dorivor o'simliklarni dorivorlik xususiyatini o'rgatish orqali talabalarning tibbiy savodxonligini rivojlantirish.....	742
<b>B.K.Boboyev, O.K.Usmonov, S.Sh.Kabilov, M.B.Xoliqov, M.B.Maxammadaliyev</b> Innovatsion texnologiyalar asosida chorvachilik sohasini rivojlantirish.....	745
<b>U.B.Mirzayev, X.A.Abduxakimova</b> Farg'ona vodiysi bo'z va cho'l mintaqasi tuproqlarining unumdorligi.....	749
<b>G.T.Sotiboldiyeva, X.A.Abduxakimova</b> O'simliklarni oziqlanishi va o'g'it fanini o'qitishda pedagogik texnologiyalardan foydalanish ....	754
<b>D.Sh.Sultonov</b> O'zbekiston po'stloqxo'r qo'ng'izlarining taksonomik ro'yxati.....	757

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GEOGRAFIYA

<b>Y.I.Ahmadaliyev, N.A.Fattoxov</b> Factors of pollution of the geoecological condition of agglomerations (on the example of Fergana-Margilan agglomeration).....	762
<b>O.I.Abduganiev, Kh.Abdullaeva</b> Agrotourism as a factor of sustainable rural development.....	765
<b>I.I.Abdug'aniev, D.B.Kosimov</b> Transchegaraviy muhofaza etiladigan tabiiy hududlarni tashkil etishning ekologik-geografik asoslari.....	770
<b>R.T.Pirnazarov, S.I.Usmonova</b> Ulkan to'g'onlar geografiyasi va ular bilan bog'liq favqulodda vaziyatlar.....	778
<b>R.Y.Xolikov, I.Y.Zikirov</b> Farg'ona vodiysi reliefini qiyalik darajasi va uni GIS dasturlari yordamida kartalashtirish .....	783
<b>A.A.Xamidov</b> O'zbekistonda zoogeografik tadqiqotlarning rivojlanishi .....	788
<b>R.T.Pirnazarov, Sh.N.Axmadjonova</b> O'rta Osiyodagi to'g'onli ko'llarning genetik turlari va ularni tasniflash masalalari .....	793
<b>N.O'.Komilova</b> Ijtimoiy-geografik yondashuv asosida etnoekologik madaniyatni o'rganish masalasi.....	798
<b>J.J.Mamatisakov</b> O'quvchilarni geolog kasbiga qiziqtirishda maktab geografiya ta'limining o'rni .....	803
<b>D.B.Kosimov, Z.I.Mamirova, Sh.S.Sobirova</b> Ekologik-xo'jalik holatni baholash asosida yerdan foydalanishning hududiy tarkibini takomillashtirish .....	807
<b>L.M.Saydaliyeva</b> Sakral landshaftlarni xosil bo'lishining tabiiy - tarixiy jihatlari .....	813
<b>A.E.Mdraximov</b> Joy Relyefi va uning o'zgarishi haqida ma'lumot beruvchi geografik nomlar.....	819

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EKOLOGIYA

<b>M.T.Abdullayeva, L.A.Tadjibayeva</b> Qishloq xo'jaligida yerni boyitishda don dukkakli o'simliklarning ro'li .....	822
<b>S.A.Mamatqulova, T.E.Usmanova, I.R.Asqarov</b> Analysis of macro and micro elements in the biologically active supplement "AS-OROM" .....	827
<b>M.T.Abdullayeva, L.A.Tadjibayeva</b> Sansevieriya (Sansevieria) o'simligining ayrim bioekologik xususiyatlari va uni yetishtirish texnologiyasi .....	831

**AGLOMERATSIYALARNING GEOEKOLOGIK HOLATINI IFLOSLANTIRUVCHI OMILLAR (FARG'ONA-MARG'ILON AGLOMERATSIYASI MISOLIDA)****ФАКТОРЫ ЗАГРЯЗНЕНИЯ ГЕОЭКОЛОГИЧЕСКОГО СОСТОЯНИЯ АГЛОМЕРАЦИЙ ГОРОДОВ (НА ПРИМЕРЕ ФЕРГАНА-МАРГИЛОНСКОЙ АГЛОМЕРАЦИИ)****FACTORS OF POLLUTION OF THE GEOECOLOGICAL CONDITION OF AGGLOMERATIONS (ON THE EXAMPLE OF FERGANA-MARGILAN AGGLOMERATION)****Ahmadaliyev Yusufjon Ismoilovich<sup>1</sup>** <sup>1</sup>Farg'ona davlat universiteti geografiya kafedrası professori, geografiya fanlari doktori**Fattoxov Ne'matullox Abdulxakim o'g'li<sup>2</sup>** <sup>2</sup>Farg'ona davlat universiteti geografiya kafedrası o'qituvchisi**Аннотасија**

Maqolada hozirgi globalashuv davrida dunyoning ko'plab yirik shaharlari qatori bizning mamlakatimiz aglomeratsiyalarida ham yuz berayotgan asosiy geoeologik muammolarning kelib chiqish sabablari va oqibatlariga to'xtalib o'tilgan. Mazkur jarayonlar mamlakatimizda shakllanib kelayotgan Farg'ona-Marg'ilon aglomeratsiyasi misolida tushuntirilgan. Bu ikki shaharning juda ko'p aholiga ega ekanligi va tabiiy geografik o'rni ham Farg'ona vodiysida joylashganligi tahlil etilgan hamda, bu omillarning salbiy oqibatlari qisqacha tadqiq etilgan. Shuningdek, bu ikki yirik shaharning geoeologik xolatiga eng katta ta'sir o'tkazuvchi geoeologik omil ham tadqiq etilib, ifloslanishni oldini olish uchun qator takliflar kiritib o'tilgan.

**Аннотация**

В статье рассматриваются причины и последствия основных геоэкологических проблем, происходящих в агломерациях нашей страны, а также во многих крупных городах мира в современную эпоху глобализации. Эти процессы поясняются на примере формирующейся в нашей стране Фергано-Маргиланской агломерации. Анализируется тот факт, что эти два города имеют большую численность населения и их естественно-географическое положение находится в Ферганской долине, а также кратко изучены негативные последствия этих факторов. Также был исследован геоэкологический фактор, оказывающий наибольшее влияние на геоэкологическое состояние этих двух крупных городов, и был сделан ряд предложений по предотвращению загрязнения.

**Abstract**

The article focuses on the causes and consequences of the main geoeological problems that are occurring in the agglomerations of our country as well as in many large cities of the world in the current era of globalization. These processes are explained on the example of the Fergana-Margilan agglomeration that is forming in our country. The fact that these two cities have a large population and their natural geographical location is located in the Fergana Valley is analyzed, and the negative consequences of these factors are briefly studied. Also, the geo-ecological factor that has the biggest impact on the geo-ecological condition of these two big cities has been researched and a number of proposals have been made to prevent pollution.

**Kalit so'zlar:** atmosfera ifloslanishi, urbanizatsiya, aholi zichligi, atmosfera havosi, aglomeratsiya.**Ключевые слова:** загрязнение атмосферы, урбанизация, плотность населения, атмосферный воздух, агломерация.**Key words:** atmospheric pollution, urbanization, population density, atmospheric air, agglomeration.**INTRODUCTION**

Despite the fact that urban areas are the highest example of residential areas, due to a number of social and environmental problems in them, people's views on these areas are changing today. It is probably for this reason that the topic of the optimal city has recently been raised in the world community. Of course, the fact that cities gather a large group of people in turn creates various social and ecological problems seems to be a situation that does not require proof. However, it is possible to achieve an optimal city model through proper regional organization.

## GEOGRAFIYA

It is said that the main negative situation in the cities of Uzbekistan is the sharp deterioration of the atmospheric air. Indeed, the fact that the capital of the country, Tashkent, is advancing in the ranking of cities with polluted air is a proof of this. In addition, cases of severe air pollution have been recorded in other cities of the country. Such situations are formed due to the unreasonable use of the nature of urban areas by people, and the failure to implement scientific research for the development of cities. In our country, it is becoming necessary to take practical measures aimed at solving such urgent issues. In this, geographical research conducted in urban areas occupies a special place.

**LITERATURE ANALYSIS AND METHODOLOGY**

Information about agglomeration and its problems can be found in scientific literature. First of all, let's give a brief definition of what the main structure of the agglomeration is, the urban area. The city is a large population center whose inhabitants are mainly employed in industry, trade, as well as service, administration, science and culture. An agglomeration is a group of several cities and towns gathered around one large city. Agglomeration is a center of population not directly engaged in agriculture. A leading city in the center of agglomeration is not only an economic and cultural center for the surrounding cities and towns, but also a major factor influencing their location and growth [6].

In order to obtain the status of agglomeration, urbanized areas must have a number of indicators. For example, the distance between the satellite cities and the leading city should not exceed 2 hours, and the fact that the shuttle migration between them is well established is also one of the important indicators.

Along with many agglomerations of the world today, geocological problems are becoming more and more visible in the Fergana-Margilan agglomeration, which are having negative consequences. In particular, as a result of the anthropogenic factor, a number of problems appear in almost all areas of the agglomeration. If the development of industry has a great impact on the environmental pollution of Fergana city, the excess of anthropogenic load causes various geocological problems in the city of Margilon.

Environmental protection is especially important in settlements and, above all, in large agglomerations. This is due to the fact that the main sources of pollution are located near residential areas and pose a threat to health. Urbanization, pollution of air, water and soil, use of large amounts of water for household needs, radical changes in landscapes caused by climate change cause a number of ecological and biomedical problems. The main sources of chemical air pollution in cities are industrial enterprises (in addition to transport systems), industrial enterprises, road transport and the process of burning various wastes. Industrial sources include: ferrous and non-ferrous metallurgy, petrochemical, construction materials production, chemical and other industries, as well as cogeneration plants. The degree of air pollution from fuel combustion products from power plants depends on the quality of the fuel and the nature of the fuel isolation device. The main pollutants are complete (sulfur and ash oxides) and incomplete (mainly carbon monoxide, carbon monoxide, hydrocarbons) combustion products. Nitrogen oxides formed at higher combustion temperatures than atmospheric nitrogen play an important role [3].

It should be noted that in the Fergana-Margilan agglomeration, the maximum harmful emissions to the atmosphere are observed in the winter months when thermal power plants and boilers are working at full capacity.

The group of transport sources of air pollution in this agglomeration includes: railway, water, air and road transport. In addition, its role in changing the chemical composition of the air is growing rapidly. Internal combustion engines consume large amounts of oxygen, and their exhaust gases contain more than 200 different chemicals. The main part is carbon monoxide and its dioxide, nitrogen oxide, hydrocarbon and lead compounds. One car traveling 15,000 km per year takes 4.4 tons of oxygen from the city atmosphere and emits 3.3 tons of carbon dioxide, 0.5 tons of carbon monoxide, 0.1 tons of toxic hydrocarbons, and 30 kg of oxides [5].

The participation of Fergana industrial enterprises in soil and surface and underground water pollution is also very high. In this regard, the role of the oil refinery is particularly important. Contamination of the soil layer with oil products causes various physical and chemical changes in it. For example, the composition of soil microelements changes, the water-air regime and the

oxidation regime are disturbed. In addition, the normal ratio of carbon and nitrogen in the soil changes, resulting in a lack of oxygen, phosphorus and nitrogen. As a result, the agrochemical characteristics of the soil deteriorate, and the growth of crops slows down. When the amount of oil in the soil increases by 400-1000t/day, the activity of microorganisms in it decreases, and the intensity of soil respiration decreases.

### RESULTS AND DISCUSSION

Air pollution in the Fergana-Margilan agglomeration is one of the biggest geocological problems. The numbers also show that the amount of harmful substances released into the atmosphere is increasing every year. This situation requires taking necessary scientific and practical measures.

Contaminated soils under the influence of agglomeration can be divided into the following groups: a) Soils contaminated with petroleum products. Such soils are located in the northern part of the Fergana industrial zone, where the importance of the oil refinery in soil pollution with oil products is high. Also, the influence of underground water in soil cover pollution with oil products is incomparable. As a result of the evaporation of oil products in them, the gas composition of the soil is disturbed and biocenoses are changed; b) soils polluted by various compounds in the atmosphere. Such soils mainly spread in accordance with the direction of the winds of the area. The direction of the winds of the region shows that the winds of the industrial zone blow the least from the north-east, east, south-west, and south sides, which causes the spread of harmful chemical elements in the atmosphere in a small area. As a result, the harmful chemical elements in the atmosphere cause the accumulation of toxic gases and dust, and due to various meteorological processes occurring in the atmosphere, they are added to the soil cover; c) Contaminated soils on land occupied by HEC waste. As a result of the accumulation of garbage, sewage and other waste in the northern part of the Fergana thermal energy center, the soil layer and groundwater are also damaged. In order to reduce the accumulation of harmful waste in and around industrial enterprises, their impact on water and soil, including the prevention of air poisoning with chemical substances, surrounding tree groves are being established around them. Measures are also being taken to rebuild enterprises with a high risk of damage in areas far from the city.

### CONCLUSION

To sum up, the role of industrial enterprises in the creation of large agglomerations is significant. Therefore, the topic of improving the ecological condition of agglomerations remains relevant. No region can solve these problems alone. Taking this into account, first of all, it is necessary to implement complex works in the cities of our country, and in this case it is useful to use the experiences of developed countries. In particular, in the Fergana-Margilan agglomeration, it is necessary to take necessary measures based on the above problems. In the era of globalization, problems are also becoming global, which requires humanity to take necessary measures as soon as possible.

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