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WAYS OF ORGANIZING MONITORING OF MOTOR TRANSPORTATION

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ANNOTATION

The release of pollutants from vehicles and industrial enterprises into the atmosphere causes various diseases. Pollutants accumulate in brain tissue, skin, liver, pancreas, produce protein in urine and increase blood pressure. It causes lung edema, inflammation of the respiratory tract, disorders of the nervous and vascular system, eye damage and other diseases.

Keywords: Industry, traffic intensity, urban ecosystem, diesel engine, carbon monoxide, paraffin, hydrocarbons, aromatic substances, dry aldehydes, nitrogen oxides, lead oxides, atmosphere, air, pollutes..

INTRODUCTION

The rapid development of many branches of industry in our republic, the increase in the intensity of traffic, has a negative impact on the urban ecosystem. In particular, 75-80 percent of the total pollutants in the city of Andijan are caused by vehicle emissions. These substances affect the atmosphere, soil, flora and human health.

Gases released from motorized transport based on gasoline and diesel engines play a decisive role in the pollution of the urban ecosystem. Internal combustion engines are a direct source of air pollution with substances such as carbon monoxide, paraffin and olefinic hydrocarbons, high-boiling aromatic substances and dry aldehydes, nitrogen oxides, and lead oxides. These smoke gases can mix with the atmospheric air and, especially under the influence of intensive solar radiation, undergo a photochemical reaction and result in the formation of fog [1; 231–259–p.].

The main pollutant compounds are carbon dioxide, nitrogen oxides, hydrocarbons, benz(a)pyrene, aldehydes and lead. Transport directly pollutes the living environment, causes the accumulation of lead and other toxic and carcinogenic compounds in the human body [2; 341–368–p.].

The level of research of the problem. The release of pollutants from vehicles and industrial enterprises into the atmosphere causes various diseases. Pollutants accumulate in brain tissue, skin, liver, pancreas, produce protein in urine and increase blood pressure. It causes lung edema, inflammation of the respiratory tract, disorders of the nervous and vascular system, eye damage and other diseases. In addition, nitrogen oxides burn the leaves of plants, corrode metal equipment, and have a negative impact on the national economy. The leaves and cells of plants

that absorb such pollutants in the air begin to die. Your trees' water-absorbing mechanism will fail and their leaves will drop. The tips of the plant dry up. The increase in the amount of various gases in the air increases the effect of the "Heat Effect" on global environmental problems. The contribution of cars to urban air pollution is significant, they make up 70-80% of urban air pollution (A. Rakhmatullaev, Kh. Khusaenov, 1998). According to Yu.V. Novekov and Beknazarov, cars emit more than 200 different aerosol particles into the air. Permissible concentration of pollutant in atmospheric air (REK) is its concentration that does not have a direct or indirect adverse effect on current and future generations throughout its lifetime. (REK) values are expressed in milligrams (mg/m3) of the substance in 1m3 of air for atmospheric air [3]

In this regard, the scientific research carried out on the scale of our republic shows that a number of recommendations have been developed in the scientific works of professors T. U. Rakhimova and D. SH. Yodgorova, and these are: to prevent air pollution in Uzbekistan in transport:

- to strengthen standard requirements for lead content in gasoline, to ensure gradual complete abandonment of gasoline with added ethyl alcohol;
- more use of compressed gas and diesel fuel;
- traffic optimization;
- gradual renewal of the transport fleet;
- development of electric transport, subway [4]. Several foreign researchers in this field (Rui Xie, Dihan Wei, Feng Han, Yue Lu, Junfeng Wang) conducted observations on the density of urban transport, pollution by harmful substances, gas and smoke distribution in China in 2003-2015. It was observed that traffic pollution in large and medium-sized cities is variable, and in small cities, the impact is less than in large cities. The rapid movement of vehicles in cities is interdependent on the number of vehicles and the amount of harmful substances in the air of the street network [5].

THE PURPOSE OF THE STUDY

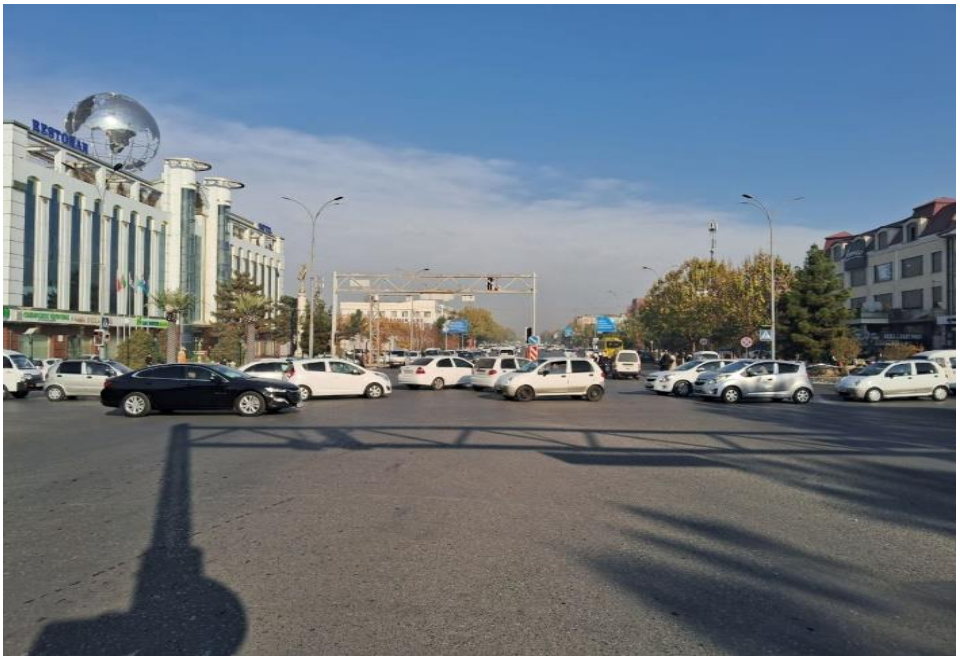
In a city with large networks, it was observed that the share of emissions from vehicles during the day was close to 80%, and during the night it was close to 40%. In particular, the hourly emissions of each pollutant on working days are higher (up to 64.2%) than on non-working days, and on some roads, they change significantly during holidays compared to working days [6].

The impact of vehicles on the environment in the form of air and noise pollution causes some diseases such as asthma, bronchitis, cardiovascular diseases, myocardial infarction and hypertension. Recently, it has been suggested that not only their individual effects but also their combined effects should be considered in health research. Also, the number and types of vehicles were determined to assess the level of noise pollution in the study area. Model results were compared with measurement data using various statistical tools [7].

In the study of four streets in Harbin, China (Meihui Ba, Jian Kang 2019), they studied the interaction of harmful substances emitted by vehicles on the environment, and the interaction of ornamental trees in reducing noise. The results showed that ornamental trees have been studied to reduce the disturbance caused by traffic noise and to create a pleasant atmosphere in the surrounding area. A two-lane lily-planted street was found to have a better subjective

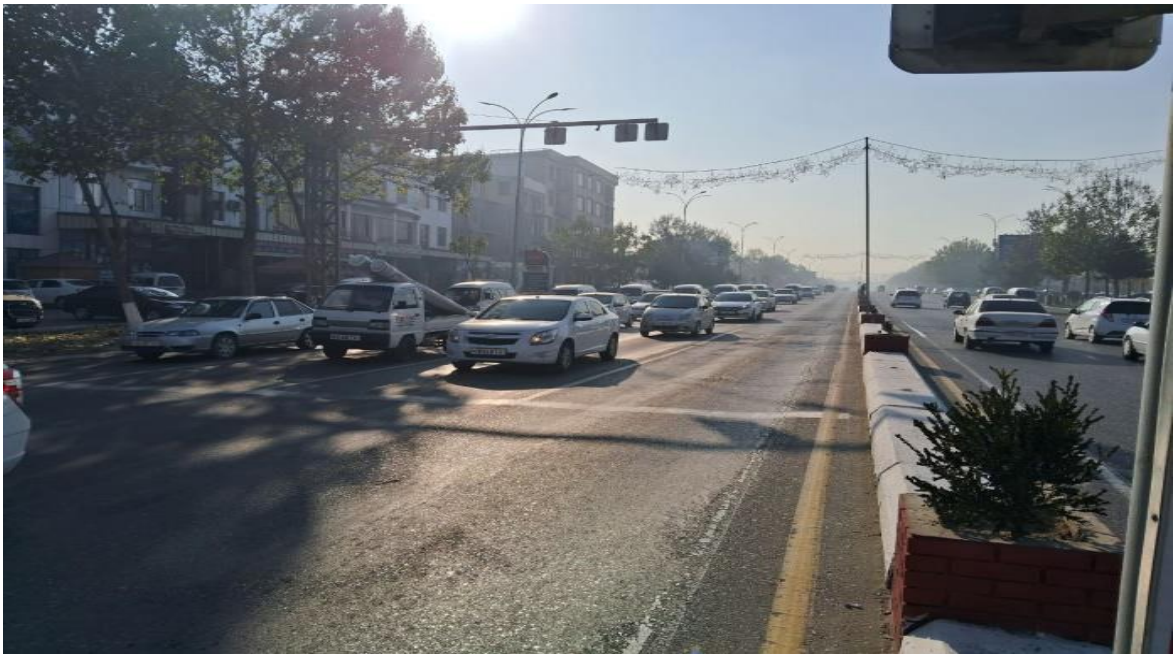
evaluation than a single-lane street, and it was found to further reduce the impact of traffic noise when the streets were less congested. Research also found that the higher the harmony between the aroma and the environment, the more comfortable and less disturbed people are [8]. There is evidence that traffic-related air pollution is associated with increased lung cancer incidence and mortality. The hypothesis that high traffic density increases the risk of respiratory tract cancer and death among people over 20 years of age has been studied. Nowadays, cities face various problems such as health care, environment, energy consumption, traffic congestion, housing, education, public safety, lack of funds, economic development, demography, biodiversity. . It is necessary to voluntarily cooperate with citizens' and city dwellers' opinions and monitoring of the environment. This plays an important role in offering solutions that help increase citizen engagement. In many countries, the increase in the number of trancports creates inconvenience for drivers and passengers, resulting in air pollution and noise levels, and an increase in traffic accidents. Transport problems have always attracted the attention of researchers and engineers. Such problems arise in the organization of transport centers for passenger and cargo transportation (in the analysis of railways, airlines), etc. In the modeling of transport, it is also necessary to take into account the flow of passengers in different directions. An important role is played by the matrix of operations describing the intensity of passenger traffic between different stations. Taking into account the above, in order to study the effect of pollutants in the atmospheric air on various ornamental trees, as a research object, industrial enterprises of Andijan city are densely located and the busiest streets are Babur, Cholpon, Amir Temur and Four serkatnov streets named after Navoi were selected.

Methods. Determining the number of cars was carried out by counting on each street for an average of one hour. Counting of the number and type of cars was determined during the times when cars are most active, that is, from 7:00 a.m. to 9:00 a.m., from 11:30 a.m. to 2:30 p.m. at lunchtime, and from 4:00 p.m. to 6:00 p.m. in the evening.



1-Figure. Observations on the identification of unknown sources in the streets named Amir Temur, Babur, Navoi, CHolpon in the city of Andijan.

The official information obtained by the Department of Ecology and Environmental Protection of Andijan Region on the total number of cars and types of fuel in the region was used. Based on this information, there are a total of 211,397 cars in the region, of which 130,806 or 61.8% of gasoline-powered cars, 5,408 or 2.6%, and 75,183 gas-powered cars or 35.6% is the number of cars driven by diesel fuel. The total length of the streets taken as the research object is 15.4 km in one direction and 30.8 km in both directions.



2-Figure. Determination of pollutants in cars

Practical results of the research. Table 1 shows the number of cars, the amount of fuel used on their roads, and the amount of pollutants released into these streets. According to this table, the total amount of emissions is 13,916 thousand tons, which is 18-20 percent of the total amount of pollutants emitted from motor vehicles in the region. The composition and amount of emissions are distributed as follows: carbon monoxide 11,586 thousand tons, hydrocarbons 1,028 thousand tons, nitrogen oxide 0,804 thousand tons, sulfur oxide 0,118 thousand tons, lead compound 0,095 thousand tons.

When the conditions are favorable for the growth of plants, respiration speeds up 30 times and produces a lot of oxygen. Therefore, photosynthesis maintains the amount of oxygen in the earth.

From this it can be concluded that air pollution at this level causes trees to dry up and the urban ecosystem to deteriorate. It is important to breed ornamental trees in Andijan's Amir Temur, Babur, Navoi, and Cholpon avenues, which are the object of research, and to choose suitable and resistant species for the city's ecosystem. Also, the creation of "green shields", i.e., small forests, in the city area is one of the positive measures for cleaning the atmospheric air in the city ecosystem. It is necessary to implement the organization of green protection zones.

A study of newly planted ornamental pavlovian trees on central streets showed that they were superior to single-lane streets and reduced street pollution. Research shows that the higher the

harmony between the aroma and the environment, the more comfortable and less harmful and disturbed people are.

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