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## THE IMPACT OF TRANSPORT ON THE ECOLOGY OF THE CITY

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Ukraine Abstract: emissions of industrial enterprises, energy systems and transport into the atmosphere, reservoirs and subsoil reach dimensions that in some areas of the globe pollution levels far exceed the permissible sanitary standards.

This leads, especially among the urban population, to an increase in the number of people suffering from chronic bronchitis, asthma, allergies, cancer and other diseases. Keywords: transport, emissions, urbanization, human impact, disease, improvement measures. More than 20 million people in Ukraine live in cities where the level of air pollution is systematically 10 times or more than the permissible sanitary standards. The city of Sumy also has environmental problems. These are pollution of air, water and soil by emissions, waste and runoff of industrial enterprises, as well as motor transport. Within the city are industrial enterprises, which are the main sources of environmental pollution. At the current level of industrial development, the location of large industrial enterprises within the city is unacceptable. Transport is one of the main sources of environmental pollution. In this work, the object of study is motor transport as the main mode of transport in the city of Sumy. 34 The purpose of the study is to determine the aerogenic load on major city highways; concentrations of harmful substances in residential areas adjacent to motorways. There are more than 200 chemical compounds and elements in the engine exhaust gases; the maximum amount is carbon, nitrogen, hydrocarbons, soot, aldehydes. Air pollution by motor vehicle emissions is characterized by significant irregularities in space and time. Therefore, it is very important to quickly and thoroughly calculate the intensity and structure of traffic flows in the city. Several streets with minor, medium and high traffic traffic were selected to account for flows; the selected streets were marked with 1 or more observation points. The mass of pollutants emitted into the atmosphere with the emission of gases is calculated by specific values [1, p. 8-15], as well as by the method [2, p. 304], taking into account a number of factors affecting the intensity of emissions: meteorological conditions, composition,

condition and age of transport, species fuel, traffic control, street character, etc. The study was performed taking into account the stationary posts of the Sumy Laboratory of Air Pollution Observation and air sampling and sampling points performed by the sanitation facility on the city highways within the framework of the ecological and economic study. The studies of the intensity of road traffic on the main streets of the city of Sumy in the spring-summer and autumn seasons were performed, the concentration of carbon monoxide in the exhaust gases of cars and at the roadside in the air during peak times was determined. It is established that very intensive traffic with the mark "high" - in the range of 18-27 thousand cars per day - is observed on the streets of H. Krut, Kharkivs'ka, Levanevs'koho, the average intensity (8-17 thousand units / day) - on the streets of Metalurhiv, Naberezhna r. Strilky, Bilopil's'ka, the concentration of CO in the atmosphere in the area of motor vehicle emissions, for most streets, exceeds the maximum permissible concentration. The concentration of CO during peak times was also several times higher than the MPC on Kurs'ka. Heroes of Sumy region and Prokof'yeva. It is established that the width of many investigated streets does not meet the standards. It has been found that the fleet of vehicles is "aging"; in the volume of fuel used, the gaseous and compressed and liquefied gas occupy a relatively low percentage; the transport of individuals 35 undergoes a two-year technical inspection once, which does not contribute to its serviceability. According to different methods, taking into account the type of fuel, types and purpose of cars, the owner, meteorological conditions, type of work, technical condition and age of cars and other factors, masses of atmospheric emissions from vehicles of such substances are determined: carbon monoxide, the mass of which was 3194,3–7281,0 t/year, hydrocarbons (396-2096,8), nitrogen dioxide (470–1261,5), carbon black (77,5–187,9), sulfur dioxide (66,95–262,4), lead (6,3–6,85), benz(a)pyrene (7,532–10). Emissions of hazardous substances (CO, NO<sub>2</sub>) were determined at 1000 m sections along the streets where roads are close to the residential area. It has been established that the carbon monoxide emission intensity in some areas reaches 20-40 g/s. Based on the data obtained, it can be concluded that motor transport accounts for a significant proportion of the pollution by harmful impurities: benz(a)pyrene, lead and formaldehyde. Measures should be proposed and recommendations should be developed to reduce the aerogenic load in the city; to introduce and control the fulfillment of specifications for motor fuel; equip the car fleet with exhaust gas neutralization systems, anti-smoke additives and filters by 2020; to introduce control of the quality composition of gasoline at filling stations; to introduce modern computer-based systems of analysis and forecasting of the impact of transport on the environment; create a database at the Environmental Protection Directorate for the quantity and

quality of fuel in the city, the composition and condition of motor transport of individuals and legal entities, the composition of emissions into the atmosphere from transport.

#### REFERENCES

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