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Editor

Komarytskyy M.L.

Ph.D. in Economics, Associate Professor

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e-mail: rome@sci-conf.com.ua

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ASSESSMENT OF THE STATE OF THE ATMOSPHERIC AIR OF THE PRE CARPATHIANS

Masikevych Yuriy Hryhorovych

doctor of biological sciences, professor

Tyuleneva Viallanta Oleksandrivna

student

Bukovynian State Medical University

Chernivtsi, Ukraine

Malovanyy Myroslav Stepanovych

Doctor of Technical Sciences, Professor

Kotyk Sergii Yaroslavovych

student

Lviv Polytechnic National University

Lviv, Ukraine

Introductions. Despite significant violations of the integrity of natural ecosystems, the Precarpathian region remains one of the safest and most attractive regions of Ukraine. At the same time, in some ecotopes of this foothill ecosystem, there is a high percentage of the disease in some nosological forms, such as tuberculosis and other respiratory diseases. It should be noted that these diseases are largely determined by the state of the air. Our analysis of the literature shows that the ecological determinism of the population health of mountaineers, in particular the relationship between air pollution and diseases of the local population, is insufficiently studied.

Aim. The purpose of the study was to study the state and ways to improve air quality and the level of population health of residents of a particular region of Western Ukraine.

Materials and methods. The research was conducted on the territory covering the geographical region of Precarpathia, which stretches for almost three hundred kilometers in Chernivtsi, Ivano-Frankivsk and Lviv regions from the border with Romania in Bukovina to Roztocze in Lviv region. In the course of research the aeroionic and microbiological composition of atmospheric air in 12 points covering

all territory of the studied region was studied. The results of the experiments are statistically processed.

Results and discussion. Based on the analysis of data from regional reports on the state of the environment and reports of the Main Department of Statistics in Chernivtsi, Ivano-Frankivsk and Lviv regions, a general description of the study region is compiled, in particular, air emissions in the study region. High emissions per unit area in Ivano-Frankivsk region are explained by the location of the largest air pollutant in Western Ukraine - Burshtyn thermal power plant, as well as JSC "Ivano-Frankivsk Cement" (Yamnytsia). As for the city of Lviv, here this figure is determined primarily by the number of vehicles. Based on the obtained indicators of air pollution per unit area, we have proposed a scale of air pollution in the territory of Precarpathia.

A number of indicative microorganisms were found in the air of the study region. Atmospheric air of landscapes located in the south-eastern direction of the wind rose, around urban areas, is characterized by an increase in the total microbial count and species diversity of the microflora. There is also no close correlation between emissions into the atmosphere and the level of its microbiological pollution. A comparative analysis of population health indicators and the level of air pollution made it possible to establish a close direct relationship between atmospheric quality (in terms of total microbial count and aeroionic composition) and a number of demographic indicators (demographic load, morbidity, mortality, etc.).

Conclusions. The state of atmospheric air in the Precarpathian region of the Western region of Ukraine is analyzed by microbiological indicators and aeroionic composition. The scale of air pollution of the territories of the studied region is offered. The connection between sanitary and microbiological indicators of air quality in the Precarpathian region and the level of population health of the local population has been studied.