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URBAN UKRAINE

VENHRYN D.V., PhD student

L. M. NIEMETS, Professor, Doctor of Science in Geography, Scientific Adviser

IULIA I. SHAMAIEVA, Associate Professor, PhD in Philology, Language Adviser

V. N. Karazin Kharkiv National University, Kharkiv

Cities are key centers of spatial changes that spread to the surrounding territory of regions, states, continents. Some of them become epicenters of the spread of cultural innovations, focuses of concentration of new ideas, technologies, economic and social capital, migration of creative people and implement modern strategies for renewal and modernization of urban space. Others, on the contrary, as if stopping in time, preserve the characteristic features of the previous eras. In the process of interaction, cities form amazing combinations – constellations of networks and flows. Each city finds its niche in complex hierarchies and typologies. World cities and small working-class settlements, centers of constant business activity and seasonal resort villages, transport hubs and remote eco-towns, cities with mass housing blocks and constantly growing skyscrapers and local administrative centers that in some places even in the central part resemble rural settlements – they all form complex structure spatial frameworks of urban settlement. This is exactly what "urbanistic Ukraine" is – a set of cities and metropolitan regions, urban and suburban spaces, which are characterized not only by lists of demographic or economic indicators (population, manufactured industrial products, services provided, built housing or social infrastructure institutions), but also by their specific aura, color, perceived through their own associative images and stereotypes, which makes our research, oriented at multidimensionally revealing peculiarities of the above concept, so topical at present.

Urbanistic Ukraine is a phenomenon that does not lose its relevance. In the last decades, urban spaces of Central and Eastern Europe have undergone significant, sometimes dramatic or chaotic changes. How typical or specific are the processes occurring in Ukrainian cities? How are urban and suburban spaces changing? What awaits millionaire cities and very small urban settlements? Is there

any future for industrial and depressed cities? Will there be more green, creative, smart cities in Ukraine? All these questions have determined the relevance of geographical studies of urban Ukraine, which is currently at the epicenter of spatial changes.

To recapitulate, my dissertation analytically presents the results of various urban studies, touching upon different aspects and integrating several thematic areas: there is research of national and regional networks and systems of urban settlements of various types, their evolution and development; studies of modern processes that take place in cities; determination of further ways of the development of urban settlements of Ukraine, taking into account the priorities of safety and comfort of living, using the potential of industrial heritage to form a new image of cities of the twenty-first century.

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COMPREHENSIVE RESEARCH OF THE GEOLOGICAL ENVIRONMENT FOR THE SAFE STORAGE OF CARBON DIOXIDE GAS

ANDRIY YAROSHENKO, PhD student

IULIIA I. SHAMAIEVA, Associate Professor, PhD in Philology, Language Adviser
V. N. Karazin Kharkiv National University, Kharkiv

At the current stage, burning coal, oil, gas, and oil products releases a huge amount of carbon dioxide into the atmosphere, which negatively affects the ecological situation around the world. Now, more than ever before, there is a need to dispose of man-made carbon dioxide within the framework of the Paris climate agreement signed by the world community. Gasocyclic injection of carbon dioxide into oil wells with oil of increased viscosity is the most promising and least expensive technology for increasing their oil yield. Injection of CO₂ into the formation also solves the problems of its collection and disposal. The complex structure of collectors and covers requires extensive involvement of complex laboratory studies of the rocks that make them up.

Samples in the form of cylinders measuring 30x30 mm from the existing well cores were used for laboratory research: No. 7 Buzivska Square; No. 3 Nord-Pinyanska Square; No. 21, 28 Solotvynska Square; No. 33 Khidnovychska Square.

The most common group of rocks among the core samples presented for petrographic studies are psammite rocks, mainly with a finely fragmented structure