

**МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ
БУКОВИНСЬКИЙ ДЕРЖАВНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ**



МАТЕРІАЛИ

**106-ї підсумкової науково-практичної конференції
з міжнародною участю
професорсько-викладацького колективу
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**POSSIBLE CONSEQUENCES OF MILITARY OPERATIONS FOR UKRAINE'S
ENVIRONMENT DURING RUSSIAN AGGRESSION**

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Introduction. The war in Ukraine, which is the result of Russian aggression, has been going on for almost 1,000 days and has a huge destructive impact on the environment. The hostilities led to the contamination of water, soil, and air with inorganic and organic pollutants, posing a threat to human health and the environment. According to preliminary estimates, Russian invasion caused direct infrastructure damage of more than €150 billion and €52.4 billion in environmental damage. This includes €27 billion in air damage, €23.6 billion in waste pollution damage, €1.5 billion in water damage, and €0.3 billion in soil damage. Daily damage to the environment from hostilities is estimated at €70 million. About 156.000 square kilometers of Ukraine's territory is mined with anti-personnel land mines, anti-tank mines, and other munitions.

The aim of the study. To analyze the possible consequences of hostilities during the Russian aggression on Ukraine's environment by literature search in relevant databases.

Material and methods. Original research articles, including book chapters, articles and review articles published in peer-reviewed journals, were used for the review. The terms "military actions", "Ukraine", "Russia", "war", "environment", "international humanitarian law", "ecocide" were used for the search. Biblisemantic and information-analytic methods of analysis were applied.

Results. Deforestation, soil erosion, and biodiversity loss are the most pronounced environmental consequences of armed conflict in Ukraine. Battlefields are places of accumulation in the soil of potentially toxic elements due to the self-degradation of ammunition. In such places, there are also various organic pollutants such as polycyclic aromatic hydrocarbons (PAHs), explosive compounds and fuels, chemical warfare agents, polychlorinated biphenyls (PCBs), and per- and poly-fluoroalkyl substances (PFA). Bombs or heavy artillery affect the properties of the soil through the bombing process, which leads to changes in the landscape and soil structure. Another set of risks is related to contamination from industrial facilities that are damaged or unable to be properly managed due to hostilities like mines, chemical plants, and facilities that contain potentially hazardous substances. These, as well as infrastructure, including nuclear power plants, were often accidentally damaged or deliberately targeted during the conflict. The capture of the Zaporizhzhia nuclear power plant creates the risk of a long-term environmental disaster. The destruction of the Kakhovska Dam by Russian forces is ecocide and the worst environmental disaster in Europe and has long-term effects on the environment and public health.

Conclusions. To promote the adoption of specific measures to reduce the impact of armed conflicts on the environment, the international community has developed relevant recommendations of international humanitarian law, which determine the attitude to the environment during hostilities. It is the violation of these rules that leads to huge losses and destruction in the ecological system of Ukraine. Analyzing the possible short-term and long-term environmental consequences of hostilities with these facts in mind can help ensure appropriate response and effective measures in the current conflict.

Sydorchuk I.Y.
**ANTIPHAGOCYTIC ACTIVITY OF CAUSATIVE AGENTS
OF PURULENT-NECROTIC PROCESSES**

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Introduction. The multiple impact of various artificial factors, which is typical for most countries, causes the prevalence and severity of purulent-necrotic processes in soft tissues. The last logically follows, as a consequence of the radical restructuring of the lifestyle, the breaking of natural stereotypes that have been formed for centuries. Such changes threaten the emergence of