

THREATS TO THE ECOLOGICAL STATE OF THE UKRAINIAN-POLISH BORDER AREAS DURING THE WAR

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The war in Ukraine has become a major environmental problem in the border areas. Research on air pollution shows that the hostilities have already led to an average increase of about 9.78% in PM 2.5 and 10.07% in NO₂ emissions, as well as an average decrease of about 7.93% in ozone emissions in European cities located near the war zones [1].

The Ukrainian-Polish border regions are affected by direct military actions and secondary environmental impacts related to population displacement, land use change, and increased demand for natural resources. In these situations, an assessment of the ecological condition of these areas is crucial to identify possible threats, halt environmental degradation, and ensure sustainable growth in the years following the conflict.

The ecosystems of the border areas are directly affected by pollution resulting from hostilities, rocket attacks, and arson attacks on infrastructure. This primarily concerns the western territories of Ukraine bordering Poland. As a result of the attacks, air masses containing hazardous compounds and combustion products entered the neighboring country. For example, after the shelling of transformers in the village of Pidbirtsi in the Lviv region in May 2022, more than 48 tons of transformer oil and 167 thousand tons of pollutants were released into the air. Air flows were shifting towards Poland, indicating that the effects of the conflict were being felt on the other side of the border [2].

Pollution caused by Russian aggression may also negatively affect such cross-border rivers as the Western Bug and the San, which flow through the territory of the two countries.

The environmental consequences of war are of long-term importance and affect not only natural ecosystems but also the economy and quality of life. Therefore, it is essential to research cross-border impacts and make appropriate decisions to counteract negative changes in the environment. Restoration of nature requires time and financial resources, and while the war continues, the environmental safety of the environment of the two countries is under constant threat.

References:

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