Environmental Problems Caused by War in Ukraine

Natalia Choszczyk
Karolina Kocewiak
Stanisław Kwiatkowski
Yulia Rylska

Intro

Russia's invasion of Ukraine on February 24, 2022, initiated the most extensive armed conflict in Europe since World War II. While the impacts of war are typically measured in terms of human, economic, and societal tolls, the environment frequently becomes an overlooked casualty of conflict.

Extensive data on the environmental effects of the conflict has been amassed by Ukrainian government bodies, civil society groups, and international organizations. Our aim was to review this data and based on it, draw our own conclusions regarding environmental issues.

Fuel consumption and waste

Increased fuel usage

- Military vehicles
- Tanks
- Planes/helicopters
- All kinds of machinery

Waste management and disposal

- Military-specific debris
- Disruption of Municipal Waste Services

Explosive Materials

- The heavy use of artillery and bombs in conflict zones results in significant environmental degradation as explosions release toxic substances into the air, soil, and water. This indiscriminate contamination can lead to long-term ecological damage
- Unexploded ordnance is a serious problem that remain for decades after conflicts have ended. Not only endanger humans and animals but also restrict access to agricultural land and critical natural resources.

National parks and nature reserves

According to the Ukraine Nature Conservation Society,
more than 44% of the **most valuable natural areas**
of Ukraine are **covered by war**.

Russian troops dug trenches in nature reserves,
built fortifications, and planted and exploded mines.

Animals

Ukraine hosts 35% of Europe's biodiversity, housing 70,000 plant and animal species, including rare, relict, and endemic ones such as European bison, brown bears, lynx, wolves

Wild animals are killed by shelling and bombing, fires, explosions, and vibrations scare off the animals, force birds to leave their nests, and disrupt their food chain.

Fighting in spring, most species' breeding season, multiplies the damage.

Usage of chemical and atomic weapons

Chloropicirin – it is said to be used

One example of chemical weapons “used” is chloropicrin, an agent similar to tear gas. Swallowing saliva containing chloropicrin absorbed from the air causes nausea, vomiting and diarrhea. Cardiac arrhythmias may occur. Skin contamination with vapor or liquid causes redness and pain, with risk of burns.

- destruction of the dam in Nowa Kachowka
- chemical pollution

Post-war environment steps

While the environmental challenges post-war are significant, these solutions provide a roadmap for recovery and sustainable development.

1. Environmental restoration programs (reforestation and land rehabilitation).
2. Pollution cleanup efforts (hazardous waste removal).
3. Sustainable development practices (green infrastructure).
4. International cooperation and funding.
5. Environmental policy and regulation (strengthen legislation, monitoring and enforcement).
6. Community engagement and education.

But the only way to prevent the environmental consequences of war is to prevent the war itself.