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Greening Agrifood
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Organic farming during the war: biodiversity issues

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ORGANIC FARMING is developing in Ukraine since 1990-s



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Organic production in Ukraine



Year	2017	2018	2019	2020	2021	2022	2023
Area of organic agricultural land, thousands ha	420	429	468	462	422	264	471
Share of organic agricultural land in the total number of agricultural lands of Ukraine	1%	1%	1,1%	1,1%	1%	0,6%	1,1%
Total number of operators	375	510	617	549	528	462	481
Agricultural producers	304	401	470	419	418	380	383
Share of agricultural producers in the total number of operators	81%	79%	76%	76%	79%	82%	80%



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ORGANIC FARMING AND BIODIVERSITY

ORGANIC AGRICULTURE AND ITS BENEFITS FOR BIODIVERSITY

- ⬆ 30% more species
- ⬆ 50% more individuals
- ⬆ 20-95% more plant species*
- ⬆ 150% higher abundance of plant species*
- ⬆ 23% more insect species
- ⬆ 30% more pollinators

**in field and field margins*

#OrganicIsPartOfTheSolution





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ORGANIC AGRICULTURAL biodiversity in rural areas became richer and more diverse



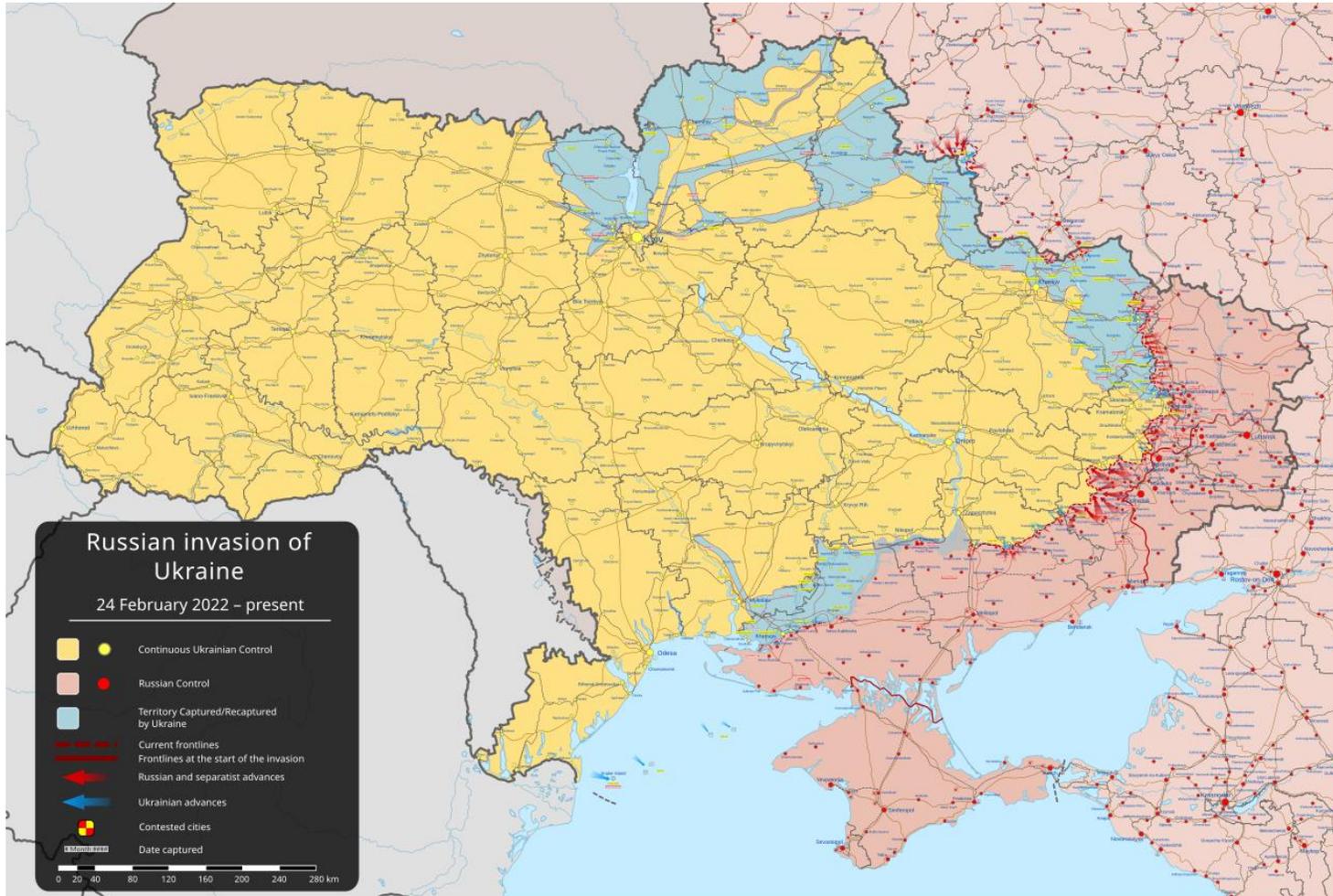
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ORGANIC FARMING DURING THE WAR



About 17% of Ukrainian territory remains being occupied by Russia, including many organic fields and premises

<https://uk.wikipedia.org/>



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IMPACT OF THE WAR ON SOILS AND ENVIRONMENT



Currently, the territory of Ukraine contaminated with explosives is 139,000 sq. km. The air contains traces of Russian missile explosions. As a result of shelling and forest fires, an additional 180 million tons of carbon dioxide (greenhouse gases) have entered the atmosphere.

Every explosion of ammunition is a chemical reaction that releases toxic substances into the environment. All 100% of the chemical elements contained in the shells enter the environment: some into the air, the other part into the soil.



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IMPACT OF THE WAR ON SOILS



Fortification
buildings



Clogging /
mining /
pollution



Crater
eruptions



Movement of
heavy
equipment



Scorched
lands



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KEY QUESTIONS FOR ENVIRONMENT

Direct pollution - toxic elements directly enter the soil, water or atmosphere.



Secondary pollution - occurs through the spread of these elements through groundwater and surface waters.



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KEY QUESTIONS FOR ENVIRONMENT



Sources of increased pollutant levels due to hostilities:

- Ammunition, especially bullets and shell fragments, explosives. When detonated, some of these compounds can enter the soil and water.
- Destruction of infrastructure. Damage to sewage systems, treatment plants, and agricultural facilities can lead to the leakage of wastewater and fertilizers.
- Military equipment. Emissions from engines and fuels can contain nitrogen compounds.
- Fires. Burning organic materials can release nitrogen and phosphorus compounds.



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Among agricultural crops, the highest content of heavy metals was found in leafy vegetables and silage crops, the lowest - in legumes, cereals and technical crops



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Examples of the soil pollution in some communities



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Kakhovska Hydro Power Station after russian crime



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Херсон. Каховська ГЕС



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Death of animals - unpredictable
consequences in the future



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ORGANIC AGRICULTURE & ENVIRONMENT



- Organic agriculture can be part of ecological restoration, as it is based on the principles of sustainability and conservation management.
- Responsible collection of wild plants in the western part of Ukraine (less damaged) - an opportunity to maintain biodiversity while complying with environmental standards.
- Ecotourism and wild herb collection – creating opportunities for local businesses that do not harm nature.

Our further important work to be the ecological rehabilitation of the territories – cleaning of the land from pollution, demining, and creating safe nature conservation zones.



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Thank you for your attention!



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