Prevalence and Impact of Landmines on Ukrainian Agricultural Production

2023 World Food Prize, Borlaug Dialogues,
"Food System Repercussions of the Russia-Ukraine War"
Policy Seminar

- Landmine contamination unprecedented in 21st century
- Types of Landmines
 - At least 13 types of <u>anti-personnel</u> and 13 types of <u>anti-vehicle</u> mines have been identified
- Area contaminated —varying estimates
 - o 67,000 96,525 sq miles of Ukrainian territory
 - o 1,814 9,652 sq miles of Ukrainian agricultural land

- <u>Ukraine's total area</u>: Texas
- Ukraine's total farm land: Illinois + Wisconsin
- <u>Ukraine's total farm land unsuitable for use due to war</u>: Massachusetts + Verm ont
- Ukraine's total farm land exposed to landmines: Vermont

Steps for Demining

Humanitarian Demining

- Non-technical survey
- Technical survey
- Clearance
- Certification

UNMAS 5 Pillars of Mine Action

- Clearance
- Mine Risk Education
- Victim Assistance
- Advocacy
- Stockpile Destruction

Government Actors Involved



Ministry of Defense of Ukraine



Ministry of Agrarian Policy and Food of Ukraine

Interagency Working Group on Humanitarian Demining



Ministry of Economy of Ukraine



Ministry of Infrastructure of Ukraine



Ministry of Foreign Affairs of Ukraine







State Emergency Service of Ukraine

Progress to Date

WE ARE CLEARING THE TERRITORY OF UKRAINE FROM MINES: ALMOST HALF OF THE AGRICULTURAL LAND IDENTIFIED AS A PRIORITY HAS BEEN SURVEYED.

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Since the beginning of this year, more than 225,000 hectares of agricultural land identified for priority return to economic use have been inspected. According to the operational information of the regional military administrations, in the last week of October alone, more than 5,000 hectares of such land were inspected.

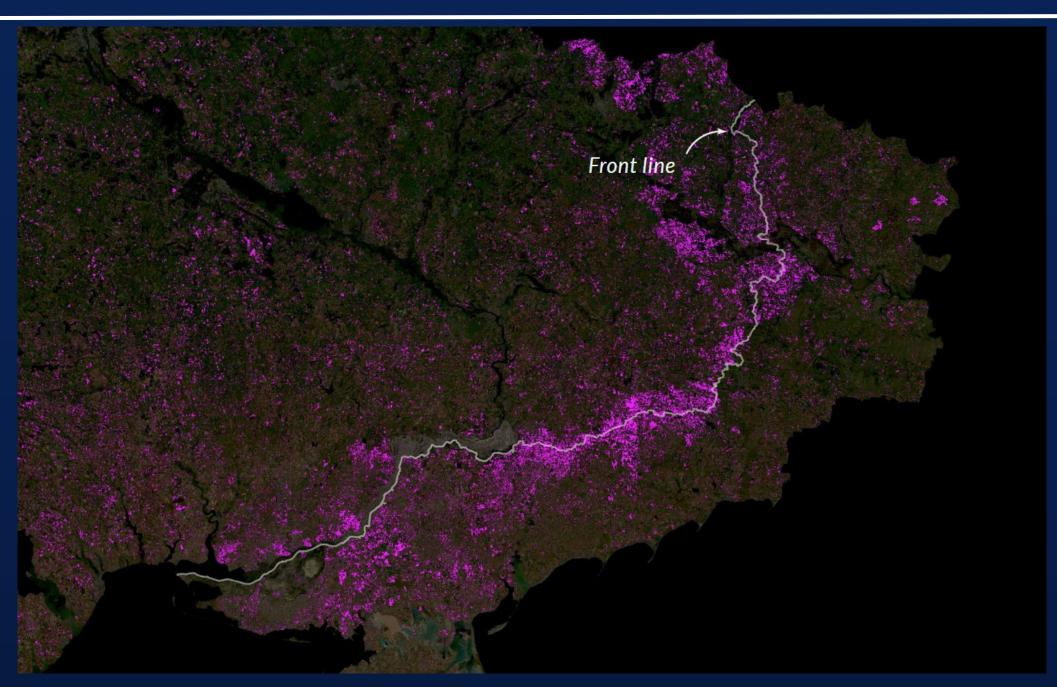
The vast majority of the areas inspected during the week - almost 4.2 thousand hectares - are located in Kherson oblast. The rest are in Mykolaiv and Kharkiv oblasts.

In total, more than 47% of the agricultural land that was planned to be returned to economic use in the first place has been surveyed. In particular, over 28% - in Kharkiv oblast, 48% - in Kherson oblast, and over 79% - in Mykolaiv oblast.

At the same time, about 170 thousand hectares of agricultural land were returned to economic use.

In total, the four-year plan for the priority restoration of agricultural land provides for inspections and, if necessary, the clearance and demining of more than 470,000 hectares of agricultural land.

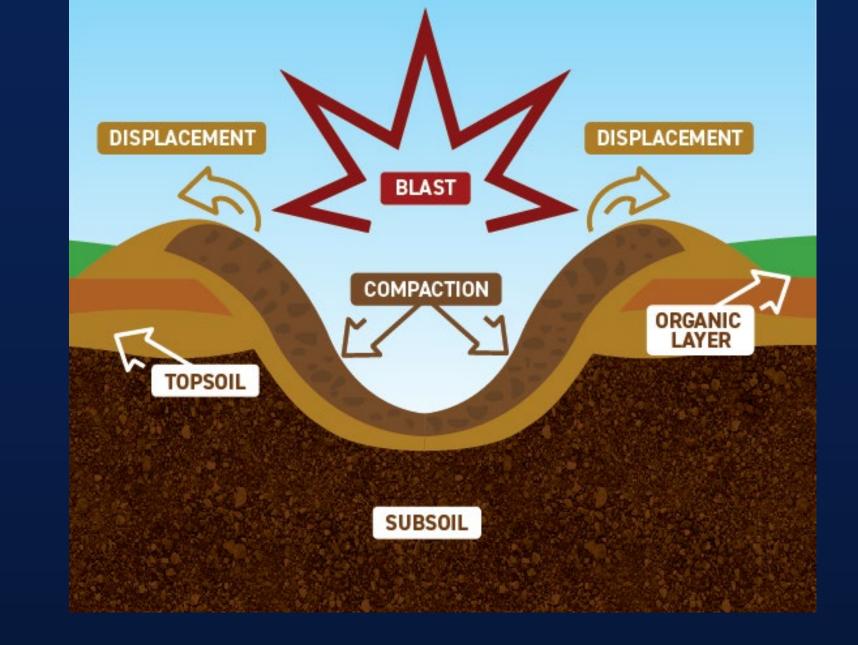
• 'Out of 3,000 hectares, I have 1,000 hectares mined. I left the application for demining immediately after the de-occupation. The emergency department says that they will not clear the mines in the near future, because they do not have time...We will look for a way out on our own, because today it is cheaper to buy a field than to demine it. We are considering the possibility of buying a drone that looks for mines, or renting a special car. Otherwise, life will not return to our villages, I need to clear the fields and sow crops this year," Oleg Girm an stressed.



Unique Considerations of Agricultural Soil

- Detonation creates a crater that displaces topsoil and compacts subsoil
- Detonations can release toxic pollutants into soil and waterways

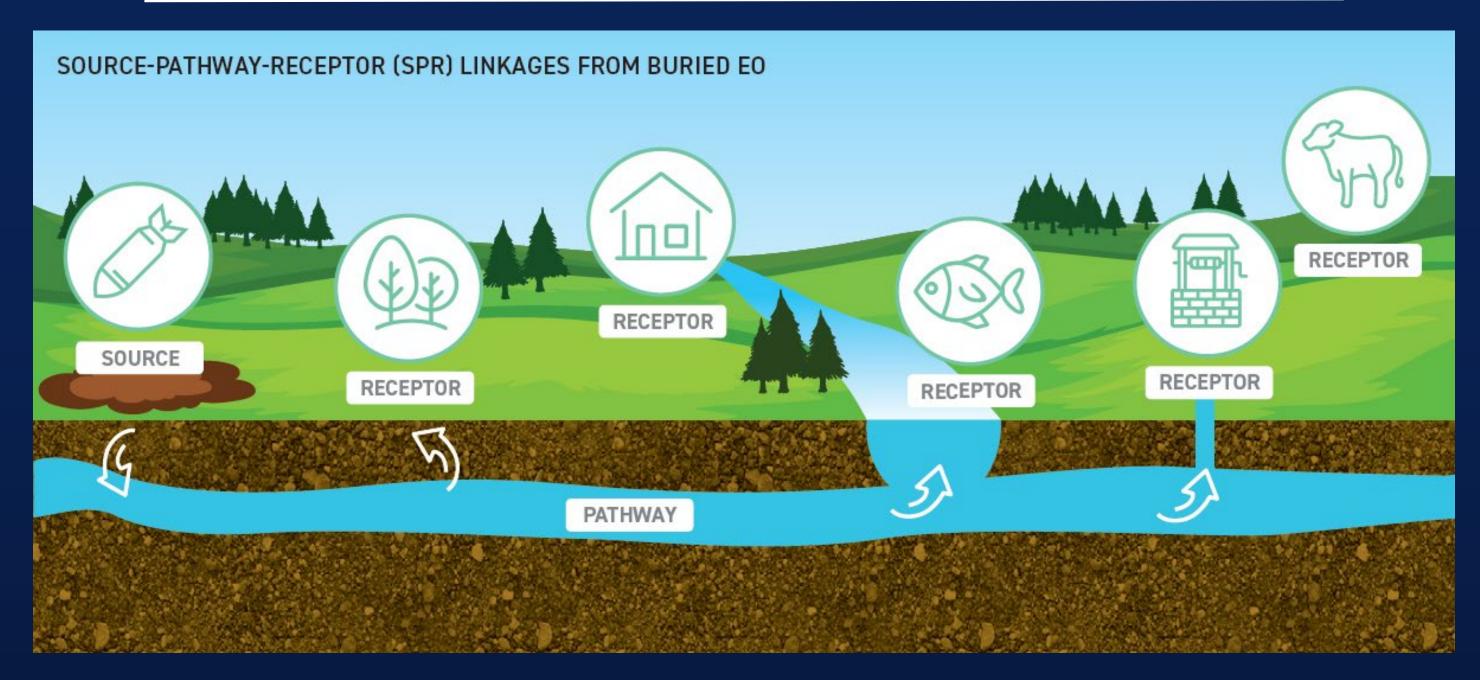
Im a ge Credit: Mine Action Review, Mitigating the Environmental Impacts of Explosive Ordnance and Land Release



IMPACT ON SOIL FROM EO DETONATION



Unique Considerations of Agricultural Soil



Recommendations

- Expedite the provision of humanitarian demining , including from increased funding from donors
- Lower the cost to farmers of demining
- Make special considerations for the unique needs of agricultural soil, including by taking steps to reduce soil and water pollution from demining and implementing soil testing to ensure soil quality