

Agribusiness is the locomotive of the Ukrainian economy. Ukraine has been considered the granary of Europe, as **about 25% of the world's black soils** known for their high level of fertility are here. Before the full-scale invasion, Ukraine was said to be able to **feed 600 000 000 people.** With at least 22% of land unavailable for farming, 125 mln of people are not getting the food. The country is also the world's largest exporter of sunflower oil and one of the largest exporters of grain. Because of the war, the situation has dramatically changed. Due to the military invasion of russia, the **total losses of Ukrainian agricultural sector are estimated up to 4.3 billion dollars**. After russians destroyed our iron industry in the South, farming has become a number one budget forming industry.





In 2008, Andrii owned 2200 ha of land and was in charge of 32 workers. From the very beginning of the full-scale invasion (in 2022), he stayed at home, taking care of his business, employees, and household regardless of the high danger. It is worthy to note that Andrii is a well-known public figure with an active patriotic position. As for now, he is in Kyiv oblast, trying to start everything from scratch. He is starting a farm 40 kilometers from the belorussian border, as he has noticed he likes challenges. The occupied farm in Kherson oblast will be managed by his friend, who is in charge of everything there right now and is loyal even under such pressure.

In spring 2022, the Russian army invaded Kherson oblast, coming from the South through Crimea quite easily and very fast. Due to some reasons, which need to be investigated after the victory, the bridges and rout were demined, thus easy to move through. Local territorial defense forces were not prepared enough to confront. There was major lack of ammunition, weapons, and heavy military equipment in the region. Those who tried to fight back with the means they had (self-made Molotov cocktails, hunting guns etc.) were quickly shot by russians.

The russians met the strong opposition only when they approached the Antonovskiy Bridge, which connects the right and left banks of Kherson oblast. It was a fierce battle. Andrii was among the last who crossed this bridge towards his farm on the left bank before the fight. Later, the city of Kherson was captured by russians and stayed occupied for 8 months (from the beginning of March till the mid November). Andrii had to pass 32 block posts, travelling less than 20 km from his farm to the city. After the city was liberated, it has been under constant heavy shellings.

All that time, heavy fightings took place, and "russian losses were huge," Andrii said. They wanted to hide their losses; thus, they burned the bodies of their dead and badly wounded soldiers on tires. People could not open the windows because of the acrid smell of burnt rubber and corpses. After liberation, it became clear that a lot of Ukrainian patriots were tortured to death and burnt to gather with Russians in order to hide their crimes. We cannot even imagine how many people will be considered missing (both Ukrainians and russians) because of this. Later on, they brought crematoriums.



The russian soldiers told that their goal is to show that the life in russia is much better than in Ukraine. However, they behaved aggressively. All their actions were aimed at intimidation, suppression, and destruction of Ukrainians, especially true patriots. It is a Genocide of Ukrainian nation in the 21<sup>st</sup> century.

Andrii evacuated his family from the region during the first three days. He was regularly visited by russian military investigators. Once he was taken for interrogation and, as a result, spent 4 days in prison, having been known as a famous patriot and public figure. Those were the most terrible days in his life as he was physically and psychologically oppressed. Once he even asked to shoot him, but russians made a "gesture of good will" and allowed him to live. Nevertheless, he was under scrutiny by russians. He was visited several times after imprisonment. They were thoroughly checking his phones all the times, trying to find any information that could be used against him – reason to kill him. As Andrii said, he was lucky enough not to be caught as he always was following Ukrainian news channels to keep updated, expecting and hoping for counteroffensive.





Besides, he had many Ukrainian patriotic literature, national symbols, and awards for volunteering and his public activity. All these had to be hidden (even dug) in order to save life.

It should be noted that even being under occupation, Andrii kept paying taxes to Ukraine, which was a significant reason for russians to kill him. However, in November 2022, having no profit, he sent all his workers on vacation at their own expense.

Most small and mid-sized farmers did not leave their homes as occupiers were stealing everything from the empty houses and farms. In the beginning of the full-scale war, the farmers gave away their production to the local people in order they and their farm animals could survive. Despite the occupation, Andrii started planting in **accordance with the President's order.** 

Thanks to his friends who communicated with russians, he was able to start field works. Nevertheless, the usual structure of sawing had to be changed because of the lack of crop-protection chemicals and fertilizers. They planted the crops which they had, taking into account the



In March 2022, the President of Ukraine Volodymyr Zelenskyi said in a video message that "planting campaign should be carried out in all regions of Ukraine, including temporarily occupied territories. Because this is about life. About our life. About our dreams. About our future. And, therefore, about our victory."



availability of crop-protection chemicals and fertilizers they required. **There was no farming strategy!** Just preserving the seeds and the soil. The only way to save something from russians was to dig it into the soil. And the only way to protect the field from being mind is to cultivate it. So, that was a win-win strategy in this battle, but not in the war yet.

At first Andrii was in no hurry to sell newly harvested grain, including the elite seeding materials for peas and small grains. The reason was that under occupation the prices were even 2-3 times less than in Ukraine (4-5 times less than world commodity prices). For example, the corn in the port of Reni (Ukrainian Danube port) cost \$280/ton, when it was \$70-80/ton to export to Crimea. Thus, he waited. But, in December 2022, the russians took away more than 10000 tons of his produce directly from the farm. Andrii's farm manager asked to leave some amount of the seed material for the future planting (remember they are a seed farm), but they refused, saying: "Are you really expecting to be able to plant anything the next season?"



The situation seemed similar to Holodomor (1932–33). The USSR authority took from farmers not only grain but all the food and property that could be sold or exchanged for food. It was a genocide caused by manmade famine in Ukraine organized by Stalin. 90 years have passed, and they came to kill Ukrainians again, using the same means. Actually, there were several Holodomors in Ukraine (1921-1923 and 1946-1947), but the one from 1932 to 1933 is the most famous and internationally recognized famine.



They didn't take agricultural machinery and equipment. But the farm is still under occupation and some of other households in the area have already been looted.

In the beginning of 2023, Andrii saved his super elite small grain seeds and peas, hiding them into the soil by planting. The harvest was half as much as the year before due to the lack of crop-protection chemicals and fertilizers as well as insufficient irrigation. As the result, this year harvest was given to the local people because of no possibility to sell it or keep it. Two weeks ago, russians informed that the farm will soon be nationalized to the benefit of russia.

This season they only cultivated their fields for the weed control purposes, so that russians don't drive and mine the land. The empty cultivated field cannot hide the footsteps and traces of military machinery.

Now, the irrigation system in the area is destroyed. russians blew up **the Kakhovka HPP** on June 6, 2023. It was mined in April 2022. Water volume was **18 mln m**<sup>3</sup>. HPP was necessary for electricity production and water supply to the south of Ukraine.

**Reasons:** to interrupt counter offensive of Ukrainian forces; to make it impossible to move to Crimea; to move their troops to other directions.

# THE RUSSIANS BLEW UP THE KAHOVKA HPP

TOP

On June 6, 2023, the Russians blew up the Kakhovskaya HPP with a water volume of 18 million m3. The hydroelectric power station is necessary for electricity production and water supply to the south of Ukraine.

### Consequences of blowing up the Kahovka HPP

- Hundreds of thousands of people will be affected
- Water supply will stop in a part of the southern regions
- More than 80 settlements are at risk of flooding
- There will not be enough water for cooling at the Zaporizhzhia NPP

## Consequences of blowing up for the Kherson region

4.8 m Wave height

5 km Filling width

24.4 km/h Wave speed

14 hours

uninterrupted rise of the water level

t.me/uawarinfographics

3 days Duration of flooding



## **CONSEQUENCES OF THE BLAST ON KAKHOVKA DAM**



Information about the consequences is incomplete because the water has yet to recede, and Ukraine does not have access to the occupied territories. In particular, obtaining data on the consequences for the occupied part of the Kherson region is impossible. However, it is already possible to make preliminary conclusions and forecasts.



## ≈ 1.5 thou.

people were evacuated from the right bank of the Kherson region



## ≈ 1.8 thou.

\$300 mln

the death of fish

\$1 bln

Possible losses from

Cost of the construction

of a new hydroelectric power plant

Residents of several regions already

have problems with water supply

houses were flooded on the right bank of the Kherson region



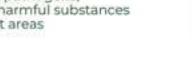
settlements in the flood zone



field irrigation systems remained without water supply. 4 million tons of crops were harvested in these fields.



Chemicals, pathogens, x and other harmful substances 90 m pollute vast areas





Protected areas, areas of archaeological excavations are flooded

krainian Painta, Ministry of Agrarian Policy and Food of Libraina



at.me/uawarinfographics

# **ENVIRONMENTAL DISASTER**



## **DUE TO THE EXPLOSION** OF THE KAKHOVKA HPP

Levels of the utilization of the Kakhovka reservoir, water level mark. meters of the Baltic Normal Height System

16.00 The normal level for use Loss of 14% of the export potential of 14.50 Ukrainian wheat due to possible irrigation problems in some regions 200K+ residents of settlements <14.00 without drinking water The threat of a nuclear disaster due <13.20 to the suspension of cooling of ZNPP reactors 1+ mln Ukrainians without drinking water. Massive <13.10 pestilence of fish, birds, and other species. The threat of an epidemic in the Black Sea region 40K residents of Pokrov city will not have access to drinking water An environmental disaster. Shallowing of the reservoir will lead to the destruction of biodiversity in the surrounding areas



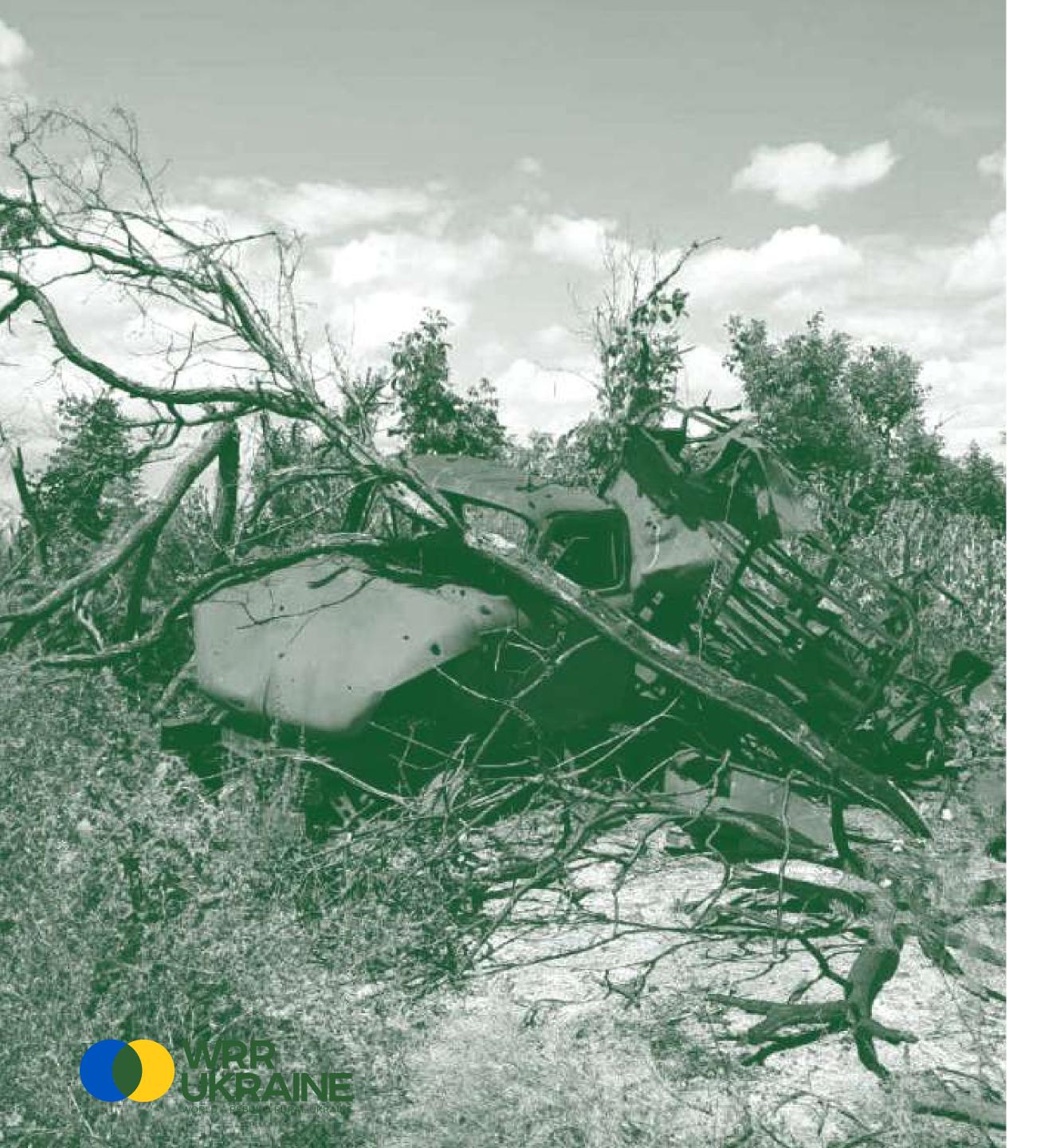












**Oleksandr Donchenko** is a 36-year-old farmer, who was forced to move to Kryvyi Rih in Spring of 2022 because of the occupation of his village Velyka Oleksandrivka (Kherson oblast). The village was under occupation from March 9, 2022 to October 10, 2022 (7 months). Oleksandr has a family, consisting of the wife Iryna and two children, 6-year-old daughter Zlata (child with disability) and 5-month-old son Volodymyr. They moved from the occupied village, but it was difficult to do. Russians did not want to allow people to leave Velyka Oleksandrivka, thus the deals about "safe evacuation corridors" have always been broken by attack of their artillery. It is a known fact that russians used civilians as "human shield". And Oleksandr's ill daughter was the only reason why the occupiers let them go away.

Before the war, Oleksandr planted such crops as wheat, barley, peas, and sunflowers. He cultivated **96 ha of farmland**, 33 ha of which were mined. Moreover, he practiced animal husbandry, **having about 100 pigs**, **10 cows, and 7 calves**. The russian occupiers stole all the piglets from the farm, leaving only 15 sows. In addition,

5 cows and 5 calves were shot down for food. Russian army has a very poor supply of food to the fighting zones.

When the full-scale invasion started, russian occupiers located their machinery near Oleksandr's warehouse. Thus, it was damaged because of hostilities. Oleksandr demined the field by himself, using all possible means. He even bought three metal detectors to be able to find dangerous objects.

As for now, Oleksandr is trying to resume farming activities on his field. He sold 5 cows and 2 calves, which remained after the occupation, to buy diesel fuel. Besides, the occupiers wanted to loot the agricultural machinery from his farm, but did not manage to do that and just took important parts, such as car batteries. To continue working on the farm, Oleksandr needed to buy everything, which is too expensive. He planted sunflowers (the seed was borrowed). Moreover, the farmer does not have any financial resources to hire employees to help on the farm. Thus, most scope of work he tries to complete by himself.

No forecast can be provided as for now, as the farm is too close to the hostilities line.







Mykola is the owner of **the farm Amarant Agro** (800 ha), which grows the "borshch set" (the set of vegetables used for traditional Ukrainian meal Red Beet Borshch: cabbage, onion, table beet, carrot, potato) and small grains in Kyiv oblast. There are 70 employees on the farm, which cover the needs for labor only for 70-80%. It is worthy of note that 9 of his workers joined the Armed Forces of Ukraine since the full-scale invasion began.

On the 24<sup>th</sup> of February 2022, Mykola gathered all his employees and said that the farm will continue working. They were free to go and secure their families, but the men didn't leave. However, the demand for products fell. The reason is that usually women, who fled to the safer areas, cook food and use the "borshch set" products. Thanks to the brave defenders of Kyiv area in the spring of 2022, his village was not occupied. Nevertheless, the farm of Mykola was right in the center of artillery movement. And it is a miracle that all the farm facilities remained intact. However, the big bags with fertilizers served as a screen, having protected the farm equipment from explosive waves. When the war began in 2014, understanding that food is the secondary weapon,







Mykola has been helping people and army by providing food since then. Being too shy about estimation of his total donations he said he never counted, but it is over 10 mln UAH (\$250 000).

As for now, Mykola continues his farming activity, planting the same "borshch set" and small grains in the crop rotation. Before the war, he finished constructing efficient warehouses with controlled microclimate by the American technologies with capacity of 4700 Metric tons, thus having the opportunity for the long storage of most of his produce. The problem of today is low price for the produce, but he is waiting for the changing of the situation. As Mykola is saying: "Farming risks are nothing compared to the battlefield's ones."

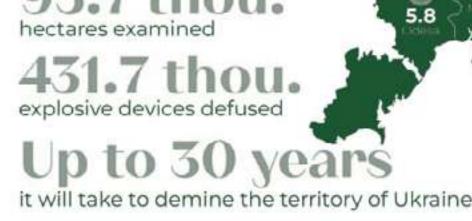
The war in Ukraine negatively influenced all the areas, especially agricultural one. The farmers try to survive, but they meet numerous challenges. They are all similar, no matter where the farm is situated. The enormous problem is **mined fields.** Some people manage to demine them by themselves, but it is too dangerous. Every day farmers are

being injured during the field work even in the relatively safe areas. Besides, many men joined the Armed Forces of Ukraine, thus the lack of workforce is another challenge. High **prices** of fertilizers, fuel, and seeds also make it difficult for the farmers to make their work economically efficient. Due to the **limited export** opportunities, burnt and stolen produce, unavailable fields, etc. the farmers in Ukraine do not have enough finances to invest in their business.

# Demining of Ukraine During the full-scale war, Ukraine became the most mined country in the world. Demining takes place daily Explosive ordnance disposal during the full-scale war\*, of Ukraine's territory is by region, thou, units contaminated with mines The area of the mined territory of Ukraine can be compared with: 4.7 36.9 0.5 Austrias



Israels









52.1

40.1

2.3

1.3

79.3

1.6







3.7

77.9

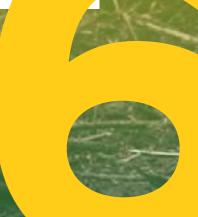


0.1

43.0

Terrestrial Environment (







# Contacts



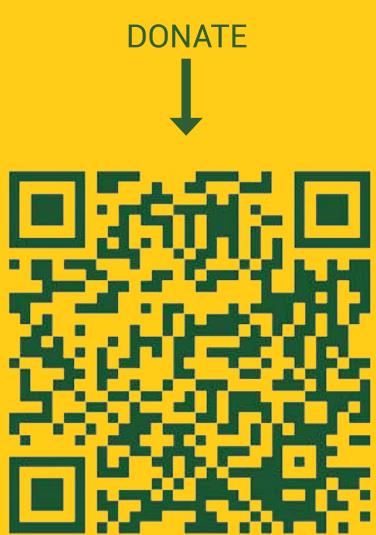












CHARITABLE ORGANIZATION INTERNATIONAL
CHARITABLE FUND «REBUILDING RURAL UKRAINE»
EDRPOU 45112243
Ukraine, 43005, Volyn region, Lutsk city, 10 Peremohy ave.

Tel.: +380979965047 WWW.WRRU.ORG