

REPORT



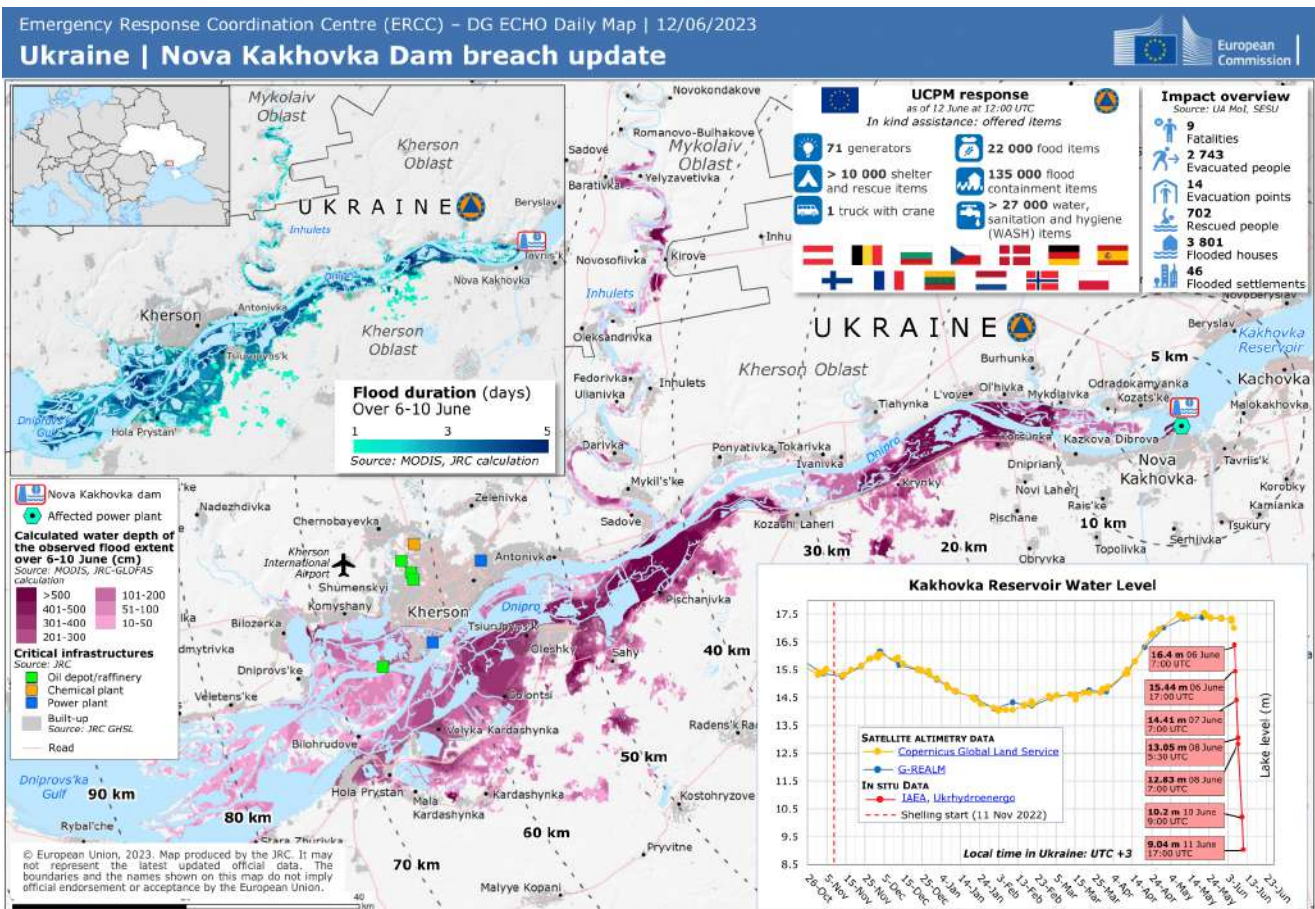
**THE AFTERMATH OF THE KAKHOVKA
DAM'S EXPLOSION BY RUSSIAN ARMY:
Report from the monitoring mission**

JUNE 2023

THE AFTERMATH OF THE KAKHOVKA DAM'S EXPLOSION BY RUSSIAN ARMY: REPORT FROM THE MONITORING MISSION. JUNE 2023

On June 6, 2023, at approximately 2:50 AM, the armed forces of the Russian Federation deliberately blew up the dam of the Kakhovka hydroelectric power plant, resulting in extensive flooding across territories in Ukraine. This man-made disaster has left tens of thousands of people homeless, causing significant damage and loss of property, documents, and infrastructure. It has also resulted in water supply issues in the Kherson and Mykolaiv regions, as well as damage to agriculture and the environment.

Since June 6, the Vostok SOS Charitable Foundation has been actively **monitoring the situation in settlements along the right bank of the Dnipro River, particularly in Kherson and on both banks of the Ingulets River.** Additionally to working closely with the communities of Kherson and Mykolaiv, the monitoring teams have assessed **the affected areas in the Dnipro and Zaporizhzhia regions.**



Nova Kakhovka Dam breach - DG ECHO Daily Map

THE SITUATION IN THE LEFT-BANK KHERSON REGION

The left-bank part of the Kherson region, which is temporarily occupied, experienced severe flooding due to the local landscape. **Within the first two weeks of the tragedy, the Vostok SOS Charitable Foundation received approximately 4,200 appeals (70% of the total) from residents in the left-bank Kherson region**, including Oleshky, Sahy, Solontsi, Kokhany, Kardashynka, Mala Kardashynka, Velyka Kardashynka, Hola Prystan, Nova Zburiivka, Stara Zburiivka, and several smaller villages. These appeals were for evacuation, humanitarian aid, and general information. Many houses were submerged up to the roof level, and residents found themselves trapped, seeking refuge on rooftops. **However, the evacuation of the population was completely blocked by Russian troops.**

Affected individuals sought help through volunteer networks. Initially, they were able to make personal calls to request evacuation, but as their phone batteries drained, their relatives took over the communication for another week. Local organizations and volunteers established channels on Telegram and created a map to locate individuals in need of evacuation. The number of such requests reached the thousands, and evacuations were conducted privately to avoid persecution by the occupation authorities. Additionally, the hotline received numerous inquiries regarding the initial steps to take upon discovering deceased individuals as a result of the flooding, indicating a high number of casualties in the temporarily occupied territory.

 **The volume of needs in the occupied settlements is significantly higher, but it is impossible to investigate it because the occupying authority ignores the consequences of the disaster.**

THE SITUATION IN THE RIGHT-BANK KHERSON REGION (KHERSON AND MYKOLAIV REGIONS)

The flooded areas of the right-bank Kherson region can be divided into 3 groups:

- mainly **rural areas along the Dnipro River** (from Kozatske village to Stanislav village), which are most affected and in the area hit by enemy shelling;
- **Kherson**, including multi-story buildings in the Korabel district;
- mostly **rural areas along the Ingulets River**. The most affected areas are the Dariivka community of the Kherson district, and Kalynivka community of the Beryslav district of the Kherson region, Horokhiv and Snihurivka communities of the Bashtanka district of the Mykolaiv region.



EVACUATION

A common characteristic observed among all groups affected by the flooding was their reluctance to evacuate from the impacted areas. Many individuals who remained in the Kherson region, without the assistance of formal evacuation teams, chose to relocate to the homes of relatives or friends within the same settlement or neighboring communities following the dam explosion. On the first day, approximately 45 people were evacuated by train from Kherson to Mykolaiv, but a majority of those who gathered at the station decided to stay.

Initially, **the military and neighbors were the first to assist in evacuating the victims from the flooded areas.** Subsequently, **units from the State Emergency Service, representatives from public and charitable organizations, and volunteers joined the efforts.** The process was chaotic during the initial three days due to the inability to prepare in advance for the disaster. **The situation was constantly changing,** with fluctuating availability of vehicles, boats, and boats with engines due to the strong currents. Furthermore, Russian representatives began shelling the evacuation sites, prohibiting volunteers from going on the water.

Another challenge faced was the coordination of joint action planning. The evacuation process, needs assessment, and provision of humanitarian aid relied on the Foundation's hotline, the communication team's activities, established connections with organizations, and contact with local administrations and State Emergency Service units that submitted requests.

The evacuation of affected residents residing in high-rise buildings in Kherson, including the Korabel district, was carried out by boat. People were rescued from windows on the 2nd and 3rd floors. Some individuals chose to remain in their buildings, while others received food and water supplies by boat.

People sought refuge in houses that were not flooded within the cities. Local authorities organized shelters in Kherson, Chornobaiivka, Snihurivka, and Mykolaiv. In villages, victims sought temporary accommodation in the empty houses of their neighbors or set up tents on the streets. Some individuals utilized their trucks as a means to wait out the flooding.

Kherson





HOUSING

Different settlements experienced varying degrees of flooding based on their geographical location. For instance, households in the village of Novokandakovo, Bashtanka district, Mykolaiv region, remained undamaged, while the village of Mykhailivka in the same district was heavily flooded, with over 50% of the area affected.

The nature of the houses in the flooded regions, predominantly constructed using stone and clay, led to significant destruction during the disaster.

It is important to note that **some of the currently flooded settlements were subjected to prolonged shelling by Russian forces.** In the village of Veselyi Kut in the Mykolaiv region, for example, a local family had to take refuge in an outbuilding as their main house had its roof and ceiling destroyed due to Russian shelling. Unfortunately, the outbuilding itself became flooded, and the family is temporarily residing in a truck.

In the flooded Korabel district of Kherson, as well as in affected villages and streets, **access to electricity, gas, and water supply was cut off** for an extended period. As the water began to recede, gradual efforts were made to restore these essential services.

The continuous flooding, high humidity, and ongoing shelling have led to **daily destruction of housing in the Kherson and Mykolaiv regions.** The interior decorations, furniture, and personal belongings inside the submerged homes have mostly become unusable.

A family with five children (Mykhailivka, Mykolaiv region).
Forced to live in a tent due to the flooding of their house.





ACCESS TO INFRASTRUCTURE AND DRINKING WATER

Villages connected to dams or bridges spanning the Ingulets, Vysun, and Verevchyna rivers, **as well as those situated along lowland roads adjacent to the rivers** (between Komyshany and Kherson), **faced isolation from other settlements and limited access to food supplies.** The village of Afanasiivka in the Mykolaiv region, for example, became completely disconnected from all roads, turning into an isolated island amidst the flooding. Only military vehicles, ferries, and later boats were able to reach these villages. A few days following the destruction of the dam by Russian forces, heavy rainfall commenced, further complicating access to the affected villages via dirt roads. The road leading to the village of Novosofiivka was washed away and submerged by rainwater, rendering it impossible to monitor and provide assistance.

Access to clean drinking water has significantly declined in nearly all flooded settlements, including those that remained unaffected by the flooding. Volunteers and humanitarian organizations have been delivering drinking water to residents in these areas. In some villages, the water has become unusable even for basic technical needs.



AGRICULTURE

Agriculture in the Kherson and Mykolaiv regions has suffered as a result of:

- washing away part of the fertile layer of plowed land located in the river valleys where the flooding occurred;
- flooding of pumping stations on the Ingulets River, which supplied water to the irrigation system of both regions;
- flooding of agricultural and farming enterprises, property, and equipment located in the flood zone;
- pollution of flooded land with oil products, garbage, and other substances that have fallen into the water. For example, between the villages of Vasylivka and Yevhenivka in the Mykolaiv region, the Foundation's team saw an overturned two-ton tanker brought by the water flow (with traces of oil products spreading around).

Flooded machine rooms and pumping station buildings that supply river water to the Ingulets irrigation system will be drained, but it is impossible to assess the damage **caused to the pumping system and predict the date of water supply restoration.** This fact will delay or prevent crop irrigation if the equipment has suffered critical damage. Therefore, **the actions of the occupiers will also affect the harvests** in the Mykolaiv and Kherson regions, **food prices, farm incomes, and employment opportunities in the region.**



SANITARY SITUATION

During visits to the flooded settlements, various concerning observations were made. **The presence of dead wild animals was noted, indicating the impact of the flooding on local wildlife.** Additionally, a fish pestilence was detected, suggesting a negative effect on aquatic life in the affected areas. Locals also reported flooded buildings that housed livestock, highlighting the potential loss of animal life and the challenges faced by farmers.

Several instances of fuel and lubricant contamination in the water were documented in at least five locations, including the engine rooms of pumping stations in Vasylivka and Veselyi Kut in the Mykolaiv region, as well as the premises of a shipyard in Kherson. This pollution poses a risk to the environment and requires mitigation measures.

Afanasiivska solar power station, Mykolaiv region



The flooding also affected the Afanasiivka solar power plant, with approximately 25% of its production capacity (20.5 MW) completely submerged. This power plant supplied electricity to numerous settlements in the region. The flooded areas may contain substances that can potentially pollute the environment, particularly in the plant's inverter and transformer converters.

Furthermore, the flooding resulted in the contamination of street toilets, chicken coops, cesspools, wells, and boreholes in every settlement. **This biological contamination introduces the risk of waterborne diseases due to the presence of human and animal waste,** including the potential spread of intestinal infections and parasites. In the village of Lymantsi, Mykolaiv region, the flooding even affected the local cemetery, with visible damage to burial sites.



SECURITY SITUATION

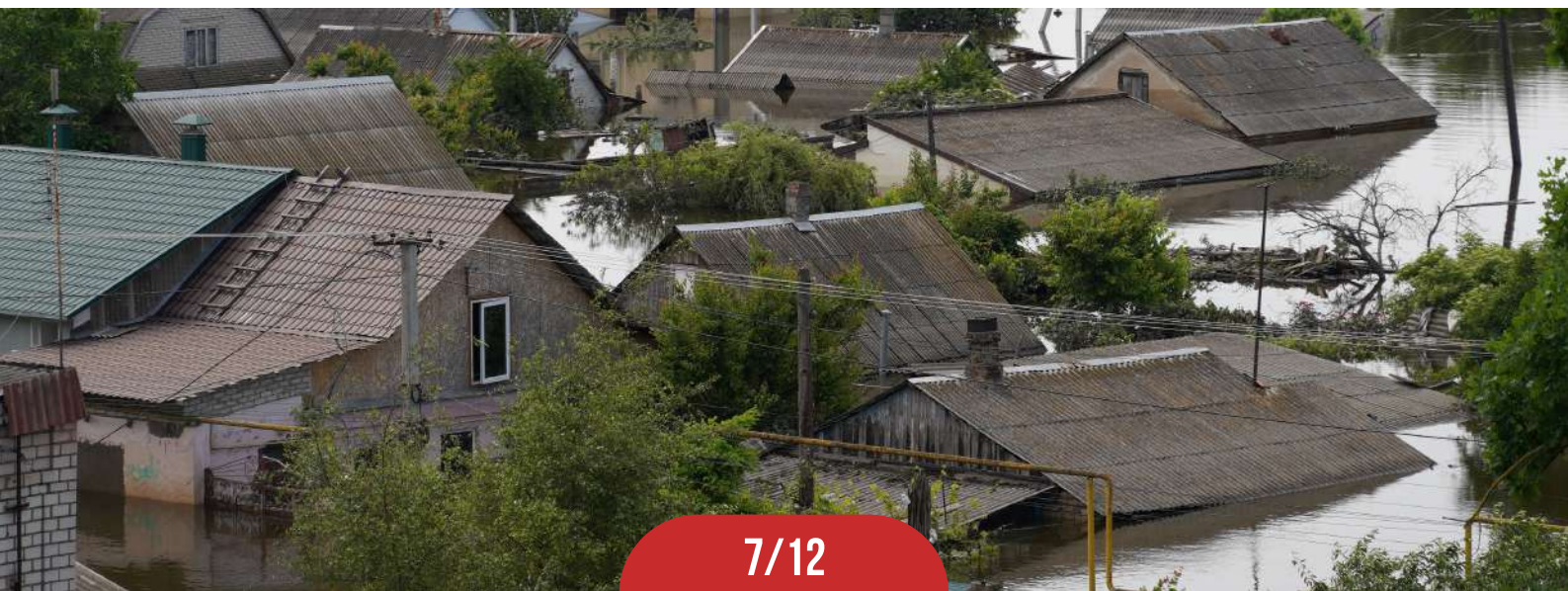
The settlements located near the coast of the Dnipro River, such as Kherson and the villages of Antonivka, Bilozerka, Zelenivka, Kizomys, Veletenske, Beryslav, Kozatske, Vesele, Poniativka, Mykolaivka, Novosilka, Tiahynka, Olhivka, Mykhailivka, Zymovnyk, and others, **are facing frequent artillery shelling from russian troops** on the left bank of the Dnipro.

Mine safety is a critical concern in the region. The Kherson region has been fully occupied by russian troops, and part of the Mykolaiv region, which also experienced flooding due to the man-made disaster, was occupied after the start of the full-scale russian invasion in 2022. Following the de-occupation, sappers from Ukrainian state services began demining fields, roads, and private houses. However, the demining work was ongoing until the Russians blew up the Kakhovka dam.

Local administrations are issuing warnings to exercise caution on flooded roads, as there is a possibility of water carrying explosives that were extensively planted by russian troops along the coast of Ingulets. Not all areas have been completely cleared of mines yet, and you may frequently encounter "Mine" signs, posters, and banners serving as reminders of the ongoing danger. **There is a risk of explosives being transported from the mined areas along the coast.**

On June 13, at approximately 2:30 PM, the monitoring and humanitarian mission crews of Vostok SOS came under direct shelling by the russian federation in the village of Veletenske in the Kherson region. Even after the team urgently evacuated from the village, the shelling continued. **Deliberate attacks on locations where evacuees gather or where humanitarian aid is distributed confirm the terrorist intentions of the russian representatives.**

Kherson, Korabelny district



NEEDS



HUMANITARIAN NEEDS

The immediate needs that arose in the aftermath of the explosion were swiftly met through the efficient collaboration between the proactive civil and volunteer movement, local authorities, and emergency services. Local businesses played a vital role in providing assistance, and support from UN agencies and international funds was instrumental. These organizations demonstrated flexibility by reallocating a portion of their project funds to address the urgent needs in the Kherson and Mykolaiv regions.

FOR CIVILIANS:



- evacuation;
- accommodation of evacuees;
- clothing, bedding, and blankets;
- drinking water, water containers;
- fast food and ready-made meals;
- hygiene products, including for the care of people with limited mobility;
- gas stoves and cylinders, stoves;
- food and pet carriers.

FOR RESCUERS (SES, VOLUNTEERS):



- motor boats;
- uniforms (life jackets, wading boots, wading overalls, raincoats);
- generators, charging stations;
- motor pumps, pumps, hoses;
- tents.



PSYCHOLOGICAL NEEDS

The devastating impact of home loss has left people in a state of despair, stress, and emotional instability, necessitating immediate attention and psychological support. The well-being of children is of utmost concern, and providing them with psychological assistance is an urgent priority. Equally important is providing parents with the necessary information and guidance to help address their children's heightened anxiety. The dedicated efforts of doctors and psychologists in local resilience and resettlement centers are commendable, yet they too require relief and support in their crucial roles.

The types of assistance include the following:

- **psychological measures for the victims** (evacuees and those who remained in their homes after the flooding);
- **training for activists, volunteers, psychological and social service providers** in Kherson, Mykolaiv, Zaporizhzhia, Dnipro, etc.: interventions, supervision, and support groups.



LEGAL NEEDS

Victims also need legal assistance:

- 37% of the applications received were regarding **the acquisition of IDP (Internally Displaced Persons) certificates, financial assistance for IDPs, providing individual support to residents affected by house flooding, and facilitating access to bank cards and accounts.**
- 31% of the appeals were focused on **verifying the extent of housing damage or destruction for future compensation purposes**, as well as obtaining or restoring documents that confirm ownership.
- 12% of the applications were specifically related to **passport restoration and other document-related matters.**
- The remaining 19% of requests encompassed a range of issues such as notarized powers of attorney, inheritance matters, salary disputes, land lease debts, retirement concerns, and other related issues.

LEGAL ISSUES:

- **Lack of systematic work of free legal aid providers in Kherson.**
- Due to the **limited capacity of state bodies** (DoSPs, ASCs, SMS, notaries, banks) and the lack of staff, there are long queues, which endangers people and prevents people with disabilities, older adults, and people with psychological problems from exercising their rights.
- The Bureau of Technical Inventory and the registrars of the State Register of Property Rights in Kherson are not working, leaving most people without the ability to file applications to register their damaged or destroyed housing. **Affected persons are unable to exercise their right to compensation.**
- **Many people lost all their documents and money, so they were trapped in a circle:** without a passport, they cannot apply for assistance; without a bank card, they cannot get one; without money, they cannot pay the fee to restore the document.



PRIORITY AREAS FOR LONG-TERM LIQUIDATION OF THE KAKHOVKA DAM EXPLOSION AFTERMATH:

- **pumping water out of flooded buildings, cellars, wells, and cesspools** (sludge pumps, pumps, household equipment);
- **drying out homes** (complete pumping out of water, removal of damp items, removal of floors and wall decoration, disinfection of premises);
- **repair of damaged housing stock** (building materials: boards, slate roofing, cement, bricks, sand; replacement of essential household items);
- **disinfection of drinking and technical water** (filters, chlorine, activated carbon, etc.);
- **collection and burial of frozen fish and animal bodies** (protective suits, respirators, mobile crematoriums);
- **scheduled water quality inspections** to be carried out by certified laboratories;
- **ensuring constant access to drinking water and filling water supply systems - the volume of needs of the population of 3 regions** (Kherson, Mykolaiv, and Dnipro) needs to be addressed by central and local authorities with the involvement of expensive infrastructure projects.

In the upcoming weeks, as the situation unfolds, more comprehensive information regarding the epidemiological situation and the actual extent of the damage is expected to become available. This will include data on the houses that have been affected and the overall impact on the affected areas. Reservoirs located near rivers that have been infiltrated by contaminated floodwater, such as the three reservoirs near Afanasiivka, are also at risk of experiencing deteriorating water conditions and potential outbreaks of fish pestilence. Monitoring and assessment of these reservoirs will be crucial to address any potential environmental and public health concerns arising from the flooding.

Prizoerne, Kherson region



WATER SUPPLY CHALLENGES IN THE DNIPROPETROVSK AND ZAPORIZHZHIA REGIONS: ASSESSING THE IMPACT AND MITIGATION MEASURES

DNIPROPETROVSK REGION

The water supply situation in the Dnipropetrovsk region presents varying degrees of difficulty, particularly between rural areas and large cities. **Nikopol and Marhanets currently have no water supply.**

NIKOPOL

live more than **80 000 citizens**

MARHANETS

live more than **40 000 citizens**

In these communities, technical and drinking water is transported by rail and distributed to the residents. Technical water is also sourced from fire tanks and delivered to the communities by vehicles, including fire trucks. The State Emergency Service (SES) and utilities, equipped with suitable transportation, are actively involved in addressing the water supply problem. The local leadership of these communities is working on developing a plan to drill wells, although this process is still in its initial stages. The most optimistic estimates suggest that a **water supply system from Zaporizhzhia could be established within six months.**

In contrast, **the situation is relatively better in the rural areas of the Tomakivka and Myrove communities.**

TOMAKIVKA COMMUNITY

14 000 inhabitants

MYROVE COMMUNITY

7 000 inhabitants

Previously, the Tomakivka community relied on a water pipeline extending from Marhanets, while the Myrove community was supplied with water from the Kakhovka reservoir. However, during the monitoring period, **both communities experienced a complete cutoff from their water supply.**

Industrial water needs were addressed by delivering it through trucks and Ukrzaliznytsia tanks from Zaporizhzhia. Drinking water can be obtained from local stores, and humanitarian organizations are distributing water to socially vulnerable groups. Since the main territory of these communities is rural, many households have concrete wells ("pools") where water is stored in case of supply interruptions. Residents have also taken precautions by stockpiling water following last year's critical drop in the water level of the Kakhovka reservoir, so there is no immediate crisis regarding water for technical needs. **Community leaders are exploring the possibility of drilling wells and studying the geological conditions of aquifers as potential long-term solutions.**

ZAPORIZHZHIA REGION

The central municipal water supply system is currently ensuring the provision of drinking water to most communities in the Zaporizhzhia region, and there are no reported issues in this regard. However, in certain communities, such as **Kshuhum**, there was a reliance on technical water intake from the Kakhovka reservoir for irrigation and other non-potable purposes.

KUSHUHUM COMMUNITY

live 15 000 citizens

Community leaders express concerns that **if people resort to using drinking water for irrigation, it may lead to problems with the water supply system, such as reduced water pressure, in certain villages and districts.**

Additionally, in the upcoming weeks, **the communities anticipate a deterioration in sanitary conditions as fish trapped in water-filled cavities die.** This situation may contribute to environmental concerns and the potential spread of diseases if not properly addressed.

Novovasylivka, Mykolaiv region

