

Winterisation 2024-25: A Multi-Sectoral Needs Assessment Lens on Needs and Vulnerabilities

October 2024

Key findings

- **Kharkivska, Doneska and Sumska oblasts remain the most at risk for the upcoming winter**, with Kharkivskiyi, Bohodukhivskiyi, Chuhuivskiyi, Kramatorskyyi and Sumskiyi raions facing the highest Cold Spot Index (CSI) scores due to conflict-related damage, high population density, and socio-economic vulnerabilities.
- **Disruptions to water and heating services remain a significant concern**, particularly in frontline oblasts like Donetsk and Kharkivska. Areas such as Pokrovskiyi in Donetsk and Kharkivskiyi in Kharkivska show the greatest need for repairs and support to water and district heating systems.
- Many households in areas such as **Dnipropetrovska, Donetsk, and Kharkivska report missing heating appliances for the upcoming winter**, compounded by ongoing electricity disruptions. Nearly 49% of the population in Dnipropetrovska relies on electricity as their primary heating source, posing a critical vulnerability.
- Several areas, such as **Izmailskiyi and Bolhradskiyi in Odeska oblast, report severe shortages of winter clothing. Gaps in access to essential non-food items (NFI) like blankets and thermal bedding have also been noted, including heating fuel in Odeska oblast**, highlighting the need for urgent interventions to ensure thermal comfort.

Introduction

Cold winter temperatures in Ukraine can significantly exacerbate humanitarian needs, making winterisation activities a crucial component of the humanitarian response. The winter 2024-2025 is expected to be particularly challenging due to a combination of cumulative damage to energy production and heating infrastructure, widespread destruction of housing, and persistently high levels of humanitarian needs. According to recent reports, damage to critical infrastructure has severely impacted the country's capacity to maintain essential services during the winter months, putting millions at risk.¹

To support winterisation efforts, REACH conducted a **Cold Spot Assessment 2024/2025** in June 2024, identifying the most vulnerable areas to winter-related hazards. While the highest-risk raions are located near the Russian border, significant risks are spread across various regions of Ukraine due to the ongoing conflict and infrastructure damage.

This brief aims to provide updated and detailed information on winter-related needs throughout Ukraine, using the latest data from REACH's Multi-Sectoral Needs Assessment (MSNA). By integrating recent data and contextual analysis, this assessment seeks to support winterisation response planning, ensuring that aid is targeted where it is most needed.

The assessment is aligned with activities outlined in **OCHA's Winter Response Plan**, ensuring a coordinated approach to addressing critical needs across sectors, with a focus on Shelter & Non-Food Items (SNFI) and Water, Sanitation & Hygiene (WASH).

Calculation and methodology

The assessment updates the previous **Cold Spot Assessment** from June 2024 with recent data from September,² with an added analysis of winterisation needs based on the latest of REACH's Multi-Sectoral Needs Assessment (MSNA)³. The analysis uses selected winterisation-relevant indicators – such as access to heating, water services, insulation of housing, availability of winter clothing, and non-food items (NFIs) – to assess local needs that can be addressed by the activities outlined in **OCHA's Winter Response Plan**.

Results are visualised in maps (Map 2 to Map 8) produced with the selected indicators and represent the combined average of the selected indicators used to assess the needs level per raion or oblast. Indicators suggesting more severe needs are highlighted on the maps, allowing for easy identification of priority areas for intervention. Additional data from REACH's Humanitarian Situation Monitoring (HSM)⁴ and Joint Market Monitoring Initiative (JMMI)⁵ was used to contextualise the identified needs at both raion and oblast levels.

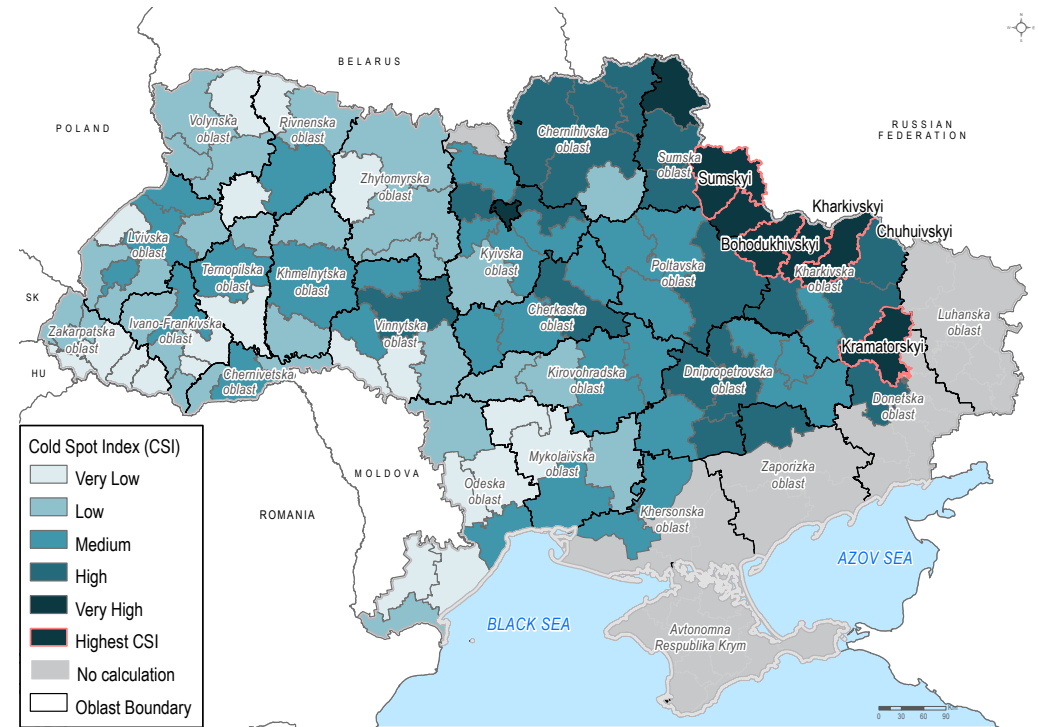
The methodology assesses the percentage of households reporting critical winter-related needs. By comparing these indicators across raions and oblasts, the assessment identifies areas where winterisation needs may be particularly high. Detailed information on data sources, assessment design, and limitations can be found in the **Research Methodology Note**.

Cold Spot Index (CSI)

In June 2024, REACH produced its Cold Spots Assessment for 2024-25, which identifies areas where cold temperatures intersect with socio-economic vulnerabilities and high-conflict impacts. Data sources were updated as of September 2024 to account for the evolving situation, particularly Russian attacks on Ukraine's energy infrastructure. The below map shows the results of the updated Cold Spot Index (CSI)¹ at the raion level.

Given socio-economic vulnerabilities, conflict-related damage, and high population density, **Kharkivska and Sumska oblasts continued to hold the highest Cold Spot Index (CSI) in Ukraine**. Within these oblasts, the raions of Kharkivskiy, Bohodukhivskiy, Chuhuivskiy (Kharkivska oblast), Kramatorskiy (Donetska oblast), and Sumskiy (Sumska oblast) remained the most at risk during the cold season.

¹ CSI is a tool which supports the identification of areas most at risk during winter by combining several key dimensions to assess vulnerability and capacity to cope with winter conditions. The CSI includes hazard, exposure, susceptibility, and lack of coping capacity (LOCC) variables. More information on the index and the Cold Spots Assessment [methodology](#) can be found in the [Assessment's factsheet](#).



Map 1. Cold Spot Risk Index (CSI).

While the CSI highlights the most critical areas, it is important to also consider regions with varying levels of need. A comprehensive understanding of winter-related needs across the country, influenced by geographic location, socio-economic conditions, and the ongoing conflict, is crucial to ensuring effective and inclusive support for affected populations.

The following sections provide a detailed, sector-specific needs analysis, highlighting raions with high needs across different activity areas according to OCHA's Winter Response Plan.

Water, Sanitation and Hygiene (WASH) needs

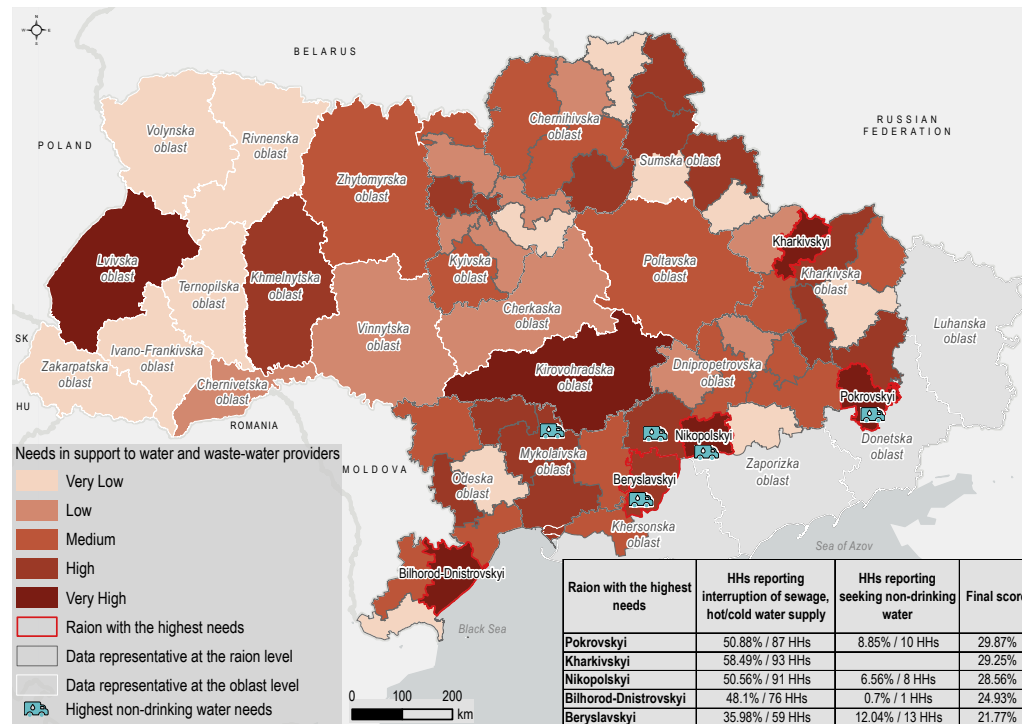
The Winter Response Plan divides the WASH-related activities into three categories:

1. Support to water and waste-water providers;
2. Support to district heating service providers;
3. Support to institutions.

Of these categories, the first two were included in this analysis based on relevant MSNA indicators.

Support to water and waste-water providers

The provision of water services is key to maintaining sanitation and hygiene and ensure the continuous functioning of the heating systems during the winter. The MSNA indicators considered under this activity include the percentage of households (i) reporting interruption of water services and (ii) seeking non-drinking water for other house reasons. Analysis of these indicators revealed Pokrovskiyi raion in



Map 2. Support to water and waste-water providers needs per raion/oblast.

Donetska oblast as having the highest need for support to water and waste-water providers, closely followed by Kharkivskiyi raion in Kharkivska oblast and Nikopol'skiy raion in Dnipropetrovska oblast (see Map 2 for further results). Analysis of HSM data aggregated to the oblast level shows that Donetska has elevated needs for this category of support, with 98% of the key informants (KI) sampled reporting **disruptions to the water supply**, compared to 75% on average for the other crescent oblasts, and 44% reporting service cuts most of the time every day between June and July. In neighbouring Kharkivska and Dnipropetrovska, 67% and 77% of the KIs respectively reported experiencing interruptions on the water service at least every few days per month in the same period.

Donetska and Kharkivska, with 7% and 4% of KIs, are the only oblasts with reported **damages to water infrastructure** between June and July. These recent damages may help explain the elevated levels of disruption to water and waste-water services in these areas. When asked about the barriers to water access, 81% of KIs in Donetska, 37% in Kharkivska, and 7% in Dnipropetrovska reported **damages to the water network** as one of their main barriers. Other barriers to accessing water services in Donetska include the breakdown of water pumping stations, damaged water treatment facilities, and lack of electricity, reported by 60%, 56%, and 58% of KIs respectively. Water service providers may therefore require support in the form of repairs to damaged infrastructure, maintenance of equipment, and back-up sources of power.

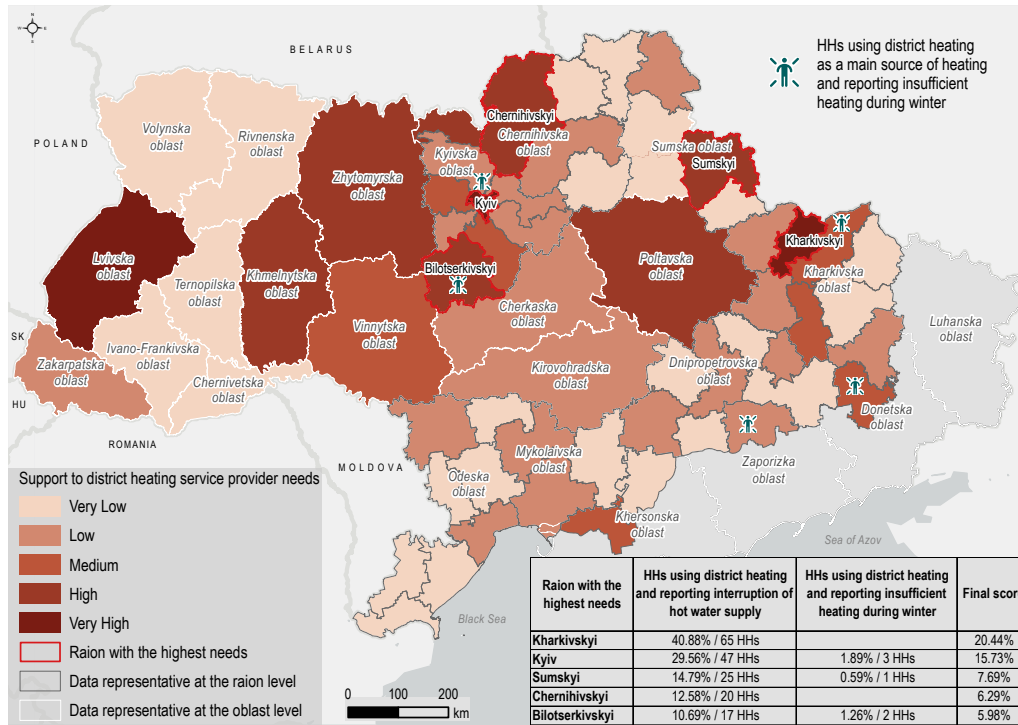
In this regards, between June and July, the population of Pokrovskiyi received assistance from four different organisations supporting the reparation and maintenance of water and waste-water systems.⁶ Three of these organisations assisted individual households, while another one assisted the Vodokanal directly. The assistance reached approximately 40,000 people in Pokrovskiyi, covering around 32% of the raion's estimated population.⁷ For the same period, Kharkivskiyi received aid from seven organisations, which targeted the Vodokanal, health institutions and local authorities. As a larger city and with more projects, the assistance reached approximately 300,000 people, covering around 22% of the estimated population.⁸

Support to district heating service providers

Providing assistance to district heating providers before the start of the winter is key to ensure their preparedness for the provision of services. This activity consists of the development of independent water sources for district heating, and the provision of equipment and materials for repairs in the distribution network. MSNA data shows that centralised heating covers 42% of the population, with a higher concentration in frontline oblasts (55% of households) and urban areas (60% of households versus 16% in rural areas).

For this activity, two sets of combined MSNA indicators were analysed, the percentage of households relying (i) on district heating and reporting interruption of hot water

supply, and (ii) on district heating and reporting insufficient heating during winter. Under this analysis, Kharkivskiy raion in Kharkivska oblast is the most affected raion, followed by Kyiv, and Sumskiy in Sumska. More households relying on district heating were affected by interruption of hot water supply than those reporting insufficient heating during winter. For instance, in Kharkivskiy, while 41% of households reported interruptions to the service, none reported insufficient heating during winter. The situation was similar in Kyiv, with 30% reporting interruptions and only 2% reporting insufficient heating. See Map 3 for further details.



Map 3. Support to district heating service providers needs per raion/oblast.

REACH's **District Heating Assessment**,⁹ which analysed the needs of 146 district heating companies found that district heating companies across Ukraine have been heavily affected since the start of the full-scale invasion. District heating companies have faced several challenges to service provision, including lack of facilities / equipment for water treatment (reported by 30 companies), lack of reagents for water treatment (reported by 13), damages to heat distribution networks (by 91), and heat loss in heat distribution networks (by 68).

Between June and July, two organisations reported providing targeted support to district heating and health institutions, reaching approximately 97,000 people (7%

of the raion's estimated population).¹⁰ However, in the same period, no assistance to district heating facilities was reported in either Kyiv or Sumskiy.

Shelter and Non-Food Items (SNFI) needs

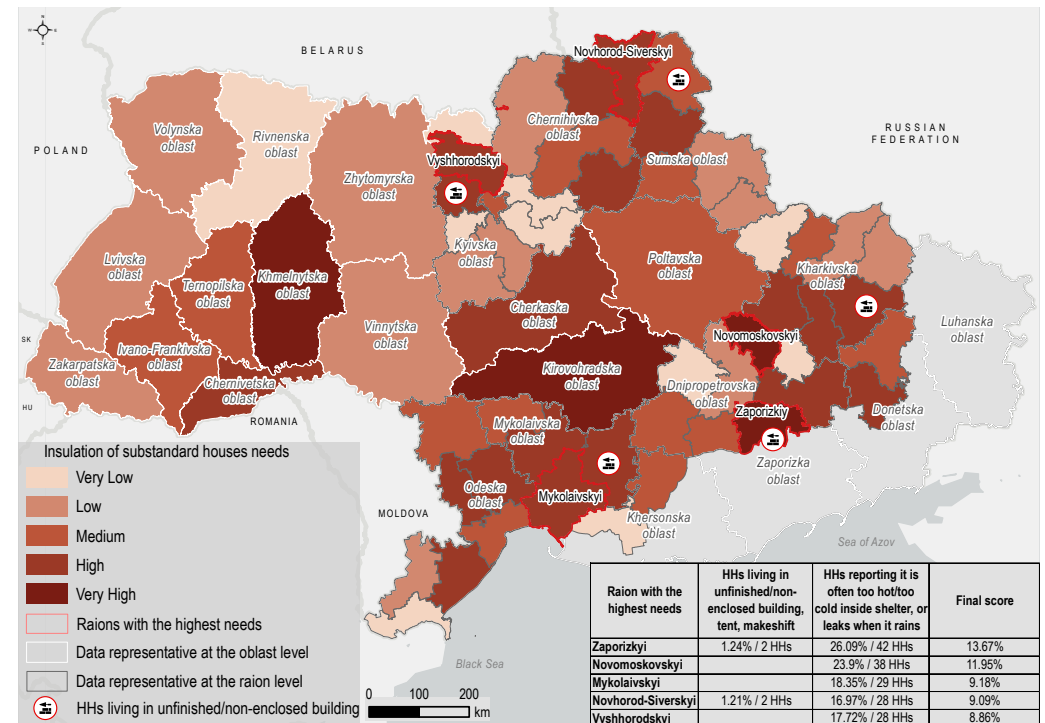
The SNFI activities are divided into six categories in the Winter Response Plan:

1. Insulation of substandard houses;
2. Winter cash for utilities;
3. Winter heating appliances;
4. Winter energy;
5. Winter clothing;
6. NFI for winter.

This assessment looked into the following five:

Insulation of substandard houses

The housing sector in Ukraine has sustained significant damage throughout the period of the full-scale war. To withstand the harsh winter conditions, it is critical to ensure the insulation of the people's housing, especially in the most vulnerable areas.



Map 4. Insulation of substandard houses needs per raion/oblast.

For this activity, two MSNA indicators were analysed, the percentage of households (i) living in unfinished buildings, tents or makeshift shelters, and (ii) reporting insulation problems with their home, such as cold temperature inside or leakages during rain. The combination of these factors showed that the most critical raion is Zaporizkyi in Zaporizka oblast, closely followed by Novomoskovskiyi in Dnipropetrovska, and Mykolaivskiyi in Mykolaivska. See Map 4 for details of the other raions.

The data showed that from the two MSNA indicators analysed, insulation needs were by far the largest in all the observed raions. Taking the most critical raion as an example, Zaporizkyi shows 26% of households reported this situation, while only 1% reported living in unfinished buildings. The same applies for Novomoskovskiyi and Mykolaivskiyi with 24% and 18% of households respectively reporting house insulation problems, while none reported living in unfinished housing.

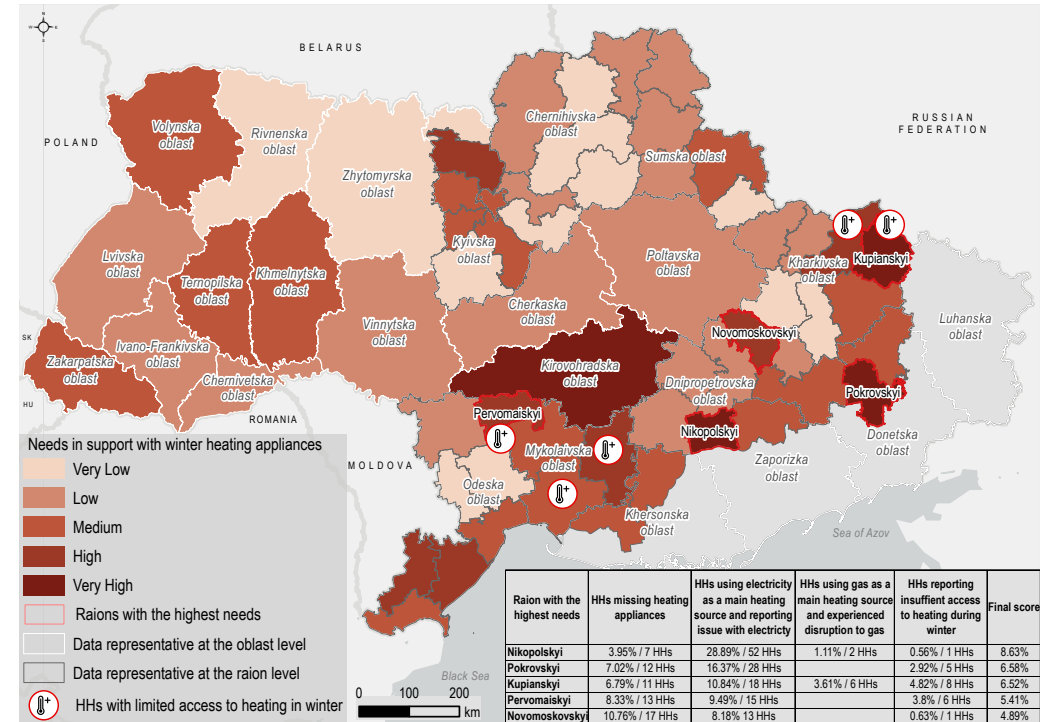
Winter heating appliances

Ukrainian homes rely on multiple heating sources to withstand the harsh winter temperatures. Heating appliances, such as electric heaters and gas boilers, are essential for households. However, disruptions in utilities like electricity and gas severely impact their functionality, exacerbating the challenge of keeping homes warm during the winter months. It is therefore necessary to understand the availability and reliability of these heating options and the specific needs of households across Ukraine.

This activity analysed four MSNA indicators, namely percentage of households reporting (i) missing heating appliances, (ii) issues with electricity, (iii) gas distribution, and (iv) insufficient access to heating during winter. The most affected raions are Nikopolskyi, Pokrovskyi and Kupianskyi, in Dnipropetrovska, Donetsk and Kharkivska oblasts respectively. Map 5 shows the levels of the raions relevant to this activity.

When analysing HSM's oblast-level data, the only oblasts where it was reported a significant **lack of heating appliances** ahead of the upcoming winter season were Donetsk, Zaporizka, and Dnipropetrovska, with 10%, 9%, and 2% of KIs, respectively. Notably, Dnipropetrovska is the only oblast where KIs reported **receiving assistance in heating systems**, with 9% of households benefiting from such aid.

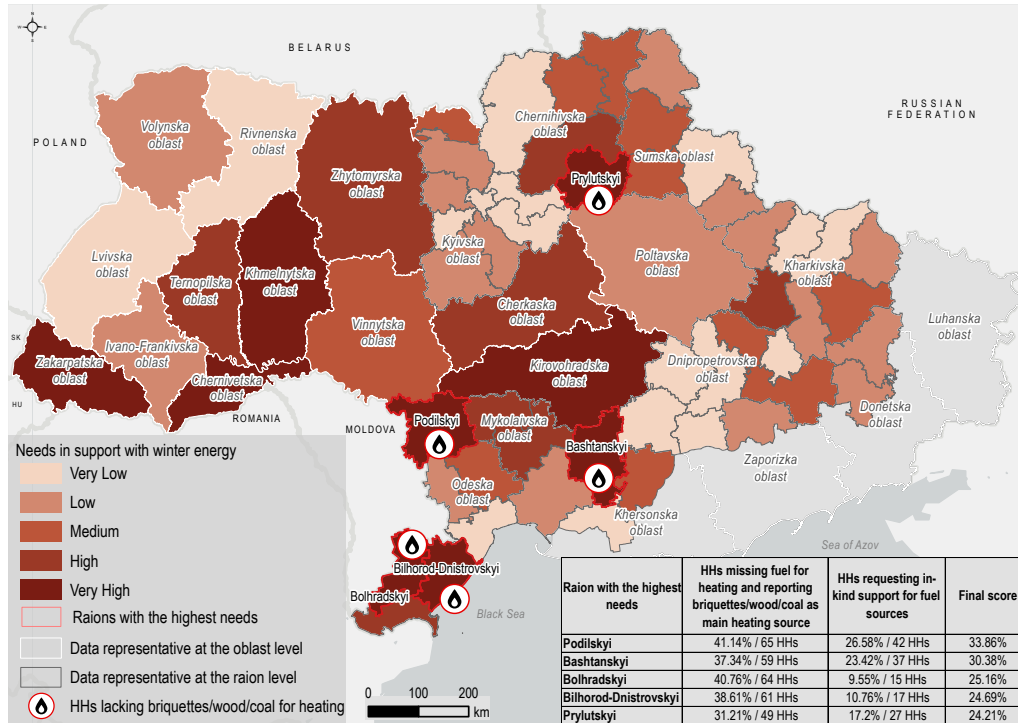
In terms of **electricity disruption as a barrier to heating**, 17% of assessed KIs in Dnipropetrovska and 12% in Donetsk reported such disruptions, while no disruptions were noted in Kharkivska. This issue is particularly salient in Dnipropetrovska, where 49% of KIs rely on electricity as their primary heating source. The potential strain on the national electricity grid, combined with further service interruptions, could significantly increase the vulnerability of populations heavily dependent on the energy sector for winter heating.



Map 5. Winter heating appliances needs per raion/oblast.

Winter energy

Ukrainian households often rely on a diverse range of solid fuels, including coal, wood, and briquettes, to meet their heating needs during the harsh winter months. These fuel sources become critical in areas where access to gas or electricity is disrupted or insufficient. The availability and affordability of such fuels have been severely impacted by conflict impacts, placing additional strain on vulnerable communities. Understanding the availability of these fuel types, as well as the challenges in accessing them, is key to ensuring that households can maintain adequate warmth throughout the winter season. For this section, the selected MSNA indicators are the percentage of households (i) missing fuel for heating combined with households using briquettes, wood or coal as main heating source, and (ii) requesting in-kind support for fuel sources. The most affected raions in terms of winter energy needs are Podilskyi and Bolhradkyi in Odeska, and Bashtanskyi in Mykolaivska. These areas report a particularly high dependence on traditional fuels like coal and wood, coupled with significant challenges in obtaining adequate supplies. Map 6 provides a detailed overview of winter energy needs.



Map 6. Winter energy needs per raion/oblast.

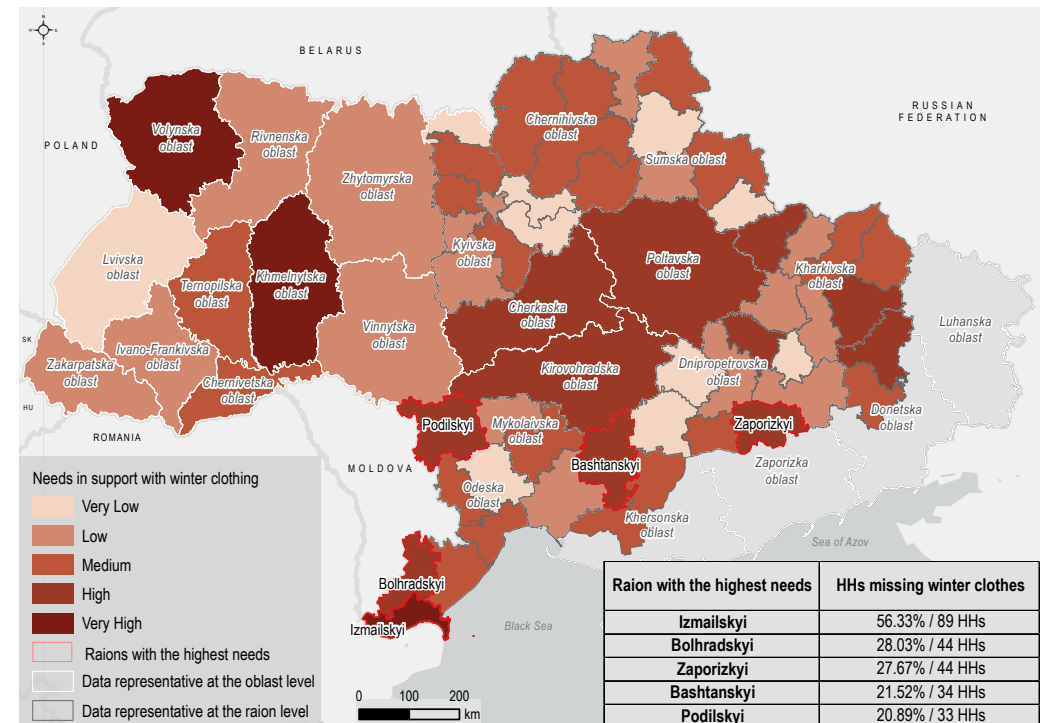
Further analysis at the oblast level with HSM data reveals that in Odeska, 70% of the interviewed KIs **rely in wood, coal and briquettes for their winter heating needs**, with most of them relying particularly on wood (56%). In Mykolaivska, 80% of the KIs reported using the same solid fuel sources, with most of them (60%) relying mainly on wood. In Chernihivska, KIs reported only wood as a solid fuel used for winter heating with 83%.

When asked about the **availability of fuel for heating in the market** during June and July, no KIs reported this problem for the mentioned oblasts; however, this challenge was reported in Dnipropetrovska, Khersonska, and Donetsk, with 21%, 11% and 5% of KIs. It is also noteworthy that 17% of interviewed KIs in Dnipropetrovska reported a lack of fuel stock as one of the main barriers for heating. It is important to highlight that fuel availability was measured during the summer months, a period when demand is generally lower. Consequently, any reported availability may not reflect the expected higher demand and potentially reduced availability during winter, when these challenges are likely to be exacerbated.

Winter clothing

Winter clothing is essential for Ukrainian households to withstand the country's extreme winter temperatures, particularly as the conflict and displacement have disrupted access to markets and resources. Adequate winter clothing, including coats, boots, gloves, and other insulated garments, plays a crucial role in protecting individuals from hypothermia and other cold-related health risks. The need for winter clothing is particularly acute in areas where households have been displaced or have lost access to markets, making it difficult to purchase or replace essential items.

The analysis uses the MSNA indicator of households reporting a lack of winter clothing. The most affected raion is Izmailskyi in Odeska oblast, with 56% of households reporting shortages of winter clothing. It is followed by Bolhradskyi, also in Odeska, and Zaporizkyi, in Zaporizka, with 28% and 27% of reports respectively. These raions report significant gaps in winter clothing availability, with a large portion of the population lacking adequate protection against winter temperatures.



Map 7. Winter clothing needs per raion/oblast.

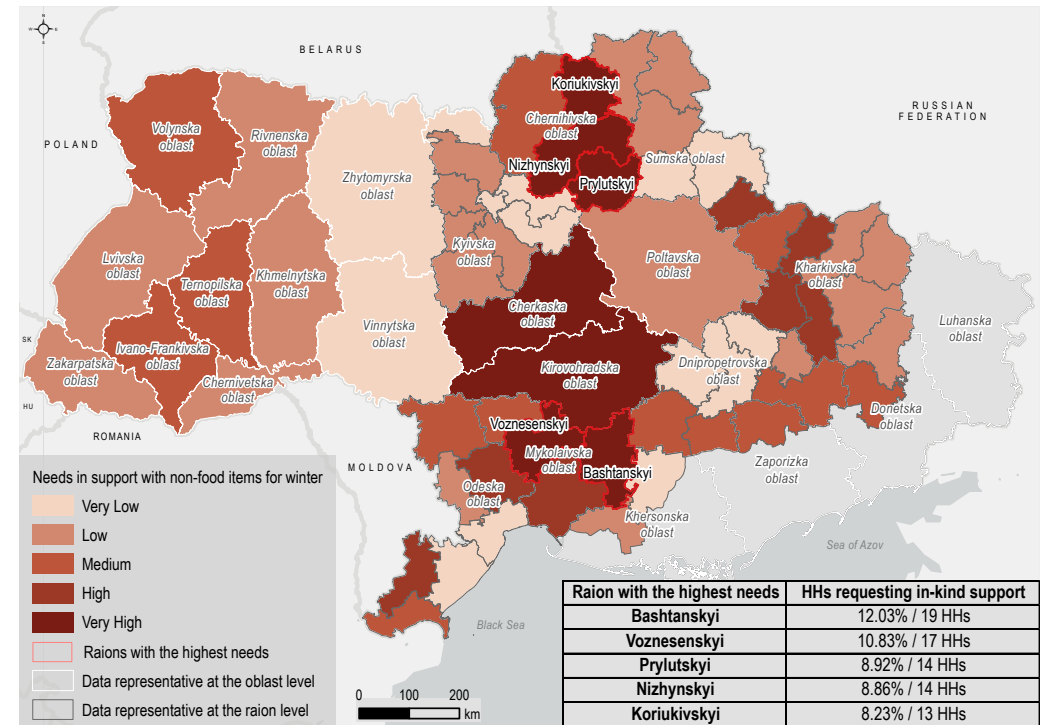
HSM data indicates that only four oblasts reported **unavailability of winter clothing** between June and July, being Sumska, Donetska, Dnipropetrovska, and Zaporizka. In Sumska, 17% of assessed KIs reported a shortage of winter clothing, while 8%, 7%, and 5% of KIs reported similar challenges respectively for the remaining oblasts. Additionally, the raion-level JMIMI data shows that 40% of the customers in Zaporizkyi reported that warm clothes are not available for purchase. This is the second most affected raion following Pokrovskyi in Donetska with 80% of customers reporting the same issue.

The lack of accessible winter gear in these areas increases the vulnerability of affected populations, particularly in Zaporizka where the unavailability of products combines with the already high percentage of households experiencing shortages in winter clothing. The combination of raion- and oblast-level reporting underscores the need for winter clothing distributions in these areas.

Non-Food Items (NFI) for winter

Beyond heating appliances and winter clothing, NFIs play a pivotal role in ensuring households can withstand the harsh Ukrainian winter. NFIs include essential personal items such as blankets, thermal bedding, and other household goods that provide warmth and comfort. These items are particularly crucial for vulnerable populations, including displaced households and those with damaged homes, who may struggle to acquire sufficient resources to stay warm during the colder months.

The MSNA indicator used in this analysis is the percentage of households requesting in-kind support for winter NFIs, which helps identify the regions where the need is greatest, offering insights into where humanitarian efforts should prioritise their interventions. The results show that the most affected raions for winter NFIs are Bashtanskyi and Voznesenskyi, both in Mykolaivska oblast, and Prylutskyi, in Chernihivska, with 12%, 11%, and 9% of assessed households respectively. These raions report high levels of demand for NFIs as households seek additional resources to cope with winter conditions.



Map 8. Non-food items (NFI) for winter needs per raion/oblast.

At the oblast level, HSM data provides further context by showing the level of **assistance received regarding personal winter items**. Between June and July, receiving aid as in-kind winter items was reported in only four oblasts, Khersonska, Sumska, Dnipropetrovska and Kharkivska, by 9%, 7%, 4%, and 2% of assessed KIs respectively. These figures are expected to increase as winterisation activities begin (October). While these oblasts have received assistance, the data also reveals gaps in coverage, indicating that many households remain without essential winter NFIs.

Conclusion

As the winter of 2024-2025 approaches, Ukraine faces heightened challenges due to the cumulative effects of conflict-related infrastructure damage, socio-economic vulnerabilities, and limited access to essential winter resources. Kharkivska and Sumska oblasts continue to be the most vulnerable, maintaining their high-risk status from the previous Cold Spot Assessment.

This MSNA-based assessment reveals needs in water and district heating services, particularly in frontline regions such as Donetsk and Kharkivska. Many households are also facing a severe shortage of heating appliances and fuel, exacerbated by disruptions in electricity and gas supply. The reliance on alternative fuels like wood and coal has become increasingly critical for many, particularly in areas like Odeska and Mykolaivska.

Additionally, significant gaps in access to winter clothing and NFIs remain, especially in vulnerable and displaced communities. It is important to note that these gaps were identified during data collection in the summer, before the start of winterisation assistance, which may have since addressed some needs. However, addressing these gaps will be essential to reducing the risk of cold-related health issues and ensuring the well-being of affected populations during the harsh winter months. Humanitarian interventions must prioritise support to the most critical areas identified in this assessment, with a focus on restoring essential services and distributing winter supplies to alleviate the burden on vulnerable communities.

Limitations

This winterisation assessment update relies on data collected in other REACH research cycles, meaning that it presents data which possesses the limitations of those assessments. This includes, but is not limited to, areas of focus of the assessments used (e.g., HSM¹¹ focuses on frontline settlements, MSNA¹² has representative data in some areas at raion level, in others - at oblast level), insufficiently precise spatial data regarding energy infrastructure, inaccurate and outdated population data, and sensitivity around conversing about damage to energy infrastructure. More details about the limitations of the Cold Spot Assessment can be found in the [Research Methodology Note](#).

Information on methodology

The following assessments were used in this Multi-Sectoral Needs Assessment lens update to the Cold Spot Assessment:

| | Data collection method | Data collection period | Latest Terms of Reference (TOR) / Methodology Note (MN) | Latest output |
|--|--|------------------------|---|--|
| <i>Cold Spot Assessment (CSA)</i> | Key informant interviews, SDR | July 2024 | MN | Assessment 2024/2025 |
| <i>Multi-Sectoral Needs Assessment (MSNA)</i> | Household interviews (F2F, CATI), Key informant interviews | Yearly (May to July) | TOR | Frequency tables |
| <i>Humanitarian Needs Monitoring (HSM)</i> | Key informant interviews, Focus group discussions | Every 8 weeks | TOR | Spotlight on settlements receiving less or no assistance |
| <i>Joint Market Monitoring Initiative (JMMI)</i> | Key informant interviews, SDR | Monthly | TOR | August 2024 presentation |

References and notes

- 1 ACAPS, [Energy infrastructure attacks: outlook and impact during 2024–2025 cold season](#), September 2024.
- 2 Same sources used in [REACH's Cold Spot Assessment \(June 2024\)](#) but data updated until September 2024.
- 3 REACH, [Ukraine - Multi-Sectoral Needs Assessment \(MSNA\)](#), data from June 2024.
- 4 REACH, [Ukraine - Humanitarian Situation Monitoring \(HSM\)](#), Round 17 July 2024.
- 5 REACH, [Ukraine - Joint Market Monitoring Initiative \(JMMI\)](#), Round 28 July 2024.
- 6 WASH Cluster Ukraine, [Response Monitoring](#), August 2024.
- 7 UNFPA, [Ukraine - Common Operational Dataset on Population Statistics](#), August 2024, restricted access; WASH Cluster Ukraine, [Response Monitoring](#), August 2024.
- 8 Ibid.
- 9 REACH, [Winter Heating Crisis: An Assessment of Ukraine's District Heating Needs and Damages](#), September 2024.
- 10 UNFPA, [Ukraine - Common Operational Dataset on Population Statistics](#), August 2024, restricted access; WASH Cluster Ukraine, [Response Monitoring](#), August 2024.
- 11 REACH, [Humanitarian Situation Monitoring \(HSM\) Terms of Reference](#), March 2024.
- 12 REACH, [Multi-Sectoral Needs Assessment \(MSNA\) Terms of Reference](#), May 2024.

ABOUT REACH

REACH Initiative facilitates the development of information tools and products that enhance the capacity of aid actors to make evidence-based decisions in emergency, recovery and development contexts. The methodologies used by REACH include primary data collection and in-depth analysis, and all activities are conducted through inter-agency aid coordination mechanisms. REACH is a joint initiative of IMPACT Initiatives, ACTED and the United Nations Institute for Training and Research - Operational Satellite Applications Programme (UNITAR-UNOSAT).

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