

Ukraine: Humanitarian Situation Monitoring Factsheet: Focus on damage to infrastructure and disruptions to utilities

January, 2023
Ukraine

KEY MESSAGES

- Increased number of settlements reported **disruptions to utilities (electricity, water supply, heating)** and **telecommunications** (on average, **two times more** in December 2022/January 2023 (Round 7)), reflecting the reduced capacity of energy infrastructure.
- Areas in the eastern parts of the country with closer proximity to hostilities (such as **Donetska, Dnipropetrovska** oblasts) and **Kyivska oblast** reportedly experienced higher degree of access constraints and disruptions to utilities.
- Bohdanivka** (Donetska oblast) appears to experience higher degree of barriers, with KIs reporting **extreme level of overall need** and **'all the time' disruptions to utilities**.
- High prices and lack of money** continue to be the main barriers in accessing heating during winter, along with increased reports of **disruptions to the heating supply**.

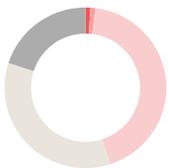
100%

Proportion of settlements reporting **disruptions to utilities** as a **main concern** in the settlement in 14 days prior to data collection (December 2022/ January 2023 (Round 7))

60%

Proportion of settlements reporting **electricity** as a **priority need** in 14 days prior to data collection (December 2022/January 2023 (Round 7))

Graph 1: % settlements by reported level of overall need (n=306): December 2022 / January 2023 (Round 7)



KIs in **42% (n=130/306)** of the assessed settlements reported **'moderate' level of overall need** in 14 days prior to data collection

- 'Extreme'**: loss of life or imminent loss of life as a result of lack of access to life-saving assistance.
- 'High'**: most people are still able to meet their basic needs, but living conditions are very poor in the settlement.
- 'Moderate'**: most people are still able to meet their basic needs, but living conditions are provided.
- 'Limited/no needs'**: most people continue to meet their needs as normal, without significant deterioration of living conditions.
- No consensus**

CONTEXT & RATIONALE

Since the escalation of the conflict in February 2022, people in Ukraine have experienced wide-scale humanitarian needs across multiple sectors. Furthermore, starting from October 2022, Ukraine has been subjected to intensified waves of country-wide attacks particularly targeting key infrastructure. The needs of people and service access constraints have further exacerbated with winter. To inform humanitarian actors, REACH has been conducting monthly **Humanitarian Situation Monitoring (HSM)** since March 2022 across Ukraine, covering accessible or government-controlled areas (GCAs) and hard-to-reach areas (including, among others, non-government-controlled areas (NGCAs)¹).

ASSESSMENT OVERVIEW

The sixth and seventh rounds of HSM specifically intended to allow humanitarian actors to get a **better overview of how humanitarian needs have changed over time** and get indicative information on the areas where a higher level of need or service access concerns have been registered.

METHODOLOGY:

306 settlements (towns or villages) were assessed in GCAs through a total of **1113 phone interviews** with key informants (KIs)² in Round 6, and **810 interviews** in Round 7.³ All KI responses from the same settlement were aggregated to have one data point for each variable per settlement. The findings should be interpreted as **indicative**.

Data collection: 5-26 September 2022 (Round 6) and 13 December 2022 - 09 January 2023 (Round 7).

OVERALL HUMANITARIAN NEEDS

The level of overall need continues to be relatively low in GCAs, particularly in areas farther from the frontline and active hostilities. Nevertheless, with the **intensified waves of attacks on infrastructure** throughout Ukraine since October 2022, as well as continued hostilities and resulting disruptions to services, the levels of need in a number of settlements appear to have increased from September 2022 to December 2022/January 2023.

While in **September 2022 there were no settlements with reported 'Extreme' level of need** ('loss of life or imminent risk of loss of life as a

result of the lack of access to life-saving assistance'), two settlements, **Bohdanivka** and **Rodynske** (both in Donetsk oblast), were identified to be experiencing 'Extreme' level of need in December 2022/January 2023.

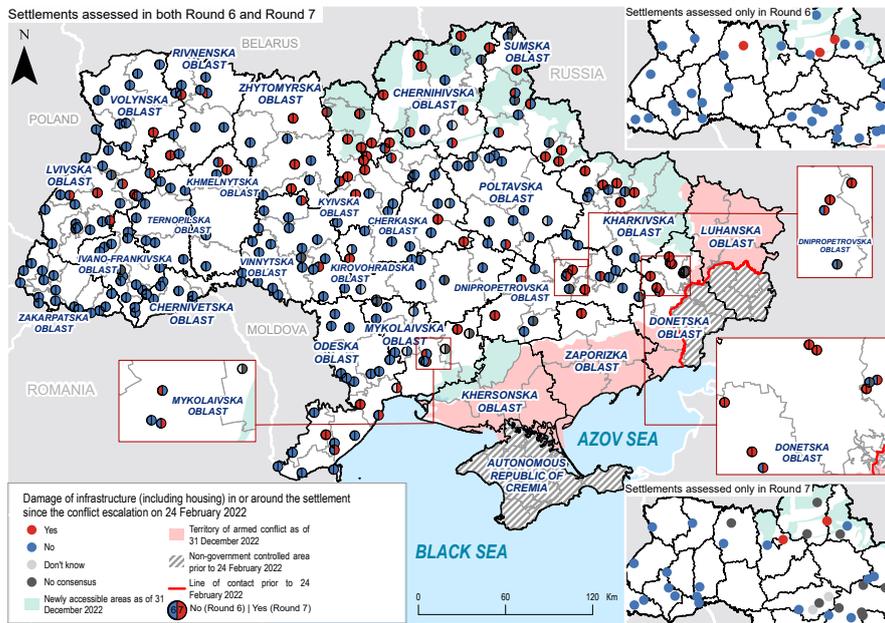
The reported priority needs in the assessed settlements and the shift in needs between the two rounds further reflects the growing scale of damage to energy infrastructure and the related barriers for the affected populations to access essential services. While in September 2022, the top priority needs were around livelihoods (such as employment and

financial resources), in December 2022/January 2023, the top three priority needs were:

- **electricity** (reported by KIs in **60% (n=185/306)** of the assessed settlements),
- **internet/phone network (35%, n=108/306)**,
- **employment (26%, n=80/306)**.

For comparison, electricity was reported as a priority need in three settlements, while internet/phone network was reported in one settlement in September 2022 compared to 185 and 108 settlements reporting these needs respectively in December 2022/January 2023.

Map 1: Settlements by reported damage of infrastructure and housing

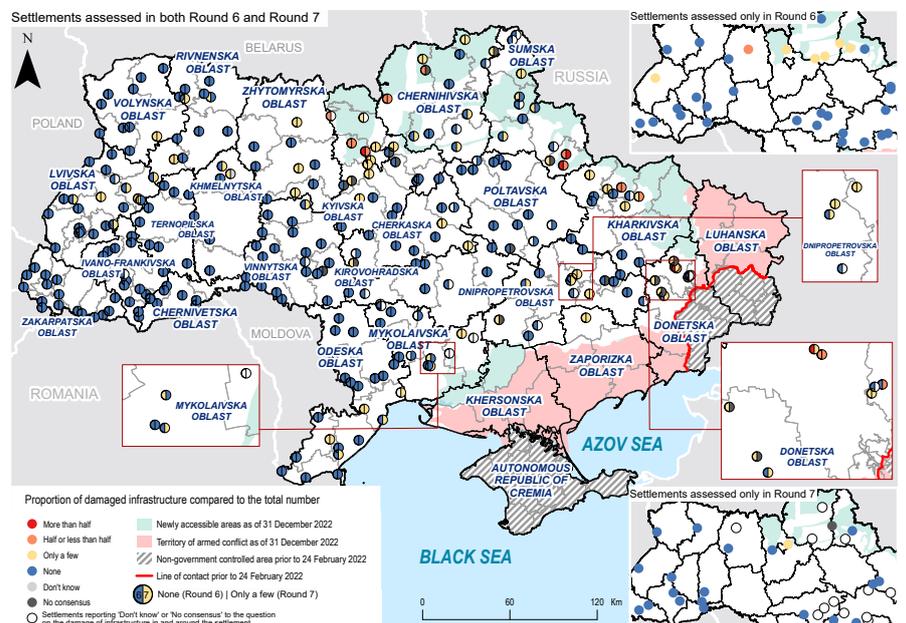


DAMAGE TO INFRASTRUCTURE

While the conflict escalation in February 2022 had already led to wide-spread infrastructural damage across the country, intensified attacks have been registered on civilian infrastructure since October 2022. Accordingly, an increased number of settlements reported damage to infrastructure and civilian housing in GCAs in December 2022/January 2023 (**n=75/306**), compared to September 2022 (**n=59/306**). ACLED's data⁴ also indicates that most of the settlements where KIs had not reported any damage to infrastructure in September 2022 (Round 6 data collection), had been subjected to shelling, artillery, or missile attacks since then.

However, the scale of overall damage to housing and infrastructure in most of the assessed settlements in GCAs remains low. Of the **75** settlements where damage to infrastructure was reported in December 2022/January 2023, only KIs in **Trostianets** (Sumska oblast) reported that **more than half** of the infrastructure had been damaged since the conflict escalation in February 2022. Meanwhile in **eight** settlements (**Bohdanivka** and **Kramatorsk** (Donetska), **Borodianka** and **Irpin** (Kyivska), **Okhtyrka** (Sumska), **Kharkiv** and **Chuhuiv** (Kharkivska), and **Vorokhivka** (Chernihivska)), the reported scale of damage was **'half or less than half'**. **Schools/education facilities** and **industrial facilities** were the most reported types of damaged infrastructure in around one third of the above-mentioned 75 settlements.

Map 2: Settlements by reported proportion of infrastructural damage



DISRUPTIONS TO UTILITIES

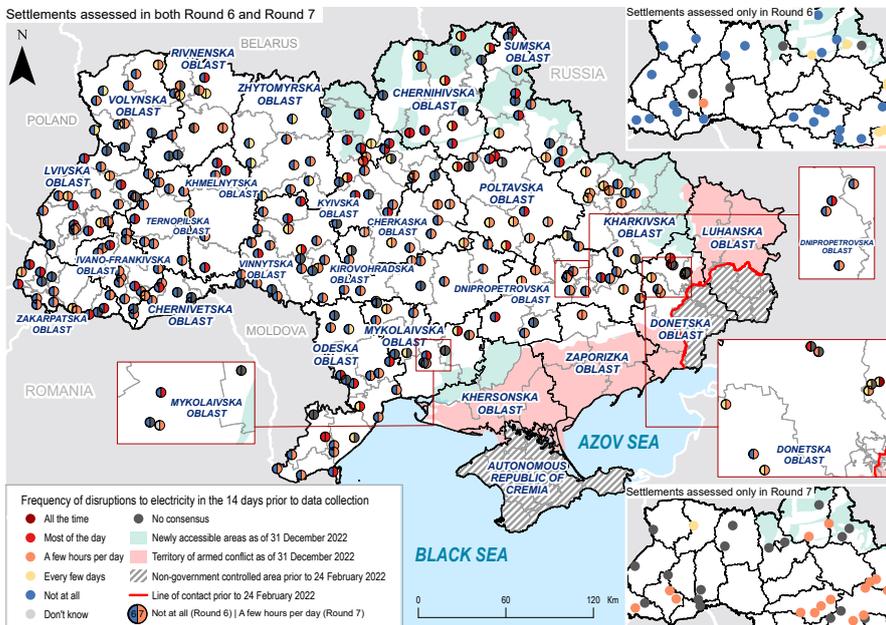
Since October 2022, the number and severity of conflict incidents affecting energy infrastructure has drastically increased.⁵ As of December 2022, it was estimated that **half of Ukraine's energy infrastructure had been damaged or destroyed**.⁶ The largest number of incidents damaging energy and power infrastructure occurred in the eastern oblasts of the country (Zaporizka, Donetska, Kharkivska, Dnipropetrovska, Mykolaivska), as well as Kyivska oblast.⁷ Concurrently, Donetska, Kharkivska, Kyivska, and Dnipropetrovska are also the regions where the highest

numbers of people in need were registered,⁸ and those are therefore likely to be most exposed to the consequences of damaged energy infrastructure and the subsequently affected essential services.

Reduced capacity of energy infrastructure directly affects the ability of people to access power, heating, and clean water, as well as other basic services (including healthcare and education), further exacerbating the growing humanitarian needs of the conflict-affected populations.

Alongside the shifts in reported priority needs in relation to access to power and communications as presented above, substantial **changes were also observed around the main concerns** reported by KIs in the assessed settlements. In December 2022/January 2023 (Round 7), along with safety concerns (reported by KIs in **68% (n=209/306)** of the assessed settlements), the most reported concerns in around half or more of the assessed settlements related to the **disruptions of utilities and telecommunications**, as well as **access to water** (see Graph 2).

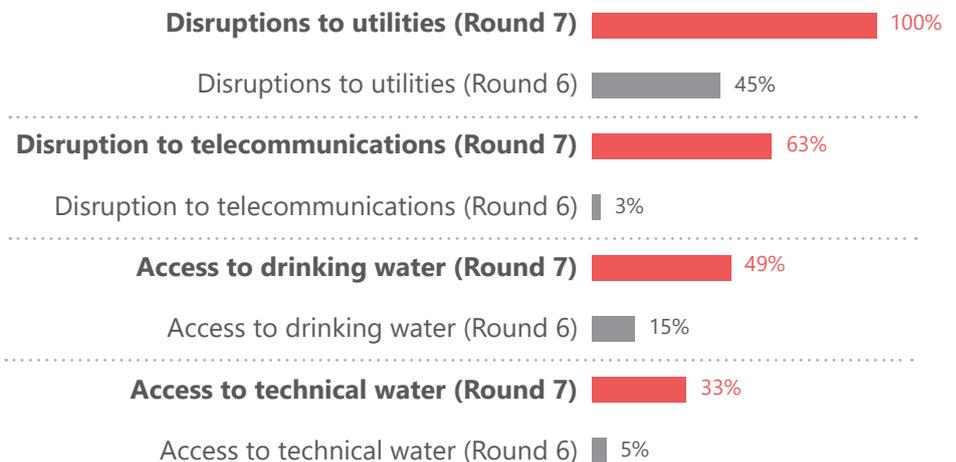
Map 3: Settlements by reported frequency of electricity disruptions



While in September 2022, disruptions to electricity were reported in around a quarter (**24%, n=72/306**) of the assessed settlements, in December 2022/January 2023, the proportion of settlements reporting **at least some level of disruption** increased by over two times (**77%, n=237/306**). Similarly, the frequency of disruptions in these settlements was reportedly higher, with nearly all these settlements reporting that electricity disruptions occurred **'a few hours per day'** or **'most of the day'** (**94%, n=223/237**). In Bohdanivka (Donetska oblast), KIs reported that the power was out **'all the time'**. The rising consumption of electricity during winter adds pressure on the already reduced energy infrastructure capacity and may result in the continuation of scheduled power cuts through to March 2023.⁹

In a similar pattern, while in September 2022 (Round 6) the proportion of settlements reporting disruptions to telecommunications in the 14 days prior to data collection was small (**13%, n=41/306**), in December 2022/January 2023 the proportion of settlements reporting at least some level of disruptions increased significantly (**69%, n=210/306**). Disruptions were reported **'all the time'** in Bohdanivka (Donetska), Okhtyrka (Sumska), Bobrovytsia (Chernihivska), Yasinia (Zakarpatska), and Uhniv (Lvivska). In **162 out of 306** assessed settlements, KIs reported that disruptions to telecommunications occurred **'a few hours per day'**.

Graph 2: % of settlements reporting disruptions and access constraints as concerns in September 2022 (Round 6) and December 2022/January 2023 (Round 7): n=306



ACCESS TO HEATING

As winter in Ukraine continues and temperatures stay below zero in most parts of the country, access to heating also continues to be crucial. As previously mentioned, **damage to energy infrastructure aggravates the situation** in terms of access to essential services, and, among other things, **affects people's access to adequate heating during winter**. This is particularly the case in areas that are already largely impacted by the conflict and where the level of need is higher.

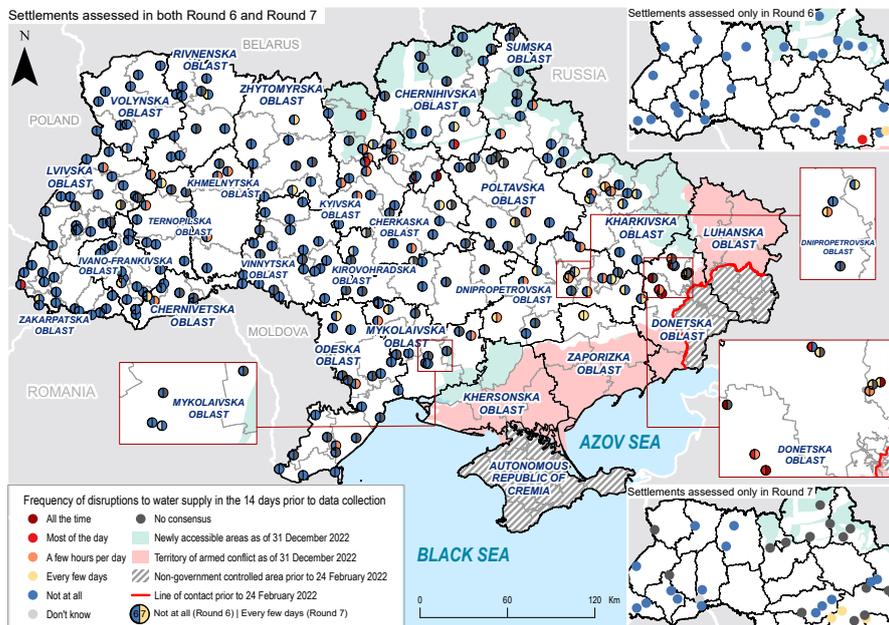
Consequently, in December 2022/January 2023 (Round 7), **disruptions**

to heating appeared to be one of the most reported **barriers in terms of accessing heating**, increasing from **29** settlements where KIs reported this barrier in September 2022 to **81** settlements in December 2022/January 2023. Notably, this was the case in more than half of the assessed settlements in **Donetska (n=7/9)**, **Kyivska (n=12/21)**, and **Dnipropetrovska (n=11/21)** oblasts. Additionally, REACH's Cold Spot Risk Assessment also highlighted that cold spot impacts were expected to be most severe in eastern areas of the country, particularly in Kharkivska,

Dnipropetrovska, and Donetska oblasts.¹⁰ The proximity to hostilities may further impact the people's ability to cope with winter conditions.

In terms of barriers to accessing heating, **high prices and lack of money** continue to be the most reported barriers across the assessed settlements in both rounds. Nevertheless, the proportion of settlements reporting these barriers decreased from September 2022 (Round 6) to December 2022/January 2023 (Round 7) (see Graph 3 for more details).

Map 4: Settlements by reported frequency of water supply disruptions

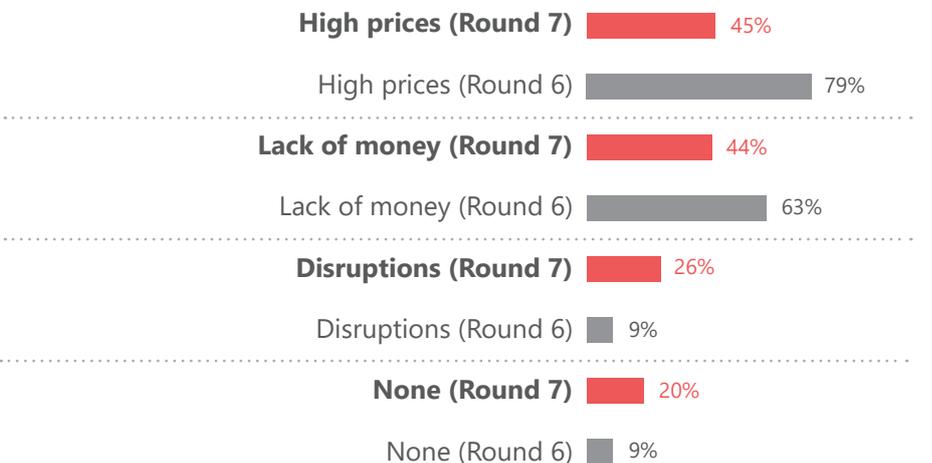


ACCESS TO WATER SUPPLY

In addition to the challenges in terms of accessing utilities, access to water supply also continues to be concerning in certain parts of Ukraine. Water supply disruptions may be caused by the damage to water infrastructure, including pipes, treatment facilities/buildings. Such damage was reported by KIs in **Kryvyi Rih** (Dnipropetrovska), **Bohdanivka** (Donetska), **Vilniansk** (Zaporizka), **Trostianets** (Sumska), **Kharkiv** (Kharkivska), and **Lviv** (Lvivska) in December 2022/January 2023 (Round 7). The system may also be impacted by the damage to energy infrastructure, which reduces water pumping capacity, as well as scheduled power outages.

While in more than half of the assessed settlements (**n=169/306**) in December 2022/January 2023, KIs reported there were no disruptions to water supply in the 14 days prior to data collection, **18% (n=56/306)** reported at least some disruptions, an increase from 38 settlements in September 2022. A large share of these settlements was in **Dnipropetrovska (12 out of 21)** assessed settlements) and **Kyivska (n=10/21)** oblasts. Additionally, in **4 out of 9** assessed settlements in **Donetska** and **2 out of 3** settlements in **Zaporizka** oblasts, KIs reported at least some disruptions. Disruptions to water supply were reported 'all the time' in **Bohdanivka**, **Myrnohrad** (Donetska oblast), and **Novomykolaivka** (Cherkaska oblast).

Graph 3: % settlements by reported barriers in accessing heating during winter in September 2022 (Round 6) and December 2022/January 2023 (Round 7): n=306



METHODOLOGY OVERVIEW

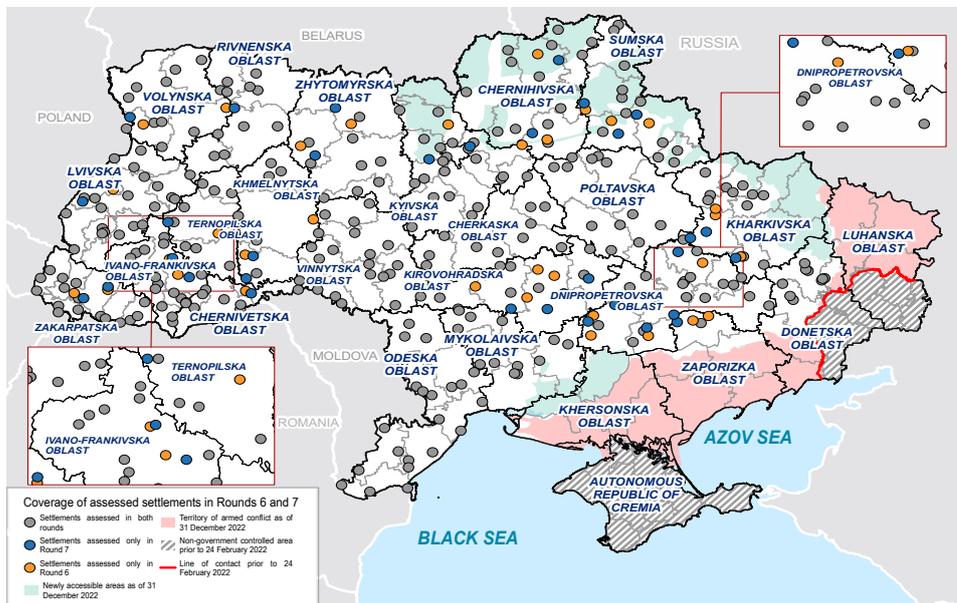
The data was collected through community KI interviews. To account for higher variation in needs in units with larger population sizes, the number of KIs per settlement differed according to each settlement's category: 3 KIs in every rural settlement, and 4 KIs in urban and urban-type settlements (for Round 6), and 2 KIs in every rural settlement, and 3 KIs in urban and urban-type settlements (for Round 7).

The findings are presented at the settlement and/or oblast level. All KI responses from the same settlement were aggregated to have one data point for each variable per settlement. The **Data Aggregation Plan** used the average approach to aggregate the settlement response by using

a severity scale in cases of **single-choice** questions. In case of **multiple-choice** questions, the rule was to select all responses that have been reported by at least 1 out of 3 respondents in rural settlements, and 2 out of 4 respondents in urban and urban-type settlements (for Round 6), and at least 1 out of 3 respondents in urban and urban-type settlements, and 1 out of 2 respondents in rural settlements (for Round 7).

In this brief, the data represents a percentage of settlements (towns or villages) for which KIs reported a specific answer to a survey question. These statistics **cannot be extrapolated to represent a proportion (%) of the population**, and thus should be interpreted as **indicative** rather than representative.

ASSESSMENT COVERAGE



ENDNOTES

- 1 Non-government controlled areas before 24 February 2022, including Crimea, were not included in the geographic coverage.
- 2 Key informants were representatives from the local government, local non-profit organisations, and representatives of specific population groups (such as older persons, people with disabilities, children, women, IDPs, and others).
- 3 The same settlements were sampled in both rounds, except for 33 rural settlements. In case of difficulties identifying KIs in the given rural settlement from the sample, another settlement was randomly selected from the same raion.
- 4 Armed Conflict Location and Event Data Project (ACLED), [Ukraine Crisis Hub](#).
- 5 REACH: [Ukraine - Energy infrastructure damage: Situation overview for 10-24th October 2022](#).
- 6 Voice of America: [UN: Half of Ukraine's Energy Infrastructure Destroyed by Russian Attacks](#), 13 December 2022.
- 7 PAX, [Risks and impacts from attacks on energy infrastructure in Ukraine](#), December 2022.
- 8 UN OCHA, [Ukraine Humanitarian Needs Overview 2023](#), 28 December 2022.
- 9 Reuters, [Ukraine introduces emergency power cuts in east and southeast](#), 11 January 2023.
- 10 REACH, [Navigating winters in Ukraine: A look at the Cold Spot Risk Assessment](#), 31 January 2023.

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).