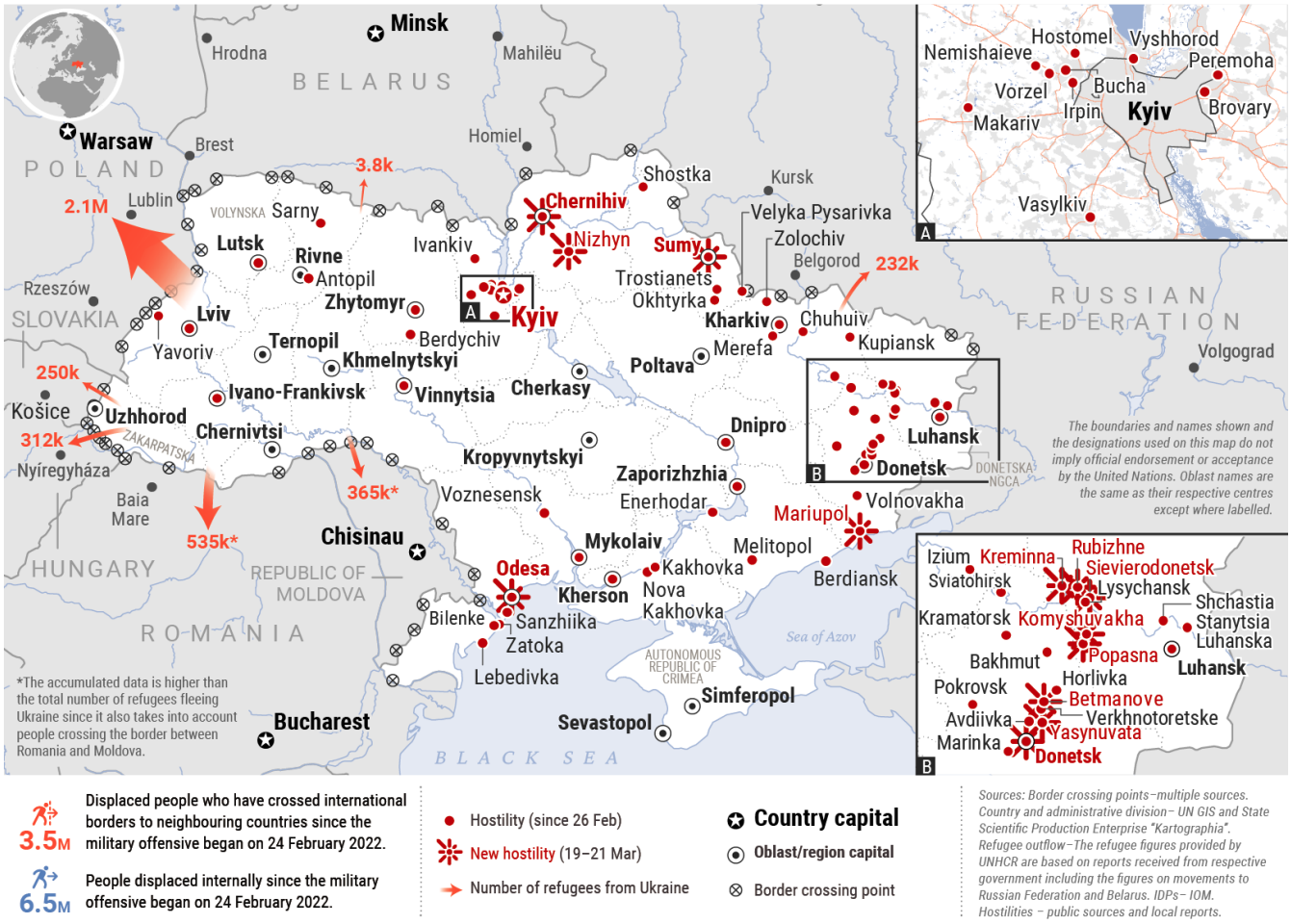
Ukraine Conflict – Analysis Brief

The Humanitarian Impact on Cities under Bombardment - 21 March 2022



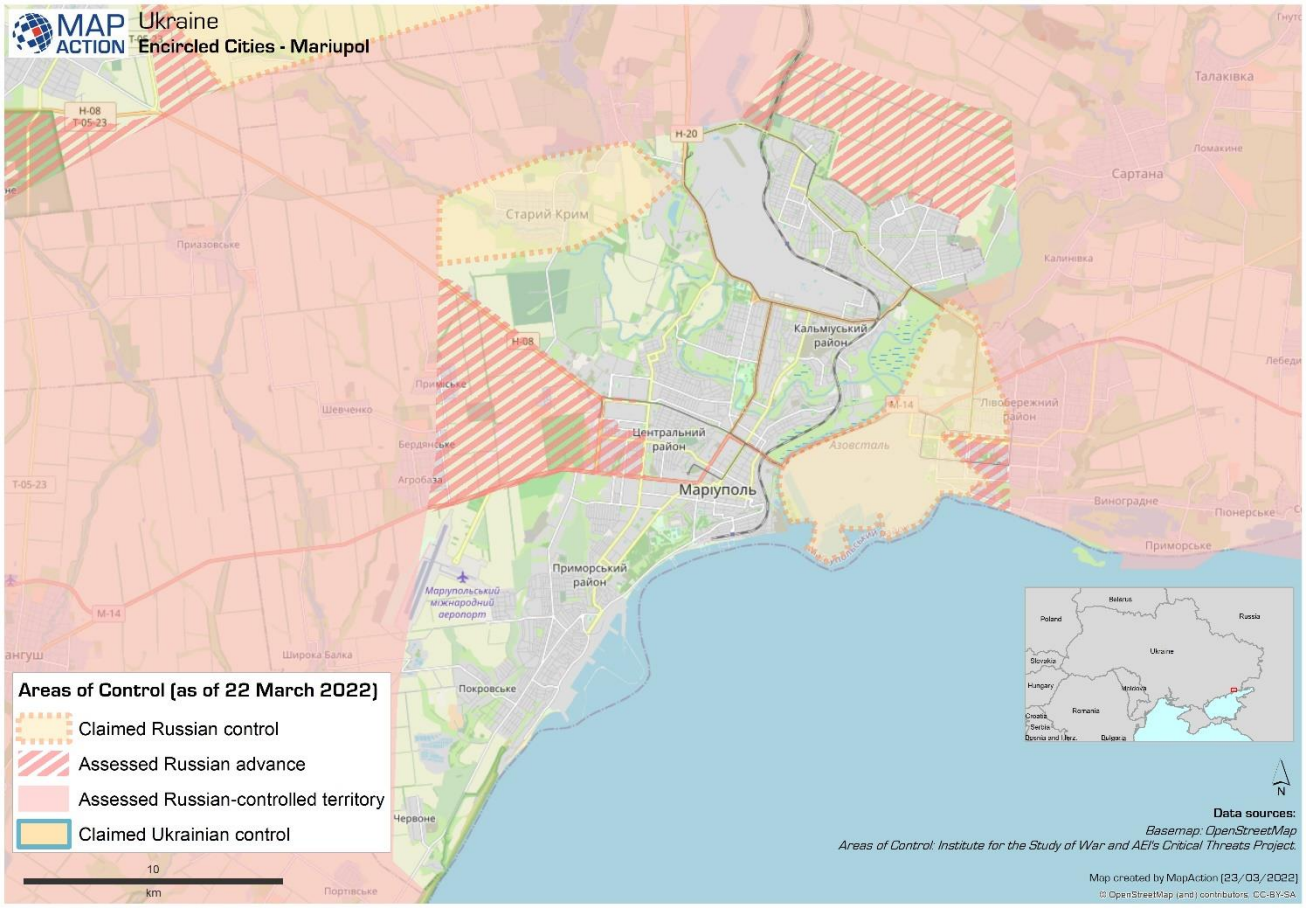
It is nearly four weeks since the start of the conflict, with 2,421 civilian casualties (925 killed, 1,496 injured) reported by the Office of the High Commissioner for Human Rights (OHCHR). However, the actual figure is likely to be considerably higher (OHCHR 21/03/2022). Recent days have seen significant loss of civilian life, with several buildings used as shelters being hit by bombs or shelling, the most serious being two incidents in the encircled city of Mariupol. This brief examines the situation in three cities currently under bombardment by Russian forces, including efforts to evacuate civilian populations and the humanitarian needs on the ground.

Key Takeaways

- The bombardment of cities and large towns continues. Most of the civilian casualties recorded were caused by explosive weapons with a wide impact area, including shelling from heavy artillery and multiple-launch rocket systems and missile and airstrikes.
- Of the cities analysed in this brief, the situation in Mariupol is the most serious. Extensive damage has occurred in civilian areas as highlighted recently by media analysis and drone footage (New York Times 20/03/2022, The Guardian 19/03/2022). Therefore, there are many civilian casualties and consequently a need for urgent medical support, including trauma care.
- Across Ukraine, there are critical humanitarian needs for those living in urban areas where bombardments are taking place. This is partly due to widespread damage to civilian infrastructure affecting essential services such as electricity, heating and clean water, and critically, the disruption of access to food and health care.
- Without the establishment of humanitarian corridors for the evacuation of civilians from conflict zones, the situation for many will continue to deteriorate. Particularly worrying is whether the catastrophic conditions currently occurring in Mariupol will be repeated in other cities.

Mariupol

Mariupol is a port city and the second-largest city in Donetsk Oblast, situated in the southeast of Ukraine. It had a pre-war population of over 400,000 people (Statistics Service of Ukraine, 2021). Mariupol is strategically important for Russia as it lies along the Azov Sea coast between the annexed Crimean Peninsula and the Russian-occupied parts of eastern Ukraine (Kyiv Independent 16/03/2022). Russian forces have already cut Mariupol off from the Sea of Azov. If Russia seizes Mariupol, it will link Crimea to eastern territories controlled by Moscow-backed separatists (Kyiv Independent 16/03/2022, AP News 20/03/2022).



Map shows the extent of Russian control around Mariupol

Since the siege began, the city's internet and mobile networks have shut down [beginning March]. As a result, there is almost no mobile communication. News from the city comes from sporadic contacts, a few international photographers and some international humanitarian organisations who remain in Mariupol (Kyiv Independent 16/03/2022, Reuters 13/03/2022, ICRC 10/03/2022).

Conflict development: Mariupol has been encircled by Russian forces since March 1 and has been under regular bombardment with thousands of civilian casualties.

Russian forces advancing east from Crimea began initial assaults against Mariupol, Donetsk Oblast, the morning of February 27 (ISW 27/02/2022). Since then, Mariupol has been one of the major urban centres that have witnessed the most intense clashes (OCHA 03/03/2022), with the worst of the shelling in the city's west (The Guardian 10/03/2022). The city has been encircled by Russian soldiers since March 1, with Russian forces continuing to make steady territorial gains around Mariupol and are increasingly targeting residential areas (AP News 09/03/2022, ISW 17/03/2022). As of March 19, fighting has reached the centre of Mariupol (The Guardian 18/03/2022, CBS News 19/03/2022). Basic needs remain unmet of those trapped in the city (AP News 09/03/2022, CNN 16/03/2022).

According to local authorities, at least 2,400 people have been killed in the city since the start of the fighting. However, this is likely to be underestimated as the full extent of civilian casualties cannot be confirmed due to ongoing hostilities (BBC 17/03/2022, OCHA 15/03/2022, OCHA 10/03/2022). Mariupol's City Council reports that around 80% of the city's housing stock has been affected by ongoing hostilities, with nearly 30% estimated to be

damaged beyond repair (OCHA 18/03/2022). However, the extent of the damage to the city's infrastructure is unknown due to the continued shelling and limited communications, though recent drone footage indicates the level of damage is considerable (Human Rights Watch 08/03/2022, The Guardian 17/03/2022, The Guardian 19/03/2022). Reports from inside the city indicate the presence of mass graves on the city's outskirts (AP News 16/03/2022, BBC 16/03/2022).

On March 9, the maternity and children's wards of a prenatal hospital in the centre of Mariupol were destroyed in an attack (OCHA 10/03/2022). Less than a kilometre away from the destroyed hospital complex, explosions later that day damaged a university and city council building in the city, adding to the scores of homes, grocery stores and other critical infrastructure damaged or destroyed (OCHA 10/03/2022).

On March 16, a theatre that has been designated as a shelter for civilians in Mariupol was bombed; estimates of the number of people taking shelter there lies between 500 to 1,200 (CNN 16/03/2022, BBC 17/03/2022). Russia's military denied bombing the theatre or anyplace else in Mariupol on March 16 (AP News 18/03/2022). Rescue efforts are hindered by the breakdown of social services in the city and insecurity due to attacks (CNN 17/03/2022, The Guardian 18/03/2022).

Russian Forces issued an ultimatum for the city of Mariupol to surrender by 5am local on Monday March 22, offering "All who lay down their arms are guaranteed safe passage out of Mariupol". However, the demand was rejected by local authorities and the deadline has passed (Al Jazeera 21/03/2022, BBC 22/03/2022).

Evacuation: While some private vehicles have been able to escape the city, several attempts to establish humanitarian corridors have failed.

Despite what has been described as a dire humanitarian situation in Mariupol, most attempts to establish safe civilian evacuation corridors to evacuate Mariupol have failed (CNN 17/03/2022, Al Jazeera 06/03/2022). The Russian Federation and Ukraine have both agreed on a humanitarian corridor to allow for the evacuation of civilians and delivery of humanitarian aid (IMC 10/03/2022). However, this has not been established. The attack on the children's hospital on March 9 occurred despite a ceasefire agreement intended to allow civilians in the city who had been trapped for weeks to evacuate safely (Al Jazeera 09/03/2022).

On March 15, a convoy of about 2,000 private vehicles left the city and about 20,000 people managed to escape (BBC 17/03/2022, CNN 16/03/2022). Municipal authorities add that another 2,000 cars are parked at the city's entrance, awaiting their opportunity to leave (OCHA 15/03/2022). As of March 20, a convoy of buses travelling to Mariupol to evacuate residents was stopped a few kilometres outside Berdyansk (about 85km by road from Mariupol) and refused entry into the city limits (The Guardian 20/03/2022).

Humanitarian Needs: Trapped residents are without electricity, water and heat, and with dwindling food reserves, with no humanitarian aid being allowed into the city.

Mariupol has been encircled for weeks, leaving civilians unable to flee safely or for humanitarian aid to enter. Humanitarian supplies have been waiting for days, but Russian forces have not allowed them access. Regular bombardment and street fights have also restricted movements (CNN 16/03/2022, BBC 16/03/2022, MSF 11/03/2022). Food reserves also decrease, with people rationing food (Reuters 18/03/2022). Local officials say around 350,000 people are still trapped in the encircled city, most living in dire conditions with little food, water or access to electricity and heating (Reuters 09/03/2022, OCHA 15/03/2022). Continued shelling has prevented repairs to damaged electricity, water, communications, and heating infrastructure (HRW 08/03/2022). Residents who have escaped said the most critical situation was the west of the river that divides the city (The Guardian 17/03/2022). These conditions are highlighted by reports from various media and humanitarian organisations:

- As of March 3, all residents of Mariupol city are without water. This resulted from shelling, which caused damage to power lines and, in turn, stopped Starokrymska Filter Stations #1 and #2 from running (WASH Cluster 03/03/2022).
- The city council delivered some water bottles to major user points, but this was insufficient to cover needs. Many have no water at all for drinking (ICRC 10/03/2022). According to city officials, trapped residents have been melting snow and dismantling heating systems to access water, with some reportedly drinking water from puddles and directly from rivers (CNN 16/03/2022, The Guardian 17/03/2022, France24 17/03/2022).

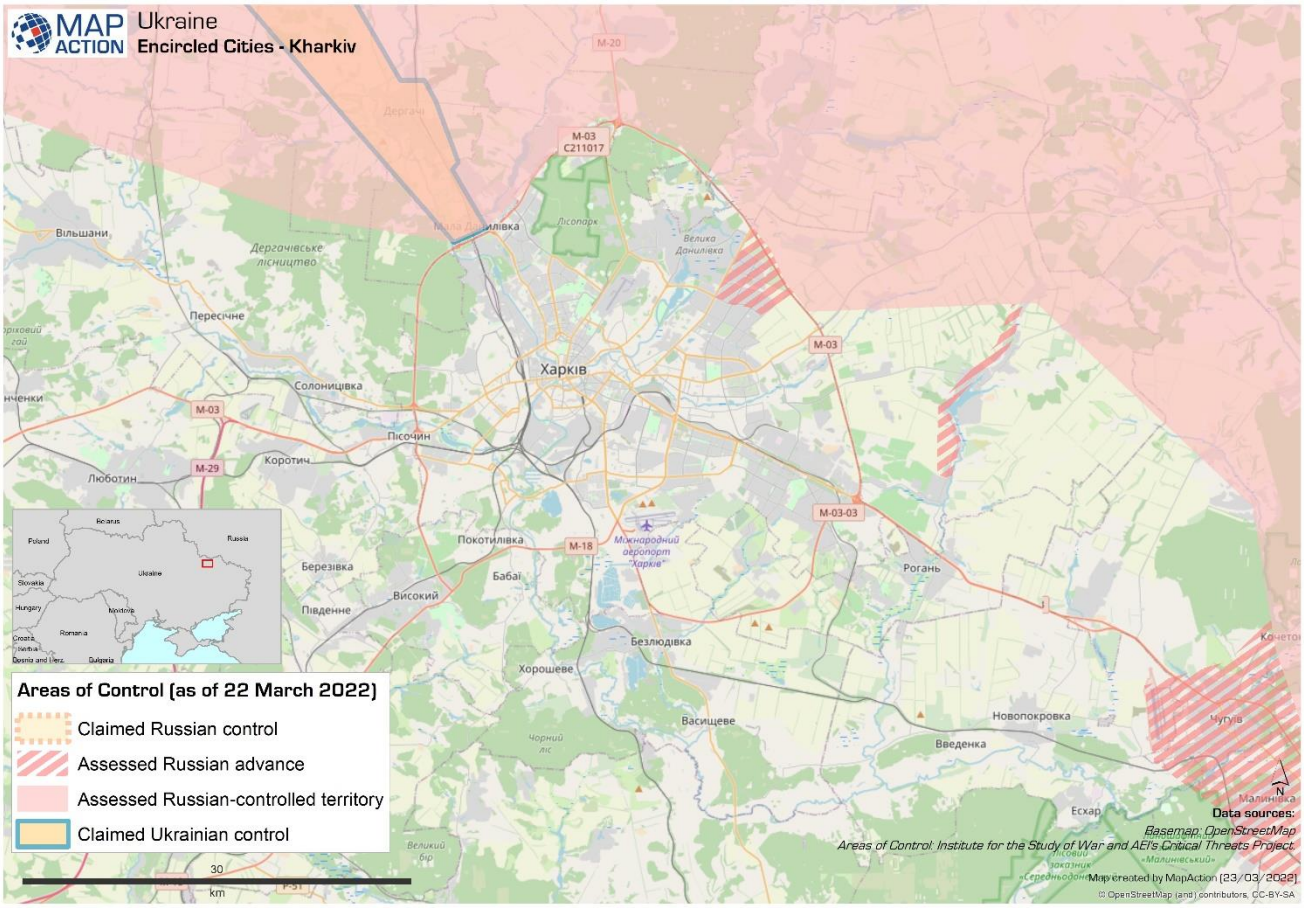
- Reportedly, water stoppages have also stopped town heating systems from functioning amid freezing winter temperatures, reaching minus 5 centigrade (WASH Cluster 03/03/2022, OCHA 03/03/2022).
- Mariupol residents have been chopping wood to cook and keep warm in sub-zero temperatures (Kyiv Independent 16/03/2022).
- According to the ICRC team in Mariupol, "*We also found some sort of a black market with vegetables that are working so far, but you can't find meat or something like this*" (ICRC 10/03/2022).

The lack of clean water and access to health care is particularly concerning. Contaminated water can cause diarrhoea, which in turn lead to further dehydration. In extreme situations, this can also result in death. Mariupol saw an outbreak of cholera in 2011, and the bacteria which causes cholera is present in the region. Poor water quality can also lead to other diseases, including skin infections and scabies. With the population being forced to live in crowded conditions as they shelter from shelling and explosions, it is difficult for them to follow basic hygiene measures and putting them at risk of respiratory tract infections and COVID-19 (MSF 11/03/2022).

The health sector is also in need of urgent support. People are getting sick because of the cold, while hospitals are only partially functioning, relying on fuel provided by the city council (MET Office 19/03/2022, ICRC 10/03/2022). Attacks on health structures exacerbate health needs and capacity to treat urgent cases (MSF 09/03/2022). Dispatches from the city say that there are no more medications in Mariupol with diabetes and cancer patients in urgent need (Kyiv Independent 16/03/2022, BBC 16/03/2022, ICRC 10/03/2022). People are also facing access constraints due to the ongoing attacks. Seeking health care has become increasingly hard, especially for expectant mothers and the elderly who are already limited in their movement (MSF 09/03/2022).

There are unconfirmed reports that aid has reached affected people in Mariupol; however, the kind and quantity of relief supplies received cannot be verified (OCHA 15/03/2022). UNHCR has relocated humanitarian supplies from Kyiv to a new warehouse in Vinnytsia to enable immediate dispatch to areas in need, including to Mariupol and Volnovakha, once the safe passage operation is confirmed (UNHCR 08/03/2022)

Kharkiv



Map shows the extent of Russian control around Kharkiv

Kharkiv is Ukraine's second city, with a pre-war population of just over 1.4 million inhabitants (Statistics Service of Ukraine 2021). Its proximity to the Russian border meant that hostilities reached the city soon after launching a Russian Federation military offensive on 24 February 2022 (OCHA 01/03/2022, ISW 24/02/2022). Kharkiv was the first capital of the Ukrainian Soviet Socialist Republic, from 1919 to 1934 (after which the capital relocated to Kyiv) and has a predominantly Russian-speaking population (Washington Post 28/03/2022).

Conflict development: Kharkiv was amongst the first Ukrainian cities to be attacked by land forces, but the Russian army was unable to take control of Kharkiv or fully encircle it; since February 28, it has been under regular bombardment.

After initial frontal assaults on the city during February 24 – 25, Kharkiv civil authorities reported Russian forces entering the outskirts of Kharkiv from several directions late on February 25 (ISW 25/02/2022). However, Russian forces failed to gain control of the city (ISW 26/02/2022, ISW 27/02/22).

February 28 saw a change in tactics as Russian forces began using heavy artillery against central Kharkiv (ISW 28/02/22). Civil authorities reported that 11 civilians had been killed or wounded by the Russian shelling of residential areas by the end of the first day. The bombardment limited the ability of emergency services to respond (Pravda.RU 28/02/2022). As well as shelling, Kharkiv has been subject to airstrikes and the use of Multiple Launch Rocket Systems (MLRS) (OCHA 07/03/2022, OHCHR 01/03/2022).

The Russian air, artillery, and missile barrage have continued for over two and a half weeks resulting in many civilian casualties and causing considerable damage to civilian infrastructure. Specific incidents include:

- On March 2, at least 10 people were killed and 35 wounded by a series of missile strikes on homes and offices in Kharkiv, including a long-range rocket fired at the city's main regional administrative building. Several civilian cars were caught by the blast, resulting in fatalities; local officials saw this as an attempt to kill Kharkiv's governor and wipe out his leadership team (The Guardian 02/03/2022).
- On March 6, airstrikes resulted in multi-story residential buildings, administrative buildings, medical institutions, educational institutions and dormitories being entirely or partially destroyed. Fires broke out in 21 residential buildings in Kharkiv (Delo 07/03/2022)
- In the evening of March 10, the Neutron Source research nuclear facility located at the Kharkiv National Institute of Physics and Technology in Kharkiv was damaged by bombing. (unian 11/03/2022)
- OHCHR noted a report by the National Police of Kharkiv region, according to which as of 6 p.m. (local time) March 19, 266 civilians had been killed in the region, including 14 children (OHCHR, 20/03/2022).
- On March 20, five people – including a nine-year-old boy – were killed in a Russian artillery attack (Al Jazeera, 21/03/2022)

As of March 15, Russian forces continue to shell civilian areas of Kharkiv, but face supply shortages, particularly of ammunition (ISW 13/03/2022, ISW 16/03/2022). However, explosive weapons with a wide impact area (shelling from heavy artillery, multiple-launch rocket systems, missile and air strikes) cause the majority of civilian casualties across Ukraine. Thus, casualty numbers will likely rise if such tactics continue (OHCHR 15/03/2022).

Evacuation: 600,000 people have been successfully evacuated from Kharkiv, but many more remain in the city.

Several efforts have been made to facilitate the evacuation of civilians from Kharkiv. On 6 March, in talks with the Russian Federation, the head of the Ukrainian delegation stated a possibility of a "humanitarian corridor" out of Kharkiv that same day. Local authorities reported 23,000 people were then evacuated, but at least eight people were also killed (IOM 09/03/2022). By March 9, the Kharkivska Oblast Administration said that some 600,000 people had been evacuated from Kharkiv (east) by railway (OCHA 09/03/2022).

Humanitarian Needs: Many residents are affected by a lack of electricity, water, and gas, with limited access to food and medicines by regular bombardment. However, some relief supplies are reaching the city.

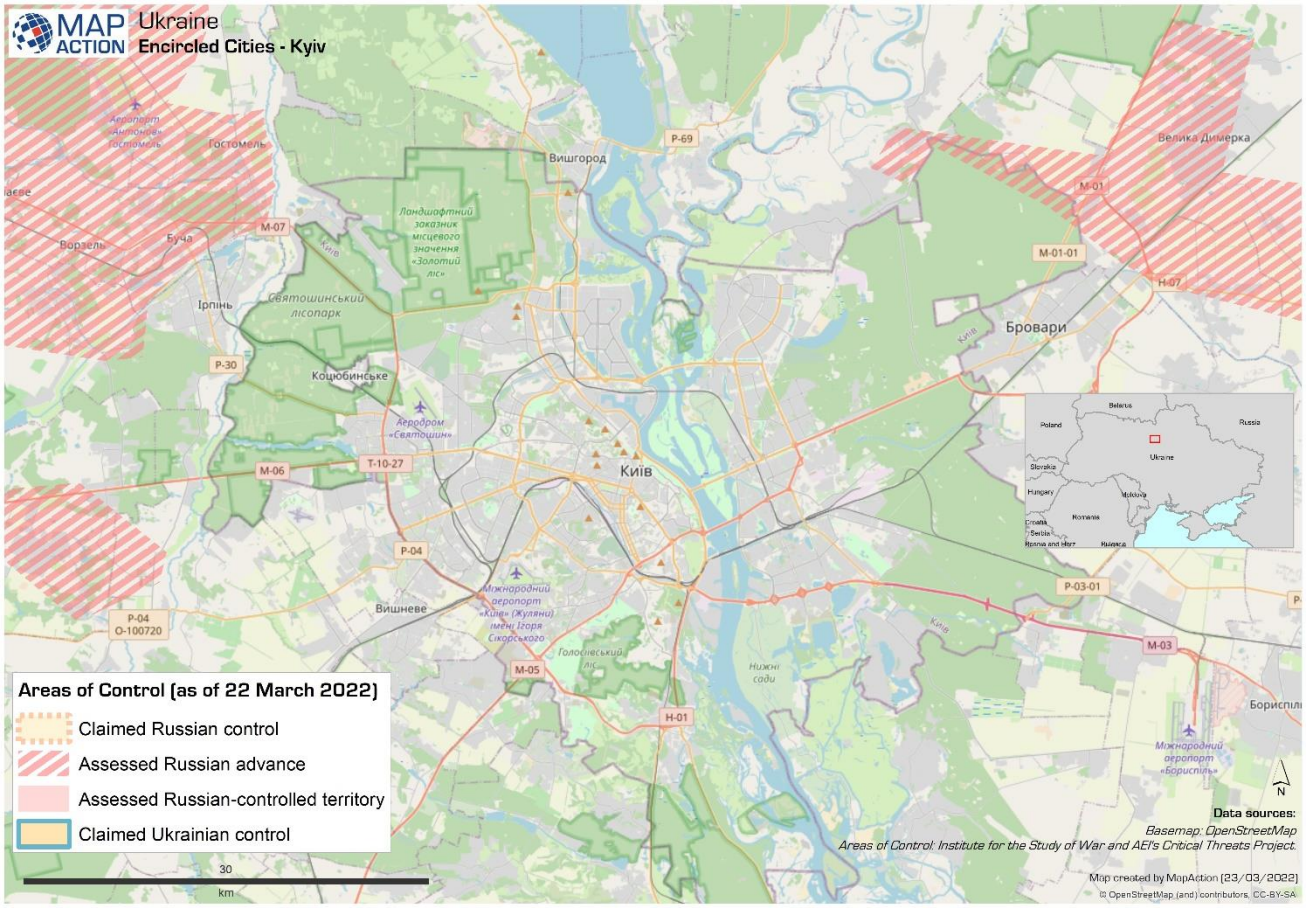
The civilian population in Kharkiv faces increasing hardship because of the continuing barrage of shells, rockets, bombs and missiles. Early in the conflict, it was reported that several electrical substations had been damaged, impacting electricity and water supplies (ukrinform 01/03/2022). In addition, Ukrainian authorities said that a natural gas pipeline was blown up (Reuters 27/02/2022). Telecommunications has also been affected, so many households are without power, heat or access to information. The rapidly deteriorating security situation prevents

service repair teams from restoring critical services, including electricity, gas and water, as they require secure "windows of silence" to operate safely (OCHA 07/03/2022).

There are reports of severe shortages of food and water in the city (WFP 04/03/2022), and the lack of supplies in Kharkiv is having a knock-on effect on the availability of goods in some of the eastern areas of the country with food shortages in Kramatorsk (Donetsk oblast) (IOM 02/03/2022). Although it is estimated that close to 600,000 people have managed to leave the city, this goes over 800,000 facing severe hardship, reluctant to leave where they are sheltering to access food, water, medicines or other supplies.

Some humanitarian assistance is getting through. On March 8, the Ukrainian Prime Minister stated that 12 wagons and seven trucks of humanitarian aid supplies arrived in Kharkiv (OCHA 10/03/2022). The following week Ukrainian officials reported that 17 railway wagons and two trucks delivered food, water, clothes, hygiene items and medicines to Kharkiv (OCHA 16/03/2022). WFP says that it has doubled its bread distribution through partners, reaching 77.7 mt for around 260,000 crisis-affected people (WFP 18/03/2022).

Kyiv



Map shows the extent of Russian control around Kyiv

Kyiv is the capital city of Ukraine with a pre-war population of around 3 million people and continues to be the administrative centre for the government. On March 15, in a show of solidarity, the prime ministers of Poland, Slovenia and the Czech Republic travelled to Kyiv by train to meet Ukraine's President Volodymyr Zelensky (BBC 16/03/2022). Predictions of a full scale assault on Kyiv have yet to materialise (ISW 28/02/2022, ISW 06/03/2022, ISW 19/03/2022)

Conflict Development: There is intense fighting on the outskirts of the capital, with heavy resistance from Ukrainian forces

Although Kyiv has so far been spared the intense bombardment seen in cities like Kharkiv or Mariupol, major attacks have been reported across the capital, including a rocket attack on a TV tower on March 1, resulting in the deaths of 5 people and the destruction of broadcasting hardware, impacting the city's communications infrastructure (Reuters 19/03/2022, CNN 02/03/2022, DW 01/03/2022, OCHA 26/02/2022). More recently, a 35-hour curfew was

imposed (on Kyiv) on March 15 after several apartment blocks were struck by Russian forces based outside the city. Residents in the city were not allowed to move around the city without special permission, except to go to bomb shelters (Reuters 15/03/2022).

Authorities say at least 60 civilians have been killed in the capital since the launch of the Russian invasion (Reuters 19/03/2022). However, the city council put the number of casualties much higher, at 228. The city council also announced that over 900 citizens (including 16 children) have been wounded (Kyiv Independent 19/03/2022).

As of March 18, there is intense fighting on the outskirts of the capital. Ukrainian resistance has been effective in repelling Russian efforts to encircle Kyiv. However Russian advances in southern Ukraine may threaten to unhinge the defence of Kyiv and north-eastern Ukraine if they continue unchecked (ISW 17/03/2022). With Russian forces so far unable to cross the Irpin River, they remain 20km or more from the city centre, ruling out the use of short-range artillery against the population that has proved so damaging in the eastern cities of Mariupol and Kharkiv (The Guardian 16/03/2022).

On 20 March, heavy shelling of a residential area in the Podilskyi district of Kyiv damaged four schools, six apartment buildings and destroyed a shopping mall, reportedly leaving at least eight people dead and another injured. Local authorities have subsequently declared a 35-hour curfew across the Kyivska Oblast from 8:00 p.m. (EET) on 21 March to 7:00 a.m. on 23 March (OCHA 21/03/2022).

Evacuations: Evacuations from the capital have been successful but are impacted by insecurity

Many residents fled Kyiv following the initial Russian invasion with their stories detailed on social media and online press (The Guardian 26/02/22). Since the Russian attack, long lines of cars have been heading out of the city, but there are no confirmed figures. In some areas, evacuation has been relatively successful; for example it is reported that the majority of the 110,000 inhabitants of Irpin (a strategic city providing north-western access to Ukraine's capital Kyiv) have been evacuated (France24 16/03/2022, Reuters 19/03/2022). However, in other cases, evacuation attempts of civilians are endangered as fighting continues around Kyiv. Ukraine officials accused Russian forces of firing on a convoy of women and children from Peremoha village, near Kyiv, killing seven (BBC 12/03/2022, Alarabiya 12/03/2022).

Facilitating the evacuation of the people in the worst-affected areas, especially vulnerable groups, including children, the elderly and people living with disabilities, remains a key priority. The urgency of this situation was demonstrated by reports from Borodianka, a small town some 60 km from Kyiv, where the military offensive had impacted a psychiatric hospital with around 670 people inside. Patients include those with special needs who require continuous, round-the-clock assistance, some of whom have been bedridden for years. According to local authorities, the hospital quickly ran out of water and essential medicines (OCHA 04/03/2022, OCHA 06/03/2022).

Humanitarian Needs: Disruption to water, electricity, gas, and telecommunications services is widely reported but repairs are still being implemented. Supplies are reaching Kyiv, but shortages remain.

In Kyiv , damage and disruption to crucial infrastructure are caused by the missile and airstrikes, often leaving thousands of people without water, electricity, gas, and telecommunications, making it difficult to track and repair damage to WASH infrastructure (OCHA 08/03/2022, OCHA 10/03/2022). However, according to recent local media reports, utility service providers are generally maintaining heating and water disposal systems. The city has been able to keep electricity and communication services functioning in many city areas. Additionally, public transportation, both ground transportation and the metro, are in operation for part of the day, albeit on a limited schedule (Kyiv City Council 19/03/2022). Other civilian infrastructure has also been hit, with nearly 40 houses, six schools, and four kindergartens damaged in Kyiv (Kyiv Independent 19/03/2022).

Many residents shelter in inadequate makeshift shelters such as underground metro stations, as all Kyiv metro stations operate as shelters 24/7 (Reuters 19/03/2022, Kyiv City Council 19/03/2022). Many shelters in Kyiv are inaccessible for persons with disabilities resulting in them being forced to stay home without access to information, awaiting a safer option. There are also concerns for persons with disabilities living in institutions should staff evacuate (Global Protection Cluster 08/03/2022).

The supply chains for medicines, medical supplies, and everyday goods have been disrupted in Ukraine, creating urgent needs. Many distributors are not operational, and many government and humanitarian stockpiles are inaccessible due to ongoing military operations. Life-saving and essential medicines, such as oxygen and insulin,

personal protective equipment, surgical supplies, anaesthetics, and safe blood products, are in short supply (OCHA 10/03/2022). Other critical supplies, including food and basic hygiene items, are becoming increasingly scarce in the hardest-hit areas, while dwindling cash reserves, empty ATMs and suspended money transfer services have significantly curtailed affected people's ability to purchase basic goods (IOM 05/03/2022). Therefore, food, water, shelter and basic household items are urgently needed, especially for those trapped in cities experiencing active hostilities (OCHA 06/03/2022).

Kyiv is still the centre of government, and relief items are still getting through and are also being distributed to other conflict affected areas of the country. Reported interventions include five tons of [medical] kits delivered by WHO to support treating patients with trauma and injuries to Kyiv, many of which will be sent onwards to hospitals in other oblasts (OCHA 09/03/2022). WFP reported delivering 26 mt of high-energy biscuits to Kyiv, whilst WFP partners delivered around 325 mt of vegetable oil 478 mt of wheat flour to nearly 70,000 vulnerable persons (WFP 28/03/2022). MSF reported four tons of trauma supplies and Interagency Emergency Health Kits (IEHKs) to MSF Holland in Kyiv (OCHA 18/03/2022). 170,000 diapers were delivered to maternity wards, primary healthcare centres and bomb shelters in Kyiv and neighbouring cities (OCHA 03/03/2022).

About this brief

The analysis provided is a synthesis of information collected and tagged using the **DEEP** platform from publicly available sources and supplemented by assessment data provided by humanitarian partners working in Ukraine and neighbouring countries. This brief was prepared on behalf of the Information Management and Analysis Cell (IMAC) in Ukraine, but the analysis provided is produced independently by Data Friendly Space (DFS). **MAPACTION** has provided mapping support to this brief.

DEEP

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