

Civil preparedness in practice

Lessons and insights from Ukraine

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Preface

This report presents lessons from Ukraine's Lviv Region on resilience, societal security and civil preparedness. The study has been undertaken as part of the work of the Nordic Thematic Group for Regional and Local Resilience and Attractiveness. This network brings together national and regional Nordic representatives to address shared regional development challenges. The group focuses on working across borders to share knowledge, identify solutions and initiate joint projects to support a green, competitive and socially sustainable Nordic Region by 2030.^[1]

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The aims of this case study are twofold. Firstly, it examines the practicalities, roles and responsibilities necessary to provide services and administer critical infrastructure within the context of a country currently experiencing severe crises. Based on these factors, it provides recommendations for contingency planning in other countries. Secondly, it is a pilot study. Over the next few years, surveys addressing several of the issues raised will be conducted in the Nordic countries, which will facilitate comparative analyses and learning.

1. Read more about the Thematic Group here: <https://nordregio.org/research/nordic-thematic-groups-2025-2027/>



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Summary

The full-scale Russian invasion of Ukraine on 24 February 2022 proved a wake-up call for Ukrainians, and transformed civil preparedness from a theoretical concept into a vital survival and resilience practice.

This paper examines Ukraine's civil preparedness, using Lviv as a regional case study. Situated in the safer, western part of the country, the city has become a humanitarian aid hub, and serves as a testing ground for innovative crisis management, community mobilisation and resilience-building strategies.

This research highlights the efforts of national and regional authorities. Local governments, universities, businesses and civil society continue to work together to deliver essential services such as energy, healthcare, education, and psychological and physical rehabilitation, while also protecting civilians and internally displaced persons.

Key themes include multi-level governance, energy and healthcare adaptability, digital tools (e.g. the Diia platform for alerts and shelter mapping), and the increasing involvement of private business and volunteer networks in crisis management. The study also examines social and psychological resilience, including community-based practices such as "Toloka" and social-communicative strategies involving inspirational members of the community, art therapy and inclusive communication.

The situation in Ukraine, and especially in Lviv, shows that effective civil preparedness relies on co-operation, adaptability and trust. These insights offer valuable lessons for the Nordic countries and others seeking to strengthen regional and community crisis resilience.

Sammanfattning (Swedish summary)

Den ryska invasionen av Ukraina den 24 februari 2022 blev en väckarklocka för ukrainarna och förvandlade civil beredskap från ett teoretiskt begrepp till livsviktiga handlingar och aktiviteter för överlevnad och motstånd.

Denna rapport undersöker Ukrainas civila beredskap med Lviv som regional fallstudie. Lviv, som ligger i den västra delen av Ukraina, har blivit ett centrum för humanitärt bistånd och fungerar som ett testområde för innovativ krishantering, mobilisering av samhället och strategier för att bygga upp motståndskraft.

Resultaten belyser de nationella och regionala myndigheternas insatser. Tillika är samarbete mellan lokala myndigheter, universitet, företag och civilsamhälle viktigt för att tillhandahålla service och tjänster såsom energi- och elförsörjning, hälso- och sjukvård, utbildning, psykologisk och fysisk rehabilitering, och skydd till civila. Studien undersöker också komponenter av social och psykologisk resiliens, inklusive det ukrainska begreppet "Toloka", viktigt för att tillsammans upprätthålla samhällsliga funktioner.

Situationen i Ukraina, och särskilt i Lviv, visar att effektiv civil beredskap bygger på samarbete, anpassningsförmåga och tillit. Dessa insikter kan ge värdefulla lärdomar för de nordiska länderna och andra som vill stärka regioners och samhällens krishanteringsförmåga.

Sammenfatning (Danish summary)

Den russiske invasion af Ukraine i fuld skala den 24. februar 2022 var skelsættende for ukrainerne og forvandlede hurtigt civil beredskab fra et teoretisk koncept til et bærende praksis for overlevelse og modstandsdygtighed.

Denne rapport undersøger Ukraines civile beredskab med Lviv som regional casestudie. Byen, der ligger i den sikrere, vestlige del af landet, er blevet et centrum for humanitær hjælp og fungerer som et testområde, for innovative strategier for krisestyring, mobilisering af lokalsamfundet og opbygning af modstandsdygtighed.

Vores undersøgelse fremhæver de nationale og regionale myndigheders indsats. Lokale myndigheder, universiteter, virksomheder og civilsamfundet fortsætter med at samarbejde om at levere vigtige tjenester såsom energi, sundhedspleje, uddannelse og psykologisk og fysisk rehabilitering, samtidig med at de beskytter civile og internt fordrevne personer.

Nøgletemaer omfatter flerniveaustyring, tilpasningsevne inden for energi og sundhedspleje, digitale værktøjer (f.eks. Diia-plattformen til alarmer og kortlægning af krisecentre) og den stigende involvering af private virksomheder og frivillige netværk i krisestyring. Forskingen ser også på social og psykologisk modstandsdygtighed, herunder lokalsamfundsbasepraksisser som »Toloka« og social-kommunikative strategier, der involverer inspirerende medlemmer af lokalsamfundet, kunstterapi og inkluderende kommunikation.

Situationen i Ukraine, og især i Lviv, viser, at effektiv civil beredskab afhænger af samarbejde, tilpasningsevne og tillid. Disse indsigter giver værdifulde erfaringer for de nordiske lande og andre, der søger at styrke regional og samfundsmæssig kriseberedskab.

Tiivistelmä (Finnish summary)

Venäjän aloittama täysimittainen hyökkäys Ukrainaan 24. helmikuuta 2022 toimi herätyksenä ukrainalaisille ja muutti siviilivalmiuden teoreettisesta käsitteestä elintärkeäksi selviytymistä ja kriisinsietokykyä tukevaksi toimintatavaksi.

Tässä julkaisussa tarkastellaan Ukrainan siviilivalmiutta Lvivin aluetta koskevan tapaustutkimuksen kautta. Maan turvallisemmassa länsiosassa sijaitsevasta Lvivin kaupungista on muodostunut humanitaarisen avun keskus, joka toimii samalla kehittämisympäristönä uusille kriisinhallinnan, yhteisöjen mobilisoinnin ja kriisinkestävyyden vahvistamisen toimintamalleille.

Tapaustutkimus havainnollistaa erityisesti kansallisten ja alueellisten viranomaisten toimenpiteiden merkitystä. Paikallishallinnot, yliopistot, yritykset ja kansalaisyhteiskunta tekevät tiivistä yhteistyötä keskeisten palvelujen jatkuvuuden turvaamiseksi. Näihin kuuluvat muun muassa energiajärjestelmän toimintavarmuus, terveydenhuolto ja koulutus, sekä psykologinen ja fyysinen kuntoutus. Samalla nämä tahot myös osaltaan suojelevat siviilejä ja maan sisällä siirtymään joutuneita henkilöitä.

Keskeisiä teemoja ovat monitasoinen hallinto, energiahuolto, terveydenhuollon sopeutumiskyky, digitaaliset työkalut (esim. Diia-alusta hälytysten ja väestönsuojien kartoittamiseen), sekä yksityisten sektorin ja vapaaehtoisverkostojen kasvava rooli kriisinhallinnassa. Tutkimuksessa tarkastellaan lisäksi sosiaalista ja psykologista resilienssiä, mukaan lukien yhteisöpohjaiset käytännöt, kuten "Toloka" ja viestinnälliset lähestymistavat, joissa hyödynnetään yhteisöllisyyttä, taideterapiaa ja osallistavaa viestintää.

Ukrainan ja erityisesti Lvivin tilanne osoittaa, että toimiva siviilivalmius rakentuu yhteistyön, sopeutumiskyvyn ja luottamuksen varaan. Nämä tutkimushavainnot tarjoavat hyödyllisiä oppeja Pohjoismaille ja muille maille, jotka pyrkivät vahvistamaan alueellista ja yhteisöllistä kriisinsietokykyä.



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Introduction: Ukrainian civil preparedness – A wake-up call

Although Ukraine had experienced war on its borders since 2014, it was not fully prepared for Russia's full-scale attack on 24 February 2022. The civilian population lived everyday lives: they worked, planned for the future, built communities and modernised cities and villages. Many dismissed the idea of a full-scale modern war in central Europe as highly unlikely. Civil preparedness systems focused primarily on local security challenges, such as floods, industrial accidents or fire safety, rather than military aggression.

That reality was radically altered on the morning of 24 February 2022. Missile strikes, bomb attacks, and the Russian ground invasion destroyed any illusion of stability. Military facilities, residential areas, hospitals, schools and transport infrastructure were all targeted. Thousands of civilians were killed.

Ukrainian society faced unprecedented challenges, including widespread internal displacement and logistical collapse, and essential services were under enormous strain. The civilian population went from leading ordinary lives to seeking refuge in bomb shelters. Many people organised volunteer support groups or enlisted in the armed forces.

This situation exposed widespread deficiencies in civil preparedness. Many communities lacked adequate shelter, early warning systems or stocks of critical supplies. Local governments were forced to respond rapidly as the crisis unfolded. Businesses faced numerous challenges, such as disruption to production, destroyed infrastructure and the urgent need to evacuate personnel and relocate facilities.

Despite this, Ukrainian society has demonstrated remarkable resilience. People formed volunteer groups, and businesses adjusted to support military and humanitarian needs. Local authorities set up relief centres for displaced persons and developed new civil defence systems in response to the changed circumstances.

The war has shown that civil preparedness is a collective responsibility shared by all parts of society. To maintain resilience in a crisis and foster a strong sense of security among the population, the public and private sectors must be integrated.

Based on interviews conducted during July–October 2025 and studies of relevant documents, this report provides insights into civil preparedness in Ukraine and the Lviv region. We evaluate civil preparedness among local and regional authorities and their role in maintaining critical infrastructure, particularly in the areas of energy supply, food security, health and education. This report was initiated by the Nordregio Thematic Group for Regional and Local Resilience and Attractiveness, and provides lessons in civil preparedness that may prove valuable for the Nordic countries and others when adapted to their regional and national contexts.



Map 1. The Lviv region in Ukraine. Source: Nordregio



Images: Kevin Bückert; Marjan Blan / Unsplash

The formal structure of civil protection in Ukraine

The civil protection system is based on both existing and evolving Ukrainian legislative and regulatory frameworks. The Constitution of Ukraine upholds the state's obligation to guarantee the security of its citizens, and further defines the role of local self-government bodies in resolving regional issues (1). The introduction of martial law and military powers is particularly relevant in relation to the Lviv Regional Military Administration (LRMA) (2). The Code of Civil Protection of Ukraine outlines the tasks of central and local authorities in providing emergency protection (3). Additional legislation establishes a specific framework for developing regional security programmes and defines strategic guidelines for integration into the European security system (4,5).

In addition to the overall legislative framework, several bylaws and strategic documents are also important. These include, notably, the Cabinet of Ministers of Ukraine's resolution On the Approval of the State Strategy for Regional Development for 2021–2027 (6), which provides for the integration of security aspects into local policies; the resolution On the Unified State System of Civil Protection (7) and the Presidential decree National Security Strategy of Ukraine: Human Security – National Security (8). These initiatives further establish institutional mechanisms for coordination between the central government and local-level authorities.

Legislation enacted by the President of Ukraine and the National Security and Defence Council plays an important role in fostering national resilience. Specifically, the Presidential decree On the Introduction of a National Resilience System (9) emphasises developing community capacity. It aims to coordinate the efforts of state agencies, local self-government and civil society. The decree highlights the importance of enhancing the institutional capacity of local authorities to effectively respond to emergencies and promote the sustainability of regional communities.

Institutional stability and community capacity

Ukraine's governance system is designed to maintain institutional stability, enable communities to independently address local issues and provide basic services during crises. These principles are enshrined in the Constitution of Ukraine (1) and in On Local Self-Government (4). However, they do not endorse full regional independence or isolation from interregional and national markets.

After 2021, the government adopted a national resilience plan that would also function at the local level (29,30). The plan prioritises the rapid recovery of systems and communities, rather than complete self-sufficiency.

Ukraine has a well-established system of anti-corruption agencies, which includes the National Anti-Corruption Bureau of Ukraine (NABU) (134), the Specialised Anti-Corruption Prosecutor's Office (SAP) (135), the National Agency on Corruption Prevention (NACP) (136), and the State Bureau of Investigations (SBI) (137). Within the framework of the EU integration process, anti-corruption activities in Ukraine have made significant progress. The active involvement of civil society and the support of democratic institutions have improved transparency and accountability at all levels.



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Lviv: A regional perspective

The war has revealed the variation in levels of crisis preparedness across the country. Western Ukraine, particularly the Lviv region, did not face an immediate ground offensive, which meant that residents had more time to prepare. However, the persistent shelling of energy, transport, and civilian and industrial facilities proves that even cities far from the frontlines are under constant threat. Lviv is now a key international aid distribution centre and accommodates thousands of internally displaced persons (IDP).

Regional characteristics

Founded in 1256, Lviv is among Ukraine's oldest cities and a historical centre in Eastern Europe. Its location at the crossroads of major trade routes has made the city part of various state formations over the centuries: the Principality of Galicia-Volhynia, the Kingdom of Poland, the Austro-Hungarian Empire and interwar Poland. Each historical period has left its mark on the city's architecture, culture and systems of governance, creating a distinctive blend of Western European and Eastern Slavic traditions. Lviv is a centre for politics and culture, where ideas of national revival, independence and community solidarity have always flourished. In a broader sense, the Lviv Region functioned as a strategic border, inextricably linked to defence against external threats, and a gateway between Central and Eastern Europe. This long history of preserving different identities, cultures and traditions has shaped the city's modern civil resilience and self-organisation.

Before Russia's full-scale invasion in February 2022, the city's population was approximately 720,000. Recent estimates suggest that figure is now 723,403 (10). Lviv region had an estimated population of 2.48 million as of 2022 (11). Since the onset of the war, Lviv has accommodated a significant influx of internally displaced persons (IDPs). According to analysis from aid groups, the city has taken in over 200,000 IDPs (12). This

increase suggests that Lviv's current population probably exceeds 900,000 to 1,000,000, which places substantial demographic pressure on housing, services and infrastructure.

Situated 70 km from the Polish border, Lviv serves as a gateway between Ukraine and the EU. Its railway station, airport (currently closed for civilian flights) and major motorways are crucial for transporting humanitarian aid, refugees and essential supplies. The region's topography is diverse: the southern Carpathian Mountains provide natural protection and tourism opportunities, while the northern plains and valleys support agriculture, infrastructure and urban development. This varied terrain poses specific challenges in relation to civil preparedness, including the logistics of evacuating mountainous regions, providing urban shelters and healthcare services.

Due to its prominent location, Lviv has served as a logistical and humanitarian hub since the start of the war. It has become a relocation centre for government agencies, universities, cultural organisations and businesses fleeing conflict zones. This influx has increased pressure on housing, education, healthcare and energy systems. Lviv maintains strong relationships with EU municipalities, NGOs and international agencies. These partnerships provide humanitarian assistance, technical expertise and crisis-management support, reinforcing the city's crucial role in Ukraine's civil preparedness network. Lviv has a long industrial heritage, including bus manufacturing at the historic Lviv Bus Factory (LAZ) (13) and food processing and energy equipment production (10,14). The region is also home to the Drohobych Salt Plant, founded in 1250, which is the oldest continuously operating industry in Ukraine. Over the past decade, Lviv has emerged as a thriving IT and innovation hub, with a tech cluster that generates over \$2 billion in annual turnover – up from around \$1.4 billion in 2020 to \$1.8 billion in 2021 and surpassing \$2 billion in 2022, despite the war-related disruptions (138).

Lviv Region's strategic location and robust rail and road corridors have facilitated its transformation into a humanitarian and business relocation hub. Investments in manufacturing, such as those from multinational companies like the Kingspan Group, have highlighted the region's resilience and potential for industrial growth, despite the ongoing conflict (15).

Civil preparedness is critical for ensuring societal stability amid armed aggression and hybrid threats. Lviv has evolved a unique, multi-layered civil security system, albeit one that still faces many challenges.

Several programmes aimed at enhancing civil preparedness have been introduced in the Lviv Region. One particularly notable example is the Programme for Preparing the Lviv Community for National Resistance, which promotes greater co-operation between the authorities, the commercial sector and the public (16). The Lviv Regional Council has approved several specific civil protection programmes, overseen by the Lviv Regional Military Council (LRMA), in partnership with local communities. The city of Lviv has implemented a number of local initiatives, including a network of shelters, evacuation plans and novel digital tools for informing and updating the population.

Lviv as a testing ground for civil preparedness

The Lviv region and its community are a testing ground for civil preparedness, which combines efforts by the state, local government, educational institutions, businesses and civil society.

As part of its public policy, the Ukrainian government has created a regulatory framework to provide social support for IDPs. The resolution On Certain Issues of Social Support for Internally Displaced Persons and Other Vulnerable Groups (17) specifies measures intended to help displaced and vulnerable groups, and provide housing and social benefits. In the Lviv region, these initiatives are integrated into local programmes designed to support the people who have sought refuge there. The public agencies provide essential infrastructure for survival and social adaptation, in line with broader resilience-building concepts.

The IDP Centre at Lviv Polytechnic National University, under the leadership of Assoc. Prof. Mykola Brych PhD, is an important focal point for civil preparedness. Several international partners, including the International Organization for Migration, support the Centre's activities. During an official visit to the facility in 2022, the US Ambassador to Ukraine spoke with displaced persons living there and highlighted the importance of partnership in the field of humanitarian aid (18). The Centre houses hundreds of displaced people, and provides them with a range of services, assisted by student volunteers. It is a positive example of educational institutions functioning as an integral part of the civil preparedness system.

The coordination of activity between local authorities and international humanitarian organisations also plays a vital role. A conference at the Polytechnic convened by the Norwegian Refugee Council in January 2023 highlighted the active involvement of Scandinavian partners in Ukrainian civil preparedness (19). Encouraging co-operation between various agencies and groups resembles the Nordic model, where state institutions and NGOs work together within a unified system.

The civic community in Lviv has taken steps to integrate IDPs into local society. The training programme Instruments of Local Democracy for IDPs enables displaced students to participate in public forums, form self-organised groups, start petitions and hold public hearings (20, 21). This promotes integration and fosters a broader democratic culture, which is also a key pillar of civic stability in the Nordic countries.

In addition to state and public initiatives, many businesses have played an important role in civil preparedness. The Rinat Akhmetov Foundation, for example, provides humanitarian packages, medical assistance and support to displaced persons. Across Ukraine, the private sector has borne part of the financial costs, easing the burden on local budgets. This public-private partnership is similar to the Scandinavian model, in which private entities are involved as strategic partners in crisis-response plans.

Civil society, particularly volunteer groups, continues to be the most active component of Ukrainian civil preparedness. Volunteers coordinate the collection of belongings, provide transport to civilians fleeing threatened areas and assist IDPs with registration and relocation. These activities are also coordinated via institutional structures, as at Lviv Polytechnic, where students work with the administration to provide assistance. As in the Nordic countries, volunteer networks are a key resource in emergencies.

Experience from the Lviv region and community shows that civil preparedness in Ukraine is a multi-layered system. The government sets legal and financial frameworks, local authorities oversee implementation, businesses supply resources and civil society contributes mobility and flexibility. Universities and international partners act as hubs for adopting and sharing innovative practices that support survival in times of crisis and reinforce social cohesion, which are defining features of the Nordic model of civil resilience.

Thanks to these combined efforts and approaches, the Lviv region is today a positive example of regional civil preparedness. This experience shows that collaboration between public entities, the private sector and civil society can build a sustainable security system capable of withstanding wartime challenges while also fostering democratic practices.



Images: Anzhela Bets; Andrii Solok / Unsplash

The role of private enterprise in civil preparedness and daily life during wartime

The private sector plays an important role in ensuring civil preparedness. Ukrainian companies provide significant support to the state and communities through financial assistance, humanitarian aid and media engagement. Many firms are involved in initiatives to counter disinformation and assist the Armed Forces of Ukraine. These companies are listed on the Corporate Social Responsibility (CSR) platform, in the Catalogue of Business Contribution to Victory in the Russian-Ukrainian War (22).

Directly helping civilians during wartime has become a priority for the Ukrainian business community. Metinvest operates Saving Lives, a humanitarian project for internally displaced persons, which has helped more than 85,000 people (23). Nova Poshta is a key logistics partner for foundations and volunteer groups, delivering humanitarian aid for free and assisting with the relocation of displaced people and businesses (24,25).

Energy sector

In the energy sector, the DTEK group has launched the RISE project, along with Octopus Energy, to install 100 solar and battery systems aimed at stabilising power supply in the business and public sectors (26). DTEK has also set up autonomous solar heating stations for the military, to ensure an autonomous energy supply (27).

OKKO has focused on energy independence and support for the military, e.g. by offering free coffee and hot dogs at petrol stations under the initiative Warm the Defenders. The company's OKO ZA OKO project also provides drone financing for the Armed Forces. In total, more than UAH 207 million (approximately \$5 million) has been invested in helping the military, volunteers and communities (28).

Ukrainian companies have committed to a wide range of social initiatives, including logistical and evacuation assistance, energy sustainability, cultural support and community awards. In doing so, they have significantly enhanced their role in the civil preparedness system.

These commitments show that the private sector is not merely a dispassionate participant, but is actively engaged in civil preparedness.

However, in much of Ukraine, community-level coordination measures and clear continuity planning involving the private sector are still underdeveloped. While there has been considerable progress, there remains a need for further formalisation of business, public organisations and civil society partnerships.

Ukraine's legislative and institutional framework provides a solid foundation for the development of civil preparedness. The examples from Lviv and the surrounding region demonstrate the private sector's potential for ensuring resilience at the local level. Ukrainian companies have proved that they can effectively partner with the state to provide civil security within the population.

In the energy sector, decentralisation and greater use of local resources are key initiatives, according to the approved Strategy for the Development of Distributed Generation until 2035 (31,32). The focus is on reducing vulnerability to attacks on the national grid and making communities operationally self-sufficient during critical periods. Members of the G7+ Energy Coordination Group acknowledged Ukraine's progress in implementing energy sector reforms. They reaffirmed their ongoing support to restore Ukraine's energy infrastructure and transition to a decentralised and sustainable energy system (33).

In practice, critical infrastructure, both in Lviv and across the region, is based on local energy sources: solar power for city hospitals and schools, as well as a 20 MW co-generation power plant project to supply heat and electricity (34, 35).

Lviv has a Sustainable Energy and Climate Action Plan (SECAP) that outlines systemic steps to enhance energy efficiency and improve local energy production. It emphasises sustainability and reducing overreliance, rather than a complete disconnection from the national grid (36).

Food sector

The Cabinet of Ministers of Ukraine has issued several directives concerning food security and agricultural strategies (37,38). Under martial law, special regulations have been introduced to ensure sowing and land access (39). These measures help sustain supply stability by diversifying routes and logistics and preventing regional isolation.

The National Security and Defence Council of Ukraine (NSDC), as part of its national security analyses, regularly evaluates the state of food security. It encourages capacity building in local communities by providing warehouses, food reserves and local contracts within the framework of the nationally established policy (39).

Healthcare sector

Ukraine's current legislative system does not officially recognise regional self-sufficiency. However, since the introduction of martial law, many healthcare areas have been granted various devolved powers, which have increased their level of autonomy and resilience. In line with On Local Self-Government in Ukraine (4), community agencies are responsible for managing municipal healthcare facilities, providing resources and coordinating at the cluster or regional level. Two government resolutions established new hospital clusters that are designed to optimise emergency care pathways and concentrate specialised medical services (40,41). This reform guarantees that emergency patients are quickly admitted to hospitals that are capable of delivering the necessary urgent care. Under martial law, local authorities are now allowed to reassign medical personnel, relocate operating departments and rapidly distribute humanitarian aid, which enhances the communities' capacity to respond to emergencies.

Vital healthcare facilities and infrastructure must operate continuously without disruption. This is outlined in On Critical Infrastructure (43), which aims to improve healthcare resilience by adding backup power sources, enhancing energy efficiency and increasing the healthcare facilities' autonomy.

Government decisions relating to healthcare, education and critical infrastructure are implemented via international co-operation with foreign partners specialising in energy solutions and projects (Table 1).

Technology	Example (Equipment/Region)
Hybrid solar power plant (SPP) + battery	Kharkiv Children's Hospital (44)
	Brovary Regional Hospital (44)
	Mykolaiv Trauma Center (Solar Microgrids) (45)
	Gostomel and Mykolaiv (Greenpeace) (46)
Cogeneration (combined heat and power – CHP)	Lviv (Forte wood/gas plant) (46)
	80 CHP units via USAID, Kharkiv (GIZ – Deutsche Gesellschaft für Internationale Zusammenarbeit – German Society for International Co-operation) (48)
	Mobile CHP units by SOKRATHERM in Kharkiv (48)
	Small/medium CGUs for district heating (50)

Table 1. Examples of solutions for local energy self-sufficiency (Ukraine, 2022–2025)

The Solar Energy Supports Ukraine campaign has partnered with the BSW, the German Solar Association, SolarPower Europe, the RePower Ukraine Charitable Foundation and the Energy Law for Ukraine Foundation. This has led to the installation of solar-powered energy sources in schools and hospitals to address power-supply disruptions (44).

Lviv has launched several projects to achieve energy independence in hospitals through solar stations with storage and backup systems for operating rooms and intensive care units. International partners and foundations have financed these healthcare sustainability initiatives, in line with national goals. The projects fall under the scope of the On Critical Infrastructure Directive (43), which proposes the creation of multi-level resilience plans for energy and water utilities and healthcare settings, which supports local preparedness in the Lviv community.

The Ukrainian National Health Service's (NHS) "money follows the patient" model enables hospitals to independently negotiate contracts for emergency, rehabilitation and psychiatric care packages, which affords regions greater financial flexibility. The state enterprise "Medical Guarantees" was established for this purpose, in accordance with both the Cabinet of Ministers of Ukraine's decree "On the Establishment of the State Enterprise Medical Guarantees", and the National Health Service of Ukraine's order with the same name. These decrees support NHS development by implementing government policy and ensuring that systems are in place to provide patients with access free medical care (50). At the same time, deploying modular medical units to combat zones and the de-occupied territories (the Kharkiv, Chernihiv, Sumy, Dnipropetrovsk, Mykolaiv and Odessa regions) allows autonomous access to emergency care with standalone systems for water, sanitation and energy supply. Ten mobile clinics supported by the German government, currently deployed in six regions, are a good example (51).

Although regional healthcare self-sufficiency is not an explicitly stated goal, governance reforms and wartime conditions have laid the foundations for community autonomy with regard to organising emergency and crisis care, and the provision of equipment, medicines and personnel. In Lviv Region, for example, a high level of operational independence is balanced by national health system integration and centralised state management.

A CLUSTER MODEL FOR HEALTHCARE AND HOSPITALS

Natalia Litvinska, acting head of the health department of the Lviv Regional Military Administration, noted in an interview that a network of 37 hospitals has been established in the Lviv region, within the framework of the cluster model. These include supercluster facilities that provide highly specialised treatments (52). Each district has also established rehabilitation centres for physical and psychological support.

1) The Superhumans Centre in Lviv, which has been operating since 2022, is a modern, all-Ukrainian war-trauma centre specialising in free prosthetics, reconstructive surgery, rehabilitation and psychological support for war-affected adults and children (54).

2) UNBROKEN is a Ukrainian initiative that brings together leading medical institutions, rehabilitation experts, psychological support specialists, and prosthetics professionals to provide comprehensive assistance to those affected by the war. The centre provides a variety of services, including treatment, prosthetics, physical and psychological rehabilitation, residential care and reintegration. Since the beginning of the war, it has treated more than 19,000 wounded Ukrainians, including children (54).

While international donors finance major elements of these projects, the projects are nonetheless consistent with the national policy on critical infrastructure resilience and healthcare reform (56). The primary care reform, which allows patients to select their family doctor regardless of residence, increases doctor and patient mobility and expands the reach of regional healthcare. Meanwhile, decentralisation allows communities to retain over 70% of tax revenues to reinvest in regional healthcare services.

Information systems

Ukraine also faces Russian military aggression in cyberspace. The number of cyberattacks on state information systems and critical information infrastructure facilities has tripled between 2021 and 2024 – from 1,350 in 2021 to 4,315 in 2024 (139). 90% of attacks are carried out by Russian and Belarusian military hackers funded by state agencies (57).

Ukrainian legislation identifies the need to protect information (58) and addresses specific information-protection systems (59). These systems operate under the State Service for Special Communications and Information Protection of Ukraine (60), which outlines the requirements for data protection in existing Ukrainian systems, including protection requirements during wartime. The systems, which conform to European standards ISO/IEC 27 series (61), form Ukraine's first line of defence in cyberspace.

Security of supply in Lviv

The existing policies in energy and healthcare clearly promote local self-sufficiency for critical services, such as backup energy sources, hybrid solar power plants, co-generation and energy efficiency. In the area of food supply, the focus is on sustaining supply chains and supporting producers through emergency wartime mechanisms, rather than absolute regional autonomy. The Lviv region has a clear advantage in this regard, as it has advanced processing capabilities and logistical networks that are integrated into both national and European markets (within the framework of government strategies). For raw materials (water, heat, fuel), this approach diversifies sources and safeguards critical infrastructure, in line with the national sustainability framework and other relevant legislation. It establishes backup power, heat and water-supply systems for Lviv and nearby areas. Regional self-sufficiency in energy and healthcare is a vital tool for ensuring sustainability, rather than an isolationist management principle. Legislation and broader government strategies can promote sustainability, ensure continuity of service provision and facilitate multi-level coordination.



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Enhancing social cohesion in wartime

From a Ukrainian perspective, civil preparedness extends beyond basic functions like food and energy security. Psychological resilience, spiritual support^[2] and cultural practices all contribute to increased social cohesion in wartime. Music, theatre, art, sports and traditional forms of communal activities not only boost morale, but also foster an environment of trust and mutual support.

Constant air raids, missile and drone attacks, and the systematic bombing of residential areas and critical infrastructure create an atmosphere of chronic anxiety in the Ukrainian population. This leads to disturbed sleep, exhaustion, increased irritability and a persistent sense of danger. Under these conditions, building psychological resilience is not only a personal responsibility, but also a priority for government policy and local civil preparedness programmes.

Ukraine has responded to these challenges by drawing on international experience and adapting it to develop its own mental health practices. A crucial approach has been implementing programmes to detect and treat mental health problems earlier, at the primary care level. This adds a new dimension to civil preparedness, in which mental health care is seen as an integral component of social resilience.

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2. The term "spiritual support" refers to moral and emotional support, including religious observance or participation in religious practices. It encompasses inner strength, empathy, and understanding provided to others in challenging life circumstances. In Ukrainian, the word "spiritual" (ukr. «духовний») has a broader meaning than the English "spiritual." It includes not only religious or faith-related aspects but also moral, ethical, intellectual, and emotional dimensions of human life. "Spiritual support" therefore denotes assistance that nurtures a person's inner world – values, emotions, empathy, and sense of purpose. This concept may involve religious elements but extends further to humanistic and moral encouragement.

NUMEROUS REHABILITATION PROGRAMMES HAVE BEEN SET UP TO AID RECOVERY, PROMOTE PSYCHOLOGICAL RESILIENCE AND ENHANCE SOCIAL COHESION. THESE INCLUDE:

- Spiritual and moral support programmes. The Center of Military Chaplaincy of the Ukrainian Greek Catholic Church (UGCC) in Lviv conducts religious services and organises pilgrimages for military personnel and their families, which bolster spiritual resilience, religious unity and social cohesion (62).
- Veterans' recovery and resilience retreats. Hero's Compass is an eight-day retreat for veterans, held in the Carpathian mountains. It combines adventure therapy, art therapy, group psychological support and ten weeks of online support. The aim is to promote psycho-emotional recovery (63). Ukrainian Action Heroes offers veterans two-week rehabilitation programmes in winter resorts in the Carpathians, involving group therapy and mindfulness activities such as meditation, yoga and saunas. This has improved psychological well-being significantly (64). The Tepla Gora Kolo Programme, also in the Carpathians, offers creative workshops, emotional sharing circles, art therapy and communal gardening, to help restore emotional balance, especially among displaced people and volunteers (65).
- Art and creative therapy initiatives. The Blue Sky Ukraine project operates in three regions of Western Ukraine. It combines humanitarian aid with art therapy, which restores children's emotional resilience through drawing, music, movement and storytelling. The programme has already reached tens of thousands of children, and hundreds of professionals have been trained in its methods (66). The Art Therapy Force project provides art therapy for children, IDPs, and veterans in hospitals and universities, and brings together specialists to create psycho-emotional balance through creative practices (67). The International Medical Corps organises art sessions for displaced children, in which they make a floral map of Ukraine. This serves as a non-verbal form of therapy that strengthens their national identity and offers hope (68). The Peace of Mind Foundation sponsors 12 art and movement therapy workshops at the War Childhood Museum, where adults and children can create together and explore themes of trauma and recovery (69).
- Music therapy and cultural resilience projects. The Music Therapy Project (Middlesex University) uses music to help displaced persons, especially children and mothers. It offers a series of 12-week courses that have proved effective in reducing depression and post-traumatic stress (70). Victory Beats is a charitable project that brings together musicians and DJs to provide music therapy in rehabilitation centres for veterans. These sessions, which can last up to 36 weeks, represent a new approach to cultural support in a crisis (71). The Ukrainian Freedom Orchestra, which was founded by Keri-Lynn Wilson and consists of Ukrainian refugees and diaspora musicians, tours internationally under the motto "culture is our soul", symbolising resistance through music (72). After the rocket attack on Kyiv on 28 August 2025, Svyatoslav Vakarchuk, frontman of the world-famous Ukrainian band

Okean Elzy, gave a spontaneous performance at Olimpiyska metro station. He sang the song *Obijmy* (73), which became a symbol of hope for the residents of the capital, who faced severe shock and loss (74). A group of classical musicians (three violinists, a cellist and a double-bassist) held a concert in the Kharkiv metro for residents forced to shelter there. They performed the Ukrainian national anthem, works by Bach and Dvorak, and folk melodies, giving the listeners a momentary sense of peace and solidarity (75). Law of Ukraine "On Amendments to Certain Legislative Acts of Ukraine Regarding Improving Access to Medical and Rehabilitation Care During Martial Law".).

- Community mental health and primary care training. The World Health Organization programme mhGAP has been introduced at the primary health care level in Ukraine. It gives family doctors specialised training to diagnose and treat common mental health issues such as depression and anxiety, which increases civilian access to quality psychological care in rural and urban settings. As part of the National Programme for Mental Health and Psychosocial Support, the First Lady of Ukraine, Olena Zelenska, established the course "Management of common mental disorders at the primary health care level using the mhGAP guidelines". This online course was developed with support from the World Health Organization and the Ministry of Health of Ukraine (76). The programme trains primary care physicians to recognise and treat depression, anxiety disorders, psychosis and other common mental health conditions. It seeks to close the gap between society's mental health needs and the limited resources available in non-specialised healthcare settings (77). Training healthcare professionals expands qualified care access, helps reduce stigma and encourages a culture of self-help and psychological resilience – which is regarded as both an individual quality and a vital civil preparedness resource for communities.

These examples prove that the Ukrainian civil preparedness model effectively combines aspects of spiritual support, psycho-emotional recovery and cultural expression. Religion, retreats, occupational therapy, and art and music programmes foster a combination of physical, psychological and spiritual resilience. Together, these initiatives comprise a multifaceted system, based on material and institutional support, that enables communities to survive and preserve identity, communal trust and personal integrity under the most challenging conditions.

Maintaining unity and hope through Toloka

The Ukrainian cultural tradition of Toloka describes a form of collective responsibility and community preparedness. It is both a historical practice of mutual support and a contemporary social mechanism that helps sustain solidarity and psychological resilience within society.

Toloka is a unique cultural and social phenomenon with deep roots in the historical memory and practices of the Ukrainian people. In essence, it involves community members voluntarily coming together to tackle problems that are beyond the capabilities of any single person or family. This form of collective mutual assistance has evolved over centuries in rural Ukrainian communities.

Toloka emerged from the need to survive and overcome challenges as a group. In traditional Ukrainian culture, this involved working together to solve a specific problem, such as building a hut or defensive fortifications, harvesting crops, or helping a neighbour after a fire or other calamity. Every community member offered their labour, time and resources for free. This practice symbolised trust, solidarity and a recognition that dangers and challenges can only be overcome by working together.

Toloka was informal, yet morally obligatory. Participation in Toloka exemplified humanity, solidarity and a willingness to support one another. The Ukrainian phrase "together for peace" is an expression of this phenomenon.

Unlike many other global cultural traditions, Toloka carries no religious or legal obligations. It is a voluntary act of solidarity, born of a profound awareness of the community's shared destiny. It combines material aspects, such as sharing work and resources, with immaterial elements, like trust, communality and mutual respect.

Today, Toloka has seen a notable resurgence in the wake of Russia's invasion. Communities have rallied to set up shelters, weave camouflage nets for the Armed Forces, collect and distribute humanitarian aid and restore destroyed houses. As in former times, participation is voluntary, but morally obligatory. People help one another because they understand that their survival depends on it.

As a social phenomenon, Toloka is an example of Ukrainian resilience. It shows that communal connections within society can be just as effective as top-down management decisions. It represents a unique contribution to global efforts aimed at building capable communities, as it demonstrates that even under the most challenging circumstances, collective efforts, mutual trust and solidarity are essential for survival and growth.

The Ukrainian experience proves that civil preparedness cannot be reduced to mere material or infrastructural factors. Spiritual support, psycho-emotional initiatives and access to basic psychological care are critical elements that strengthen community resilience. They humanise the security system, which makes it more adaptable, interactive and culturally relevant to Ukrainian society. These approaches help to build trust, heal trauma and strengthen social bonds, just as in the Toloka tradition.



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Inclusive, practical and actionable communication

Since the onset of the war, it has been essential to ensure comprehensive and inclusive communication with the population. From the beginning, state messages used straightforward language – e.g. “What to do now” and “Where to get help”. This approach is in line with Risk Communication & Community Engagement models designed to reduce anxiety and prevent the spread of panic.

Launched shortly after the invasion, the Air Alert mobile app is a key communication tool. It delivers alerts for various threats, e.g. air strikes, shelling and chemical hazards, along with brief, clear instructions for action (78, 79, 80). In addition, the application provides psychological support and fosters emotional wellbeing through Ukraine’s mental health programme How Are You? (81, 82).

The government and UNDP Ukraine have adopted a wide range of accessibility measures. These include sign language, subtitles and simplified texts, as well as “hotlines” that offer video communication with an interpreter, all of which are important accommodations for people with disabilities.

The How Are You? platform, developed by UNICEF, WHO and other partners, offers self-help resources, answers children’s questions about anxiety, and provides contacts for psychological support. It aims to avoid the spread of panic and to support families in challenging times (83).

The United Nations Population Fund (UNFPA), through youth support projects such as the Mentalochka podcast, Energy of Your Future camps and the Bank of Ideas programme, promotes emotional support for adolescents and develops psychosocial resilience in communities (84, 85). Thanks to these initiatives, communication with young people has become more direct, more focused and more supportive.

Gender considerations are addressed through UNFPA information campaigns Break the Circle and 4 Hands Happiness, which challenge male and female stereotypes. Several inspirational individuals from various fields participated in the campaigns to boost trust among vulnerable groups (86).

Regarding people with disabilities, the emphasis is on making shelters physically accessible and tailoring communications and local access routes. Many communities provide large-print materials and posters at shelter entrances to assist individuals who do not use the internet, in accordance with humanitarian communication principles. An online platform and a hotline give IDPs access to a "single window" of information. Local IDP councils (e.g. in Lviv) have evolved into platforms that promote dialogue and encourage participation in decision-making, which reduces levels of dislocation among the displaced (84).

Respected members of the community, including doctors, psychologists, chaplains and athletes, have participated in communication campaigns that include both scripted messages and Q&A formats. These have helped to create a "network of trust" within society.

The Centre for Countering Disinformation offers guidance on how to recognise propaganda and false information spread by bots, and how to check if information is trustworthy without causing panic (87).

Many cities, including Kyiv, have embraced digital technologies. The Kyiv Digital app offers directions to shelters, pharmacies and shops. It also provides airstrike alerts and functions as a Wi-Fi hotspot in shelters, making communication versatile and reliable (88).

AlarmMap, along with other websites that show a real-time airstrike map, reaches 89.5% of mobile device users, which helps people react quickly. On 2 March 2022, the Lviv Siren bot, which reports airstrikes in Lviv, was launched on Twitter. The concept of monitoring and visualising alerts on a map was then extended to the entire country (89).

Today, communication in Ukraine spans a variety of platforms, from apps to social media, from printed materials to live video calls. It is tailored to the needs of young people, women, people with disabilities and IDPs. The messaging remains clear and easy to understand, which helps to avoid panic. The various strategies successfully combine information resilience and inclusion.



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Challenges and areas for improvement

Challenges at the regional level

The primary challenges to civil preparedness at the Lviv regional level stem mainly from the following:

1. Resource constraints and uneven distribution. Local communities often lack the funds to build shelters, purchase generators or stockpile water and fuel, which leaves them vulnerable to widespread attacks on energy infrastructure and prolonged power outages.
2. Limited mobile or internet coverage hinders communication with the population. In practice, this means that residents do not always receive instructions promptly.
3. Coordination between authorities, civil society groups and volunteers. At the regional level, the absence of a central authority that can manage and coordinate efforts leads to duplicated functions and wasted time during crisis conditions.
4. Social and educational services are overburdened, requiring additional resources and specialists. The social dimension also presents challenges: communities must support local residents while also integrating large numbers of internally displaced persons.
5. Limited human resources. There is often a shortage of personnel on the ground who are trained in emergency response measures, and public training can be inconsistent.
6. There is a lack of psychological assistance specialists, which negatively affects the quality of psychosocial support for the civilian population.
7. Low or insufficient digital literacy among parts of the population and weak data-protection measures increase the risk of cyberattacks on municipal systems. In addition, regional authorities regularly have to deal with cyber threats.

Specific challenges for Lviv as a humanitarian hub

The main civil preparedness challenges for Lviv and the surrounding region stem from the fact that it is both geographically distant from the frontline and serves as a key humanitarian hub.

1. Since the start of the war, the region has hosted hundreds of thousands of internally displaced persons. This has strained housing, social and educational infrastructures, as communities have had to simultaneously meet the basic needs of both local residents and newcomers.
2. One challenge has involved the delivery of shelters and civil protection systems. An interactive map was created showing every shelter in Lviv. However, many of them are in poor condition or do not meet the standards for long-term occupancy. In rural areas, the situation is even more acute: shelters are either non-existent or lack access to water, heat and sanitation.
3. Ensuring energy resilience. Prolonged attacks on Ukraine's power grid have caused extended power outages in Lviv and the surrounding region. Although "Invincibility Points" equipped with generators were established, they proved insufficient – especially in remote areas with limited backup power sources.
4. The healthcare sector represents another critical challenge. Lviv became a medical hub for all of Western Ukraine, as the wounded and critically ill from the frontline zones were evacuated here. This required increased bed capacity and the formation of mobile teams, which put a strain on doctors and led to a shortage of psychologists who could support the civilian population.
5. Regarding education, the region faced a dual challenge: providing shelter in schools and simultaneously integrating large numbers of children from IDP families. This created a need for additional classrooms, teachers and inclusivity programmes.
6. Another equally important challenge involves coordinating the efforts of the municipality, regional authorities, volunteers and international agencies. Excessive workloads impede efficient communication and result in duplicated efforts or decision-making delays.

In summary, the key challenges for civil preparedness in Lviv and the surrounding region include an overburdened social and humanitarian infrastructure due to the influx of IDPs, a shortage of modern shelters, limited energy sustainability, staff shortages in the medical and educational sectors, and coordination issues among various stakeholders. Addressing these challenges requires both direct state support and international efforts.

Progress and areas for improvement

Ukraine has developed a robust approach to civil preparedness, but constant improvements are necessary. In this context, the following points should be noted:

- 1. Compliance with legislation.** Ukraine distinguishes several types of protective structures: stationary, dual-purpose, simplest (basements, cellars), and modular mobile shelters. Regions should ensure pedestrian accessibility (no farther than 100, 300, or 500 metres away, depending on the building density) (90).
- 2. Shelters and public awareness.** Authorities have improved access to shelters and conducted repairs on many of them. The city has standardised shelters in schools, hospitals and ASCs, and ensured that they can be rapidly accessed (≤ 5 min for students). Regular ongoing funding and training remain essential.
- 3. Digital services and information preparedness.** Platforms like Diia and interactive maps help citizens access services. The Lviv region is scaling Oplich as a regional digital hub for IDPs and residents, which ensures connectivity even during power outages (91).
- 4. Communications.** Emergency messages are available in multiple languages (Ukrainian, English and Polish) to help inform residents, international volunteers and students. Authorities are encouraged to translate civil preparedness documents to increase accessibility.
- 5. Social support.** Mobile social services provide support to rural communities and vulnerable groups, including people with disabilities, the elderly, children and IDPs.
- 6. Healthcare.** Mobile medical teams, telemedicine services and psychological crisis centres are currently being integrated. In Lviv, psychologists are on hand at the Points of Invincibility to ensure support during blackouts and emergencies.
- 7. Education.** In case of danger, participants in the educational process must stay in shelters that comply with established building standards and regulations. Developers are required to ensure the design and construction of such shelters in accordance with current standards and with consideration of new types of threats (for example, the construction of underground schools). Educational programmes for pupils and students should include not only a theoretical component but also provide practical skills for responding to emergency situations.
- 8. Energy and critical infrastructure.** The Invincibility Points provide backup generators, heat and water for critical facilities. Lviv is developing urban solar stations and energy storage units to reduce reliance on the main grid.
- 9. Cybersecurity.** Cybersecurity programmes for civil servants and rapid response teams have been established to safeguard critical digital infrastructure (92,93, 94).
- 10. Humanitarian and cultural engagement.** Working with inspirational figures, celebrities, religious leaders, and theatres and museums enhances psychological support and fosters public dialogue. Incorporating these efforts into regional council programmes helps build community resilience.

Ukraine and the Lviv region show strong civil preparedness, but there is room for improvement. Prioritising funding for shelters and critical infrastructure, expanding communication channels and combining social, healthcare and digital services are essential steps in enhancing community resilience.



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Opportunities and lessons to be learned

Four years into the war, Ukraine has established a unique approach to civil preparedness, based on clear communication, accessible information, and supporting physical, psychological and informational safety. This strategy prioritises clear instructions, efficient communication and regular updates, all of which help to reduce anxiety, increase trust and ensure community resilience.

Lessons from a national perspective

The following list aims to serve as a civil preparedness and crisis management guide for other countries, regions and municipalities:

1. Use simple messages and clear language. Clear instructions (e.g. "What to do now" and "Where to get help") are vital. Avoid emotionally charged language. The RCCE framework recommends brief to-do messages, feedback opportunities and constantly updated Frequently Asked Questions (FAQs). This helps reduce anxiety and prevents infodemics (95, 96).
2. Multi-channel delivery of alerts and instructions. The Ukrainian model includes sirens, a national TV marathon, official web channels, secure messaging and the Air Alert mobile app. The app details the threat type and recommended actions without being sensationalist. As a government-supported initiative, it increases trust and outreach (78, 97, 98).

Radio continues to play a vital part during blackouts and internet outages. It allows direct threat alert communication, including what actions to take and where to find available resources. Local and national radio stations increase the range and stability of the

warning system and ensure continuity of communication in crisis conditions. Citizens must have basic FM/AM radios powered by batteries, solar panels or a manual generator, as well as a supply of batteries.

3. Accessibility for people with disabilities. Emergency messaging includes sign language interpretation, subtitles, simplified or easy-to-read texts, audio descriptions and "hotline" video communication via an interpreter. These measures were recommended by the alert system accessibility assessment, and are gradually becoming the standard for official video messaging (99).

4. Ensure a psychologically safe environment. This involves providing facts and risk assessments alongside "anxiety buffers", such as normalising stress responses, simple self-help techniques, contact with Mental Health and Psychosocial Support (MHPSS) and access to offline services. These measures alleviate anxiety in young people and families with children, and are supported by both Ukrainian and international guidelines (100–103).

5. Cybersecurity as part of civil preparedness. Among other initiatives, the State Service of Special Communications and the Information Protection of Ukraine/Computer Emergency Response Team of Ukraine (CERT-UA) regularly publish short checklists covering, e.g. passwords, multi-factor authentication (MFA), phishing awareness, backups and incident-sharing protocols. The checklists emphasise the message "protect yourself and community data" through "take action cards" and short videos (92,93).

6. Counter disinformation. Use a range of examples to illustrate propaganda technology and typical Russian military narratives. All citizens must have the skills and tools to understand the risks posed by anonymous Telegram users and bot networks, check sources and report disinformation via official channels, based on the formula: "How to recognise – What to do – Where to send a fact check" (104,105).

7. Leverage inspirational leaders in communication. This approach involves media messaging by popular inspirational figures, such as doctors, psychologists, clergy, educators, athletes and celebrities, who uphold ethical, patriotic beliefs and are experts in their field. [To layout: suggest making the text about the "trust network" a text box of some kind]. Experience from Ukraine experience shows that using admired figures effectively reinforces the official message and reaches vulnerable groups.

- Poet, military paramedic, and senior corporal of the Armed Forces of Ukraine Yaryna Chornohuz is a prominent public figure who combines creativity and patriotism. Her university education and frontline experience are an inspirational example for young people. Her contribution is an example of how culture and education can interact in a time of crisis (107).
- Father Yaroslav Rokhman is a chaplain at the Perinatal Centre of Ivano-Frankivsk. His messages – "Love instead of aggression", "After the dark night, a new day" – offer hope and inner peace to many families and strengthen civil resilience (108).
- The Primate of the Ukrainian Greek Catholic Church, His Beatitude Sviatoslav (Shevchuk), regularly offers the faithful spiritual and moral guidance, highlighting the significance of truth, justice and unity – key values for everyday resilience (109).

- Renowned professor and surgeon Borys Todurov has performed frontline surgeries, conducted online consultations and appears regularly in the media. His statement, "We are here and ready to help", offers reassurance and a sense of genuine support (110).
- High-jump world-record-holder Yaroslava Mahuchikh stresses that she is competing for Ukraine, not just for personal glory. She has generously donated her prize winnings to military support and animal protection programmes (111).
- Yuliia Paievska, founder of Taira's Angels, documented the medical efforts in Mariupol, and in doing so became a symbol of courage and compassion. Her inspiring story illustrates how doctors can become the voice of civic responsibility (112).
- Art therapist Olena Lutsenko runs support groups for women, children and displaced persons, which adapt art-therapy methods to a war context. She is a well-known figure who helps boost confidence in psychological assistance (113).
- Eurovision 2016 winner Jamala has actively supported Ukraine since the invasion began, through charity concerts, social initiatives, fundraising and publicly advocating for its people (114, 115).

Other regions and municipalities can adopt this strategy by leveraging inspiring individuals with authentic ties to the community to build trust and relay critical information.

8. Bilaterality and community engagement. Develop IDP councils and youth initiatives as permanent nodes of communication. Involving IDPs as co-authors of housing, employment and social services solutions increases their engagement and participation. In practice, these forums include IDP council forums in Lviv, the national portal of IDP councils and IDP integration programmes at the regional state administration/city level (116).

In Ukraine, local authorities work closely with UNHCR and international partners to support activities for internally displaced persons by implementing various initiatives at the regional state administration level (RSA) and in cities (Table 2).

Region / Institution	Specific initiative	Details
Zakarpattia Region (Zakarpattia Regional State Administration/Regional Council of IDPs)	Comprehensive IDP Support Programmes (2023–2026)	Housing purchase programmes for IDPs and veterans, including compensation of mortgage interest rates under the “e-Housing” and “Own Home” programme, psychological support provision and digital and print media guides for IDPs (117)
Chernivtsi (Chernivtsi City Council)	IDP Integration Forum (2024)	Event supported by UNDP and UNHCR to develop models for integrating IDPs into urban life: housing, education, employment and social services (118)
Kyiv (Kyiv City Administration, Department of Social Policy)	Single reference portal for IDPs	Online resource featuring data on housing, rental subsidies, medical care, the “municipal nanny” childcare programme, assistance to people with disabilities and free legal aid (119)
Lviv region (Lviv regional administration)	Comprehensive IDP Support Programme (2022–2025)	Provision of temporary housing, rental payments, creation of a regional IDP co-ordination headquarters and integration measures. Lviv has also organised IDP council forums and worked on the development of accessible entry points (ASC) for IDP services (120)
Ministry of Reintegration	IDP hotline	IOM's new case-management call centre allows 1,000 agents to work simultaneously, responding to legal, social and housing issues (121)
UNDP & UNHCR (Mykolaiv, Kherson regions)	Mine Action and IDP Return project	Repairs of damaged housing, psychosocial support, document replacement and legal assistance for IDPs and local communities (122)
United Nations High Commissioner for Refugees (UNHCR) National level	Multi-purpose cash assistance for shelter	Cash assistance to IDPs for essential goods and housing repairs, mobile support teams and hotlines for counselling (123)
All-Ukrainian Forums of IDP Councils (SSS-UA)	Forum and regional meetings (2024)	Kyiv, Lviv, Vinnytsia, Poltava, Odessa, Mykolaiv: establishing councils that represent the interests of IDPs in partnership with local authorities (124)

Table 2. Examples of regional and city programmes supporting internally displaced persons (IDPs) in Ukraine

The examples in Table 2 illustrate practical strategies that can inspire similar initiatives in other countries. They show how local governments and agencies can develop solutions for housing, employment, legal aid and the social integration of IDPs.

9. Local barrier-free services. Communications should encourage action through accessible entry points (ASC), based on universal design, multilingual instructions and clearly marked service access for newcomers. Examples include Lviv's ASC network and the municipal IDP integration programmes (125).

The Ukrainian portal and application Diia exemplifies barrier-free design for accessing public services online (126). Under martial law, its role has grown significantly (59):

- Digital documents with legal status (passport, driver's licence, student ID card, Taxpayer Registration Number (TRN), allowing for personal identification even when paper documents are lost
- A shelter map and threat alerts, which provide real-time life-saving information
- Services for civil defence and assistance: eEnemy (notification of enemy movement), eRecovery (compensation for damaged housing), eAssistance (financial support for IDPs)
- The e-Document service, which allows Ukrainians to confirm their identity without physical documentation in times of crisis.

Diia demonstrates that digital solutions can quickly transform from a convenient service to a critical civil preparedness infrastructure. During wars, natural disasters or large-scale population displacement, digital channels can:

- provide quick access to government services without the need for in-person visits
- guarantee on-going citizen engagement with the state even under conditions of infrastructural destruction
- create straightforward and clear entry points for people in changed circumstances (displaced persons, refugees, veterans).

Ukraine's experience in creating accessible entry points and digital humanitarian services could be a model for other cities and regions around the world that are seeking to enhance their crisis resilience.

On the night of 10 September 2025, dozens of Russian drones and a cruise missile violated Polish airspace, resulting in the destruction of Polish property. This alarming incident highlights the importance of notification systems (127).

Lessons from a regional perspective

Since the onset of full-scale hostilities, Lviv and the surrounding region have facilitated access to critical infrastructure for the population, combining municipal platform solutions and digital services in partnership with civil society organisations. In the first weeks of the war, one of the key tasks was to provide shelter for both residents and

internally displaced persons. The city quickly compiled an inventory of shelters and created an interactive map, which was made available on the Diia portal (126). This allowed citizens to find the nearest safe space, even during prolonged air raids. Some of these spaces were located in schools, universities and healthcare settings, which made it possible to integrate educational and medical activities. Communities in the region also set up collective shelters for internally displaced persons in sports halls, dormitories and other communal spaces.

The water utility Lvivvodokanal introduced backup power sources for pumping stations and deployed drinking water distribution points in case of disruptions (128). The city has organised a system of humanitarian warehouses and distribution points for IDPs, in partnership with international agencies (UNHCR, Red Cross), as well as a network of social services canteens. For example, the Kitchen for the Army and IDP initiative, in co-operation with volunteers and the municipality, has provided daily meals to thousands of people (129).

Energy and heating were also critical challenges. In the winters 2022–2023 and 2023–2024, hundreds of Invincibility Points were set up in Lviv and the region, which provide access to electricity, heat, the internet and places to sleep (130). Backup generators were procured for key infrastructure facilities, including hospitals, train stations, ASCs and water utilities, which made it possible to remain operational during the attacks on energy infrastructure (131). At the same time, heating systems were upgraded: many boiler rooms in schools and hospitals were converted to use alternative fuels, including wood and pellets, which helped improve energy sustainability.

Lviv also served as a medical hub for the whole of Ukraine. Wounded soldiers and civilians, as well as seriously ill patients from frontline areas, were evacuated here. The city added extra beds, formed mobile psychological assistance teams, and coordinated medical supplies with international partners, including WHO and UNICEF (132). Hospitals adopted telemedicine and digital patient registries, which facilitated continuity of care even when people relocated elsewhere.

Education, too, had to be adapted to war conditions. Shelters were set up in schools and universities in Lviv, which allowed for the resumption of in-person education. Additional classes were made available for children from IDP families, and inclusive education was introduced. Lviv Region became an important region for integrating students and schoolchildren from the eastern areas, and special support programmes were created specifically for them (133). A combination of offline and online education ensured ongoing accessibility to education even during frequent air raids.

By combining digital technology and physical infrastructure, Lviv and the region represent a unique case study. On the one hand, the Diia app provides access to shelter maps, digital documents, the eDocument service, and wartime programmes such as eEnemy and eRecovery (59). On the other hand, the municipality, along with volunteers and NGOs, established physical access points to essential services such as shelters, heating and humanitarian warehouses. One key factor was the rapid scaling of volunteer efforts, which ensured the sustainability of the system.

The experiences from Lviv demonstrate that access to critical infrastructure in wartime depends on close co-operation between municipalities, volunteers, businesses and international organisations. This combination of digital services, local solutions and international support has been crucial for ensuring the livelihoods of the population. For other countries in Europe and beyond, this example can serve as a guide to building a multi-layered resilience system that simultaneously integrates digital technologies, local resources and partnership initiatives.



Images: Andrew Petrishev; Katja Anokhina / Unsplash

Concluding remarks

With the war now in its fourth year, Ukraine has developed a robust civil preparedness strategy, combining clear communication, accessible information and support for citizens' physical, psychological and informational safety. Key measures include multi-channel alerts such as sirens, official web portals, secure apps and older technologies like radio. Accessibility for people with disabilities, psychological support, cybersecurity, countering disinformation and using inspirational community figures to convey critical information also feature prominently. Local authorities work closely with the UNHCR and international partners to assist internally displaced persons through the provision of housing, social services and integration programmes.

Lviv occupies a strategic location on Ukraine's western border with the EU. As such, it has played a vital role during the war, acting as a humanitarian and logistical hub for international aid, a key centre for internally displaced persons and a transit point for those seeking refuge abroad. Regional and local authorities mapped shelters and integrated this information into the Diia digital platform, ensuring that residents and displaced persons could quickly access safe locations. Backup systems were put in place for water, energy and heat supply, while humanitarian warehouses, mobile social services and volunteer initiatives ensured continuous support. Hospitals adopted telemedicine and digital patient registries to maintain healthcare continuity, and schools provided inclusive education and shelters.

The Lviv region's experience highlights the importance of combining digital solutions, physical infrastructure, partnerships with volunteers, NGOs and international organisations. This multi-layered approach demonstrates how communities can maintain critical services and resilience during wartime, and may be instructive for other regions seeking to strengthen preparedness and civil resilience.

The insights in this report provide a regional and practice-oriented perspective. The report emphasises social cohesion, trust and grassroots co-operation, and shows how resilience is built through partnerships between municipalities, civil society and international organisations. These examples offer useful insights for Nordic countries on strengthening local resilience and community-driven responses, which are key elements of the Nordic model of shared responsibility.

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Appendix: Methodology

This study is based on document analysis and interviews. Primary sources include semi-structured expert interviews with 8 Ukrainian specialists from key sectors: civil preparedness, healthcare, education, public administration, energy and the volunteer sector. The interviews were conducted during the period 5 July to 10 September 2025. The interview respondents were selected through a process of selective sampling, taking into account their expertise in key areas of civil preparedness. Contacts were obtained through professional networks and personal communication channels.

Documents were selected based on their official status, credibility and relevance to the topics of civil preparedness, resilience and humanitarian coordination. As noted in the list of references, source documents consist of legislative and regulatory acts; governmental and regional decrees, strategies, and methodological guidelines; reports and publications of international organisations; academic papers and research reports; institutional, project and organisational reports; online resources and official websites; training materials and educational courses; technical recommendations and standards; media materials and public communications; and informational and analytical online resources.

While this report focuses on Lviv, it is worth noting that the results would differ if another region of Ukraine had been examined. The city and region of Lviv have a specific status, as they are removed from the frontlines, and act as a hub for humanitarian, logistical and educational functions. Other areas of Ukraine, particularly those closer to the frontline, face different conditions, including greater levels of destruction, greater risks to the civilian population and alternative models of coordination between authorities, the military and civil society. The Lviv region therefore reflects a practice-oriented model of civil preparedness, while findings from other regions might highlight different aspects of emergency response and recovery.

Our research complements other reports, such as the Finnish report *Lessons from Ukraine: Impact of the war in Ukraine on civil society and protection of the population during the war* (133). This report offers a regional and practice-oriented perspective. For instance, it can also be worth noting that the above section "*Challenges and areas for improvement in Ukraine and the Lviv region*" was written from this practice-oriented regional perspective. As such, it integrates the experiences of local authorities, educational and healthcare institutions, civil society initiatives and international partners. It is based on a combination of qualitative analysis of expert interviews and content analysis of official documents and other sources. This approach allows for a balanced representation of the problems and opportunities of the Lviv region as a model for other territories seeking to enhance their resilience and civil preparedness under crisis conditions.

About this publication

Civil preparedness in practice Lessons and insights from Ukraine

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Nordregio Working paper 2025:5

ISBN: 978-91-8001-175-4 (digital)

ISBN: 978-91-8001-176-1 (PDF)

ISSN: 1403-2511

DOI: <http://doi.org/10.6027/WP2025.5.1403-2511>

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Layout: Kotryna Juškaitė

Cover Photo: Eugene / Unsplash.com

To cite this work please use: Dvulit, Z & Slätmo, E (2025). Civil preparedness in Practice. Lessons and insights from Ukraine. *Nordregio Working Paper 2025:5*

DOI: <http://doi.org/10.6027/WP2025.5.1403-2511>

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