

## Ukraine – conflict

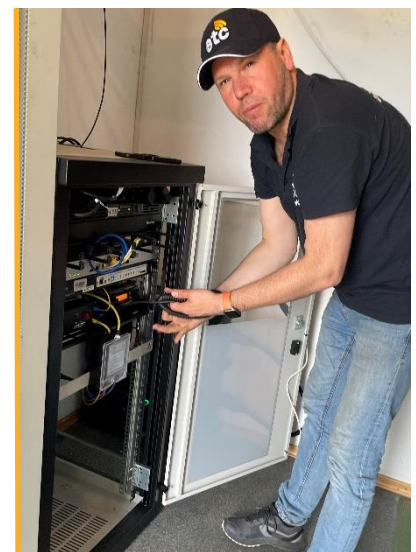
### ETC Situation Report #39

Reporting period: 01/09/2024 to 30/09/2024

The Emergency Telecommunications Cluster (ETC) was activated in Ukraine on 03 March 2022 following the escalation of armed conflict between Ukraine and the Russian Federation. ETC SitReps are distributed monthly.

## Highlights

- The ETC continued its planned expansion of the Very High Frequency (VHF) radio network across eight priority locations along Ukraine’s frontline to facilitate more robust security communications services for responders in high-risk areas. In September, the ETC facilitated the deployment of the VHF network in Kehychivka.
- The United Nations Department for Safety and Security (UNDSS) is satisfied with the first three Remote Site on Vehicle (RSoV) kits received in August and requested the cluster to produce more RSoV kits as per the Memorandum of Understanding (MoU) between UNDSS and ETC team. The kits will provide secure radio communications and data connectivity services for UNDSS mission movements in high-risk areas and during inter-agency convoys.
- ETC relaunched the new assessment of satellite phone network reliability across key Ukrainian cities to determine the coverage and signal strength status of the network.



ETC extended the VHF coverage in Ukraine by installing the VHF radio and data connectivity equipment in Kehychivka city. Photo: WFP/ETC

## Overview

From January this year, 8,5 million people have been determined as needing humanitarian aid. The close cooperation of thirteen clusters has reached, 6.7 million people, as of September and their efforts are continuing to assist the remaining people<sup>1</sup>.

Throughout September, intense fighting continues to affect civilians with the most destructive attacks in Zaporizhzhia City, another attack in Kharkiv City, Kramatorsk Town, Pokrovsk City, Poltava Region, and Sumy City that cause damage to energy infrastructure, a centralized water and gas supply across Ukraine<sup>2</sup>. Ukraine’s Energy Ministry says that as of 24 September, more than 530 towns and villages across Ukraine were either fully or partially without electricity due to ongoing hostilities and technical issues<sup>3</sup>.

Despite the conflict, Ukraine is developing a data connectivity service and announced that internet connectivity is installed on the 16 trains and that a Wi-Fi network will soon be available for the passengers.

<sup>1</sup> [2024 UKR Humanitarian Response](#)

<sup>2</sup> [Top news - Ukraine](#)

<sup>3</sup> [OCHA Situation Report, 19 September 2024 - Ukraine](#)

## Impact on telecommunications

On 15 July, the National Centre for Operational and Technical Management of Telecommunications Networks obliged mobile and other telecommunications operators to provide stable data connectivity for at least 10 hours during power outages with a deadline of 01 October to provide 60% of base stations with alternative power sources. The largest national telecommunications operators informed authorities that they are far from meeting the stated network uptime requirements. Currently, they provide 65% network coverage, which is available for four hours while the rest of the service providers are available for about two hours. With back-up power solutions the service providers may achieve six hours of network connectivity. However, 10 hours network uptime is a challenging task to achieve with the current power situation in Ukraine. Despite that, the operators are updating and installing different equipment such as lithium-ferro-phosphate batteries, generators, solar power solutions, and power stations to achieve and guarantee 10 hours of network operation without centralized energy.

In September, the Donetsk Oblast was attacked several times—further aggravating the humanitarian situation in Pokrovsk and left some 28,000 people without essential services<sup>4</sup>, including power and putting the ETC equipment, VHF network coverage, and data connectivity at risk.

## ETC Activities

### Coordination

On 04 September, the ETC partnered with UNDSS to discuss the implementation plan of the new SOC design and requirements to accommodate the decentralization of central SOC in Kyiv to the field locations: Odesa, Dnipro, and Kharkiv. The new design will allow monitoring of the high volume of the ETC network through a software dispatcher and will keep physical radio base stations as backups.

On 24 September, the ETC participated in the 2025 Humanitarian Needs and Response Plan (HNRP) Workshop, where the cluster presented and discussed the response plan, frameworks, objectives, targets, funding, and activities for 2025.

### Security communications (radio)

#### VHF radio network

The ETC is expanding the VHF radio network across eight priority sites<sup>5</sup> along Ukraine's frontline to facilitate more robust security communications services for UN staff in high-risk areas of the response. The Ukrainian Broadcasting, Radiocommunications & Television Concern (BRT) hosts each site.

In September, the ETC facilitated the deployment of the VHF network in Kehychivka. The first four sites—Zaporizhzhia, Poltava, Sumy, and Pokrovsk—were completed from June to July. The second two sites—Mykolaiv and Orly—were completed in August. Only one site remains—Kropyvnytskyi—to fulfill the 2024 ETC target.

On 11 September, BRT installed the VHF antenna and cable on the TV tower in Kehychivka while the Internet Service Provider (ISP) provided the fibre optic data connection. On 13 September, the ETC installed the VHF repeater, power solution, and other related telecommunications equipment at the BRT TV tower. The ETC checked all the equipment and tested the system's continuity and power failover ability to seamlessly switch to the back-up. VHF coverage tests were also performed while driving on the road Dnipro - Kegychivka - Krasnopavlivka - Pervomaiskiy - Merefa - Dnipro. Full VHF coverage was identified. UN staff from Kehychivka and all UN actors during the missions between

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<sup>4</sup> [Humanitarian Impact of Hostilities in Donetsk, Kharkivska and Sumska Oblasts](#)

<sup>5</sup> Kehychivka, Kropyvnytskyi, Mykolaiv, Orly, Pokrovsk, Poltava, Sumy, and Zaporizhzhia.

Dnipro and Kharkiv along the frontline can now communicate directly with the UNDSS Security Information Operations Centre (SIOC) in Kyiv using the ETC VHF network.

Service at the following VHF radio sites was enhanced as tabulated:

- **Orly:** The ETC completed the installation and testing of all VHF equipment, and established the optical-fibre internet connection, at the new site—Orly. The test result showed a full VHF signal covering the road linking Orly—Synel'nykove and Dnipro, allowing the humanitarian community convoys to communicate directly with UNDSS SIOC in Kyiv using the ETC VHF network.
- **Sumy:** On 11 September, the ISP "Datagroup" provided the fibre optic data connections for Sumy BRT TV tower Remote Security Operations Centre (RSOC). The ETC team configured network equipment, tested the connection, and implemented it as a backup data connectivity platform.
- **Poltava:** On 18 September, the Ukrradioservice (URS) installation company installed the antenna and cables on the Poltava BRT TV tower. On 26 September, the ETC completed the upgrading, installation and testing of the VHF radio communications system in Poltava, to ensure uninterrupted secure communications services between humanitarian responders and the UNDSS SIOC in Kyiv. The test result showed full VHF signal coverage for the city.

The ETC has responded to the request from the International Safety Organisation (INSO) to extend the VHF radio network for use by Non-Government Organizations (NGOs)—the equipment for the expansion is being tested and piloted for integration into the existing VHF network managed by the ETC. The test results showed that the setup works with the ETC backbone. Since 26 September, ETC has been discussing the costs involved with the supplier. Previously, the VHF network established by the cluster was only available for use by UN agencies.

### **Security & Information Operation Centre (SIOC)**

On 05 September, the ETC team in Kyiv upgraded the SIOC to allow communication and monitoring of the newly deployed remote site in Orly.

On 09 September, the ETC team, in partnership with UNDSS, finalized the Kyiv SIOC's new design to switch over 13 active VHF repeaters to the dispatcher software for monitoring VHF traffic in the fields. The cluster has begun procuring materials for the upgrade and is expected to be delivered to the warehouse by the end of October.

On 16 September, the ETC upgraded the Kyiv SIOC, allowing the Kehychivka VHF repeater installed on the BRT TV tower to be connected to the ETC secure network and monitored through ETC standard tools.

### **Remote Site on Vehicle (RSoV) project**

The ETC continues to deploy the RSoV project—a mobile VHF radio solution that provides secure communications for UN armored vehicles operating in high-risk areas to provide secure radio communications and data connectivity services for UNDSS missions and inter-agency convoys.

As part of the RSoV project, the ETC supported UNDSS with the cabling of 24 armored vehicles (AV) and installation of nine RSoV kits in the UNDSS fleet and the SIOC. The first phase of this support is completed—three RSOV kits were deployed in Dnipro, Kharkiv, and Kyiv in August. On 04 September, the UNDSS requested the cluster to produce twelve more RSoV kits. On 10 September, ETC started procuring the needed RSoV materials as per the MoU between UNDSS and ETC.

On 16 September, the ETC loaned one RSoV kit from its stock in Kyiv to UNFPA and ten Starlink cables to UNDSS for the AV cabling.

### **Radio programming**

During the reporting period, the ETC programmed the following VHF handheld radios:

- Two for UNOPS in Mykolaiv;
- Three for WFP in Odesa and;
- Seven VHF handheld radios for the WFP in Kyiv.

Radio check exercises were carried out to verify the functionality and reliability of the programmed radios.

ETC radio programming services can be requested via email through a ticketing system: [ukraine.etc servicedesk@wfp.org](mailto:ukraine.etc servicedesk@wfp.org)

### **Capacity building**

The ETC offers radio capacity-building sessions to UN agencies to ensure staff are informed and equipped to respond to security incidents in the field. To book security communications training sessions, please use [this link](#).

On 25 September, the ETC team conducted training on the software-based radio control and monitoring (dispatcher software) usage for the two SOC team participants in Kyiv.

On 31 September, the ETC provided a Security Communications System (SCS) online training for 15 IOM participants from Ivano-Frankivsk and Uzhgorod.

### **Telephony**

At the beginning of September, the ETC received information from Iridium about the core changes made from their side. In recent months, the ETC has identified low reliability of Iridium satellite phone networks in areas where humanitarians use them as part of the security communications system in Ukraine. In particular, issues with network coverage have been found in Kyiv, Kharkiv, Dnipro, and Odesa.

The ETC conducted satellite phone signal strength testing in August throughout Ukraine, particularly in Kyiv, Kharkiv, Dnipro, and Odesa, and identified the low reliability of Iridium satellite phone networks. Iridium informed the ETC about the core changes made to its network. From 13 to 19 September, the ETC conducted the new testing exercise in the mentioned areas and the results show the same low reliability of the Iridium satellite phone network—Kyiv (some improvement, remains unstable), Lviv (all tests were successful within the Iridium network and local mobile networks), Dnipro (37% successful calls), Kharkiv (still unreliable, 7% successful calls), and Odesa (30% successful calls).

The ETC has finalized its testing of the satellite phone networks and concludes that it remains an unreliable option as part of the security communications protocol in missions. The cluster plans to explore alternative and secure communications platform to address the gap. .

### **Data connectivity**

The ETC provides data connectivity services in the inter-agency hubs in four common operational locations—Odesa, Kharkiv, Mykolaiv, and Lviv—and part of the SCS infrastructure to support the VHF radio network. In September, 125 unique users connected to the ETC network.

The ETC Helpdesk servicing the connectivity network recorded 100 tickets in September, 83 of which were resolved, and the remaining 17 are in process, representing an 83 percent completion rate.

On 01 September, ETC recorded service interruption at the Poltava Remote site due to power failure. ETC services were restored on 02 September after manually restarting the backup power.

On 09 September, the ETC partner's server used for the cluster WiFi user login was temporarily inactive due to a cyber-attack. However, the ETC users had an alternative WiFi network and therefore, the data connectivity service was not interrupted.

The ETC network supported by Cisco was expanded on 13 September by deploying one new SCS remote site in Kegychivka. There are now 13 active ETC service sites in Ukraine, providing data connectivity and security communications services to humanitarian actors.

On 20 September, the ETC monitoring system showed that the ETC Sumy remote site was down. On 24 September, the ETC Kyiv team conducted a mission to Sumy to check the data connectivity issue affecting the radio link with SIOC. After investigations, ETC concluded that the Meraki network device was malfunctioning, and it was replaced. This affected the ETC data connectivity between the SCS remote site with Kyiv SIOC. Remote site services have been restored.

### Services for Communities

The ETC continues to support the humanitarian Cash Working Group (CWG) in creating a chatbot as a one-way communication tool with affected communities in Ukraine to enhance information dissemination on Humanitarian Multipurpose Cash Assistance (MPCA). In August, the Retender process was started by the Procurement Unit and on 05 September, ETC and the Procurement unit conducted an open session/meeting with potential service providers. Two applications received from two vendor developers, have been evaluated. On 26 September, WFP TEC and ETC started a joint technical assessment of the proposals focusing on evaluating the demo versions of the chatbots provided.

## Dashboard

See the [ETC Dashboard](#) for an overview of service locations.

## Funding

The ETC in Ukraine is 100 % funded out of a 2024 budget requirement of US\$1.5 million to continue delivering vital communications services. The ETC currently has a balance of US\$557,000 to cover cluster activities until the first quarter of 2025.

Funds received by the ETC in 2023 were carried over into 2024 to complete critical projects. US\$921,000 was received in May 2023 from the Government of Japan and a US\$500,000 in-kind equipment donation received in February 2024 from Cisco Crisis Response to secure the VHF radio backbone network in Ukraine. A further US\$402,000 was received in July 2024 from UNDSS to fund the extension of the VHF radio network, the re-design of the SIOC, and the implementation of the RSoV solution for UNDSS vehicles.

## Challenges

Expanding VHF coverage and data connectivity in locations close to the frontline is becoming more challenging and dangerous for the ETC engineers.

On 05 September, ETC recorded a service interruption at the Pokrovsk remote site due to a power failure after the shelling. On 06 September, ETC disabled the equipment providing data connectivity services, at the site and will be reactivated when the security situation improves.

The risk of cyber-attacks is considered high in the region.

## Contacts

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Further information related to ETC Ukraine operation can be found on the website:

[www.etcluster.org/emergency/ukraine-conflict](http://www.etcluster.org/emergency/ukraine-conflict)

For more information or to be added or deleted from the mailing list, please contact:

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