

HUMANITARIAN LAW & POLICY



Protecting essential service personnel is a vital part of humanitarian action

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Water and wastewater pipelines, electricity lines and telecommunication installations permeate contemporary urban landscapes and form complex, interdependent service networks,

which populations rely on for their essential needs. Armed conflict can damage or disrupt these networks and the essential services they provide. In recent years, increasing attention has been paid to protecting critical civilian infrastructure, yet addressing the humanitarian impact of essential service disruption requires a broader focus beyond physical infrastructure.

In this post, the group of experts behind the newly released report “Keeping the Lights on and the Taps Running”, co-published by the ICRC and the Norwegian Red Cross, highlight the crucial yet often overlooked role of the personnel who operate, maintain, and repair essential service infrastructure during hostilities. They argue that protecting and facilitating safer access for essential service providers during armed conflict should be considered a key component of humanitarian action and review the Movement’s experience in doing so.

ICRC Humanitarian Law & Policy Blog · Protecting essential service personnel is a vital part of humanitarian action

In Gaza, Sudan and Ukraine – as well as other contemporary urban conflicts outside the international spotlight – the disruption of essential services has devastating humanitarian impacts on civilian populations. Without clean water, sanitation conditions in densely populated areas quickly deteriorate, and infections and water-borne diseases spread. Electricity cuts turn hospitals and operating rooms dark, render x-rays, anesthetic machines, and ventilators inoperable, and prevent maternity wards from effectively treating sick or premature newborns in incubators. Out of service elevators may hinder people unable to walk from evacuating residential buildings and a lack of electricity may prevent them from using their phones to call for help.

All urban services require three critical and interdependent components to function: people, hardware and consumables. Disruption occurs when any one of the critical components is compromised, for example when a bomb damages an electrical installation, when personnel needed to keep a water treatment plant operational are caught in the crossfire, or when fuel to operate water pumps runs out. Therefore, civilians can only have access to essential services if the personnel can safely access their places of work to ensure the systems’ continuous functioning and to repair infrastructure as necessary. The complexity of large power and water/sanitation systems in cities means that qualified and experienced staff are indispensable to their functioning and thus to service delivery.

In many contexts experiencing urban fighting, personnel in the electricity, water and sanitation sectors have only been able to “keep the lights on and the taps running” at great cost to themselves, including injury and death. The need to protect essential services personnel in the riskiest of places – war zones – remains largely overlooked by the public or parties to armed conflict and even by humanitarian agencies. Ensuring better respect and protection for essential service personnel, so they can continue their work during conflicts, is vital not only for their own safety, but also to ensure that the quality and quantity of power and water can be maintained at sufficient levels even during crisis situations. These services are central to the health, livelihoods, safety and well-being of civilians.

The need for enhanced safety of essential service providers

In cities affected by war, essential service personnel are exposed to the same risks as other civilians. They also benefit from the same protection: under international humanitarian law (IHL), each of the three components of any essential civilian service (people, hardware and consumables) is in principle covered by the general protection afforded to civilians and civilian objects and benefits from a presumed status of civilian objects or persons. The fundamental IHL principles and rules governing the conduct of hostilities – distinction, proportionality and precaution – therefore apply to them.

In addition, essential service personnel face other risks specific to the nature of their work. This has led to death and injury as well as damage to vehicles, equipment and other property. The operation and routine maintenance of water and electricity services requires not only the movement of materials but also the movement and regular presence of teams of personnel. Certain facilities require continuous staff presence based on rotating shifts, others may only have to be attended for periodic or emergency repairs. In either case, continuous, unimpeded and safe access for essential service personnel to all parts of the vast infrastructure networks spanning the urban and peri-urban space is a precondition for effective service provision.

In many conflicts, workers have become casualties of direct attacks and crossfire when working at plants or repairing infrastructure. Interviewees also highlighted the frequent danger of explosive remnants of war on workers' routes, and of improvised explosive devices deliberately placed around or inside water and power stations. The presence of weapon bearers inside infrastructure facilities, due to the perceived militarily advantageous location or the convenient shelter they provide, creates additional risks to the personnel.

When urban armed conflict erupts, elements of the power and water infrastructure are typically spread across exposed areas. Pipelines and power lines will almost inevitably cross the front lines between the warring parties. Facilities may thus fall under the control of different armed actors. Even the simple act of moving between locations and transporting spare parts and consumables may then entail interacting with multiple parties, passing through checkpoints manned by various armed factions, and dealing with cumbersome, uncertain administrative procedures and security clearances for safe passage.

Despite these risks and their vital contribution to essential services, personnel do not currently enjoy any special or heightened protection. This contrasts with the special protected status afforded under IHL to "objects indispensable to the survival of the civilian population", with drinking water installations and supplies explicitly listed. Such protection also *extends to* items of energy infrastructure critical to the effective operation of other indispensable objects. It also contrasts with the enhanced protection provided under IHL to medical, civil defense and humanitarian relief personnel.

Acknowledging the critical role of water, sanitation and electricity provider personnel, the report calls for further legal, policy and diplomacy work to increase understanding of the humanitarian nature of their work and to explore new ways of enhancing their protection.

Protecting and facilitating safer access in practice

While essential service providers are experienced professionals who know their communities and can often manage many things themselves, an armed conflict poses multiple challenges to their work. Humanitarian actors can, in some cases, help them overcome such challenges. In recent years the ICRC and National Red Cross and Red Crescent Societies operating in urban warfare contexts have gained considerable operational experience in facilitating safer access for essential service providers.

There are numerous instances where these efforts have been applied in practice. For example, between 2012-16, the Syrian Arab Red Crescent (SARC) played a vital role in coordinating pauses in the fighting and access with the multiple armed groups on the ground to the then opposition-held eastern part of Aleppo for water service personnel and for delivering fuel to the Bab al-Nayrab and Suleiman al-Halabi pumping stations. SARC took the lead in collecting information from the essential service providers and checking what they needed.

When fighting broke out in Khartoum in 2023, the power supply to the Bahri water treatment plant, which supplied clean water to 1.5 million inhabitants of the Sudanese capital, was disrupted. Active hostilities in the area initially

prevented technicians from accessing the damaged overhead power lines to undertake repairs. The ICRC then facilitated safe access for workers of the Sudanese Electricity Company to repair the cables by notifying the parties of the planned work and the routes that would be taken and obtaining security guarantees. When personnel traveled to and from the repair site, the ICRC escorted the technicians in a convoy, flying the ICRC flag, and then remained next to them for the duration of their repair works.

In Ukraine prior to 2022, following a number of security incidents, the ICRC partnered with the Voda Donbassa water utility company to increase the essential service providers' visibility. The ICRC arranged for vehicle stickers showing the company logo and "water utility worker" or "Donbas Water" in large characters. It also changed the vehicles' colour (formerly camouflage pattern paint) to avoid any possible confusion with the military, and donated orange high-visibility vests for repair teams and operators in facilities near the line of contact. The logic was that clearer visibility would help the parties to the conflict to identify essential service personnel and assets and to distinguish them from combatants and military objects.

These are just a few examples of interventions highlighted in the report that are possible and necessary to reduce the risks to essential service providers in conflict situations and facilitate their safer access.

The way forward

The report concludes that much more can and should be done by all stakeholders. The Red Cross and Red Crescent Movement as well as other humanitarian organizations can make a real difference in civilians' lives by investing more in understanding the challenges of essential service providers and developing capacities to support their work both before and during armed conflicts. Essential service providers should, even before conflict starts, identify measures to provide protection to facilities and personnel and develop contingency plans. Donors should ensure that resources to maintain essential services, including through enhancing the protection and safety of essential services personnel, are made an integral part of humanitarian and development funding.

Our hope is that the report will stimulate serious examination, within the Red Cross and Red Crescent Movement and beyond, of how to expand and professionalize this area of work and of how to increase both physical and legal protection, including considerations around distinctive signs, of essential service providers over the long-term. The need is urgent, as an ever-increasing part of the world population are living in urban areas and depend for their lives and well-being on these services.

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