Emerging Patterns of Civilian Harm in Ukraine
March 9, 2022

On February 24, 2022, the Russian Federation launched a large-scale land, air, and sea invasion of Ukraine, which has resulted in devastating harm for civilians. Twelve days after the fighting began, Ukraine’s defenses slowed down and pushed back Russian forces advancing on multiple fronts. However, in the south, the port of Kherson on the Black Sea was the first major city to fall.1 Fierce fighting is ongoing in Mariupol and in Kharkiv, Ukraine’s second-largest city.2 A column of military vehicles stretching over 40 kilometers is making its way toward the capital, Kyiv, and bombing and shelling continues across the country. As of March 6, 2022, the Office of the United Nations High Commissioner for Human Rights (OHCHR) reported 1,207 civilian casualties in Ukraine: 406 killed and 801 injured,3 though unverified reports by the Ukrainian State Emergency Service put the number closer to 2,000 civilians killed since the start of the invasion.4 Furthermore, over two million Ukrainians have fled to neighboring countries according to the UN High Commissioner for Refugees.5

Center for Civilians in Conflict (CIVIC) has been monitoring patterns of civilian harm from open-source information and local and international media, as well as from local authorities and communities. CIVIC has been present in Ukraine since 2017, supporting the resolve and capacities of communities for better civilian protection. The perspectives of CIVIC’s Ukraine team, as well as interactions with local networks and communities, has informed the content of this paper. This paper reflects on the impact of the ongoing international armed conflict on civilians; offers urgent recommendations to better protect the civilian population of Ukraine from the conflict’s devastating consequences; and analyzes ways to ensure accountability and transparency on violations and abuses of international humanitarian law (IHL) and other applicable laws, including international human rights law (IHRL).6

Patterns of Civilian Harm

In the earliest days of the attack, initial reports focused on significant civilian harm resulting from fighting in densely populated areas and the use of non-precision weapons in cities such as Chuhuiv, Kharkiv, Kyiv, Mariupol, Uman, Vuhledar, and others near the frontlines. Amnesty International’s Crisis Evidence Lab verified an incident on February 24 in which a missile targeting Chuhuiv Air Base instead hit a nearby residential block, killing one, injuring another, and damaging the residential area.7 The same day in Vuhledar, a ballistic missile struck near a hospital building, killing four civilians and injuring ten.8 Other reports suggested that Russian troops were using Multiple Launch Rocket Systems (MLRS) – unguided and notoriously inaccurate artillery systems – in the outskirts of Kharkiv, a city of just under 1.5 million.9 A day later, on February 25, a preschool in Okhtyrka was hit by cluster munitions while

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5 Grandi, Filippo, Twitter Post, March 8, 2022, 10:29 AM, https://twitter.com/FilippoGrandi/status/1501304937812869137?s=20&t=RzZbM7ofuK19y49qyekOS6w.
8 Ibid.
civilians took shelter inside, killing three (including a child) and wounding another child. Amnesty International suggests a logistics storage yard 300 meters north of the school may have been the intended target.10

As the conflict escalated, reports of attacks by Russian forces that appeared to have been directed at civilian areas multiplied. Multiple sources pointed to changing Russian tactics: as Russia’s blitzkrieg over Ukraine failed, Russian forces reportedly switched to shelling civilian areas to break resistance.11 Geolocated images showed hits on residential areas in Kharkiv, which do not appear to be in the vicinity of military installations and therefore could have been deliberately targeted.12 A female CIVIC staff member based in Kharkiv described her own distress: “Each morning starts as a normal day until the air raid sirens go off. We grab our backpack, run to the shelter, and stay there for hours while listening to the sound of explosions and weapons in total uncertainty.”

Russia has consistently denied targeting populated areas. However, the International Criminal Court (ICC) Prosecutor announced on February 28 that his Office “had already found a reasonable basis to believe crimes within the jurisdiction of the Court had been committed.”13 Following referrals from 39 ICC State Parties, the Court was able to proceed with opening an investigation into the situation in Ukraine.14

Threats to civilians have also come from attacks on critical infrastructure and dangerous sites. This includes strikes on hospitals,15 as well as oil depots and other energy-related installations.16 Strikes on gas pipelines or nuclear energy reactors can cause severe losses among the civilian population, as well as long-term environmental and health consequences. On February 25, the Centre for Information Resilience geo-localized an explosion at a strategic fuel reserve in Kharkiv,17 and early reports from the Chernobyl Exclusion Zone indicated higher radiation measurements after the Russian Federation took control of the site.18 According to the International Atomic Energy Agency (IAEA), the measurements did not indicate a threat, but the risk of a serious incident involving nuclear facilities was real enough for the IAEA chief, Rafael Grossi, to call on “all parties to refrain from any measures or actions that could jeopardize the security of nuclear material.”19 IAEA issued similar concerns on March 7 after Russian forces took control of Zaporizhzhya Nuclear Power Plant, noting two of the seven indispensable

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18 On 25/02, the Centre for Information Resilience geo-located an explosion at a strategic fuel reserve in Kharkiv - toxic oil fumes can cause grave health issues when inhaled and spilled oil (in addition to oil fires) causes soil contamination.  
pills of nuclear safety and security appeared to be violated — namely that “operating staff must have the capacity to make decisions free of undue pressure” and that “there must be reliable communications with the regulator and others.” These incidents prove attacks on nuclear facilities are part of a broader trend in Russia’s military offensive on civilian infrastructure in Ukraine. Potential damage to nuclear facilities poses very real risks to the health and safety of civilians, as well as the environment, and is prohibited by the Geneva Conventions (Article 56 of Additional Protocol I and Customary IHL Rules 7, 43).

More recent information suggests civilians are being denied safe passage out of conflict zones, shot at by Russian forces, or used as human shields. In Mariupol, reports indicated that Russian forces were attacking railways and bridges, preventing civilians from leaving.22 The UN Office for the Coordination of Humanitarian Affairs (UNOCHA) cited that “urgent evacuations remain impossible” in the cities of Bucha and Hostomel due to continuous heavy shelling.23 A team from the New York Times directly witnessed a Russian hit on one of the main evacuation roads used by civilians moving out of Irpin and towards Kyiv, which left four dead.24 Most accounts citing actual incidents, however, remain unverified at the time of writing. Local reports also warn of possible military equipment being placed in residential areas by Russian forces; the occupation of medical facilities, including a psychiatric clinic and a children’s hospital; civilians being taken hostage; and booby-trapped items like children’s toys or matchboxes. If verified, these incidents represent blatant violations of IHL, which will require a full, independent, and impartial investigation.

In addition to immediate threats, reports of unexploded ordnances (UXOs) littering populated areas throughout Ukraine suggest long-term consequences for civilians.25 Cluster munitions and UXOs discarded by ammunitions that failed to detonate can threaten civilians long after active fighting ceases. CIVIC therefore expects an increasing number of incidents involving civilians unknowingly detonating UXOs as they try to clear them. Photo documentation of UXOs in the middle of playgrounds are a grim reminder that children are likely to suffer disproportionate and long-term impacts from the conflict.26

The Unfolding Humanitarian Crisis

As fighting continues and it becomes more difficult to leave areas most affected by the conflict, a humanitarian crisis is unfolding in Ukraine. With missile strikes disrupting transport routes, supplies of water and food in the southern port of Kherson are running low.27 In Mariupol, heat and electricity were cut off in many areas, and residents are struggling to find food and water.28 Credible allegations additionally point to electricity and mobile phone networks not working in

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20 IAEA reports that “any action of plant management – including measures related to the technical operation of the six reactor units – requires prior approval by the Russian command” and that “phone lines, as well as e-mails and fax, were not functioning anymore [...] Mobile phone communication was still possible, but with poor quality.”
25 Unverified video evidences suggest that on 27/02 in Nova Kakhovka, Russian forces used a power plant and residential areas as launch base for MRL, and in Kharkiv they hid in a school to continue fighting Ukrainian forces.
26 Demining non-profit The HALO Trust expressed concern about video circulating on social media of UXO in Ukraine, and shared safety warnings in Russian, Ukrainian, and English.
27 On February 26, multiple media shared images and videos of an unexploded Grad rocket stuck in the middle of a kindergarten playground in Kharkiv.
cities near Kyiv, such as Bucha and Hostomel. The World Health Organization (WHO) has reported major shortages of oxygen and other vital medical supplies in Ukrainian hospitals.\(^{31}\) Attempts by warring parties to put in place evacuation and humanitarian routes have been met with very limited success so far.\(^{32}\) The risks associated with being trapped in active hostilities are further compounded by limited or no access to basic services, life-saving information, and other means of communication, and will continue to worsen as the conflict persists. Those most vulnerable – the elderly, persons with disabilities, and children – will suffer the most.\(^{33}\)

### IHL Provisions on Protection of Civilians

One of the main goals of IHL is to limit the suffering of conflict-affected civilians. While recognizing military objectives and warfare, it strikes a balance between the latter and principles of humanity. It is thus at the core of the international rule of law system. The ongoing armed conflict between Russia and Ukraine is governed by IHL and Russia and Ukraine are both signatories to the four Geneva Conventions of 1949 as well as Additional Protocol I of 1977. They are furthermore bound by Customary IHL and the applicable obligations under IHRL.

Based on the patterns of civilian harm described above and the humanitarian crisis unfolding as a result, it is imperative to not just talk about IHL, but to apply it.\(^{34}\) Current trends in the conflict indicate that relevant IHL obligations are not being upheld.

Fighting in populated areas (especially in bigger cities as is the case in Ukraine), even when exclusively targeting military objectives, requires ensuring that the anticipated incidental harm to civilians and/or civilian objects is not excessive in relation to the concrete and direct military advantage expected to result from hostilities.\(^{35}\) In areas where military objects and civilian infrastructure coexist, use of weapons – in particular explosive weapons with wide area effects – requires special discrimination.\(^{36}\) In Ukraine’s urban centers, the entanglement of military objectives and civilian presence has already rendered the use of explosive weapons, such as ballistic missiles and MLRS, deadly to civilians and damaging to critical infrastructure. Indiscriminate attacks, e.g. those not directed at specific military objectives and those that employ weapons which cannot be precisely directed at military areas, are prohibited as per IHL.\(^{37}\)

The targeting and shelling of civilian houses and apartments is a blatant violation of the distinction principle of IHL, e.g. distinguishing between combatants and civilians.\(^{38}\) Attacking, destroying, removing, or rendering useless objects indispensable to the survival of the civilian population (such as water, heating, and electricity infrastructure) is prohibited.\(^{39}\)

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33 According to reliable humanitarian sources, and as of March 8th, residents of these cities need green corridors to evacuate and deliver food and medicine: Bucha, Volnovakha, Kakhovka, Kherson, Kharkiv, Kupyansk, Nova Kakhovka, Mariupol, Olenivka, Sumy, Troyians, Chernihiv, Chuhuiv, Ivanivka, Schastia, Hostomel, Vorzel, Irpin, and Izium.

34 The protection of civilians areas and legal obligations mentioned below are not exhaustive.

35 ICRC, Customary IHL Database, https://ihidatabases.icrc.org/customary-ihl/eng/docs/v2_rul_rule14#:~:text=The%20manual%5B%5Dglossary%20defines%20%E2%80%9Ccollateral,against%20a%20legitimate%20military%20objective%20%E2%80%9D%2C%20March%202022.


Attacking nuclear facilities such as the Zaporizhzhia plant risks resulting in the release of harmful materials and is prohibited (with very limited exceptions).\textsuperscript{40} Article 56 of the 1977 Additional Protocol I stipulates: “Works and installations containing dangerous forces, namely dams, dykes and nuclear electrical generating stations, shall not be made the object of attack, even where these objects are military objectives, if such attack may cause the release of dangerous forces and consequent severe losses among the civilian population.”

IHL recognizes the rights of conflict-affected civilians to impartially access humanitarian assistance, such as water, food, and medical supplies. While states are generally the primary parties responsible for meeting these basic needs, this can be challenging during armed conflict. In such scenarios, parties must provide humanitarian actors unimpeded, impartial access to assist civilians in need.\textsuperscript{41} With cities like Mariupol currently being cut off from outside supplies,\textsuperscript{42} it is also vital to remind parties to the conflict that they must refrain from deliberately impeding the delivery of relief supplies to civilians in need in areas under their control.\textsuperscript{43}

In occupied Ukrainian territories,\textsuperscript{44} the occupying power has a duty to ensure that the population is provided with food and medical supplies. In particular, it should bring in the necessary food, medical supplies, and other items if the occupied territory has inadequate resources. If all or part of the population of an occupied territory lacks the necessary supplies, the occupying power is under an obligation to consent to relief efforts to aid the population.\textsuperscript{45}

**Protecting Civilians in Ukraine: Urgent Actions**

The international community needs to support the adoption of urgent measures to protect the lives of civilians in Ukraine. All parties must abide by IHL and other applicable norms, including IHRL; all parties must refrain from targeting civilians and civilian objects, and take precautionary measures to mitigate civilian harm from direct attacks and consequences thereof.

The international community must prioritize the protection of civilians in all efforts to bring about a ceasefire and stop the fighting in Ukraine. A pause in hostilities of several days is urgently needed to spare the lives of civilians, allow for safe evacuation from areas under constant fighting, and permit the delivery of humanitarian assistance into these areas. In particular:

1. All efforts should be directed at exerting pressure on the Russian Federation to immediately cease indiscriminate and targeted attacks on civilians and civilian infrastructure, such as medical facilities, residential buildings, and schools. All available means of pressure must be applied to reduce the use of weapons that result in indiscriminate attacks on civilians and civilian objects, including ballistic missiles, MLRS, and other explosive weapons with wide area effect in populated areas.

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\textsuperscript{40} The special protection against attack provided shall cease for a nuclear electrical generating station only if it provides electric power in regular, significant, and direct support of military operations and if such attack is the only feasible way to terminate such support.\textsuperscript{41} Additional Protocol I provides that “only in case of imperative military necessity may the activities of the relief personnel be limited or their movements temporarily restricted” (Additional Protocol I, Article 7(3) (adopted by consensus) (ibid., § 725). The exception of imperative military necessity is justified on the basis that relief operations must not be allowed to interfere with military operations, lest the safety of humanitarian relief personnel be endangered. These restrictions can only be limited and temporary, however. See: ICRC, Customary IHL Database, https://ihl-databases.icrc.org/custimized-ihl/eng/docindex/v1_rul_rule56. 7 March 2022 and ICRC, Customary IHL Database, https://ihl-databases.icrc.org/custimized-ihl/eng/docindex/v1_rul_rule55, 7 March 2022.\textsuperscript{42} Morris, Llewellyn, Ellen Francis, and Robyn Dixon. “Mariupol, Key Ukrainian Port, under Siege and out of Water.” We Are Being Destroyed.” The Washington Post, March 3, 2022. https://www.washingtonpost.com/world/2022/03/03/ukraine-mariu Polsiege-russia-invasion/.


2. Pressure should be exerted on, and support provided to, Ukrainian and Russian officials to urgently negotiate *evacuation routes* to allow civilians to *safely leave conflict-affected areas in a manner that guarantees their safety, dignity, and protection.* The Russian Federation should be reminded that evacuation is a voluntary process; civilians must not be prevented from leaving areas where hostilities are taking place, nor be attacked during the process, and they should not be forced to evacuate into enemy territory. Should reports of deliberate actions by Russian forces aimed at preventing civilians from leaving turn out to be correct, these tactics must be immediately abandoned. In addition, the Russian Federation should be reminded that civilians who remain in besieged areas continue to be protected under their status as “civilians”.

3. *Safe humanitarian access routes* must be established from and into areas exposed to intense fighting, where the dire need of food, medical supplies, winter items, and other essential non-food items increases the vulnerability of the population day after day. As siege-like situations develop in Ukraine, the besieging party cannot deliberately deprive civilians of essential supplies. Armed forces besieging an area must allow unimpeded access to humanitarian assistance essential for the survival of civilians.

4. All parties to the conflict need to proactively *track patterns of civilian harm* in areas they are operating in and subsequently adapt tactics, operational guidance, and rules of engagement (ROEs) to better protect civilians.

5. In order to bring about full accountability and transparency into alleged IHL and IHRL violations, the work of existing monitoring missions (such as the UN Human Rights Monitoring Mission in Ukraine) and investigation mechanisms need to be reinforced and scaled up. In addition, the *newly created Independent International Commission of Inquiry on Ukraine* needs to *urgently be operationalized* in order to investigate all alleged violations of IHL and make recommendations to ensure perpetrators are held accountable. Collected data should be disaggregated to enable attribution of specific incidents to different categories of armed actors, including private military contractors. International actors with satellite or geolocation capabilities in the area should add evidence of civilian harm to the information gathered.

6. As the Russian Federation’s attacks on nuclear sites risk serious long-term and reverberating effects on the civilian population, coordinated steps by Russia, Ukraine, and the international community should be taken to prevent damage to all remaining nuclear sites in Ukraine.

International partners of Ukraine, including NATO, NATO nations, the European Union (EU), and EU member states, need to urgently prioritize the protection of civilians in their assistance measures to Ukraine:

1. NATO, NATO members, the EU, and other international partners of Ukraine should prioritize civilian protection in their own military preparedness and planning, as in assistance measures to Ukraine.

2. While Ukraine’s international allies deliver lethal and non-lethal equipment to Ukraine, they should also focus on supplies crucial to civilian protection, including protective vests and medical equipment. These supplies need to be distributed to civilians.

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3. International partners should use their own capabilities to step up operational support to Ukraine, as well as to international monitoring agencies, to prevent, mitigate, and track incidents of civilian harm, including through sharing satellite imagery.

4. The donor community needs to support the urgent scale-up of humanitarian assistance through dedicated funds, rapid grants, and coordination mechanisms.

Methodology

CIVIC has been present in Ukraine since 2017, monitoring trends in civilian harm and working with local actors to put in place innovative procedures aimed at mitigating civilian harm.

For this analysis, CIVIC has relied on open-source information available online and/or shared by Ukraine-based and international sources. CIVIC staff worked to triangulate every report. For data that has been verified by evidence labs or investigative journalists, CIVIC is confident of its veracity. For incidents that have been geo-localized and for which video or photographic evidence is available, CIVIC is moderately confident in their authenticity. A majority of the incidents reported are currently awaiting verification and have been included in this paper to better inform our conclusions on trends reported on the ground. The inclusion of these unverified incidents does not constitute a confirmation of the incident as CIVIC currently does not have independent capacities to verify claims of civilian harm in Ukraine.