

DRAFT FOR FOURTH STATE CONSULTATION

Workstream 6 – UPHOLDING INTERNATIONAL HUMANITARIAN LAW IN THE USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES DURING ARMED CONFLICTS

CO-CHAired by Ghana, Luxembourg, Mexico, Switzerland and the International Committee of the Red Cross

Overview

Information and communication technologies (ICTs) have become indispensable to the lives of people throughout the world. In our digitalized and connected world, essential services for civilian populations, as well as people's ability to connect with loved ones and pursue economic development, depend on the integrity and availability of ICTs. In conflict-affected areas, reliable ICTs are critical for civilians to access essential goods and services, for governments to provide services, and for supporting medical services and humanitarian activities, including those of the International Red Cross and Red Crescent Movement. While ICT capabilities may enable belligerents to achieve military objectives without necessarily causing harm, or with less harm to civilians or civilian objects than kinetic operations, their use in contemporary conflicts has also given rise to harmful ICT activities affecting civilian populations and infrastructure, including across international borders.

The workstream underscored the imperative to protect civilian populations and preserve human dignity in contemporary and future conflicts. To this end, it is essential to uphold and strengthen respect for international humanitarian law (IHL) in the use of ICTs during armed conflicts, to ensure that our

infrastructure, networks and ability to communicate are not shut down, our data is not erased, and our societies are not brought to a standstill.

The workstream also produced practical recommendations, outlined below, notably to

- protect the civilian population and civilian data and infrastructure from harmful ICT activities
- safeguard medical services and humanitarian activities from digital threats, and uphold prohibitions on sexual violence and the recruitment and use of children in hostilities, including through online means
- address information spread in violation of IHL
- minimize the risk of harm to the civilian population arising from the military use of civilian ICT infrastructure and prevent civilians – from hackers to personnel of technology companies – involved in ICT activities from violating IHL or from inadvertently putting themselves at risk.

To foster compliance with IHL in relation to ICT activities, the workstream underlined the importance of:

- recognizing that, in conflict-affected areas, reliable ICTs are critical for civilians, governments and humanitarian actors, and that ICT activities can inflict human costs, including suffering, injury or destruction, even without causing physical damage, underscoring the need to uphold humanity and human dignity in war
- committing to promote and clarify the application of IHL to ICT activities, and to take practical measures, individually and collectively, to mitigate risks to the civilian population and ensure that ICT activities remain consistent with the protections afforded by IHL
- continuing the study and discussion of how IHL applies to ICT activities, building on discussions under the workstream, with a view to promoting a shared understanding that safeguards civilians from harm
- promoting transparency through the public sharing of national views on how international law, including IHL, applies to ICT activities, as well as the exchange of lessons learned and good practices on mitigating civilian harm
- supporting capacity-building at bilateral, regional and global levels to strengthen states' ability to implement and apply IHL in relation to ICT activities.

Outcome

1. Protecting the civilian population and civilian data and infrastructure from harm arising from ICT activities during armed conflict

Contemporary armed conflicts show that ICT activities can pose risks to the civilian population and civilian data and infrastructure. Such activities can seriously affect civilians and other protected persons and objects, including where essential civilian services, such as electricity, water, sanitation, telecommunications, health care, humanitarian and emergency services or financial services, are disrupted, even in the absence of physical damage.

In the conduct of ICT activities in the context of and associated with an armed conflict, compliance is required at all times with IHL, including the principles of humanity, military necessity, distinction, proportionality and precautions.

ICT operations expected to cause death or injury to persons, or to result in damage to or destruction of objects, amount to attacks under IHL. This includes operations that may disable equipment or systems and require action (such as replacement, reinstallation or repair) to restore their functionality. Such ICT operations must be conducted in accordance with all IHL principles and rules on the conduct of hostilities, including the prohibitions on attacks against civilians and civilian objects, indiscriminate attacks and disproportionate attacks, and the principle of precautions.

Data lies at the heart of an increasingly digitalized world and is central to the functioning of essential civilian services and humanitarian activities. The way data is handled during armed conflicts may affect people's lives and dignity. Medical, biometric, financial and humanitarian data, among others, are integral to the delivery of public and social services. Deleting, manipulating, denying access to, or disclosing such data without authorization may disrupt essential services and expose individuals and communities to serious harm.

Several IHL principles and rules offer protection to the civilian population and civilian data and infrastructure against the dangers arising from ICT activities during armed conflicts, including:

- the principle that a party to an armed conflict may only resort to those means and methods of warfare that are necessary to weaken the military forces of the enemy
- the principles and rules governing the conduct of hostilities, including the prohibitions on attacks against civilians and civilian objects, indiscriminate attacks and disproportionate attacks, and the principle of precautions
- the obligation to take constant care to spare the civilian population, individual civilians and civilian objects in the conduct of military operations
- the rules protecting property from pillage, seizure and destruction.

Information-gathering activities *per se* are not prohibited under IHL, including when they involve accessing data.

In order to strengthen the protection of the civilian population and civilian data and infrastructure from harm arising from ICT activities during armed conflict, it is essential for states and parties to armed conflict to do the following:

- a) Establish and apply rigorous targeting procedures for ICT operations to ensure compliance with IHL, including to verify that targets qualify as military objectives and are not subject to special protection, and to assess and avoid or at least minimize the risk of incidental civilian harm.
- b) Base ICT operations including targeting procedures on all reasonably available information actively sought from relevant sources, including reliable data and intelligence, which are supported by legal advice, as required under IHL; and to the maximum extent feasible, seek expertise from cybersecurity and other relevant technical specialists on the structure, interconnectivity and civilian dependencies of ICT infrastructure.
- c) Where ICT infrastructure qualifies as a military objective under IHL but continues to serve civilian functions, take into account all reasonably foreseeable direct and indirect incidental effects on the civilian population, data and infrastructure resulting from the total or partial loss of its civilian use, including the impact on essential civilian services it provides or enables,

in accordance with the principles and rules of proportionality and precautions in the planning and conduct of attacks.

- d) In implementing the obligation of taking all feasible precautions in the choice of means and methods of warfare, select those means and methods that are expected to cause the least incidental civilian harm, including by rigorously assessing whether ICT-enabled or other non-kinetic means and methods would reduce the risk of civilian harm compared to available kinetic alternatives.
- e) Apply appropriate geographic, temporal and system-based limitations (“fencing”) in the conduct of ICT operations, to avoid, or at least minimize, the risk of incidental civilian harm.
- f) Continuously monitor ICT operations and ensure there is the capacity to adjust or terminate them to prevent unintended or excessive civilian harm. Where feasible, incorporate technical safeguards (such as “kill-switches”) enabling the halting, limiting or isolation of ICT operations if they risk spreading beyond their intended target, including into civilian networks or infrastructure or that of third-party states.

2. Minimizing the risk of harm to the civilian population arising from military use of civilian ICT infrastructure during armed conflict

Except for certain military networks, the ICT environment is predominantly civilian. However, the interconnection between civilian and military networks, and military use of civilian ICT infrastructure, create specific challenges for their protection.

Where civilian ICT infrastructure including infrastructure provided by technology companies is used for military purposes, not every such use renders it, or even parts thereof, a military objective under IHL. Nevertheless, military use may increase the risk that such infrastructure will be attacked, thereby exposing civilians and civilian objects in physical proximity to, digitally connected to, or dependent upon it to incidental harm.

IHL prohibits attacking civilian objects, including civilian ICT infrastructure. However, military use may turn such infrastructure, or parts thereof, into military objectives.

When attacking such military objectives, states and parties to armed conflict must respect the prohibitions on indiscriminate and disproportionate attacks and the principle of precautions, including where the civilian population relies on that ICT infrastructure for the delivery of essential services. Where feasible, they must seek to conduct attacks in a manner that affects only those components or functions of the ICT infrastructure used for military purposes and not those serving civilian functions.

To protect the civilian population against the effects of attacks, states and parties to armed conflict must, to the maximum extent feasible, take all necessary precautions to protect civilians and civilian objects under their control from the dangers arising from military operations.

In order to minimize the risk of harm to the civilian population arising from the military use of civilian ICT infrastructure during armed conflict, and in addition to the measures set out in Outcome 1 above, it is essential for states and parties to armed conflict under whose control such infrastructure is to do the following:

- a) Allocate appropriate financial and technical resources and adopt planning, design and configuration measures in advance of and during armed conflict.

- b) Wherever feasible, physically or technically separate the components of ICT infrastructure used for military purposes from those serving civilian functions, including through network segmentation or other appropriate configuration measures. This includes, where feasible, segregating data used for military purposes from those serving civilian needs, such as through separate storage and management and access-control arrangements.
- c) Strengthen the resilience of essential civilian ICT infrastructure and services, including through redundancy, contingency-planning and other measures to reduce the risk of incidental civilian harm.

3. Minimizing risks related to the involvement in ICT activities during armed conflict of civilians on the territory of a state or under its jurisdiction or control

In today's armed conflicts, the involvement of civilians in ICT activities during armed conflicts has become more pronounced. In some situations, states have tolerated, facilitated or encouraged civilians to conduct ICT activities against the adversary, including activities that may affect civilians and civilian objects.

As civilians are drawn closer to hostilities, they risk exposure to harm. Many may be unaware of the risks involved, the potential legal consequences of their conduct, or the IHL rules they need to follow.

Civilians – from hackers to personnel of technology companies – must comply with IHL when conducting ICT activities in the context of and associated with an armed conflict.

States and parties to armed conflicts are responsible for IHL violations committed by civilians, including hackers and technology companies' personnel, whose ICT activities during armed conflict are attributable to them. States must exercise due diligence to prevent IHL violations from being committed through or facilitated by the ICT activities by civilians on their territory or under their jurisdiction or control, and must suppress such violations if they do occur, in accordance with their obligations under IHL. States undertake to make IHL known to civilians in their respective countries. They must not encourage, aid or assist civilians in violating IHL, including through ICT activities.

Under certain limited circumstances, civilian involvement in ICT activities may amount to direct participation in hostilities, meaning that civilians lose their protection from attack, but only for such time as their involvement amounts to direct participation. In case of doubt, IHL requires that a person be considered as protected against attacks.

Children must not be allowed to take part in hostilities during armed conflict, including through ICT activities.

In order to minimize risks related to civilian involvement in ICT activities during armed conflict, it is essential for states and parties to armed conflict to do the following:

- a) Take concrete steps to inform civilians who may be involved in ICT activities in the context of and associated with an armed conflict of the legal and practical risks of doing so. These could include sharing information about IHL rules via social media, dedicated applications, radio or other means of mass communication, or developing IHL-compliant model codes of conduct that civilians conducting ICT activities should be asked to follow.
- b) Avoid, to the extent feasible, involving civilians in ICT operations amounting to direct participation in hostilities, to protect them from the dangers resulting from military

operations. Where such participation nevertheless occurs, integrate civilians into the armed forces to the extent feasible.

- c) Take all feasible measures to prevent children from taking part in hostilities through ICT activities, for example through education and awareness programmes for children and caregivers; by adapting the national legislation and policies prohibiting the recruitment and use of children to address online means, and enforcing them; and by considering age restrictions on access to digital tools that could amount to direct participation in hostilities, where appropriate.

4. Protecting civilian ICT products and services provided by technology companies during armed conflict

Technology companies increasingly provide cybersecurity and other ICT services or products to parties to armed conflict. In such situations, civilians and civilian objects that rely on, or are associated with, such products and services may be exposed to harm.

At the same time, ICT products and services provided by technology companies are widely used by the civilian population, governments and impartial humanitarian organizations, including during armed conflicts. Their disruption, degradation or misuse can therefore have significant humanitarian consequences. These civilian ICT products and services, as well as the civilian personnel providing them, are protected under IHL.

In order to enhance the protection of civilian ICT products and services provided by technology companies during armed conflict, technology companies should do the following:

- a) Be mindful that providing ICT products and services to parties to armed conflict carries both legal and practical risks.
- b) Understand, assess and take measures to minimize the risks of harm to civilians and civilian objects, whether to the personnel or property of these companies, or due to their physical proximity, digital connection to, or dependence upon the relevant infrastructure or services. This includes, to the extent feasible, physically or technically separating their infrastructure, services and products used to support military operations from those used for civilian purposes.
- c) Take measures to prevent their personnel from engaging in, facilitating or becoming complicit in violations of IHL, including through the provision of ICT products or services to parties to armed conflict, and to take appropriate action should any such acts occur.

5. Safeguarding medical services, humanitarian activities and other specifically protected persons, objects and activities from harm arising from ICT activities during armed conflict

The health-care sector and impartial humanitarian organizations are especially vulnerable to ICT activities during armed conflict. The increasing reliance of medical and humanitarian services on interconnected systems and digital data means that disruptions to ICT infrastructure or services can directly affect life-saving medical operations, compromise sensitive data, impair the work of impartial humanitarian organizations and their personnel, and jeopardize the delivery of essential assistance.

Medical personnel, units and transports, as well as humanitarian personnel and objects, must be respected and protected at all times, in accordance with IHL, including from harm arising from ICT activities. ICT activities during armed conflict must not unduly disrupt the functioning of medical services and humanitarian activities, including their data, ICT and communication systems.

The confidentiality of medical and humanitarian data must be respected, in accordance with IHL. This protection is critical to preserve trust in the work of medical services and impartial humanitarian organizations.

Parties to armed conflict must also take all feasible measures, in the prevailing circumstances and in light of the resources available to them, to prevent medical services and humanitarian activities from being harmed, including through ICT activities by third parties such as cyber criminals and other non-state actors not attributable to a party to an armed conflict.

Certain other objects and activities benefiting from specific protection under IHL, including objects indispensable to the survival of the civilian population, works and installations containing dangerous forces, cultural property and civil defence, may also face grave risks from ICT activities. The specific protection accorded to them must be respected, including when conducting ICT activities during armed conflicts. This protection includes their data and the ICT infrastructure indispensable to their functioning.

ICT activities can be used to commit or facilitate acts of sexual violence or to recruit or use children in hostilities. IHL prohibits sexual violence and the recruitment and use of children in hostilities, including when such acts are committed through or encouraged or facilitated by ICT activities.

In order to safeguard medical services, humanitarian activities and other specifically protected persons, objects and activities from harm arising from ICT activities during armed conflict, it is essential for states and parties to armed conflict to do the following:

- a) Support discussions and efforts to make the specific protection afforded under IHL to medical services and humanitarian activities identifiable and visible in the ICT environment, including through the development of a “digital emblem”, and continue engaging with the ICRC on the legal, technical and diplomatic avenues for its implementation.
- b) Explicitly reaffirm their commitment to respecting and protecting medical services and humanitarian activities, including the data, ICT and communication systems of these services and activities, and to facilitating their operations in the ICT environment, as well as to respecting the specific protection for objects indispensable to the survival of the civilian population, including their data and the ICT infrastructure indispensable for their functioning. Such commitments should be reflected in national law, policy, military doctrine and practice.
- c) Where feasible, support and facilitate the development of adequate cybersecurity and data protection measures for medical service providers and impartial humanitarian organizations, and assist in strengthening their resilience to ICT threats affecting their systems and operations.
- d) Strengthen relevant national legal and policy frameworks addressing online conduct that may constitute or facilitate violations of IHL related to sexual violence and to the recruitment or use of children in armed conflict, and ensure effective implementation and coordination among relevant authorities.
- e) Integrate specific safeguards into military doctrine, standard operating procedures and rules of engagement to prevent and address violations committed through or facilitated by ICT

activities, including sexual violence and the recruitment or use of children in hostilities. Feasible measures include regulating the use of personal ICT devices in operational settings, restricting the sharing of sensitive images or information, prohibiting the use of ICTs to recruit or involve children in hostilities, and educating children and caregivers about associated risks.

6. Addressing information spread in violation of IHL

In contemporary armed conflicts, ICT activities are increasingly used to spread information that may violate IHL. While information operations have long formed part of warfare and are not unlawful *per se*, the use of ICTs, particularly through social media platforms or messaging applications or when combined with artificial intelligence and other emerging technologies, can significantly amplify the speed, scale and reach of harmful information.

States must refrain from, and take all feasible measures to prevent, information spread in violation of IHL, including through the use of ICTs. This includes spreading information that incites or encourages IHL violations, exposes persons deprived of liberty to insults or public curiosity, or whose primary purpose is to spread terror among the civilian population.

Medical services and humanitarian activities must be protected from ICT-enabled disinformation aimed at obstructing their work during armed conflict, as such acts unduly interfere and are incompatible with the obligation to respect and protect medical and humanitarian personnel and their activities.

In order to address information spread in violation of IHL, it is essential for states and parties to armed conflict to do the following:

- a) Take all feasible measures to assess, prevent and mitigate the risk of information operations harming the civilian population and other protected persons, including by undermining their safety, dignity or access to essential services.
- b) Refrain from spreading information that dehumanizes the adversary or propagates hatred against the civilian population, including through ICTs, and take appropriate measures to ensure that their armed forces, other public authorities, or persons acting on their behalf do not engage in such conduct.
- c) Support, where feasible, medical service providers and impartial humanitarian organizations in building capacities to strengthen resilience against disinformation and other harmful information activities, including by facilitating their ability to gather, verify and disseminate accurate information; strengthening their preparedness and contingency-planning to address exposure to harmful information; and encouraging the development of context-appropriate responses to harmful information affecting civilians within their areas of operation.
- d) Engage with relevant actors, including the technology sector, to reduce the risk that online platforms or other ICT services are used to incite, encourage or facilitate violations of IHL or otherwise harm civilians and civilian objects. This may include developing appropriate legal and policy frameworks and promoting the adoption by technology companies of safeguards and practices designed to detect, assess and address harmful information in situations of armed conflict.

- e) Strengthen societal resilience to harmful information activities, including by supporting the availability of reliable information, protecting journalists and media where required by IHL and other applicable law, and promoting preparedness measures that enhance the ability of the civilian population to access trustworthy information during armed conflict.
- f) Refrain from shutting down civilian access to the internet or other ICT services considering that such measures would risk harming the civilian population. Where restrictions are justified by imperative military necessity, take mitigation measures to minimize adverse effects on civilians to the greatest extent possible.

7. Cross-cutting measures to strengthen the implementation of IHL in relation to ICT activities

It is essential for states, in implementing their obligations under IHL in relation to ICT activities, to do the following, including through implementation measures undertaken in peacetime:

- a) Disseminate IHL knowledge within armed forces and among the wider population, particularly among those who may be involved in ICT activities, and integrate IHL principles and rules and their application to ICT activities into national legislation, military doctrine, standard operating procedures, rules of engagement and training, as appropriate.
- b) Make available qualified legal advisers to military units and commands responsible for ICT activities, particularly in the planning and conduct of such operations.
- c) Conduct legal reviews of ICT capabilities that function as new weapons, means or methods of warfare, including through, *inter alia*, rigorous testing, evaluation, verification and validation of ICT capabilities, to better understand their functioning, propagation and potential effects on civilian systems.
- d) Adopt all necessary legislative, regulatory and other measures, including, where appropriate, criminal sanctions, to prevent and suppress IHL violations committed through or facilitated by ICT activities by persons or on territory under their jurisdiction or control.
- e) Take all feasible measures to prevent or limit the proliferation, repurposing or misuse of ICT tools and capabilities where there is a clear risk that they would contribute to violations of IHL.
- f) Promote voluntary information-sharing and confidence-building measures aimed at reducing risks to civilian ICT infrastructure, including exchanges of good practices among states, the establishment of communication channels and other practical risk-reduction arrangements, and, where appropriate, voluntary reporting of significant ICT incidents that have caused unintended civilian harm, in order to enhance collective understanding and risk mitigation.
- g) Promote transparency and shared understanding through the development and public sharing of national views on how international law, including IHL, applies to ICT activities, and through the exchange of lessons learned and good practices to minimize civilian harm.
- h) Support capacity-building at bilateral, regional and global levels to strengthen states' ability to implement and apply IHL in relation to ICT activities.
- i) Foster cooperation among states, technology companies, impartial humanitarian organizations and civil society to use ICTs in ways that enhance the protection of civilians, including through the development of context-specific guidance or practical arrangements.
- j) Encourage cooperation between technology companies and impartial humanitarian organizations to improve preparedness and response to ICT threats affecting protected persons

and objects, including through information-sharing and cybersecurity support, while respecting the humanitarian principles of neutrality, impartiality and independence.

- k) Integrate gender- and age-sensitive, and disability-inclusive approaches into national frameworks and operational practice in order to strengthen the implementation of IHL, including in identifying and addressing ICT-related risks.