

DRAFT FOR FIFTH STATE CONSULTATION

Workstream 4 – PROTECTING CIVILIAN INFRASTRUCTURE

CO-CHAIRERD by Algeria, Costa Rica, Sierra Leone, Slovenia and the International Committee of the Red Cross

Overview

The shocking levels of damage and destruction to civilian infrastructure in armed conflict have shaken the public conscience. Too often, they have severed the vital lifelines that sustain humanity and dignity. To abandon or abuse the intransgressible limits placed by international humanitarian law (IHL) on such destruction is to risk returning to a world where future generations are forced to accept, as lawful, the reduction of entire cities to uninhabitable rubble by parties to armed conflict.

States and parties to armed conflict must, in good faith, uphold and comply with the IHL principles and rules protecting civilian infrastructure. The dangerously large gap between discourse and practice regarding even the most fundamental principles and rules of IHL as well as the lack of accountability for violations when they occur, remains one of the greatest obstacles to alleviating suffering during armed conflict.

At the same time, continuing to share understandings of the limits imposed by IHL on the means and methods of warfare and exchanging good practices to protect civilians and civilian infrastructure also has the potential to generate positive humanitarian outcomes for civilian populations. Central to this is preserving the protective scope of the concept of military objectives and the limits inherent in it, which exists to restrict the range of objects that may be lawfully targeted. Moreover, parties to armed conflict must always comply with all applicable specific protections, the prohibition against indiscriminate and disproportionate attacks, and the obligation to take all feasible precautions in attack and against the effects of attack.

This document outlines practical measures to these ends. These measures include procedures and good practices to ensure that objects to be attacked are not protected against attacks under IHL, and ways to anticipate and mitigate the consequences of military operations, including attacks, on civilian infrastructure and dependant civilians. It also identifies means of ensuring the continual access of civilians to essential services. For the purposes of this document, “essential services” denotes services vital to ensure the subsistence of civilian populations, such as health, water, food production and food distribution, electricity, wastewater treatment, solid waste disposal, and education, as well as all those interrelated systems on which people depend to meet their basic needs, such as market systems, financial systems, and digital services that civilians rely on to access essential items, transportation for people and goods, and communications. Essential services require three critical elements to function:

people (notably service provider staff), hardware (notably infrastructure) and consumables (such as fuel, chlorine and medicines). This document also addresses measures relating to ensuring the safe and sustained movement of essential service providers and flow of critical consumables.

The implementation of these measures will determine whether present and future generations may be spared the devastation resulting from the damage and destruction of civilian infrastructure that has become a hallmark of contemporary armed conflicts.

Outcome

1. Protecting all civilians and civilian objects, including civilian infrastructure, by upholding the limits imposed by the concept of “military objectives”

All objects, including infrastructure, are protected from attack and reprisals under IHL by default. They remain protected unless and for such time as they satisfy the strict criteria in the definition of military objectives.

The concept of “military objectives”, defined in Article 52(2) of Additional Protocol I to the Geneva Conventions and reflected in customary international law, was devised to impose significant limits that states and parties to armed conflict must respect at all times. It consists of a cumulative two-pronged test which provides that military objectives are limited to those objects which: 1) by their nature, location, purpose or use make an effective contribution to military action 2) and whose total or partial destruction, capture or neutralization, in the circumstances ruling at the time, offers a definite military advantage.

How these elements are understood and applied has profound implications for the protections afforded to civilians and civilian objects, including civilian infrastructure. Broad conceptions of military objectives mean more infrastructure destroyed, more civilians killed or injured incidentally, and less access to essential services.

Under IHL, objects, including infrastructure, cannot be targeted based on blanket classifications. Each object to be attacked must individually fulfil both prongs within the definition of “military objective” at the time of planning, deciding upon and executing the attack. Nor can parties to armed conflict attack complex infrastructure in its entirety merely on the basis that one or more buildings or other objects comprising them are military objectives. Objects that do not exhibit a sufficiently close connection to the fighting, such as war sustaining objects and economic targets that do not make an effective contribution to military action, cannot satisfy the definition of “military objective”. Nor can objects whose attack does not offer a definite military advantage, but would only offer purely political or economic effects, or only serve to harm civilian morale.

The following measures, which reflect a combination of existing law and good practices, are particularly important to ensure that the definition of “military objectives” remains capable of providing meaningful protection:

- a) reinforce the critical importance of legal advisers to commanders being well versed in IHL, including but not limited to the definition of “military objectives”, and enable them to provide timely, clear and accurate advice, including through legal training based on scenarios
- b) integrate the definition of “military objectives” in military doctrine and codes of conduct and ensure that operational forces are effectively informed about and trained in the protection of civilian infrastructure and other civilian objects

- c) establish or adapt existing military doctrine, standard operating procedures, rules of engagement, codes of conduct and operational orders, as well as targeting processes, to reflect the importance of delineating infrastructure into the smallest practically distinguishable objects and assess whether they individually satisfy the definition of “military objectives”; reinforce this in the training of military decision makers and operational units.

2. Respecting the heightened protection afforded to specific types of objects, including certain infrastructure, under special protection regimes

IHL grants special protection to certain types of objects, due to their particular importance or the exceptionally grave risk to civilians if they are damaged or destroyed. Failing to respect these protections results in devastating consequences. Patients die, diseases spread, famine and malnutrition ensue, populations face the threat of floods or radiation that could make areas uninhabitable for decades or even centuries. Communities suffer deep psychological harm and loss of their cultural, historic or religious identity. Entities meant to protect and assist civilians are unable to function. For these reasons, objects enjoying special protections that go beyond those general protections afforded to civilian objects may not lose their protection from direct attack simply by virtue of fulfilling the definition of a military objective, unless additional conditions are met. This is the case for certain objects, including infrastructure, such as:

- hospitals and other medical facilities
- objects indispensable to the survival of the civilian population
- infrastructure containing dangerous forces, notably dams, dykes and nuclear electrical generating stations
- cultural property, including but not limited to buildings dedicated to religion, art, science, education or charitable purposes and historic monuments
- buildings, shelters and materiel of civil defence organizations.

To ensure the protection of these objects, it is particularly important to establish or adapt military doctrine, standard operating procedures, rules of engagement, codes of conduct and operational orders, and targeting processes to reflect these special protection regimes and emphasize this protection in the training of military decision makers and operational units. Such measures must ensure that these special protections continue to apply even if the infrastructure or object in question satisfies the definition of “military objective” under IHL and as long as the additional conditions imposed by IHL for loss of special protection are not met.

Given the exceptionally grave risks for civilians if they are damaged or destroyed, or their role in addressing the needs of civilians and other protected persons during conflicts, often in dangerous environments it is particularly important to afford similar protection in practice to other types of infrastructure, notably:

- infrastructure containing hazardous material such a chemical plants, petroleum refineries and life sciences research laboratories and other facilities which may also cause severe harm to the civilian population and the natural environment if damaged or destroyed
- the premises and assets of impartial humanitarian organizations.

3. Protecting civilian objects, including civilian infrastructure, through robust verification procedures and related measures

IHL can do little to prevent the humanitarian consequences of attacks against civilian infrastructure if parties to armed conflict fail to take steps to ensure that their attacks are directed strictly to military objectives, that such objects are not specially protected, and that it uses a means or method of warfare that can be so directed. To ensure that the attacking party respects the limits inherent in the concept of “military objectives”, and minimize errors in targeting, IHL requires parties to armed conflict to do everything feasible to verify that objects to be attacked satisfy the definition of “military objectives”. It further requires the attacking party to verify that the object is not otherwise subject to special protection. In case of doubt as to the status of an object, it must be presumed to be protected.

The following measures, which reflect a combination of existing law and good practices, are particularly important to ensure that infrastructure and other objects that are protected under IHL are not attacked:

- a) Identify, map, and regularly update information on civilian objects, including civilian infrastructure and other objects enjoying special protection such as cultural property, and agricultural areas for the production of foodstuffs and ensure that this information is communicated to military decision makers and operational units
- b) place infrastructure subject to special protection and other infrastructure enabling the delivery of essential services to civilians on “no strike” or “restricted strike” lists and apply strict requirements and procedures for their removal from such lists
- c) establish “no fire zones” to protect civilian infrastructure
- d) ensure that these “no fire zones” and objects on “no strike” and “restricted strike lists”, or similar measures, are mapped, updated, integrated into targeting procedures and communicated on a timely basis to military decision makers and operational units continuously review and cross-verify information relating to the status of potential targets in light of information available from all sources and whenever circumstances change, in particular when planning, deciding upon or executing an attack
- e) establish and apply elevated verification standards and procedures for infrastructure and other objects that are normally dedicated to civilian purposes such as places of worship, houses or other dwellings, as well as educational facilities, or are in fact being used for, civilian purposes.

4. Taking measures to account for the humanitarian consequences of damaging or destroying civilian objects, including civilian infrastructure

Damage and destruction to civilian objects, including civilian infrastructure, have the potential to cause severe and long-lasting humanitarian consequences for civilian populations. A non-exhaustive, but well-documented list of examples includes displacement, reduced access to education and livelihoods, hunger and food insecurity, energy insecurity, an increased risk of outbreak and spread of infectious disease, and death. The risks and gravity of these humanitarian consequences for civilians vary depending, among other things, on their age, gender, and disability.

The interdependent nature of infrastructure, especially in urban settings, increases the likelihood of such consequences and requires special consideration. For instance, the significance of the infrastructure vis-à-vis other infrastructure and the delivery of essential services factors into the scale and severity of the humanitarian consequences for civilians. Such significance may vary depending on the redundancies that are put in place and the degree to which other infrastructure has already been

damaged or destroyed by the conflict. The resources of the state or party to armed conflict exercising control over such infrastructure are also relevant in this regard, as they may be less capable of preparing redundancies or repairing damaged infrastructure.

These consequences arise not only when civilian infrastructure is damaged or destroyed incidentally, but also when the infrastructure itself is attacked. This is particularly relevant when infrastructure and other objects used for both civilian and military purposes.

IHL requires parties to armed conflict to take constant care in the planning and conduct of military operations to spare civilians and civilian objects. Moreover, those who plan or decide upon attacks must account for all reasonably foreseeable direct and indirect incidental civilian harm expected to be caused by the attack. This may include short- but also long-term, cascading and cumulative effects on civilians, including from the disruption of essential services. Attacks whose effects cannot be limited as required by IHL are prohibited as indiscriminate. In this regard, parties to armed conflict must do everything feasible to obtain information that will allow for a meaningful assessment of the effects of military operations, including attacks, on civilians.

The following measures, which reflect a combination of existing law and good practices, are particularly important to account for the humanitarian consequences of damaging or destroying civilian infrastructure:

- a) actively seek information reasonably available from all sources, including quality data and intelligence on the condition and interdependence of civilian infrastructure and the essential services they provide or enable, and ensure that this information is continuously updated and made available to field commanders
- b) develop civil-military liaison channels, including with local authorities, to ensure that information regarding civilian infrastructure, its condition, the services it provides and the civilians that rely on it can be obtained
- c) presume the presence of civilians inside or in the vicinity of infrastructure where there is evidence of human habitation or activity, unless otherwise apparent.
- d) establish or adapt existing doctrine and codes of conduct, emphasizing the requirement to take all reasonably foreseeable direct and indirect incidental civilian harm of attacks into account, and incorporate good practices and procedures, including collateral-damage estimation methodologies or similar assessments to that end
- e) ensure, to the extent feasible, that in addition to legal advisers, engineers, urban planners, and water, environmental, cultural heritage and other specialists are included in the decision-making process for targeting to provide expertise on the location and structural make-up of civilian infrastructure.

5. Addressing challenges when objects, including infrastructure, are used for both civilian and military purposes

During armed conflict, some infrastructure and other objects are used, or intended to be used, simultaneously for civilian and military purposes. Such instances raise unique challenges and require measures additional to those applicable to civilian infrastructure. Destruction or damage to such objects can have devastating direct and indirect humanitarian consequences for civilians. The fact that they may fulfil the definition of “military objectives” exposes civilians and civilian objects located in or in

the vicinity of such infrastructure to harm and increases the risk of disruptions to the essential services they provide or enable.

In addition to those enumerated under Outcome 4, the following measures, which reflect a combination of existing law and good practices, are particularly important to address these humanitarian challenges:

- a) develop or adapt doctrine and codes of conduct to allow for the targeting of such objects only when there is sufficient evidence that they are actually being used at the time of attack in a way that fulfils the definition of “military objectives”, require that such use makes a significant contribution to the military action of the adversary, and ensure that the attack is consistent with any special protection
- b) adapt doctrine, codes of conduct, instructions, targeting procedures, collateral-damage estimates and similar assessments to include the loss of civilian function or civilian use of such an object and the impact on the essential services it may provide or enable for civilians.

6. Avoiding, and in any event minimizing, all reasonably foreseeable direct and indirect incidental civilian harm resulting from attacks against infrastructure that has become a military objective, or incidentally impacting civilian infrastructure

Harm to civilians resulting from damage and destruction to civilian infrastructure is, such as death, injury, spread of disease and displacement, are not inevitable consequence of armed conflict. Even if the infrastructure to be attacked satisfies the definition of “military objectives” and is not subject to special protections, parties have an obligation to limit the effects of the attack on civilians as much as possible. As mentioned above, parties to armed conflict must take constant care to spare the civilian population, civilians and civilian objects in the conduct of all military operations. Moreover, IHL requires that all feasible measures are taken to avoid, and in any event minimize, all reasonably foreseeable direct and indirect incidental civilian harm expected to be caused by an attack.

The following measures, which reflect a combination of existing law and good practices, are particularly important to avoid and minimize all reasonably foreseeable direct and indirect incidental civilian harm:

- a) ensure the command authority for an attack is commensurate with the gravity and scale of the incidental civilian harm
- b) ensure that practical measures aimed at avoiding, and in any event minimizing, the incidental civilian harm of attacks, including but not limited to those enumerated below, are clearly integrated into military doctrine, codes of conduct and operational frameworks, and that all relevant personnel, including military decision makers and operational units, are trained on them regularly:
 - i) do everything feasible to employ only those weapons or tactics which have the greatest likelihood to avoid, and in any event minimize, the incidental civilian harm particularly that related to the damage or destruction of infrastructure that enables the delivery of essential services.
 - ii) adopt a policy that some means and methods of warfare, such as explosive weapons with wide area effects, should not be used in populated areas, including where civilian infrastructure is located, unless sufficient mitigation measures are taken to reduce their wide area effects and the consequent risk of incidental civilian harm. For instance:

- (1) avoid the use of unguided airstrikes and limit the explosive yield of munitions used in the vicinity of civilian infrastructure
 - (2) favour the use of precision-guided munitions with low explosive payloads and pre-fragmented casings over weapons with a wider impact area
 - iii) choose the timing and angle of attack that is most suited to limiting incidental civilian harm
 - iv) refrain from launching attacks that would result in the total destruction of infrastructure satisfying the definition of “military objectives” when temporarily disabling or partially destroying, neutralizing or capturing it would be effective in achieving the military advantage sought
 - v) consider the time, expertise, equipment, and capacity needed for repair or restoration of the infrastructure to be targeted, or parts thereof, as well as its possible cultural significance where relevant, in addition to the danger to civilian lives and objects, when selecting among several military objectives which offer similar military advantages
 - vi) warn civilians in advance of attacks that may impact them, include in the warning information pertaining to their access to essential services, and ensure that such warnings can be easily received and understood by as many civilians as possible. In order to be effective, such warnings and related information must be accessible to civilians facing specific risks, including women, children, as well as older persons and persons with disabilities.
- c) put in place a system for recording and retaining to the greatest extent possible, information on the use or abandonment of explosive ordnance, and create a process for providing that information to the party in control of the relevant territory and to civilian populations, including organizations and personnel involved in the marking, clearance, removal or destruction of such ordnance, as well as the maintenance and repair of the infrastructure.

7. Protecting civilians and civilian objects, including civilian infrastructure, from disproportionate attacks

Even when attacks are directed against military objectives, they may lead to intolerable humanitarian consequences. For this reason, IHL prohibits attacks whose foreseeable direct or indirect incidental civilian harm would be excessive in relation to the concrete and direct military advantage anticipated.

The following measures, which reflect a combination of existing law and good practices, are particularly important to prevent such disproportionate attacks from being launched and to enable the cancellation or suspension of such attacks once the excessive civilian harm becomes apparent:

- a) train military decision makers to determine whether an attack may result in excessive incidental civilian harm, including through scenario-based exercises, taking into account the unique characteristics of civilian infrastructure and the services they provide and enable
- b) ensure that the targeting cycle includes, to the maximum extent feasible, sufficient time to allow for the provision of advice from advisers with the relevant expertise as to the incidental civilian harm that may be expected
- c) ensure that all relevant information is made available to the individuals carrying out an attack and update them on a timely basis prior to the attack, to equip them to make determinations as to whether the attack must be cancelled or suspended due to a change in circumstances

- d) ensure, similar to section 6(a) above, that the command authority for an attack is commensurate with the gravity and scale of the expected incidental civilian harm.

8. Protecting all civilians and civilian objects, including civilian infrastructure, from the effects of attacks by the adversary

IHL requires, to the maximum extent feasible, that parties remove civilians and civilian objects under their control from the vicinity of military objectives, avoid locating military objectives within or near densely populated areas, and take other necessary precautions to protect civilians and civilian objects against the dangers resulting from military operations. Deliberately failing to take these precautions may in some circumstances amount to the use of “human shields”. IHL prohibits using the presence or movements of the civilian population or individual civilians to render certain points or areas immune from military operations, in particular in attempts to shield military objectives from attacks or to shield, favour or impede military operations.

Whether or not a party complies with these obligations does not change the obligations of an attacking party. At the same time, the role that these so-called “passive precautions” can play to protect civilians and civilian objects, including civilian infrastructure, from the potential effects of attacks must be underscored. To provide that protection, measures taken during peacetime are critical, as are those taken during armed conflict. IHL therefore requires parties to armed conflict take such measures to the maximum extent feasible.

Failing to take such measures can result in the dire consequences described above when infrastructure is destroyed or damaged because of attacks by the adversary. Infrastructure is put at risk of attack when the parties use it for military purposes and at risk of incidental civilian harm when parties locate military objectives inside it or in its vicinity.

The following measures, which reflect a combination of existing law and good practices, are particularly important to maximize the protection of infrastructure and the civilians dependent on it from the effects of attacks:

- a) build redundancies into infrastructure, including during peacetime, so that the systems that rely on it can continue to meet the basic needs of civilian populations in the event of an armed conflict
- b) develop or adapt existing doctrine and codes of conduct to avoid the use of civilian infrastructure, for military purposes and the placing of military objectives in the vicinity of such infrastructure. Specifically with regard to educational facilities, reference may be had to the Safe Schools Declaration and its associated guidelines
- c) develop or adapt existing doctrine and codes of conduct to ensure that tactics designed to exploit the proximity of civilians or civilian objects to military objectives to render them immune from attacks and other military operations or otherwise to favour own military operations or impede those of the adversary, are never used
- d) clearly separate the parts of infrastructure used for military purposes from the parts dedicated to civilian use and, when feasible and expected to enhance protection, communicate or make visible such distinctions to the adversary
- e) provide military decision makers and operational units with accurate and timely information regarding the location and condition of civilian infrastructure and the essential service systems they enable or serve

- f) ensure that military decision makers and operational units are trained to identify such infrastructure and instruct them to avoid using them or locating military objectives in their vicinity
- g) give warnings to civilians to prepare for potential disruptions to essential services, especially when the above measures cannot be taken.

9. Continuously improving military practices to better protect civilians and civilian objects, including the capacity to anticipate, prevent, mitigate and respond to the effects of military operations on civilian infrastructure and dependent populations

The principles and rules that protect civilian infrastructure were codified at a time when there were considerably fewer resources, less technological capability and less expertise on limiting the effects of military operations and sparing civilians and civilian objects. There was not the knowledge that is widely accessible today on the direct and indirect humanitarian consequences that military operations have on civilian populations, including those resulting from damage and destruction to civilian infrastructure. Progress in these areas since then has generated greater potential for parties to spare civilians from the calamities of armed conflict.

For IHL to remain effective in limiting the impacts of armed conflict on civilian populations, it is crucial that states prioritize improvements in their capacity to protect civilians and civilian objects, including civilian infrastructure, especially whenever they decide to increase their defence capacities. This extends to the measures included in this document, particularly the capacity to anticipate, avoid, minimize and respond to the effects of military operations on civilian infrastructure and the civilians who rely on it.

The following measures, which reflect a combination of existing law and good practices, are particularly important to continuously improve military practices in this regard:

- a) invest in training and capacity-building, including, when feasible, through the development of innovative methods using new and emerging technologies for the protection of civilian infrastructure and dependent populations
- b) leverage and improve technologies to track attacks, assess damage, and enable swift and effective responses to the effects of attacks, in order to mitigate civilian harm
- c) develop and strengthen cooperation with civilian authorities to form a knowledge base of risks to civilians and of measures to anticipate, prevent, mitigate and respond to those risks, and ensure this knowledge base is reflected in doctrine, codes of conduct, training and data modelling
- d) establish multidisciplinary mechanisms and institutions for the purpose of consolidating, expediting and institutionalizing measures to anticipate, prevent, mitigate and respond to harm to civilian infrastructure and civilians
- e) create and implement mechanisms to proactively track harm to civilian infrastructure and civilians, including through after-action reviews, within a tightly defined but reasonable timeframe
- f) document every phase of the targeting decision-making process, including target verification, proportionality assessments, and the decisions as to the precautionary measures taken to avoid and minimize civilian harm.

To this end, it is particularly important to:

- i) regularly review and compare this documentation with post-strike assessments to evaluate the suitability of the targeting process
- ii) set clear criteria for determining whether targeting processes must be updated or amended and incorporate lessons learned
- iii) ensure that competent authorities are informed of incidents that may constitute war crimes and other violations of IHL, and that they initiate criminal investigations when warranted, considering all relevant and credible information
- g)** establish or participate in peer-to-peer exchanges on good practices.

10. Protecting civilian objects, including civilian infrastructure, through the establishment of protected zones or similar measures

IHL sets out specific measures that parties to armed conflict can take to enhance the protection of individuals and objects. For instance, protected zones such as neutralized zones, demilitarized zones and non-defended localities may be used to designate specific areas where civilian infrastructure is located. These measures can be used to enhance the protection of civilian infrastructure above and beyond the robust protections that already apply by virtue of its civilian status.

The following measures, which reflect a combination of existing law and good practices, are particularly important to ensure the effectiveness of arrangements including, but not limited to, protected zones:

- a)** implement and adhere to such arrangements in good faith, irrespective of their precise nature
- b)** ensure the complete and effective demilitarization of such zones
- c)** ensure that the location of such areas is clearly communicated to operational units with the direction that such areas are not to be attacked or used for military purposes
- d)** clearly and visibly mark the zones including, where possible and likely to result in greater respect, through means such as digital mapping
- e)** establish supervisory, monitoring and verification mechanisms.

11. Ensuring continued access to essential services when exercising control over civilian objects, including civilian infrastructure

In armed conflict, including situations of occupation, a party to armed conflict may be tempted to destroy or seize all or part of the infrastructure under its control. In exceedingly narrow circumstances, this may be lawful insofar as it is justified by “imperative military necessity.” Separately, civilian infrastructure may suffer misuse by the party exercising control over it to cut off civilian populations from essential services, either to put pressure on the adversary or punish the civilian population. In both cases, the resulting loss of access by civilian populations to essential services can lead to the same humanitarian consequences described above in relation to attacks.

The following measures, which reflect a combination of existing law and good practices, are particularly important to ensure the continued access of civilian populations to essential services:

- a)** not destroy, seize or remove, or render useless infrastructure when doing so would deprive the civilian population of an object indispensable to its survival

- b) furthermore, never use civilian infrastructure in a manner that deliberately disrupts or cuts off the access of civilians to essential services, including when those civilians are in territory under the control of an adversary, and in any event avoid causing such effects incidentally
- c) prioritize alternatives to destruction, notably seizure, where such alternatives are feasible and respond to the imperative military necessity. limit the destruction or seizure to the specific part of the infrastructure that imperative military necessity requires
- d) assess in good faith whether the destruction or seizure of the property in question is required by imperative military necessity and maintain proportion between the destruction or seizure of property and the military advantage to be secured.

12. Safeguarding essential service providers and their personnel and critical consumables to ensure civilians have continual access to essential services

The delivery of essential services depends not only on infrastructure and other objects but also on people, particularly those involved in the operation, maintenance and repair of infrastructure, and on consumables, i.e. the materials necessary for the functioning of the infrastructure, such as fuel, disinfectants and medicines.

The impact of armed conflict on these critical components can lead to long-term deterioration of essential services. This cumulative impact is often the most destructive and difficult to recover from. It can have devastating, long-lasting and even irreversible consequences for civilian populations.

Deaths and injuries among essential service personnel, along with restrictions imposed by parties to an armed conflict on their movement, prevent them from safely accessing the areas where they are needed. These risks may also lead to fewer staff reporting to work. Before long, the civilian population loses access to the services they enable.

Damage or destruction to, or restrictions on, the flow of critical consumables depletes reserves that enable civilian infrastructure to continue to function. It can trigger price increases due to shortages, further exacerbating scarcity. What emerges is a vicious cycle that accelerates the degradation of infrastructure or compromises the quality and safety of the service, such as the provision of clean water.

Separately, failing to respect and protect the personnel of impartial humanitarian organizations, as well as other hindrances to humanitarian access, can negatively impact the delivery of essential services. This is particularly the case when humanitarian personnel undertake functions similar to those of essential service providers in relation to civilian infrastructure, when they support them in carrying their activities, or more generally when they undertake activities to meet the needs of civilian populations affected by armed conflict. Against this backdrop, complementary initiatives such as the Declaration for the Protection of Humanitarian Personnel can therefore contribute to ensuring continual access of civilians to essential services when implemented in good faith.

The following measures, which reflect a combination of existing law and good practices, are particularly important to safeguarding essential services providers and their personnel as well as consumables:

Safeguarding essential service providers and their personnel

- a) set up robust domestic legal and policy frameworks to respect and protect essential service personnel and ensure their safe and sustained access to civilian infrastructure

- b) develop relationships with essential service providers prior to, and during, armed conflict to understand their needs and existing capacities in order to facilitate their work and ensure their respect and protection
- c) draw up operational plans with essential service providers and give the necessary support to facilitate their safe and sustained access to civilian infrastructure, including in instances where they must cross front lines
- d) establish coordination mechanisms, including an emergency hotline
- e) develop practical measures to increase the visibility of essential service personnel, vehicles and equipment when this enhances their protection.

Safeguarding consumables

- a) ensure the safe, rapid passage of consumables and spare parts necessary for ensuring continual access to essential services through agreed coordination mechanisms, priority checkpoint clearance and, where necessary, neutral intermediaries to facilitate their delivery across front lines
- b) maintain buffer stocks of consumables in multiple secure locations and diversify suppliers
- c) map key supply routes and storage sites, and provide military decision makers and operational units with accurate and timely information regarding these locations
- d) assess the flow of consumables and the effects of any disruption on the civilian population and their access to essential services when evaluating the impact of attacks and other military operations, including the destruction and seizure of such consumables based on imperative military necessity
- e) ensure that restrictive measures that could delay or prevent the import of supplies do not result in disruptions to the delivery of essential services, including through well-framed and standing carve outs.