

## ICRC Q&A on the issue of explosive weapons in populated areas<sup>1</sup>

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Hostilities in contemporary armed conflicts are increasingly being conducted in population centres, thereby exposing civilians to heightened risks of harm. This trend is only likely to continue with growing urbanization and is compounded by the fact that belligerents often avoid facing their enemy in the open, intermingling instead with the civilian population. Despite this, armed conflicts often continue to be waged with weapon systems originally designed for use in open battlefields. There is generally no cause for concern when explosive weapons with a wide impact area are used in open battlefields, but when they are used against military objectives located in populated areas they are prone to indiscriminate effects, often with devastating consequences for the civilian population.

The International Committee of the Red Cross (ICRC) continues to witness these effects first-hand as it assists the victims of armed conflicts involving the use of explosive weapons in populated areas. The ICRC has raised its concerns with the parties to such armed conflicts as part of its bilateral and confidential dialogue on the conduct of hostilities. Since 2009, it has also been publicly expressing its concerns regarding the use of explosive weapons in populated areas.

In 2011, the ICRC stated publicly for the first time its position that “due to the significant likelihood of indiscriminate effects and despite the absence of an express legal prohibition for specific types of weapons, the ICRC considers that explosive weapons with a wide impact area should be avoided in densely

populated areas”.<sup>2</sup> In 2013, the International Red Cross and Red Crescent Movement as a whole took up this position in similar terms.<sup>3</sup>

The ICRC further developed its analysis of the issue in a report submitted to the 32nd International Conference of the Red Cross and Red Crescent in 2015, on which the present Q&A is based. The report built upon evidence gathered by the ICRC of the immediate and long-term effects of the use of explosive weapons in populated areas and on existing military policies and practices pertaining to warfare in populated areas. It also drew on insights that the ICRC had gained in an expert meeting on this issue which it had organized earlier in 2015.<sup>4</sup>

In parallel, the United Nations (UN) Secretary-General has been drawing the attention of UN member States to the need to strengthen the protection of civilians in view of the humanitarian impact of the use of explosive weapons in populated areas, as have UN agencies and non-governmental organizations.<sup>5</sup> A growing number of States are also acknowledging the humanitarian concerns raised by this phenomenon.<sup>6</sup>

## Q&A on explosive weapons in populated areas

### 1. What are the weapons of concern?

The explosive weapons that raise humanitarian concerns when used in populated areas are those that have a “wide impact area” – or “wide-area effects”.

Explosive weapons are weapons that injure or damage by means of explosive force.<sup>7</sup> They may have “wide-area effects” when used in populated areas due to:

- 1 Based on International Committee of the Red Cross (ICRC), *International Humanitarian Law and the Challenges of Contemporary Armed Conflicts: Report*, October 2015, available at: [www.icrc.org/en/document/international-humanitarian-law-and-challenges-contemporary-armed-conflicts](http://www.icrc.org/en/document/international-humanitarian-law-and-challenges-contemporary-armed-conflicts) (all internet references were accessed in August 2016). See also ICRC, “Explosive Weapons in Populated Areas”, fact sheet, June 2016, available at: [www.icrc.org/en/document/explosive-weapons-populated-areas-factsheet](http://www.icrc.org/en/document/explosive-weapons-populated-areas-factsheet).
- 2 See ICRC, *International Humanitarian Law and the Challenges of Contemporary Armed Conflicts: Report*, October 2011, p. 42, available at: [www.icrc.org/eng/assets/files/red-cross-crescent-movement/31st-international-conference/31-int-conference-ihl-challenges-report-11-5-1-2-en.pdf](http://www.icrc.org/eng/assets/files/red-cross-crescent-movement/31st-international-conference/31-int-conference-ihl-challenges-report-11-5-1-2-en.pdf).
- 3 See 2013 Council of Delegates, “Weapons and International Humanitarian Law”, Res. 7 (CD/13/R7), para. 4, wherein the International Red Cross and Red Crescent Movement called upon States to “strengthen the protection of civilians from the indiscriminate use and effects of explosive weapons, including through the rigorous application of existing rules of international humanitarian law, and to avoid using explosive weapons with a wide impact area in densely populated areas”. Available at: [www.icrc.org/eng/assets/files/red-cross-crescent-movement/council-delegates-2013/cod13-r7-weapons-and-ihl-adopted-eng.pdf](http://www.icrc.org/eng/assets/files/red-cross-crescent-movement/council-delegates-2013/cod13-r7-weapons-and-ihl-adopted-eng.pdf).
- 4 ICRC, “Expert Meeting – Explosive Weapons in Populated Areas: Humanitarian, Legal, Technical and Military Aspects”, Geneva, June 2015, available at: [www.icrc.org/en/document/explosive-weapons-populated-areas-humanitarian-legal-technical-and-military-aspects](http://www.icrc.org/en/document/explosive-weapons-populated-areas-humanitarian-legal-technical-and-military-aspects).
- 5 See notably UN Security Council, Reports of the Secretary-General on the Protection of Civilians in Armed Conflict since 2009, available at: [www.securitycouncilreport.org/un-documents/protection-of-civilians/](http://www.securitycouncilreport.org/un-documents/protection-of-civilians/); and a compilation of NGO reports available at: <http://www.inew.org/learn-more-about-inew>.
- 6 See notably a compilation of States’ statements available at: [www.inew.org/acknowledgements](http://www.inew.org/acknowledgements).
- 7 An “explosive weapon” is defined as a weapon activated by the detonation of a high-explosive substance, creating a blast and fragmentation effect. See also Kenneth Cross, Ove Dullum, Marc Garlasco and N. R. Jenzen-Jones, *Explosive Weapons in Populated Areas: Technical Considerations Relevant to Their Use and Effects*, Special Report, Armament Research Services, Perth, 2015, available at: [www.icrc.org/en/document/explosive-weapons-populated-areas-use-effects](http://www.icrc.org/en/document/explosive-weapons-populated-areas-use-effects).

- the large destructive radius of the individual munition used, i.e., its large blast and fragmentation range or effect, such as large bombs, large-calibre mortars and rockets, large guided missiles, and heavy artillery projectiles;
- the lack of accuracy of the delivery system, typically indirect-fire weapons where the target is not observed by the platform firing the weapon, such as mortars, rockets, artillery (especially when using unguided munitions) and unguided air-delivered bombs; or
- the weapon system being designed to deliver multiple munitions over a wide area, such as multiple rocket-launcher systems.

In this respect, the issue of explosive weapons in populated areas concerns not one single weapon but a range of different conventional weapon systems, and consideration of the circumstances of their use, including the typical vulnerabilities of civilians living in populated areas, is needed.

Insofar as improvised explosive devices may fall into one of the three general categories of explosive weapons listed above, they are also a cause for concern when used in populated areas.

Explosive weapons that are already prohibited or otherwise limited as such by international humanitarian law (IHL) treaties, such as anti-personnel mines or cluster munitions, are outside of the scope of the discussion. Also excluded are issues related to explosive remnants of war, which, although they pose a significant threat to civilians and result from the decision to use explosive weapons, are governed by a specific treaty.<sup>8</sup>

## 2. How are “populated areas” defined?

Simply put, the terms “densely populated areas” and “populated areas” should be understood as synonymous with “concentration of civilians”, the latter being the only one of these terms defined by IHL treaties, as in “a city, town, village or other area containing a similar concentration of civilians or civilian objects”.<sup>9</sup>

8 See Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on their Destruction, 2056 UNTS 211, 18 September 1997 (entered into force 1 March 1999); Convention on Cluster Munitions, 2688 UNTS 39, 30 May 2008 (entered into force 1 August 2010); Convention on Certain Conventional Weapons (CCW), Protocol II on Prohibitions or Restrictions on the Use of Mines, Booby-Traps and Other Devices, 2048 UNTS 93 (entered into force 3 December 1998) as amended on 3 May 1996; Protocol V on Explosive Remnants of War, 2399 UNTS 100, 28 November 2003 (entered into force 12 November 2006).

9 See Article 51(5)(a) of Additional Protocol I (AP I) and Articles 3(9) and 7(3) of CCW Protocol II, above note 8. The term “concentration of civilians” is defined, in Article 1(2) of CCW Protocol III on Prohibitions or Restrictions of the Use of Incendiary Weapons, as “any concentration of civilians, be it permanent or temporary, such as in inhabited parts of cities, or inhabited towns or villages, or as in camps or columns of refugees or evacuees, or groups of nomads”.

### 3. What are the humanitarian consequences of the use of explosive weapons in populated areas?

Warfare in populated areas using explosive weapons that have a wide impact area exacts a terrible toll on civilians. Recent armed conflicts have confirmed that the use of such weapons is a major cause of civilian death and injury and of destruction and damage to civilian residences and critical infrastructure, with consequent disruption to essential services such as health care, water distribution and other services necessary for the survival of the civilian population.<sup>10</sup>

In terms of effects on people's health, these are not limited to death, physical injury and long-term disability, but also include the long-term impact on mental well-being. The use of explosive weapons in populated areas also affects the ability of health-care facilities and services to operate, to cope with the rapid and simultaneous influx of numerous wounded people and the particular injuries they present, and to provide adequate care. The foregoing effects are accentuated in contexts where the use of explosive weapons is protracted, with the consequent decline of essential services over time and serious risks for public health.<sup>11</sup> Often civilians have no choice but to leave, increasing the number of displaced people.

### 4. What are the IHL rules applicable to the use of explosive weapons in populated areas?

In view of the humanitarian consequences outlined above, and as previously stated, the ICRC is of the view that explosive weapons with a wide impact area should not be used in densely populated areas due to the significant likelihood of indiscriminate effects, meaning that their use against military objectives located in populated areas is likely to fall foul of the IHL rules prohibiting indiscriminate and disproportionate attacks.

Indiscriminate attacks are those of a nature to strike military objectives and civilians or civilian objects without distinction, notably because they employ means or methods of warfare that cannot be directed at a specific military objective or the effects of which cannot be limited as required by IHL.<sup>12</sup> Disproportionate attacks and area bombardment are treated as particular forms of indiscriminate attacks. The principle of proportionality prohibits attacks “which may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated”.<sup>13</sup> Area bombardment is defined as “an attack by bombardment by any methods or means which treats as a single

10 For more on the ICRC's approach to urban services during protracted armed conflict, see the interview with Jean-Philippe Dross in this issue of the *Review*.

11 See ICRC, *Urban Services During Protracted Armed Conflict*, Geneva, October 2015, available at: [www.icrc.org/en/download/file/13438/icrc-002-42491.pdf](http://www.icrc.org/en/download/file/13438/icrc-002-42491.pdf).

12 AP I, Art. 51(4). This is a rule of customary IHL in both international and non-international armed conflicts.

13 AP I, Art. 51(5)(b).

military objective a number of clearly separated and distinct military objectives located in a city, town, village or other area containing a similar concentration of civilians or civilian objects”.<sup>14</sup> The foregoing rules must be respected by the parties to an armed conflict in all circumstances,<sup>15</sup> even if alternative, more discriminate weapons or tactics are not available to them.

In addition to these obligations, the IHL rule of precautions in attack requires the parties to an armed conflict, in the conduct of their military operations, to take constant care to spare the civilian population, individual civilians and civilian objects. This rule notably requires “those who plan or decide upon an attack” to take “all feasible precautions in the choice of means and methods of attack with a view to avoiding, and in any event to minimizing, incidental loss of civilian life, injury to civilians and damage to civilian objects”.<sup>16</sup> When conducting hostilities in populated areas, the rule of precautions may require the parties to choose the most precise weapon available, or consider alternative weapons and/or tactics.

## 5. How can these rules be implemented in military operations?

The assessment of whether an attack is indiscriminate or disproportionate, and whether all feasible precautions have been taken, must be based not on hindsight but rather on the perspective of the commander based on the information available to him/her at the time of the attack. Such information includes the foreseeable effects of the weapons at his/her disposal in view of their inherent characteristics, as well as the circumstances of their use, including the physical environment in which the military objective is located and the vulnerability of the surrounding civilian population and civilian objects.

Of these factors, the choice of weapon and the manner in which it will be used are those over which the commander has the greatest control. In this regard, the variables related to the choice and use of weapon that the commander can manipulate to respect the above-mentioned IHL rules include the type and size of the warhead (munition), the type of fuse, the delivery system and the distance from which the weapon is launched, as well as the angle and timing of the attack. The technical skills of the armed forces in the selection and use of weapons gained through training are also critical factors that will influence the outcome of an attack.<sup>17</sup> Nonetheless, even after taking all such measures and precautions,

14 AP I, Art. 51(5)(a). This is a rule of customary IHL in both international and non-international armed conflicts.

15 See AP I, Art. 51(1).

16 AP I, Art. 57(2)(a)(ii). This is a rule of customary IHL in both international and non-international armed conflicts. Feasible precautions are described in Article 3(10) of CCW Protocol II, above note 8, as those that are “practicable or practically possible taking into account all circumstances ruling at the time, including humanitarian and military considerations”.

17 For the range of factors regarding weapons selection and use, see ICRC, above note 4, pp. 5–6, 24–30. See also Yves Sandoz, Christophe Swinarski and Bruno Zimmermann (eds), *Commentary on the Additional Protocols of 8 June 1977 to the Geneva Conventions of 12 August 1949*, ICRC and Martinus Nijhoff, Geneva, 1987 (Commentary on the Additional Protocols), para. 2212.

certain explosive weapons may be prone to causing significant incidental immediate and long-term effects on civilians and civilian objects when used in populated areas.

Warfare in densely populated areas, where military objectives are intermingled with protected persons and objects, represents an important operational challenge for armed forces.<sup>18</sup> A military commander has the responsibility to minimize the incidental effects on civilians of an attack, and such a responsibility is heightened in an environment where civilians and civilian infrastructure are the main features of the theatre of operations. This holds equally true when the opposing party deliberately intermingles with civilians in order to shield its military activities – unlawful behaviour that nonetheless does not relieve the attacking party of its own obligations under IHL. Urban warfare thus entails a more demanding analytical process during the planning phase, as well as complex decision-making in real-time situations. As seen above, the military commander has a larger number of factors to take into account than when conducting hostilities in open areas.

Even more so than in open areas, an attacking party's ability to respect IHL in populated areas depends on the means and methods of warfare that it chooses to use, or not to use, taking into account their foreseeable effects in such environments, including their reverberating effects. Though some military practice, such as “collateral damage estimation” methodologies and “minimum safe distances”, as well as lessons learned from post-attack “battle damage assessments” and “after action reviews”, may help to minimize incidental harm to civilians, it remains unclear how these integrate the requirements of the rules of IHL discussed above.

What seems certain is that thorough training of armed forces in the selection and use of means and methods of warfare in populated areas, including on the technical capabilities of the weapons at their disposal, is critical to avoiding or minimizing incidental harm to civilians in this environment. Moreover, specific targeting directives applicable to the use of certain explosive weapons in populated areas may be required to ensure compliance with IHL. Yet only a few armed forces are known to train specifically in urban warfare, or to otherwise apply specific limitations on the choice and use of explosive weapons in populated areas for the purpose of avoiding or minimizing incidental civilian harm.

## 6. What is the main challenge in relation to the prohibition of indiscriminate attacks?

The prohibition of indiscriminate attacks takes into account the fact that means and methods of warfare which can be used perfectly legitimately in some situations could, in other circumstances (including due to the manner in which they are used), be of a nature to strike military objectives and civilians and civilian objects without distinction.<sup>19</sup> Warfare in populated areas is certainly a situation that may

18 For further discussion of the military perspective on civilian protection in urban warfare, see the article by Nathalie Durhin in this issue of the *Review*.

19 See Commentary on the Additional Protocols, above note 17, para. 1962.

render indiscriminate explosive weapons that could be lawfully used in other circumstances, such as an open battlefield.

The prohibition of indiscriminate attacks includes those that employ a method or means of delivery which cannot be directed at a specific military objective.<sup>20</sup> It is unclear what States consider to be the degree or standard of accuracy of a weapon that would be acceptable under this rule, generally or in a given operational situation. At any rate, any such standard of accuracy must be consistent with the general aim of protecting civilians from the effects of hostilities.

Still, the inherent inaccuracies of certain types of explosive weapon systems – such as many of the artillery, mortar and multiple rocket-launcher systems in use today, especially when using unguided munitions, as well as unguided air-delivered bombs – raise serious concerns under the prohibition of indiscriminate attacks when used in populated areas. While increasing the accuracy of delivery systems would help reduce the weapons' wide-area effects in populated areas, accuracy could be obviated by the use of large-calibre munitions – i.e., munitions that have a large destructive radius relative to the size of the military objective – which might still be in violation of IHL.

The interpretation of the prohibition of indiscriminate attacks may become more demanding with the development of new means and methods of warfare, notably with advances in precision weaponry. For example, the meaning of “clearly separate and distinct” military objectives in the prohibition of area bombardment is understood to mean a distance at least sufficiently large to permit the individual military objectives to be attacked separately.<sup>21</sup> This understanding implies that the practical application of the prohibition of area bombardment, and by extension of the prohibition of indiscriminate attacks, could evolve based on the development of new weapons capabilities.

## 7. What is the main challenge in relation to the prohibition of disproportionate attacks?

The most visible effects of an attack using explosive weapons in populated areas are the immediate (or “direct”) civilian deaths and injuries and damage to civilian objects caused by the weapons' blast and fragmentation effects. Less visible, but equally devastating, are the reverberating effects (also referred to as the “indirect”, “knock-on” or “long-term” effects) of the attack, as consequences of incidental damage to certain civilian objects. For example, incidental damage to civilian homes is likely to cause the displacement of civilians, while incidental

20 See AP I, Art. 51(4)(b). Article 3(8) of CCW Protocol II, above note 8, includes, in its definition of “indiscriminate use” of mines, booby-traps and other devices, any placement of such weapons “which employs a *method or means of delivery* which cannot be directed at a specific military objective” (emphasis added).

21 See Commentary on the Additional Protocols, above note 17, para. 1975: “When the distance separating two military objectives is sufficient for them to be attacked separately, taking into account the means available, the rule should be fully applied. However, even if the distance is insufficient, excessive losses that might result from the attack should be taken into account.”

damage to hospitals is likely to cause the disruption of medical services, which in turn is likely to lead to the deaths of patients. Critical civilian infrastructure, such as vital water and electrical facilities and supply networks, is particularly fragile and vulnerable to the incidental effects of explosive weapons. The interconnectedness of the essential services that depend on critical infrastructure is such that disruption to one service will have knock-on effects on the other services. Thus, incidental damage to critical infrastructure can cause severe disruption to essential services on which the civilian population depends for its survival, such as health care, energy and water supplies and waste management, leading to the spread of disease and further deaths.

The question that arises is whether the reverberating effects of an attack using explosive weapons in populated areas must be taken into account by the attacker in assessing the expected incidental civilian casualties and damage to civilian objects as required under the IHL rules of proportionality and precautions in attack, recalled above. While acknowledging that it is both impractical and impossible for commanders to consider all possible effects of an attack, the ICRC considers that those reverberating effects which are foreseeable in the circumstances must be taken into account.

While there is support for this view, there remains uncertainty regarding which reverberating effects of an attack are “foreseeable”. Although, as explained above, this assessment is context-specific, the ICRC submits that it is framed in an objectivized way by what is foreseeable based on the standard of a “reasonably well-informed person in the circumstances [of the attacker], making reasonable use of the information available to him or her”.<sup>22</sup> In this respect, it is submitted that those who plan and decide upon an attack have an obligation to do everything feasible to obtain information that will allow for a meaningful assessment of the foreseeable incidental effects on civilians and civilian objects. Moreover, what is objectively foreseeable by a commander in a given case must be informed by past experiences and lessons learned from his/her country’s armed forces. It should also take into account the ever-growing experience of other armed forces in urban warfare, when available. In other words, as the understanding of the reverberating effects of the use of explosive weapons in populated areas increases, this knowledge informs future assessments and decisions under the rules of proportionality and precautions in attack.<sup>23</sup>

It is unclear how armed forces integrate the obligation to take into account the foreseeable reverberating incidental effects on civilians and civilian objects into their military policies and practice, for example in collateral damage estimates. Based on the effects of explosive weapons in populated areas, namely the extensive civilian harm being witnessed today, there is significant doubt that

22 International Criminal Tribunal for the former Yugoslavia, *The Prosecutor v. Galić*, Case No. IT-98-29, Judgment, 5 December 2003, para. 58.

23 For further discussion of the reverberating effects of explosive weapons when used in populated areas, see the article by Isabel Robinson in this issue of the *Review*.



reverberating effects are sufficiently factored in as required by the rules of proportionality and precautions in attack.

#### 8. Are the rules of IHL sufficient to regulate the use of explosive weapons in populated areas?

Although there is no dispute that any use of explosive weapons in populated areas must comply with the above IHL rules, there are divergent views on whether these rules sufficiently regulate the use of such weapons, or whether there is a need to clarify their interpretation or to develop new standards or rules. Based on the effects of explosive weapons in populated areas being witnessed today, there are serious questions regarding how the parties using such weapons are interpreting and applying IHL. Divergent practice of militaries, and contrasting views among experts and in the case law of international criminal tribunals regarding what is or is not legally acceptable, may point to ambiguities in IHL and the need for States to clarify their interpretation of the relevant IHL rules or to develop clearer standards in order to effectively protect civilians.

In any respect, the prohibition of indiscriminate attacks and the rules of proportionality and precautions in attack, each of which strikes a careful balance between considerations of military necessity and of humanity, were developed by States with the overarching objective of protecting civilians and civilian objects against the effects of hostilities. Any challenges that may arise in their interpretation and application to the use of explosive weapons in populated areas must be resolved with this overarching objective in mind.

A better knowledge of existing military policy and practice, and more clarity on how States interpret and apply the relevant rules of IHL to the use of explosive weapons in populated areas, would help to inform debates about this important humanitarian issue, foster a possible convergence of views, and assist parties to armed conflicts who endeavour in good faith to comply with the law. Ultimately, this will lead to better protection of civilians in populated areas.

