

Libya, Use of Explosive Weapons in Populated Areas

The urbanization of warfare generates major challenges regarding the protection on civilians. A recent report published by Action on Armed Violence estimated that 91% of victims of explosive weapons in populated areas between 2011 and 2015 were civilians. The highest number of deaths were found in Afghanistan, the Syrian Arab Republic, Yemen and Libya. In Libya, in particular in 2014, 36 incidents with explosive weapons were recorded, resulting in the death of 549 people, 306 of them being civilians according to the OCHA. In face of this reality, the ICRC has issued a report on Explosive Weapons with Wide Area Effects: a Deadly Choice in Populated Areas. In the report, the ICRC tackles the issue both from a humanitarian and a technical standpoint and highlights the implications of the use of such weapons under IHL.

Acknowledgments

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N.B. As per the disclaimer, neither the ICRC nor the authors can be identified with the opinions expressed in the Cases and Documents. Some cases even come to solutions that clearly violate IHL. They are nevertheless worthy of discussion, if only to raise a challenge to display more humanity in armed conflicts. **Similarly, in some of the texts used in the case studies, the facts may not always be proven;** nevertheless, they have been selected because they highlight interesting IHL issues and are thus published for didactic purposes.

A. SHATTERED LIVES: CIVILIANS SUFFER FROM THE USE OF EXPLOSIVE WEAPONS IN LIBYA

[OCHA, PAX, Shattered lives: Civilians suffer from the use of explosive weapons in Libya, https://www.unocha.org/sites/unocha/files/PAX_Rapport_Libya_Final_v2_spread.pdf]

[...]

A. Introduction

[1] Violence and conflict in Libya since February 2011 have had a grave impact on the civilian population. In particular, the widespread use of explosive weapons by Government forces and armed groups in cities,

towns and villages has resulted in the death and injury of thousands of civilians, destroyed livelihoods and essential infrastructure, and forced tens of thousands of people to flee their homes.

a. Explosive weapons in populated areas: a global problem

[2] The tragic situation in Libya is not unique. Similar patterns of death and destruction resulting from explosive weapons are apparent in Afghanistan, Iraq, Libya, the occupied Palestinian territory, Sudan, Syria, Ukraine, Yemen and elsewhere. [...]

[3] Explosive weapons include improvised explosive devices (IEDs), and explosive ordnance such as mortar bombs, rockets, tank shells, and aircraft bombs and missiles. These weapons differ in their design and method of delivery, but they all use blast and fragmentation, and they have the potential to kill, injure or destroy anyone or anything around the detonation point. When these weapons are used in populated areas, such as cities, towns, markets and refugee camps, civilians are often severely affected, both directly from the blast and fragmentation, and indirectly through the partial or complete destruction of their homes, livelihoods and essential infrastructure, such as hospitals, as well as water and sanitation and electrical supply systems.

[...]

b. Explosive weapons and international humanitarian law

[3] In situations of armed conflict, international humanitarian law (IHL) contains important rules for the protection of civilians, including from the effects of explosive weapons. Through the principles of proportionality, distinction and precaution, parties to conflict (national armed forces and non-state armed groups) are obliged to limit loss of civilian life, injury to civilians and damage to civilian objects as far as possible. Full compliance with IHL by all parties to conflict would significantly enhance the protection of civilians from the effects of explosive weapons. However, given the effects of explosive weapons in populated areas being witnessed today in Libya and elsewhere, there are serious questions regarding how parties to conflict are interpreting and applying the relevant rules of IHL. [...]

B. Background to the Libyan conflict

a. Chronology of events

[4] On 15 February 2011, the Libya uprising began with peaceful protests in the east of the country demanding an end to leader Colonel Muammar Qadhafi's 41-year rule. The uprising spread rapidly throughout the country as "Qadhafi forces engaged in excessive use of force against demonstrators in the early days of the protests, leading to significant deaths and injuries".

[...]

[5] On 17 March 2011, the Security Council adopted resolution 1973 authorising “all necessary measures” to “protect civilians and civilian populated areas under threat of attack in the Libyan Arab Jamahiriya”, short of a “foreign occupying force.” On 19 March, military forces from France, the United Kingdom and the United States began attacks to implement the no-fly zone over Libya mandated by resolution 1973. The North Atlantic Treaty Organization (NATO) assumed command of all offensive operations from 31 March.

[6] Simultaneously, *thumar* (anti-Qadhafi forces) launched a major offensive against Government forces and captured the capital, Tripoli, in August 2011. On 20 October 2011, Qadhafi was captured and killed. Libya’s transitional Government, the National Transitional Council (NTC), declared the country independent from the previous Government. It sought to continue democratic transition and establish security.

[...]

[7] The NTC prepared an interim constitution for Libya and organized the first elections for 7 July 2012. These elections resulted in the formation of the General National Congress (GNC) and brought to power an array of political parties that coalesced around political objectives and the allegiance of armed groups. [...]

[8] However, the GNC’s inability to establish security and control over armed groups led to wide protests, and elections for a new legislative body to replace the GNC, known as the House of Representatives (HoR), took place on 26 June 2014. The HoR has faced opposition on multiple fronts and struggled to consolidate legitimacy as the main authoritative power in Libya. In July 2014, the HoR was relocated to Tobruk, and violence escalated in Tripoli and Benghazi. Groups in opposition to the HoR established a rival Government in Tripoli, effectively creating two governing bodies in the country, each with a distinct legislature and executive and each aligned with a bloc of armed groups.

[...]

b. Main parties to the conflict

[9] The two main Libyan political factions that emerged post-revolution, the GNC and the HoR, are often described as “islamists” and “liberals” respectively. The former is largely represented today by the so-called Tripoli Government, based in the west of the country, while the latter is largely represented by the internationally recognized Tobruk Government led by the HoR, based in the east. The conflict is mainly between two fighting blocs: the GNC-aligned Libya Dawn and the HoR-aligned Dignity. However, much of the conflict, and Libya itself, is fragmented into localized battles and power dynamics, driven by loyalties along often-overlapping ideological, regional, local, tribal and ethnic lines. An estimated 1,700 armed groups and militias are active in Libya, some of which were formed as brigades during the 2011 uprising, while others were formed in the later stages or aftermath of the 2011 conflict. [...]

[10] Chaos across the country has also provided fertile ground for the development of the Islamic State in Iraq and the Levant (ISIL) and affiliated groups. ISIL's territorial influence has grown considerably in 2015.

c. Humanitarian situation

[...]

C. Explosive weapons in Libya

[11] The use of explosive weapons in Libya has been widespread, particularly in populated areas. Explosive weapons were used extensively during the conflict in 2011. After a period of relative calm in 2012 and 2013, their use became prevalent in 2014 and has continued unabated. The Commission of Inquiry on Libya (CoI) found that Qadhafi forces and thuhar used explosive weapons in populated areas throughout the Libyan conflict in 2011. The CoI also found that in some instances, Qadhafi forces and thuhar directly targeted civilians or conducted indiscriminate attacks in clear violation of IHL. [...]

a. Artillery rockets

[12] These were among the most widespread explosive weapons used in populated areas during the Libyan conflict in 2011. [...] The CoI found that Qadhafi forces and thuhar used artillery rockets extensively throughout the conflict, with particularly devastating consequences in major cities such as Misurata, which was under siege between March and May 2011.

[...]

b. Other ground-launched explosive weapons

[13] Numerous Libyan homes, particularly in Tawergha, were damaged or destroyed by M-40 recoilless rifle fire. Qadhafi forces and thuhar used these direct fire anti-tank weapons in towns and cities across Libya. However, the most widespread use of these weapons in populated areas was by thuhar, who used them in the defence of Misurata, during the siege of Sirte and in reprisal attacks in Tawergha. The CoI found particularly troubling evidence of widespread use of these weapons in Tawergha, where many homes bore the holes of M-40 weapon fire and dozens of spent M-40 canisters littered streets across the city.

[14] In addition, hundreds of 122 mm and 152 mm shells were fired from field artillery into Libyan towns during 2011. [...]

[15] Mortars were also widely used in populated areas by Qadhafi forces and thuhar during the conflict. Mortar projectiles are portable, tube-launched unguided artillery projectiles. They are fired in volleys against a target due to their relative inaccuracy. Mortars contributed to civilian harm throughout the conflict even though their blast and fragmentation radius, at approximately 20 metres, has a smaller area of effect than

that of larger weapons. Due to the mass effect of these barrage weapons, numerous mortars were fired simultaneously on population centres.

c. Air-launched explosive weapons

[16] NATO aircraft flew 17,939 armed sorties in Libya during the 2011 conflict. Every NATO airstrike employed so-called precision-guided munitions (PGMs) – the first time in history that a party to conflict had used only PGMs. However, the use of PGMs alone does not remove the danger to civilians, particularly if the weapons are used in populated areas. [...] During NATO strikes in Tripoli and Surman, the fragmentation effects of BLU-109 earth-penetrating bombs killed civilians. In Tripoli, a NATO strike hit a bunker, but fragmentation effects from the explosion destroyed an adjacent dwelling, killing two people.

[17] The CoI found that the vast majority of NATO's aerial bombs were not used in population centres. For the few targets that struck within populated areas, NATO took extensive precautions to avoid civilian casualties. Nonetheless, the CoI confirmed incidents of civilian casualties and damage to civilian infrastructure from NATO attacks, and on a few occasions the CoI found targets that "showed no evidence of military utility". [...].

[...]

d. Improvised explosives devices

[...]

e. Landmines and cluster munitions

[18] Cluster munitions were also of serious concern during the 2011 conflict, particularly Qadhafi forces' use of Spanish MAT-120 and Russian PTAB 2.5M cluster munitions. In addition, there was widespread use of landmines during the conflict. For example, Qadhafi forces used Chinese Type-84 scatterable anti-tank mines in Misurata, placing civilians at grave risk of death or injury. Anti-personnel landmines and cluster bombs are banned by the Mine Ban Treaty and the Convention on Cluster Munitions respectively. Libya is not a party to either of these instruments.

D. The human cost of explosive violence in Libya

a. The cost in civilian casualties

[19] Every year since 2011, Libyan civilians have paid the highest price for the use of explosive weapons, particularly in populated areas. Data collected by AOAV [Action On Armed Violence] indicate that between January 2011 and June 2015, civilians comprised about 79 per cent of all reported casualties (people killed

or physically injured) from explosive weapon attacks in populated areas in Libya. This compares with 34 per cent when explosive weapons were used in other areas in Libya.

[20] The use of explosive weapons in populated areas was a major cause of civilian deaths and injuries across Libya in 2014 and the first half of 2015, including in the three most populous cities (Tripoli, Benghazi and Misurata) and in Derna, Wershafana and Al Qubbah. In 2014, AOA recorded 36 incidents of explosive weapons use in Libya resulting in 549 people killed or injured, including 306 civilians. When explosive weapons were used in populated areas in 2014, civilians comprised 86 per cent of the resulting casualties, compared with just 19 per cent in other areas. In addition, between January and June 2015, AOA recorded 38 incidents of explosive weapons use in Libya, with 419 civilian casualties. When explosive weapons were used in populated areas during this period, civilians comprised 81 per cent of the casualties, compared with 45 per cent in other areas.

[...]

b. Broader impact on civilian life

[...]

[21] The destruction of civilian homes and infrastructure caused by explosive weapon attacks has been extensive throughout Libya. For example, thuwar attacks in Sirte in 2011 using explosive weapons, particularly rocket artillery, left whole sections of the city in rubble. The Col found buildings damaged and destroyed deep within the city, not just along main roads and the axis of fighting. Qadhafi's military similarly destroyed large sections of several Libyan cities in 2011. Misurata bore the brunt of the Qadhafi forces' strikes, with destroyed homes visible along the axis of fighting and damaged homes spread widely throughout the city. According to the Senior Military Adviser to the Col, the destruction of houses and public buildings in the city of Tawergha was complete; virtually every structure in the city bore extensive damage from explosive weapons, making the buildings uninhabitable.

[22] [...] Qadhafi forces damaged or destroyed several medical facilities, including by shelling with high-explosive weapons such as mortars, artillery rockets and field artillery. These attacks made it difficult for civilians to receive adequate medical care during the conflict, creating a post-war situation where major repairs were needed to return facilities to operation.

[23] More recent fighting in Libya has also seen extensive damage to civilian infrastructure due to the use of explosive weapons in populated areas. In June 2014, for example, a Libyan warplane under Haftar's command targeted an Islamist militia base in Benghazi but instead hit a university building. According to witnesses, the warplane fired three rockets that hit the university's engineering faculty, causing huge material damage.

[...]

[24] In February 2015, the United Nations Support Mission in Libya (UNSMIL) reported extensive damage to civilian property and infrastructure, including schools, hospitals and clinics, caused by shelling. According to UNSMIL, “The continued indiscriminate shelling and use of air assets against targets in heavily populated areas and strategic installations across the country underscores the growing plight of the civilian population and the systematic destruction of much of the country’s vital infrastructure.”

[...]

c. Displacement of civilians

[25] The use of explosive weapons in populated areas is a major driver of displacement as civilians are forced to flee due to fear of, or as a result of, explosive weapon attacks. Furthermore, the ability of displaced people to return to their place of origin is often impeded by damage to civilian housing and vital infrastructure, and by the potential presence of ERW.

[26] In Libya, some 60,000 people fled their homes during the 2011 uprising, and many were still displaced by February 2015. According to the Col, in many cases the return of people displaced in 2011 was delayed by war-related damage to the electricity supply and the water and sanitation systems, as well as severe destruction of property, particularly in the case of Sirte. In some cases, returns were also delayed due to the contamination of residential areas with ERW.

[...]

d. Explosive remnants of war: a deadly legacy

[...]

E. Devastation in Libyan families: cases and personal stories

[...]

a. NATO strikes in Zliten

[27] During the 2011 conflict, most NATO airstrikes in Libya were outside populated areas. Nonetheless, the Col found that a small number of NATO attacks hit population centres, causing civilian deaths and damage to civilian infrastructure. [...] among the 20 NATO airstrikes investigated, the Col documented five airstrikes in which 60 civilians were killed and 55 injured. [...]

[28] Fifty kilometres to the west of Misurata lies the coastal town of Zliten. Still under the control of Qadhafi

forces in 2011, Zliten became the operations base for their assault on Misurata. Consequently, the town was a target of NATO forces.

[29] In June 2011, Mustafa Al-Murabit began noticing a steady flow of luxury vehicles, SUVs and armed men going to and from a neighbour's home. It was evident that the visitors had transformed the home into a regime command centre. Concerned by their proximity to military activity and the threat of NATO strikes, Mustafa and his wife moved the family to his brother's home.

[30] On 2 August, after nearly two months without incident, they returned home. But two days later, a NATO missile struck their home. Col interviews indicate that the actual target was an adjacent building used by the Qadhafi-loyal leadership. It is not clear if the NATO strike missed its target entirely or if NATO struck the wrong building.

[...]

b. Libya Dawn strikes in Weshafana

[...]

c. ISIL car bombs in Al-Qubbah

[31] The absence of functional State institutions in Libya has provided fertile ground for the formation and expansion of ISIL and affiliated groups, now prominent actors in the ongoing battle for the country. These groups often use IEDs as their weapon of choice. When used in populated areas, IEDs can have a heavy impact on civilians.

[32] On 15 February 2015, ISIL released a video showcasing the beheading of 21 Egyptian workers in a supposed act of retaliation against the Egyptian Government. The Egyptian Government retaliated the next day with air strikes on ISIL facilities in which 40 to 50 militants and seven civilians were killed. [...]

[...]

B. EXPLOSIVE VIOLENCE MONITOR 2020

[Action on Armed Violence, Explosive Violence Monitor 2020, <https://aoav.org.uk/wp-content/uploads/2021/03/Explosive-Violence-Monitor-2020-V3-single-pages.pdf>]

A. Introduction

[1] In this report Action on Armed Violence (AOAV) presents the findings from the tenth consecutive year of the Explosive Violence Monitoring Project (EVMP), which records the casualties from explosive weapon use

worldwide as reported in English-language media. In 2020, AOAV recorded 18,747 deaths and injuries as a result of the use of explosive weapons around the world. [...].

[...]

B. Key findings

a. Overview

[2] In total, AOAV recorded 18,747 deaths and injuries by explosive weapons in 2,910 incidents in 2020. Of these, 11,056 were civilians – 59%.

[...]

[3] Civilian deaths and injuries in populated areas represented 89% of all reported civilian deaths and injuries.

[4] When explosive weapons were used in populated areas, 88% of those killed and injured were civilians. This compares to 16% in other areas.

[5] AOAV recorded 9,880 civilians killed and injured in populated areas.

[...]

C. Key Terms

[...]

D. 2020 Overview

a. [...]

b. 2020 Hotspots

1. 1. 1. Afghanistan

[...]

1. 1. 2. Syria

[...]

1. 1. 3. Pakistan

[...]

4. Yemen

[...]

5. Libya

[6] After rises in violence in 2018 and 2019, AOA V monitored fall in civilian casualties in Libya last year. Civilian casualties fell to 671 in 2020, a fall of 26% compared to the previous year when 906 civilian casualties were recorded from explosive violence.

[7] Most explosive violence occurred in April and May of 2020, when 145 and 256 civilian casualties were recorded respectively. These two months accounted for 60% of a total 2020 civilian casualties.

[8] In total, ground-launched explosive weapons were responsible for 79% of civilian casualties in Libya from explosive violence, with 527 civilian deaths and injuries. The number of civilian casualties from groundlaunched weapons shows a 211% rise in casualties from this launch method type, while casualties from IEDs and airstrikes both drastically fell.

[...]

- c. A global problem

[...]

- d. Who is behind the explosive violence?

1. State actors

[9] The 880 incidents that were attributed to a state, rather than a non-state group, caused 7,018 deaths and injuries in 2020. Of these 48% (3,347) were civilians. This compares to 12,323 deaths and injuries in 2019, of which 56% (6,733) were civilians.

[...]

2. Non-State actors

[10] Collectively, non-state actors caused 9,706 casualties in 2020, of whom 65% were civilians (6,272). This compares to 15,640 casualties in 2019, of whom 73% were civilians (11,418). These figures point to a 45% decline in civilian deaths and injuries from non-state actor use of explosive weapons, following falls in violence across key conflicts.

[11] AOA V recorded 25 different non-state actors using explosive weapons. [...]. In 2020, the Taliban, the

reported perpetrators of 130 attacks resulting in death or injury to 606 civilians, accounted for 10% of the total civilian casualties from non-state actors. Haftar forces were responsible for 8% and Islamic State for 6%.

E. Explosive weapons in populated areas

a. Populated areas

[12] [...]The use of explosive weapons in populated areas has been shown to overwhelmingly harm civilians. In 2016, 92% of deaths and injuries in populated areas were reported as civilians; in 2017, 2018, 2019 this was 92%, 90% and 90% respectively. [...].

[...]

b. Residential

[...]

c. Villages

[...]

d. Market bombings

[...]

e. Targeting

[13] As has consistently been the case throughout AOAV's records, simply targeting armed actors with explosive weapons did not prevent civilians from being killed or injured.

[14] In 2020, 17% of those killed or injured by attacks which were explicitly coded as targeting armed actors were civilians. In populated areas this percentage was 56%, whilst in areas not densely populated it was 5%.

[15] It must be stressed that the use of explosive weapons that impact a wide area particularly endangers civilians, even if these weapons are directed at a military objective.

f. Women

[...]

[16] Women were reported among those killed and injured in 430 incidents, including those incidents where

no figure was given. Overall, 692 women were reported killed or injured in 387 incidents.

[...]

[17] The majority of women who were killed or injured were victims of attacks in populated areas. It was found that 89% of female casualties recorded, occurred in populated areas.

g. Children

[...]

[18] In 2020, AOAV recorded 1,264 child deaths and injuries in 510 incidents. Of these, a gender was given for 318 individuals, of whom 146 were girls and 172 were boys. The rest were reported without specifying gender.

[...]

[19] Of the incidents reported that saw children killed or injured, at least 91% took place in populated areas.

F. Explosive weapons types

[...]

G. Conclusion

[20] Despite the welcomed fall in casualties from explosive violence last year, it remains the case that all too often civilians are continuing to suffer disproportionately from the use of explosive weapons, particularly when explosive weapons are used in populated areas.

[...]

H. Recommendations

[21] States and other actors should stop using explosive weapons with wide area effects in populated areas.

[22] Previous AOAV reports, along with other notable publications by UNOCHA, ICRC and CIVIC, have shown the impact that strong, progressive rules of engagement can have in limiting the impact of explosive weapons on civilians. States should review their policies and practices on the use of explosive weapons in populated areas, particularly those which may be expected to impact a wide area.

[...]

[23] States and users of explosive weapons should work towards the full realisation of the rights of victims,

including those killed and injured, their families, and affected communities. They should strive to ensure the timely and adequate provision of needed services for the recovery, rehabilitation, and inclusion of victims of explosive violence, without discrimination.

[...]

C. EXPLOSIVE WEAPONS WITH WIDE AREA EFFECTS: A DEADLY CHOICE IN POPULATED AREAS

[ICRC, Explosive Weapons With Wide Area Effects: A Deadly Choice In Populated Areas; available at: https://www.icrc.org/en/download/file/229018/ewipa_explosive_weapons_with_wide_area_effect_final.pdf (footnote omitted)]

[...]

Introduction

War in cities: old weapons in a changing conflict environment

[1] Contemporary armed conflicts are increasingly being fought in population centres. This trend is likely to continue with the growing urbanization of the world's population. It is estimated that some 50 million people worldwide are suffering the effects of urban warfare.

[...]

[2] Though the nature of warfare has become more urbanized in recent decades, the means and methods of combat employed by belligerents have so far not undergone a similar evolution. Today, hostilities in urban areas are often conducted with weapons and tactics that were not originally designed, or have otherwise not been adapted, for use in such areas. [...]

[...].

[3] Since 2011, based on its observation of the direct and indirect harm to civilians caused by the use of heavy explosive weapons in populated areas, the ICRC has been calling on states and parties to armed conflicts to avoid using “explosive weapons with a wide impact area in densely populated areas, due to the significant likelihood of indiscriminate effects and despite the absence of an express legal prohibition for specific types of weapons”.

[...].

Explosive weapons with a wide impact area in populated areas: scope of the issue

[...]

Chapter 1: Humanitarian consequences of the use of explosive weapons with a wide impact area in populated areas

[...]

1.1 Introduction

[4] The ICRC's point of departure when engaging in dialogue with governments and armed forces on how hostilities are conducted, including on the impact of weapons, is to report on their effects on people's lives and well-being, applying an objective analysis. Working on the frontlines of armed conflicts, the ICRC witnesses and documents the humanitarian consequences of the conduct of hostilities, including those taking place in populated areas. It reminds belligerents of their obligations under IHL, including the requirement to take constant care to spare civilians and civilian objects in the conduct of military operations, and other rules aimed at protecting the civilian population. In addition, the ICRC directly assists, or supports assistance to, persons wounded by weapons of war [...]

[5] The ICRC also has extensive experience in mitigating health risks, such as communicable diseases, notably for populations affected by armed conflicts taking place in urban areas. The ICRC's emergency response is activated in the affected areas with the aim of maintaining or restoring provision of essential services to the population, for example when they have been disrupted as a consequence of critical civilian infrastructure being damaged by heavy explosive weapons. In this respect, the ICRC also provides longer-term support to local service providers to strengthen the resilience of essential-service systems, in order to mitigate the humanitarian consequences that might follow when essential services are affected by the use of heavy explosive weapons.

[...]

1.2 A pattern of civilian harm

[6] The ICRC's on-the-ground documentation of the impact on civilians of warfare conducted in populated areas, in some fifteen contexts over the last decade, has confirmed that the use of explosive weapons with wide area effects in populated areas is a major cause of civilian harm.

[7] Cases collected by the ICRC show a trend of extensive suffering among civilians when military objectives (lawful targets) located in populated areas were attacked with explosive weapons that are inaccurate or that are otherwise prone to wide area effects – such as artillery guns, most mortars, rocket artillery, MBRLs [multi-

barrel rocket launchers], air-delivered general-purpose bombs, and large IEDs [improvised explosive devices].

[8] Effects have been typically observed well beyond the target: high numbers of civilian deaths and injuries; mental and psychosocial harm; significant damage to and destruction of civilian property and critical infrastructure; disruption of services essential to the survival of the civilian population, including water, electricity, sanitation and health care; contamination by UXO [unexploded ordnance]; impact on the natural environment; displacement of the civilian population; and impact on development, among other reverberating impacts. These 'incidental' effects are particularly severe when the use of heavy explosive weapons is repeated and protracted over days, weeks and even months. Children and women are especially vulnerable.

[...].

1.3 Physical effects of explosive weapons on people

[...]

1.3.1 Death and injuries

[...]

[9] In Libya, in 2018, 47 civilians were killed and 54 injured during the month of May alone; the UN Support Mission in Libya (UNSMIL), which documented these figures, attributed most of the casualties to shelling.

[...]

1.3.2 Types of injury

[...]

1.3.3 Health care implications

[...]

1.3.4 Long-term and lifelong disabilities

[...]

1.4 Mental health and psychosocial effects

[...]

1.5 Destruction of civilian objects and impact on essential services

1.5.1 Destruction of buildings, in particular civilian population's homes

[...]

1.5.3 Impact on essential civilian services

[10] [...] A significant proportion of the civilian suffering caused by the use of heavy explosive weapons stems from the disruption and deterioration of the essential services on which civilians living in populated areas depend for their survival, such as electricity, water, sanitation, solid-waste disposal and health care. The ICRC has documented and continues to witness the devastating impact on essential services, during armed conflicts, of the use of heavy explosive weapons.

[11] Most commonly, the use of explosive weapons with a wide impact area will have an effect on the infrastructure necessary to render such services. Cities, towns, villages and other built-up populated areas typically contain a complex web of fragile, centralized and interconnected service infrastructure located underground (e.g. water and wastewater pipelines), at ground level (e.g. electrical substations and health-care facilities), and above ground (e.g. overhead power lines, elevated water reservoirs), all of which are not hardened against attack and as such vulnerable to damage from the use of heavy explosive weapons. [...].

[12] The impact on service infrastructure can be direct – meaning the impact caused immediately by the physical effects of the explosion – and indirect or ‘reverberating’ – meaning the second- or higher-order effects triggered by the direct impact. The interdependency and interconnectedness of essential services increases the probability that disruption of one service will have a domino effect on the provision of others. For example, damage to a power station will cause power shortages that will likely disrupt the functioning of hospitals or of water-purification stations, which may in turn lead to the death of patients and the spread of disease. Other services that rely on this particular power station for electricity – such as hospitals, schools, telecommunications, transportation systems, banking and financial services, and emergency services – could also be affected.

[...].

[13] In protracted hostilities, the direct and indirect effects on essential urban services described above accumulate with the multiple and repeated use of heavy explosive weapons, and make the recovery of essential-service systems particularly difficult and time-consuming. This leads to the incremental degradation of the service infrastructure system and to a vicious cycle of service decline, generating yet more suffering for

the civilian population. [...]

[...]

[14] [...] [O]ne of the essential services that is particularly affected by the use of heavy explosive weapons in populated areas is health care. Most health-care facilities and most patients in need of treatment are located in populated areas. As with all essential services, when located within the weapon's impact area, health-care facilities are vulnerable to being incidentally damaged or destroyed, and medical personnel are at risk of death or injury.

[15] But beyond these direct effects, often the functioning of hospitals or other health-care centres is disrupted by water or power shortages or an inability to evacuate wastewater and solid waste, while the wounded or sick can be prevented from safely accessing health-care facilities by ongoing hostilities or the presence of explosive remnants of war (ERW). The use of heavy explosive weapons may also endanger and hinder the movement of first responders, obstructing their access to the wounded and depriving those seriously injured of lifesaving interventions. In short, it can be extremely difficult, if not impossible, to deliver safe and effective health care when explosive weapons with a wide impact area are used in populated areas, especially when such use is protracted.

[...]

1.5.3 Impact on cultural heritage

[...]

1.6 Displacement

[16] Displacement of the civilian population is a typical consequence of the use of heavy explosive weapons in urban and other populated areas, especially when such use is prolonged. The ICRC and other organizations have documented this nexus. Indeed, when cities are bombed and shelled, civilians are often compelled to flee, out of fear for their lives, above all.

[...]

[17] In Libya, between April and July 2019, ICRC documented the displacement of over 120,000 civilians mainly as a result of the continuous use of heavy explosive weapons (in particular large air-delivered bombs, MBRLs and mortars) in residential areas of Tripoli.

1.7 Contamination by unexploded ordnance

[...]

1.8 Impact on children and women

[...]

1.9 Impact on the natural environment

[...]

1.10 Impact on development

[...]

Chapter 2: Technical characteristics of explosive weapons accounting for their wide impact area

[...]

Chapter 3: International humanitarian law and the use of explosive weapons with a wide impact area in populated areas

Key findings

[...]

3.1 Introduction

[18] It is a long-standing principle of IHL that the right of the parties to an armed conflict to choose means and methods of warfare is not unlimited. [...]

[19] [...] [T]he principle of distinction requires parties to an armed conflict at all times to distinguish between civilians and combatants and between civilian objects and military objectives, and to direct their attacks only against combatants and military objectives, never against civilians and civilian objects.

[20] Even when the parties to a conflict direct their attacks against lawful targets (combatants and military objectives), IHL limits their choice of weapons and tactics (means and methods of warfare) by prohibiting indiscriminate and disproportionate attacks and by requiring them to take all feasible precautions to avoid or at least minimize incidental civilian harm.

3.2 The prohibition against indiscriminate attacks

[...]

[21] The prohibition against indiscriminate attacks defines three types of attack, each of which is of a nature to strike military objectives and civilians and civilian objects without distinction. First, attacks that are not directed at a specific military objective [...]: this refers to the manner in which a weapon is used rather than the characteristics of the weapon itself. Second, attacks that use a method or means of combat that cannot be directed at a specific military objective [...]: this includes the use of weapons that are not sufficiently accurate to strike a specific target, in all or in certain circumstances. Third, attacks that employ a method or means of combat the effects of which cannot be limited as required by IHL [...]: this typically refers to weapons the effects of which cannot be controlled in either time or space as required in order to comply with IHL. In addition, IHL prohibits two specific types of indiscriminate attack: area bombardment and disproportionate attacks [...]

[22] A distinction should be made between the prohibition against indiscriminate attacks and the prohibition against weapons that are by nature indiscriminate. The latter are weapons that are of a nature to strike military objectives and civilians and civilian objects without distinction because they cannot be directed at a specific military objective, or because their effects cannot be limited as required by IHL, in any of the normal or expected circumstances of their use. The use of such inherently indiscriminate weapons is prohibited under customary IHL, independently from the prohibition against indiscriminate attacks. Legal experts and state practice generally do not support the view that explosive weapons with a wide impact area are indiscriminate by nature.

[23] Conversely, the prohibition against indiscriminate attacks encompasses attacks that employ a method or means of combat that, in the circumstances of the attack, cannot be directed at a specific military objective or the effects of which cannot be limited as required by IHL. In fact, means or methods of warfare that can be used perfectly lawfully in some situations could, in other circumstances, violate the prohibition against indiscriminate attacks. Populated areas constitute an environment that may render indiscriminate certain methods or means of combat that can be lawfully employed in other circumstances, in open battlefields, for instance. This is typically the case of explosive weapons with a wide impact area, the use of which may be indiscriminate – and therefore unlawful – in certain circumstances, notably in populated areas, precisely because of their wide impact area.

[...]

3.2.1 Means and methods of combat that cannot be directed at a specific military objective

[...]

[24] Accuracy and precision are relevant to determine whether a weapon can be directed (or aimed) at a specific military objective. [...] the larger the probability of error associated with a weapon, the higher the risk of incidental civilian harm. Certain unguided tactical ballistic missiles and certain types of rocket artillery are among the weapons deemed inaccurate; their use – in some or in all circumstances – has been designated by some states as contravening the prohibition against indiscriminate attacks. [...] IHL does not provide specific criteria that would define whether a weapon system is sufficiently accurate or precise to comply with the rule prohibiting indiscriminate attacks in given circumstances, and states are not forthcoming in specifying what they would consider as a standard of accuracy required by this rule.

[25] Case law, too, does not provide a clear standard of accuracy that could be relied upon to determine whether a weapon's use complies with the prohibition against indiscriminate attacks. The International Criminal Tribunal for the former Yugoslavia (ICTY) addressed this issue, but its findings on the question of weapon accuracy have been inconclusive. In the Martić case, the ICTY held that a weapon with a dispersion error between 800 and 1,000 metres was indiscriminate when used in densely populated areas and should thus not be used in such environments. It did not, however, draw any conclusions regarding a general standard for weapon accuracy. The Appeal Chamber noted that even a pattern of 180 metres x 165 metres would hardly make the finding of the Trial Chamber that the M-87 Orkan was incapable of hitting specific targets unreasonable. In Gotovina, the Appeal Chamber rejected a '200 metre standard' established by the Trial Chamber that had held impact points located more than 200 metres from a legitimate target as indicative of an indiscriminate artillery attack. The Appeal Chamber considered that the Trial Chamber had not sufficiently justified why it drew the line at 200 metres as an acceptable margin of error; it did not, however, elaborate upon what it considered the correct standard to be.

[...]

3.2.2 Means and methods of combat the effects of which cannot be limited as required by IHL

[26] "As required by IHL" refers notably to the prohibition against disproportionate attacks [...] and the use of weapons the effects of which cannot be limited so as to avoid causing widespread, long-term and severe damage to the natural environment or "the release of dangerous forces and consequent severe losses among the civilian population". This third type of indiscriminate attack also covers the employment of means and methods the effects of which cannot be controlled in time and space, such as biological agents, or water or fire (depending on how they are used). This concern leads, among other things, to the imposition of prohibitions and restrictions on the use of incendiary weapons against military objectives located within a concentration of civilians. [...]

[27] The ICRC Commentary illustrates this category of indiscriminate attacks with examples of attacks carried out by means that may be expected to cause "extensive" civilian harm, whether because the means escape the control of the user or because of the sheer power of the weapon used. It provides as an example of the

latter a ten-tonne bomb used to destroy a single building. In such a case, “it is inevitable that the effects will be very extensive and will annihilate or damage neighbouring buildings”.

[28] [...] In this regard, the use in populated areas of large-calibre or high-payload munitions, which have a large destructive radius even when precision-guided, raises serious concerns under this prohibition when the military objective is significantly smaller than the weapons’ destructive radius, because in such situations the weapons’ effects can be foreseen to be extensive both in terms of impact area and the magnitude of civilian harm likely to be caused.

3.2.3 Use of indirect fire for suppression, harassment, and interdiction under the prohibition against indiscriminate attacks

[...]

3.2.4 Adjustment techniques for indirect fire under the prohibition against indiscriminate attacks

[...]

3.3 The prohibition against area bombardment

[...]

3.4 The prohibition against disproportionate attacks

[...]

[29] Also known as the ‘principle of proportionality’, this rule is reinforced by certain rules flowing from the principle of precautions in attack, in particular the obligation to do everything feasible to assess whether an attack may be expected to be disproportionate and to cancel or suspend an attack if it becomes apparent that it may be expected to have disproportionate effects.

[30] As is the case when applying all the other rules governing the conduct of hostilities, the proportionality assessment must be carried out before deciding upon an attack. It requires a commander to take into account all incidental harm to civilians and civilian objects that is foreseeable based on information reasonably available from all sources in the circumstances. This includes not only civilian death, injury and destruction within the explosive weapon’s impact area, but also indirect or ‘reverberating’ effects, meaning those effects not directly caused by the weapon’s explosive impact, but which are nonetheless a product thereof. Indeed, there is no requirement that the relevant incidental civilian harm – unlike the military advantage anticipated from the attack – be “concrete” and “direct”. Several states expressly include harm due to the foreseeable indirect (or reverberating) effects of attacks, either when describing the relevant

standard or through the examples they provide.

[31] While there must be a causal link between the attack and the reverberating effects, there are no temporal or geographic requirements other than being reasonably foreseeable for the determination of the effects to be considered. For example, [...] the incidental damage caused by heavy explosive weapons to critical civilian infrastructure, such as electrical power plants and supply lines, might disrupt services essential to civilian survival, such as water distribution, health care, power supply and sanitation. This is likely to result in significant civilian harm, affecting a large number of persons beyond the weapon's impact area and for a period of time well beyond the immediate aftermath of the attack. Such harm must be taken into account in the proportionality analysis insofar as it is reasonably foreseeable at the time of the attack [...]

[...]

[32] Proportionality must be assessed ex ante. What is foreseeable at the moment of attack is to be assessed from the perspective of the 'reasonable commander', namely a person trained and experienced in the military art, making use in good faith of information from all sources reasonably available to them in the circumstances.

[...]

[33] Parties to a conflict must do everything feasible to assess whether an attack will comply with the rule of proportionality. In the ICRC's view, this entails 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, of an attack. Depending on the circumstances, this may include collecting information to map critical infrastructure within the impact area of the explosive weapon to be used, to assess the impact of the eventual damage of such infrastructure on the provision of essential services, and to estimate the civilian harm resulting from such disruption. Assessing the likelihood and magnitude of reverberating effects might require technical expertise (e.g. from engineers or public health specialists). In populated areas, where military objectives are intermingled with civilians and civilian objects, it is imperative that the proportionality assessment be conducted with utmost care, given the heightened risk of incidental civilian harm.

[...]

[34] With respect to the types of harm relevant to the assessment of incidental civilian harm – whether direct or indirect – the rule of proportionality [...] speaks of "loss of civilian life, injury to civilians and damage to civilian objects or a combination thereof". In the view of the ICRC, "damage to civilian objects" encompasses the consequences for civilians of impairing the civilian use of objects employed simultaneously for military and civilian purposes; loss of functionality; and environmental damage. This would be the case, for example, when a water-purification station ceases to function because the lines that supply electricity indispensable for

its operation are damaged by the use of heavy explosive weapons, or when an attack using such weapons damages the environment either directly or through contamination by unexploded ordnance. Moreover, “injury” is to be construed broadly to include illness and disease, as well as wounds. Thus, illness or disease triggered by, for example, inadequate or insufficient water provision owing to the disruption of essential services caused by an attack using heavy explosive weapons constitutes civilian harm relevant for the proportionality assessment.

[35] In sum, based on the extensive civilian harm, direct and indirect, witnessed in recent armed conflicts, there are serious questions as to whether militaries sufficiently factor all relevant effects of an attack, including its reverberating effects, into the proportionality assessment. Military doctrine and practice are neither entirely clear nor consistent in this respect [...].

3.4 The obligation to take precautions

3.5.1 The obligation to take constant care

[...]

[36] The general obligation to take constant care supplements the basic rule of distinction. It applies to the entire range of military operations and not only attacks within the meaning of IHL [...].

[37] The obligation of constant care is an obligation of conduct, to mitigate risk and prevent harm. It applies constantly in the planning or execution of any military operation. As a general rule, the higher the risk for the civilian population in any given military operation, the more will be required in terms of care. It goes without saying that a stringent standard of care is particularly necessary when conducting operations in urban areas.

[38] The requirement to take constant care extends to every aspect of military operational training, planning and mission execution, and is interpreted by some as demanding that soldiers be trained and directed to instinctively endeavour to mitigate civilian risk in all situations. The constant care requirement may shape an operational plan, for instance, by not fighting in densely populated areas or attacking military objectives therein if such attacks are likely to cause heavy civilian casualties. [...].

3.5.2 Precautions in attack

[...]

[39] When planning or deciding upon an attack, parties to armed conflict have an obligation to take all feasible precautions to avoid, or at least minimize, incidental civilian harm. The obligation to take precautions is very stringent, as all precautions that are “feasible” must be taken. This is understood to mean all those precautions that “are practicable or practically possible taking into account all circumstances ruling at the

time, including humanitarian and military considerations". The obligation to take all feasible precautions in the choice of means and methods of warfare is particularly relevant to the use of heavy explosive weapons in populated areas. This requires an assessment of the foreseeable effects of the available weapon systems based on their technical features and the planned circumstances of their use, as well as consideration of alternative weapons and tactics, if these would avoid or minimize the likelihood or extent of expected incidental civilian harm. [...]

[40] Although there is no obligation under IHL to acquire the most precise weapons available on the market, parties to armed conflicts have a duty to ensure that they have the means available to respect IHL rules. And when planning attacks, the obligation to take all feasible precautions in the choice of means and methods of warfare might require them to choose the most precise weapon available, and the smallest possible calibre or explosive yield that achieves the military advantage sought, so as to minimize incidental civilian harm.

[41] The obligation to take all feasible precautions in attack includes a requirement to give effective advance warning of attacks that may affect the civilian population, unless circumstances do not permit. [...] However, the fact that civilians have received effective advance warnings and that evacuations have been allowed, or even ordered, does not necessarily mean that an area is no longer "populated". [...] Those who remain in the area do not lose their protected status because they did not heed a warning or evacuate. Moreover, providing advance warnings does not relieve an attacker from taking all other precautionary measures that are feasible.

[...].

3.5.3 Precautions against the effects of attacks and the prohibition against the use of human shields

[...]

3.5.4 Explosive remnants of war

[...]

Chapter 4: Military policy and practice relating to the use of explosive weapons with a wide impact area in populated areas

Key-findings

[...]

4.1 Introduction

[...]

[42] According to the information available to the ICRC to date, comparatively few armed forces throughout the world appear to have produced doctrine or adopted a specific policy for training in urban warfare, including in the choice of weapons and tactics suitable for use in populated areas. More examples of urban-warfare doctrine have emerged recently, but they have not always underpinned urban-warfare training or – even less so – the choice of suitable weapons or tactics. Relevant elements of policy and practice are mainly mission-specific, but for some states they form part of a more consistent approach towards urban warfare. In addition, some states and military alliances have developed specific policies for the protection of civilians in armed conflict, which are also of relevance to urban warfare, including in connection with the use of heavy explosive weapons in populated areas.

[...]

4.2 Express limitations and other weapon-specific measures on the use of certain explosive weapons in populated areas

[43] Some military policy and practice recognizes that there are challenges in employing weapons that are inaccurate or otherwise have wide area effects in populated areas, and that these challenges can be offset by taking measures to reduce the area effects of the weapon and by considering alternative weapons and tactics. [...]

[...]

4.2.10 Non-state armed groups

[44] The practice of non-state armed groups as regards the use of heavy explosive weapons in populated areas is discernible from recent and ongoing armed conflicts. [...]

[45] Beyond what can be observed from their practices, little is known of non-state armed groups' policies or operational instructions on the choice of means and methods of warfare in populated areas, not least because of the challenges in engaging in and maintaining a dialogue on the conduct of hostilities (or on their policies concerning the use of weapons) with such actors. Nevertheless, where contact and dialogue have been possible, codes of conduct reflecting IHL have sometimes been put in place, some of which were provided to non-state armed groups by the ICRC directly or by other actors.

[46] All six non-state armed groups involved in a survey conducted by Geneva Call stated that protecting the civilian population and preventing collateral damage (incidental civilian harm and damage to civilian objects) caused by the use of explosive weapons was a priority for them. One group specifically mentioned

endeavouring as far as possible to use explosive weapons only outside populated areas, and to move operations away from populated areas in general. The groups mentioned various precautionary measures taken to reduce incidental civilian harm when using explosive weapons, including avoidance of fighting in densely populated areas and use of nonexplosive weapons when the risk of civilian casualties was too high.

[47] More recent discussions have similarly shown that some non-state armed groups actively endeavour to minimize civilian harm in the context of hostilities. For example, a representative of one non-state armed group told Geneva Call that the group would try to use 'guerilla methods' and 'small weapons' to minimize civilian harm, while a representative from another group mentioned their group's use of small weapons to reduce civilian casualties. Finally, representatives from various non-state armed groups mentioned the importance they placed on gathering information to conduct a proper assessment of civilian presence around a potential target, in order, then, to determine what weapon should be employed to minimize incidental harm to civilians.

[...]

Discussion

I. Legal Framework and applicable law

1. (*Document A, paras [4]-[10] and [32]*)

1. How do you classify the situation in Libya from 15 February 2011 onwards? May there be simultaneously several conflicts of different nature? How does the declaration of independence made by the National Transitional Council affect the classification of the situation? (GCI – IV; GCI-IV, Common Art. 3; PI, PII, Art. 1)
2. Who are the parties to the conflict(s)?
 1. Can France, the United Kingdom, United States and/or NATO be considered as parties to an armed conflict on the territory of Libya? Why or why not? What about Egypt?
 2. OCHA Report mentions the existence of up to 1700 armed groups and militias on the territory of Libya, can all those groups be considered as parties to the conflict? Why or why not? Can the Islamic State of Iraq and the Levant (ISIL) be considered a party to the conflict? Does IHL specify the requirements for armed groups to be part of a NIAC?
3. Does the existence of Resolution 1973 by the UNSC authorizing the adoption of all necessary measures for the protection of civilians affect in any way the applicability of IHL? Why or why not?

2. (*Document B, paras [12]-[14]; Document C, paras [41]-[46]*)

1. Are non-state armed groups bound by IHL? If so, should or are they subject to the same obligations as States are? Is it realistic to expect from non-state armed groups to be subjected to the same rules as States?
2. What is the importance of the action of organizations on the ground, such as Geneva Call?

II. Protection of civilians

3. (*Document C, paras [17]-[40]*) What rules parties must respect in the conduct of hostilities? Are they applicable both to NIACs and IACs? According to the ICRC, what are the main challenges for the respect of each rule when explosive weapons are used in urban areas? How could those challenges be approached by the parties to the conflict? (PI, Art. 48, Art. 49, Art. 51(5)(b), Art. 57; PII, Art. 13(1); CIHL, Rules 1, 7, 14, 15)

4. (*Document A, para. [18]; Document B, paras [2]-[6], [13]-[19]; Document C, paras [20]-[25], [30]-[35]*)

1. According to IHL, what is an indiscriminate attack? What are the steps to assess if an attack was indiscriminate or not? What is incidental loss of civilian life? At what moment must the assessment of incidental loss of civilian life be made? What must be taken into account in the assessment? Namely, should indirect effects also be taken into account? Considering the effects of explosive weapons in urban areas, would the use of explosive weapons in urban areas always be disproportionate and thus in violation of the proportionality rule? (PI, Art. 48, Art. 49, Art. 51(4), Art. 57; CIHL, Rule 11, 12, 14, 15, 18)
2. Are women and children specifically protected against attacks?
3. Are explosive weapons indiscriminate by nature? Does IHL clarify how to assess on accuracy and precision of weapon systems? How does the case-law of international tribunals address this issue? If a criminal tribunal rejects a certain method for assessing when an attack is indiscriminate, does this also exclude using such method for determining when a party to an armed conflict has violated the IHL prohibition of indiscriminate attacks? Does IHL contain any specific rule on the means and methods of warfare? Are they unlimited? Are landmines and cluster munitions prohibited by IHL? Are the parties prohibited from using them? (PI, Arts. 57-58; CIHL, Rule 17, Rule 18; Convention on Cluster Munitions; Convention on Conventional Weapons (CCW) and its Protocols I (Non-Detectable Fragments), II (Protocol on Prohibitions or Restrictions on the Use of Mines, Booby-Traps and Other Devices), III (Incendiary Weapons), IV (Blinding laser weapons), V (Explosive Remnants of War; Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on their Destruction (Ottawa Convention)).

5. (*Document B, paras [16]-[19]; Document C, paras [16]-[17], [29]-[41]*)

1. Is the use of explosive weapons in populated areas always indiscriminate? Could the use of explosive weapons in populated areas be considered as a tool “which employ a method or means of combat the effects of which cannot be limited as required by international humanitarian law”? (PI, Art. 48, Art. 49, Art. 51(5)(b), Art. 57; PII, Art. 13(1); CIHL, Rules 1, 7, 14, 15)
2. Which effects does the use of explosive weapons have on the population according to the ICRC’s report? Does “damage to civilian objects” under the proportionality rule encompass the consequences for civilians of impairing the civilian use of dual use objects? Could forced displacement be considered as one of such effects? Is forced displacement always unlawful under IHL? Is it taken into account for the conduct of hostilities? Can it be considered as an incidental civilian harm for the assessment of proportionality in attack? Should it be taken into account when assessing precautionary measures? (GCIV, Art. 49 and 147; PI, Arts. 51, 57-58 and 85(4)(a); PII, Art. 17; CIHL Rule 14-15, 129, 132)

III. Interplay between IHL and IHRL

6. (*Document B, para. [19]*) Due to the effects of the use of explosive weapons in urban areas, is the civilian population affected entitled to remedies? In IHL? In IHRL?

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