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Advocacy

**HANDICAP
INTERNATIONAL**

قصف *Qasef*: Escaping the bombing

The use of explosive weapons in populated areas and forced displacement: perspectives from Syrian refugees



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Photo credits to David Parel, Alma Taslidžan Al Osta, Elisa Fourt.

Aurélie Beaujolais, Information & Publications Advocacy Manager at Handicap International, coordinated the writing of this document.



© D. Parel / Handicap International - July 2016 - Jordan - Handicap International's team interviewing a Syrian refugee.

FOREWORD

"There is no safe place in Syria."¹

This sentiment is universal among the Syrian civilians we interviewed, as most stressed that the main reason for leaving their homes was the use of explosive weapons in the towns or cities where they lived, and that they had to flee several times as the threats reached places they had believed would be safer.

Since 2012 and the beginning of Handicap International's activities in response to the humanitarian crisis in Syria, we have denounced the appalling levels of destruction and casualties caused by the massive use of explosive weapons in populated areas in Syria, especially those with wide-area effects. As fighting escalated, our organisation repeatedly condemned this intolerable violence against civilian populations.

1. Interview #1, July 18, 2016

We have striven to document the devastating impacts of explosive weapons used in populated areas in Syria through a series of reports looking at data on incidents caused by explosive weapons in Syria,² assessing weapons contamination in the city of Kobani,³ and studying injuries and traumas encountered among Syrians affected by the crisis⁴.

Handicap International teams are working on a daily basis alongside refugees or displaced families. Bombing and shelling are common features of their stories, as people flee their homes in search of safety and are unable to return due to the massive destruction of civilian infrastructure, to the threatening presence of explosive remnants of war and to permanent insecurity.

The causes for displacement are multiple (fear of arrest, of gun violence, or just of "war in general", more personal drivers linked to education, family, etc), and individual trajectories are difficult to predict and can evolve along the way. The use of explosive weapons in populated areas is not the only factor influencing the decision to leave one's home, and even less so for undertaking cross-border migration, but it

certainly appears to be an overriding factor. We hope that this study, carried out with the support of the Government of Luxembourg, will help deepen the understanding of the link between the use of explosive weapons and forced displacement.

This analysis does not cover other violent methods of war that are currently used in Syria and also have a high humanitarian impact, notably outside urban areas. Our focus on explosive weapons in populated areas certainly does not indicate a willingness to ignore these other methods, but rather special attention to a particularly acute phenomenon that was a strong undercurrent in the testimonies collected at field level.

When asked to tell the story of their escapes, the Syrian refugees interviewed for this study mentioned the word "*qasef*" (bombing) so often that we decided to use it as a title for our report. As a political process is underway to address the harm inflicted on civilians by the use of explosive weapons in populated areas, Handicap International wants to ensure that the voices of these refugees are heard.

Anne Héry

*Director of Advocacy and Institutional Relations
Handicap International*

2. Handicap International, "The use of explosive weapons in Syria: a time bomb in the making", 2015

3. Handicap International, "Kobani: a city of rubble and unexploded devices", 2015

4. Handicap International, "Syria, a mutilated future: a focus on persons with injuries", 2016



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EXECUTIVE SUMMARY

The Syrian civil war has raged since 2011 and has led to numerous civilian deaths and injuries and mass displacement. As a result of the conflict, over 10.9 million Syrians have been displaced: 6.1 million within Syria and 4.8 million as refugees.⁵ Based on a review of literature regarding the use of explosive weapons in Syria and displacement, on interviews of key informants, and on interviews of families of Syrian refugees in Jordan, this study shows that forced displacement in Syria is strongly correlated with the use of explosive weapons in populated areas.

This study confirms that the use of explosive weapons in populated areas in Syria is at times nearly continuous, with indiscriminate bombing that lasts for days. The attacks are sometimes seemingly random, until there is complete destruction of an area. **All Syrians interviewed said they fled because of the various effects of the conflict, and most of them stressed that the main reason for leaving their homes was the use of explosive weapons in their villages, towns, and cities.** In our interviews, explosive weapons were mentioned as the overriding factor forcing Syrians out as they fled from their homes.

Analysis of the use of explosive weapons in the governorates of Aleppo, Damascus, Deraa, and Homs highlights the diversity of types of explosive

weapons that were used in populated areas of Syria: from barrel bombs to rockets, cluster munitions, mortars or car bombs, with a strong shift, over time, from a mostly ground-intensive campaign of widespread shelling through bombardment to more directed air attacks. The study also shows that displacement patterns follow events linked to the conflict, and in particular, the use of explosive weapons with, for example, mass displacement from besieged cities as soon as it becomes possible to flee, which makes the humanitarian response more difficult for those displaced.

The primary impact of explosive weapons, especially those with wide-area effects, which is mentioned when describing the causes of forced displacement in Syria, is the fear of being killed or injured by those weapons, or of seeing one's family members killed or injured. Another direct cause of displacement is the destruction of houses and livelihoods, which forces the families to flee their homes.

But other effects of explosive weapons reverberate, i.e. create long-term damages impacting the living conditions of affected communities, which should be considered when analysing causes for displacement, as highlighted by recent studies.⁶ Interviewees explained how explosive weapons destroy water and electricity infrastructure; fuel

5. OCHA (as of Sep 2016). In addition, 4.5 million live in besieged cities.

6. UNIDIR, "The implications of the reverberating effects of explosive weapons use in populated areas for implementing the sustainable development goals", 2016

depots and the pipes carrying fuel are destroyed; roads and bridges are made inaccessible, severely restricting the delivery of food and humanitarian aid; and health facilities are damaged or destroyed. Even when not directly hit or affected by the use of explosive weapons during an attack, interviewees who were living in conflict zones without access to basic necessities such as shelter, water, food, fuel, and medical care had few choices but to take the perilous decision to flee. Those journeys were often through areas of intense fighting and to places with an uncertain future.

More generally, Syrians interviewed stressed how the use of explosive weapons in populated areas affected every aspect of their lives, increasing their vulnerability, and compromising their future. Those internally displaced face immediate and direct threats to their security, acute challenges in accessing essential services such as health, food and water, not to mention a very uncertain future. Although they have escaped from the conflict, Syrian refugees still face other types of insecurities

and dire living conditions, namely income insecurity and unsatisfied health needs. Many of these vulnerable populations can trace their displacement back to the use of explosive weapons in populated areas.

The pattern of multiple forced displacements was another finding of the study; when civilians are forced to leave due to war, they are often forced out again and again as they flee bombs throughout their journey. Interviewees had to go through multiple waypoints throughout Syria that they hoped were safe but proved to be insecure, due to indiscriminate attacks on civilians and widespread violations of human rights.

Aside from the long-term contamination they create, impeding a safe and quick return of refugees and internally-displaced persons to their homes, explosive weapons destroy communities and separate families, altering the cultural and social landscape of the whole country. But this study also shows that Syrian refugees want to go back to Syria as soon as it becomes feasible.

Key recommendations for the warring parties and the international community

- Parties to the conflict should immediately cease all attacks on civilians and civilian facilities and put an end to all violations of International Humanitarian Law inside Syria. Parties to the conflict should immediately end the use of explosive weapons with wide-area effects in populated areas, particularly the use of banned weapons such as cluster munitions.
- The international community should strongly condemn the use of explosive weapons, especially those with wide-area effects, in populated areas in Syria.
- All States should support the development of an international commitment to end the use of explosive weapons with wide-area effects in populated areas.
- All warring parties and the international community should ensure unhindered access to principled humanitarian aid, including protection and life-saving assistance to all those impacted by the conflict.
- The international community should ensure that the rights of survivors of explosive weapons, the families of those killed and injured, and affected communities from all impacted areas and wherever they are, are recognized.
- The international community should support the implementation of risk education and clearance efforts in Syria in the short- and long term.
- The international community should ensure that all forcibly-displaced people are given a haven, and in the long run, a durable solution that fully respects their dignity.

1.

GLOBAL OVERVIEW OF DISPLACEMENT IN SYRIA



© A. Taslidžan Al Osta/ Handicap International - July 2016
View of Zaatari refugee camp, biggest camp in Jordan with almost 80 000 Syrian refugees.

According to the UN Refugee Agency (UNHCR), forced displacement is at an all-time high globally.⁷ The UNHCR Global Trends Report finds that 65.3 million people were displaced from their homes by conflict and persecution in 2015, a number greater than the population of France or the United Kingdom.⁸ Over half are children.⁹

Forced displacement has become a major issue on the international scene, giving rise to political tensions and debates. Europe is a glaring example, where European Union ministers have been

engaged in relentless negotiations to deal with the influx of migrants across European borders since 2014. It is also, and most importantly, an unprecedented challenge for the humanitarian sector, whose capacities are overstretched by the extent of the crisis. Acknowledging the need for a global agenda on the issue, the United Nations launched a process aiming at bringing countries together behind a more humane and coordinated approach to addressing the large movements of refugees and migrants.¹⁰

7. UNHCR, "Global Trends factsheet", 2015, available at <http://www.unhcr.org/en-us/news/latest/2016/6/5763b65a4/global-forced-displacement-hits-record-high.html>

8. Ibid. UNHCR, 2015

9. Ibid. UNHCR, 2015



Syrian refugees and displaced persons account for 10.9 million of these refugees and migrants. 6.1 million are internally displaced and 4.8 million have taken refuge in neighbouring countries, North Africa, or farther afield. Half of Syria's pre-war population has been forced to leave their homes. The magnitude of this crisis is such that it has been described as the *"largest population displacement since World War II"*.¹⁰ According to the International Committee of the Red Cross (ICRC), *"the conflict in Syria is the largest and most complex humanitarian*

crisis in the world, with no end in sight".¹² Besides the civil war being waged, an internationalised armed conflict also changed the territory into a patchwork governed by multiple armed groups and militaries.

Displacement in Syria started after a protest was repressed in Deraa in March 2011.¹³ Syrian displacement has increased throughout the civil war as the fighting has shifted. Initially, displacement was sporadic, but escalating fighting in Damascus in 2012 forced many people to flee

10. On 19 September, 2016, the UN General Assembly held a high-level meeting to address large movements of refugees and migrants.

11. OCHA, "2016 Humanitarian Needs Overview on the Syrian Arab Republic", 2015 available at https://www.humanitarianresponse.info/en/system/files/documents/files/2016_hno_syrian_arab_republic.pdf

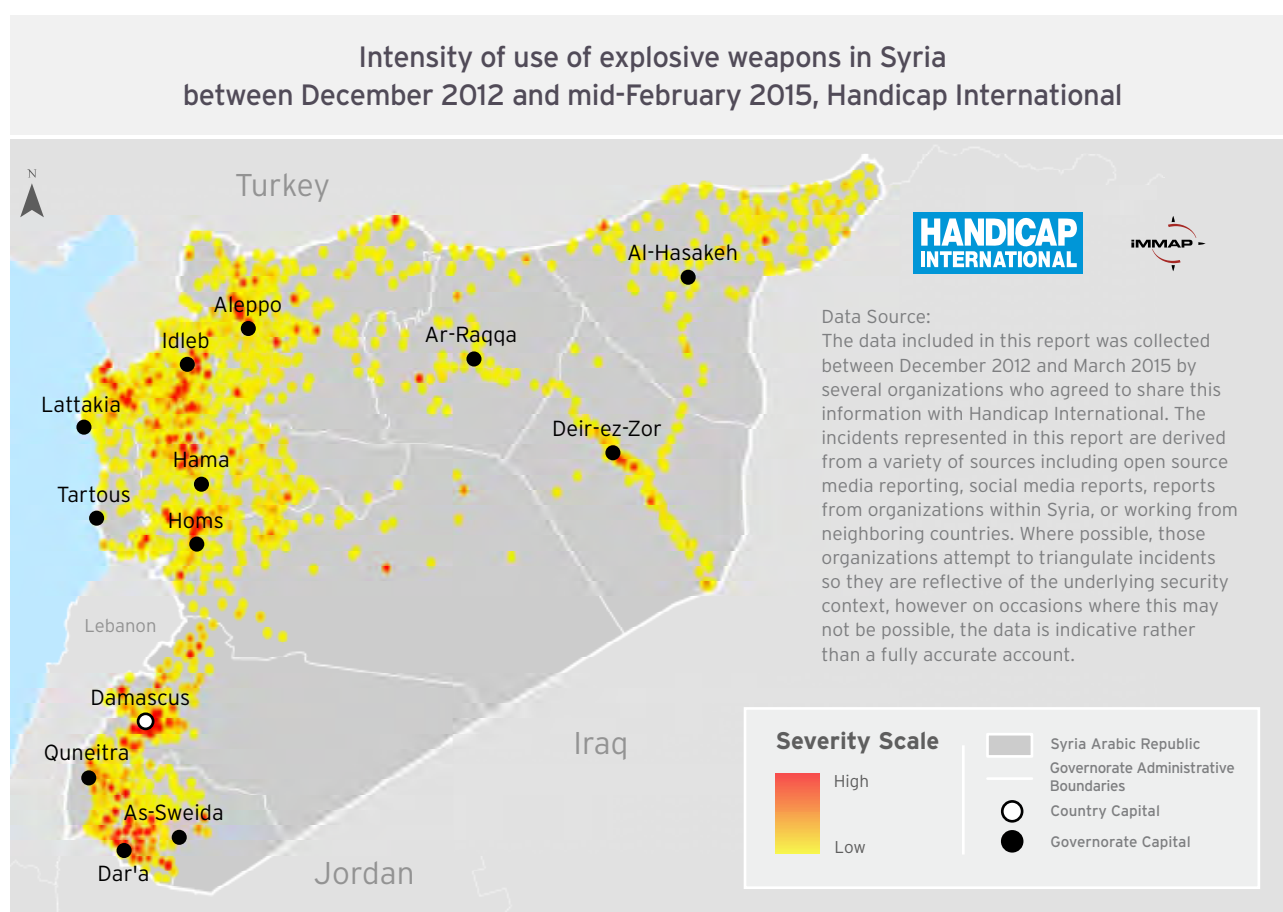
12. ICRC, "Syria Crisis", available at <https://www.icrc.org/en/where-we-work/middle-east/syria>

13. BBC, May 5, 2011, available at <http://www.bbc.com/news/world-middle-east-13299793>

their homes.¹⁴ Fighting shifted to Homs, which was destroyed by massive shelling.¹⁵ Valerie Amos, then Under-Secretary-General for Humanitarian Affairs and Emergency Relief Coordinator said, *"No building was untouched and there was clear evidence of the use of heavy artillery and tanks"*.¹⁶ Civilians fled Homs for Aleppo, which, along with Damascus, was seen as a safe haven. By the summer 2012, massive fighting spread to Aleppo and tens of thousands of people fled the city.

In 2013, an average of 9 500 Syrians were displaced every day, but the situation has steadily worsened since then. By June 2014, close to half of the entire Syrian population had already been displaced, with a third of the population displaced within Syria.¹⁷ In just 2015, experts estimate that

1.2 million persons have been displaced, many for the second or third time.¹⁸ Some of these internally displaced persons (IDPs) are actually trapped at the Syrian border, unable to cross due to restricted access to neighbouring countries. It is estimated that 5.1 million people are living in those highly contaminated areas, and more than 2 million children are directly exposed to the risk of explosive weapons. Aleppo and Rural Damascus are the most dangerous governorates for children. Furthermore, an estimated 4.5 million people are currently living in areas of the country that the UN considers to be nearly impossible to reach, including besieged areas.¹⁹ This complexity, the scale of the displacement, and the intensity of the conflict in the country has been hampering data collection and monitoring efforts on internal displacement.²⁰



14. Internal Displacement Monitoring Centre (IDMC), "Syria: No Safe Haven - A country on the move, a nation on the brink", Emilie Arnaud, 2012, available at <http://www.internal-displacement.org/middle-east-and-north-africa/syria/2012/no-safe-haven-a-country-on-the-move-a-nation-on-the-brink>

15. United Nations, Press Conference on Syria by Emergency Relief Coordinator, March 12, 2012, available at http://www.un.org/press/en/2012/120312_Amos.doc.htm

16. Ibid. United Nations, 2012

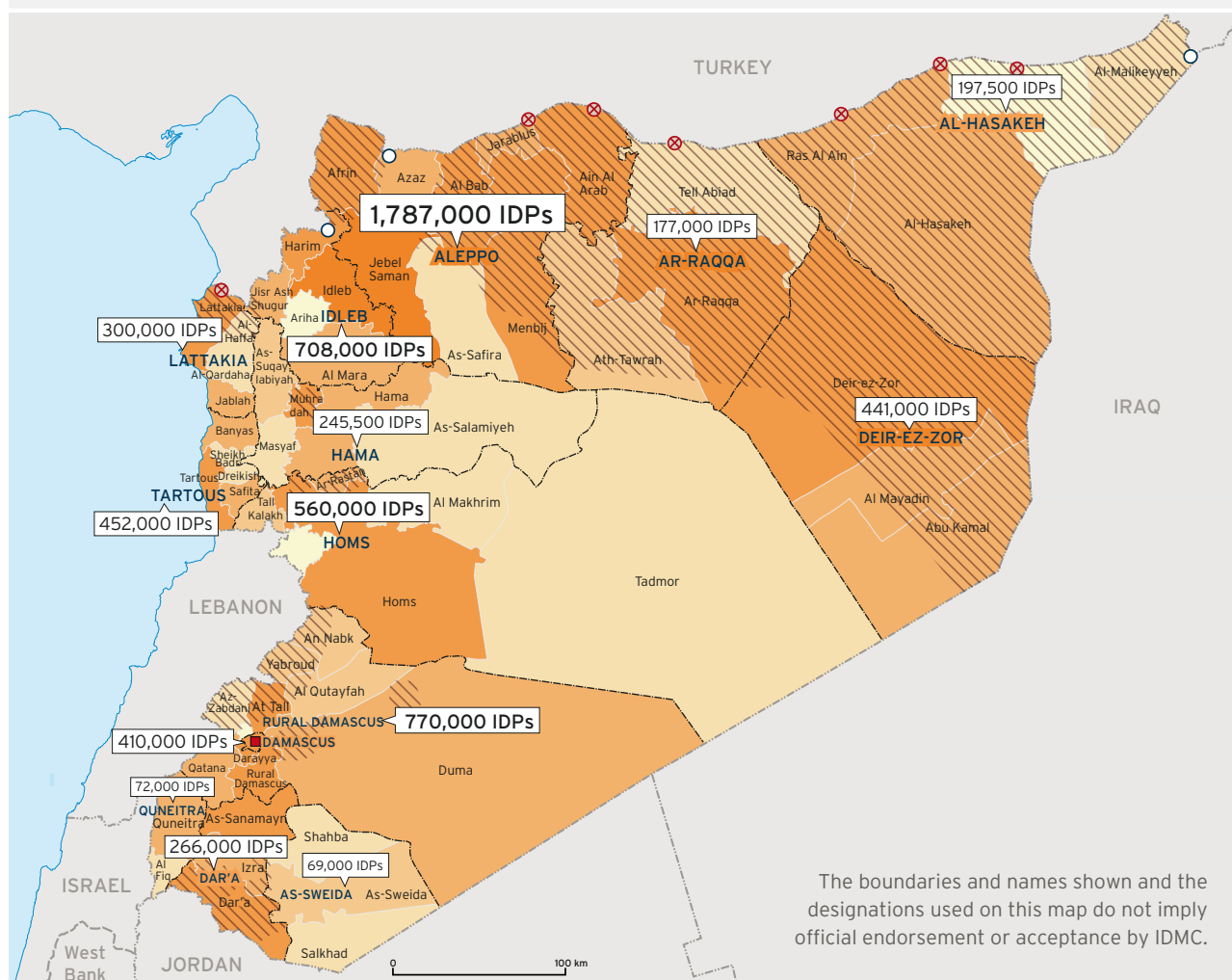
17. ICG, June 2013; Christian Science Monitor, June 2013; The Guardian, June 2013; RRP6, July 2014

18. IDMC, "Global report on internal displacement", 2016, available at <http://www.internal-displacement.org/globalreport2016/>

19. Under-Secretary-General for Humanitarian Affairs and Emergency Relief Coordinator, Stephen O'Brien, "Statement to the Security Council on Syria", October 2015, available at <http://reliefweb.int/report/syrian-arab-republic/under-secretary-general-humanitarian-affairs-and-emergency-relief-27>

20. Ibid. IDMC, 2016

Internal displacement in Syria as of 21 October 2014, IDMC



The causes of displacement in Syria are multiple and interconnected. But in its 2016 Humanitarian Needs Overview on the Syrian Crisis, the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) identifies the primary causes of civilian casualties and displacement in Syria as being:

- “Indiscriminate attacks and use of explosive weapons in populated areas,
- deliberate targeting of civilians or civilian objects,
- sieges.”²¹

The Under-Secretary-General for Humanitarian Affairs and Emergency Relief Coordinator, Stephen O'Brien, declared that “the rising levels of fighting and violence [in Syria] have had an enormous humanitarian impact, resulting in large-scale death, injury and displacement of civilians, particularly in northern Syria. Indiscriminate attacks on civilian-populated areas continue with impunity. [...] The pace of displacement in Syria remains relentless. Well over 1.2 million people have been displaced so far this year, many for the second or third time. Further displacement is expected to continue at a similar rate unless there is an end to the fighting”.²²

21. Ibid. OCHA, 2015

22. Ibid. Under-Secretary-General for Humanitarian Affairs and Emergency Relief Coordinator, Stephen O'Brien, October 2015

Provisions of International Humanitarian Law (IHL)

Rules regulating the conduct of hostilities

The ICRC raised concern about the use of explosive weapons in populated areas in 2011 when it stated *“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”*.ⁱ

The legal issue regarding the use of explosive weapons is linked to the means and methods of warfare used to attack a legitimate target. These means and methods are at all times limited by the principles of distinction and proportionality. Parties to the conflict must at all times distinguish between a military object and a civilian object. Customary IHL also states that *“Launching an attack 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, is prohibited.”* Attacks using weapons that encompass an area and are incapable of targeting a specific military object and/or that extend beyond the target and include civilian objects may be considered indiscriminate. In that perspective, even if a target is lawful, the use of explosive weapons in populated areas with wide-area effects will inevitably encompass civilians.ⁱⁱ

*1951 Refugee Convention and its 1967 Protocol*ⁱⁱⁱ

The legal framework for the protection of refugees is set up by the 1951 Refugee Convention and its 1967 Protocol. It defines a refugee as a person who is outside his or her country of nationality or habitual residence; has a well-founded fear of being persecuted because of his or her race, religion, nationality, membership in a particular social group or political opinion; and is unable or unwilling to avail him or herself of the protection of that country, or to return there, for fear of persecution (see Article 1A(2)). It guarantees to all refugees the right not to be expelled, not to be punished for illegal entry into the territory of a contracting State, the right to work, to housing, to education, to public relief and assistance, to freedom of religion, to access the courts, to freedom of movement within the territory, and to be issued identity and travel documents.

States not parties to the Convention and its Protocol are bound to apply the norms of customary law, such as the principle of non-refoulement of refugees.

i. ICRC, “International Humanitarian Law and the Challenges of Contemporary Armed Conflicts”, 2011, available at <https://app.icrc.org/e-briefing/new-tech-modern-battlefield/media/documents/4-international-humanitarian-law-and-the-challenges-of-contemporary-armed-conflicts.pdf>

ii. ICRC, Customary IHL, “Rule 12. Definition of Indiscriminate Attacks” and “Rule 14. Proportionality in Attack”, available at https://ihl-databases.icrc.org/customary-ihl/eng/docs/v1_cha_chapter3_rule12

iii. UNHCR, “The 1951 Refugee Convention”, available at <http://www.unhcr.org/1951-refugee-convention.html>



© D. Parel / Handicap International - July 2016 - Jordan. Jamal was injured to the leg during an attack in May 2013, in Syria.



"Bombing and death became part of our daily lives in Syria"

Jamal and Leila

When asked about their life in Syria, Leila and Jamal, a young couple with three children, recall: *"Our village was beautiful. We had trees everywhere, we had our cattle, we were self-sufficient."* But the face of Jamal's mother immediately darkens: *"I hear it's not liveable anymore. There is nothing left but rubble."*

When asked about why they left, all the members of the family give the same answer, speaking all at once: *"Bombing."*

"There was bombing and shelling every day, every two hours. We couldn't do anything. We were constantly waiting for the rockets to be fired, and the bombs to be dropped. We never knew where they would hit. It was random", says Jamal.

The family used to live in a small village in Syria. In May 2013, during an attack, the planes shot aimlessly at their house, injuring the husband and driving them to flee their home.

They first went to a nearby village, where Jamal received emergency care in a field hospital. Due to the lack of medical resources, the doctors only managed to patch up his damaged leg enough for him to head to Jordan for surgery and proper medical treatment.

The family walked for four hours before reaching a small camp near the Jordanian border, where they rested and spent the night before heading to the refugee camps the following morning.

Once the family set foot in Jordan, the husband was able to get the much-needed medical treatment. As refugees, they are reminded every day of the horror of bombing and of the hardships of displacement.

"Bombing and death became part of our daily lives in Syria. We got used to it. We knew we were going to die and we had no control over it", says Leila. She describes how many people from the family's village were forced out of their homes because of the bombing. Some were displaced in neighbouring villages within Syria, while others went to Lebanon, Turkey, Egypt, or even Sudan.

2.

THE USE OF EXPLOSIVE WEAPONS IN POPULATED AREAS IN SYRIA



© A. Taslidžan Al Osta/ Handicap International - July 2016 - Jordan. Street view outside the house of a Syrian refugee.

Handicap International's analysis of weapon use²³ in Syria shows that the types of explosive weapons used in populated areas are varied, but many have wide-area effects and fall consistently into certain main categories. Artillery, rocket artillery (including improvised), and mortars are examples of explosive weapons used to bombard populated areas in Syria. Airstrikes conducted by parties to the conflict rely on dumb bombs, unguided aerial rockets, cluster bombs, and improvised barrel

bombs, as well as precision-guided bombs and missiles. Improvised Explosive Devices (IEDs), tanks, and other direct-fire weapons (such as rocket-propelled grenades) have also been used during the conflict by various parties.

There has been widespread use of explosive weapons in populated areas by all parties to the conflict in Syria.²⁴ Between 2011 and 2015, Action On Armed Violence (AOAV) recorded 36,224

23. Handicap International, "The use of explosive weapons in Syria: a time bomb in the making", 2015

24. The parties to the conflict in Syria changed as the war moved through different stages between 2012-2016. The parties include Syrian armed forces and pro-government militias, anti-government militias (including the "Free Syrian Army"), Hezbollah, Iran, Russia, Islamic State, other Islamist groups (including the al-Nusra Front), Kurdish groups, and an international coalition led by the United States and including numerous NATO and non-NATO allies.



reported deaths and injuries in Syria as having been caused by explosive violence. Of these, they estimated that 86% were civilians. The use of explosive violence has increased consistently since 2011, with the highest figure for deaths and injuries recorded in 2015.²⁵

Syrian civilians interviewed in this study singled out a few notable weapons as being what they perceived of greatest concern, including barrel bombs, cluster bombs, unguided rockets and aerial bombs, rocket artillery (often of an

improvised and indiscriminating nature), and other weapons used in bombardments, including tube artillery and mortars.

In Syria, the relentless use of explosive weapons has been consistently driving people to flee their homes, as denounced by the Under-Secretary-General for Humanitarian Affairs in a statement to the Security Council in October 2015: *"Latest estimates indicate that over 120 000 people have been displaced in northern Syria since early October as a result of aerial bombardment, as*

25. AOA, "Explosive Violence Monitor 2011-2015", 2015

What are explosive weapons?ⁱ

Explosive weapons are those weapons that use a chemical reaction to cause a high-explosive charge to detonate and damage or destroy a target. The primary damage mechanisms of such weapons are blast, fragmentation, and thermal effects. Explosive weapons may be fired singly, as in an aerial bomb, or in salvos of many dozens, such as rocket artillery. Weapons that deflagrate, or burn through a low-explosive charge, are considered incendiary weapons and are not covered here.

This pattern of explosive violence, particularly when these weapons have wide-area effects, is of grave concern, as it tends to cause harm beyond the targeted area. There are numerous technical and targeting decisions militaries employ to minimise civilian harm in conflict, particularly when employing explosive weapons. However, there are inherent features in explosive weapons, particularly those with wide-area effects, when used in populated areas, which make them inherently prone to causing civilian harm. These inherent features include, but are not limited to:

- Their large destructive radius,
- Their inaccurate delivery systems,
- And the design for area effect, as in barrage weapons.ⁱⁱ

The potential for civilian harm is magnified when numerous inherent features combine.

i. For a full analysis of the technical aspects of explosive weapons in populated areas and the potential for harm to civilians from explosive weapons with wide area effects, see the following report commissioned by the ICRC: "ARES Special Report: Explosive Weapons in Populated Areas", 2016, available at <http://armamentresearch.com/ares-special-report-explosive-weapons-in-populated-areas/>

ii. Barrage weapons fire in salvos and use massive numbers to overcome inherent inaccuracies. These include weapons commonly used in Syria such as rocket artillery.

*well as ground offensives among the parties. This includes some 45 000 people displaced from the southern outskirts of Aleppo city to relatively safer areas to the west and south following a Government forces offensive over the last week. [...] Elsewhere in Syria, thousands more have been displaced in Homs, Rural Damascus, and Deir ez-Zor governorates over the past few weeks."*²⁶

It is worth noting that over time the use of explosive weapons leading to civilian deaths

has shifted from a mostly ground-intensive campaign of widespread shelling of cities through bombardment²⁷ to more directed air attacks against cities. This shift is confirmed by data analysis from several organisations tracking Syrian deaths from explosive weapons.²⁸ Bombardment weapons were the primary weapon types responsible for civilian deaths in 2012 and 2013; there was a dramatic shift to airstrikes in 2014 after the conflict became more widely internationalised.²⁹

26. Ibid. Under-Secretary-General for Humanitarian Affairs and Emergency Relief Coordinator, Stephen O'Brien, October 2015

27. Bombardment is the use of artillery, including artillery rockets, mortars, and tube artillery

28. IRIN, "How Syrians Are Being Killed," July 2016, available at <https://www.irinnews.org/maps-and-graphics/2016/07/25/how-syrians-are-being-killed> ; and data provided to Handicap International from AOAV in an e-mail dated August 26, 2016

29. Data on civilian deaths from explosive weapons in populated areas provided by AOAV is largely consistent with the percentages in the VDC dataset. According to AOAV data, the percentage of civilian deaths from air versus bombardment has increased every year: in 2012, airstrikes constituted 29% and bombardment 71% (VDC dataset : 20% vs. 80%); in 2013, the figures were 53% vs. 47% (VDC dataset : 26% vs. 74%); in 2014, 74% vs. 26% (VDC dataset : 65% vs. 35%); and in 2015, the figures were 76% and 24% for airstrikes vs. bombardment (VDC: 71% vs. 29%)



View of the street after an attack using explosive weapons, picture provided by an interviewee.

Airstrikes continue to become a more significant cause of civilian deaths in 2016.³⁰ It is believed that airstrikes are generally more targeted than bombardment. However, the yearly increase in civilian deaths attributed to explosive weapons, discussed later, shows the wide-area effects of such weapons and the terrible danger they pose to civilians.

Aerial Bomb - OFABⁱ

The vast majority of aerial bombs employed by parties to the conflict in Syria are unguided gravity bombs, also commonly referred to as “dumb bombs”. One of the most common unguided gravity bombs used in Syria is the OFAB.

The OFAB is designed to penetrate light armour via fragmentation. These are unguided iron bombs that come in three basic sizes with multiple variants: 100 kg, 250 kg, and 500 kg. This weapon dates back to the Second World War and is fairly unsophisticated, with some variants using an inefficient high-drag shape. All warheads are highly explosive. OFAB-100-120 were used in urban areas of Aleppo as early as July 2012.ⁱⁱ The OFAB-250 has recently been dropped by jets and helicopters in urban areas in Hama, Talbiseh, and Daraa.ⁱⁱⁱ



i. See also AOA, Robert Perkins and Sarah Leo, “Syria’s Dirty Dozen: The OFAB 100-120,” September 23, 2013, available at <https://aoav.org.uk/2013/syrias-dirty-dozen-ofab-100/>

ii. See <http://brown-moses.blogspot.com/2013/05/a-syrian-smorgasbord-of-ieds-and-uxo.html>

iii. Analysis and videos available at <http://brown-moses.blogspot.com/2012/06/evidence-of-unguided-bombs-being.html>

Photo OFAB: <http://brown-moses.blogspot.be/2012/06/evidence-of-unguided-bombs-being.html>

30. Ibid. VDC and AOA. Partial data covering the first half of 2016

Focus on the use of explosive weapons in four governorates

According to a study on internal displacement in Syria from 2011-2014, areas with the highest levels of conflict, like the cities of Aleppo, Deraa, and Homs, had the highest number of displaced households.³¹ War is a prime driver of forced displacement, and our analysis shows that one major factor forcing people to flee in Syria is the use of explosive weapons in populated areas.

This section reviews explosive-weapon use and patterns of displacement in those three governorates particularly impacted by explosive weapons, plus Damascus and rural Damascus. It is worth noting that all interviewees come from those governorates.

Aleppo Governorate

Estimated number of persons in need:

2 804 853³²

Internally-Displaced Persons in the governorate: **1 246 968**³³

The battles in and around Syria's largest city and major economic centre split the region largely between the parties to the conflict. Eventually, combat settled into a battle of attrition and the city was under siege at the beginning of 2016. Fighting around Aleppo has been marked by widespread indiscriminate attacks by barrel bombs more than any other weapon.³⁴ A multi-cultural city, Aleppo's diversity has been laid waste by years of war and numerous types of explosive weapons.

A protracted ten-day bombing campaign in 2013 levelled much of the city with hundreds of barrel bombs and over 1000 civilians killed.³⁵ Attacks continued into 2014 with one group documenting nearly 2000 deaths in Aleppo from barrel bombs over a five-month period (civilians and combatants).³⁶ Satellite imagery analysis of

Aleppo identified over 1000 distinct incidents of barrel bomb strikes in Aleppo between February 2014 and January 2015.³⁷

While barrel bombs have seen widespread use in Aleppo, bombardment has led to numerous civilian deaths throughout the long siege of the city. Airstrikes have also contributed to the civilian toll in Aleppo.

The level of forced displacement in Aleppo is startling. There are over one million internally-displaced persons leaving Aleppo owing to the conflict and the number continues to rise. In the summer of 2012, over 200 000 people left Aleppo due to the fighting there.³⁸ The trend continued with intense fighting in Aleppo in the first half of 2013, leading to another 200 000 fleeing the city and thousands entering Turkey as refugees.³⁹ By February 2014, an estimated 450 000 people had fled violence in East Aleppo City and that number rose to 550 000 by May of that year.⁴⁰ As fighting in the city raged, the displacement continued unabated. In early 2016, another 70 000 fled the city and rural Aleppo for Turkey.⁴¹

31. Doocy, Lyles, Delbiso, and Robinson, Conflict and Health, "Internal Displacement and the Syrian Crisis: an analysis of trends from 2011-2014," 2015, available at <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4589969/>

32. Ibid. OCHA, 2015

33. Ibid. OCHA, 2015

34. An analysis of data provided by AOAV shows that Aleppo has been the main target of the use of barrel bombs. For more information see also, The Washington Post, "In Syria, 'barrel bombs' bring more terror and death to Aleppo," December 23, 2013, available at <https://www.washingtonpost.com/world/middle-east/in-syria-barrel-bombs-bring-a-new-form-of-terror-and-death-toaleppo/2013/12/23/6f8a7f0c-6bed-11e3-aecc-85cb037b7236>

35. Shireen Qabbani, "Asharq Al-Awsat", December 26, 2013, available at <http://english.aawsat.com/2013/12/article55325898>

36. BBC, May 30, 2014, available at <http://www.bbc.com/news/world-middle-east-27633656>

37. Human Rights Watch, February 24, 2015, available at <https://www.hrw.org/news/2015/02/24/syria-new-spate-barrel-bomb-attacks>

38. "Ibid. Internal Displacement Monitoring Centre, Emilie Arnaud, 2012

39. Modeling, Analysis, and Simulation Center, "Modeling Population Displacement in the Syrian City of Aleppo," Sokolowski, Banks, and Hayes, Virginia, 2014, available at <https://www.semanticscholar.org/paper/Modeling-population-displacement-in-the-syrian-Sokolowski-Banks/466a8cd42a7035f75c74add9175b61adcb85977d/pdf>

40. WFP, "Aleppo Displacement," February 2014, available at <http://reliefweb.int/sites/reliefweb.int/files/resources/WFP%20Syria%20Crisis%20Aleppo%20Displacement.pdf>. See also Reach, "Syria Crisis: Aleppo City," June 2014, available at http://www.reachresourcecentre.info/system/files/resource-documents/syr_aleppocity_keyinformantsassessment_june2014.pdf

41. Reach, "Reach Situation Overview: Displacement From Aleppo Governorate, Syria," February 18, 2016, available at http://www.reachresourcecentre.info/system/files/resource-documents/reach_syr_situation_overview_displacement_from_aleppo_18_feb_2016.pdf

Barrel Bombs



The barrel bomb is an unguided IED rolled out the back of a cargo aircraft or dropped from a helicopter. These bombs have been used extensively in Syria. Large amounts of explosives and shrapnel are packed into simple oil drums or similar barrels. Due to the inherent inaccuracy of these weapons and their wide-area effects, they have caused numerous civilian deaths in Syria: hundreds of civilians have reportedly been killed in Aleppo alone by widespread use of these weapons.ⁱ

Barrel bombs are inherently indiscriminate due to a lack of even the most rudimentary guidance system: they are rolled out the door of a moving aircraft or dropped from ropes slung below a helicopter, thereby removing any possibility of aiming them. They also have wide-area effects, but due to their improvised nature there is no standard of measurement possible; each bomb is unique and they are packed with anywhere from hundreds to 2000 pounds of explosives. The explosives are not uniform. Some barrel bombs use a simple ammonium nitrate mixture, some use fuel oil, and others use military-grade high explosives.ⁱⁱ It is estimated that recent barrel bomb attacks in Syria have a blast/fragmentation radius of 250m.ⁱⁱⁱ

i. See also AOAV, "Syria's Dirty Dozen: The OFAB 100-120," September 23, 2013, available at <https://aoav.org.uk/2013/syrias-dirty-dozen-ofab-100/>

ii. See <http://brown-moses.blogspot.com/2013/05/a-syrian-smorgasbord-of-ieds-and-uxo.html>

iii. Analysis and videos available at <http://brown-moses.blogspot.com/2012/06/evidence-of-unguided-bombs-being.html>

Photo: http://www.channel4.com/media/images/Channel4/c4-news/2015/February/10/10_barrel_g_w--%28None%29_LRG.jpg

Damascus and rural Damascus

Estimated number of persons in need:

1 006 261⁴²

Internally-Displaced Persons in the governorate: **436 170⁴³**

Fighting in Damascus has been marked by intense fighting raging inside populated areas. In 2012 and 2013, pitched battles ensued with tank fire and bombardment raining down on the city and suburbs.⁴⁴ Hundreds of civilians were killed in Damascus and its suburbs as mortars, rockets, and car bombs struck indiscriminately.⁴⁵ The use of car bombs as weapons of war is noteworthy

in Damascus. According to an analysis by AOAV, it resulted in some of the largest death tolls of civilians during the entire war. As the war continued, airstrikes were used to a greater degree.

Airstrikes led to numerous civilian deaths in 2015. Damascus was originally seen as a safe haven from fighting and swelled with the internally displaced fleeing fighting in other areas. Offensive strategies changed the dynamic, and in 2012 it shifted as forced displacement there grew, with people fleeing besieged neighbourhoods in the city.⁴⁶ By the summer of 2012, thousands of Syrians were fleeing the fighting in the Syrian capital.⁴⁷

42. Ibid. OCHA, 2015

43. Ibid. OCHA, 2015

44. Reuters, March 25, 2013, available at <http://www.reuters.com/article/us-syria-crisis-damascus-idUSBRE92007320130325>

45. Human Rights Watch, March 22, 2015, available at <https://www.hrw.org/news/2015/03/22/syria-rebels-car-bombs-rockets-kill-civilians>

46. Ibid. IDMC, 2016

47. IRIN, July 20, 2012, available at <http://www.irinnews.org/news/2012/07/20/fighting-capital-adds-growing-displacement-challenge>

Deraa Governorate

Estimated number of persons in need: **615 613**⁴⁸
Internally-Displaced Persons in the governorate: **320 773**⁴⁹

Fighting in Deraa began with an 11-day siege; more than 200 civilians were killed by air and ground forces, many by tanks.⁵⁰ In 2014, a four-month battle broke out. Civilians endured the full range of explosive weapon use, including tanks, bombardment, and airstrikes.

Deraa also experienced attacks with barrel bombs and airstrikes. According to AOAV statistics, numerous civilians died from these attacks.

Deraa has faced high levels of forced displacement as hundreds of thousands have taken refuge in the region due to fighting, even as the city is besieged, thus limiting the ability of civilians to flee. The current estimated total of internally displaced is more than three times the pre-war population.

In early 2015, UNHCR reported that fighting in Deraa Governorate had displaced 50 000 Syrians.⁵¹ The numbers continue to grow. Airstrikes in February 2016 led to the displacement of some 70 000 Syrians, the second largest group to flee airstrikes after an earlier group estimated at nearly 100 000 persons.⁵²

Artillery rockets - BM-21 Grad

Artillery rocketsⁱ are explosive weapons carried by rockets fired in indirect fire mode, typically in barrage fire used as an area-effect weapon. It is an economical method of maximising area-effect fires at ranges longer than traditional tube-launched artillery can accomplish. Rocket artillery is generally inaccurate indirect fire with a very wide area of effect (approximately a football field) and considerable collateral effects over wide areas.



Grad rocket use has been widespread during the war in Syria, namely during a Grad rocket barrage of Damascus in July 2013.ⁱⁱ The BM-21 Grad (Hail) is an area-effect weapon designed for salvos of 40 rockets of suppressive fire targeting armour, artillery, mortar positions, and other enemy positions on a battlefield. When used in urban areas and fired in salvos, the rockets have indiscriminate effects over a large area, with typical rockets each producing over 3000 fragments. There is no way to independently aim each rocket; the launching party has no way of knowing precisely where the weapon will strike other than a general area.

i. For a comprehensive analysis of rocket artillery see Norwegian Defence Research Establishment, "The Rocket Artillery Reference Book", Ove Dullum, June 30, 2010, available at <http://www.ffi.no/no/Rapporter/09-00179.pdf>

ii. Reuters, "Activists: Syria government rocket attack kills 15 Palestinian refugees", July 25, 2013, available at <http://www.jpost.com/Arts-and-Culture/Arts/Activists-Syria-government-rocket-attack-kills-15-Palestinian-refugees-320970>

Photo: https://defencyclopedia.files.wordpress.com/2016/02/bm-21_grad_firing_11.jpg?w=468&h=341&crop=1

48. Ibid. OCHA, 2015

49. Ibid. OCHA, 2015

50. BBC, May 5, 2011, available at <http://www.bbc.com/news/world-middle-east-13299793>

51. UNHCR, "Fresh Displacement, Changing Dynamics, UNHCR Responds: UNHCR Syria 2015 mid-year report," September 2, 2015, available at <http://reliefweb.int/report/syrian-arab-republic/fresh-displacement-changing-dynamics-unhcr-responds-unhcr-syria-2015-mid>

52. Middle East Eye, Sara Elizabeth Williams, February 12, 2016, available at <http://www.middleeasteye.net/news/70000-syrians-flee-south-firmly-shut-jordanian-border-1206332844>



© D. Parel / Handicap International - July 2016. Jordan. Both Nour and Nayif were severely injured in a bombing in Syria.



"I was forced out of my country because of the bombing"

Nour and Nayif

The first time they had to leave their home in Dera'a, Nour and Nayif were asked by combatants to flee their village for their own safety. They went to a neighbouring city and returned five days later, to discover their whole neighbourhood greatly damaged.

However, they returned to their house and resumed their lives as best they could. They did not want to leave the house they were so attached to. *"When we first got married, we used to live with his parents. Then we built our own house when our financial situation got better, and we moved in five years ago."*

But eventually, the violence drove them out of their home: *"It was bombed."*

"The sound of the explosion woke us up. It was dark. There was smoke everywhere, and remnants. We waited until the sound disappeared, then my son ran and opened the door of our house to see what had happened. They hit close to our house twice and we expected a third one. The usual was three hits, one after the other. You can't imagine the situation, it was 3 am. The whole house was destroyed from inside."

As a result, the family was forced to move to the husband's parents, hoping that it would be a safer option for their children. However, the bombing and shelling continued, disrupting every aspect of their lives. They lived in fear under constant bombing and shelling, and were left with barely any water, electricity or food. Their children eventually stopped going to school; they were too afraid to go.

"Three or four times, they bombed schools while children were inside. Their teachers used to dismiss them and send them home."

Not long after the destruction of their own house, a barrel dropped on the house of the husband's parents. It left the couple severely injured, particularly the wife, who had to have her leg amputated. She was unconscious as the ambulance took them to the Israeli border, where they spent four hours waiting without getting clearance to enter. The husband vividly remembers those long hours of fear for his wife's life. They were finally taken to Jordan for immediate intensive care.

Like many other Syrians from their village and the neighbouring areas, the couple and their children found themselves refugees in Jordan. Some of the people they know made it to Germany.

Nayif says: *"Members of my family are still there; I didn't want to leave. If it wasn't for my injury, I wouldn't have left. I was forced out of my country because of the bombing."* He was a civil servant in Syria and had a good position; now he has no salary to provide for his three children. The daily struggle of the family in Jordan, with no *"resources and no assistance"*, greatly affects him.



"Things have become difficult. I can't take care of the house responsibilities on my own, and since my younger daughter has to help me she doesn't go to school", explains Nour. "My husband wants to go back to Syria, but I told him I won't go back, unless there is a political solution. No more planes. I don't want my youngest son to experience what our family has experienced."



Pictures provided by interviewees of the remnants of their parents' house, after a barrel bomb attack.

Homs Governorate

Estimated number of persons in need:

1 023 033⁵³

Internally-Displaced Persons in the governorate: **526 510**⁵⁴

Homs, Syria's third-largest city, endured a three-year siege from 2011 to 2014 during which the civilian population suffered widespread shelling and tank attacks. Thousands of civilians were killed by the extensive use of bombardment in the city and hundreds of thousands fled.

Even after the siege was lifted in 2014, civilians have continued to die from explosive weapon use in and around Homs. In October 2015, two airstrikes killed 59 civilians, including 33 children, when the village of Ghantou in northern Homs was struck.⁵⁵

Forced displacement in Homs has happened on a massive scale, with over 500 000 internally displaced. It is important to note this is a city under siege, thus limiting the ability of civilians to flee. The first displacement took place in May 2011 when an initial 50 000 to 60 000 people fled fighting in Homs.⁵⁶ Sometimes thousands are displaced at once. In 2015, nearly 4000 families fled fighting in Homs governorate through contested areas.⁵⁷ This puts great stress not only on the displaced but also on the system that tries to provide relief: *"The roads that lead to these hard-to-reach areas are really dangerous. It is becoming more and more difficult for us to transport items or reach people in need"*, stated the International Organization for Migration (IOM) field coordinator there.⁵⁸

Mortars - 240mm Mortar

Mortar bombs are man-portable tube-launched unguided artillery bombs. Since they are inaccurate, they are fired in volleys against a target. Mortars are infantry support weapons typically used against personnel and light materiel. Because they are unguided, a spotter is needed to correctly fire them. Mortar bombs were designed for massed infantry and other targets on a battlefield, but in practice they are often fired into urban areas. The lethal radius for a mortar bomb varies greatly depending upon many variables, including size and warhead.



The 240mm mortar, which is the largest mortar bomb in the world, has been used in the conflict in Syria. These bombs cause massive damage and have been used to destroy entire city blocks in Syria.ⁱ Beginning on February 3, 2012, it was used to shell the city of Homs, killing at least 373 civilians.ⁱⁱ Satellite imagery shows bombardment in Homs and Baba Amr resulting in 640 buildings showing evidence of damage from shelling, many from 240mm mortars.ⁱⁱⁱ

i. Christian Science Monitor, "Syria's Assad is hitting Homs with the heaviest mortars in the world," Dan Murphy, February 21, 2012, available at <http://www.csmonitor.com/World/Security-Watch/Backchannels/2012/0221/Syria-s-Assad-is-hitting-Homs-with-the-heaviest-mortars-in-the-world-video>

ii. Human Rights Watch, "Friends of Syria: Push to End Indiscriminate Shelling," February 24, 2012, available at <http://www.hrw.org/news/2012/02/24/friends-syria-push-end-indiscriminate-shelling>

iii. Human Rights Watch, "Syria: New Satellite Images Show Homs Shelling", March 2, 2012, available at <http://www.hrw.org/news/2012/03/02/syria-new-satellite-images-show-homs-shelling>

Photo: <http://www.bocn.co.uk/vbforum/threads/4698-modern-russian-mortar-shell>

53. Ibid. OCHA, 2015

54. Ibid. OCHA, 2015

55. Human Rights Watch, October 25, 2015, available at <https://www.hrw.org/news/2015/10/25/russia/syria-possibly-unlawful-russian-air-strikes>

56. IDMC, "Syria: Forsaken IDPs adrift inside a fragmenting state," 2014, available at <http://www.internal-displacement.org/middle-east-and-north-africa/syria/2014/syria-forsaken-idps-adrift-inside-a-fragmenting-state>

57. International Organization for Migration (IOM), "Displacement Surges as Thousands of Syrians Flee Conflict in Homs, Hama," January 9, 2015, available at <https://www.iom.int/news/displacement-surges-thousands-syrians-flee-conflict-homs-hama>

58. Ibid. IOM, 2015



3.

THE VOICES OF SYRIAN REFUGEES ON EXPLOSIVE WEAPONS AND DISPLACEMENT

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As mentioned above, OCHA identifies indiscriminate attacks and use of explosive weapons in populated areas as one of the primary causes of civilian casualties and displacement in Syria.

And indeed, the vast majority of Syrian civilians interviewed, whether men, women or children, said that they left because of the effects of explosive weapons used where they lived.

In fourteen of the eighteen interviews conducted, the use of explosive weapons in populated areas was the overriding theme. Most interviewees also mentioned reasons other than the use of explosive weapons for leaving, but they strongly linked the reasons with the consequences of bombing and shelling: destruction of their house

or property, injury to self or loved ones, fear and stress, destruction, and lack of access to basic services such as food, electricity, water, hygiene, healthcare, or education. In four interviews, people mentioned that they had also been driven to flee by other factors, some being outright violations of International Humanitarian Law:

- Violence linked to small arms and light weapons, for one interviewee;
- Persecution, including forcible recruitment in armed forces, risk of abduction and detention for two interviewees;
- Reunion with family, after having been trapped in a besieged area, for one interviewee.



“If someone is sitting quietly at his home and nothing happens, why would he leave?”⁵⁹

Syrian civilians interviewed said they faced potential death and injury from explosive weapons on a daily basis, whether from airstrikes, bombardment, or some other form of explosive weapons such as IEDs and rocket-propelled grenades. For many people who survived the immediate effects of an attack, explosive weapons in populated areas became the driving cause of forced displacement because it eliminated all basic necessities, spread terror, and made them fear for their lives. Shelter was destroyed when homes were bombed, infrastructure destruction increased food and

water insecurity, and medical care degraded as it was forced underground and medical facilities were targeted.

When interviewees fled their homes, they rarely found lasting safety, instead coming to a temporary waypoint in what would prove to be a string of forced displacements.

59. Interview #12, July 21, 2016

3.1. PATTERNS OF DISPLACEMENT AND INDISCRIMINATE ELEMENTS

The use of explosive weapons in populated areas is correlated with a multiple displacement pattern

“Wherever we would go there was bombing.”⁶⁰

In its 2016 Humanitarian Needs Overview of Syria, OCHA asserts that temporary displacements occur frequently: *“Displacement trends are fluid and dynamic. Tracked by sector, in the two months of July and August 2015 at least 148 000 people were newly displaced or displaced a second time.”⁶¹*

This study shows a pattern of multiple displacements for the majority of Syrians interviewed, with families moving within Syria from two to twenty-five times.

Sixteen of the eighteen families interviewed were displaced multiple times, creating an ongoing threat as they fled one area of insecurity for another owing to the effects of war. **Of the sixteen families interviewed that reported multiple displacements, seven were displaced twice, one was displaced three times, two were displaced five times, one was displaced 20 times, and one was displaced 25 times. The others were unable to recall the exact number of times they were displaced.**

After the destruction of their homes, they typically moved to temporary shelter in a more secure area. Several interviewees recalled how people stopped locking the doors of their houses as they fled so that others could take shelter inside in case of necessity. As violence spread, they were forced to move multiple times,

enduring the danger and trauma of displacement as explosive weapons continued to force them to leave what had been safe areas until they finally reached IDP camps at the border.

According to OCHA, *“camps and informal settlements still represent the last resort for IDPs. Of the total IDP population, only 4 percent have sought refuge in tented camps (primarily self-settled), while 23 per cent have moved to collective centres. [...] In 2015, 50 per cent of IDPs arriving in IDP camps and informal settlements came not from their homes but from other displacement sites. Collective centres (schools, mosques, public/unfinished buildings, extensions used for residence) remain a strong community coping mechanism”⁶²*

This ongoing threat for the internally displaced is often overlooked; the use of explosive weapons in populated areas leads families to continuously flee the violence of war, escaping bombing and shelling multiple times.

Ahmad and Hamida described how they fled with their three children from Homs to Hama, Idlib, and Aleppo, fleeing bombing each time.⁶³ Ahmed, who was displaced four times, described how his family would try to return home but could not because the house was heavily damaged. Every time his family moved to a safe place they were forced to flee as fighting broke out.⁶⁴

60. Interview #5, July 19, 2016

61. Ibid. OCHA, 2015

62. Ibid. OCHA, 2015

63. Interview #12, July 21, 2016

64. Interview #1, July 18, 2016



© D. Parel / Handicap International - July 2016 - Jordan. Street view outside the house of a Syrian refugee.



"When the bombing started, it was too dangerous to go to school"

Ahmed

Ahmed lives with his aunt outside of Amman, but he needs to come to the city centre frequently to receive treatment for his injury. He needs constant care as a result of the brain injury sustained in a shelling incident. Although he does not know if his aunt will be able to keep hosting him and caring for him much longer, he says, *"My life is good compared to others who have more problems"*.

The 20-year-old is mostly thankful that no member of his family died in the various bombing and shelling incidents they lived through. Among his eight sisters and four brothers, only he and one of his brothers were injured. His face brightens at the thought of his hometown and family. He has not been able to have contact with them more than five times in a year.

Ahmed describes how the family has been displaced four times since the beginning of the conflict because of bombardments.

"Each time, we tried to return to the house, but we could not stay because of the bombing. [...] We had to move to other cities where the armed forces had agreed not to attack. But the agreement was always broken and we had to move again. There is no safe place in Syria." He remembers that there were no warnings; people learned how to react when the bombing started and would give each other advice.

Each displacement put more stress on the family, and further exhausted their resources:

"Each time, it was complicated, we had to take the fridge and oven with us [...] It was also difficult to

find food." Once, they came back to find the house too damaged for them to move back in. *"There was even a hole the size of the door next to the main door. So we did not have to open the door to get in."*

But Ahmed is mostly affected by the fact that he had to drop out of school. *"I had only one more year until graduation when the war began."*

"But when the bombing started, it was too dangerous to go to school; even the teachers were too afraid to come to school. [...] Something should be done to help students continue their studies."

In June 2015, Ahmed was outside, socialising with his friends, when shelling started. A piece of shrapnel entered his brain. His condition was so critical that the medical point, the only functioning healthcare facility in the area, could not treat him and sent him to Jordan. He has no memory of the trip, but his family later told him the details:

"The trip took four or five days, because the road was very dangerous and there were several checkpoints to cross. I woke up in Jordan, I did not know where my family was, and I had no way to contact anyone. Finally, I remembered my brother's phone number; he was able to reach my aunt."

Ahmed could not walk for four months, but he is now feeling better. Unfortunately, one of his brothers has also been injured by shrapnel, but has not been able to come to Jordan for treatment due to the restrictions hampering civilian freedom of movement. Furthermore, his family had to sell properties to pay for his treatment and surgery, making their financial situation very fragile.



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Ahmad was severely injured when a shell hit the house his family had taken shelter into, in Syria. His daughter and his brother were injured in the same incident.



“If you go through something like this, you will never forget”

Ahmad and Hamida

Ahmad and Hamida come from a popular neighbourhood in one of Syria's main towns.

In June 2014, the house where they lived with their three children was destroyed by mortar shelling. Ahmad was working outside the house at that moment, but his wife and father were both injured during the incident. His father lost a leg.

They remember the dire living conditions under the bombs. When Hamida describes the situation, she says *“It was continuous shelling every day”*. After the shelling started, they had no electricity and no water. *“Shelling had destroyed all of this.”* It took a toll on the infrastructure, but also on their mental health. *“The children were extremely frightened by the sound of bombs. [...] If you go through something like this, you will never forget.”*

However, the family did not decide to leave their city until their home was destroyed. *“If someone is*

sitting quietly at home and nothing happens, why would he leave?” says Ahmad. For a year, they had to flee the bombs, moving through several cities. It took them a year to get to Jordan. During this year, 3 members of the family were injured in explosive weapons incidents.

In September 2015, a shell hit the place where the family had taken shelter. Ahmad, his daughter and his brother were severely injured. Shrapnel hit both of his legs, leaving him with mobility problems, like his brother, who had a leg amputated. His daughter was also injured by shrapnel in her back. The little girl had to undergo surgery and part of her intestines was removed.

They entered Jordan to get medical care for their injuries, but their situation in their host country is very precarious, burdened by the costs of healthcare for their injuries. Ahmad was a farming hand in Syria, but he cannot work anymore because he lacks a work permit.

Indiscriminate attacks and direct targeting of civilians

“The main reason [for leaving] was bombing and shelling. Rockets were falling all over the village.”⁶⁵

Bombing, whether from aircraft or some form of shelling, did not seem to take the form of concerted attacks against military objects that end when the target is destroyed. Instead, Syrians explained that *“shelling was sometimes like rain”*; it was continuous and *“there were only a few days when I did not hear bombs. I was very scared for my family”*.⁶⁶ Attacks on Syrian civilians took place in towns, villages, and cities, encompassing all areas. Many described how no place was safe and death was a normal part of everyday life: *“It was a scary atmosphere. Death was something common. We saw bodies all the time.”*⁶⁷

Some of the interviewees alleged that attacks in populated areas took place even when there was no reason to suppose that a military target was the objective of the attack anywhere in the vicinity. Their testimony suggests many attacks widely observed in Syria are indiscriminate. *“It was random. There were no military targets in the village, no armed people.”*⁶⁸ Indiscriminate attacks are unlawful, but are prevalent in Syria. Interviewees described how indiscriminate

attacks often took the form of airstrikes, rockets, artillery, and mortars. “Bombing occurred every day, every two or three hours. You could not eat or sleep because of it.”⁶⁹

When attacks targeted a military object, the wide-area effects of explosive weapons often resulted in civilian harm. Samir, a father of three, described attacks on checkpoints: *“The first attack left gaps around the whole neighbourhood. Some houses were only damaged, but most of them were destroyed.”* The second attack on another checkpoint that was bombed and then shelled with mortars hit an engagement party: *“During the second bombing, one shrapnel shell hit the house where the celebration was being held and destroyed it. Other shells landed on the streets and damaged the neighbourhood.”*⁷⁰

Interviewees also mentioned that parties to the conflict do not appear to have taken any precautions to protect civilians from attacks as required by International Humanitarian Law.

Interviewees likewise claimed that civilians sometimes suffered intentional direct attacks. This report does not focus on this issue. But it is clear that direct attacks on civilians constitute grave breaches of International Humanitarian Law and must be investigated as war crimes.

Indiscriminate weapons

The use of indiscriminate⁷¹ weapons is also common in Syria, including cluster munitions and highly inaccurate improvised weapons. Syrian interviewees described two improvised weapons often used in Syria: the *“barrel bomb”* and the *“elephant rocket”*. These weapons are incapable of targeting a specific object when used

in populated areas because of their inaccuracy and wide-area effects. Such weapons should be considered unlawful when used in areas of concentrations of civilians because of their inability to distinguish between a military and a civilian object.⁷²

65. Interview #17, July 25, 2016

66. Interview #5, July 19, 2016

67. Interview #14, July 23, 2016

68. Interview #14, July 23, 2016

69. Interview #14, July 23, 2016

70. Interview #16, July 25, 2016

71. Indiscriminate weapons are those weapons incapable of being aimed at a specific military object. Some weapons are considered inherently indiscriminate, that is, by the nature of their design and/or effects. Under International Humanitarian Law (IHL), the use of such an ‘inherently’ indiscriminate weapon is prohibited.

72. Interview #8, July 20, 2016

Barrel bombs, as explained in the text box above, cannot be aimed in any meaningful way and their use is inherently indiscriminating. Interviewees told Handicap International how barrel bombs were loaded with shrapnel.⁷³ Amir, a father of five, explained: *“It was scary. They were filled with sharp metal, nails, glass, and white powder. No wall can stand up to this weapon. They are too strong.”*⁷⁴ They are used throughout towns, villages, and cities and have turned homes to ash. Amir continued: *“If they are dropped on a house, the house crumbles. If the barrel falls in the street, it will destroy everything in a radius of 50 metres and leave a 2-metre crater.”*⁷⁵ Hassan, a father of five, confirmed the horrific damage he saw when barrel bombs were used: *“It would*

*destroy buildings on both sides of the street. The crater would be two metres in size. There were nails and pieces of metal in it. The metal was shaped like triangles and as sharp as razor blades. They would make holes in the walls.”*⁷⁶

Cluster munitions are also a grave concern in Syria. Numerous types of cluster bombs and rockets carrying cluster munitions have been used in populated areas in Syria.⁷⁷ Muhammad described a strike: *“A bomb explodes in the air, and small bombs fall to the ground. Children would often pick them up. There were a lot of accidents.”*⁷⁸ Cluster munitions have been outlawed by the Convention on Cluster Munitions.⁷⁹

Improvised Rocket-Assisted Munitions* - Elephant Rocket

A range of Improvised-rocket-assisted munitions (IRAMs), widely referred to as “Elephant” or “Volcano” rockets, is employed in Syria. IRAMs are any of various rockets with an improvised warhead. They have minimal accuracy and are very short range, due to their poor aerodynamic design and improvised nature.

IRAMs have a significant payload, but due to their improvised nature and non-aerodynamic shape they are almost uniformly employed in indirect fire at short range (less than 3 km).

The munitions are fired from a diverse range of launchers, ranging from rudimentary welded-steel single tube arrangements to self-propelled, power-controlled launchers with 10 or more launch rails or tubes.



* This section was developed from a factsheet provided by ARES, “Snapshot: Improvised Rocket-Assisted Munitions in Iraq and Syria,” N.R. Jenzen-Jones and Galen Wright, August 11, 2006.

73. Interview #9 July 20, 2016

74. Interview #10, July 21, 2016

75. Interview #10, July 21, 2016

76. Interview #11, July 21, 2016

77. Cluster Munition Coalition, “Cluster Munition Use In Syria”, 2016, available at <http://www.stopclustermunitions.org/en-gb/cluster-bombs/use-of-cluster-bombs/in-syria.aspx>, see also Corey Charlton, The Daily Mail, February 15, 2016, available at <http://www.dailymail.co.uk/news/article-3447933/Two-hospitals-school-destroyed-air-strikes-Syria-killing-three-children-11-Turkey-accuses-Russia-acting-like-terrorist-organisation.html>

78. Interview #5, July 19, 2016

79. The Convention on Cluster Munitions is an international treaty adopted on May 30, 2008 banning the use, assistance in use, production, transfer, and stockpiling of cluster munitions. It has been signed by 119 States and 100 have ratified or accepted it at the time of the writing of this report.



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Kareem lost his father, his brother and many relatives in the bombings and shellings of his village in Syria.



“We didn’t know how to protect our children”

Kareem

Kareem lived with his wife and five children in a small Syrian village. In March 2014, the village where they had taken refuge from the conflict was attacked and heavily shelled. The whole family waited for the shelling to get lighter and then decided to flee by car towards the Jordanian border.

They stayed in a camp along the Syrian and Jordanian borders for less than a day before being allowed to enter the territory.

Remembering his life in Syria, Kareem says “*you just had to walk with your eyes to the sky*”, watching for planes for fear of attacks. The frequency of the bombing and the continuous shelling made them familiar with the different types of military weapons that were being used on them, the sounds they make when they are fired and dropped, the kinds of remnants they leave behind, and even the types of wounds they can cause. They often had to clear the unexploded remnants of war themselves in order to prevent accidents.

“*It’s our kids that we feared for the most. Our kids have seen blood, explosions and fear for the first time. Every time they would hear an explosion, they would run to us for protection. We didn’t know how to protect them*”, he says.

Kareem describes the different types of rockets, mortars, and planes that used to fly over their village every day, killing and injuring indiscriminately. “*They even used chemical weapons*

on us. We would suffocate and not be able to breathe. [...] The chemicals would stay on the grass. The cows used to eat the grass and die.”

“*There was another village near us that was hit with chemical weapons. One thousand four hundred people were killed. When they saw rockets, they thought they were being bombed. In fear of the walls collapsing on them, most people hid in their basements. Because the rockets contained chemical agents, they were stuck in the basements with no air.*”

The threat of bombing made it difficult for schools to operate normally. Many of the schools became shelters for people whose houses were destroyed or damaged. So in 2012, the family’s five children stopped attending school. “*After people started using schools for shelters, the schools were targeted as well. I couldn’t send my children there.*”

Kareem and his wife were initially reluctant to leave the country. Despite losing many of their relatives and loved ones, they insisted on staying in their home until it was bombed. “*My father was killed five years ago when a bomb dropped on his house. My brother was killed six months later.*”

“*We wish the bombing would stop. We want to go back home. There is nothing better than one’s own country.*” Life under the bombs is impossible. “*One of my relatives wakes up every day and grabs her children, one on each side and stares at the sky all day, scared that a bomb will drop on them. She doesn’t eat or drink.*”

3.2. PRIMARY EFFECTS: PHYSICAL AND PSYCHOLOGICAL TRAUMAS

Although many interviewees did not want to leave their homes, they were forced to flee by the ever-present dangers of explosive weapons. Zeinah, a mother of two, noted that explosive

weapons created an intense feeling of insecurity, particularly regarding the safety of her children: *"I would never have left, but it was too dangerous and I was scared for my children."*⁸⁰

Death and injuries

"If you are outside when it [bombing and shelling] happens, you are done. My uncle was outside looking for food and a shell fell next to him. His body was scattered all around."⁸¹

In fact, the clearest direct effect of explosive weapons in populated areas is the death of Syrian civilians. There is no authoritative number for the civilian death toll in Syria. One group has estimated over 470 000 civilians have been killed; the United Nations stopped counting because of concerns over the reliability of data.⁸²

An analysis of data compiled by the Violations Documentation Center (VDC), an independent monitor of human rights abuses in Syria, reveals the percentage of war-related civilian deaths from explosive weapons in populated areas has increased every year since the war began.⁸³ While the numbers in this analysis are likely lower than the reality due to challenges in documenting civilian casualties during a conflict, the trends are clear: explosive weapons in populated areas have become the main cause of civilian deaths in Syria. In 2012, explosive weapons in populated areas were responsible for 48% of civilian deaths, the figure rising to 60% in 2013, and to 67% in 2014. In 2015, they accounted for a staggering 73% of all civilian deaths. The percentage of Syrian civilians killed by explosive weapons in populated areas is on the rise again (now up to 83%) through the first six months of 2016.



Ahmad receiving emergency care at the medical point after he was severely injured in a shelling, in Syria - Picture provided by interviewee.

These trends are crucial to understanding how and why civilians are being killed in Syria so that civilian protection may be enhanced and forced displacement of civilians can be addressed.

In addition to killing civilians, explosive weapons, in particular those with wide-area effects, are also prone to injuring and maiming large numbers of victims. In 2016, Handicap International produced a factsheet on the injuries and psychological trauma observed while working with internally-displaced persons in Syria and Syrian refugees in neighbouring countries. The document is based on the initial assessment by Handicap International teams of more than 25 000 persons with injuries. Among those with injuries sustained as a result of the crisis, 53% had injuries due to the use of explosive weapons.

80. Interview #7, July 20, 2016

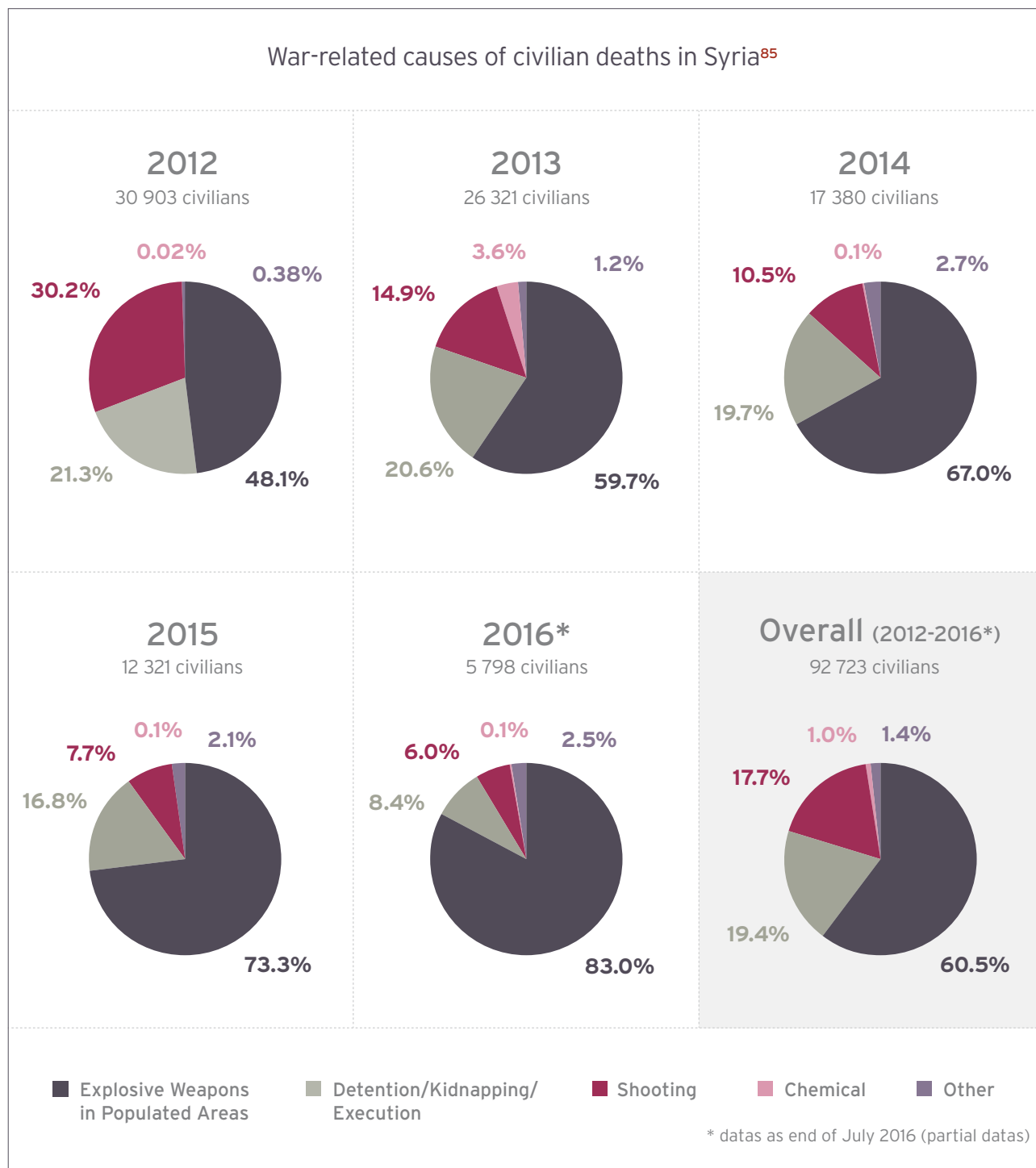
81. Interview #4, July 19, 2016

82. The New York Times, Anne Barnard, February 11, 2016 available at <http://www.nytimes.com/2016/02/12/world/middleeast/death-toll-from-war-in-syria-now-470000-group-finds.html>

83. Ibid. IRIN, 2016

These persons are often facing permanent impairments:

- 47% had fractures or complex fractures, including open fractures of lower and/or upper limbs,
- 15% of the victims of explosive weapons have undergone amputation,
- 10% of people surveyed who were injured by explosive weapons are facing peripheral nerve damage,
- 5% of the victims of explosive weapons suffered a spinal cord injury.⁸⁴



84. Ibid. Handicap International, 2016

85. IRIN, "How Syrians Are Being Killed," July 2016, available at http://www.irinnews.org/maps-and-graphics/2016/07/25/how-syrians-are-being-killed?utm_source=IRIN+-+the+inside+story+on+emergencies&utm_campaign=fb8cb43605-RSS_EMAIL_ENGLISH_ALL&utm_medium=email&utm_term=0_d842d98289-fb8cb43605-15713109

Psychosocial impact and mental health

“If you go through something like this, you will never forget.”⁸⁶

The mental health of civilians exposed to the effects of explosive violence is of grave concern, due to their exposure to constant bombing and shelling. All interviewees described high levels of fear and stress. *“There is no safe place in Syria”*, Ahmed explained.⁸⁷ Children are particularly vulnerable and their parents reported nightmares, skin problems, and hysteria due to their exposure to constant airstrikes and bombardment. A study of Syrian refugees in Germany noted that 70% had witnessed violence and 50% had been victims of violence, leading to mental health issues.⁸⁸ An International Medical Corps study noted a lack of access to mental health care for refugees and showed 54% of displaced persons had severe emotional disorders.⁸⁹

Amar disclosed that he is gripped with fear due to the war and weapons used: *“I am afraid for my family every minute.”* He now fears planes, a common sentiment among many interviewees.⁹⁰ Reem described her children’s mental state: they had nightmares, trouble sleeping, and skin problems due to stress and fear.⁹¹ She had psychological support for her first seven months in Jordan, but no longer. She explained that she is filled with fear and a feeling of insecurity. Hassan related how the mental trauma of constant bombardment still affects his wife: *“She still hears the sound of constant shelling. It gives her headaches.”*⁹² He spoke of how he surveyed people he knows: *“People start to lose their memory from the trauma of bombing.”*⁹³

The deadly threat of unexploded ordnance

The danger of death and injuries caused by explosive weapons in populated areas is not limited to the time of use. Many explosive weapons fail to detonate, and when one considers the tens of thousands of bombs used in Syria, in particular highly-unreliable weapons such as cluster munitions that cover vast areas with hundreds of small bomblets that may explode at the slightest touch, the problem of unexploded ordnance (UXO) in Syria is dramatic. Six of the families interviewed described areas being made

unsafe by UXO, particularly unexploded barrel bombs and cluster munitions.

During a protection focus group discussion conducted by OCHA in 2015, Syrians interviewed identified the presence of explosive remnants of war as among the greatest risks in 50 per cent of governorates.⁹⁴ As an illustration, in April 2015, Handicap International assessed the damage caused by fighting in the city of Kobani and the surrounding villages, and found that the level of

86. Interview #12, July 21, 2016

87. Interview #1, July 18, 2016

88. Brookings, Omer Karasapan, “Syria’s Mental Health Crisis,” 2016, available at <https://www.brookings.edu/2016/04/25/syrias-mental-health-crisis/>

89. Ibid. Brookings, Omer Karasapan, 2016

90. Interview #4, July 19, 2016; Interview #5, July 19, 2016; Interview #7, July 20, 2016; Interview #9, July 20, 2016; Interview #12, July 21, 2016; Interview #13, July 21, 2016

91. Interview #3, July 18, 2016

92. Interview #11, July 21, 2016

93. Interview #11, July 21, 2016

94. Ibid. OCHA, 2015



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Zeinah had her leg amputated and suffered from multiple shrapnel wound after a shelling incident.



"The emotional impact is much worse"

Zeinah

Zeinah is 36 and lives with her parents and cousins in Jordan. She was forced to leave Syria with her husband and children after an injury that cost her a leg.

During the month of Ramadan 2013, she was injured by a rocket that fell in the street, killing six people and injuring many, all civilians. Both she and her husband, on their way to fetch bread, were injured in the explosion

Zeinah suffered from multiple shrapnel wounds to her chest and back, and her leg had to be amputated. A few days after the amputation, her leg became infected, putting the rest of her lower body at risk: *"In Syria, medical treatment is insufficient. After the amputation, my leg got infected. They were afraid the infection would spread to the bone and to my other leg. Thankfully, I came to Jordan, and here I was able to receive treatment."*

Zeinah never wanted to leave Syria, even when the bombings intensified and many of her neighbours and relatives left. Her injury changed everything. She recounts the horrors of war, and how people had to cope with constant bombing and shelling. *"After the first shell is fired, we start taking precautions. People on the upper floors of their buildings go down to the ground floor; those in the streets seek refuge in any open house they can find. [...] I was afraid my children would get hurt."*

After the war started, her children could no longer go to school like they used to. Their education was continuously disrupted by the violence and

the bombing. She recalls an incident near her children's school: *"Fortunately, the teachers took all the children down to the basement, so no one got injured. [...] But on our way out, there was blood everywhere. [...] My niece saw a man lying on the ground in his own blood. She was so shocked that she started laughing instead of crying. We started shaking her until she came to herself, and then she started crying."*

"The war had an impact on us, and not just the physical injury. The emotional impact is much worse." Following her injury and her departure from Syria, multiple other changes greatly affected her life. *"My husband and I suffered from the same injury; he accepted his, but could not accept mine. [...] We separated. He took my children and left for Germany. I live by myself now."*

A few months ago, her mother came to Jordan after a bomb dropped on her house, killing an aunt and leaving her cousin and mother severely injured. When asked about her relatives and family, she said that many were killed or maimed; some are still in Syria. Each time she talks to them, they tell her about the daily bombing, the airstrikes, and the explosions; every day is more damaging, more destructive. Zeinah recalls her life in Syria before the conflict: *"I was a housewife. My husband worked as a taxi driver. Things were going well for us. We were comfortable and lived in our own house. We were safe."*

"I hope that people outside Syria can help stop the bombing and the war so that we can go back to our country. All we want is safety."



© Ph. Houliat / Handicap International - April 2015 - Kobani. Explosive remnants of war in the city of Kobane during an assessment by HI.

contamination in the city centre was extremely high, with an average of 10 pieces of munitions per square metre.⁹⁵

Interviewees for the current study spoke of the prevalence of UXO. Jamal and Leila, a couple with three children, described the situation: *"Lots of weapons would not explode at launch... Farmers could not work because of this and some got injured."*⁹⁶ Some told of cluster bomb contamination and how dangerous it is to the civilian population. Kareem described the death of a neighbour from an unexploded submunition: *"Once a neighbour picked one up and it exploded."*⁹⁷

Clearing these weapons takes trained professionals many long and dangerous hours, and in Syria professional demining teams are unable to work due to the insecurity and to access constraints in Syria and in neighbouring countries. Families described volunteer groups of civilians clearing weapons themselves to prevent incidents that would harm their families.⁹⁸ This is hazardous work that should only be performed by a professional, yet Syrian civilians are choosing to risk their lives to clear the remnants of explosive weapons.

95. Handicap International, "Kobani: a city of rubble and unexploded devices", 2015

96. Interview #14, July 23, 2016

97. Interview #15, July 23, 2016

98. Interview #12, July 21, 2016

3.3. DISRUPTED ACCESS TO ESSENTIAL NEEDS

The ICRC noted in its report on explosive weapons: *“A very important, though sometimes neglected, problem is the effects of explosive weapons on the homes of civilians and on infrastructure essential for their survival, such as water and sewage systems, and underground electricity networks. News reports often show images of blown-out windows and damaged buildings, but seldom draw attention to the less visible destruction of this essential infrastructure, which has ripple effects, from the malfunctioning of health-care facilities to the spread of diseases.”*⁹⁹

As has also been documented by UNIDIR in its study on the ripple effects of explosive weapons use in populated areas, access to basic services is disrupted by explosive weapons in populated areas.¹⁰⁰ The destruction of infrastructure, roads, pipes, power services, access to education, and hospitals are just some of the indirect ways explosive weapons in populated areas makes life impossible for civilians and forces displacement. Explosive weapons in populated areas touch every facet of civilian life. Pushed to desperation and left with no resources or alternatives, civilians have to flee in search of livelihood opportunities.

99. ICRC, “Explosive Weapons in Populated Areas: Humanitarian, Legal, Technical and Military Aspects,” 2015, available at <https://shop.icrc.org/explosive-weapons-in-populated-areas-expert-meeting.html?store=default>

100. Ibid. UNIDIR, Christina Wille, 2016

© D. Parel / Handicap International - July 2016 - Jordan. Street view outside the house of a Syrian refugee.



Income and livelihood insecurity

“We tried to run the bakery, but we stopped, it was too dangerous. Shrapnel was melting the door.”¹⁰¹

Interviewees have lost their income and livelihoods due to explosive weapons in populated areas. Most of them had to leave all their properties and savings behind them when fleeing. Hassan describes how he fled with his family *“with only the clothes on our back”*, while their house was being shelled.¹⁰²

Some are injured and thus cannot work. Others lost their businesses –after they were destroyed–, and are unable to support their families. Some are unable to work anymore due to unexploded ordnance that contaminates the ground (see Jamal’s testimony above: *“There were unexploded weapons in the field, and farmers could not work”*).¹⁰³

Owing to the war, Reem is the only breadwinner in her family. She lost her family’s bakery and now sometimes cooks and sells food to make ends meet. She explains *“Before, in Syria, everyone could find a way to work and manage for subsistence. Now life is very hard.”*¹⁰⁴

Kareem explained how he is only able to work a few days a month because he lacks a work

permit in Jordan. Forced to flee the war, he is now unable to provide for his family, cannot afford medical care, or pay for a kidney transplant for his child.¹⁰⁵ Ammar and Rima lost their house and the stores they ran in Syria.¹⁰⁶ After escaping the bombing several times, they opened a falafel stand to make enough money to survive, but they eventually had to close it and flee once more. Now they say: *“Life is less than zero.”* Without an income and because of their refugee status, life for this family with six children is uncertain.¹⁰⁷

Once they have taken refuge in Jordan, the issue of income insecurity continues to drive other consequences such as lack of education, family tensions, and mental health issues. Many families explained how they have had to shift the burden of work to children, that their family and marital life suffers because of strife over money, and that the anguish over not being able to support their family is a constant burden. Hayyan used to be a shop owner and Rasha a hairdresser. *“It is hard to live here [Jordan]. Once I worked, but my employer refused to pay. I want to go back to my people, my country. I don’t know anyone here. What can we do here?”*, Hayyan confessed.¹⁰⁸ Hayyan now provides for his wife Rasha and their four children by cooking as a street vendor ten days a month.

101. Interview #3, July 18, 2016

102. Interview #11, July 21, 2016

103. Interview #14, July 23, 2016

104. Interview #3, July 18, 2016

105. Interview #15, July 23, 2016

106. Interview #4, July 19, 2016

107. Interview #9, July 20, 2016

108. Interview #9, July 20, 2016



© A. Taslidžan Al Osta/Handicap International - July 2016 - Jordan.

Reem owned a bakery in Syria, now she sells her cookies in the streets to provide for her family.



"Each time, there was conflict and we had to move again"

Reem

Reem comes from one of the biggest towns in Syria. She has four children, two daughters of 14 and 4, and two sons of 12 and 8. She lives in a small, plain apartment with three of her children, her oldest son being in Europe with his father.

Among her family and relatives, single-parent homes were not common before the conflict, but now she says *"there are 15 households without men, because the husbands were killed in bombings or shot, or because they disappeared at checkpoints"*.

She is the household's only breadwinner, and she provides for her children with the limited resources she can earn by selling food in the street. *"We used to have a very good life! My husband and I ran a bakery and rented out apartments. We lived in a very nice neighbourhood; we were very happy and I never expected that something like this would happen."* She tried to stay in Syria with her family, but as the conflict continued, she explains that the fear and feeling of insecurity became impossible to bear.

"Bombing was constant: we could hear the planes all the time. I am still petrified when I think about it."

She remembers how she and her husband tried to keep the bakery running, *"but we stopped. It was very dangerous. Shrapnel was melting the door"*. Bombing and shelling were constant threats and impacted all aspects of their lives: *"People would go outside for groceries and die."*

She now has anxiety attacks at the sound of planes; she received psychological support to deal with this anxiety when she arrived in Jordan. Her children developed skin problems, sleeping disorders, and enuresis because of the stress and fear.

In the space of one year, her family had to move from city to city 5 or 6 times. *"But each time, there was conflict and we had to move again."*

In July 2012, they were first displaced to a nearby

village while their city was under attack. During this attack, she was shot in the arm. An ambulance was driving her to the nearest medical centre, a field hospital set up in a church, when a bombing occurred. The hospital turned her away at triage as her wound was not life-threatening and the medical staff was overwhelmed by victims of the bombing. That day, 350 persons were killed by the bombs.

"It was a massacre. [...] There are the two parties to the conflict. Civilians are the third party, the innocent who pay the price."

Her family decided to seek safety in a nearby village, but came back to their house after a few days.

"Our house was damaged; we could not run the bakery. The schools did not reopen after the bombing, as it was too dangerous." She also remembers that the whole neighbourhood had been emptied of its residents in just a few days: *"80% of the neighbourhood had left when we came back. There was no one left. We stayed for a month before deciding to leave Syria."*

They moved from village to village. At the end of 2012, they attempted to cross the border to Turkey. A smuggler requested 20 000 euros to help her, but left with the money. She finally succeeded in entering Lebanon in 2013: her objective was to reach Egypt, where her parents and sisters had already taken refuge. However, they were denied visas for Egypt and Lebanon, and came to Jordan instead.

She is grateful for the safety she found in Jordan. However, her husband was invited by friends to come to Europe. Her family is in Egypt. *"Only God stands with me now [...] I want to reunite with my husband and my son. The most important thing is also the education of my children. They did not go to school for a year, but now they have good grades. I hope I will be able to give them more education."*

But *"when there is no war, no planes, no noise, I will go back [to Syria]. Now, I would not go back for anything"*.

Food insecurity

“People would go outside for groceries and die.”¹⁰⁹

Food insecurity is an often-overlooked effect of explosive weapons in populated areas. Explosive weapons, especially air-delivered explosive weapons, create more extensive damage to food production sites, transport hubs, and local markets than other conventional weapon types.¹¹⁰ As a result, it disrupts the whole food supply chain in affected areas. It also hampers the ability of humanitarian organisations to safely deliver food aid.¹¹¹ Access to food supplies becomes tenuous as continuous use of explosive weapons destroy the homes of labourers needed in food cultivation and distribution; road networks are destroyed, making it impossible to transport food; and civilians are killed by explosive weapons as they risk acquiring food for their

families. Farmers' fields in Syria are littered with unexploded ordnance, further exacerbating the lack of food, even if the farmers were able to work their fields without fear of being killed during harvest.

Syrians risk death simply by venturing out for food. Hassan explained: *“The bombing was constant. You could not even go out. But you had to go out for bread.”*¹¹² He explained that he took extreme risks to feed his wife and five children. Often food was just not available. Ammar and Rima explained that food shortages in Homs were severe, and for three and half months they ate Zaatar (a spice mixture) with oil and then with water when the oil ran out.¹¹³ Muhammad related how his family ate grass, made tea and ate the tea leaves to survive.¹¹⁴

109. Interview #3, July 18, 2016

110. Ibid. UNIDIR, 2016

111. Ibid. UNIDIR, 2016

112. Interview #11, July 21, 2016

113. Interview #4, July 19, 2016

114. Interview #5, July 19, 2016

© D. Parel / Handicap International - July 2016 - Jordan. Ahmad and Hamida's kitchen.



Loss of access to water and power

“After the shelling we had no electricity and no water. Shelling had destroyed all of that.”¹¹⁵

Another effect of explosive weapon use in populated areas is the loss of water and access to electricity. The United Nations warned that millions of Syrians have no access to running water or electricity, and has called for a halt to fighting so these services may be repaired and humanitarian aid delivered.¹¹⁶ In 2014, explosive weapons damaged the water pipelines from Orontes to Homs, cutting off water to both cities and affecting around 1.5 million people for weeks. That same year in Aleppo, three of the four major water pipelines were bombed, depriving 2 million persons of access to water.¹¹⁷

Explosive weapons destroy water pipes, wells, water treatment facilities, electric transmission wires, electric production and distribution

facilities, and the fuel to run them. The loss of water and electricity are particularly worrying during hot summer months when dehydration is of acute concern. Loss of access to clean running water also increases the potential for waterborne diseases, as people are faced with the stark choice of dying due to lack of water or drinking foul and diseased water.

Numerous interviewees reported that water and electricity were particularly vulnerable to explosive weapons, with these services being cut off immediately after shelling started. Ahmad, Hamida and their three children lost power and water during the war. Muhammad related that after attacks *“Water and electric facilities were not working. We would have to take water from the street and divert electricity.”*¹¹⁸ Sayid, a father of three, described how desperate Syrians are for water at times and they have to dig to find it: *“We felt blessed when we found water.”*¹¹⁹

Lack of medical care

“If it wasn’t for my injury, I wouldn’t have left. I was forced out of my country because of the bombing.”¹²⁰

Medical care is severely disrupted by the use of explosive weapons in populated areas. From March 2011 through May 2016, there were 343 attacks on 245 medical facilities in Syria, resulting in 395 medical personnel being killed by bombing, shelling, or some other type of explosive weapons.¹²¹

The UN reports that medical stocks are running low and there is concern over the sick and wounded receiving adequate medical care.¹²² Medical facilities have been destroyed, forced to relocate multiple times, lack medicine and doctors, and are often inaccessible due to fighting. Syrians interviewed explained that when they needed medical treatment it was just too dangerous to seek it out: *“If you wanted a doctor, you had to go to the city centre. But they were shelling cars. It was too dangerous.”*¹²³ When drugs were available, they were often expired.¹²⁴

115. Interview #12, July 21, 2016

116. VOA News, August 9, 2016, available at <http://www.voanews.com/content/syria-aleppo-water-electricity/3457186.html>

117. Ibid. UNIDIR, 2016

118. Interview #5, July 19, 2016

119. Interview #6, July 19, 2016

120. Interview #8, July 20, 2016

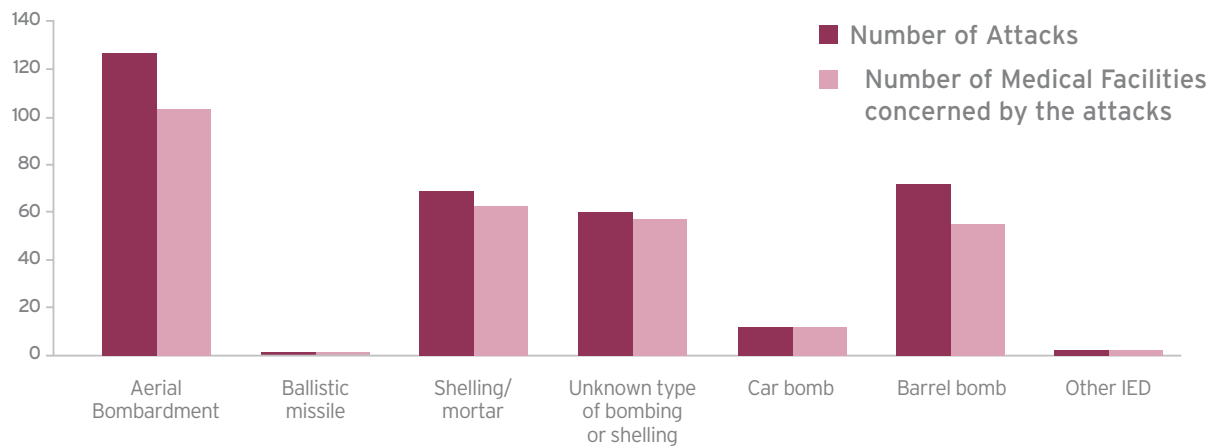
121. Physicians for Human Rights, Elise Baker, Research Coordinator, e-mail dated August 10, 2016. See also: Physicians for Human Rights, “Anatomy of a Crisis: A Map of Attacks on Healthcare in Syria,” accessed August 10, 2016, available at https://s3.amazonaws.com/PHR_syria_map/web/index.html

122. Ibid. VOA News August 9, 2016

123. Interview #11, July 21, 2016

124. Interview #5, July 19, 2016

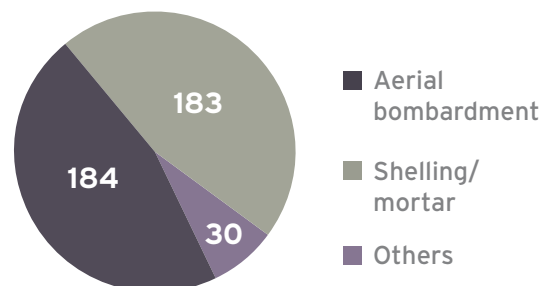
Attacks on Syrian medical facilities using explosive weapons in populated areas¹²⁵



Many of those interviewed have injuries from the war and had to leave Syria to seek adequate treatment for their conditions. Ahmed, a student before the war had a shrapnel injury to his brain and had to make regular travels to Amman for medical care.¹²⁷ Not everyone interviewed had access to medical treatment. Sayid related how he lost his leg because the makeshift medical facility he was brought to did not have the necessary equipment to treat his injury.¹²⁸

Lack of reproductive health services, including emergency obstetric care, is also of grave concern. Because of the absence of skilled birth attendants and obstetricians and of shortages of drugs, it is unlikely women are receiving the pre- and post-natal care they should. The lack of hospitals, medical personnel, and maternity services endangers women and their children at birth. Aisha, a mother of five, pointed out that after giving birth alone, she bled for days and her newborn child was in critical condition because they had no medical care due to the bombings.¹²⁹ They moved to a school that was turned into a shelter during the war. *“At the school three out of ten women would give birth during bombing or shelling incidents and often without the supervision of a midwife”*, Aisha explained.¹³⁰

Deaths of medical personnel from explosive weapons in populated areas in Syria¹²⁶



Mohamed, a father of six, related that when his wife was pregnant and needed to deliver, the nearest equipped hospital was 40kms away and impossible for them to travel to because of *“bombing and shelling; rockets were falling all over the village”*.¹³¹

125. Ibid. Elise Baker. Aerial Bombardment includes gravity bombs, cluster munitions, and other types of aerial bombardment.

126. Ibid. Elise Baker. Explosions include car bombs, IEDs, landmines, and suicide bombings.

127. Interview #1, July 18, 2016

128. Interview #6, July 19, 2016

129. Interview #13, July 21, 2016

130. Interview #13, July 21, 2016

131. Interview #17, July 25, 2016



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Aisha lives alone with her five children in Jordan, she gave birth alone, during a bombing incident, to her now 3 year old son.



"Bombing started, and the midwife had to leave to find shelter with her family"

Aisha

Aisha, 30, lives with her five children, in a peri-urban area in Jordan. Besides her children aged 9, 5, 4, and 3 years and one aged 6 months, she does not have relatives in Jordan. She lives a very isolated life. Indeed, Aisha has not seen her family, still in Syria, for 3 years. Her husband is still hospitalised and can only visit once a week.

Aisha and her family had to leave their home in early 2013, but arrived in Jordan only in mid-2014. In the meantime, they lived with twenty other families in a school, transformed into a collective centre for IDP. She misses her old neighbourhood, where she was surrounded by her relatives and neighbours.

"I lost my house, but I am not worried about the house, I thank God that my children are safe."

But life at the collective centre was difficult:

"During the bombing, women and children would have to hide in the basement for 2 to 3 days. It was a little room, and there were a hundred people inside. The children would cry and be restless. It was very difficult to care for them at that time."

"We left our city a year after the beginning of the conflict, because of the bombing and shelling. Our house was destroyed." Aisha was pregnant at the time, and she describes the dire conditions in which she gave birth. "There were medical points for injury, but no facilities for giving birth. And there was only one midwife for the whole area; the women had to go to her because it was too dangerous for her to move around." She recalls: "At the school, three out of ten women would give birth during bombing or shelling, and often without the supervision of a midwife."

When her labour started, she had to leave the school alone and rely on the assistance provided by the combatants to reach the midwife. *"A few moments after reaching the midwife's house, there was an alert that an attack was imminent. The midwife gave me medicine to make the delivery quicker. But bombing started, and the midwife had to leave to find shelter with her family."*

Aisha gave birth alone after two hours, and then hid in the basement with her newborn for twelve hours.

She was rescued and was able to go back to the school, but no medical care was provided to her or her infant. *"I bled for 20 days and my baby was also in critical condition. When I arrived in Jordan, doctors told me that it would have consequences for my baby's development."*

After these events, the family decided to leave Syria; they travelled by car for eight days to reach Jordan. During those eight days, she remembers that they had to flee the bombing three times. Her husband was injured in a shelling, receiving very serious shrapnel wounds to the head, leg, and arm. He is in a lot of pain because the shrapnel is still in his brain and often causes bleeding from his nose and ears.

"He needs surgery, but we cannot afford it," says Aisha. She is also concerned for the future of her children, namely for her daughter, who could not be registered in school due to the overstretched capacity of schools in Jordan. *"She is my only daughter; I would like her to learn to read and write."*

She hopes that her family will be able to build a life in Jordan: *"Syria is dear to my heart, but I have too many bad memories there."*

Disruption of education services

"We will be immigrants for education."¹³²

The education system in Syria has broken down due to the conflict. One in four Syrian schools has been damaged, destroyed or occupied, which has disrupted the education of over two million children.¹³³

Numerous schools have been destroyed by the use of explosive weapons and many of those that remain are being used as shelters.¹³⁴ Mohamed related why his six children stopped going to school in 2013: *"The shelling started and schools were not safe anymore."*¹³⁵ The children of the families interviewed missed an average of one to three years of school due to the conflict. Zeinah explained that school was not continuous during the war. Her children would go to school in the morning, but they were dismissed early because of shelling. Once, she recalled, her children were home for five months because school was closed due to the war.¹³⁶

"Schools in Homs were not operating because they were often bombed", Muhammad, a father

of five, explained. *"Teachers would gather the children in basements."*¹³⁷ Teachers and students have to brave bombs even if there is a school to go to.

Even when Syrians gain refugee status, education is difficult, as many children take long breaks in their education, disrupting their studies, and many older children had to take jobs to help support their families and never returned to complete their education. In five of the families interviewed, children are still unschooled. Hassan, a father of five, tells us that his two younger daughters, who were excellent students before the war but have missed two years of school, are now forgetting how to read: *"I would take them anywhere where there is education."*

Ahmed related how, *"after the incidents [bombings], people would stop sending their kids to school. Even the teachers did not want to work in this area anymore"*.¹³⁸ Even after facing the trauma of war he wants to return to school: *"Something should be done to help students continue their studies."* He was a student before the war and was one year from graduating. He has not been back to school since the war began.

132. Interview #11, July 21, 2016

133. Save the Children, "Crisis in Syria: Save the Children Providing Aid for Children and Families Displaced by Conflict", January 2016

134. Interview #13, July 21, 2016

135. Interview #17, July 25, 2016

136. Interview #7, July 20, 2016

137. Interview #5, July 19, 2016

138. Interview #1, July 18, 2016



Scattered communities

The forced displacement of Syrians has altered the landscape of the country. Communities that existed for thousands of years are gone. Others are left to live in dire conditions under daily stress caused by insecurity and deprivation. Cities have been razed to the ground or so damaged by explosive weapons they will have to be destroyed if they are to be rebuilt. Explosive weapons destroyed not only the existing infrastructure but also compromised the ability of people to move safely or access livelihood in the areas pockmarked with explosive remnants of war.

The people who used to inhabit these communities have been scattered throughout Syria, refugee camps in the region, and across Europe. Many interviewees also mentioned that their relatives are still living in Syria, some because they are trapped in besieged areas, and

some because they lack the financial resources to leave the country. The financial situation of many Syrians have been greatly impacted by the conflict: OCHA estimates that 67% of the Syrian population are now living in extreme poverty.

This macro-level displacement has also filtered down to the point where families have been dispersed over numerous countries and face real challenges to ever reunite. Family separation is even more unbearable when the location or condition of missing persons is unknown. Some of those interviewed even had their children taken away from them, such as Zeinah, whose children are now somewhere in Germany where her husband has claimed asylum. *"I don't know where my children are exactly, and I cannot talk to them"*, she explains.

Going back home

The theme of wanting to return home was paramount through all of the testimonies. People want to live in their own homes, their own communities, and their own country. Syrian refugees want to return home even knowing their homes and cities are rubble. They yearn to rebuild their lives in the place they love. *"Syria was heaven"*, Sayid, a father of three, sighed as he spoke of wanting to return.ⁱ

These people have been forced from their homes, forced from their country. Most want to return. Jamal and Leila affirmed: *"There is nothing better than your own country."*ⁱⁱ

Even though Syrian refugees want to return, they need security; none want to face the dangers of explosive weapons again. *"When there is no war, no planes, no noise, I will go back. But now, I would not go back for anything"*, Reem lamented.ⁱⁱⁱ Syrian refugees are waiting for the fighting to end: *"I cannot give up on my country. If tomorrow there is peace I will go back."*^{iv} Samir exclaimed: *"I can't wait to return to Syria, to the land where I was born, and to build my life."*^v

i. Interview #6, July 19, 2016

ii. Interview #14, July 23, 2016

iii. Interview #3, July 18, 2016

iv. Interview #15, July 23, 2016

v. Interview #16, July 25, 2016

4.

CONCLUDING REMARKS AND RECOMMENDATIONS

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View of Zaatari refugee camp, biggest camp in Jordan with almost 80 000 Syrian refugees.

The use of explosive weapons in populated areas, especially those with wide-area effects, appears to be strongly correlated to the forced displacement of populations in Syria. In populated areas, the potential death and injury from explosive weapons that they face on a daily basis, as well as the destruction of civilian infrastructure, play a key role in the decision made by people to flee. Indirect effects of the use of explosive weapons in populated areas are making life in affected areas extremely difficult or impossible. Indeed,

it hampers access to all basic necessities such as shelter, food, water, electricity, education, and medical care, driving people further and further from their homes.

Civil society and States have recognized the harm caused by the use of explosive weapons in populated areas on civilians and have banded together in the last years to seek limits on the use of explosive weapons in populated areas.¹³⁹ Employing munitions in a conflict is a choice.

139. Handicap International co-founded in 2011 the International Network on Explosive Weapons (INEW), a network of 19 international NGOs calling for concrete actions to end the human suffering caused by the use of explosive weapons in populated areas. As of September 2016, 53 States and territories, the UN Secretary-General together with several UN agencies, the International Committee of the Red Cross (ICRC), and the European Union officially acknowledged that the use of explosive weapons with a wide-area effect in populated areas poses a specific humanitarian problem. Among these countries, 28 urged action, including support for the elaboration of a political declaration on this topic.



Although obtaining reliable and exhaustive data on the issue is a challenge, it is our hope that this report will highlight forced displacement as a critical factor to consider when explosive weapons with wide-area effects are used in populated areas.

In some circumstances, this disruption of civilian life and mass displacement of civilians may be the result of a voluntary objective. Such direct attacks on civilians would constitute grave breaches of International Humanitarian Law and must be investigated as war crimes.

The use of explosive weapons in populated areas that leads to forced displacement affects every aspect of the lives of civilians, increasing their

vulnerability and compromising their future, especially as most are displaced multiple times inside Syria, and face the constant threat of explosive violence along the way and beyond Syria's borders.

Handicap International calls on the international community to strongly condemn the use of explosive weapons, especially those with wide-area effects, in populated areas. The international community must ensure protection and life-saving assistance to all those impacted by the crisis. Furthermore, it must ensure that all forcibly-displaced people are given a haven, and in the long run, a durable solution that fully respects their dignity.

Warring parties must abide by International Humanitarian Law, and:

- Immediately end the use of explosive weapons with wide-area effects in populated areas, particularly the use of banned weapons such as cluster munitions;
- Immediately cease all attacks on civilians and civilian facilities and put an end to all violations of International Humanitarian Law inside Syria;
- Implement without delay the provisions of UN Security Council resolutions 2139, 2165, 2191, and 2254 so that all those in need of aid and protection can access it fully and safely, without any impediments, and so that all humanitarian actors - including local staff - regardless of their origin or point of access, can work free from fear of arrest, detention, loss of property, retaliation, persecution, or interference from all parties;
- Ensure unhindered and safe opportunities that allow all civilians who wish to flee to leave conflict zones;
- Ensure communication with affected populations and raise their awareness about the risks posed by the use of conventional weapons, including unexploded ordnance;
- Allow and facilitate the monitoring and collection of data on internal displacement by international agencies and humanitarian organisations to ensure effective humanitarian response.

The international community should:

Use of explosive weapons in populated areas:

- Call for investigation on direct attacks on civilians by all parties to the conflict;
- Strongly condemn the use of explosive weapons in populated areas, particularly the use of banned weapons such as cluster munitions and landmines in Syria;
- Support the development of an international commitment to end the use in populated areas of explosive weapons with wide-area effects;
- Acknowledge that humanitarian mine action is essential and support the implementation of risk education and clearance efforts in Syria in the short- and long term;
- In particular, donors should commit to funding risk education, survey, and clearance of mines and explosive remnants of war, and support Syrian response capacity to effectively respond to these threats.

Victim assistance:

- Ensure that the rights of survivors of explosive weapons, the families of those killed and injured, and affected communities from all impacted areas and wherever they are, are recognized and that:
- Their basic needs, including safety, protection, shelter, food, water, hygiene and sanitation, are met in a timely manner,
- They have safe and timely access to mainstream personal support services and disability-specific services, including emergency and long-term medical care, rehabilitation, psychological and psychosocial support, education, work, employment, social protection, and social inclusion,
- They receive assistance to compensate for the loss of their homes and/or livelihoods due to explosive weapons.
- Donors should commit to provide adequate, long-term and coordinated support in the form of earmarked funding or by ensuring development, human rights and humanitarian initiatives count victims of explosive weapons amongst their beneficiaries

Protection and respect for the human rights of refugees and displaced persons

- Ensure that the borders of Syria are open to all those fleeing the conflict, respect refugees' right to freedom of movement, and refrain from refoulement;
- While hosting countries in the region should develop comprehensive refugee policies, grounded in refugee rights, other countries should take their share, including by resettlement and humanitarian admission programs;
- Commit to an ambitious, long-term recovery plan for Syrian refugees and Syrian refugee-hosting countries in the region. Such a plan should comprise significant increases in developmental and multi-year funding pledges. It should encourage the establishment of cross-sectorial partnerships between governments, civil society, the private sector, and international financial institutions, while supporting increased access to education for refugees and working to create income-earning opportunities for refugees and host communities;
- Promote and protect the human rights of all refugees and asylum seekers, wherever they are, without any discrimination and with particular attention to gender and age-risk factors, as well as to vulnerable groups, such as persons with disabilities. This means ensuring proactive means to reach refugees with difficulties in accessing registration points, and ensuring that procedures for obtaining and maintaining civil documentation and securing legal status and residence are accessible, affordable, and as simple as possible. It also means lifting restrictions on working for refugees and allowing refugees to participate in the economy so that they can benefit themselves and those who have welcomed them.

METHODOLOGY

This study documenting the link between explosive weapons in populated areas and forced displacement is based on:

- a literature review,
- key informants' interviews,¹⁴⁰
- interviews of refugees carried out in Jordan during July 2016.

This report does not seek to account for all conflict-related displacement in Syria. The aim of this report is to examine the patterns of conflict-related displacement through the eyes of Syrians affected by the war and to better understand the correlation between displacement and the use of explosive weapons in populated areas.

To collect data on displacement in Syria, the document review was based mostly on reports from OCHA, whose estimates are based in large part on groups operating in Syria, such as UN agencies, the Syrian Red Crescent, and NGOs operating in areas controlled by different parties to the conflict.¹⁴¹ It is difficult to gather recent and exhaustive information from areas of

active conflict. Additionally, due to the complex displacement history in Syria, it is challenging to account for displacement, especially when multiple displacements are occurring as the war continues. Tracking families as they move from one place to the next is challenging, if not impossible, and all numbers on persons displaced must be understood as estimates.

There is a vast arsenal of explosive weapons of various types and origins being used in Syria. We described some weapons that are responsible for numerous instances of civilian harm in Syria. For a more detailed perspective, we recommend a report on the technical aspects of explosive weapons commissioned by the ICRC.¹⁴²

140. While implementing the study, the research team gathered information and views from experts, from the UNHCR, the IOM and AOAV. The UNHCR and IOM experts were also asked for their feedback on the final draft report.

141. IDMC, "Syria IDP Figure Analysis," December 31, 2015, available at <http://www.internal-displacement.org/middle-east-and-north-africa/syria/figures-analysis>

142. ARES "Special Report: Explosive Weapons in Populated Areas", June 1, 2016, available at <http://armamentresearch.com/ares-special-report-explosive-weapons-in-populated-areas/>

The interviews were carried out with displaced civilians originating from areas where explosive weapons have been used in populated areas of Syria in order to better understand how these incidents impacted their lives. All interviewees were adults and gave free and informed consent to their participation. To ensure their safety, all personal information and sensitive data have been withheld in this report and locations of their original residences have been kept generic.

The team interviewed eight couples and families (the couple plus several adult relatives), seven men alone (five were married with children; two of them were single without children) and three women alone (all of them single parents). The eighteen interviews dealt with a total of 36 adults. Children were often present within the room, but questions were not directed to them.

Interviewees were from four main areas with strong patterns of use of explosive weapons in populated areas: Aleppo (2 interviews), Damascus (4 interviews), rural Damascus (2 interviews), Deraa (4 interviews), and Homs (6 interviews), given that refugees from Aleppo, Damascus, Deraa, Homs, and Rif Dimashq (rural Damascus) account for 88% of the Syrian refugees registered in Jordan. The interviews were carried out in Jordan between the 17th and the 25th of July 2016. However, Handicap International aims to reproduce this study in other

countries of the region in order to interview Syrian civilians from other governorates.

Displaced civilians interviewed for this report were identified by Handicap International's programme in Jordan. They arrived in Jordan between 2013-2016 and represented a cross section of Syrian society, genders, and age groups. Their level of education reached from primary to post-secondary, although only two adults had university diplomas. Their activities in Syria were diverse: construction workers, farm hands, government employees, students, craftsmen, housewives, shop owners and entrepreneurs, persons surviving with odd jobs. The team was also attentive to balancing different refugee situations across the sample, interviewing civilians in the two main refugee camps (Al Azraq and Zaatari) as well as in several communities (Amman, Zarqa, Irbid, Mafrqa).

The interviews were conducted in Arabic and continued until saturation of information was reached, meaning no new information was provided by the interviewees.

For this study, Handicap International worked with a consulting expert with field experience in the area of explosive-weapons use. He recently co-authored a report on the technical aspects of explosive weapons in populated areas commissioned by the ICRC.¹⁴³

143. Ibid. ARES, June 1, 2016



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Qasef, قصف :
arabic for "bombing"

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