

# STATE OF CRISIS: EXPLOSIVE WEAPONS IN YEMEN

ACTION ON  
ARMED VIOLENCE

**AOAV**



OCHA



**Report by:**

Robert Perkins

**Editors:**

Hannah Tonkin, Iain Overton

**With thanks to:**

Lars Bromley, Jane Hunter

**Photos:**

Charlotte Cans (OCHA), Philippe Krops (OCHA)

Satellite analysis by UNITAR-UNOSAT. Image copyright: US Department of State, Humanitarian Information Unit, Nextview Licence (Digital Globe).

**Cover illustration:**

The city of Sa'ada has been heavily hit by airstrikes during the conflict in Yemen in 2015 (Philippe Krops/OCHA, 5 August 2015).

**Design:**

Tutaev Design

**Disclaimer:**

This publication was developed by Action on Armed Violence and OCHA Policy Development and Studies Branch. It does not necessarily represent the official views of the United Nations.

## **ABOUT UN OCHA**

The Office for the Coordination of Humanitarian Affairs (OCHA) is the part of the United Nations Secretariat responsible for bringing together humanitarian actors to ensure a coherent response to emergencies. OCHA also ensures that there is a framework within which each actor can contribute to the overall response effort. OCHA's core functions are coordination, policy, advocacy, information management and humanitarian financing. Our mission is to:

- Mobilize and coordinate effective and principled humanitarian action in partnership with national and international actors in order to alleviate human suffering in disasters and emergencies;
- Advocate the rights of people in need;
- Promote preparedness and prevention; and
- Facilitate sustainable solutions.

OCHA has a unique mandate to speak out on behalf of the people worst affected by humanitarian situations. Our ultimate goal is to save more lives and reduce the impact of conflicts and natural disasters.

## **ABOUT AOAV**

Action on Armed Violence (AOAV) is a UK-based charity working to reduce harm and to rebuild lives affected by armed violence.

AOAV works with communities affected by armed violence, remove the threat of weapons, reduce the risks that provoke violence and conflict, and support the recovery of victims and survivors.

AOAV's global explosive violence monitor, launched in October 2010, tracks the incidents, deaths and injuries from explosive weapon use reported in English-language media sources. AOAV does not attempt to comprehensively capture every incident of explosive weapon use around the world, but to serve as a useful indicator of the scale and pattern of harm to civilians.

AOAV is a founding member of the International Network on Explosive Weapons (INEW), an NGO partnership calling for immediate action to prevent human suffering from the use of explosive weapons in populated areas.



# KEY TERMS

---

The following key terms are used by AOA's Explosive Violence Monitor. An explanation of AOA's methodology is on page 16.

## **Casualty:**

Refers to people who were killed or physically injured.

## **Civilian/armed actor or security personnel:**

Casualties were recorded as 'armed actors' only if they were reported as being part of the state military, members of non-state armed groups, or security personnel who AOA considers likely to be armed. This includes police, security guards, intelligence officers and paramilitary forces. All casualties not reported as belonging to these armed groups were recorded as civilians.

## **Explosive violence incident:**

Refers to the use of explosive weapons that caused at least one death or injury and took place in a 24-hour period in a specified geographical location.

## **Populated area:**

AOA's definition of a populated area is based on Protocol III of the 1980 Convention on Certain Conventional Weapons (CCW) which defines concentrations of civilians as: *"any concentrations of civilians, be it permanent or temporary, such as in inhabited parts of cities, or inhabited towns or villages, or as in camps or columns of refugees or evacuees, or groups of nomads."*<sup>1</sup> Incidents recorded by AOA are designated as occurring in populated areas likely to contain

concentrations of civilians if: a) It is stated in the source (e.g. a busy street, a crowded market); b) If an incident occurs in or near a pre-defined location which is likely to contain concentrations of civilians e.g. commercial premises, entertainment venues, hospitals, hotels, encampments (containing internally displaced persons, refugees, nomads), markets, places of worship, public gatherings, public buildings, public transport, schools, town centres, urban residential neighbourhoods, villages/compounds.

## **Explosive weapon types**

Weapons are classified by AOA based on consistently-used language in media reporting. The categories used are deliberately broad in order to capture a range of different weapon types.

### ***Air-launched explosive weapons:***

Any aerial bomb, rocket or missile delivered by an aircraft. This includes helicopters, planes and unmanned aerial vehicles (drones).

### ***Ground-launched explosive weapons:***

This grouping covers a wide range of manufactured conventional ordnance delivered from a variety of surface-level platforms. In Yemen, this category refers to the use of primarily indirect-fire weapons like mortars, rockets and artillery.

### ***Improvised explosive devices (IEDs):***

IEDs cover all homemade explosive weapons, and include car bombs, roadside bombs, and devices detonated by a suicide bomber.

# CONTENTS

---

<b>Introduction</b>	<b>1</b>
<b>Explosive weapons: a background</b>	<b>2</b>
<b>Yemen: The impact of explosive weapons</b>	<b>3</b>
<b>Air-launched explosive weapons</b>	<b>7</b>
<b>Ground-launched explosive weapons</b>	<b>10</b>
<b>Improvised Explosive Devices (IEDs)</b>	<b>13</b>
<b>Conclusion</b>	<b>14</b>
<b>Methodology</b>	<b>15</b>
<b>Notes</b>	<b>16</b>

## INTRODUCTION

In March 2015, a complex and long-running political crisis in Yemen rapidly escalated into all-out conflict. Over the previous six months the country had seen steadily-worsening armed violence as armed groups, commonly referred to as Houthis or Ansar Allah, took control of large parts of the country including the capital city Sana'a. After President Hadi fled the country, on 26 March a coalition, led by Saudi Arabia, began an operation of air strikes in Yemen at the request of the Government of Yemen.<sup>2</sup>

As fighting has spread across the country, millions of civilians in Yemen are suffering from the devastating consequences of armed violence.<sup>3</sup> As of 10 September 2015 the United Nations Office of the High Commissioner for Human Rights (OHCHR) had registered 2,204 civilian deaths and 4,711 civilian injuries from armed violence in Yemen.<sup>4</sup> These figures include civilian deaths and injuries from *all* forms of armed violence in Yemen, including but not limited to the use of explosive weapons.

Civilians are bearing the brunt of the violence in Yemen, and a population already suffering desperate poverty, insecurity, malnutrition and

limited access to health and sanitation is now facing a severe humanitarian emergency. Aid agencies on the ground estimate that some 21 million people – 80 per cent of the entire population – are in need of some form of humanitarian protection or assistance. This is a 33 per cent increase in needs since the conflict began.<sup>5</sup>

The spiralling violence in Yemen in 2015 has been characterised by the use of explosive weapons with wide-area effects in populated areas. All parties to the conflict have repeatedly used heavy explosive weapons in fighting since March, including in populated areas. In addition to aerial bombing in the capital Sana'a and other locations across the country, southern governorates in particular have seen heavy ground fighting with rockets and mortars between Houthi militants and government allied fighters. As a further threat to the protection of civilians, Islamic State in Iraq and the Levant (ISIL) and Al-Qaeda in the Arabian Peninsula (AQAP) have carried out deadly bombings as they take advantage of the insecurity gripping Yemen.

This paper investigates the humanitarian impact of the use of explosive weapons in populated areas in Yemen during the conflict up to 31 July 2015.



Abdallah Mohamed Al Qady stands in what used to be the entrance of his family home in Bayt Mayad neighbourhood of Sana'a, Yemen. The four-storey house was completely destroyed when a missile landed next door on 13 June 2015. (OCHA/Charlotte Cans, 7 July 2015)

## EXPLOSIVE WEAPONS: A BACKGROUND

Explosive weapons affect an area with blast, heat and fragmentation. There are many types of explosive weapons, including large aircraft bombs, tank shells, mortars and improvised explosive devices (IEDs). These weapons differ in their method of delivery and scale of effects, but all have the capacity to cause deaths, injuries, and damage to anyone or anything around the point of detonation.

### HUMANITARIAN IMPACT

When explosive weapons are used in populated areas such as markets, places of worship or residential areas, civilians are exposed to a high risk of harm. The risk to civilians is particularly high when explosive weapons with ‘wide-area effects’ are used in populated areas. Wide-area effects may result from the large blast or fragmentation radius of the individual weapon, the inaccuracy of the weapon’s delivery to a target, the use of multiple warheads across an area, or a combination of these three characteristics.<sup>6</sup>

As well as the threat of death and injury to civilians, explosive weapons consistently cause severe and long-lasting damage to homes, services and infrastructure such as hospitals, schools, and sanitation and energy supply systems. Livelihoods are also devastated as commercial property and means of production (factories, livestock etc.) are damaged or destroyed in attacks involving explosive weapons. The use of explosive weapons in populated areas is a major driver of displacement as people are forced to flee due to the fear of, or as a result of, explosive weapon attacks. Explosive weapons also leave explosive remnants of war (ERW), which can continue to pose a serious threat to civilians, in particular children, for decades after a conflict has ended.<sup>7</sup>

### EXPLOSIVE WEAPONS AND INTERNATIONAL HUMANITARIAN LAW

International Humanitarian Law (IHL) contains important provisions for the protection of civilians in armed conflict, including from the effects of explosive weapons. Through the principles of proportionality, distinction and precaution, parties to conflict are obliged to limit loss of civilian life, injury to civilians and damage to civilian objects as far as possible.

Across the globe, greater compliance with IHL by all parties to conflict would significantly enhance the protection of civilians from the effects of explosive weapons. In addition, it is increasingly recognised that stronger policy standards to curb or limit the use in populated areas of explosive weapons, particularly those with wide-area effects, would provide additional protection to civilians.<sup>8</sup>

### GROWING RECOGNITION OF A GLOBAL PROBLEM

The continued use of explosive weapons in populated areas, in many different countries and context around the world, has emerged over recent years as a key concern in the protection of civilians. Since 2009, the United Nations Secretary-General has repeatedly called on Member States to recognise and address this critical humanitarian issue.<sup>9</sup>

He has called upon all parties to conflict – national armed forces and non-state armed groups – to refrain from the use of explosive weapons with wide-area effects in populated areas, and he has recommended that the Security Council, whenever relevant, expressly call upon parties to conflict to refrain from such use. Growing international recognition of the severe pattern of civilian harm has seen more than 40 countries speak out and acknowledge this humanitarian problem.<sup>10</sup>

“Many wounded are laid on the floor, we have only 130 beds. To ease the pressure on the morgue, which is filled with bodies, we took pictures of bodies and buried them if none of their relatives came to receive them the same day [...] I have eight children and my sister is living with me too. My children find it difficult to go to school like most of the children now as they are awake all night.”

*Yousif, a doctor at a hospital in Taizz, April 2015*<sup>11</sup>



## YEMEN: THE IMPACT OF EXPLOSIVE WEAPONS

Since 2011, UK-based charity Action on Armed Violence (AOAV) has monitored the immediate humanitarian impact of explosive weapon use worldwide. The monitor records deaths and physical injuries reported in English-language media sources. The remainder of this paper presents data collected by AOV on reported explosive violence in Yemen between 1 January and 31 July 2015.

No claims are made that this sample of data can represent the total impact of explosive weapons on civilians. It is instead intended to inform an understanding of patterns of harm to civilians. A full explanation of AOV's methodology is included on page 15 in this paper. The intensity of armed violence in Yemen in recent months, and the limited access for journalists and investigators on-the-ground makes it particularly challenging to capture the full scale of ongoing explosive weapon use in the country.

Civilians have borne the brunt of explosive violence in Yemen in 2015. AOV recorded 124 incidents of explosive violence in Yemen between 1 January and 31 July 2015 (see infographic overleaf).<sup>12</sup> In these incidents, a total of 5,239 deaths and injuries from explosive weapon use were recorded.

Of these, 4,493 were civilians (1,363 civilian deaths and 3,130 civilian injuries). This means that civilians have made up 86 per cent of deaths and injuries that AOV has recorded from explosive weapons in Yemen between 1 January and 31 July 2015.

The intensity of explosive violence in the country has meant that more civilian deaths and injuries from explosive weapons were recorded in Yemen during the first seven months of 2015 than in any other country in the world.<sup>13</sup>



Jumhuri hospital, Sana'a. Adam Abdullah (20 years old, left) and Youssef Harban (24 years old, right). Adam was injured when an airstrike hit his house in Sa'ada. Youssef was wounded when an airstrike hit a market in Sa'ada. (OCHA/Charlotte Cans, 7 July 2015)



The majority of explosive weapon use reported in Yemen has taken place in populated areas. Of the 124 incidents recorded by AOAV between 1 January and 31 July 2015, 60 per cent (75 incidents) were recorded in towns, cities, and villages of Yemen. When explosive weapons were used in populated areas, civilians made up 95 per cent of reported deaths and injuries. This compares to 51 per cent in other areas.

The spread of conflict in 2015 can be seen clearly in the infographic overleaf. AOAV recorded at least one death or injury from explosive weapon use in 18 of Yemen's 21 governorates (provinces) between 1 January and 31 July 2015.<sup>14</sup> Civilian deaths and injuries outnumber armed actors in 12 governorates. Sana'a, home to the most populous city in Yemen, is the most-affected governorate with 2,361 recorded civilian deaths and injuries. More than half (53 per cent) of the reported civilian toll from explosive violence in Yemen was recorded in the capital city and surrounding districts. Other governorates with high numbers of civilian deaths and injuries include Aden (19 per cent of civilian deaths and injuries reported in Yemen), Hajjah (10 per cent), and Taiz'z (9 per cent).

Civilians have been killed and injured by many different bombs, shells and rockets in Yemen. Many attacks have resulted in a high number of civilian casualties. Between 1 January and 31 July 2015, AOAV recorded 13 separate incidents in Yemen that each killed and

injured more than 100 civilians. Eight of these incidents were air strikes, three were caused by ground-launched explosive weapons like rockets and mortars, and two by improvised explosive devices (IEDs).

The high number of civilian deaths and injuries reported in such a large proportion of incidents in Yemen illustrates the wide-area impact that explosive weapons can have in populated areas.

AOAV loosely groups explosive weapons into three categories: air-launched explosive weapons, ground-launched explosive weapons, and IEDs. All three launch methods of explosive weapons have had a terrible humanitarian impact on civilians in Yemen, not only causing a high number of deaths and injuries but also causing severe psychological suffering, damaging homes and civilian infrastructure, and driving displacement and insecurity.

The impact of explosive weapons in Yemen goes far beyond the immediate deaths and injuries recorded by AOAV. The testimonies and experiences of victims and witnesses illustrate some of the long-term impacts that can cause extensive suffering far into the future, even after the fighting has ended. The next section of this paper shares the stories and experiences of people affected by the use of explosive weapons in populated areas in Yemen during the fighting in 2015.

“Almost 8.6 million people are in urgent need of medical help [...] people continue to suffer not only from war-related injuries, but from inability to get basic treatment for the most common health conditions, or get obstetric care during childbirth.

As the conflict continues, more lives are lost every day, not just due to the violence, but as a health system that has been seriously damaged barely copes with the extraordinary needs posed by the unrelenting violent conflict and can no longer provide them with the health services they need to stay alive. The health and lives of millions of people are at risk.”

*Dr Margaret Chan, Director-General of the World Health Organization, 27 May 2015<sup>15</sup>*

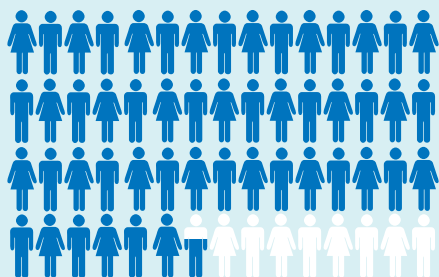
# INCIDENTS OF EXPLOSIVE VIOLENCE, JAN-JULY 2015 IN YEMEN



**75 (60%) INCIDENTS**  
IN POPULATED AREAS

**49 (40%) INCIDENTS** IN  
NON-POPULATED AREAS

## DEATHS AND INJURIES FROM EXPLOSIVE VIOLENCE IN YEMEN, JAN-JULY 2015



**4,493 (86%) DEATHS AND INJURIES** FROM  
EXPLOSIVE VIOLENCE WERE CIVILIANS



**3,926 (95%) OF DEATHS AND INJURIES**  
IN POPULATED AREAS WERE CIVILIANS



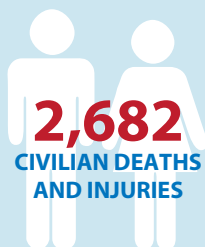
**567 (51%) OF DEATHS AND INJURIES**  
IN OTHER AREAS WERE CIVILIANS

## CIVILIAN DEATHS AND INJURIES FROM EXPLOSIVE VIOLENCE



### AIR-LAUNCHED EXPLOSIVE WEAPONS

**60% OF CIVILIAN DEATHS AND INJURIES**



**35/71 INCIDENTS (49%)**  
IN POPULATED AREAS

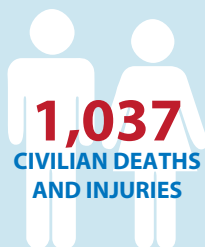


**93% OF DEATHS AND INJURIES** IN  
POPULATED AREAS WERE CIVILIANS



### GROUND-LAUNCHED EXPLOSIVE WEAPONS

**23%**



**25/33 INCIDENTS (76%)**  
IN POPULATED AREAS



**94% OF DEATHS AND INJURIES** IN  
POPULATED AREAS WERE CIVILIANS



### IMPROVISED EXPLOSIVE DEVICES (IEDs)

**17%**

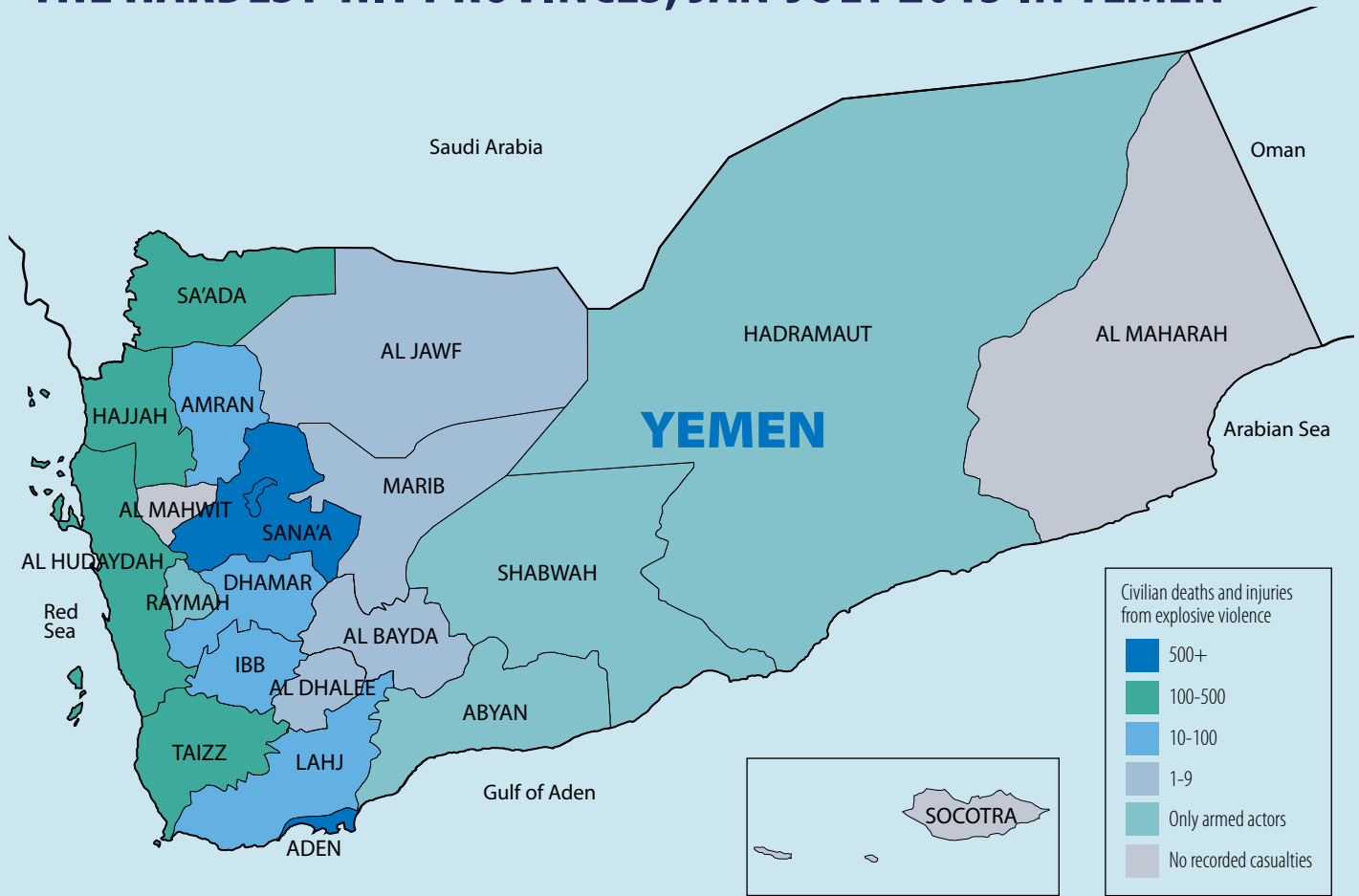


**15/20 INCIDENTS (75%)**  
IN POPULATED AREAS

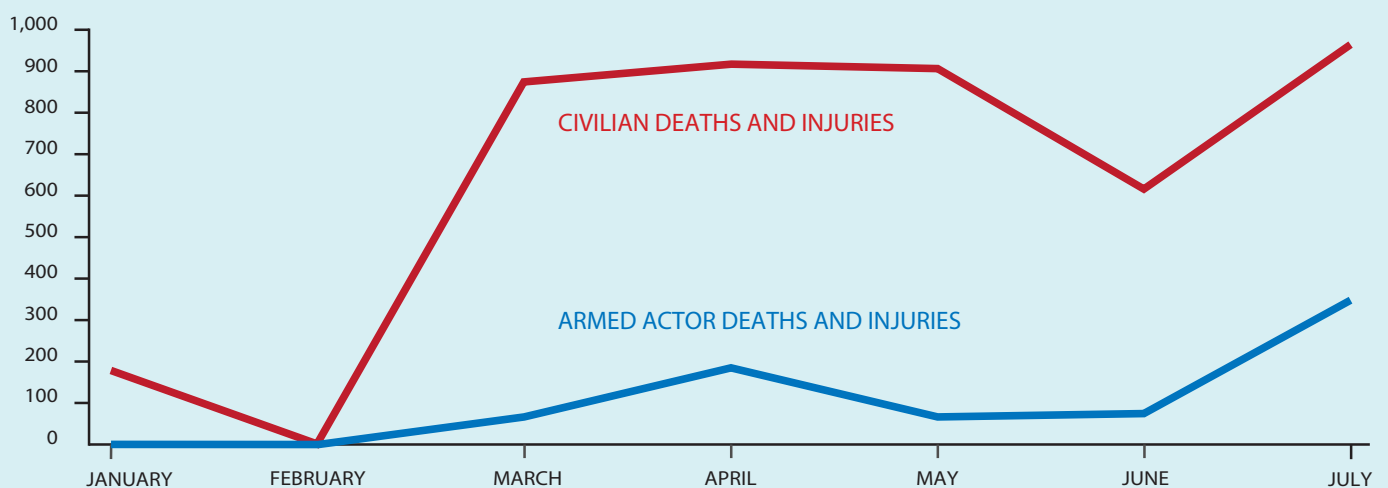


**97% OF DEATHS AND INJURIES** IN  
POPULATED AREAS WERE CIVILIANS

# THE HARDEST-HIT PROVINCES, JAN-JULY 2015 IN YEMEN



# MONTHLY DEATHS AND INJURIES FROM EXPLOSIVE VIOLENCE, JAN-JULY 2015 IN YEMEN



# AVERAGE DEATHS AND INJURIES PER DAY SO FAR IN 2015



**21**  
CIVILIANS



**4**  
ARMED ACTORS

## AIR-LAUNCHED EXPLOSIVE WEAPONS

Air-launched explosive weapons include any bomb, rocket or missile delivered by an aircraft.<sup>16</sup>

The majority of reported civilian deaths and injuries from explosive violence in Yemen from 1 January to 31 July 2015 (60 per cent) were caused by air-launched explosive weapons such as missiles and large aircraft bombs. AOV recorded a total of 3,287 deaths and injuries in Yemen from aerial explosive weapons. Of these, 82 per cent were reported to be civilians (2,682 civilian deaths and injuries).

Coalition air strikes began in Yemen on 26 March 2015. Between 26 March and 31 July AOV recorded 63 air strike incidents that resulted in reported deaths and injuries.<sup>17</sup> A total of 835 civilian deaths and 1,847 civilian injuries were reported in these incidents. There have been several air strikes which have resulted in a large number of civilian deaths and injuries in Yemen, such as the bombing of a displacement camp in Mazraq on 30 March which killed at least 40 people, or when as many as 65 civilians died when six bombs fell on a residential compound in the port city of Mokha on 24 July.<sup>18</sup> More than half of these air strikes in Yemen were reported in populated areas (35 out of 63, or 56 per cent of recorded incidents), including the capital city Sana'a.

### SHOCKWAVES ACROSS SANA'A

The incident that resulted in the largest recorded number of civilian deaths and injuries from aerial explosive weapons took place in Sana'a on 20 April 2015. An air strike at approximately 10.30 am in the morning hit an alleged mountainside missile depot in the western district of Faj Attan.<sup>19</sup> Residents described the blast as like an earthquake.<sup>20</sup>

**“It was like the doors of hell opened, I felt the house lift up and fall”**

*Mohammed Sarhan, Sana'a resident, speaking about the air strike on Faj Attan, 20 April 2015<sup>21</sup>*

AOV recorded a total of 25 civilian deaths and 398 injuries in the Faj Attan bombing.<sup>22</sup> Although the air strike was reportedly directed at a military target the

force and fallout of the explosion was felt across many populated areas of the capital.

Residential homes near the site were flattened.<sup>23</sup> The shockwaves were felt up to four miles away, and local Red Cross workers reported that civilian casualties were spread throughout the city as windows were shattered and debris was scattered across Sana'a.<sup>24</sup> Resident Osamah al-Fakih, recalling the aftermath, said:

*“The moment the missile base at Faj Attan exploded last week was terrifying. The shelling and bombardment that preceded it was usual. I was in my apartment getting ready to go out, when the room started shaking, like an earthquake. Frozen, I was genuinely worried that the building would collapse. Then the explosion – shattering all the windows and leaving broken glass in its wake. It took me a couple of minutes to realise what had happened. I took my mobile phone to answer calls and checked in with my family and friends. The most painful call was the one I made to my sister. While speaking to her I could hear my two-year-old nephew crying out in fear and screaming ‘Mama, Mama,’ his voice is still resonating in my head as each shell goes off.”<sup>25</sup>*

Sana'a has repeatedly been hit by aerial bombing and other explosive weapon attacks. Many strikes reportedly targeted military objectives such as weapon stockpiles or checkpoints, but civilians have still been caught up in the wide-area effects of the explosive weapons used. *“We have been emphasizing the need to consider alternatives to explosive weapons with wide-area effects when attacking military targets in populated areas,”* said Cédric Schweizer, the former head of the ICRC's delegation in Yemen. *“In the case of the Sana'a munitions depot [an airstrike carried out on 11 May], harm to the civilian population came not just from the munitions that exploded but also from those that did not, and lay in the street where children could play with them.”<sup>26</sup>*

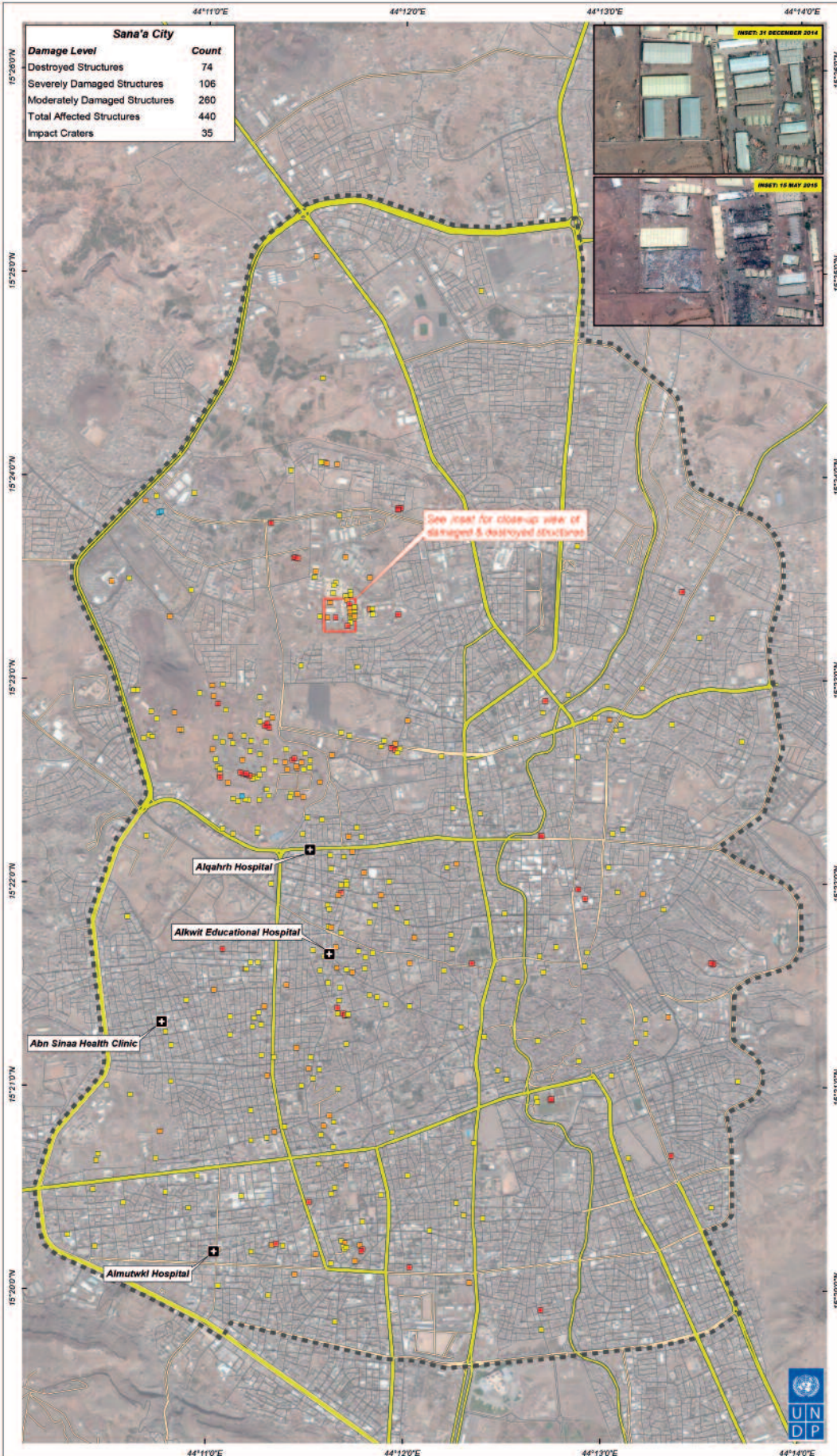
According to the damage assessment carried out by the United Nations Institute for Training and Research (UNITAR), by 15 May 2015, 440 structures had been affected by armed violence in the capital city, with 74 buildings completely destroyed.<sup>27</sup>



# DAMAGE ASSESSMENT OF SANA'A CITY, SANA'A GOVERNORATE, YEMEN

Analysis with WorldView-2 Data Acquired 15 May 2015 and WorldView-3 Data Acquired 12 & 31 December 2014

Complex Emergency  
 Production Date: 6/3/2015  
 Version 1.0  
 Glide Number: CE20150402YEM



This map illustrates satellite-detected damage and destruction in the city of Sana'a, Sana'a Governorate, Yemen. Using satellite imagery acquired 15 May 2015, 12 and 31 December 2014, UNITAR-UNOSAT identified a total of 440 affected structures. Approximately 74 of these structures were destroyed, 106 severely damaged, and 260 moderately damaged. Additionally, 35 impact craters were found. A total of four medical facilities were identified within 100 meters of damaged and destroyed buildings, and it is possible that these facilities also sustained some damage. This is a preliminary analysis and has not yet been validated in the field. Please send ground feedback to UNITAR-UNOSAT.

**LEGEND**

- Destroyed Structure
- Severely Damaged Structure
- Moderately Damaged Structure
- Impact Crater
- Possibly Damaged Medical Facility
- Highway / Primary Road
- Secondary Road
- Local / Urban Road
- Analysis Extent

Map Scale for A3: 1:35,000  
 0 0.25 0.5 1 Kilometers

Satellite Data (1): WorldView-2  
 Imagery Date: 15 May 2015  
 Resolution: 50 cm  
 Copyright: DigitalGlobe, Inc.  
 Source: US Department of State, Humanitarian Information Unit, NextView License  
 Satellite Data (2): WorldView-3  
 Imagery Date: 12 & 31 December 2014  
 Resolution: 40 cm  
 Copyright: DigitalGlobe, Inc.  
 Source: US Department of State, Humanitarian Information Unit, NextView License  
 Road Data: Google Map Maker / OSM / ESRI  
 Other Data: USGS, UNCS, NASA, NGA  
 Analysis: UNITAR / UNOSAT  
 Production: UNITAR / UNOSAT  
 Analysis conducted with ArcGIS v10.3

Coordinate System: WGS 1984 UTM Zone 38N  
 Projection: Transverse Mercator  
 Datum: WGS 1984  
 Units: Meter

The depiction and use of boundaries, geographic names and related data shown here are not warranted to be error-free nor do they imply official endorsement or acceptance by the United Nations. UNOSAT is a program of the United Nations Institute for Training and Research (UNITAR), providing satellite imagery and related geographic information, research and analysis to UN humanitarian and development agencies and their implementing partners.

This work by UNITAR/UNOSAT is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

**unitar**  
 United Nations Institute for Training and Research

**UNOSAT**

Contact information: [unosat@unitar.org](mailto:unosat@unitar.org)  
 24/7 Hotline: +47 75 467 4998  
[www.unitar.org/unosat](http://www.unitar.org/unosat)



### BOMBING HITS MARKETPLACES

On several occasions civilians shopping in marketplaces in Yemen have been killed and injured by the use of explosive weapons. AOV has recorded four air strikes that hit marketplaces in Yemen between 1 January and 31 July 2015.

On 6 July, coalition aircraft dropped two munitions on a crowded livestock market in Fayoush, in Lahj governorate of southern Yemen.

Many of the victims were blown apart in the blast and have remained unidentifiable and unclaimed.

According to investigators with Amnesty International, craters at the site measuring three metres deep and four metres in diameter indicated that a heavy aircraft bomb, weighing between 500 and 1,000 pounds, had exploded in the market.<sup>28</sup>

In all, at least 41 people were killed and another 23 injured in the attack. People had come to Fayoush market from surrounding areas to buy and sell goats, sheep and cows as a result of severe food shortages in the region.

Adam Hassan Omar, 52-year-old father of 11, told Amnesty: *“I went to the market to see if I could sell three goats for a better price than I bought them. I used to work as a daily labourer mostly in construction in Crater (Aden), but since the war I have not gone there. It’s difficult to get there now and there is no work there anyway.*

*I try to earn a little money buying and selling goats and sheep. I heard a plane above but did not worry; I did not think they would bomb a market. The plane was going around above for quite a while. Then the explosion happened. I remember feeling as if a strong wind pushed me, transported me and a strong pain as if I had been cut in half. Then I fainted and woke up here [in the hospital]. I don’t know who brought me here.”<sup>29</sup>*

Fragments of the bomb had torn through Adam’s abdomen, causing damage to his internal organs. Doctors who treated him said they had to remove some 15cm of his intestine and spleen.<sup>30</sup>

Two days earlier, on 4 July, two air strikes hit a busy market in Beni Hassan in Hajjah province, in an area known as the Aahem triangle. The first explosion hit a cooking-gas station at about 8.30 pm. The second, half an hour later, fell in the heart of a crowded market as well as two neighbouring restaurants and a hotel.<sup>31</sup>

Staff from Médecins Sans Frontières (MSF) arrived at scene an hour later, and helped to move the wounded to three separate hospitals nearby for emergency treatment. Medical staff were overwhelmed by the scale and severity of the injuries. *“It has been terrible. We could never have imagined that we could receive so many severely injured people at one time in a small health center like Beni Hassan. The whole [MSF] team is shocked by what they have seen, especially since it happened to people enjoying an evening in Ramadan,”* said Dr Ammar, part of the MSF team in Hajjah.<sup>32</sup>



Unexploded aircraft bomb lies by the side of the road, Sana’a (OCHA/Charlotte Cans, 7 July 2015)

## GROUND-LAUNCHED EXPLOSIVE WEAPONS

Ground-launched explosive weapons cover a wide range of ordnance, but in Yemen this term mostly refers to indirect-fire systems such as rockets and mortars (weapons that can be launched without the operator being able to see the target). These weapons were responsible for 23 per cent of recorded civilian deaths and injuries from explosive violence in Yemen.

AOAV recorded 1,037 civilian deaths and injuries from the use of artillery shells, mortars and rockets in Yemen between 1 January and 31 July 2015. In total, 1,104 deaths and injuries were recorded meaning that civilians made up 94 per cent of recorded deaths and injuries from ground-launched explosive weapons. These weapons have been fired into populated areas in Yemen by both state-affiliated and non-state forces. The majority of incidents (67 per cent) have been reportedly carried out by Houthi forces and allied fighters.

Deaths and injuries were reported in 33 separate incidents of ground-launched explosive violence recorded in Yemen before 31 July 2015. Three-quarters of ground-launched incidents took place in populated areas, mostly in the southern cities of Aden and Taizz.

### MULTIPLE ROCKET LAUNCHERS IN ADEN

Civilians in the port city of Aden have been repeatedly hit by imprecise rockets fired from multiple launchers. These battlefield weapons are commonly reported as ‘Katyusha’ rockets.<sup>33</sup> Similar to the notorious ‘Grad’ rocket, these weapon systems can fire a large number of munitions in a short period of time.

Overnight on 1 July between 15 and 20 rockets were fired into Aden, where they fell over a wide area.<sup>34</sup> The barrage hit two densely-populated neighbourhoods known as Block 4 and 5. Overall at least 18 civilians were killed, according to health officials in Aden.<sup>35</sup>



Al Thawra hospital, Sana'a: Hussein, 5 years old, was hit by a missile while on the balcony of his family home. He spent four days in a coma after suffering serious head injuries. (OCHA/Charlotte Cans, 15 June 2015)

Hospitals in the town were overwhelmed by the injuries.<sup>36</sup>

The first rocket fell near Mansoura central prison between two checkpoints. One reported fighter was killed and several injured.<sup>37</sup>

As people emerged onto the main road to assist the victims, a second rocket landed in the street, hitting a gas station. Among the casualties from this second rocket was 17-year-old student Ayman Abdallah. Ayman suffered shrapnel wounds across his body, and died on 4 July after three days in hospital.<sup>38</sup>

The third rocket landed shortly after the first two. It hit the roof of the nearby Infinity Hotel, which at that time was home to hundreds of people already displaced by explosive violence elsewhere in the country.<sup>39</sup>

An hour later, the fourth rocket hit the fourth floor of the Royal Concorde Hotel nearby. Six members of the Ali family were injured, including 25-year-old Amal and her infant son Hafedh.<sup>40</sup>

Witnesses described the strike on the Royal Concorde: *“Women and children were screaming, running out of their apartments without even wearing abayas or taking their bags. The fourth floor was filled with smoke. The family living in [room] 411 had come to Mansoura to seek safety. Now the wife and child are in critical condition in the hospital.”*<sup>41</sup>

Amal told researchers from Amnesty International: *“We heard two rockets strike nearby and we ran to the stairs, because the stairs are in the centre of the building, away from the outer walls. After a while we went back to the room as it was quiet. But then the rocket hit the building. Most of the shrapnel hit me and Hafedh [18-month-old son], who was on my lap. Shrapnel penetrated his head and went through to his left eye, causing internal damage. He lost his eye and*

*is in a coma. My baby Bara’, who is only three months old, my husband, my mother, and her mother-in-law were also all injured by shrapnel but luckily less seriously.”* Amal herself suffered multiple injuries from rocket fragments in her face, chest, arm and leg.<sup>42</sup>

Several more rockets hit the same area a few hours later. At roughly 5.30 am, a rocket struck a two-storey home 40m from the Infinity Hotel. The al-Junaidi family lived in an apartment on the second floor. Qaseem Mohammed, an infant, was killed as he slept, and Mohammed, the baby’s father, was severely wounded.<sup>43</sup>

Omar Saleh Omar, 54, a bus diver living on first floor told investigators from Human Rights Watch: *“It was awful, that day was awful. I will never forget how she [surviving mother] screamed and cried. Now she doesn’t speak at all. She has been in shock since that day.”*<sup>44</sup>

*“I am now quadripalegic, paralysed from the neck down. That night, shrapnel entered my neck and exited through my seventh vertebrae. We had just moved to our new house, we thought we were safe. Who will take care of my family now? I was already taking care of my 58-year-old brother Khaled, who is intellectually disabled and my 27-year-old son Ahmed who is dumb and mute. Meanwhile my 28-year-old daughter Walla’ is sixty per cent deaf.”*

*Anhar Najeeb, 55 year-old mother-of-two, injured in overnight rocket attacks in Aden on 1 July.*<sup>45</sup>



## PROJECTILES KILL AND INJURE DISPLACED FAMILIES

The humanitarian crisis in Yemen has meant that there are currently more than 1.4 million internally displaced persons (IDPs) in the country.<sup>46</sup>

On multiple occasions in Yemen this year, rockets and mortars have hit facilities home to people seeking shelter and refuge from explosive violence.

On 6 May, at least 32 civilians were killed and another 67 injured by explosive weapons as they tried to flee fighting in Aden.

Residents and witnesses reported that a series of mortar rounds fell seemingly at random as hundreds of people were gathering at an IDP camp in a small fishing harbour. Residents had been trying to board barges to escape over sea when the shells fell. Many of the casualties were reportedly women and children.<sup>47</sup>

Late in the night of 4 July, a rocket struck the front of the Al Tadamon Kindergarten in Aden. Twelve refugees living inside were killed, including five children. The Kindergarten had been home for two months to 94 IDPs, including ten families.<sup>48</sup>

“I still remember the day when the rocket shelling was heavy. My mother woke us up, pushed us through the door and told us to run, run, run. We found ourselves here, in this school. I want to go back home. I want to be safe.”

*12-year-old Al-Omari who lives in a school used to house IDPs in the southern city of Aden.*<sup>49</sup>



Houses damaged by shelling next to Sabaeen hospital in Sana'a on 15 June 2015 (OCHA/Charlotte Cans, 7 July 2015)

## IMPROVISED EXPLOSIVE DEVICES (IEDS)

IEDs are essentially homemade bombs, mostly used by non-state armed actors.

Yemen has suffered several highly destructive attacks using improvised explosive devices (IEDs), often claimed by ISIL or AQAP militants. AOVAV recorded 20 separate IED attacks in Yemen during the first seven months of 2015. These attacks were responsible for 17 per cent of civilian deaths and injuries in Yemen in 2015. IEDs have killed and injured 848 people, 774 of whom were civilians (91 per cent).

Three-quarters of all IED attacks in Yemen until 31 July 2015 have taken place in populated areas. When IEDs have exploded in populated areas, 97 per cent of casualties were civilians, compared to just 10 per cent in other areas.

### ATTACKS ON SANA'A MOSQUES

The largest number of civilian casualties from a single explosive weapon attack in Yemen in the first seven months of 2015 came on 20 March in a sequence of seemingly-coordinated suicide bombings in the capital city Sana'a. At least 137 people were killed and another 345 injured in the explosions. At least 13 children were among the dead.<sup>50</sup>

Four suicide bombers attacked the Badr and al-Hashoosh mosques as predominantly Shia worshippers began their Friday noon prayers. At the Badr mosque, in the south of Sana'a, one man entered the building and detonated his explosives among the crowd. As people ran to the exits, the second explosion happened near the main gates.<sup>51</sup>

Two bombers also detonated explosives inside the al-Hashoosh mosque in the north of Sana'a. Mohammed al-Ansi, who survived the attack at al-Hashoosh, said he was thrown about six feet by the power of the blasts.<sup>52</sup>

The devastating bombings severely impacted hospitals in Sana'a, which struggled to respond to the flood of casualties and were forced to appeal for blood donations from members of the public.

The attacks were claimed by ISIL, the first attacks in Yemen to be claimed by the group. A statement attributed to the group claimed that the attack was carried out against Shia supporters of the Houthi group.<sup>53</sup> Since then AOVAV has recorded 12 IED attacks for which ISIL has claimed responsibility in the country.



Jamaa Mansour, 50 years old, Displaced from Saada, living in a school hosting some 200 displaced persons in Sana'a. (OCHA/Charlotte Cans, 16 June 2015)

## CONCLUSION

“The humanitarian situation is nothing short of catastrophic. Every family in Yemen has been affected by this conflict. The people are facing immense hardship. And it is getting worse by the day [...] This cannot go on. Yemen is crumbling.”

*Peter Maurer, ICRC President, August 2015*<sup>54</sup>

Yemen has been torn apart by the use of explosive weapons in populated areas across the country in 2015. Explosive weapons have not only led directly to the deaths and injuries of thousands of civilians, but they have helped drag the country into crisis.

The use of explosive weapons with wide-area effects in populated areas is having a devastating impact on civilians in Yemen.

Hundreds of homes and civilian buildings have been destroyed or severely damaged. Hospitals, schools and life-saving humanitarian assistance have been hindered, blocked or closed down. Huge swathes of the civilian population have been driven from their homes, fuelling a displacement crisis in which more than 1.4 million people are currently displaced within Yemen.<sup>55</sup>

The widespread bombing of towns and cities in Yemen will likely result in extensive contamination from explosive remnants of war (ERW), putting civilians at risk for years, perhaps even decades, to come.

Yemen is not the only country to fall victim to this

pattern of violence in recent years. From Afghanistan to Iraq, Libya to the occupied Palestinian territory, Syria to Ukraine, the use of explosive weapons in populated areas is a major cause of civilian suffering. This predictable and preventable pattern of harm is unacceptable.

### RECOMMENDATIONS

AOAV and OCHA urge all parties to conflict – national armed forces and non-state armed groups – to heed the United Nation Secretary-General’s call to avoid the use of explosive weapons with wide-area effects in populated areas.

AOAV and OCHA urge states to:

- Endorse the United Nations Secretary-General’s recommendations that States, as well as other actors, should avoid the use of explosive weapons with wide-area effects in populated areas;<sup>56</sup>
- Work together with international organisations and civil society to develop a political commitment to refrain from using explosive weapons with wide-area effects in populated areas;<sup>57</sup>
- Share existing national practices and policies relating to the use of explosive weapons in populated areas, including through their representatives to the UN in response to the UN Secretary General’s Note Verbale of 1 October 2014;<sup>58</sup>
- Collect and make available to the UN and other relevant actors information on civilian harm resulting from the use of explosive weapons including gender, age and disability disaggregated data, to better understand the impacts of such use;
- Recognize the rights of victims and survivors and ensure that assistance is gender and age sensitive.



## METHODOLOGY

---

This paper draws on data collected by AOV and also by the United Nations Office of the High Commissioner for Human Rights (OHCHR). The OHCHR and AOV figures measure different things using different methodologies. OHCHR seeks to record all civilian deaths and injuries from the conflict, including but not limited to deaths and injuries from explosive weapons, whereas AOV measures only deaths and injuries from explosive weapons that are reported in English-language media sources. The narrow focus and methodology of AOV's explosive violence monitor mean that its civilian death and injury figures are significantly lower than the overall figures published by OHCHR.

### UN OHCHR

Figures attributed to OHCHR were provided by the OHCHR Yemen County Office. OHCHR has a team of trained human rights officers and field monitors located in almost all the conflict affected areas in Yemen. It gathers information on violations of human rights and international humanitarian law from medical and police reports, and by interviewing victims and their families, eyewitnesses and government officials.<sup>59</sup>

### AOV

AOV uses an incident-based methodology adapted from the Robin Coupland and Nathan Taback model.<sup>60</sup> Data on explosive violence incidents is gathered from English-language media reports on the following factors: the date, time, and location of the incident; the number and circumstances of people killed and injured; the weapon type; the reported user and target; the detonation method and whether displacement or damage to the location was reported. AOV does not attempt to comprehensively capture all incidents of explosive violence around the world but to serve as a useful indicator of the scale and pattern of harm. **No claims are made that this data captures every incident, death or injury of explosive violence in Yemen between 1 January and 31 July 2015.**

### SOURCES

AOV uses a wide range of English-language news sources, many of which are translated by the publisher. When there are multiple sources for the same incident, those which provide the most detail or most recent casualty information are selected.

At least one death or injury from the active use of an explosive weapon must be reported in order for an incident to be recorded. Incidents with no clear date or which merely give a location as a country are excluded, as are incidents which occur over a period of more than 24 hours (e.g. 150 people killed by shelling over the last week). Death and injury numbers must be clearly stated; reports which only describe 'several' or 'numerous' for example cannot be recorded.

### LIMITATIONS

AOV's methodology is dependent on the detail level provided by its source material, and lacks any mechanism to follow up reports with on-the-ground investigation. It is recognised that there are very different levels of reporting according to access conditions on the ground so that under-reporting is likely in some contexts. In addition, only English-language media reports are used, which does not provide a comprehensive picture of definitive explosive weapon use.

The methodology is designed to capture distinct incidents of explosive violence with a clear date and location. In some contexts of explosive violence, particularly during intense armed conflict, casualties cannot be assigned to specific incidents but a total number is reported as the result of a period of days. These casualties cannot be included in the dataset. As the methodology relies on reports which are filed shortly after an incident took place, there is no mechanism for assessing whether people reported as wounded in the immediate aftermath of an incident subsequently died from their injuries. This is another factor that should be assessed when considering the likelihood that the actual numbers of fatalities of explosive violence are higher than the numbers recorded by AOV. There is no systematic baseline for determining what constitutes an injury, and AOV is therefore subject to the assessment of the news source.

AOV is focused on capturing the harm caused by explosive weapons at the time of use. Explosive weapons that fail to explode as intended can linger in the form of explosive remnants of war (ERW) for years, if not decades, to come. This dataset does not include deaths or injuries caused by landmines or explosive remnants of war (ERW).



## NOTES

- 1 “Protocol on Prohibitions or Restrictions on the Use of Incendiary Weapons (Protocol III),” to the UN Convention on Certain Conventional Weapons, Geneva, 10 October 1980, [www.icrc.org/ihl.nsf/FULL/515](http://www.icrc.org/ihl.nsf/FULL/515) (accessed 18 March 2013).
- 2 Information taken from, “Yemen profile- Timeline,” BBC, 16 June 2015, [www.bbc.co.uk/news/world-middle-east-14704951](http://www.bbc.co.uk/news/world-middle-east-14704951) (last accessed 28 August 2015); “Yemen – who’s who?,” IRIN, 3 April 2015, [www.irinnews.org/report/101319/yemen-who-s-who](http://www.irinnews.org/report/101319/yemen-who-s-who) (last accessed 28 August 2015); and “Q&A on The Conflict in Yemen and International Law,” Human Rights Watch, 6 April 2015, <https://www.hrw.org/news/2015/04/06/q-conflict-yemen-and-international-law> (last accessed 28 August 2015).
- 3 United Nations Office for the Coordination of Humanitarian Affairs (UN OCHA), “Crisis Overview,” [www.unocha.org/yemen/crisis-overview](http://www.unocha.org/yemen/crisis-overview) (last accessed 28 August 2015).
- 4 Figures provided by the United Nations OHCHR Yemen Country Office. The OHCHR Yemen County Office has a team of trained human rights officers and field monitors located in almost all the conflict affected areas in Yemen. The monitoring team gathers information on violations of International Human Rights and Humanitarian Law, with a special focus on the targeting of civilians and civilians infrastructure perpetrated by the warring parties. The OHCHR Monitoring Team gathers information on human rights violations through interviewing victims and their families, eyewitness, government official, and getting medical and police reports. For more information see Methodology.
- 5 United Nations Office for the Coordination of Humanitarian Affairs (UN OCHA), “Crisis Overview,” [www.unocha.org/yemen/crisis-overview](http://www.unocha.org/yemen/crisis-overview) (last accessed 28 August 2015).
- 6 For more information see, International Network on Explosive Weapons (INEW) “A Commitment to Act,” 23 June 2015, [www.inew.org/news/a-commitment-to-act-new-inew-briefing-booklet](http://www.inew.org/news/a-commitment-to-act-new-inew-briefing-booklet), and International Committee of the Red Cross, “Explosive weapons in populated areas: The consequences for civilians,” 15 June 2015, <https://www.icrc.org/en/document/explosive-weapons-populated-areas-consequences-civilians> (last accessed on 28 August 2015).
- 7 Report of the Secretary-General on the protection of civilians in armed conflict,” 18 June 2015, S/2015/453, [www.un.org/en/ga/search/view\\_doc.asp?symbol=S/2015/453](http://www.un.org/en/ga/search/view_doc.asp?symbol=S/2015/453) para. 34.
- 8 For more information, see OCHA, “Explosive weapons in populated areas,” [www.unocha.org/what-we-do/explosive-weapons-populated-areas](http://www.unocha.org/what-we-do/explosive-weapons-populated-areas) (last accessed 28 August 2015).
- 9 See, for example, United Nations Security Council, “Report of the Secretary-General on the protection of civilians in armed conflict,” 29 May 2009, S/2009/277, [www.un.org/en/ga/search/view\\_doc.asp?symbol=S/2009/277](http://www.un.org/en/ga/search/view_doc.asp?symbol=S/2009/277), para. 36 (last accessed 28 August 2015); Report of the Secretary-General on the protection of civilians in armed conflict,” 18 June 2015, S/2015/453, [www.un.org/en/ga/search/view\\_doc.asp?symbol=S/2015/453](http://www.un.org/en/ga/search/view_doc.asp?symbol=S/2015/453), paras 30-36, 63-65.
- 10 For the full list of Member States who have spoken out on this issue, see International Network on Explosive Weapons (INEW), “Acknowledging the Harm,” [www.inew.org/acknowledgements](http://www.inew.org/acknowledgements) (last accessed 28 August 2015).
- 11 Mona Mahmood and Kareem Shaheen, “‘You can find nothing in the city now’: Yemen reels after month-long air strikes,” *The Guardian*, 23 April 2015, [www.theguardian.com/world/2015/apr/23/now-we-all-curse-the-saudis-yemen-reels-in-face-of-month-long-air-strikes](http://www.theguardian.com/world/2015/apr/23/now-we-all-curse-the-saudis-yemen-reels-in-face-of-month-long-air-strikes) (last accessed 4 September 2015).
- 12 AOAV defines an explosive violence incident as any use of explosive weapons that caused at least one death or injury at the time of use, and which took place within a given 24-hour period, with a specified geographical location.
- 13 AOAV recorded 4,486 civilian deaths and injuries in Yemen between January and July 2015. The next most-affected countries in this time period were Syria (4,205 civilian deaths and injuries), Iraq (3,327), and Nigeria (1,640).
- 14 A death or injury from explosive violence was recorded in every governorate except for Al-Mahwit, al-Maharah and Socotra. The administrative district of Aminat al-Asimah has been included as part of Sana’a governorate for the purposes of data collection. See map for further details.
- 15 World Health Organization, “Statement on the situation in Yemen,” 27 May 2015, [www.who.int/mediacentre/news/statements/2015/yemen-situation/en/](http://www.who.int/mediacentre/news/statements/2015/yemen-situation/en/) (last accessed 4 September 2015).
- 16 This includes the use of cluster munitions, weapons which were banned by the international community in 2008 under the Convention on Cluster Munitions. The use of aerial cluster munitions in Yemen has been reported by Human Rights Watch after on the ground investigations. Ground-launched cluster munitions have also been documented, but it is not known who was responsible. For more information see: “Yemen: Cluster Munitions Harm Civilians,” 31 May 2015, <https://www.hrw.org/news/2015/05/31/yemen-cluster-munitions-harm-civilians>; and “Yemen: Cluster Munition Rockets Kill, Injure Dozens,” 26 August 2015, <https://www.hrw.org/news/2015/08/26/yemen-cluster-munition-rockets-kill-injure-dozens> (last accessed on 28 August 2015).
- 17 In addition, AOAV recorded a further eight air strikes in Yemen during this time period, seven carried out reportedly by US drone strikes, and one from unknown forces. No civilian casualties were recorded in these eight incidents.
- 18 Joe Dyke, “Yemen camp bombing – what you need to know,” IRIN, 30 March 2015, [www.irinnews.org/report/101295/yemen-camp-bombing-what-you-need-to-know](http://www.irinnews.org/report/101295/yemen-camp-bombing-what-you-need-to-know) (last accessed 16 September 2015); Human Rights Watch, “Yemen: Coalition Strikes on Residence Apparent War Crimes,” 27 July 2015, <https://www.hrw.org/news/2015/07/27/yemen-coalition-strikes-residence-apparent-war-crime> (last accessed 16 September 2015).
- 19 Mohammed Ali Kalfood and Kareem Fahim, “At Least 25 Die as Airstrike Sets Off Huge Blast in Yemen,” *The New York Times*, 20 April 2015, [www.nytimes.com/2015/04/21/world/middleeast/sana-yemen-explosion.html](http://www.nytimes.com/2015/04/21/world/middleeast/sana-yemen-explosion.html) (last accessed 28 August 2015).

- 20 Osamah al-Fakih, "Sanaa diary: An explosion like an earthquake," *al-Araby al-Jadeed*, 29 April 2015, [www.alaraby.co.uk/english/blog/2015/4/29/sanaa-diary-an-explosion-like-an-earthquake](http://www.alaraby.co.uk/english/blog/2015/4/29/sanaa-diary-an-explosion-like-an-earthquake) (last accessed 28 August 2015).
- 21 "Dozens killed as large explosion rocks Yemeni capital," *Al Jazeera*, 21 April 2015, [www.aljazeera.com/news/2015/04/yemen-sanaa-explosions-150420090515770.html](http://www.aljazeera.com/news/2015/04/yemen-sanaa-explosions-150420090515770.html) (last accessed 28 August 2015).
- 22 "Air strike on missile base in Yemen capital kills 25, wounds hundreds," *Reuters*, 20 April 2015, [www.reuters.com/article/2015/04/20/us-yemen-security-idUSKBN0NB0R820150420](http://www.reuters.com/article/2015/04/20/us-yemen-security-idUSKBN0NB0R820150420) (last accessed 28 August 2015).
- 23 Mohammed Ali Kalfood and Kareem Fahim, "At Least 25 Die as Airstrike Sets Off Huge Blast in Yemen," *The New York Times*, 20 April 2015, [www.nytimes.com/2015/04/21/world/middleeast/sana-yemen-explosion.html](http://www.nytimes.com/2015/04/21/world/middleeast/sana-yemen-explosion.html) (last accessed 28 August 2015).
- 24 "Air strikes in Yemen damage homes," *The Associated Press*, posted by *The Guardian*, 20 April 2015, [www.theguardian.com/world/2015/apr/20/yemen-sanaa-air-strike-homes-damage-saudi-coalition](http://www.theguardian.com/world/2015/apr/20/yemen-sanaa-air-strike-homes-damage-saudi-coalition) (last accessed 28 August 2015); "At least 40 killed in violence attacks on Sana'a," *Yemen Times*, 21 April 2015, [www.yementimes.com/en/1875/news/5055/At-least-40-killed-in-violent-attacks-on-Sana%E2%80%99a.htm](http://www.yementimes.com/en/1875/news/5055/At-least-40-killed-in-violent-attacks-on-Sana%E2%80%99a.htm) (last accessed 28 August 2015).
- 25 Osamah al-Fakih, "Sanaa diary: An explosion like an earthquake," *al-Araby al-Jadeed*, 29 April 2015, [www.alaraby.co.uk/english/blog/2015/4/29/sanaa-diary-an-explosion-like-an-earthquake](http://www.alaraby.co.uk/english/blog/2015/4/29/sanaa-diary-an-explosion-like-an-earthquake) (last accessed 28 August 2015).
- 26 "Yemen: ICRC delivers aid, urges parties to minimize civilian casualties," International Committee of the Red Cross, 25 June 2015, <https://www.icrc.org/en/document/yemen-icrc-delivers-aid-urges-parties-minimize-civilian-casualties> (last accessed 3 September 2015).
- 27 United Nations Institute for Training and Research (UNITAR), "Damage Assessment of Sana'a City, Sana'a Governorate, Yemen," published 3 June 2015, [www.unitar.org/unosat/node/44/2220?utm\\_source=unosat-unitar&utm\\_medium=rss&utm\\_campaign=maps](http://www.unitar.org/unosat/node/44/2220?utm_source=unosat-unitar&utm_medium=rss&utm_campaign=maps) (last accessed 28 August 2015).
- 28 Amnesty International, "Nowhere Safe for Civilians: Airstrikes and Ground Attacks in Yemen," 18 August 2015, [https://www.amnesty.nl/sites/default/files/public/nowhere\\_safe\\_for\\_civilians\\_-\\_taiz\\_aden\\_report.pdf](https://www.amnesty.nl/sites/default/files/public/nowhere_safe_for_civilians_-_taiz_aden_report.pdf) (last accessed 28 August 2015).
- 29 Adam Hassan Omar, speaking to Amnesty International, "Nowhere Safe for Civilians: Airstrikes and Ground Attacks in Yemen," 18 August 2015, [https://www.amnesty.nl/sites/default/files/public/nowhere\\_safe\\_for\\_civilians\\_-\\_taiz\\_aden\\_report.pdf](https://www.amnesty.nl/sites/default/files/public/nowhere_safe_for_civilians_-_taiz_aden_report.pdf) (last accessed 28 August 2015).
- 30 Amnesty International, "Nowhere Safe for Civilians: Airstrikes and Ground Attacks in Yemen," 18 August 2015, [https://www.amnesty.nl/sites/default/files/public/nowhere\\_safe\\_for\\_civilians\\_-\\_taiz\\_aden\\_report.pdf](https://www.amnesty.nl/sites/default/files/public/nowhere_safe_for_civilians_-_taiz_aden_report.pdf) (last accessed 28 August 2015).
- 31 Medecins Sans Frontieres (MSF), "Yemen: Hundreds Wounded in Attacks on Markets and Residential areas," 6 July 2015, [www.doctorswithoutborders.org/article/yemen-hundreds-wounded-attacks-markets-and-residential-areas](http://www.doctorswithoutborders.org/article/yemen-hundreds-wounded-attacks-markets-and-residential-areas) (last accessed 28 August 2015).
- 32 Medecins Sans Frontieres (MSF), "Yemen: Hundreds Wounded in Attacks on Markets and Residential areas," 6 July 2015, [www.doctorswithoutborders.org/article/yemen-hundreds-wounded-attacks-markets-and-residential-areas](http://www.doctorswithoutborders.org/article/yemen-hundreds-wounded-attacks-markets-and-residential-areas) (last accessed 28 August 2015).
- 33 See for example, "Shelling kills three at Yemen's Aden airport," *Albawaba*, 16 July 2015, [www.albawaba.com/news/rebel-shelling-kills-three-yemen%E2%80%99s-aden-airport-720330](http://www.albawaba.com/news/rebel-shelling-kills-three-yemen%E2%80%99s-aden-airport-720330) (last accessed 25 August 2015).
- 34 "Yemen's Houthis kill 31 civilians in Aden," *Middle East Eye*, 2 July 2015, [www.middleeasteye.net/news/yemens-houthi-kill-31-civilians-aden-1257637125](http://www.middleeasteye.net/news/yemens-houthi-kill-31-civilians-aden-1257637125) (last accessed 25 August 2015); Ahmed Al-Haj, "Rebel rocket attacks in Yemen's southern city of Aden kills 18 civilians, 13 opposition fighters," *The Associated Press*, posted by *The Hamilton Spectator*, 01 July 2015, <http://www.thespec.com/news-story/5704463-rebel-rocket-attacks-in-yemen-s-southern-city-of-aden-kill-18-civilians-13-opposition-fighters/> (last accessed 25 August 2015).
- 35 Human Rights Watch, "Yemen: Houthi Artillery Kills Dozens in Aden," 29 July 2015, <https://www.hrw.org/news/2015/07/29/yemen-houthi-artillery-kills-dozens-aden> (last accessed 25 August 2015).
- 36 Ahmed Al-Haj, "Rebel rocket attacks in Yemen's southern city of Aden kills 18 civilians, 13 opposition fighters," *The Associated Press*, posted by *The Hamilton Spectator*, 01 July 2015, <http://www.thespec.com/news-story/5704463-rebel-rocket-attacks-in-yemen-s-southern-city-of-aden-kill-18-civilians-13-opposition-fighters/> (last accessed 25 August 2015).
- 37 Amnesty International, "Nowhere Safe for Civilians: Airstrikes and Ground Attacks in Yemen," 18 August 2015, [https://www.amnesty.nl/sites/default/files/public/nowhere\\_safe\\_for\\_civilians\\_-\\_taiz\\_aden\\_report.pdf](https://www.amnesty.nl/sites/default/files/public/nowhere_safe_for_civilians_-_taiz_aden_report.pdf) (last accessed 28 August 2015).
- 38 Amnesty International, "Nowhere Safe for Civilians: Airstrikes and Ground Attacks in Yemen," 18 August 2015, [https://www.amnesty.nl/sites/default/files/public/nowhere\\_safe\\_for\\_civilians\\_-\\_taiz\\_aden\\_report.pdf](https://www.amnesty.nl/sites/default/files/public/nowhere_safe_for_civilians_-_taiz_aden_report.pdf) (last accessed 28 August 2015).
- 39 Amnesty International, "Nowhere Safe for Civilians: Airstrikes and Ground Attacks in Yemen," 18 August 2015, [https://www.amnesty.nl/sites/default/files/public/nowhere\\_safe\\_for\\_civilians\\_-\\_taiz\\_aden\\_report.pdf](https://www.amnesty.nl/sites/default/files/public/nowhere_safe_for_civilians_-_taiz_aden_report.pdf) (last accessed 28 August 2015).
- 40 Amnesty International, "Nowhere Safe for Civilians: Airstrikes and Ground Attacks in Yemen," 18 August 2015, [https://www.amnesty.nl/sites/default/files/public/nowhere\\_safe\\_for\\_civilians\\_-\\_taiz\\_aden\\_report.pdf](https://www.amnesty.nl/sites/default/files/public/nowhere_safe_for_civilians_-_taiz_aden_report.pdf) (last accessed 28 August 2015).
- 41 Human Rights Watch, "Yemen: Houthi Artillery Kills Dozens in Aden," 29 July 2015, <https://www.hrw.org/news/2015/07/29/yemen-houthi-artillery-kills-dozens-aden> (last accessed 27 August 2015). Amnesty International, "Nowhere Safe for Civilians: Airstrikes and Ground Attacks in Yemen," 18 August 2015, [https://www.amnesty.nl/sites/default/files/public/nowhere\\_safe\\_for\\_civilians\\_-\\_taiz\\_aden\\_report.pdf](https://www.amnesty.nl/sites/default/files/public/nowhere_safe_for_civilians_-_taiz_aden_report.pdf) (last accessed 28 August 2015).

- 42 Amnesty International, "Nowhere Safe for Civilians: Airstrikes and Ground Attacks in Yemen," 18 August 2015, [https://www.amnesty.nl/sites/default/files/public/nowhere\\_safe\\_for\\_civilians\\_-\\_taiz\\_aden\\_report.pdf](https://www.amnesty.nl/sites/default/files/public/nowhere_safe_for_civilians_-_taiz_aden_report.pdf) (last accessed 28 August 2015).
- 43 Amnesty International, "Nowhere Safe for Civilians: Airstrikes and Ground Attacks in Yemen," 18 August 2015, [https://www.amnesty.nl/sites/default/files/public/nowhere\\_safe\\_for\\_civilians\\_-\\_taiz\\_aden\\_report.pdf](https://www.amnesty.nl/sites/default/files/public/nowhere_safe_for_civilians_-_taiz_aden_report.pdf) (last accessed 28 August 2015); and Human Rights Watch, "Yemen: Houthi Artillery Kills Dozens in Aden," 29 July 2015, <https://www.hrw.org/news/2015/07/29/yemen-houthi-artillery-kills-dozens-aden> (last accessed 27 August 2015).
- 44 Human Rights Watch, "Yemen: Houthi Artillery Kills Dozens in Aden," 29 July 2015, <https://www.hrw.org/news/2015/07/29/yemen-houthi-artillery-kills-dozens-aden> (last accessed 27 August 2015).
- 45 Amnesty International, "Nowhere Safe for Civilians: Airstrikes and Ground Attacks in Yemen," 18 August 2015, [https://www.amnesty.nl/sites/default/files/public/nowhere\\_safe\\_for\\_civilians\\_-\\_taiz\\_aden\\_report.pdf](https://www.amnesty.nl/sites/default/files/public/nowhere_safe_for_civilians_-_taiz_aden_report.pdf) (last accessed 28 August 2015).
- 46 OCHA, "Humanitarian Bulletin: Yemen," Issue 2, 14 September 2015, [reliefweb.int/sites/reliefweb.int/files/resources/OCHA%20YEMEN%20HUMANITARIAN%20BULLETIN%20-14%20September.pdf](http://reliefweb.int/sites/reliefweb.int/files/resources/OCHA%20YEMEN%20HUMANITARIAN%20BULLETIN%20-14%20September.pdf) (last accessed 15 September 2015).
- 47 "Shelling kills 32 civilians fleeing Yemen fighting by sea," *AFP*, posted by *Yahoo! News*, 6 May 2015, <http://news.yahoo.com/yemeni-civilians-killed-trying-escape-conflict-sea-135546790.html> (last accessed 25 August 2015); "50 killed as random mortar shells hit refugee camp in Yemen's Aden," *Xinhua*, posted by *ShanghaiDaily*, 6 May 2015, [www.shanghaidaily.com/article/article\\_xinhua.aspx?id=280600](http://www.shanghaidaily.com/article/article_xinhua.aspx?id=280600) (last accessed 25 August 2015).
- 48 "UNHCR calls for respect for civilian life as rocket attack kills 12 refugees sheltering in Aden kindergarten," UNHCR, 7 July 2015, [www.unhcr.org/559bc5119.html](http://www.unhcr.org/559bc5119.html) (last accessed 25 August 2015).
- 49 UNICEF, "Yemen: Childhood Under Threat," August 2015, [www.unicef.org/media/files/CHILD\\_ALERT\\_YEMEN-UNICEF\\_AUG\\_2015\\_ENG\\_FINAL\(1\).pdf](http://www.unicef.org/media/files/CHILD_ALERT_YEMEN-UNICEF_AUG_2015_ENG_FINAL(1).pdf) (last accessed 4 September 2015).
- 50 Ian Black, "Yemen suicide bombings leave over 130 dead after mosques targeted," *The Guardian*, 20 March 2015, [www.theguardian.com/world/2015/mar/20/isis-claims-mosque-suicide-bombing-as-its-first-atrocity-in-yemen](http://www.theguardian.com/world/2015/mar/20/isis-claims-mosque-suicide-bombing-as-its-first-atrocity-in-yemen) (last accessed 9 September 2015).
- 51 "Yemen crisis: More than 100 die in attacks on Sana'a mosques," *BBC*, 20 March 2015, [www.bbc.co.uk/news/world-middle-east-31983627](http://www.bbc.co.uk/news/world-middle-east-31983627) (last accessed 9 September 2015).
- 52 Ian Black, "Yemen suicide bombings leave over 130 dead after mosques targeted," *The Guardian*, 20 March 2015, [www.theguardian.com/world/2015/mar/20/isis-claims-mosque-suicide-bombing-as-its-first-atrocity-in-yemen](http://www.theguardian.com/world/2015/mar/20/isis-claims-mosque-suicide-bombing-as-its-first-atrocity-in-yemen) (last accessed 9 September 2015).
- 53 Bill Roggio, "Islamic State claims suicide attacks in Sana'a mosques," *The Long War Journal*, 20 March 2015, [www.longwarjournal.org/archives/2015/03/islamic-state-claims-suicide-attacks-in-sanaa-mosques.php](http://www.longwarjournal.org/archives/2015/03/islamic-state-claims-suicide-attacks-in-sanaa-mosques.php) (last accessed 9 September 2015).
- 54 "ICRC president says the world must wake up to the suffering in Yemen," International Committee of the Red Cross (ICRC), 11 August 2015, <https://www.icrc.org/en/document/icrc-president-says-world-must-wake-suffering-yemen> (last accessed 3 September 2015).
- 55 OCHA, "Humanitarian Bulletin: Yemen," Issue 2, 14 September 2015, [reliefweb.int/sites/reliefweb.int/files/resources/OCHA%20YEMEN%20HUMANITARIAN%20BULLETIN%20-14%20September.pdf](http://reliefweb.int/sites/reliefweb.int/files/resources/OCHA%20YEMEN%20HUMANITARIAN%20BULLETIN%20-14%20September.pdf) (last accessed 15 September 2015).
- 56 OCHA, "Humanitarian Bulletin: Yemen," Issue 2, 14 September 2015, [reliefweb.int/sites/reliefweb.int/files/resources/OCHA%20YEMEN%20HUMANITARIAN%20BULLETIN%20-14%20September.pdf](http://reliefweb.int/sites/reliefweb.int/files/resources/OCHA%20YEMEN%20HUMANITARIAN%20BULLETIN%20-14%20September.pdf) (last accessed 15 September 2015).
- 57 "Report of the Secretary-General on the protection of civilians in armed conflict," United Nations Security Council, 18 June 2015, paragraphs 30, 63, <http://reliefweb.int/sites/reliefweb.int/files/resources/N1517112.pdf> (last accessed 9 September 2015).
- 58 UN Secretary General's note verbale, ref. OCHA/NV/188/2014
- 59 For more information see <http://www2.ohchr.org/english/>
- 60 For more information see [www.insecurityinsight.org](http://www.insecurityinsight.org)

## **CONTACT**

---

### **Action on Armed Violence**

5th Floor, Epworth House

25 City Road

London EC1Y 1AA

**T** +44 (0)20 7256 9500

**F** +44 (0)20 7256 9311

**E** [info@aoav.org.uk](mailto:info@aoav.org.uk)

---

**[www.aoav.org.uk](http://www.aoav.org.uk)**