

ACTION ON
ARMED VIOLENCE

AOAV

EXPLOSIVE VIOLENCE MONITOR 2020



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A Syrian refugee camp in Aarsal, Lebanon.

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Introduction

The ICRC remains deeply concerned by the use of explosive weapons with a wide impact area in populated areas. Even when used against military objectives located in populated area, such weapons cause devastating direct and indirect civilian harm. In particular, their use results in unacceptably high levels of civilian casualties and destruction, directly caused by the weapons' blast and fragmentation effects. Our first-hand experience shows that it also causes significant indirect (or reverberating) effects such as disruptions in the water and electricity supply, health care and other services essential to the survival of the civilian population. Bombing and shelling cities displaces people and causes major setbacks to the achievement of the Sustainable Development Goals. This grave pattern of harm cannot simply be accepted as a normal and inevitable consequence of war.

Ms. Véronique Christory, Senior Arms Control Adviser, ICRC New York.
Statement to the 75th Session of the United Nations General Assembly, First Committee: General debate on all disarmament and international security agenda items, 20 Oct 2020.¹

In this report Action on Armed Violence (AOAV) presents the findings from the tenth consecutive year of the Explosive Violence Monitoring Project (EVMP), which records the casualties from explosive weapon use worldwide as reported in English-language media. In 2020, AOAV recorded 18,747 deaths and injuries as a result of the use of explosive weapons around the world. As seen every year for the past decade, civilians continued to bear the burden of this harm: civilians accounted for 11,056 of all explosive violence casualties recorded, or 59%.

For the first time since our Monitor began, Afghanistan was the worst impacted country, as the casualties recorded in Syria continued to fall. Syria saw civilian deaths and injuries from explosive violence decline by 58% in 2020 compared to 2019. While Afghanistan also saw lower levels of civilian harm, compared to 2019, this reduction was smaller, falling by a quarter (25%).

When explosive weapons were used in populated areas, the threat to civilians posed – as with other years – a significant concern. In 2020, 88% of those

reported harmed by explosive weapons in populated areas were civilians. Civilian casualties from explosive weapons in populated areas accounted for 89% of all civilian casualties harmed by explosive weapons in 2020.

These findings reiterate the consistent pattern of harm that AOAV has monitored over the last decade. Over the last ten years, AOAV has found that when explosive weapons were used in populated areas, on average nine in every ten of the deaths and injuries caused were civilians.

While this data highlights the immediate harm to civilians, the use of explosive weapons frequently has lasting impacts that linger far beyond the blast. AOAV and colleagues have sought to highlight some of the reverberating effects of explosive violence harm, which see even greater numbers of civilians affected, with impacts lasting generations.

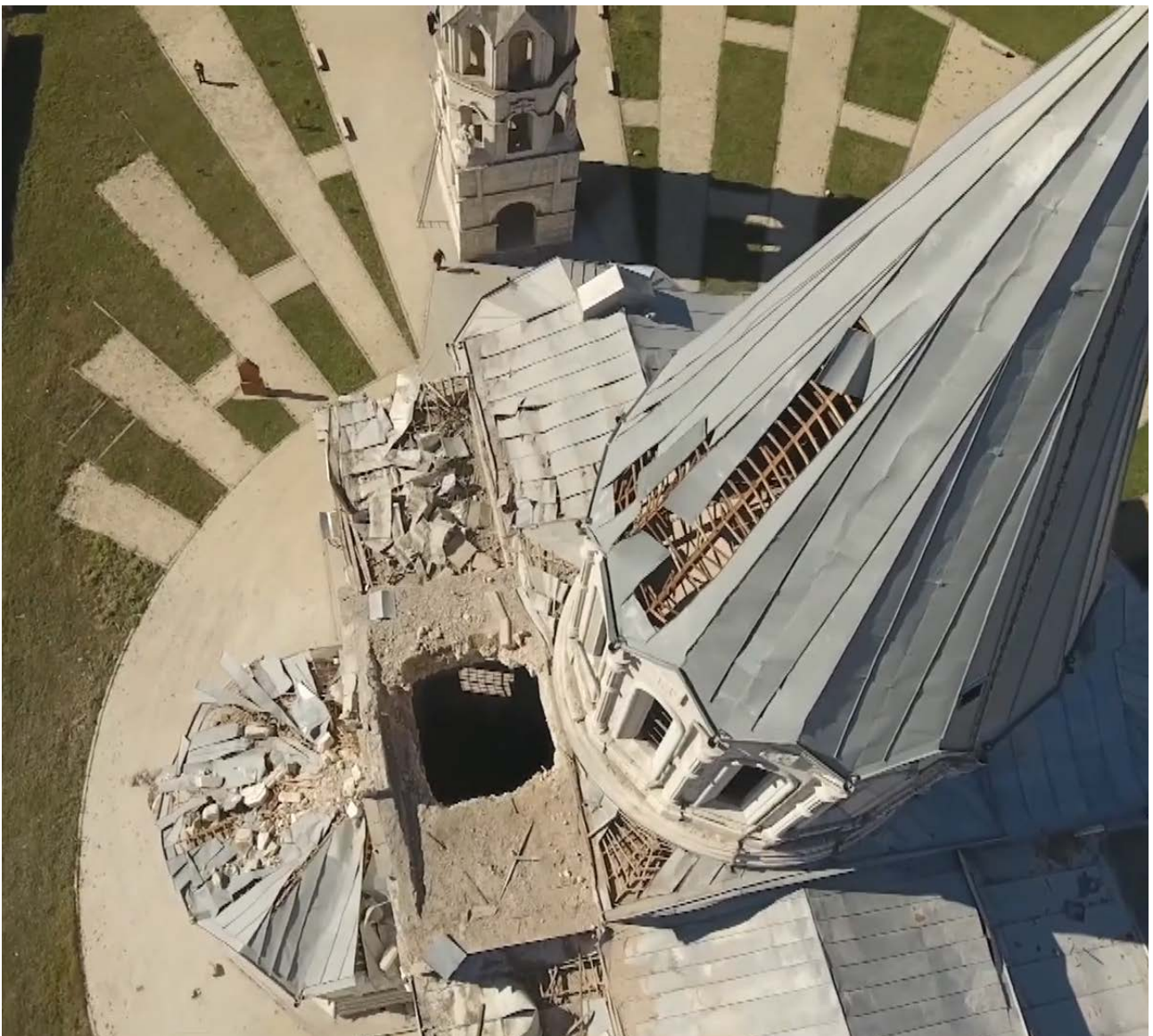
Thousands more civilians are devastated by the impacts of explosive weapons than can possibly be hinted at by our casualty figures. AOAV's data is not

an attempt to capture every casualty of every incident around the world. No claims are made that this sample of data, taken from English-language media reporting, can represent the total impact of explosive weapons on civilians in 2020.

Since the monitor began in 2010, AOA has recorded the appalling suffering caused across the globe by both manufactured and improvised weapons. States and other users must politically commit to stop using explosive weapons with wide area effects in populated areas. The harm recorded in 2020 and reflected in this report illustrates the stark urgency needed to reach this commitment.

Explosive weapons:

Weapons that share common characteristics causing deaths, injuries, and damage by projecting explosive blast, heat and often fragmentation around a point of detonation. These weapons include a variety of munitions such as air-dropped bombs, mortars, improvised explosive devices (IEDs) and artillery shells.



Shusha's historical Ghazanchetsots Cathedral damaged on 8 October 2020 during the 2020 Nagorno-Karabakh conflict, 26 October 2020, ԶԻՆՈՒԺ MEDIA.

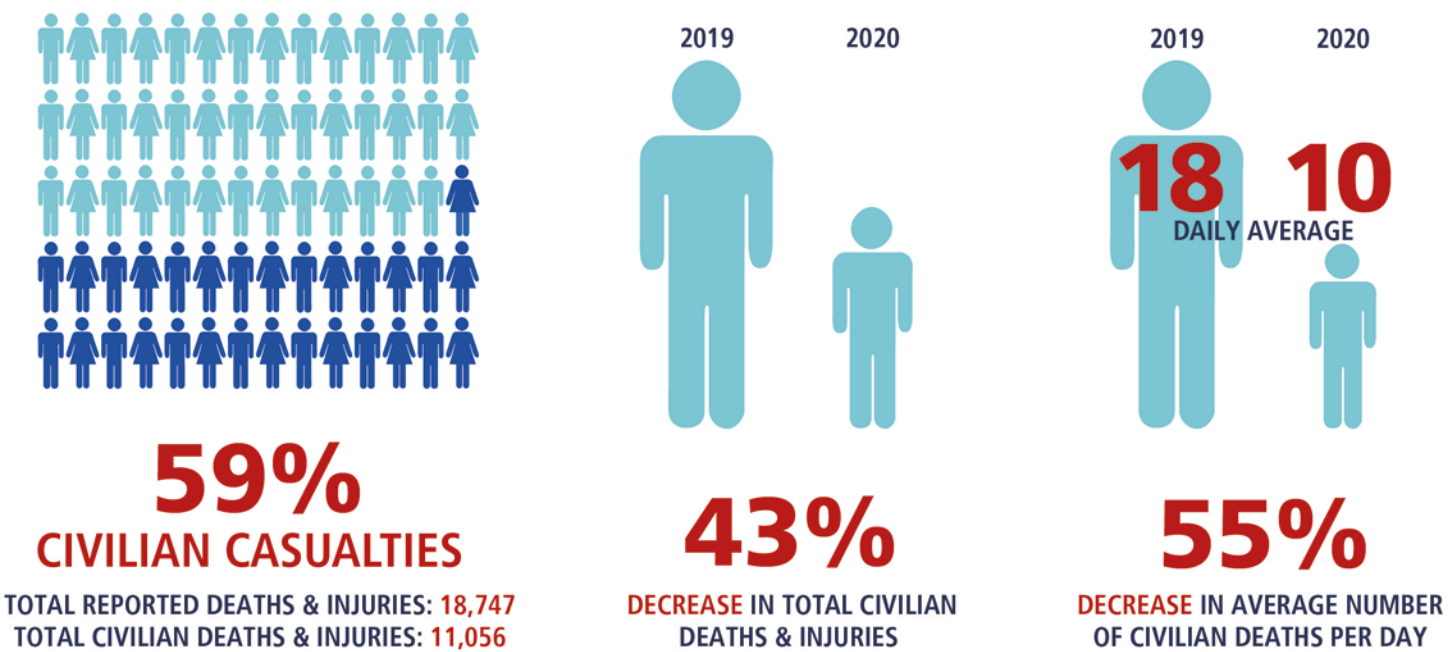
Key findings

OVERVIEW

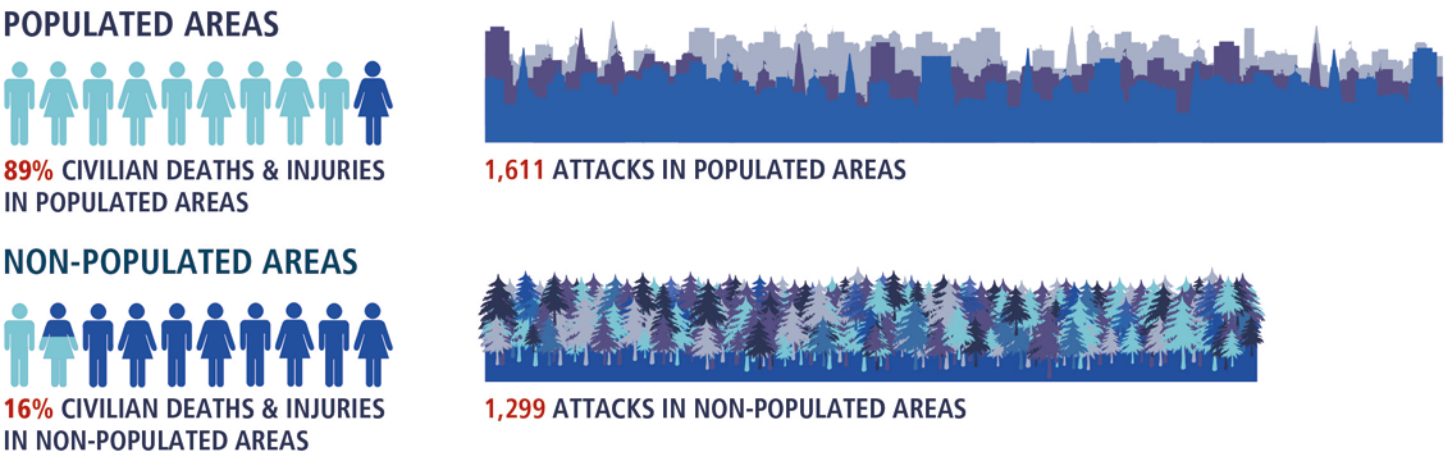
- In total, AOAV recorded 18,747 deaths and injuries by explosive weapons in 2,910 incidents in 2020.
Of these, 11,056 were civilians – 59%.
- In total, 8,165 people were killed (of which 3,668 were civilians), and 10,582 were injured (of which 7,388 were civilians) by explosive weapons globally.
- Civilian deaths and injuries in populated areas represented **89% of all reported civilian deaths and injuries.**
- When explosive weapons were used in populated areas, **88% of those killed and injured were civilians. This compares to 16% in other areas.**
- AOAV recorded **9,880 civilians killed and injured in populated areas.**
- Civilian deaths and injuries from explosive violence saw a decrease of 43% last year, compared to the year before. This means that this is the fifth consecutive year in which AOAV has recorded a drop in civilian casualties.

- Manufactured explosive weapons accounted for at least 6,186 civilian casualties (56%). While improvised explosive devices (IEDs) accounted for at least 4,778 civilian casualties (43%). (A further 92 civilian casualties were caused by incidents using multiple types of launch methods.)
- Air-launched explosive weapons were responsible for **17% of all civilian deaths and injuries**. Ground-launched explosive weapons were responsible **for 34%**. The remaining civilian casualties were caused by incidents using mines (3%), those recorded with an unclear launch method (1%), using multiple types of explosive weapons (<1%) and naval-launched explosives (<1%).
- **Afghanistan, Syria, Pakistan, Yemen and Libya** saw the highest number of **civilian deaths and injuries in 2020** with 3,485, 3,013, 689, 683 and 671 civilian casualties respectively.
- Despite most countries seeing decreases in casualties, the increasing tension in Myanmar, Azerbaijan (over the Nagorno-Karabakh region), Iran and Cameroon led to increases in these countries.
- Incidents were recorded in **48 countries and territories** around the world; twelve less locations than in 2019.

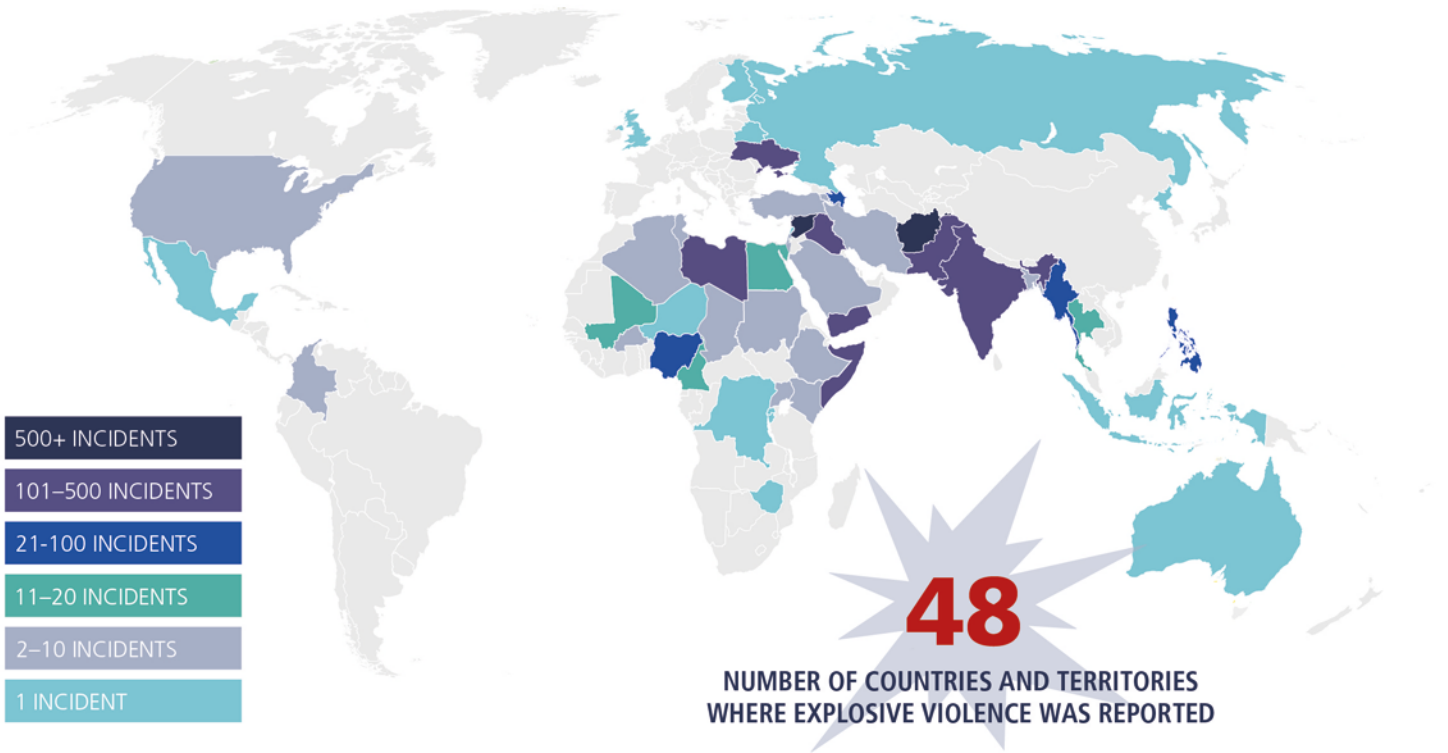
EXPLOSIVE VIOLENCE IN 2020



TARGETED AREAS

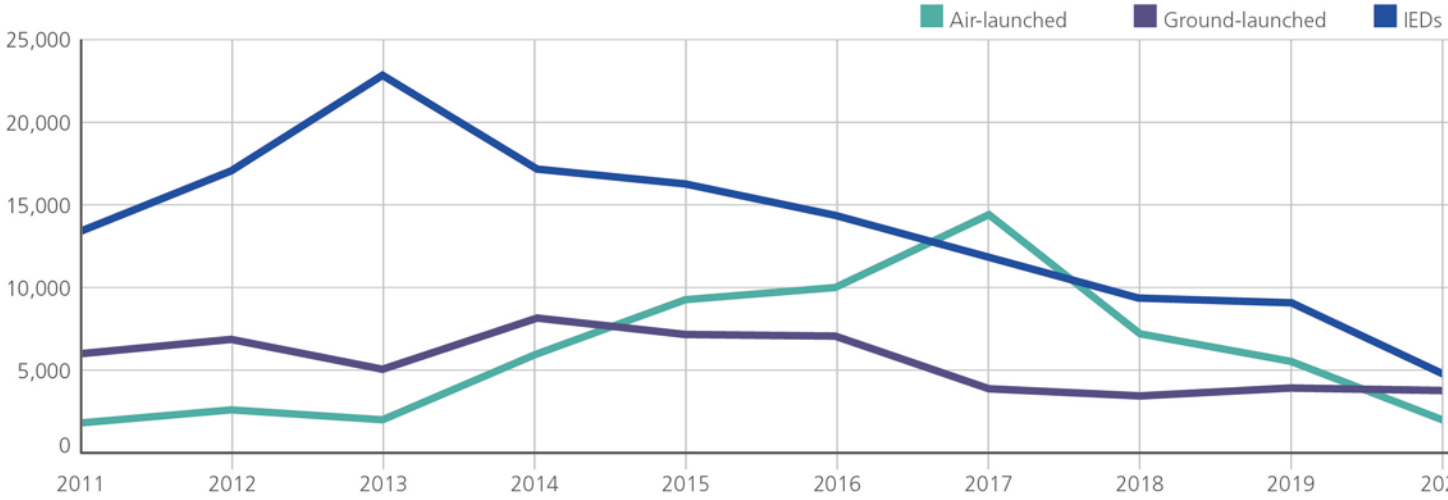


	TOTAL DEATHS & INJURIES	CIVILIAN DEATHS & INJURIES	AVERAGE CIVILIAN DEATHS & INJURIES PER ATTACK
URBAN RESIDENTIAL	2,900	91%	5
VILLAGE	2,405	81%	3
MARKETS	899	91%	15

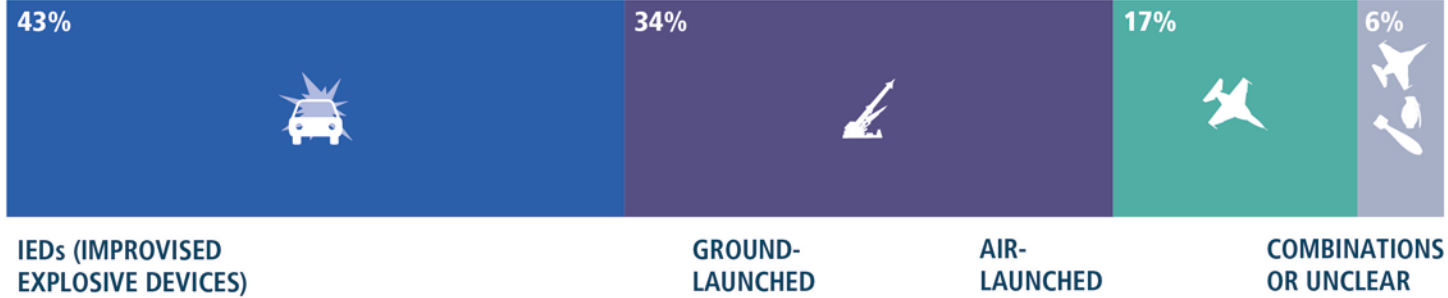


DEADLY WEAPONS

CIVILIAN DEATHS & INJURIES BY AIR-LAUNCHED, GROUND-LAUNCHED AND IEDS, 2011 – 2020



CIVILIAN DEATHS & INJURIES BY WEAPON LAUNCH METHOD



Key terms

CIVILIAN/ARMED ACTOR OR SECURITY PERSONNEL:

Casualties were recorded as ‘armed actors’ only if they were reported as being part of the state military, were members of non-state armed groups, or were security personnel who AOA V considered 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 casualty and took place in a 24-hour period.

POPULATED AREA:

Refers to areas likely to contain concentrations of civilians.²

WIDE-AREA EFFECTS:

Refers to the use of explosive weapons, which result in a large blast and fragmentation radius, lack accurate delivery systems, and/or, use multiple munitions.³

EXPLOSIVE WEAPONS TYPES:

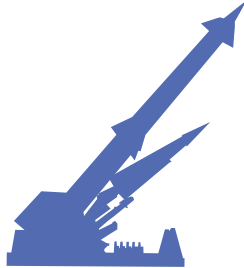
Weapons were classified by AOA V based on consistently-used language in media reporting. The categories used are deliberately broad in order to capture a range of different weapon types in light of considerable variance in the level of detail provided by news sources.

- **Multiple types:** Used to refer to incidents where a combination of different explosive weapon types were used and it was not possible to attribute casualties to each munition. These can involve any combination of air, ground-launched, or improvised explosive devices. The category most commonly includes attacks where ground-launched weapons such as rockets and artillery shells were fired together.
- **Mine:** Refers to incidents where the explosive weapon was described as a mine or landmine. These include both antipersonnel and anti-vehicle mines.⁴

AIR-LAUNCHED:



- **Air strike:** The broadest recording category in this grouping. It refers to incidents where explosive weapons were reported as delivered by drones, planes, helicopters, or other aircraft, and the type of munition fired was not specified in the news source.⁵ Where the munition used is specified in news sources it is recorded as one of the following more specific weapon categories below.
- **Air-dropped bomb:** References to areas being ‘bombed’ by military aircraft were recorded as air-dropped bomb incidents. This can include makeshift manually-deployed bombs, as well as cluster bombs.
- **Missile:** Recorded where explosive missiles delivered by air were reported in a news source, most commonly in drone attacks.⁶
- **Rocket:** Typically used to refer to unguided missiles, rockets were recorded wherever they are specified in a news source.⁷

GROUND-LAUNCHED:

- **Shelling (unspecified):** The broadest recording category in this grouping. It refers to reports of the use of explosive shells that do not specify how they were delivered (e.g. mortars, rockets, artillery, or tanks).
- **Artillery shell:** An explosive projectile fired from a gun, cannon, howitzer or recoilless gun/rifle. This refers to medium and large-calibre munitions primarily designed to fire indirectly. Artillery shells were recorded wherever specified in news sources.
- **Missile:** Recorded where reported in news sources, or where a ground-launched missile type was reported in the incident (e.g. SCUD, MANPAD). Ground-launched missiles can range from shoulder-mounted to ballistic missiles.
- **Rocket:** Recorded where reported in news sources, or where a known ground-launched rocket type was reported in the incident (e.g. Grad, Katyusha).
- **Mortar:** Recorded where reports specified that a mortar bomb was the munition used.⁸
- **Tank shell:** Explosive shells fired by tanks.
- **Grenade:** Recorded where reports indicate grenades deployed an explosive blast and/or fragmentation. Grenades specified as 'homemade' were recorded as IEDs.
- **RPG:** Rocket-propelled grenades. Grenades which are rifle-launched were recorded as grenades rather than RPGs.

IMPROVISED EXPLOSIVE DEVICES (IEDS):

- **Non-specific IED:** The broadest recording category in this grouping. It refers to all IEDs which could not be categorised as either 'roadside bombs' or 'car bombs.'
- **Car bomb:** Incidents where the IED was clearly described as a 'car bomb,' or other vehicles like trucks were used. IEDs which were reported as being attached to vehicles, such as a sticky bomb attached to a politician's car or a remote control IED attached to a bicycle, were recorded as 'Non-specific IEDs.'
- **Roadside bomb:** IEDs which were either specifically reported as 'roadside bombs' or where an IED was reported to be used alongside a road and no further information was provided.

2020 Overview

AOAV recorded **18,747** casualties (people who were killed or injured) by explosive weapons in **2,910** incidents in 2020.

Of the casualties recorded in 2020, **59%** were civilians (**11,056** civilians killed and injured).

This meant there was a **43%** decrease in civilian casualties from explosive violence compared to 2019.

In 2020, AOAV recorded 11,056 civilian deaths and injuries from explosive weapons reported around the world. In total, 8,165 people were killed (of which 3,668 were civilians), and 10,582 were injured (of which 7,388 were civilians) by explosive weapons globally.

In 2020, AOAV recorded a decrease in deaths and injuries from explosive violence recorded around the world. In total, there was a 43% decrease in civilian deaths and injuries. This is the fifth consecutive year in which AOAV has recorded a drop in total civilian casualties. This is likely to reflect the significant fall in casualties in Syria.

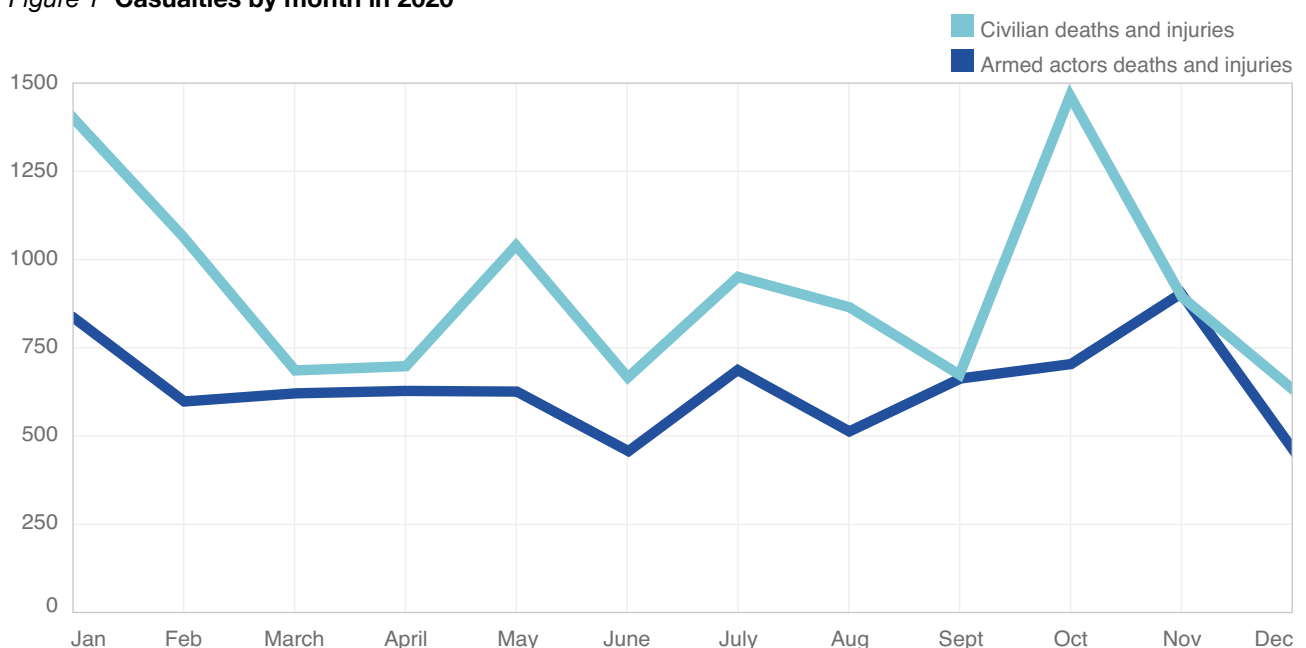
The number of casualties recorded is also likely to have been impacted by the coronavirus pandemic, with other news given less priority and journalistic access made more difficult. This is particularly thought to be the case for conflict in Nagorno-Karabakh and Ethiopia's Tigray region where independent reporting was sporadic and casualty reports often lacked enough detail to be recorded.

Despite this overall decline, civilians continued to account for the majority of casualties from explosive weapon use, accounting for 59% of all recorded deaths and injuries.

Civilians also continued to be far more at risk when explosive weapons were used in populated areas, as has been consistently witnessed over the last decade.⁹

In 2020, 55% of all recorded incidents took place in populated areas. In those attacks, 88% of those killed

Figure 1 Casualties by month in 2020



Worst explosive incidents of 2020 in terms of civilian harm

Incident	Location	Civilian casualties
Iran fires missile at passenger jet over Tehran which is mistaken for a missile ¹⁰	Tehran, Iran	176
Suicide bombing at a funeral in Nangarhar ¹¹	Nangarhar, Afghanistan	155
Shelling hits airport in Aden ¹²	Aden, Yemen	135
Suicide car bomb detonates in Firozkoh ¹³	Ghor, Afghanistan	132
IED detonates in a bag in Jamia Zuberia madressah in Peshawar ¹⁴	Khyber Pakhtunkhwa, Pakistan	118
Car bomb detonates near garages in Al-Bab ¹⁵	Aleppo, Syria	99
Cross-border shelling from Pakistan lands in residential areas in Spin Boldak ¹⁶	Kandahar, Afghanistan	95
Shells land on residential areas in Barda ¹⁷	Barda, Azerbaijan	91
Car bomb explodes at roundabout in village of Siccu ¹⁸	Aleppo, Syria	90
Booby-trapped fuel tanker explodes in Afrin city centre ¹⁹	Aleppo, Syria	90

or injured were reported as civilians. This compares to 16% of deaths and injuries reported as civilians when explosive weapons were used in lesser populated areas.

On average, AOVAV recorded 921 civilian casualties reported every month, compared to an average of 641 armed actors. This means that every day there were on average 30 civilians reported killed or injured by explosive weapons (compared to 21 armed actors).

10 civilians were reported killed on average every day from explosive weapon use in 2020 around the world.

2020 HOTSPOTS

AOAV recorded at least one death or injury from an explosive weapon attack in 48 different countries and territories (see map on page 15),²⁰ twelve less than recorded in 2019.²¹

Casualties from explosive weapons were reported in seven countries and territories in 2020 that had not been impacted in 2019.²²

As *Figure 2* shows, Afghanistan was the country with the most civilian deaths and injuries in 2020 followed by Syria, Pakistan, Yemen and Libya.

Afghanistan

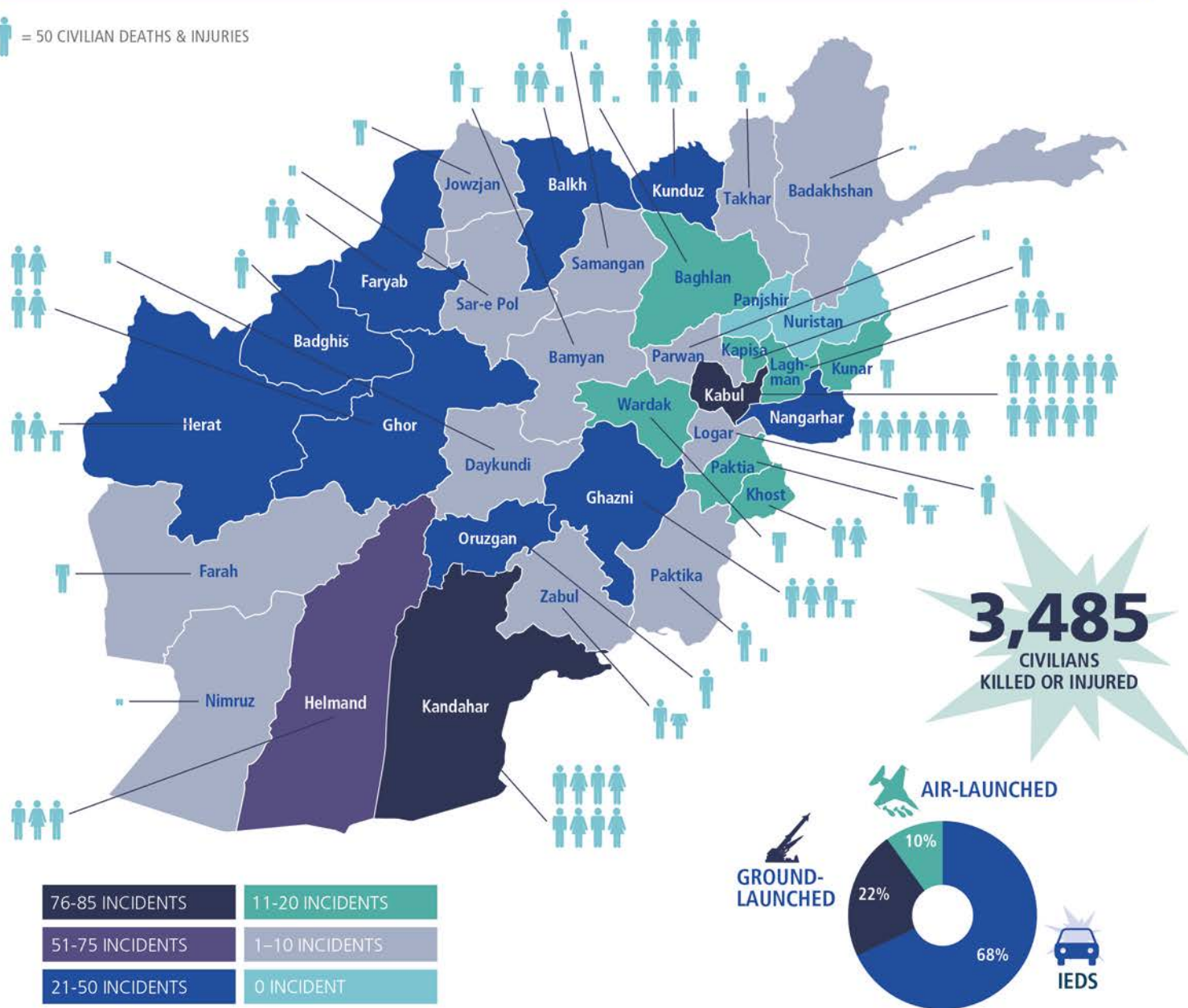
Despite a slight decline in the numbers of casualties from explosive weapons in Afghanistan, from 4,630 civilian deaths and injuries in 2019 to 3,485 in 2020, Afghanistan was the country worst impacted by explosive violence according to civilian casualty totals.

In Afghanistan, IEDs were responsible for the majority of civilian harm, accounting for 68% of civilian casualties in 2020. Though the 2,356 civilian deaths and injuries recorded in Afghanistan from IEDs, represents a 34% decrease in civilian casualties from IEDs compared to the previous year. However there was a 40% increase in civilian casualties from ground-launched explosive weapons, such as shelling and grenade incidents (from 535 civilian casualties in 2019 to 751 in 2020).

The perpetrators of attacks in Afghanistan were frequently unknown with both Islamic State and the Taliban utilising similar attacks across the country and rarely claiming responsibility. At least 606 civilian casualties were caused by explosive incidents carried out by the Taliban and at least 266 in those carried out by Islamic State.

THE HARDEST-HIT PROVINCES IN AFGHANISTAN IN 2020

 = 50 CIVILIAN DEATHS & INJURIES



MONTHLY CASUALTIES OF EXPLOSIVE VIOLENCE IN 2020

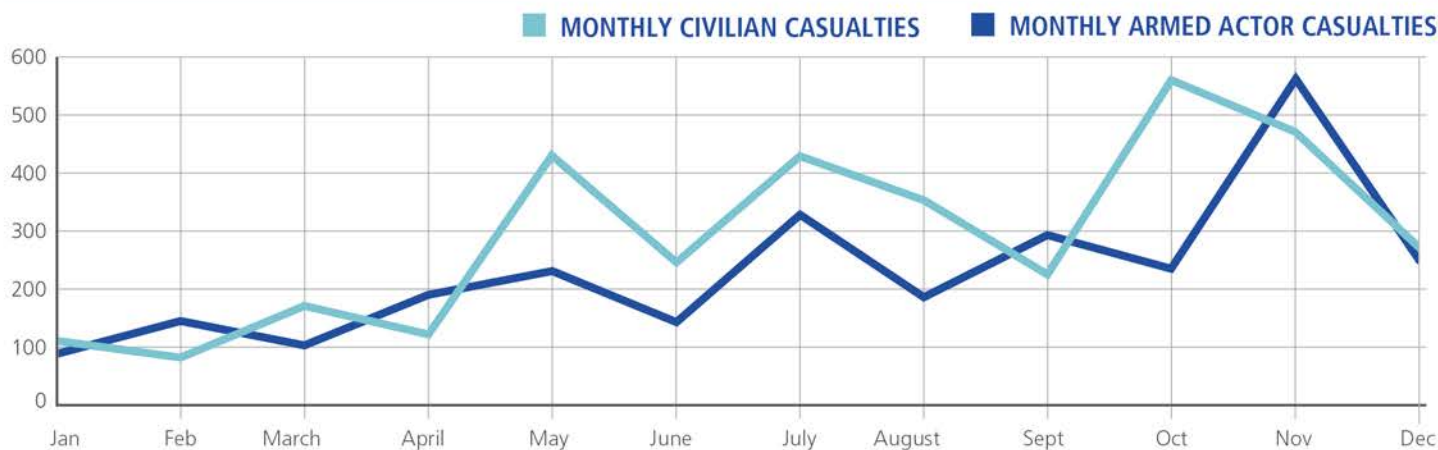


Figure 2 Most affected countries and territories in 2020

Position	Country/ Territory	Civilian casualties	All casualties	Number of recorded incidents per incident	Average civilian casualties civilians	Percentage of casualties who were civilians	Global ranking in 2019
1	Afghanistan	3485	6239	712	5	55%	2
2	Syria	3013	4850	844	4	62%	1
3	Pakistan	689	821	131	5	84%	7
4	Yemen	683	1102	105	7	62%	3
5	Libya	671	882	147	5	76%	5
6	Somalia	471	849	123	4	55%	4
7	Myanmar	366	378	91	4	97%	13
8	Azerbaijan	318	460	42	8	69%	58
9	Iraq	232	869	204	1	27%	8
10	India	193	362	153	1	53%	9
11	Iran	180	181	3	60	99%	56
12	Nigeria	140	297	21	7	47%	11
13	Cameroon	122	138	11	11	88%	24
14	Philippines	97	202	27	4	48%	10
15	Ukraine	53	385	176	<1	14%	18

Syria

In 2020, after consecutive years as the worst impacted country globally from explosive violence, falling levels of explosive violence meant Syria was the second-worst impacted country. AOVAV recorded a 58% decrease in civilian casualties (from 7,256 in 2019 to 3,013 in 2020). The number of incidents recorded also fell; from 1,479 in 2019 to 844 in 2020.

Airstrikes continued to account for the most harm of the main weapon types, resulting in 1,130 civilian casualties, or 37% of total civilian casualties from explosive weapons across the country. Ground-launched weapons caused 584 civilian casualties (19% of total civilian casualties) and IEDs 1,069 (35% of total civilian casualties).

The worst impacted regions remained Idlib and Aleppo. While casualties in Idlib fell, those in Aleppo actually rose slightly. AOVAV recorded 998 civilian casualties from explosive weapons in Idlib in 2020, compared to 3,824

in 2019 (a fall of 75%). In Aleppo, AOVAV recorded 1,287 civilian casualties in 2020, compared to 1,259 in 2019.

Frequently the perpetrators of attacks went unknown. Nevertheless, AOVAV recorded at least 599 civilian casualties from Russian explosive violence and 659 from the Syrian regime use of explosive weapons.

Pakistan

While casualties of explosive violence have continued to fall in Pakistan, a slower rate of decline meant that in 2020 it remained in among the worst impacted countries. Having fallen by 41% between 2018 to 2019 (from 1,215 to 719), last year civilian casualties only fell by 4% (from 719 to 689).

The majority (56%) of civilian casualties from explosive weapons in Pakistan were caused by IEDs, while 42% were caused by ground-launched explosive weapons. A further 19 civilians casualties were caused by landmines.

While the number of civilian casualties caused by IEDs fell (from 502 in 2019 to 384 in 2020), those from ground-launched explosives increased last year, from 179 in 2019 to 286 in 2020. This 60% increase in civilian casualties from ground-launched explosive weapons, represents a rise in the number of grenade incidents last year.

Yemen

Yemen saw 683 civilian casualties from explosive violence last year; a 49% decrease in civilian deaths and injuries compared to the previous year when 1,345 were recorded.

Ground-launched explosives accounted for 63% of total civilian casualties from explosive violence in Yemen; airstrikes accounted for 24% and the remaining 13% were caused by IEDs (2%), mines (5%), weapons with multiple launch methods (5%) and explosives with an unclear launch method (1%).

While the level of ground-launched explosive violence in 2020 was similar to the previous year, the number of incidents and civilian casualties dropped significantly for both airstrikes and IEDs in Yemen.

It is worth bearing in mind that reporting from Yemen has been consistently poor and may have been inhibited by the coronavirus pandemic. Our figures, therefore, may not accurately reflect the true levels of harm.

Libya

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

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

The number of casualties recorded in the second half of 2020 amounted to 15 civilian deaths and injuries. While it seems the levels of violence decreased in this period, it is likely that the pandemic among other factors may have contributed to a lack of casualty reporting in this period.

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

Airstrikes caused 106 civilian casualties in 2020 (a fall of 84% compared 2019) and IEDs caused 5 civilian casualties (a fall of 93%).



Defense Secretary Dr. Mark T. Esper and the President of Afghanistan Ashraf Ghani speak at the U.S.-Afghanistan Joint Declaration Announcement, Feb. 29, 2020. (DoD photo by U.S. Army Staff Sgt. Nicole Mejia).

A GLOBAL PROBLEM

The results of explosive violence continue to be felt across the globe, from Thailand to the United States, from Somalia to Armenia.

Nagorno-Karabakh

Nagorno-Karabakh is a contested area within Azerbaijan, mainly inhabited by Armenians. While there has been low-intensity violence in the region in recent years, the region saw conflict escalate in September 2020, for a period of 6 weeks. Over this time the Azeri forces seized considerable territory in Nagorno-Karabakh and explosive weapons were used by both sides.

As mentioned earlier, the reporting on explosive violence in this conflict frequently lacked sufficient detail to make the incidents recordable, and the conflict in general was characterised by misinformation. Foreign journalists were encouraged to avoid the region due to Azerbaijan's poor record around press freedom, leaving a reliance on partisan sources.²³

It is estimated that 150 civilians and more than 5,000 soldiers were killed in the 6-week period and thousands were displaced.²⁴

AOAV recorded 318 civilian casualties from explosive violence in Azerbaijan in 2020, including the Nagorno-Karabakh region. The majority of these casualties, 284, occurred in the month of October.

While Nagorno-Karabakh saw at least 49 civilian casualties from explosive weapons recorded last year, neighbouring regions were also impacted; with 117 civilian casualties recorded in Barda and 105 in Ganja. This is also likely to reflect the lack of reliable information coming from the Nagorno-Karabakh region.

As I was sipping tea and looking down, [a] blast occurred. From there I don't know what happened.

Mohamud Ahmed told Reuters after sustaining a concussion and wounds from shrapnel after a suicide bomber targeted a restaurant in Mogadishu, Somalia, in November 2020.²⁵

Iran

AOAV recorded 180 civilian casualties from explosive violence in Iran in 2020. These were caused by just two incidents. In one, a landmine explosion left three killed and one injured in western Iran; while in the other, 176 civilian casualties were caused when Iranian defence personnel fired a missile at a passenger jet over Tehran, after it was mistaken for a threat.²⁶

The missile and crash killed 176 civilians – no passengers survived. This incident saw more civilian casualties than any other attack in 2020.

The incident occurred on January 8th 2020, shortly after Iran had carried out attacks on bases in Iraq which housed US military personnel, in response to the United States killing of senior Iranian commander Qasem Soleimani in a drone strike on January 3rd. The heightened tensions between the United States and Tehran were blamed for the incident.

Myanmar

After seeing civilian casualties from explosive violence in Myanmar almost quadruple between 2018 and 2019, last year saw the number double compared to 2019. AOAV recorded 366 civilian casualties from explosive violence in 2020, compared to 176 the previous year.

Of these, 263 (or 72%) occurred in Rakhine state as the conflict in this area grew. A further 73 (20%) were recorded in Chin state.

Ground-launched weapons, frequently artillery shells, were responsible for the majority of the civilian deaths and injuries. Ground-launched explosives accounted for 187 of the civilian casualties, or 51% of total civilian casualties.

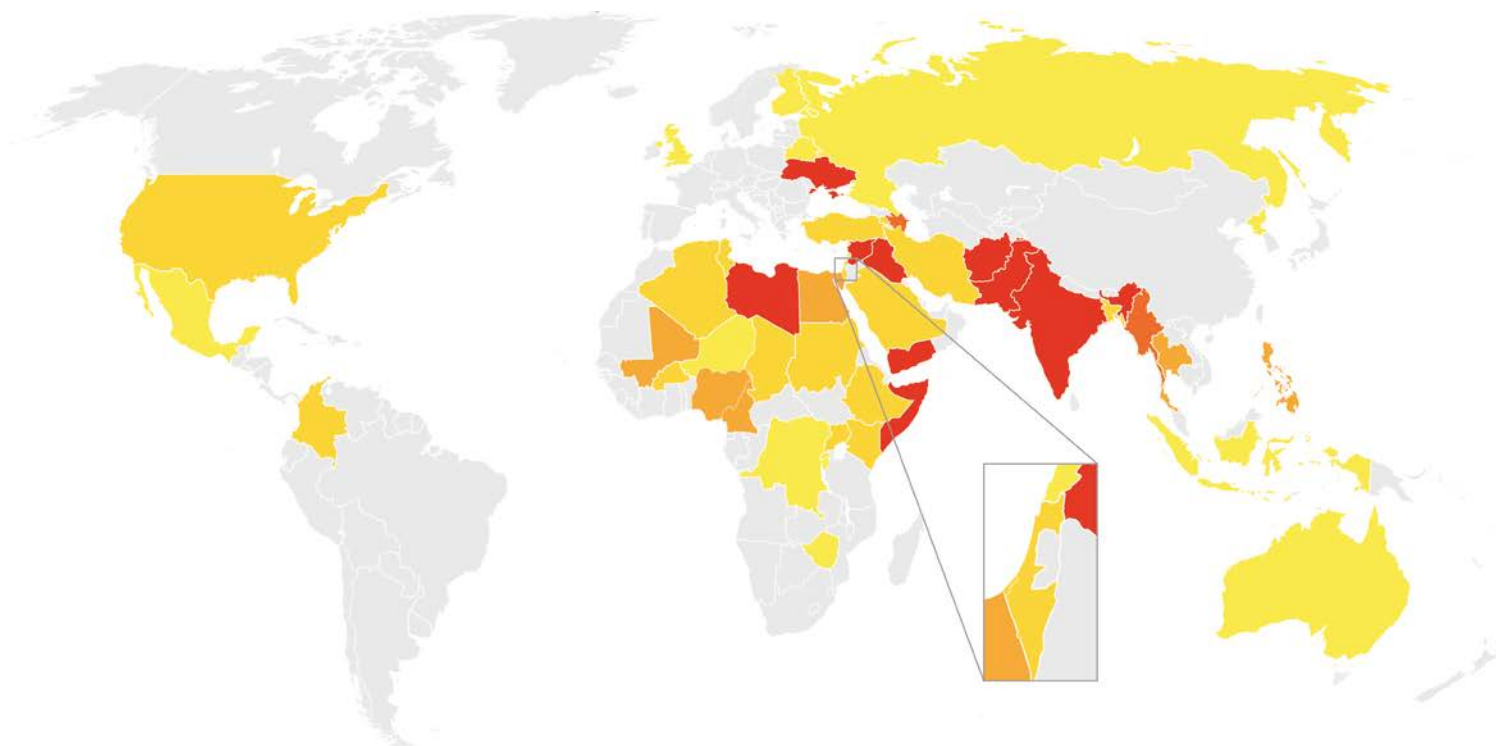
Airstrikes were responsible for 86 civilian casualties (23% of total civilian casualties), mines for 71 (19%) and naval-launched explosives for 22 (6%).

The violence, particularly in Rakhine state, has left many in need of humanitarian assistance. The recent military coup in Myanmar has left the country's minorities in fear of further persecution.

Casualty-causing incidents of explosive violence recorded by AOA in 2020

AOAV recorded explosive violence in 48 countries and territories across the world.

Explosive violence was particularly intense in several contexts.



- **Countries and territories with between 101 and 2,000 incidents**
 Afghanistan 713, India 153, Iraq 204, Libya 147, Pakistan 130, Somalia 123, Syria 844, Ukraine 176, Yemen 105
- **Countries and territories with between 31 and 100 incidents**
 Azerbaijan 42, Myanmar 91
- **Countries with between 11 and 30 incidents**
 Cameroon 11, Egypt 11, Mali 20, Nigeria 21, Philippines 27, Thailand 12
- **Countries with between 2 and 10 incidents**
 Chad 2, Colombia 2, Sudan 2, Tunisia 2, Uganda 2, USA 2, Algeria 3, Iran 3, Israel 3, Kenya 3, Ethiopia 4, Saudi Arabia 4, Armenia 5, Gaza 5, Bangladesh 6, Burkina Faso 8, Turkey 10
- **Countries and territories with 1 incident**
 Australia, Belarus, Burundi, Congo, Finland, Indonesia, Lebanon, Mexico, Niger, North Korea, Russia, Rwanda, UK, Zimbabwe

WHO IS BEHIND THE EXPLOSIVE VIOLENCE?

A significant proportion of explosive violence incidents recorded by AOAV in 2020 went unclaimed and could not be attributed to a specific actor. In 14% of all incidents it was unclear from reporting whether a state or non-state actor was responsible.

State actors

The 880 incidents that were attributed to a state, rather than a non-state group, caused 7,018 deaths and injuries in 2020. Of these 48% (3,347) were civilians. This compares to 12,323 deaths and injuries in 2019, of which 56% (6,733) were civilians. The most prolific state users of explosive weapons are listed in *Figure 3*.

Figure 3 Biggest state users of explosive weapons in 2020

States		
1	Syria	15% of incidents
2	Turkey	11%
3	Afghanistan	10%
4	Russia	9%
5	Pakistan	7%

AOAV recorded 82 incidences of Russian attacks, resulting in 599 civilian deaths as well as 130 by Syrian forces, resulting in 659 civilian casualties. This is a decrease in civilian casualties from both actors from the year before, and is likely to reflect a fall in violence more generally across Syria.

Some of the other states identified as key perpetrators of civilian harm from explosive violence, included



Aerial imagery of flight PS752 wreckage in Tehran Province, Iran. Fars News Agency, 8 January 2020. Wikipedia (cc by 4.0)

Afghanistan, Armenia, Pakistan, the Saudi-led coalition, Iran, India, Turkey and Myanmar.

Twenty-seven different individual state forces used explosive weapons in 2020. This is a slight increase from 2019, where twenty-five states were recorded as perpetrators. However, a further four coalitions carried out incidents using explosive weapons that resulted in casualties: the Multinational Joint Task Force, NATO, the Saudi-led coalition and the US-led coalition. These coalitions often comprise multiple states that carry out attacks under the coalition.

Non-State actors

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

AOAV recorded 25 different non-state actors using explosive weapons.²⁷ The most prolific non-state actors in 2020 are listed in *Figure 4*. In 2020, the Taliban, the reported perpetrators of 130 attacks resulting in death or injury to 606 civilians, accounted for 10% of the total civilian casualties from non-state actors. Haftar forces were responsible for 8% and Islamic State for 6%.

Due to AOAV's methodology, groups which do not routinely claim responsibility for their attacks or which operate in areas where attribution to a specific actor is difficult, may be responsible for more attacks than are recorded. 967 incidents committed by non-state actors were not claimed by any group, out of a total of 1,610 incidents.

Figure 4 Biggest non-state users of explosive weapons in 2020

Non-state		
1	Ukrainian separatists	8% of incidents
2	Taliban	8%
3	Haftar forces	6%
4	Islamic State	6%
5	Al Shabaab	3%

Explosive weapons in populated areas

In 2020, **88%** of casualties in populated areas were reported as civilians. This is compared to **16%** in other areas.

The majority of explosive incidents – **55%** in 2020 – were perpetrated in populated areas.

Civilian deaths and injuries in populated areas represented **89%** of all reported civilian deaths and injuries from explosive weapons.

Despite the likely harm, the majority of explosive incidents – 55% in 2020 – were perpetrated in such areas.

Civilian deaths and injuries in populated areas represented 89% of all reported civilian deaths and injuries from explosive weapons last year, demonstrating the disproportionate effect of explosives deployed in populated areas.

At least 1,611 incidents of explosive violence occurred in populated areas last year. This means fewer incidents occurred in populated areas in 2020, compared to the previous year, when 2,219 were recorded.

LOCATION

RESIDENTIAL

The highest number of civilians killed and injured were from incidents in residential areas or civilian houses. AOA recorded 502 such incidents in 2020.

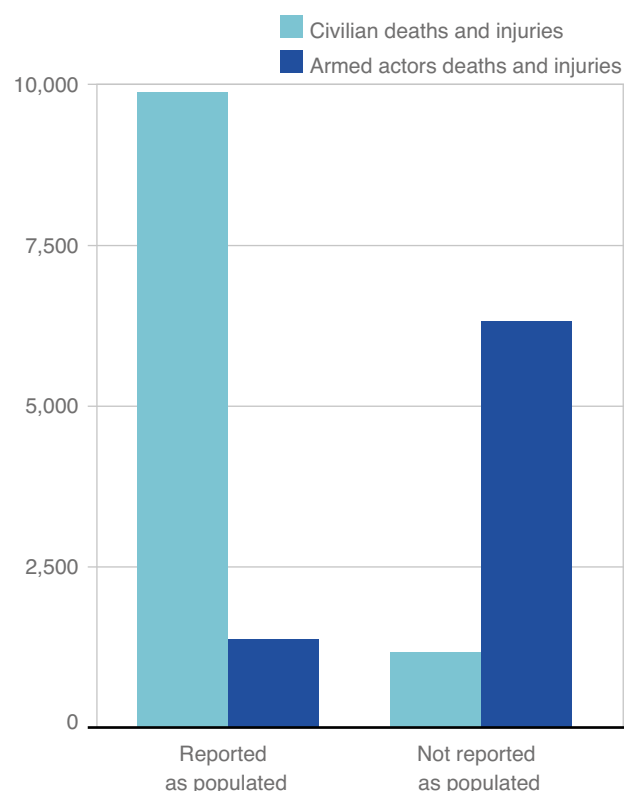
POPULATED AREAS

As Figure 5 shows, in 2020 when explosive weapons were used in populated areas, 88% of the deaths and injuries were reported to be civilians. This compares to 16% in other areas. In total, 9,880 civilians were killed and injured in populated areas.

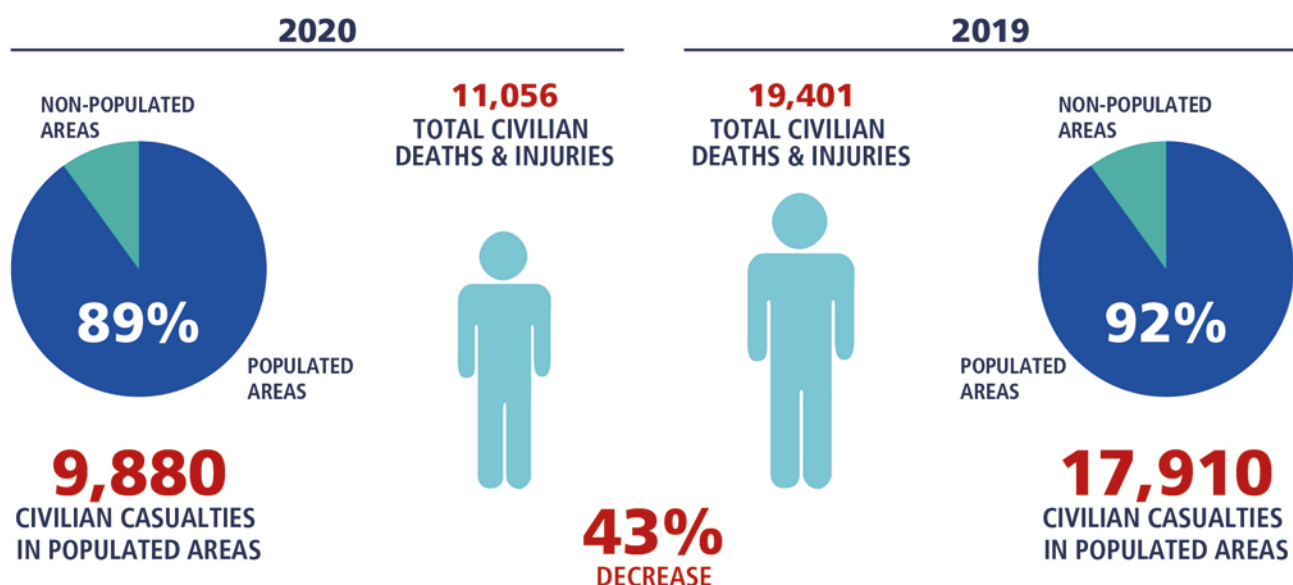
This is consistent with the pattern of harm AOA has persistently recorded since 2011. In every year of AOA's Explosive Weapons Monitoring Project, the use of explosive weapons in populated areas has been shown to overwhelmingly harm civilians. In 2016, 92% of deaths and injuries in populated areas were reported as civilians; in 2017, 2018, 2019 this was 92%, 90% and 90% respectively. Previous years data can be found on AOA's website.

When explosive weapons are used in populated areas, areas likely to contain large numbers of civilians, it is far more likely that civilians will account for most of the casualties. The use of explosive weapons in populated areas is carried out by both state and non-state actors alike, despite the likelihood of civilian casualties.

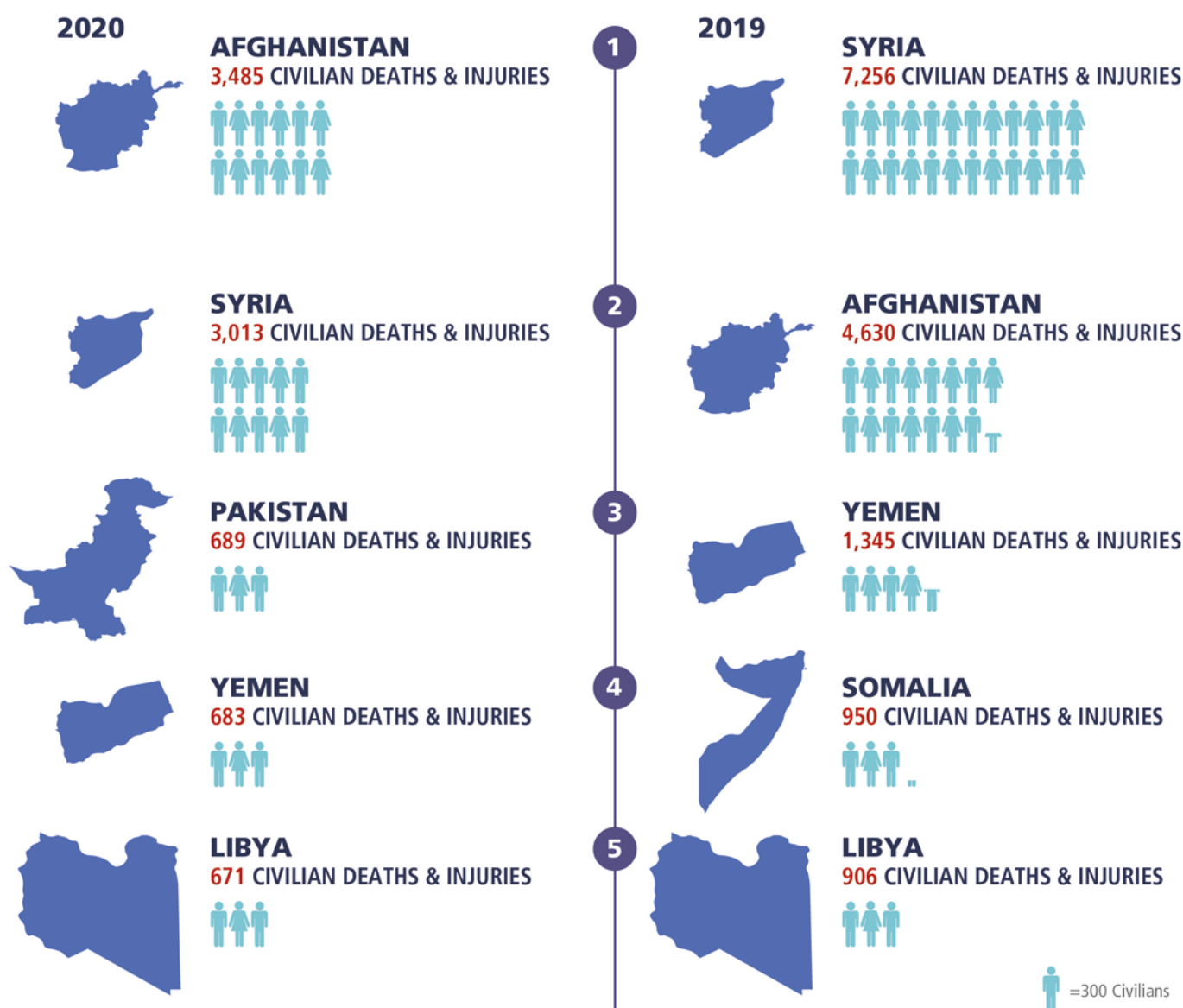
Figure 5 Total casualties by populated area / non-populated area



CIVILIANS KILLED & INJURED: 2019 v 2020



THE MOST DANGEROUS PLACES TO BE A CIVILIAN



These incidents resulted in 2,630 civilian deaths and injuries, a decline of 20% from 2019 when 3,294 civilian casualties were recorded from 646 incidents in such areas.

As in previous years, due to the frequency of bombardment in some areas many incidents in urban areas became categorised under “multiple (urban)”. An additional 88 incidents of explosive violence were recorded in this location, resulting in 840 civilian casualties.

Of the casualties recorded in urban residential areas, ground-launched explosives accounted for 51% of the civilian casualties caused there; IEDs accounted for 28%, and airstrikes for 17%.

VILLAGES

557 incidents were recorded from the use of explosive violence in villages, resulting in 1,945 civilian casualties.

Many of these incidents (211) were perpetrated in Syria, which accounts for 36% of the civilian casualties from explosive weapon use in villages, followed by Afghanistan, Myanmar and Pakistan.

In villages, 36% of civilian casualties were caused by ground-launched explosives, 30% from airstrikes, 26% from IEDs and 7% from landmines.

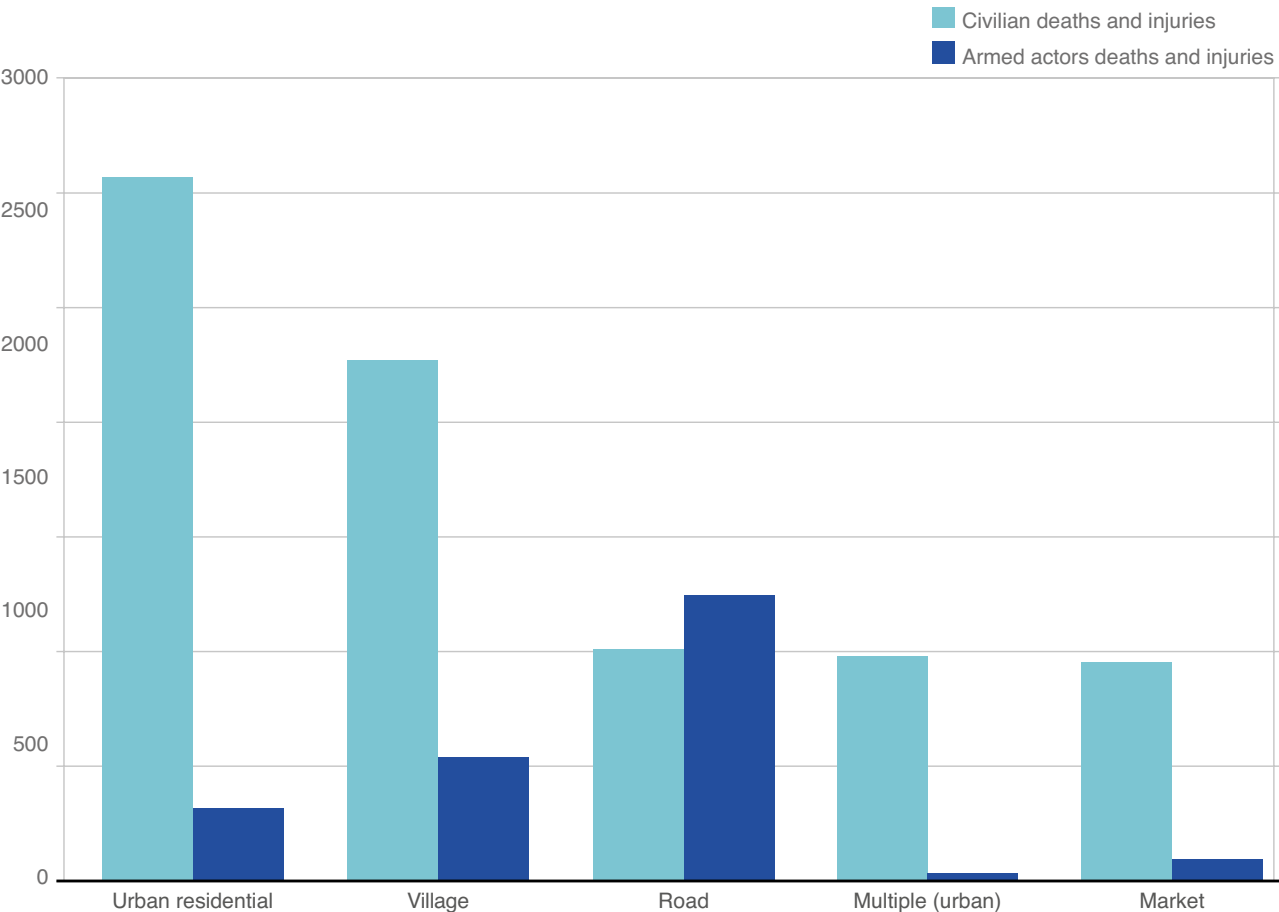
MARKET BOMBINGS

Last year, AOA V recorded 899 casualties from incidents of explosive violence in markets, including 817 civilians.

82% of all civilian deaths and injuries from market bombings were recorded in just two countries: Syria (53%) and Afghanistan (29%).

IEDs make up the majority of civilian casualties recorded from market bombings, accounting for 68% of attacks.

Figure 6 Locations with the most civilian deaths and injuries





Aftermath of the Ganja missile attack from Nagorno-Karabakh conflict, 05 January 2021, Javid Nabizade (cc by-SA 4.0).

TARGETING

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

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

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

WOMEN

The majority of media sources did not include reporting of the gender of victims in 2020.

Women were reported among those killed and injured in 430 incidents, including those incidents where no figure was given. Overall, 692 women were reported killed or injured in 387 incidents.

This figure does not include armed actors. Likewise, it does not include female suicide bombers. In 43 incidents women were reported amongst the casualties but no figure was given.

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

CHILDREN

The majority of media sources did not include reporting of the age of any victims in 2020.

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

In a further 48 incidents, no figures were given for numbers of children killed or injured but children were reported to be amongst the victims.

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

AIR-LAUNCHED EXPLOSIVE WEAPONS



1,922

CIVILIANS KILLED
& INJURED IN 2020



5 IN 10 INCIDENTS OCCURRED IN
POPULATED AREAS



87% OF DEATHS & INJURIES IN
POPULATED AREAS WERE CIVILIANS



INCIDENTS WERE RECORDED IN
15 COUNTRIES AND TERRITORIES IN 2020

GROUND-LAUNCHED EXPLOSIVE WEAPONS



3,769

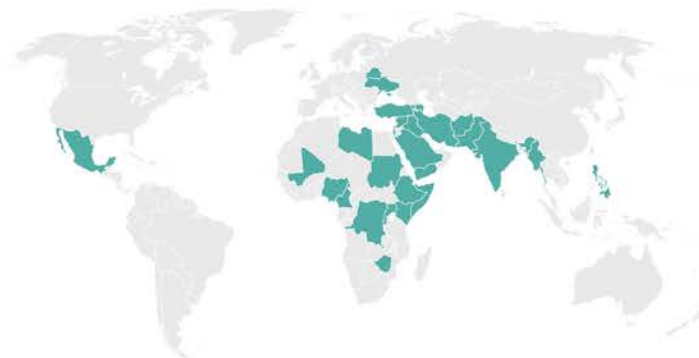
CIVILIANS KILLED
& INJURED IN 2020



7 IN 10 INCIDENTS OCCURRED IN
POPULATED AREAS

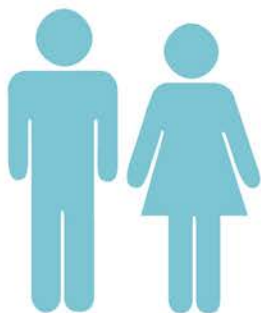


95% OF DEATHS & INJURIES IN
POPULATED AREAS WERE CIVILIANS



INCIDENTS WERE RECORDED IN
30 COUNTRIES AND TERRITORIES IN 2020

IMPROVISED EXPLOSIVE DEVICES (IEDs)



4,778

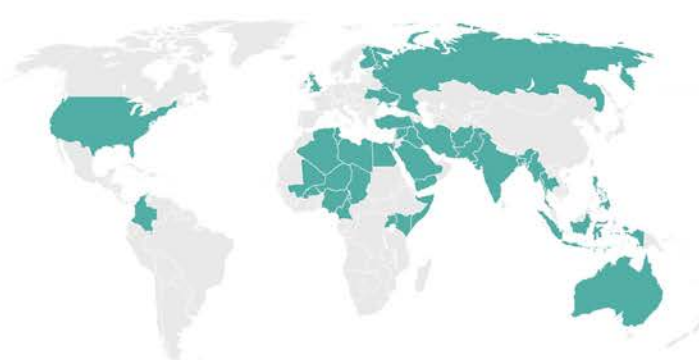
CIVILIANS KILLED
& INJURED IN 2020



5 IN 10 INCIDENTS OCCURRED IN
POPULATED AREAS



83% OF DEATHS & INJURIES IN
POPULATED AREAS WERE CIVILIANS



INCIDENTS WERE RECORDED IN
36 COUNTRIES AND TERRITORIES IN 2020

Explosive weapon types

AOAV records information on the explosive weapon used in any incident. The full list of the recording types used can be found on pages 7-8. These are kept deliberately broad in order to reflect the language commonly used in source reporting (i.e. 'shelling', which can cover several types of ground-launched weapons). More specific weapon types are used where such information is available in the source material.

The total number of civilian casualties recorded by AOA from each explosive weapon type is shown in *Figure 7*. There are different ways of evaluating the threat that various explosive weapons have had for civilians in 2020. These are explored over the following sections.

In order to better understand how these different explosive weapons have endangered civilians in 2020, AOA has split them into three different groups based on their launch method.

Air-launched weapons include any explosive munition dropped from an aircraft. If a bomb, missile or rocket is specified in the reporting of an incident (e.g. 'Hellfire' missile, FAB aircraft bomb) it is recorded under these narrower categories.²⁸ Other explosive attacks from the air are coded more generally as 'Air strike'.

Ground-launched weapons are manufactured conventional ordnance that range from small hand grenades to heavy artillery and multiple rocket launchers. They can be fired from a variety of platforms, but all are launched from surface level.

IEDs are improvised explosive devices. These cover any explosive weapon not manufactured through a commercial process, although they can include conventional ordnance. IEDs vary greatly in purpose, size and power, and in their mode of detonation. The broadest recording type is 'Non-specific IED' which encompasses anything from a magnetic bomb attached to a car to a vest of explosives detonated in a market square.

In addition to these three categories, AOA records casualties from attacks where multiple launch

methods are used to deploy explosive weapons. AOA also records reported casualties of landmines. These are excluded from analysis in the following sections.²⁹

Figure 7 **Civilian casualties by weapon type in 2020**

Weapon type	Civilian casualties	Average civilian casualties per incident
Air-launched	1922	4
Air Strike	1863	4
Air-dropped bomb	48	3
Missile	8	1
Rocket	3	3
Ground-launched	3769	4
Artillery shell	368	4
Grenade	473	5
Missile	303	7
Mortar	566	5
Multiple explosive weapons	31	3
Rocket	527	4
RPG	71	3
Shelling	1430	3
Tank shell	0	0
IED	4778	4
Car bomb	1488	13
Non-specific IED	2175	4
Roadside bomb	1115	2
Mine	324	1
Anti-personnel mine	7	1
Anti-vehicle mine	8	3
Landmine	309	1
Multiple types	92	7
Multiple explosive weapons	92	7
Naval-launched	22	3
Artillery shell	12	3
Shelling	10	3
Unclear	149	10
Missile	109	9
Rocket	40	13

Air-launched explosive weapons

Air-launched explosive weapons killed and injured **1,922** civilians in 2020 (**17%** of all harm recorded).

When airstrikes were recorded in areas reported as being 'populated', **87%** of those killed and injured were civilians.

In total, there were 4,936 deaths and injuries, including both civilians and armed actors, from aerial explosive weapons in 2020. Civilians accounted for 39% of these casualties, a lower share than last year, when they accounted for 51%.

When aerial explosive weapons were used in populated areas, 87% of those killed and injured were civilians. In areas that were not recorded as populated, that figure dropped to 8%.

In 2020, 47% of reported air-launched explosive violence incidents were recorded in populated areas. This too reflects a slight decrease in the percentage of attacks carried out in populated areas; in 2019, 54% of airstrike incidents were recorded in populated areas.

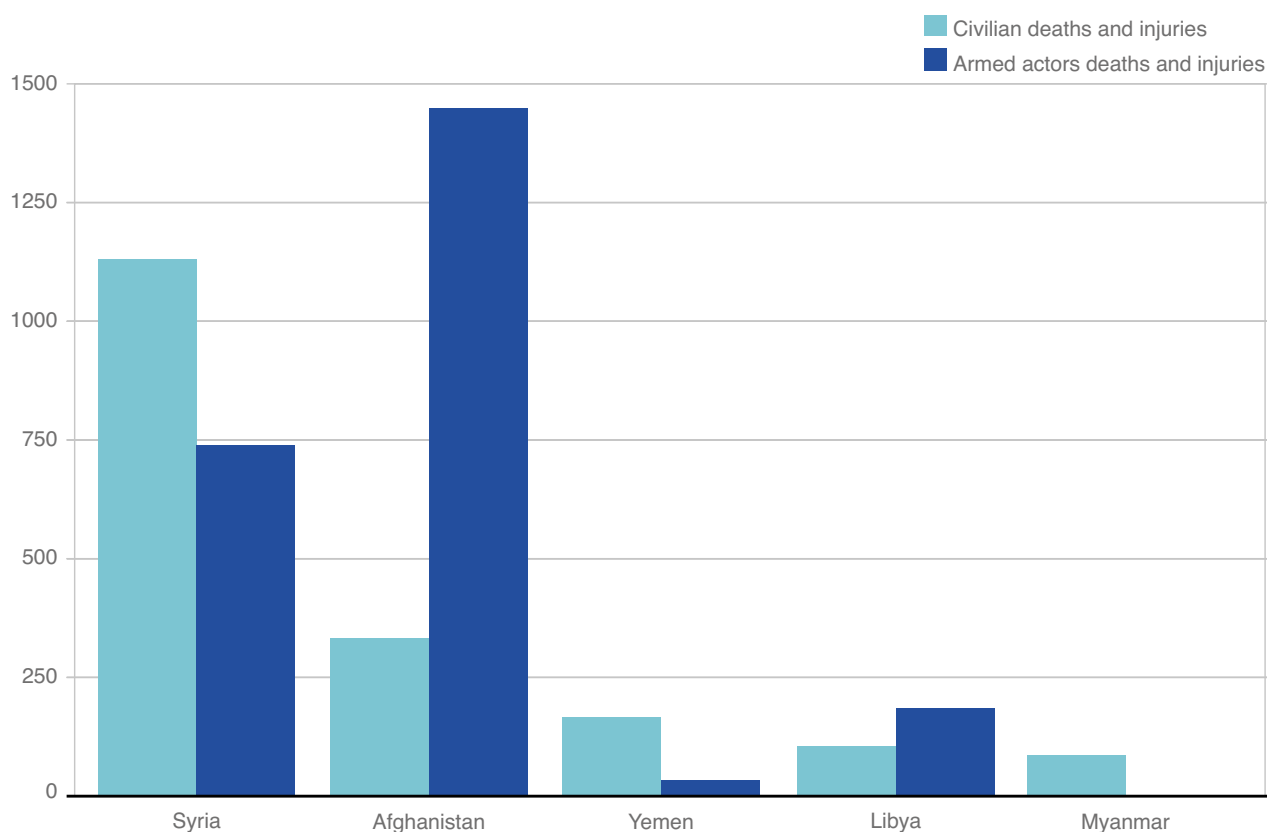
DEATHS AND INJURIES

In 2020, air-launched weaponry accounted for 17% of all civilian deaths and injuries recorded worldwide. The number of civilian casualties from airstrikes continued to fall last year. AOVAV recorded 1,922 civilian casualties from airstrikes in 2020, compared to 5,517 civilian deaths and injuries from the previous year.

COUNTRIES

Syria remained the country worst-impacted by air-strikes in 2020 (see *Figure 8*), with the number of civilians killed and injured by airstrikes in Syria accounting for 59% (1,130) of all civilians killed or injured worldwide by such weapons.

Figure 8 Worst five countries for air launched weapons in 2020



I took my son to breastfeed him. I had no idea it was an airstrike. I only saw the house collapsed over us. I was screaming at first. I thought someone might help. I didn't know they were all affected by the strike too. I took my son and my daughter, then I saw my sister next to me – she was murdered. Then I started screaming until the people arrived to rescue us.

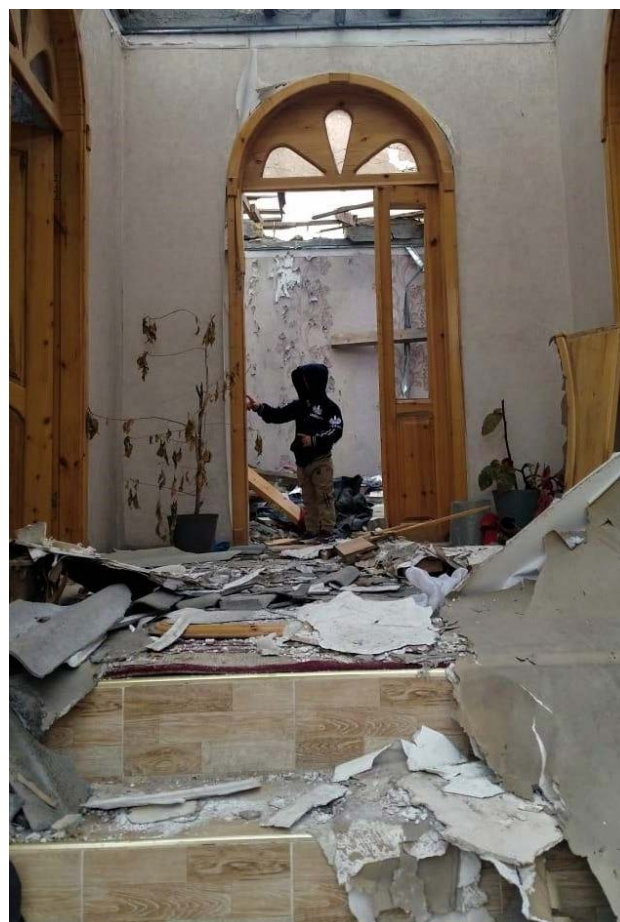
Noura Mujali, a survivor of an airstrike that killed most her family, tells of her ordeal as the missile hit her home in the village of Washah, Yemen, in July 2020.³⁰

Afghanistan, Yemen, Libya and Myanmar also saw high numbers of casualties from airstrikes, with 333, 166, 106 and 86 civilian casualties from air-launched explosive violence respectively.

Despite being amongst the countries worst-impacted by airstrikes, all four of the worst impacted have seen reductions in civilian casualties from airstrikes. Only Myanmar, among the five worst-impacted, saw a rise in civilian deaths and injuries from airstrikes, from 15 in 2019 to 86 in 2020.

The most devastating image I saw with my own eyes was the arrival of two babies to the hospital... They were both under six months and were rescued from under the rubble but were pronounced dead at the hospital.

Abedalrazzaq Zaqzooq, a hospital worker in Maaret Misreen, Syria, tells of the impact after eight missiles hit a nearby poultry farm in March 2020.³¹



Results of the Bombardment of Tartar, 18 November 2020, Aykhan Zayedzadeh (cc by 3.0).

USERS

The number of air-launched explosive incidents fell last year, from 1,305 in 2019 to 529 last year.

Despite the fall in incidents and casualties, Russia and Syria remained the key perpetrators of airstrikes in 2020. While difficulties remain in identifying the perpetrators of airstrikes in Syria, at least 572 civilian casualties were recorded from Russian airstrikes and 370 from Syrian airstrikes.

The Afghan government was identified as the perpetrator behind the death and injury of at least 196 civilians from airstrikes. While airstrikes by the Saudi-led coalition resulted in 166 civilian casualties.

Other perpetrators seeing high levels of civilian casualties from their airstrikes include Myanmar (86 civilian casualties from airstrikes), Turkey (74 civilian casualties), and the United States (66).

Ground-launched explosive weapons

Ground-launched explosive weapons reportedly killed and injured **5,040** people in 2020.

75% of casualties from ground-launched explosives last year were civilians.

66% of all ground-launched incidents recorded were reported as taking place in populated areas.

DEATHS AND INJURIES

Ground-launched weapons are manufactured conventional ordnance that range from small hand grenades to heavy artillery and multiple rocket launchers. They can be fired from a variety of platforms, but all are launched from surface level.

In total, these weapons were reported to have caused 5,040 casualties in 2020; 3,769 of whom were civilians (75% of total deaths and injuries from this weapon type). This is a similar level to that seen in the last few years, with 3,926 civilian casualties recorded in 2019 and 3,444 in 2018.

Civilian casualties from ground-launched weapons accounted for 34% of total civilian casualties from explosive weapons in 2020.

Ground-launched explosive attacks have consistently been more likely to be reported in populated areas than other kinds of incident and last year this remained true. 66% of all ground-launched incidents recorded were reported as taking place in populated areas, compared to 47% of air-launched incidents and 53% of IED incidents.

COUNTRIES

Casualties from ground-launched explosive weapons were reported in 30 countries and territories last year.

While Syria, Ukraine and Libya saw a higher number of incidents, it was Afghanistan that saw the highest levels of civilian casualties from ground-launched explosives.

Nonetheless, Afghanistan, Syria, Libya, Yemen, Pakistan, Azerbaijan, Myanmar, Iran and India all saw over 100 civilian casualties from ground-launched explosives.

PERPETRATORS

Ground-launched explosive weapons were used by state and non-state actors in a similar number of incidents last year. Non-state actors were recorded

I went to the village and I heard some people got injured. When I got home, my wife and my daughter were laid down on the floor. [My wife] was not saying anything. I tried to check my [seven-year-old] daughter and she was still alive. I picked up my daughter and tried to get out... I didn't see [any soldiers]. The weapon came from very far. And when I tried to run by hugging my daughter's body, there was more shooting. I tried to lay over my daughter's body, near the stream. Within two minutes, my daughter passed away.

Maung Soe (name changed) details the impact of the shelling on his village of Nyaung Kan in Myebon Township, Myanmar on September 8th 2020, when he returned from working nearby.³²

as being responsible for 41% of incidents, and state actors for 35% of all ground-launched attacks.

However, a larger number of ground-launched explosive incidents were recorded with an unknown perpetrator. 224 incidents - 24% of all ground-launched attacks - were recorded without it being known whether it was caused by a state or non-state actor. In 2019, this was the case for 166 incidents (16%).

SPECIFIC TYPES

Figure 9 illustrates the range of ground-launched weapon types that AOAV tracks, and their respective impact on civilians in 2020.

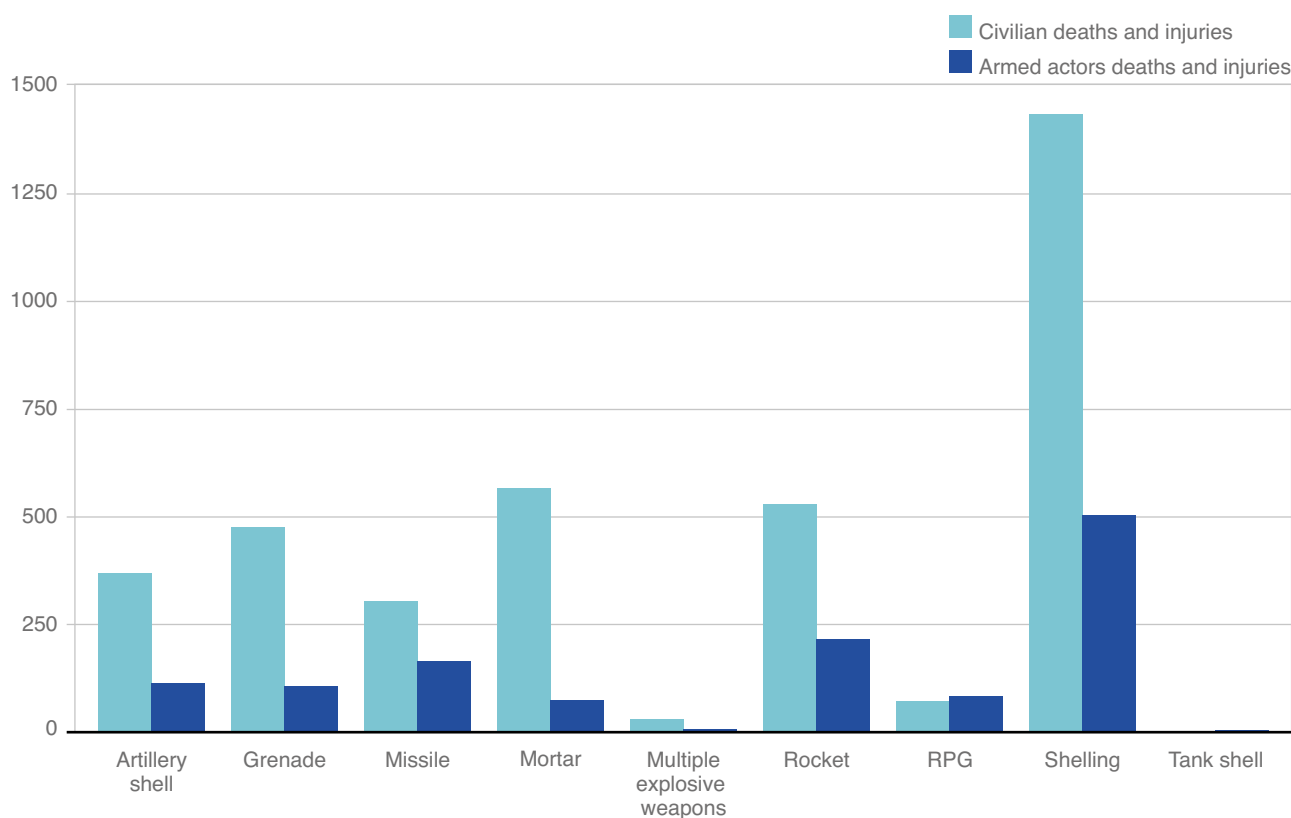
Non-specific shelling accounted for the largest amount (38%) of civilian deaths and injuries from ground-launched weaponry.

Grenades, mortars and rockets also caused a significant amount of civilian harm, responsible for 473 (13%), 566 (15%) and 527 (14%) civilian casualties respectively, compared to 378 (10%), 812 (21%) and 710 (18%) in 2019.



A disused wing in a hospital in Avdiivka, Ukraine.

Figure 9 Casualties by ground-launched weapon type



Improvised explosive devices (IEDs)

In 2020, AOAV recorded **7,382** deaths and injuries from IEDs.

IEDs accounted for **43%** of all civilian casualties recorded last year.

IEDs resulted in at least one casualty in **36** different countries and territories.

DEATHS AND INJURIES

In 2020, AOAV recorded 7,382 deaths and injuries from IEDs. Civilians continued to see the majority of harm from such devices, accounting for 65% (4,778) of casualties from IEDs.

The number of civilian casualties from IEDs last year reflects a decrease of 48% compared to 2019, when 9,122 civilian casualties were recorded from this weapon type.

Of civilian casualties from all explosive launch method types, IEDs accounted for 43%.

As is to be expected, IEDs caused particularly high levels of civilian harm when used in populated areas. IEDs were used in populated areas in 53% of all recorded attacks – totalling some 629 incidents. In these incidents, 83% of reported deaths and injuries were civilians, contrasting with 27% in other areas.

COUNTRIES

In 2020, IEDs resulted in at least one casualty in 36 different countries and territories. This is a significant fall from the 51 countries in which IED attacks were reported in 2019, but does constitute two more than in 2019. *Figure 10* shows the seven countries that saw the most civilian casualties from IEDs in 2020.

In 2020, five countries saw more than 100 civilian deaths and injuries from IED attacks: Afghanistan, Syria, Somalia, Pakistan and Iraq. These countries reflect those most impacted from IEDs globally in recent years – though the numbers of civilian casualties have fallen in all cases.

For the fourth consecutive year, Afghanistan was the country worst impacted by IEDs, with the most civilian casualties from this weapon type. Nevertheless, Afghanistan still saw a significant fall in civilian casualties from IEDs last year; from 3,596 in 2019 to 2,356 in 2020. This is despite a rise in the number of incidents; 308 to 473.

Such a fall in civilian casualties despite a rise in incidents is likely linked to the types of incidents seen, with a substantial rise in the number of roadside bombings (which appear to result in fewer casualties), alongside a fall in suicide attacks (which cause greater levels of civilian casualties). It is also worth noting that while total and civilian casualties from IEDs in Afghanistan fell the number of armed actor deaths increase, from 983 in 2019 to 1,196 last year.

Of the 473 IED attacks recorded in Afghanistan, 39 (8%) were suicide attacks, resulting in 911 civilian casualties; 39% of all civilian casualties from IEDs in Afghanistan. This demonstrates the lethality of such incidents in Afghanistan. On average, each suicide attack in Afghanistan saw 23 civilian casualties, compared to an average of 3 civilian casualties in non-suicide IED incidents.

USERS

IEDs were exclusively used by non-state actors in 2020. AOAV recorded IED usage by 19 non-state entities. Of the 256 incidents for which responsibility was assigned, 32% were attributed to Islamic State groups, which also accounted for 32% of civilian deaths and injuries from IED incidents where the perpetrator was identified. Though fewer incidents were attributed to the Taliban (80) they accounted for a larger number of civilian deaths and injuries from IEDs, accounting for 36% of civilian deaths and injuries where a perpetrator was identified. Al Shabaab accounted for 22%.

Figure 10 Top seven countries for civilian IED casualties in 2020

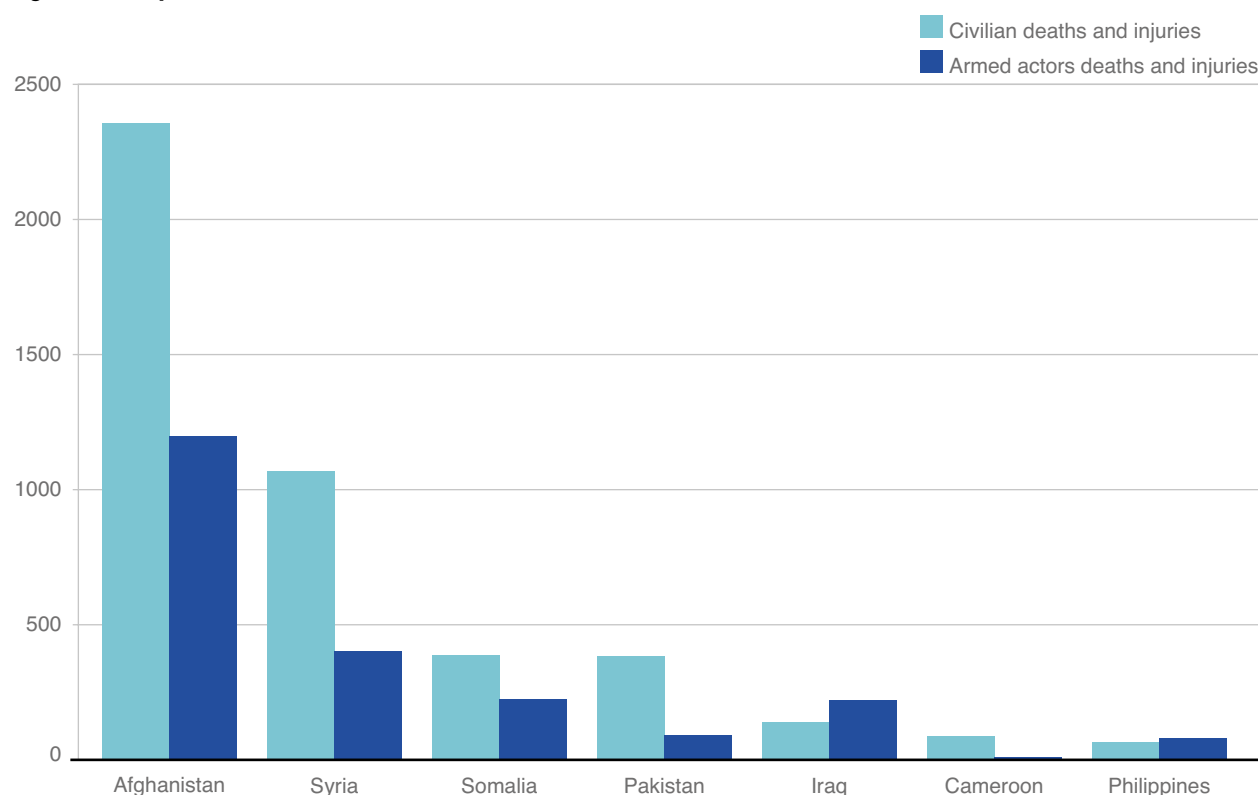


Figure 11 shows the locations where the most civilian harm occurred as a result of IED attacks. IED attacks in urban residential areas caused the highest number of civilian deaths and injuries last year. AOA V recorded 165 incidents of this kind resulting in 882 deaths and injuries, of which 82% (726) were civilians.

Other particularly badly affected areas included roads, markets and villages. While roads often see both civilians and armed actors fall casualty to bombs placed along them, markets and villages are frequently targeted due the likelihood of containing dense concentrations of civilians.

DELIVERY METHOD AND DETONATION SYSTEM

AOA V's recording distinguishes between car bombs,³³ roadside bombs and more general non-specific IEDs. The majority of incidents (49%) reported were recorded as non-specific IEDs. Roadside bombs accounted for a further 41% and car bombs for 10%. As is typically the case given their greater payload capacity, car bombs were the most injurious IED type for civilians, killing and injuring on average 13 civilians

per incident. Whilst non-specific IEDs saw an average of four civilian casualties per incident and roadside bombs saw two.

For the majority of IED incidents no detonation mechanism was reported. Nonetheless, AOA V recorded detonation mechanisms for 24% of reported incidents.

VICTIM-ACTIVATED IEDS

Victim-activated devices are most commonly detonated when a person or animal stands on them, or when they are driven over.³⁴ IEDs detonated in this fashion are typically considered as de facto antipersonnel mines³⁵ under the Mine Ban Treaty and are therefore prohibited under international humanitarian law.³⁶ Their random trigger mechanism means that they cannot distinguish between armed actors and civilians, and as such are inherently indiscriminate.

AOA V recorded 177 incidents involving victim-activated IEDs in 2020, or 15% of the total number of victims from IEDs (9% of civilian casualties from IEDs) and 6% of the total number of explosive violent incidents

worldwide. In 2020, victim-activated IEDs resulted in an average of two civilian casualties in each attack.

COMMAND-OPERATED IEDS

These are detonated generally by radio signals or command wire. AOA V divides these IEDs between those detonated by remote-control or command, and those that involved the suicide of the perpetrator.

Command-operated IEDs should technically provide the greatest level of control for a user. However, this is not necessarily an assurance of higher protection standards for civilians.

AOAV recorded an average of four civilian deaths and injuries per remote-detonated IED attack in 2020. Even when targeting armed actors, the blast impacts may frequently result in civilian deaths and injuries, particularly when in a populated area.

In 2020, 89 of the 92 civilian casualties recorded from remotely detonated IEDs were in populated areas.

SUICIDE BOMBINGS

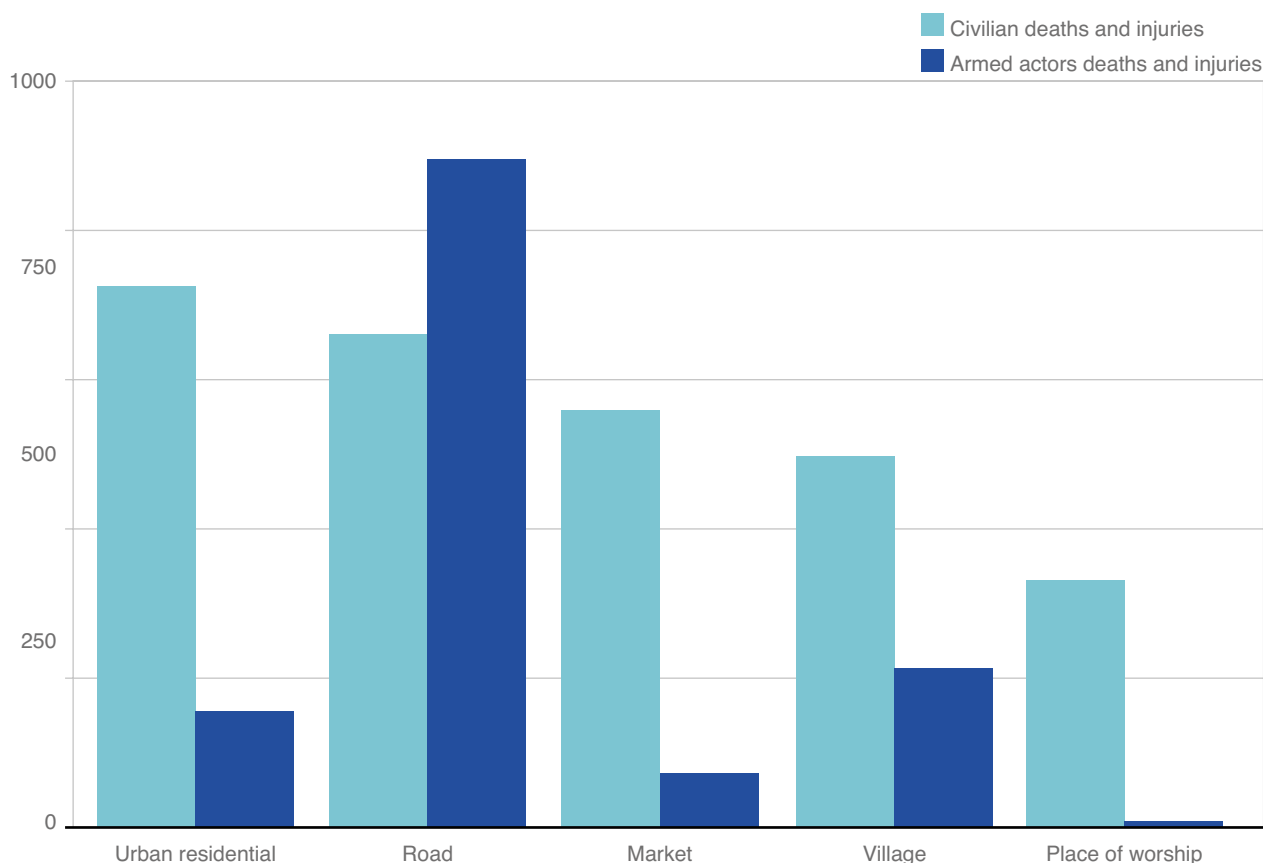
Suicide bombings, including car bombs operated by suicide bombers, are a form of command-operated IEDs. In total, AOA V recorded 78 suicide bombings last year, down from 133 suicide bombings in 2019. Last year, these attacks killed and injured at least 1,913 people, including 1,317 civilians (69%).

On average, 17 civilians were killed and injured by each suicide bombing. In 2019, an average of 31 civilians were killed and injured in each suicide bombing.

Although suicide bombings represented only 7% of all IED incidents recorded, they accounted for 28% of all civilian deaths and injuries from IED attacks.

35 of the 78 of the suicide bombings reported were recorded as non-specific IEDs, which, in the case of suicide bombings, largely refers to suicide vests. 43 of the 78 incidents were recorded as car bombs. Non-specific suicide IED attacks caused an average

Figure 11 Locations where the most civilian harm resulted from IED attacks



I was standing about 100 metres (328 feet) from the centre when a big blast knocked me down... Dust and smoke were all around me. All those killed and wounded were students who wanted to enter the centre.

Ali Reza, a survivor of a bomb blast that targeted an education centre in Kabul in October 2020.³⁷

of 23 deaths and injuries per incident, including 19 civilians, whilst suicide car bombs caused an average of 25, including 15 civilians. As would be expected, suicide car bombs generally cause the greatest number of casualties. Last year, 19 of the suicide car bombs reported targeted armed bases, accounting for the high armed actor casualty toll.

AOAV recorded suicide attacks in 14 countries. The countries worst affected by suicide bombings last year were Afghanistan (911 civilian deaths and injuries), Somalia (198), Cameroon (63), Pakistan (59) and the Philippines (54).

Last year Afghanistan saw its second consecutive year of decreasing numbers of civilian casualties from suicide attacks. Nevertheless, Afghanistan continued to be the country worst impacted by suicide attacks: 69% of all civilian casualties globally from suicide attacks occurred in Afghanistan.

Where the perpetrator group behind a suicide attack was identified, Al Shabaab was responsible for 15 suicide attacks, resulting in 248 deaths and injuries, including those of 152 civilians. The Taliban was responsible for nine suicide attacks, also resulting in at least 248 casualties, including 127 civilians, whilst Islamic State claimed responsibility for 192 casualties from seven suicide attacks, including 179 civilians.

As with other explosive weapon types, when suicide bombings were used in populated areas they inflicted

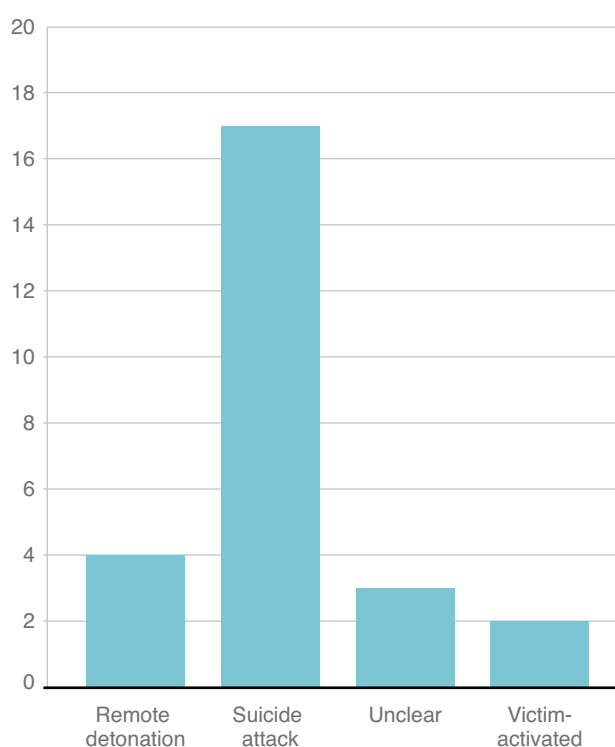
much higher levels of civilian harm. Two-thirds of recorded incidents took place in populated areas. In these attacks, around 83% of those killed and injured were civilians. This compares to 13% in other areas.

In total, 96% of the civilian casualties from suicide attacks occurred in populated areas. Suicide attacks in populated areas caused an average of 24 civilian deaths and injuries per incident.

It was a huge explosion that broke all our windows... Many people have been wounded by flying pieces of glass.

Witness Haseeb, a government employee who works near the NDS compound, detailed the impact of a Taliban car bomb on intelligence office in Aybak city, Afghanistan, in July 2020.³⁸

Figure 12 Average civilian deaths and injuries by IED detonation method



Conclusion

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

2020 was AOA's tenth year collecting casualty data from the use of explosive weapons and such data has consistently shown that when explosive weapons, especially those with wide area effects, are used in populated areas this will almost inevitably cause civilian deaths and injuries. Explosive violence in populated areas is caused by both state and non-state actors alike, despite data suggesting that about 90% of those killed and injured may be civilians.

The vast majority of civilian casualties from the use of explosive weapons have been caused when these

weapons are used in populated areas. Last year, 89% of all civilian casualties from explosive violence worldwide occurred in populated areas. These casualties are predictable and far more needs to be done to protect civilians from the use of explosive weapons in towns and cities.

The use of explosive violence in these areas not only leads to civilian deaths and injuries but also has other reverberating impacts which may see further civilians prevented from accessing necessities and essential services. Research by AOA and colleagues from the International Network on Explosive Weapons (INEW) on the reverberating effects from the use of explosive weapons has sought to highlight some of this long-term damage that continues to devastate the lives of civilians even long after the echoes of the blast have faded.



Aerial imagery of flight PS752 wreckage in Tehran Province, Iran. Fars News Agency, 8 January 2020. Wikipedia (cc by 4.0)



Damage at Ghazanchetsots Cathedral hit by Azerbaijani forces on 8 October 2020 during the 2020 Nagorno-Karabakh conflict, 26 October 2020 ԶԻՆՈՒԺ MEDIA.

Unfortunately, far more casualties are likely to have been caused by explosive weapons last year than AOVAV's methodology can capture, particularly as the world struggled through a pandemic and much explosive violence may have gone under-reported by English language media sources.

In this report, AOVAV sought to use the available data to highlight the suffering caused by explosive weapons,

but while we seek to examine trends and patterns, it is essential to remember that each casualty reflects a life-lost or forever changed.

We urge the international community to take note of the scale of the figures we have included in this report and seek to implement a strong political declaration to protect civilians from this foreseeable harm.

As a member of the International Network on Explosive Weapons (INEW), AOVAV and its colleagues urges states and all users of explosive weapons to:

- Acknowledge that use of explosive weapons in populated areas causes severe harm to individuals and communities and furthers suffering by damaging vital infrastructure;
- Strive to avoid such harm and suffering in any situation, review and strengthen national policies and practices on use of explosive weapons and gather and make available relevant data;
- Work for full realisation of the rights of victims and survivors;
- Develop stronger international standards, including certain prohibitions and restrictions on the use of explosive weapons in populated areas.

In developing these standards, states and other actors should make a commitment that explosive weapons with wide area effects will not be used in populated areas.

Recommendations

- States and other actors should stop using explosive weapons with wide area effects in populated areas.
- Previous AOA reports, along with other notable publications by UNOCHA, ICRC and CIVIC, have shown the impact that strong, progressive rules of engagement can have in limiting the impact of explosive weapons on civilians.³⁹ States should review their policies and practices on the use of explosive weapons in populated areas, particularly those which may be expected to impact a wide area.
- States, international organisations and civil society should work together to develop the international political declaration to address the harm caused to civilians by the use of explosive weapons in populated areas, in line with the recommendations of the United Nations Secretary General.
- States should be transparent about civilian casualties and casualty recording methods, and should routinely investigate and report on every casualty caused by their use of explosive weapons.
- States, international organisations, and non-governmental organisations should gather and make available data on the impacts of explosive weapons. Data on the casualties of explosive violence should be disaggregated so that stakeholders can accurately assess the impact of explosive weapons. More should also be done to protect and support people and organisations who gather such data, including providing access to journalists on the ground.
- States should be cognisant of the fact that even where civilians have not been immediately killed or injured as a result of explosive violence, the reverberating effects of attacks may have an impact on infrastructure and civilians' daily lives and survival.
- States and users of explosive weapons should work towards the full realisation of the rights of victims, including those killed and injured, their families, and affected communities. They should strive to ensure the timely and adequate provision of needed services for the recovery, rehabilitation, and inclusion of victims of explosive violence, without discrimination.
- Recognising the large number of civilian casualties caused by IEDs, all parties should work on measures which address the high level of humanitarian harm caused by these weapons.
- AOA has demonstrated over almost a decade the importance of systematic and continuous monitoring of explosive violence and its impacts in populated areas. This monitoring must continue in order to assess whether recommendations are put into effect.
- More research is needed to better understand the long-term harm from explosive weapons, including the impact of these weapons on vital infrastructure and services, public health, and environmental contamination. More funding support for NGOs working on data collection, investigations and victim assistance is necessary to advance collective understanding of the impacts of explosive weapons in populated areas.

Methodology

AOAV uses a methodology adapted from an incident-based methodology used by Landmine Action and Medact in 2009 which in turn was based on the Robin Coupland and Nathan Taback model.⁴⁰

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. AOAV 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 or casualty of explosive violence in 2020.

SELECTING INCIDENTS

An RSS reader is used to scan Google News for key terms which relate to explosive weapon use: air strike* artillery* bomb* bombing* cluster bomb* cluster munitions* explosion* explosive* grenade* IED* mine* missile* mortar* rocket* shell.*

At least one casualty from 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). Casualty numbers must be clearly stated; reports which only describe 'several' or 'numerous' cannot be recorded. When there are multiple sources for the same incident, those which provide the most detail or most recent casualty information are selected.

SOURCES

AOAV uses a wide range of English-language news sources, many of which are translated by the publisher. The most commonly-used sources are AP, AFP and Reuters. We also use the most credible data cited from organisations such as Airwars, which are frequently cited in the news reporting.

RECORDING GUIDELINES

Civilian/armed actor or security personnel:

All casualties are assumed to be civilians unless otherwise stated.⁴¹ Casualties are recorded as 'armed actors' if they are reported as being members of the military,



Wreckage from Flight 752 which was hit by a missile shortly after take-off from Tehran, Iran. Fars New Agency, 8 January 2020. Wikipedia (cc by 4.0)

members of non-state armed groups, or security personnel who are likely to be armed, for example; police, security guards, intelligence officers, and paramilitary forces.

Intended target:

The target for an attack is only recorded if one of the three conditions below are met:

- The target is declared by the user.
- It is clearly reported in the source.
- The specific contextual conditions of use clearly indicate a target (e.g. if an IED is attached to the car of a police officer or soldier, 'State armed' is recorded as the target).

Populated area:

Incidents 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 IDPs, refugees, nomads), markets, places of worship, public gatherings, public buildings, public transport, schools, town centres, urban residential neighbourhoods, villages/ compounds.

This 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."*⁴²

User status:

Responsibility for the use of explosive weapons is assigned where any of the following conditions are met:

- The group or actor responsible has claimed responsibility.
- The user of the explosive weapon is clearly stated in the report.
- If the user of the explosive weapon has employed technology clearly associated only with that user in the context in question.

If none of these conditions are met then the user is recorded as unknown. Users are recorded as 'state and non-state' when both users are identified but it is not possible to establish which one was responsible for the particular incident.

LIMITATIONS

This methodology is subject to a number of limitations and biases, many relating to the nature of the source material on which it is dependent and the lack of a mechanism to follow up reports with in-depth investigation. It is recognised that there are very different levels of reporting across regions and countries 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 around the world.

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 AOAV. There is no systematic base-line for determining what constitutes an injury, and AOAV is therefore subject to the assessment of the news source.

On a number of occasions firearms were also reported as having been used alongside explosive weapons. While AOAV always tries to determine the casualties specifically caused by explosive weapons, in these incidents new sources are not always able to clarify which casualties were caused by which weapon type, particularly in incidents that involved large numbers of casualties. It is therefore possible that some casualties in these incidents may not have been caused by explosive weapons.⁴³

AOAV is focused on capturing the harm caused by explosive weapons at the time of use. Accidental detonations are recorded but not included in the overall figures. Last year, AOA V recorded 45 incidents of accidental detonation resulting in 255 deaths and injuries, 112 of whom were civilians.

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. Last year, AOA V recorded 194 incidents involving unexploded ordnance causing 463 civilian deaths and injuries. The actual number of casualties from ERW is far higher.⁴⁴

Poorly secured or stockpiled explosive weapons can also cause unintended harm to civilians. AOA V recorded four stockpile explosions in 2020

Media reports used by AOA V are a valuable resource for better understanding the scale and pattern of explosive violence use. However, these reports are less helpful for capturing other types of harm known to be characteristic of explosive weapons in populated areas. Damage to infrastructure, the risk of ERW, long-term health effects, and displacement are all aspects of the pattern of harm caused by explosive weapons which are not fully represented in the data set. However, reporting on these effects is often limited, with news sources focusing on the immediate aftermath of an incident. For instance, only 265 incidents out of 2,911 reported damage to a location. Effects which are the result of cumulative levels of explosive violence, for instance communities displaced by heavy shelling or continued insecurity, cannot be fully represented by this research.



Afghan refugees in Khyber Pakhtunkhwa, March 2020. © European Union, 2020 (By Mallika Panorat) Flickr Creative Commons.

Notes

- 1 ICRC, 'Statement to the 75th Session of the United Nations General Assembly, First Committee: General debate on all disarmament and international security agenda items', 20 Oct 2020. <https://www.icrc.org/en/document/disarmament-efforts-essential-address-humanitarian-concerns-weapons-technologies> (accessed 17 Feb. 21).
- 2 The definition of a populated area used by AOA 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 group of nomads." The full definition is available at: "Protocol on Prohibitions or Restrictions on the Use of Incendiary Weapons (Protocol III)," ICRC, Geneva, 10 October 1980. AOA's guidelines for recording an area as populated are included in the Methodology.
- 3 Iain Overton et al, 'Wide-Area Impact: Investigating the wide-area effect of explosive weapons', (AOA 2015) <https://aoav.org.uk/wp-content/uploads/2016/03/Wide-Area-Impact-explosive-weapons-in-populated-areas.pdf> (accessed 16 Feb. 21).
- 4 The category of 'mines' includes both antipersonnel landmines and antivehicle mines. In many incidents, news sources often report what were likely to have been actually victim-activated IEDs as 'mines' or used ambiguous language; as such, it is not clear in many incidents whether these incidents involve manufactured or improvised explosive weapons.
- 5 Attacks described as air-strikes can combine the firing of explosive missiles, the dropping of aerial bombs, and/or strafing using automatic weapons. There is often a lack of detail in media and official statements as to which specific weapons were used. On this basis, incidents reported as air-strikes were recorded as the use of an explosive weapon unless it is clear that only non-explosive weapons were used.
- 6 Missiles are defined as "an armament store designed to be released from an aircraft or discharged from a gun or launcher towards a selected point usually to cause damage at that point." International Ammunition Technical Guideline, "Glossary of terms, definitions and abbreviations," United Nations Office for Disarmament Affairs, IATG 01.40:2015(E) 2nd Edition (2015-02-01) <https://unoda-web.s3-accelerate.amazonaws.com/wp-content/uploads/assets/convarms/Ammunition/IATG/docs/IATG01.40.pdf> (accessed 16 Feb. 21).
- 7 Rockets, both air and ground-launched, are defined as "munitions consisting of a rocket motor and a payload, which may be an explosive warhead or other device. The term often includes both guided and unguided missiles, although it traditionally referred to unguided missiles." International Ammunition Technical Guideline, "Glossary of terms, definitions and abbreviations," United Nations Office for Disarmament Affairs, IATG 01.40:2015(E) 2nd Edition (2015-02-01) <https://unoda-web.s3-accelerate.amazonaws.com/wp-content/uploads/assets/convarms/Ammunition/IATG/docs/IATG01.40.pdf> (accessed 16 Feb. 21).
- 8 Mortars are generally indirect-fire weapons which fire projectiles over a high-trajectory and do not depend on a line-of-sight. Erich G. Berman, Pierre Gobinet and Jonah Leff, "Mortars," Small Arms Survey, Research Notes - Number 2, February 2011, www.smallarmssurvey.org/fileadmin/docs/H-Research_Notes/SAS-Research-Note-2.pdf (accessed 16 Feb. 21).
- 9 A populated area is one that is likely to contain concentrations of civilians. It is based on Protocol III of the 1980 Convention on Certain Conventional Weapons (CCW). The full definition and guidelines for recording an area as being populated is detailed on page 35.
- 10 BBC, 'Iran plane crash: Ukrainian jet was 'unintentionally' shot down', 11 Jan 2020, <https://www.bbc.co.uk/news/world-middle-east-51073621> (accessed 11 Feb. 21).
- 11 Abed, F. 'Afghan War Casualty Report: May 2020', *New York Times*, 29 Oct 2020, <https://www.nytimes.com/2020/05/07/magazine/afghan-war-casualty-report-may-2020.html> (accessed 11 Feb. 21).
- 12 Al-Haj, A. 'First airplane lands in Yemen after deadly missile attack that killed 25, wounded 110', *Global News*, 03 Jan 2021, <https://globalnews.ca/news/7552411/yemen-flight-after-missile-attack/> (accessed 11 Feb. 21).
- 13 Abed, F. and F. Faizi, 'Afghan War Casualty Report: October 2020', *New York Times*, 29 Oct 2020, <https://www.nytimes.com/2020/10/08/magazine/afghan-war-casualty-report-october-2020.html> (accessed 11 Feb. 21).
- 14 Akbar, A. 'At least 8 killed, more than 110 injured in blast at madressah in Peshawar', *Dawn*, 27 Oct 2020, <https://www.dawn.com/news/1587278/blast-reported-at-seminary-in-peshawars-dir-colony> (accessed 11 Feb. 21).
- 15 BBC, 'Syria war: Car bomb kills 19 civilians in rebel-held town', 06 Oct 2020, <https://www.bbc.co.uk/news/world-middle-east-54421335> (accessed 11 Feb. 21).
- 16 Shah, T. and M. Mashal, 'Border Clashes With Pakistan Leave 15 Afghan Civilians Dead, Officials Say', *New York Times*, 28 Sep 2020, <https://www.nytimes.com/2020/07/31/world/asia/afghanistan-pakistan-border.html> (accessed 11 Feb. 21).
- 17 Bagirova, N. and N. Hovannisyan, 'Shelling in Nagorno-Karabakh Kills Civilians as Armenia-Azerbaijan Conflict Deepens', *The Wire*, 29 Oct 2020, <https://thewire.in/world/shelling-in-nagorno-karabakh-kills-civilians-as-armenia-azerbaijan-conflict-deepens> (accessed 11 Feb. 21).
- 18 Reuters, 'Five dead, 85 wounded in car bomb attack in Syria's Azaz - Turkish state media', 19 Jul 2020, <https://www.reuters.com/article/uk-syria-security-azaz/five-dead-85-wounded-in-car-bomb-attack-in-syrias-azaz-turkish-state-media-idUKKCN24K0OQ?edition=redirect=uk> (accessed 11 Feb. 21).
- 19 SOHR, 'Afrin carnage: death toll jumps to 52 persons, amid condemnation by opposition parties and organizations against Turkish authorities', 29 Apr 2020, <https://www.syriaahr.com/en/162173/> (accessed 11 Feb. 21).
- 20 In alphabetical order the 48 countries are: Afghanistan, Algeria, Armenia, Australia, Azerbaijan, Bangladesh, Belarus, Burkina Faso, Burundi, Cameroon, Chad, Colombia, Congo, Egypt, Ethiopia, Finland, Gaza, India, Indonesia, Iran, Iraq, Israel, Kenya, Lebanon, Libya, Mali, Mexico, Myanmar, Niger, Nigeria, North Korea, Pakistan, Philippines, Russia, Rwanda, Saudi Arabia, Somalia, Sudan, Syria, Thailand, Tunisia, Turkey, Uganda, UK, Ukraine, USA, Yemen, Zimbabwe.
- 21 These only include casualties from an explosive weapon at its time of use. AOA also recorded impacts of unexploded ordnance (UXO) and abandoned ordnance (AXO), and from unattended or mismanaged stockpiles. These casualties are excluded from the primary analysis in this report.
- 22 In alphabetical order these were: Algeria, Australia, Belarus, Congo, Finland, North Korea, and Uganda.

- 23 *Conflict and Environment Observatory*, 'Report: Investigating the environmental dimensions of the 2020 Nagorno-Karabakh conflict', Feb 2021, <https://ceobs.org/investigating-the-environmental-dimensions-of-the-nagorno-karabakh-conflict/#s1> (accessed 13 Feb. 21).
- 24 ACAPS, 'Azerbaijan: Pre-existing situation and impact of the 2020 Nagorno-Karabakh conflict, 21 December 2020', *ReliefWeb*, 21 Dec 2020, <https://reliefweb.int/report/azerbaijan/azerbaijan-pre-existing-situation-and-impact-2020-nagorno-karabakh-conflict-21> (accessed 12 Feb. 21).
- 25 *Reuters*, "At least six dead after suicide bomber attacks restaurant in Somali capital", 17 Nov 2020, <https://www.reuters.com/article/somalia-security/at-least-six-dead-after-suicide-bomber-attacks-restaurant-in-somali-capital-idINKBN27X14S?edition-redirect=uk> (accessed 23 Feb. 21).
- 26 *BBC*, 'Iran plane crash: Ukrainian jet was 'unintentionally' shot down', 11 Jan 2020, <https://www.bbc.co.uk/news/world-middle-east-51073621> (accessed 11 Feb. 21).
- 27 Al Shabaab (Kenya and Somalia), Baloch Liberation Army (Pakistan), BIFF (Philippines), Boko Haram (Nigeria, Chad, Cameroon), CPI (naxals) (India), Hizbul Ahrar (Pakistan), Houthi rebels (Yemen, Saudi Arabia), Iran-backed militia (Syria), Islamic State (Afghanistan, Algeria, Egypt, India, Iraq, Libya, Philippines, Saudi Arabia, Syria), Jama'at Nasr al-Islam wal Muslimin / GSIM (Mali), Jaish al Adl (Iran), Hafta forces (Libya), NPA (Philippines), Pakistan Taliban (Pakistan), People's Liberation Army (India), PKK (Iraq, Turkey), Popular Mobilization Forces (Iraq) Saudi-backed militia (Yemen), SDF (Syria), Sindhudesh Revolutionary Army (Pakistan) Syrian rebels (Syria), Taliban (Afghanistan), Turkish-loyal factions (Syria), Ukrainian separatists (Ukraine), YPG (Syria). There were also various other actors identified only as individuals, mercenaries, or rebels.
- 28 Barrel bombs, which are improvised makeshift weapons that comprise fuel, explosive content and often metal fragments, are included under the air-dropped bomb recording type. It is often unclear in media reporting whether descriptions of 'barrel' bombs in fact designate improvised weapons or conventional aircraft bombs with similar wide-area effects.
- 29 The category of 'mines' includes both antipersonnel landmines and antivehicle mines. In many incidents, news sources often report what were likely actually victim-activated IEDs as 'mines' or used ambiguous language; it is not clear in many incidents whether these incidents involve manufactured or improvised explosive weapons. For detailed information on the incidents of antipersonnel and other types of mine use around the world see International Campaign to Ban Landmines, 'Landmine Monitor 2020', November 2020, <http://www.the-monitor.org/media/3168934/LM2020.pdf> (accessed 12 Feb. 21).
- 30 Crawford, A. 'Yemen Conflict: The analysis of a war crime', Sky News, 15 Aug 2020, <https://news.sky.com/story/a-war-crime-in-yemen-how-an-airstrike-devastated-a-family-including-seven-children-12199374> (accessed 23 Feb. 21).
- 31 Alsaafin, L. 'At least 15 displaced Syrians killed in Idlib air attack', Al Jazeera, 05 Mar 2020, <https://www.aljazeera.com/news/2020/3/5/at-least-15-displaced-syrians-killed-in-idlib-air-attack> (accessed 23 Feb. 21).
- 32 Amnesty International, 'Myanmar: Villages burned, civilians injured and killed as Rakhine State conflict escalates', 12 Oct 2020, <https://www.amnesty.org/en/latest/news/2020/10/myanmar-villages-burned-civilians-injured-rakhine-state-conflict/> (accessed 23 Feb. 21).
- 33 Car bomb' is taken as shorthand for vehicle-borne IEDs or VBIEDs, including explosives concealed in or built into vehicles of all kinds. Thus some car bombs may in fact be bike bombs or truck bombs.
- 34 78 percent of IED attacks with a reported mode of detonation in 2020 were triggered by victim-activation.
- 35 Though some IEDs may be designed to only be triggered by a vehicle. For instances of this please see: CAR, 'Dispatch from the Field: Mines and IEDs Employed by Houthi Forces on Yemen's West Coast', September 2018. Anti-vehicle mines are not covered by the Mine Ban Treaty.
- 36 Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on their destruction, 18 September 1997, https://treaties.un.org/doc/Treaties/1997/09/19970918%2007-53%20AM/Ch_XX-VI_05p.pdf (accessed 17 Feb. 21).
- 37 Al Jazeera, 'Teens among 24 killed at Kabul education centre bombing', 25 Oct 2020, <https://www.aljazeera.com/news/2020/10/24/deadly-suicide-bombing-hit-kabul-education-centre> (accessed 23 Feb. 21).
- 38 *AFP*, "At Least 11 Killed In Taliban Car Bomb Attack On Afghan Intel Office", 13 Jul 2020, <https://www.ndtv.com/world-news/at-least-11-killed-in-taliban-car-bomb-attack-on-afghanistan-intel-office-2262151> (accessed 23 Feb. 21).
- 39 Robert Perkins, "Air Power in Afghanistan, How NATO changed the rules, 2008-2015," Action on Armed Violence (AOAV), December 2015, <https://aoav.org.uk/wp-content/uploads/2015/03/AOAV-Air-Power-in-Afghanistan.pdf> (accessed 16 Feb. 21); Robert Perkins, "Under Fire, Israel's artillery policies scrutinised," Action on Armed Violence (AOAV), December 2015, <https://aoav.org.uk/wp-content/uploads/2015/03/AOAV-Under-Fire-Israelis-artillery-policies-scrutinised.pdf> (accessed 16 Feb. 21).
- 40 For more information see www.insecurityinsight.org (accessed 16 Feb. 21).
- 41 In a minority of cases in reported incidents there is a possibility that armed actors were among those killed and injured by explosive weapons, but the exact details of the number of armed actors killed or injured was not recorded. Incidents which meet this profile are coded as 'yes' in a column titled 'Could armed actors be included among the dead and injured?' Incidents coded in this manner represented just 2% of all incidents recorded by AOAV in 2020.
- 42 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 (accessed 16 Feb. 21)
- 43 AOAV recorded 47 such incidents in 2020.
- 44 International Campaign to Ban Landmines, 'Landmine Monitor 2020', November 2020, <http://www.the-monitor.org/media/3168934/LM2020.pdf> (accessed 12 Feb. 21).

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