

“Why did they bomb us?”

Urban civilian harm in Gaza, Syria and Israel from explosive weapons use

Published by Airwars in December 2021. Airwars is a collaborative, not-for-profit organisation focused on reducing battlefield civilian casualties. We track, document and archive airpower-dominated military actions, and local reports of civilian harm in conflict zones. Presently covering Iraq, Syria, and Libya - as well as US counterterrorism actions in Somalia, Yemen and Pakistan - we provide a vital counter-narrative to the dominant military assertion that civilian deaths are low in modern warfare. Airwars contributes to truth-seeking and accountability through our pioneering work collecting, assessing, and archiving accounts from local journalists, citizens, and state and non-state actors - and leveraging that information for change.

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Cover photograph: A child uses his mobile device in the ruins of a building in Beit Lahia, Gaza Strip on May 26th 2021. © Mohamed Zaanoun

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Introduction

The eleven day conflict in May 2021 between Israel and two Palestinian militant factions was no less devastating for its shortness. Gaza bore the brunt both of attacks, and of civilian casualties. Some 1,500 declared Israeli air and artillery strikes reportedly targeted militants, weapons, and infrastructure, with Israel Defense Forces (IDF) declaring 100 militants killed. Airwars has identified 128 locally reported civilian harm events, which between them are alleged to have killed up to 214 civilians. Our present understanding, based on local reports, is that between 151 and 192 civilians were killed by IDF strikes. A further 612 to 847 Palestinians were reported injured, many seriously.

Over a third of reported civilian victims of Israeli strikes were children. Most were killed while with their families, in the evenings or at night. And in 101 of the locally alleged incidents where civilians were reported harmed in Gaza during May, Airwars could find no local community reports or official statements of militants also being killed. That is, civilians were the only known victims. When the IDF devastated Gaza's busiest shopping area, al-Wahda Street, in the early hours of May 16th, its stated target was a Hamas tunnel system beneath. While there are no known records of militant casualties, as many as 49 civilians from three different families, including up to 18 children, died in the massive assault.

Justifying in part the extreme destruction in Gaza, Israel cited the imminent threats faced by its own citizens, assaulted by an unprecedented 4,300 missiles fired from Gaza by Hamas and Islamic Jihad. While most were either shot down, fell short, or landed in less populated areas, those missiles that got through to urban areas caused both terror and casualties. Airwars has identified 33 locally reported civilian harm events, in which Palestinian rockets between them directly killed 10 civilians in Israel, and injured between 105 and 165 more; while between 15 and 20 civilians were likely killed in Gaza as a result of Palestinian militant misfires.

This short, brutal conflict was the latest in a series of escalations between Israel and Gaza's factions since 2008. In four major combat operations, the respected Israeli human rights organisation B'Tselem has for example reported that at least 2,374 Palestinian and 21 Israeli civilians have been killed.

There is, however, another major Israeli military campaign in which civilian casualties have been relatively light - raising fundamental questions about targeting policies. As part of our long running monitoring of all foreign actors conducting strikes within Syria, Airwars has conducted the first comprehensive review of many hundreds of Israeli airstrikes since 2013 which have targeted Iranian-linked forces. IDF strikes are alleged to have killed as many as 97 civilians in Syria during this lengthy campaign - although Airwars found no credible local reports of any civilian harm in the first four years of attacks. Our present estimate is that between 14 and 40 civilians have likely been killed in Syria by the IDF since 2013.

The great majority of Israeli actions in Syria have, according to local reports, targeted military assets such as air bases, troop convoys and weapons stores, away from major cities and towns. Where civilian casualties did occur, they were mainly within population centres. By contrast, other foreign belligerents such as Russia and the US-led Coalition have made strategic military choices in Syria that have led to civilians being killed in their thousands. Indeed, many times more civilians were killed by IDF airstrikes in Gaza during eleven days in May 2021, than in more than eight years of sometimes intensive Israeli airstrikes in Syria.

As this report shows, the most significant driver of civilian deaths and injuries in the conflicts examined is the population density of areas attacked. In northern Gaza, neighbourhoods such as al-Rimal were devastated in May - with at least 69 civilians killed by multiple IDF attacks. While Israeli casualties in the conflict were light, dozens of Palestinian rockets were still able to reach Israeli cities such as Ashdod, leading to casualties among residents. And over a third of comparatively more limited civilian deaths from Israeli strikes in Syria were clustered in the capital Damascus.

Urban strikes on Gaza, as well as in Syria and Israel, are part of a troubling contemporary pattern in which belligerents target high population density areas - with devastating consequences for local communities. This study demonstrates that military choices of target and locale lead to profoundly different outcomes for civilians - and that the use of wide area effect explosive weapons in populated areas (EWIPA) will continue to result in often catastrophic harm for affected communities. That is why Airwars supports ongoing efforts by the United Nations, and by a growing number of countries, to restrict the use of explosive weapons in urban areas.

This review is being published alongside our new [microsite](#), which as well as monitoring all ongoing Israeli actions and associated civilian harm in Syria, also provides a permanent, comprehensive public archive and mapping of all locally reported civilian harm claims in both Gaza and Israel during May 2021.

Key findings

- The May 2021 military campaign between Israel Defense Forces (IDF) and Palestinian militant groups led to between 151 and 192 likely civilian deaths in Gaza resulting from IDF actions; between 15 and 20 civilian deaths in Gaza resulting from Palestinian misfires; and 10 civilian deaths in Israel resulting from likely Palestinian militant actions. Between 612 and 847 civilians were allegedly injured in the Gaza Strip during hostilities, and between 105 and 165 were alleged to have been physically injured in Israel.
- Most civilian fatalities occurred in densely populated areas of Gaza. Of the 1,500 strikes declared on the territory by the IDF in May 2021, eight percent (128 events) had associated civilian harm claims.
- Over a third of all reported fatal civilian victims in Gaza were aged 0 to 17 years. Children were killed on almost every day of Israeli strikes, mostly in incidents where multiple members of the same family were also killed or wounded.
- In more than 70% of incidents where civilians were reported harmed in Gaza during May 2021 - 101 of the alleged civilian harm events - Airwars found no local or official reports of militants having also been killed or injured in the attacks. That is, civilians were the only known victims.
- Massive rocket barrages fired from Gaza primarily targeted civilian areas within Israel. At least 4,300 rockets in total were reportedly launched by Hamas's armed wing and Islamic Jihad. While most were either intercepted by the IDF, fell short within Gaza, or landed in low population areas with Israel, a significant number got through to urban centres, where most casualties were recorded.
- For this report, Airwars has also conducted the first comprehensive review of an extensive Israeli air campaign in Syria since 2013 against Iranian-linked forces. Compared in particular to other foreign actors fighting within Syria, reported civilian harm from these Israeli actions has been low.
- Overall, Israeli strikes in Syria are locally alleged to have killed up to 97 civilians between January 2013 and October 2021. However many of these actions are contested with other belligerents. An Airwars assessment therefore indicates that IDF strikes were likely to have killed at least 14 and up to 40 Syrian civilians in the past eight years. Many times more Gazan civilians were likely killed by the IDF during its eleven day campaign in May 2021.
- Airwars analysis of community-reported civilian harm events across Gaza and Israel in May 2021, and in Syria since 2013, indicates that both the targeting approach, and the population density of those areas bombed, were critical drivers of civilian harm.
- In Syria, fighters are mostly engaged away from urban areas, with strikes focused on exclusively military targets. In Gaza, militants were targeted in heavily populated areas, in close proximity to civilians.
- Airwars also mapped all civilian harm allegations in Gaza, Syria and Israel against population density, and found a clear trend. When controlling for population density across all conflicts, even in those exceptional cases of civilian harm resulting from alleged Israeli action in Syria, civilians were more likely to be harmed when strikes hit more densely populated areas such as Damascus.

- In Gaza in particular- with one of the highest populations per square kilometer on the planet - very significant civilian harm in May 2021 correlated directly with high population density. Similar levels of extreme civilian casualties were reported from IDF campaigns targeting Gaza in 2008, 2012 and 2014. In Israel, 17 of the 33 reported civilian harm incidents resulting from Palestinian rockets took place in more densely populated areas.
- Urban strikes on Gaza, Syria and Israel can therefore be viewed as part of a troubling contemporary pattern, in which belligerents sometimes aggressively target high population density areas - with devastating consequences for local communities.
- This report further demonstrates that military choices of target and locale lead to profoundly different outcomes for civilians - and that the use of wide area effect explosive weapons in populated areas (EWIPA) will result in often catastrophic harm for affected communities.

Airwars methodology

The Airwars approach to civilian harm assessments can best be described as remote, original language hyperlocal monitoring of casualty claims by affected communities - along with a review of broader reports and claims by belligerents, media, and other investigators.

The organisation's pioneering of this comprehensive all-source approach has ably demonstrated that affected communities can and do report extensively on the violence affecting them using numerous media and social media channels - and that this evidence adds significantly to our understanding of how, why and when civilians are harmed. For both 2019 and 2020, for example, the majority of civilian harm events officially admitted by the US-led Coalition in Iraq and Syria originated as Airwars referrals.

Airwars began tracking civilian harm in both the Gaza Strip and in Israel in May 2021, using the same approach to monitoring and assessing civilian harm we use for all belligerents - including Israeli strikes in Syria since 2013. Our intention in focusing on this eleven day period in May 2021 was to provide comparative data, to help understand how the same belligerent could be responsible for significantly different civilian harm outcomes in separate theatres.

Using our standard methodology,¹ Airwars has identified, assessed and reported on allegations of civilian harm in Syria dating back to 2013 from reported Israeli strikes; and from the May 2021 conflict affecting Gaza and Israel. Airwars has carried out primary language research of open source materials where civilian harm was alleged (in Arabic, Hebrew, and English); geolocated events; archived open source materials; and provided a provisional assessment of each incident based on all currently available information.

Each civilian harm event has an associated casualty range, representing both the lowest and highest reported estimates according to open source and official materials. Each assessment is also given a civilian harm grading: confirmed, fair, weak, contested or discounted. We also assess the likelihood of the strike itself - classifying each action as either likely, contested, or having been declared by the tracked belligerent. All assessments are viewed as provisional - that is, any credible new information relating to an event will be subsequently added, potentially affecting our understanding of the incident.

1 See 'Methodology', Airwars, at <https://airwars.org/about/methodology/>.

Airwars' methodology is just one of several key methodological approaches to casualty assessments. In Gaza for example, organisations such as the Al Mezan Center for Human Rights and B'Tselem carried out on the ground interviews to produce their estimates. Each approach has validity - collectively adding to our understanding of conflict related civilian harm.²

Airwars' primary focus is on casualty mitigation. We remain neutral on all conflicts we monitor, and treat each alleged civilian death or injury as having equal importance, from large events to small - and whether belligerent actions were viewed as compliant with, or in breach of, International Humanitarian Law (IHL). Both Palestinian militant groups and Israel Defense Forces have been accused of breaches of IHL during May 2021, by, among others - Human Rights Watch, the Al Mezan Center for Human Rights, and B'Tselem³. We reference such claims where appropriate throughout our own report.

For a full breakdown of Airwars' methodological approach for Syria, Gaza and Israel, see Annex A: Civilian harm grading.

Open source data in Syria, Gaza and Israel

Thousands of local sources documenting civilian harm as it happened were identified and archived by our Arabic-, Hebrew- and English-language researchers, resulting in 3,903 unique sources for Gaza; 699 unique sources for Israel; and 686 for Syria. Airwars then reviewed these materials in conjunction with reports and investigations carried out by local and international civil society organisations in order to carry out comprehensive civilian harm assessments of both the May 2021 conflict, and of ongoing Israeli military actions in Syria.

On average, each locally reported civilian harm claim incident had around 30 unique associated sources reporting on casualties - although in Gaza, some incidents had over 50 sources, and with one mass casualty incident on Wahda Street on May 16th involving 148 unique sources.

Sources used by Palestinians, Israelis and Syrians to document events in their local communities included Twitter, Facebook, YouTube, Instagram, and TikTok. More unique sources were found for incidents in Gaza than in Israel and Syria - although by far the most common platform for local reporting of civilian harm in all areas was Twitter.

Local media is often a critical resource in providing fine detail and context for civilian harm events. During the May 2021 conflict, international media also sometimes provided key casualty information for both Gaza and Israel. In comparison, much regional and international media coverage of civilian harm incidents in Syria resulting from alleged Israeli actions has focused on the geopolitical implications of the events, rather than the details of the civilians themselves.

² See Annex B for a full overview of how Airwars findings compare to other estimates in Gaza and Israel only. Due to the more limited coverage of Israeli strikes in Syria, no such alternative comparative data sets are available.

³ 'Gaza: Apparent War Crimes During May Fighting', Human Rights Watch, July 27th 2021, <https://www.hrw.org/news/2021/07/27/gaza-apparent-war-crimes-during-may-fighting>; 'Cessation of Israel's Latest Full-Scale Military Operation on Gaza', Al Mezan Center for Human Rights, May 22nd 2021, <https://www.mezan.org/en/post/23993/Cessation+of+Israel%E2%80%99s+Latest+Full-Scale+Military+Operation+on+Gaza%3A+Closure+must+now+be+Lifted+and+War+Criminals+Held+Accountable>; 'Rockets from Gaza constitute a war crime', B'Tselem, May 13th 2021, https://www.btselem.org/israeli_civilians/20210513_rocket_fire_from_gaza_constitutes_war_crime; 'Bombing civilian objects is a war crime', B'Tselem, May 20th 2021, https://www.btselem.org/gaza_strip/20210520_bombing_civilian_objectives_is_a_war_crim

Number of unique sources Airwars identified per assessment in Gaza and Israel May 2021, and Syria 2013-2021

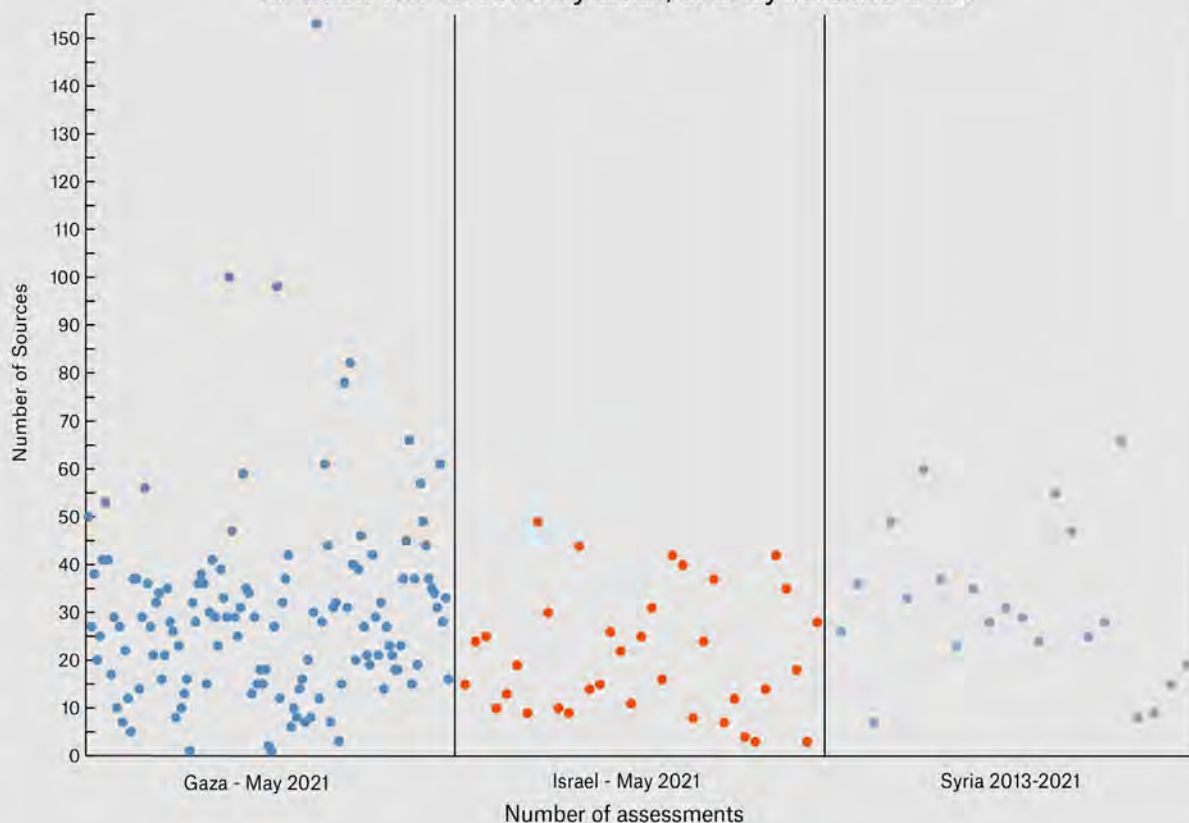


Figure 1: This presents each civilian harm assessment according to the number of unique local sources Airwars has identified, where Israel or Palestinian factions were alleged responsible. Clustering shows both more civilian harm events and more unique sources per incident in Gaza in May 2021 compared to the other theatres. The number of unique sources per civilian harm event across all arenas clusters between 10 and 40, while Gaza exceptionally had several incidents with 100 or more sources.

A frequent concern regarding open source investigations is the risk of misinformation. Certainly during the conflict between Israeli forces and militants in Gaza, misleading and false information was sometimes shared,⁴ with Facebook even setting up a “special operations centre” to monitor misinformation shared on the platform about the conflict.⁵

That said, the great majority of hyperlocal media and social media sources reviewed by Airwars for this report were both unique and legitimate, in our view. This chimes with our findings in other conflicts. Local communities under attack are clearly well placed to document what is happening to them - with such reports adding profoundly to our understanding of conflict-related harm.

As Marwa Fatafta, a Berlin-based policy analyst at Al-Shabaka, a Palestinian-focused think tank, told Vox while reflecting on the role of social media in the conflict in May: “There is a penetration of the mainstream narrative.... People are able to see with their own eyes, without being censored, what’s going on minute by minute.”⁶

4 ‘Israel Palestinian conflict: False and misleading claims fact-checked,’ BBC Monitoring, BBC News, May 16th 2021, reviewed at <https://www.bbc.co.uk/news/57111293>.

5 Facebook deploys special team as Israel-Gaza conflict spreads across social media,’ Elizabeth Culliford, Reuters, May 19th 2021, reviewed at <https://www.reuters.com/technology/facebook-running-special-center-respond-content-israeli-gaza-conflict-2021-05-19/>

6 ‘The “TikTok intifada”’, Alex Ward, Vox, May 20th 2021, reviewed at <https://www.vox.com/22436208/palestinians-gaza-israel-tiktok-social-media>.

Geolocation

A core part of Airwars' work is carried out by our specialist geolocation team, who are able to cross-check multiple open sources to identify, as closely as possible, the locations of alleged civilian harm incidents.

Our work on other conflicts demonstrates that the more accurate the geolocation of an event, the more likely a belligerent may be to concede civilian harm. The United States military in particular has requested detailed locational information from Airwars, which in turn helped to officially determine civilian casualties. In larger scale conflicts, multiple civilian harm claims on a single day can also lead to reporting confusion, which geolocation can help address.

Typical open source providers for satellite imagery such as Google have been challenged for providing only low quality satellite images for Gaza and areas within Israel.⁷ During and after the conflict in May, in response to demands from a growing Open Source Intelligence (OSINT) community, commercial satellite providers, such as Planet, opened their archives and permitted the public use of high-resolution imagery of the territories.⁸

Airwars was given access to these resources and was able to produce a dataset of locations, 17% of which are, in our view, exact Gaza coordinates (meaning longitude and latitude correspond to the exact locale of the strike). A further 18% of Gazan incidents are geolocated to the nearest close landmark.

In Israel, the geolocation team used Google Street View in lieu of clear birds-eye satellite images. Nine exact locations and two locations identified to the nearest close landmark were identified, out of a total of 35 reported civilian harm incidents.

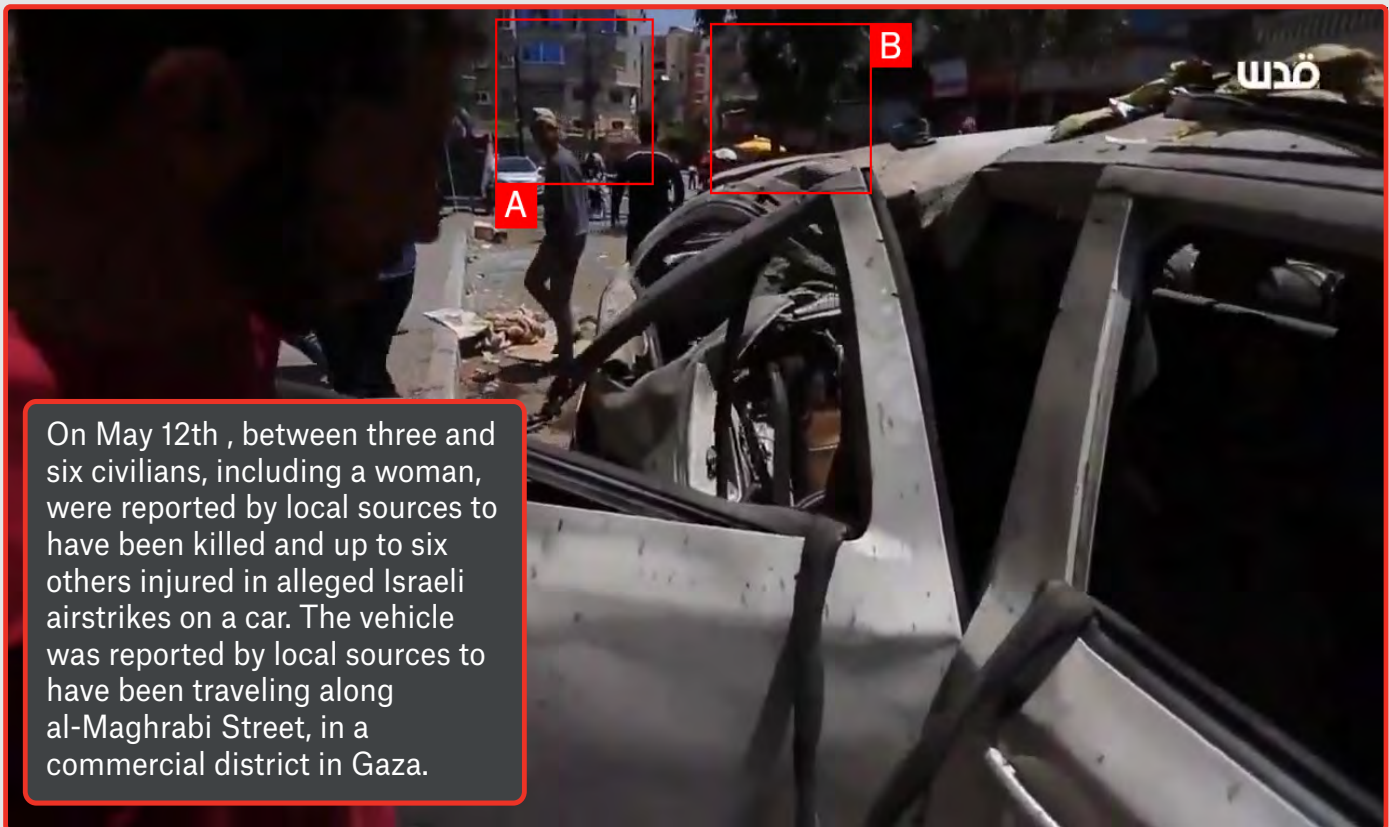
Access to high-resolution imagery not only increased the rate of exact location determinations, but also made methodological differences in geolocation across conflicts noticeable. In Syria, there are few publicly available high quality satellite images covering the whole country.

Despite such challenges, out of the 23 allegations of civilian harm in Syria resulting from Israeli actions which were reviewed by Airwars, six events have been geolocated to exact locations, four of which are within the Damascus area.

Overall, this makes our geolocation of civilian harm events in Gaza and Israel, along with reported Israeli actions in Syria, the most accurate geolocation datasets amongst conflicts presently monitored by the organisation.

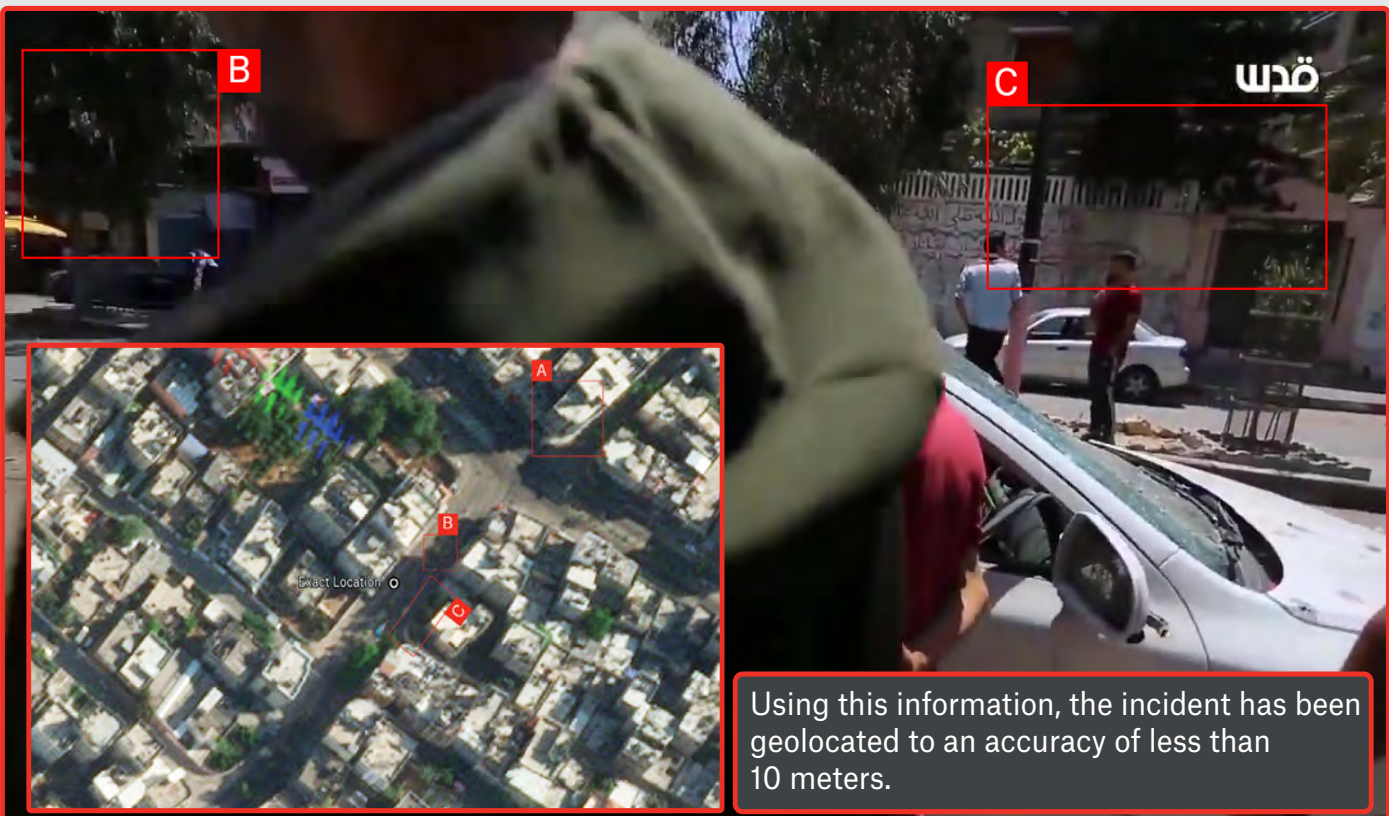
7 See for example: 'Israel-Gaza: Why is the region blurry on Google Maps?', Christopher Giles & Jack Goodman, BBC News, May 17th 2021, reviewed at <https://www.bbc.co.uk/news/57102499>.

8 See for example 'Israel-Gaza Conflict' - what satellite images tell us about this crisis', May 20th 2021, reviewed at <https://www.wsj.com/video/series/on-the-news/israel-gaza-conflict-what-satellite-images-tell-us-about-this-crisis/FE8182FA-ADE3-448E-A996-26BB5619B9D3>



Airwars' geolocation team identified the street initially using MAPS.ME - an app popular in Gaza for navigation. The team then used a 'shadow analysis' - whereby shadows visible in the photographs and videos posted by local sources relating to the event were cross-checked with the time of day the strike was reported, allowing geolocators to orientate the event within the street.

A business adjacent to the strike area called Asaad Medical Laboratory (ي ب ط ل ا د ع س أ ر ب ت خ م) was also identified. Geolocators reviewed their Facebook profile, and found that they reported their business was closed that same day due to a car being targeted outside. Using this information, Airwars geolocators then stitched together a panoramic image from a Twitter video; and matched the images in the videos with satellite imagery provided by Planet.



Caught in the crossfire - civilian casualties in Syria, Gaza and Israel

On May 10th 2021, after weeks of escalating tensions, conflict erupted between Israeli forces and Palestinian armed groups. It was the most intense fighting between the two belligerents since 2014 and the fourth such conflict since 2008.⁹

Israel conducted more than 1,500 air and artillery strikes aimed at Palestinian militant groups within Gaza. Approximately nine per cent of those actions resulted in associated civilian harm claims, according to Airwars and other monitoring and investigative organisations.

Palestinian armed factions also fired an estimated 4,300 rockets at Israel. While some fell short inside the Gaza Strip, and others landed in rural areas with few civilians present, an unknown number of rockets were able to strike urban centres.¹⁰ Israel Defense Forces claimed to have successfully intercepted 90% of those rocket attacks targeting higher population areas.

By the time an Egyptian brokered ceasefire came into effect at 2:00 AM on May 21st, between 168 and 214 civilians were overall alleged to have been killed in Gaza (primarily by Israeli strikes though also as a result of Palestinian rocket misfires) and 10 civilians were reported killed in Israel by direct attacks, according to Airwars assessments. Another five civilians in Israel died in related incidents, for example injuring themselves while running to bomb shelters. Both sides claimed victory at the end of the eleven-day war.¹¹

The conflict was covered across the world, often in real-time. High-rise buildings were captured being reduced to rubble live on rolling news channels, for example. Yet the day after a ceasefire agreement came into place ending both Israeli strikes in Gaza and Palestinian rocket attacks on Israel, the IDF continued to conduct airstrikes on a very different front.

On May 22nd 2021, Israel Defense Forces were reported to have killed and injured Hezbollah fighters in a likely drone strike on a military site east of Deir Ezzor in Syria. The attack reportedly hit a moving car, being driven by a leader of the Lebanese based non-state actor near the Iraqi-Syrian border.¹²

9 According to the Israeli human rights organisation B'tselem, at least 2,374 Palestinian civilians and 21 Israeli civilians have been killed in these four conflicts, named by the IDF as Cast Lead (2008), Pillar of Defense (2012), Protective Edge (2014) and Wall Guardian (2021). See <https://www.btselem.org/statistics>

10 'Rocket and Mortar Attacks against Israel by Date', Jewish Virtual Library, Updated September 2021, Reviewed at: <https://www.jewishvirtuallibrary.org/palestinian-rocket-and-mortar-attacks-against-israel>

11 'Israel and Hamas both claim victory as ceasefire holds', Nidal Al-Mughrabi, Jonathan Saul & Rami Ayyub, Reuters, May 21st 2021, reviewed at

<https://www.reuters.com/world/middle-east/gaza-truce-between-israel-hamas-begins-mediated-by-egypt-2021-05-20/>

12 Unidentified aerial bombardment kills Iraqi Hezbollah forces in Eastern Syria', Xeber24, May 24th 2021, Archived at: <https://archive.md/ukiwM>

Israeli military involvement in Syria, officially revealed by the IDF in 2018 to be called Operation Chess,¹³ is part of its broader shadow war with Iran and has become a proxy battlefield for, it says, preventing attacks on Israel and eradicating those that it considers terrorists, including Hezbollah militants and members of Palestinian militant groups, such as the Islamic Jihad. Israel has also been accused of wanting to maintain air supremacy in the region, and deter Syrian regime military gains.¹⁴

Syrian civilian casualties resulting from Israeli strikes have received significantly less international coverage than victims of Israeli strikes in Gaza. While Airwars has conducted the first comprehensive public review of these actions, the full cost of Israeli strikes in Syria will likely not be known until Israeli authorities themselves properly declare their actions, investigate all allegations of civilian harm, and publish their findings.¹⁵

Significantly different outcomes for civilians

Analysis of these two campaigns shows that in comparison to IDF actions in Gaza, Israeli strikes in Syria are far less likely to result in civilian deaths or injuries.

In Syria, Israeli forces are locally alleged since 2013 to have killed as many as 97 civilians, although Airwars assessments presently indicate 14 to 40 civilian likely fatalities from IDF actions, according to credible local reports where Israel is the only alleged belligerent. Airwars found no credible reports of any civilian harm in the first four years of Israel Defense Forces involvement. By contrast, foreign belligerents have made strategic military choices in the conflict that have led to civilians being killed in their thousands. Russia alone is likely responsible for at least 4,096 to 6,085 civilian deaths in Syria since 2015, Airwars monitoring shows; while the US-led Coalition is likely responsible for between 5,724 and 9,432 civilian deaths in Syria.

The ratio of civilian to militant deaths from IDF actions also differs widely between Gaza and Syria. In Gaza, Airwars estimates that at least 151 and as many as 192 civilians were likely killed in May 2021 by Israeli strikes.¹⁶ Both the IDF and local monitors also estimate that between 90 and 100 Palestinian militants were killed. In Syria, the IDF has been reported by local sources to have killed over 600 militants and Syrian and Iranian troops since 2013 - significantly more than even the maximum allegation of 97 civilians killed.

In the following section, we review in detail the IDF campaigns and associated civilian harm in both Gaza and Syria - as well as the effects of major rocket attacks on Israel by Palestinian factions.

13 'IDF reveals "Operation Chess," its effort to keep Iranian reprisals in check', Judah Ari Gross, The Times of Israel, May 11th 2018, reviewed at

<https://www.timesofisrael.com/idf-reveals-operation-chess-its-effort-to-thwart-iranian-reprisals-from-syria/>.

14 What can we learn from the escalating Israeli raids in Syria?, Eyal Tsir Cohen & Kevin Huggard, Brookings, December 6th 2019, reviewed at <https://www.brookings.edu/blog/order-from-chaos/2019/12/06/what-can-we-learn-from-the-escalating-israeli-raids-in-syria/>.

15 'Dozens Are Killed in Air Strikes Attributed to Israel in Syria. But Who's Counting?', Gideon Levy, Haaretz, September 3rd 2020, reviewed at <https://www.haaretz.com/opinion/premium-dozens-are-killed-in-air-strikes-attributed-to-israel-in-syria-but-who-s-counting-1.9124761>

16 Belligerent estimates provided by United Nations Office for the Coordination of Humanitarian Affairs, excluding civilians deemed 'contested', available to view at <https://www.ochaopt.org/data/casualties>

Analysis: Israel's eleven-day conflict with Gaza, May 2021

While incidences of locally reported civilian harm from extensive Israeli actions in Syria have been limited, the same cannot be said for Israel's massive bombardment of Gaza between May 10th and 20th 2021.

In Gaza, Airwars researchers identified 128 events where civilian harm was locally reported to have occurred - accounting for between 168 and 214 alleged civilian deaths, and between 612 and 847 injuries. This includes between 151 and 192 civilian deaths Airwars has assessed as likely having been caused by Israel Defense Forces, and at least 15 and up to 20 deaths likely caused by Palestinian rocket misfire.¹⁷

Reported civilian deaths in Gaza from Israeli strikes May 2021

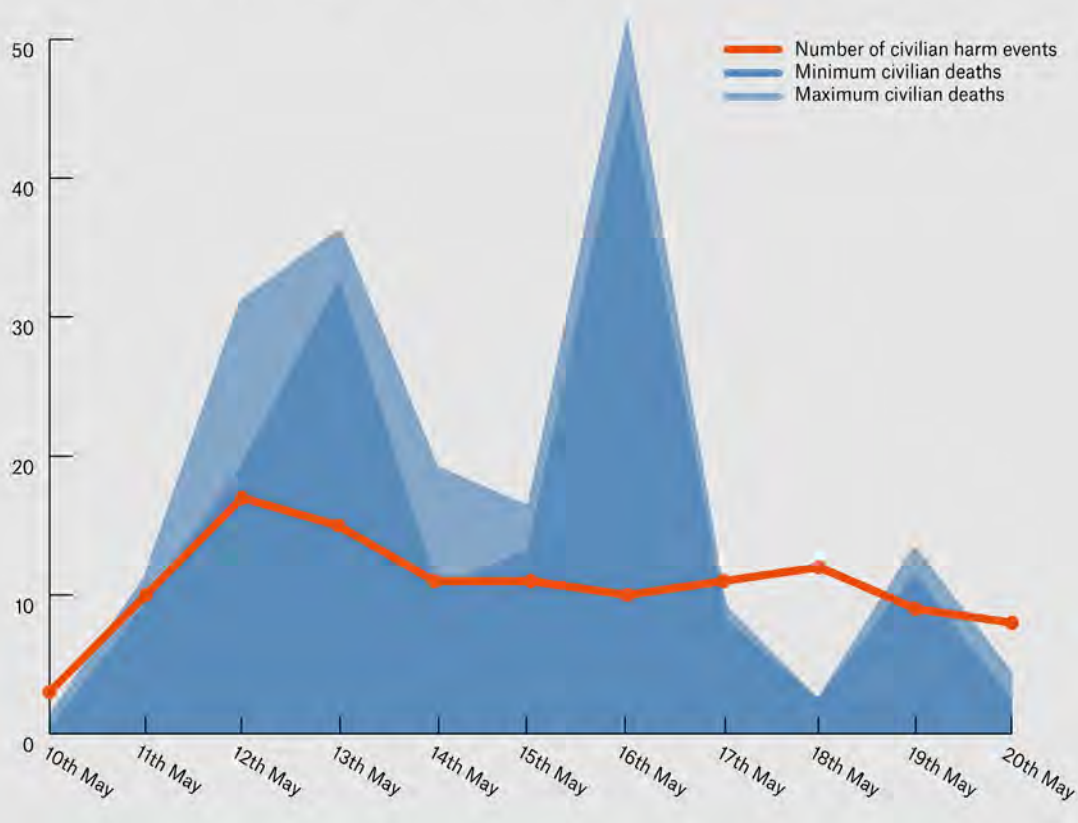


Figure 3: This shows the minimum and maximum reported civilian deaths resulting from likely Israeli actions in Gaza in May 2021, alongside the number of locally claimed civilian harm events per day. On May 12th and 13th for example, the most civilian harm events were reported, while the highest number of alleged deaths was on May 16th.

In Gaza, two days in the conflict were particularly deadly - May 13th where up to 36 civilians were killed and May 16th where up to 50 civilians were reported killed, all but one in a single incident.¹⁸

On both May 12th and May 13th, when most Palestinians in Gaza were celebrating Eid al-Fitr, the ending of the month of Ramadan, Airwars researchers identified the highest numbers of reported civilian harm events of the conflict - with 17 and 16 individual civilian harm events reported, respectively.

¹⁷ Classified as 'Fair' or 'Confirmed'; see 'Methodology', Airwars, at <https://airwars.org/about/methodology/>.

¹⁸ See Airwars assessment ISPT082 at <https://airwars.org/civilian-casualties/ispt082-may-16-2021/>

Demographics of civilian fatalities from Israeli strikes May 2021

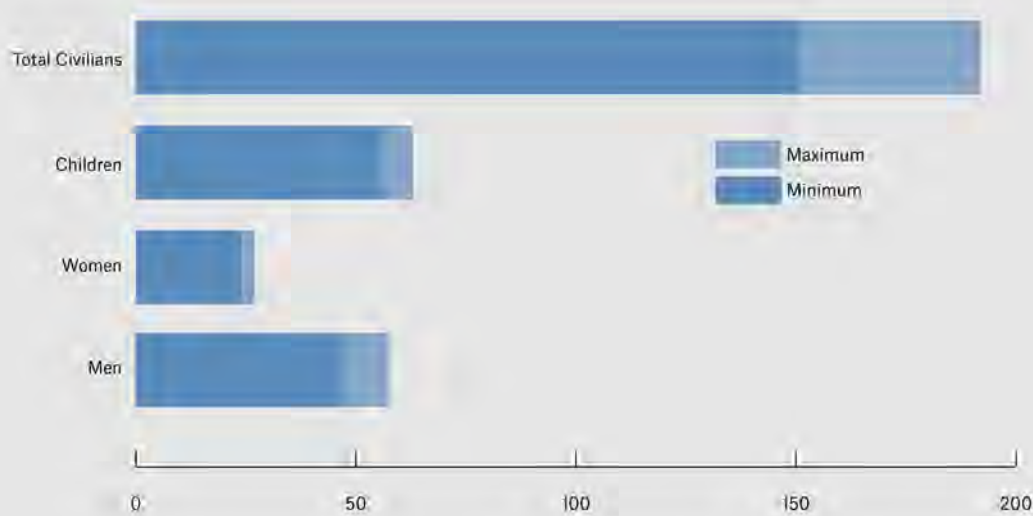


Figure 4: This shows the minimum and maximum reported civilian deaths likely resulting from Israeli strikes in Gaza, May 2021. While not all demographic information is known, children proportionally represented at least a third of those reported killed.

In one case on May 12th, 28-year old Muhammad Al-Hittu described in testimony to B'Tselem how he lost both of his parents when likely Israeli strikes hit a car travelling in the Tal al-Hawa neighbourhood in Gaza city: "I heard a loud blast behind me. There was shrapnel everywhere. From the force of the blast, I was blown into the entrance to my sister's house," Muhammad recalled. "After two hours, some relatives came and told me my mother and father had passed away. I broke down and started screaming and crying. I was in shock. Why did they bomb us? We're just civilians."¹⁹ Between three and six non combatants were reported killed in the attack, and another six injured.

Reported child fatalities in Gaza from Israeli strikes in May 2021

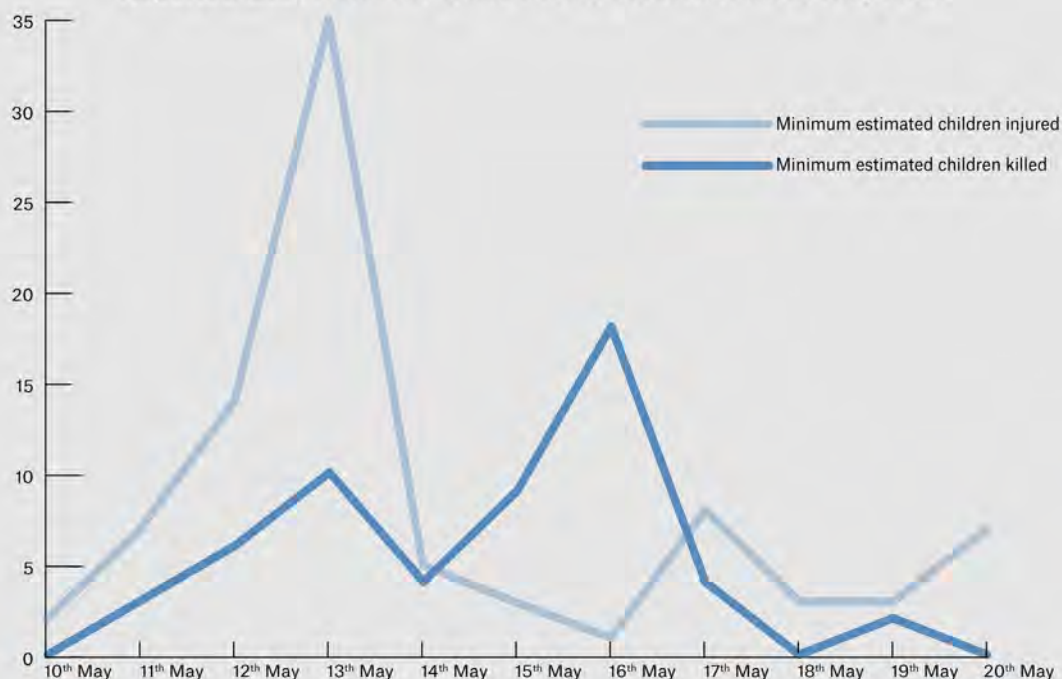


Figure 5: Minimum reported children killed and injured in likely Israeli strikes in May 2021. The graph indicates that up to 35 children were injured on May 13th, while just under 20 children were reported killed on the 16th.

19 See Airwars assessment ISPT018 at <https://airwars.org/civilian-casualties/ispt018-may-12-2021/>

As in previous major IDF actions, children paid a high price during the recent conflict in Gaza - with over a third of all reported civilian non-combatant deaths reported to be those aged 0 to 17 years. Children were killed on almost every day of Israeli strikes on Gaza, mostly in incidents where multiple members of the same family were also killed or wounded.

Gaza has a young population - with latest estimates that 40% of the population is below the age of 14.²⁰ In the last major conflict between Israeli forces and militants in Gaza, in 2014, over a third of civilians killed were also children - 556 children out of 1,545 civilians killed according to Al Mezan, and 526 out of 1,391 civilians according to B'Tselem, in less than two months of fighting.²¹

Ten children were reported killed in six civilian harm incidents across Gaza on May 13th - Eid al Fitr - representing the second deadliest night of the conflict for both recorded civilian casualties, and of children killed.

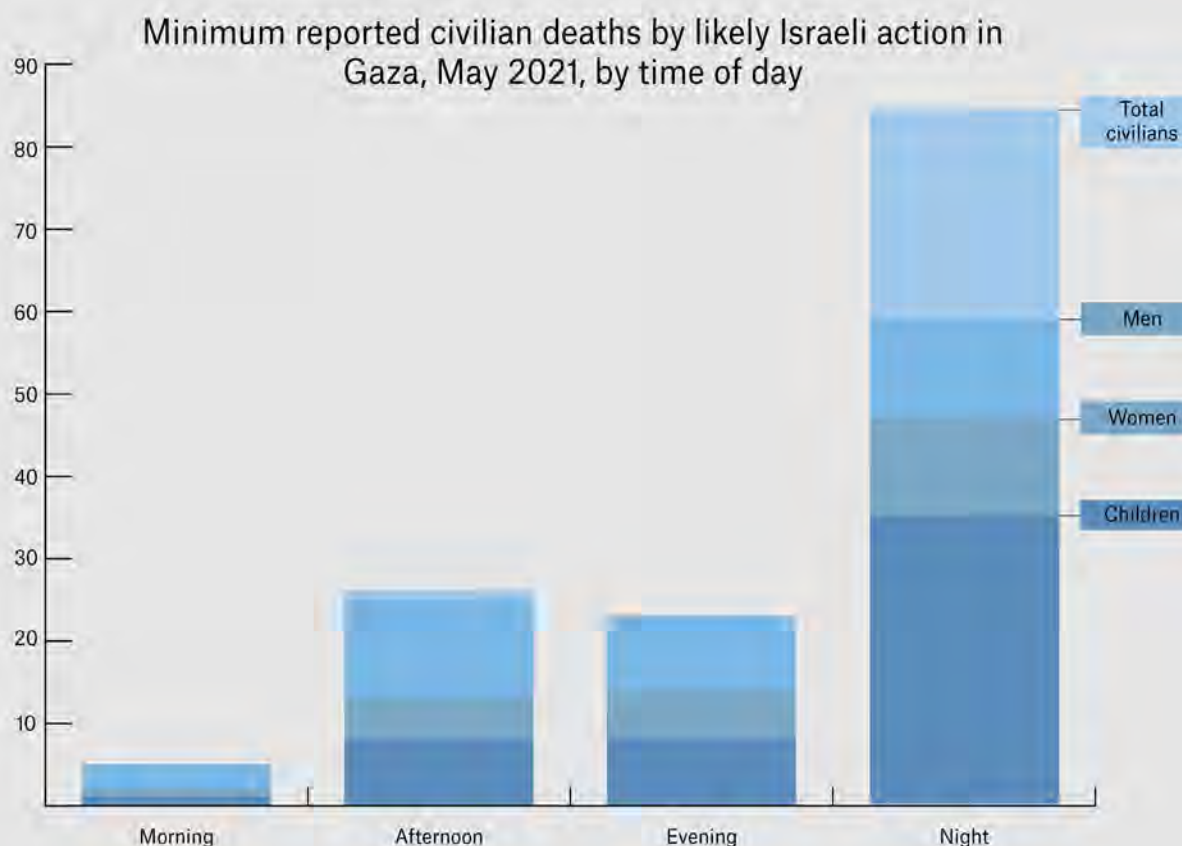


Figure 6: This stacks the minimum number of likely civilian deaths according to reported demographics by time of day. Most civilian casualties were reported at night.

In all but four civilian harm events where children were likely killed in Gaza, we were able to identify either approximate or exact timings for each strike. Our data shows that at least 72% of children were killed either at night or in the evening.²² Militaries may choose to conduct attacks at night in an effort to reduce civilian exposure. However as shown in Gaza, night time attacks still had devastating impacts on civilian families.

20 See 'Gaza: The devastating impact of conflict on children's mental health', Dr Juan Paris, Medecins Sans Frontieres, May 28th 2021, reviewed at <https://msf.org.uk/article/gaza-devastating-impact-conflict-childrens-mental-health>

21 '50 Days: More than 500 Children: Facts and figures on fatalities in Gaza, Summer 2014', B'Tselem, July 20th 2021, reviewed at https://www.btselem.org/press_releases/20160720_fatalities_in_gaza_conflict_2014. For statistical consistency, Airwars has presented just one source for historical conflicts (B'Tselem). Figures have also been provided by, for example - Al-Haq, the Palestinian Center for Human Rights, Al Dameer Association for Human Rights, and Al Mezan Center for Human Rights, see eg 'Operation Protective Edge in Numbers', 2015, <https://www.mezan.org/en/uploads/files/14598458701382.pdf>

22 Timings per event have been categorised as follows: Morning - 6am-11.59am, Afternoon - 12pm-5.59pm, Evening 6pm-10.59pm, Night - 11pm-5.59am.



Figure 7: This shows Airwars' interactive mapping of reported civilian harm in Gaza during May 2021.²³ With assistance from Palestinian sources, Airwars plotted neighbourhood boundaries, aggregating civilian fatalities by area to show where civilians were harmed. The higher the level of the neighbourhood on the map, the greater the number of fatalities reported. One neighbourhood in particular saw significant casualty reports - Al-Rimal - where 69 or more civilians were reported killed. As indicated by the raised neighbourhood levels, civilians were most likely to be harmed in northern areas of the Gaza Strip.²⁴

23 All assessments are also fully documented, reviewed and archived, and available on the Airwars website at <https://airwars.org/conflict/israeli-military-in-syria-the-gaza-strip/>. See the final section of this report 'Civilian harm in focus' for case studies of children affected in the conflict.

24 The fully interactive map, by our design partners Rectangle, can be found at <https://airwars.org/conflict-data/civilian-casualties-gaza-may-2021-map/>.

IDF position on Gaza

Throughout the May conflict, the IDF published regular bulletins and press briefings on its airstrikes and other actions in Gaza, though there has been no subsequent public report on potential civilian casualties. Responding by email on November 9th 2021 to Airwars questions regarding targeting strategies and reported civilian harm in Gaza, an IDF spokesperson provided the following statement:

“Throughout the operation, the IDF operated in order to protect the security of the State of Israel and its citizens, and to thwart the attempts by Hamas and other terror organizations to kill civilians and target civilian infrastructure. The IDF struck military targets belonging to Hamas and other terror organizations in the Gaza Strip. In particular, the IDF struck rocket capabilities, weapons development and production facilities, cyber warfare capabilities and underground infrastructure; all in order to prevent the continuous rocket fire on Israel and to eliminate the threat faced towards Israeli civilians. While terror organizations in the Gaza Strip deliberately embed their military assets in densely populated civilian areas, the IDF takes every feasible measure to minimize harm to civilians and civilian property as much as possible...”

According to the IDF’s estimation during Operation ‘Guardian of The Walls’ about 100 Hamas and Palestinian Islamic Jihad (PIJ) activists were killed by Israeli strikes.

Since Operation ‘Guardian of The Walls’, the IDF has conducted many professional and operational reviews, to examine the results of IDF operations in depth and to improve and learn from previous mistakes. The findings of these reviews cannot be published due to their classified status.”

Separately, ahead of publication of this report Airwars wrote on several occasions to the Military Advocate General of the IDF offering to discuss our findings, and potential improvements to IDF monitoring and reporting of civilian harm. At publication, no response had been received.

Airwars concerns:

It remains unclear to what extent the IDF draws upon the findings of external organisations when determining civilian harm. Based on extensive prior experience engaging with militaries in other conflicts, Airwars has demonstrated that militaries themselves are often poorly placed to determine the civilian harm resulting from their own actions. For example, the majority of events officially determined as Credible by the US-led Coalition regarding civilian harm from their actions in Iraq and Syria 2018-2019 resulted from Airwars referrals - that is, the Coalition’s own mechanisms had themselves failed to identify these events.

Investigating civilian harm claims within a classified space also prevents effective interrogation of military determinations against the public record; and so will be less effective in mitigating future civilian harm, as well as severely restricting public accountability.

In Israel, a comprehensive review by Airwars in Hebrew, Arabic and English identified 33 locally reported civilian harm events resulting from Palestinian rocket fire, which were reported to have directly killed up to 10 civilians and further injured at least 105 and up to 165 more.

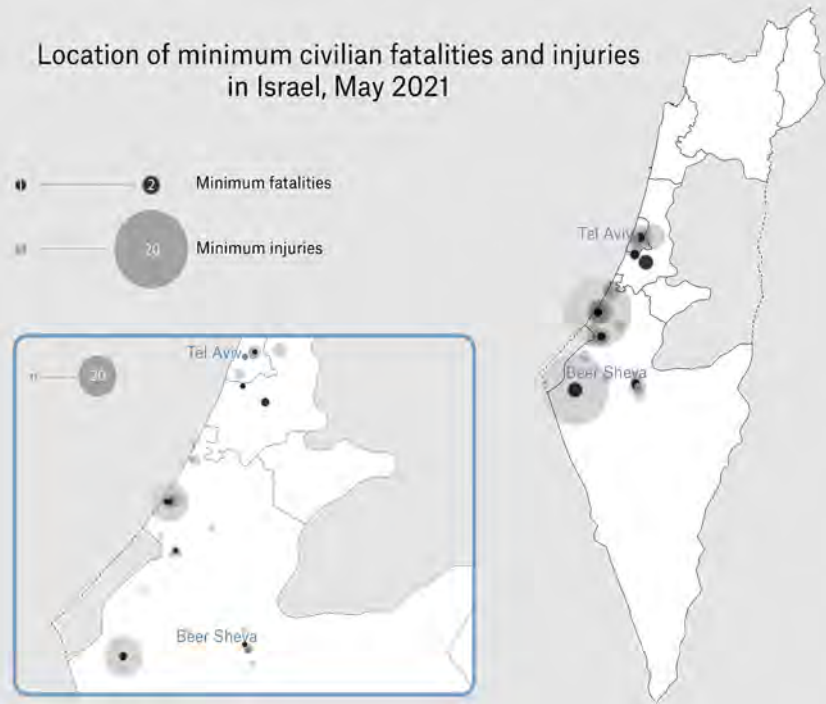


Figure 8: The map reflects the widely dispersed reach of Palestinian rockets fired at Israel - able to cause civilian harm as far north as Tel Aviv, and as far south as the city of Beer Sheva.

In Israel, the 10 civilian deaths identified as a direct result of reported Palestinian militant actions mostly occurred in residential areas such as Be'er Sheva, Sderot, Ashkelon, and in southern neighbourhoods of Tel Aviv.

Of the minimum 105 civilians reported injured, at least 12 and up to 17 were children. Over the course of the conflict, in Israel two children were reported to have been killed by Palestinian attacks.

Not directly included in this count, but included in our public database, are another five civilians who died and up to 19 more who were injured in indirect harm incidents - such as heart attacks during rocket attacks, or falling while on their way to bomb shelters. Since Gaza reports focused only on direct harm from Israeli actions, we have not included these indirect deaths and injuries in Israel in our direct harm casualty toll, although we do include them in our comprehensive assessment archive.

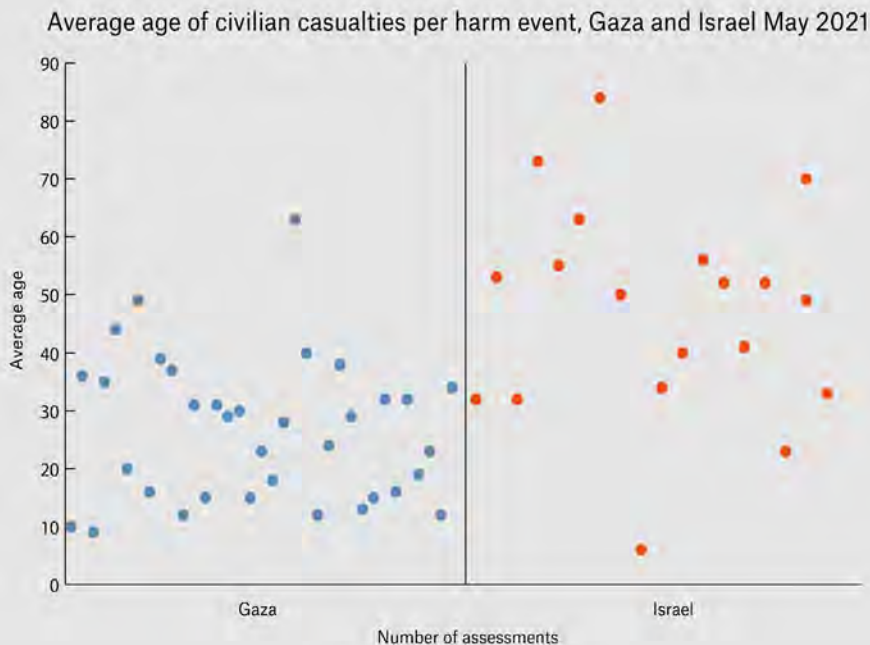


Figure 9: Each data point represents a civilian harm assessment in Gaza or Israel during May 2021, which has been categorised by the average age of all casualties reported. As the graph shows, most civilians harmed in Israel were older persons who in many cases would have been less able to quickly access shelters (see also 'Civilian harm in focus' in this report).

Mohammed Al Hadidi with his surviving five month old child, following a reported Israeli strike on the Al Shati camp in Gaza on May 15th. (image via @Aboudwahidi)



Hamas position on civilian casualties in Israel

Both Hamas and Islamic Jihad regularly published statements via social media platforms during May 2021, referencing both rocket attacks on Israel, and civilian harm events from reported IDF strikes within Gaza.

Responding to requests for comment on both targeting strategies and reported civilian harm in Israel from al-Qassam rockets, senior spokesperson Basem Naim told Airwars that Hamas had *“always tried to stick to international law and to avoid targeting civilians.”* However he also asserted that *“a lot of [Israeli] military compounds and security facilities are built inside big cities and near universities and near hospitals.”*

According to the spokesman, Hamas seeks to publish warnings ahead of its attacks on Israeli urban centres *“hours before targeting or launching any rockets [we] have always warned the cities that we are planning to target some military compound or some security facilities in Tel Aviv in three hours; or we are planning to target this military airport in the next hours.”*

Airwars concerns:

Airwars believes all belligerents should be accountable for their actions resulting in civilian harm. Unfortunately, Airwars’ review of al-Qassam statements on Telegram found that they not only acknowledged civilian harm in Israel from rocket attacks on urban centres, but also appeared to advertise civilian harm outcomes as markers of success in their campaign.

The deliberate targeting of civilians is unlawful, and Airwars strongly urges all belligerents to build mechanisms for effective protection of civilians and mitigation of harm in conflicts.

The role of more mature social media platforms in locally chronicling civilian harm - such as YouTube, Facebook, Twitter and Instagram - has been well documented in conflicts such as Syria and Libya. Both Palestinians and Israelis also made use of the video-sharing platform TikTok during May 2021 to provide sometimes compelling social media narratives and document conflict events.

Most of the videos identified by Airwars on TikTok showed the destruction of buildings in Gaza shortly after air and artillery strikes. In some cases, original footage of live attacks was also available on the platform. Young Palestinians also used the app for filming themselves and recounting violent events, or more broadly for documenting reported Israeli police violence against Palestinian civilians - similar to the way TikTok has been used in other protest movements.

Israeli citizens, on the other hand, often appeared to show civilians seeking shelter during expected missile attacks. The Israel Defense Forces and individual soldiers likewise increased their use of the app during the conflict in May. The IDF not only shared videos of its military technology and the Iron Dome air defence system, but also published footage of military operations.

What sets TikTok apart from other platforms is its embedded song-search. Footage documenting the conflict can be quickly found by searching certain trending Palestinian songs, such as لا تبالي يا غز (La tubali ya Ghaza) by Khalid Al Shareef. The app also operates via the usual hashtag search. Among the most popular hashtags used during the violent confrontation are: #غزة_تحت_القصف (Gaza under fire), #غزة_العزّة (Gaza the dearest), #غزة_فلسطين (Gaza Palestine), #لا_تَبالي_يا_غزة (Don't worry, Gaza), #حي_الشّيخ_جراح (Neighbourhood Sheikh Jarrah), and/or #SaveSheikhJarra.

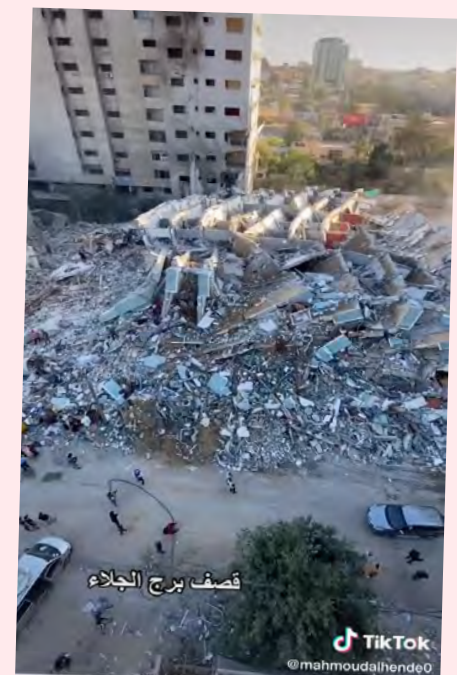
Using TikTok as a source for civilian harm comes with challenges, as search options are restricted and any context for the videos is often lacking, making multiple source cross-checking more complicated. Airwars has therefore not yet included TikTok material widely in the media sections of its civilian harm assessments, though we continue to explore ways to incorporate TikTok into ongoing open source investigations.



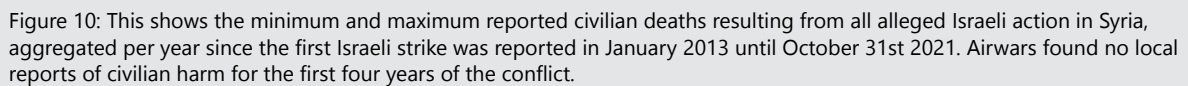
Still from a video posted on TikTok by user @f.mussabeh reported to show destruction in Gaza after an alleged Israeli strike during May 2021.



Still from video posted on TikTok by user @anas.zeno of people pulling out a man stuck under rubble, uploaded on May 14th 2021. The caption states "Gaza is _ now _ under _ bombardment"



Still taken from TikTok user @mahmoudalhende0 video of destruction in the Gaza Strip in May 2021. The video was uploaded on May 17th 2021 entitled, "Bombing of Al-Jalaa Tower in Gaza City #savesheikhjarrah #gazaunderattack"



While Airwars only began actively monitoring reports of civilian harm in Syria resulting from alleged Israeli action in mid-2019, our researchers have since conducted deep historical reviews of hyperlocal sources to investigate any potential claims of civilian harm resulting from Israeli strikes dating back to 2013. Despite a comprehensive investigation, Airwars researchers were unable to identify a single civilian harm claim against Israeli actions for the first four years of the campaign.²⁵

Overall, claimed civilian harm events account for 22 out of 185 locally reported IDF strikes which were reviewed by Airwars since 2013 - although Israel has itself noted many hundreds more such actions. The great majority of locally reported IDF strikes appear to have focused on exclusively military targets away from population centres. A likely Israeli strike on October 30th 2021 near Damascus, for example, targeted a convoy of vehicles allegedly shipping weapons from Syria to Lebanon. No associated civilian harm was reported by either local media or social media channels.²⁶

26 See for example, in Arabic, Shaam News' coverage of the likely Israeli airstrike, October 31st 2021, at <http://www.shaan.org/news/syria-news-قوة إسرائيلية قد قصفت دمشق في وقت سابق من يوم الاثنين>

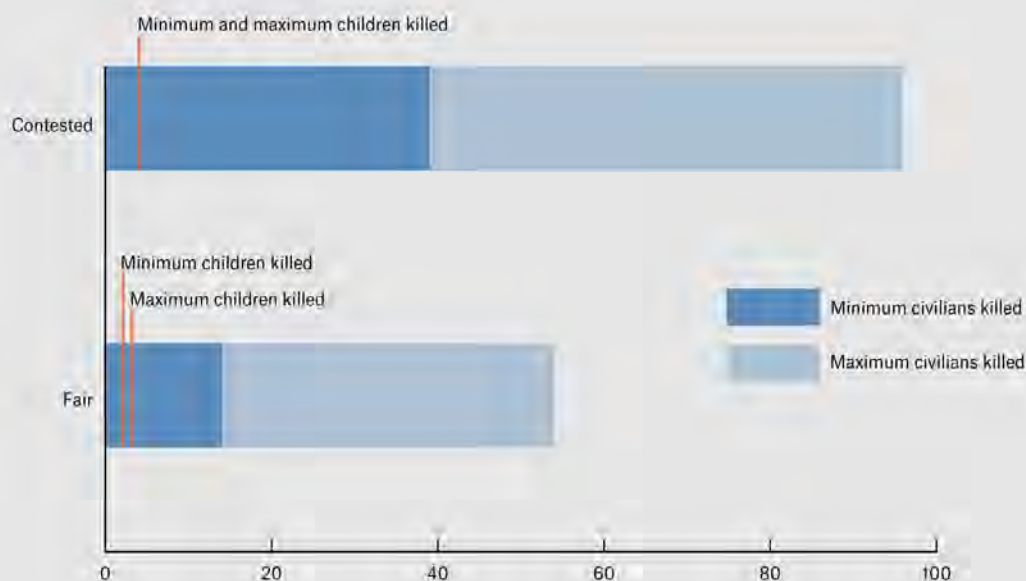


Figure 11: This shows the range of civilian deaths in Syria since 2013 reported by local sources to have resulted from Israeli strikes, categorised in line with the Airwars grading system: 'Fair' being those deaths where all sources allege Israel to be responsible, and 'Contested', where there are competing attribution claims - such as parallel reports of US-led Coalition strikes, or of debris resulting from Syrian regime anti-aircraft intercepts.

Of those 22 events where civilian casualties were alleged, half are categorised as 'contested' according to the Airwars methodology - that is, sources also pointed to other belligerents or causes as being potentially responsible for the harm. In five cases for example, some sources reported that it was possible civilian harm could have resulted not from Israeli strikes, but from falling debris after Syrian regime counterfire attempted to target Israeli planes in Syrian airspace.

In one incident in Hama on January 22nd 2021, for example, children were reported killed either by an IDF strike or by a rocket allegedly launched by the Syrian regime to intercept likely Israeli aircraft on their way to attack a Syrian regime facility. Four civilians from the same family were reported killed while four others were wounded - with the damage reducing a building to rubble, and trapping the children underneath.

Other competing attribution claims included civilian harm events also blamed on US-led Coalition forces, or where civilians were reported by some sources to have been killed by reasons other than the strike itself (such as in a car accident).

Overall, between six and seven children were killed and between seven and 10 more were injured in all incidents where Israel is alleged to have been responsible for civilian harm. Of those casualties, between two and three were killed in events where Israeli forces were likely the only belligerent.

Case studies of key civilian harm events from alleged IDF actions in Syria can be found in the final section of this report, 'Civilian harm in focus'. All civilian harm assessments are also fully documented on our website.²⁷

27 See <https://airwars.org/conflict/israeli-military-in-syria-the-gaza-strip/>

IDF position on Syria

Between 2013 and 2018, Israel made no official comments on its campaign in Syria. Senior Ministers and defence officials later on occasion acknowledged the campaign, with IDF spokespersons also confirming a small number of individual actions. No public admissions of civilian harm have been made.

Responding by email to Airwars questions regarding targeting strategies and reported civilian harm from Israeli strikes in Syria, on November 9th 2021 an IDF spokesperson provided the following statement:

“Regarding your questions about Syria - The IDF does not respond to foreign reports.”

Separately, ahead of publication of this report Airwars wrote to the Military Advocate General of the IDF on October 20th and October 28th 2021 offering to discuss our findings, and potential improvements to IDF monitoring and reporting of civilian harm. At publication, no response had been received.

Airwars concerns:

Israel’s refusal publicly to comment either on individual strikes, or on alleged civilian harm from its actions in Syria, prevents any accountability for what appears to be an extensive conventional military campaign.

While civilian deaths and injuries in Syria from Israeli strikes have been more limited than those of other belligerents, every civilian affected by conflict deserves public accountability. Airwars notes that the US-led Coalition, also operating in Syria, has not only publicly reported the dates and near locations of most strikes, but has also officially conceded several hundred civilian fatalities during that campaign.



Damage to a home from Israeli strikes on the Qusdaya suburb of Damascus on November 20, 2021 in a declared Israeli strike. Up to two children and a woman were reported injured by local sources. Image posted on Twitter by @Dannymakkisyria.

Understanding the gap between civilian harm claims from Israeli actions in Syria and Gaza

Despite the tragic and under-reported cases in Syria of civilian harm resulting from Israeli actions, Israel Defense Forces (IDF) were responsible for many times more deaths in Gaza during eleven days in May 2021, than have resulted from an at-times intensive eight year IDF campaign in Syria, our findings show.

In the view of Airwars and others, all civilian harm should be treated with equal standards of transparency and accountability - regardless of the belligerent, the conflict arena, or the scale of civilian harm. And only by belligerents comprehensively understanding how, why and where civilians are harmed by their own actions, as well as those of opponents, can current and future casualties most effectively be mitigated.

Civilians reported killed by alleged Israeli strikes per Airwars grading

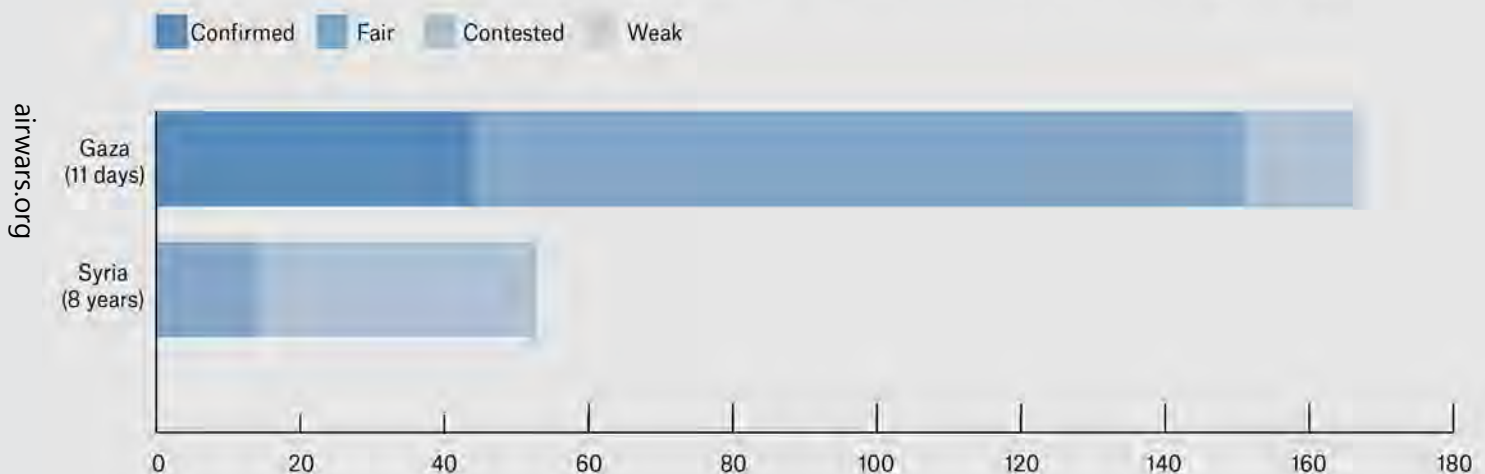


Figure 12: This shows the significantly differing reported civilian harm outcomes from Israel's actions in Gaza during eleven days in May 2021, and in Syria over the last eight years. Civilian harm is presented as the minimum reported deaths only. The 'confirmed' action in Gaza reflects one event in which up to 49 civilians were killed (al-Wahda Street, May 16th). It is the only event where Israel Defense Forces have explicitly admitted that civilian harm resulted from, though it has not provided its own casualty estimate.

So why and how, in just eleven days of conflict in Gaza, did Israeli operations proportionally kill so many civilians - a pattern also well documented during Israel's three previous military interventions?

Airwars analysis of community-reported events indicates that both the targeting strategy employed, and the population density of those areas bombed, are critical determinants of whether civilian harm might occur during a military action.

Civilian harm drivers: targeting strategy

An examination by Airwars of 185 locally reported Israeli strike sorties within Syria from January 2013 to October 2021 found that the IDF has overwhelmingly struck exclusively military targets in Syria - usually in less populated areas. These have included ammunition warehouses, airfields, and military convoys - accounting for 120 out of the 185 likely strikes reviewed.

Based on local Syrian reporting, provisional estimates indicate that at least 631 belligerents have been killed in Israeli strikes from January 2013 to October 2021 - with local sources reporting that 50% of the target groups were likely Iranian-linked military actors.²⁸

In Deir Ezzor governorate alone, local reports suggest that Israeli forces killed between 253 and 334 fighters in just 23 events. Yet despite such an intensive aerial campaign, Airwars was not able to identify a single local allegation of civilian harm caused by Israeli forces in Deir Ezzor.

Israel's near-exclusive targeting of military assets outside of civilian areas in Syria is a key driver of low levels of reported civilian harm from IDF actions, Airwars believes. For example, between March 27th-28th 2019, Israeli strikes likely killed seven to ten belligerents in a targeted attack on what was identified by local sources as a rocket manufacturing workshop near Aleppo International Airport, on the outskirts of the city. The strikes were reported to have been so destructive that they caused an electrical blackout throughout Syria's second largest city. However material destruction was reportedly limited to the manufacturing workshop alone.



The collapse of a four story building in Beit Lahia Project hit by Israeli missiles on May 13th 2021 (image via @xoql8bkY9YHz-3rn)

In a November 2021 interview between Airwars Senior Investigator Joe Dyke and Daniel Reisner, head of the IDF Law Department from 1995 and 2004, Reisner emphasised that variations in targeting approach were likely a key determinant of differing civilian harm outcomes: "You are comparing airstrikes against targets [in Gaza] in the context of rockets being fired at Israel where the number of casualties must be higher because they are firing from civilian areas and your time of response is limited - you don't have three weeks to prepare like in a targeted killing".

²⁸ Airwars researchers only explored available reports from 2018, given the limited nature of documentation on strikes in the earlier years of Israel's operations



Cars destroyed by rocket strikes on the predominantly Arab village of Dahamash, south of Tel Aviv, in the early hours of May 12th, 2021 (Image posted by @AlmakdesyMedia)

Indeed - as outlined earlier in this report, even in incidents where Israeli actions have been linked to allegations of civilian casualties in Syria, in just under a quarter - five out of 22 incidents - there are indications, according to local sources, that civilian harm may instead have resulted from Syrian regime anti-aircraft fire targeting Israeli aircraft, rather than Israeli strikes themselves targeting residential or populated areas.

Israeli forces were also found to be significantly more likely to exclusively target militants in military facilities, rather than deliberately strike targets in their family homes - as they have frequently done in Gaza.

In only two cases out of 34 alleged civilian harm incidents reviewed by Airwars since 2013 (6%) were belligerents reported to have been in their family homes when targeted by the IDF in Syria.

By contrast, in Gaza during May 2021, at least 17 of 116 locally claimed civilian harm incidents (14%) involved relatives, family members or close neighbours of militants reportedly hit in or near their homes. This accounts for at least 27 and up to 33 civilians killed, and at least 105 to 138 civilians injured. Airwars researchers also identified at least 10 and up to 11 belligerents additionally killed in these same events, according to local sources.

Hamas acknowledged to Airwars that its senior personnel had been targeted and killed in their homes during May 2021 - though questioned the legality of such attacks, with senior Hamas spokesperson Basem Naim asserting that "this happened in a lot of cases. In international law they have no right to target Hamas members and officials and their families simply because of their political affiliation."

Militants killed in family homes

Sayyeda Zainab, Damascus, Syria

December 21st-22nd 2019

Airwars has been able to identify only two incidents in Syria since 2013 where sources have clearly stated civilians were killed alongside militants in their family homes as a result of reported Israeli actions. In one, Israel is alleged to have launched airstrikes against a residential building, targeting General Haj Ali - believed to be a commander in the Iranian Revolutionary Guard Corps. However the attack also reportedly killed two civilian family members. It remains unclear whether Haj Ali was himself killed in the strike, with some sources saying that he survived.



A damaged residential house after alleged Israeli airstrikes on Al Mazza neighbourhood in Damascus on November 12th, 2019 killed at least two civilians and injured up to 10 others. Image posted on Twitter via @Maher_mon.

Al-Sheikh Radwan neighbourhood, Gaza

May 11th 2021

The IDF itself confirmed in a tweet an airstrike targeting Iyad Fathi Fayeeg Sharir, described as the head of a Hamas anti-tank missile unit in Gaza. While the IDF did not mention any further casualties, Airwars found the strike also reportedly killed three other members of his family, including his wife Layali Taha Sharir and their two children, 16 year old Lina and two year old Mina. Two missiles were fired at the family house at around 4.30pm, according to the Al Mezan Center for Human Rights.

During how many civilian harm events in Gaza and Syria were militants reportedly present?

In over 80% of incidents where civilians were reported harmed in Gaza during May 2021 - 95 of the 116 civilian harm events allegedly caused by Israeli strikes - Airwars found no local or official Hamas reports of militants having also been killed or injured. That is, civilians were the only known victims of the events. Some caution should be exercised in drawing inferences from public information on militant harm in Gaza, given significant limitations imposed by Hamas on freedom of expression - which may mean militant deaths were underreported.

In Syria, civilians were far more likely to be harmed in events which also killed fighters. More than three quarters of locally reported civilian harm incidents also involved belligerent deaths, while civilians were the only known victims in 23% of all casualty incidents (six events in total) assessed by Airwars where Israel is the alleged perpetrator. Of those six incidents, half were 'contested' due to competing attribution claims.

Airwars did not assess incidents in Gaza in May 2021 where only militants were reported harmed by Israeli actions, given our own primary focus on locally reported instances of civilian casualties. However, according to the United Nations' humanitarian arm OCHA, in total 64 militants were killed in Gaza, with 67 additional deaths contested as to whether they were a civilian or a member of an armed group.²⁹ Palestinian organisation the Al Mezan Center for Human Rights determined that 89 militants were killed, while the Israeli NGO B'Tselem separately reported that 90 Palestinians were killed who were believed to be participating in hostilities.³⁰ These figures closely reflect the IDF's own estimation of 100 militants killed by its actions.

As outlined elsewhere in this report, Airwars has recorded militants as being members of al-Qassam (the armed wing of Hamas) or of the Islamic Jihad/ al-Quds Brigade. Those killed were often claimed or announced by the militant groups themselves. Their official channels were comprehensively scraped by Airwars researchers and cross-checked against each civilian harm event. At least 14 Airwars assessments also included statements by al-Qassam or the Islamic Jihad showing that a member of their militant group had been killed, alongside civilians.

Throughout the Israel-Palestine conflict in 2021, the IDF itself routinely reported the deaths of alleged senior Hamas commanders and officials, including names and other information. For example on May 12th, the IDF declared an operation was conducted to "eliminate a number of senior commanders in the Hamas terrorist organisation. The senior commanders were a key part of the Hamas General Staff and are considered close to the head of the Hamas military wing, Mohammed Deif. Details regarding the dead terrorists will be announced."³¹

29 'Response to the escalation in the oPt | Situation Report No. 10 (September 2021)', OCHA, September 10th 2021, Reviewed at: <https://www.ochaopt.org/content/response-escalation-opt-situation-report-no-10-september-2021>

30 'Words Fail Us', B'Tselem, October 2021, reviewed at <https://wordsfailus.btselem.org/>.

31 Statement released to journalists by IDF via WhatsApp, 12:21, May 12th 2021.

Military targets within civilian areas: how is 'collateral damage' justified?

Israeli military forces, similarly to others such as Russia or the US-led Coalition fighting ISIS, often point to the fact that civilians killed by their actions may be 'collateral damage' resulting from strikes against fighters and military objects deliberately embedded among civilian populations. This narrative has often been used to justify strikes in civilian areas.

There are at least three mentions in IDF press statements during the 2021 conflict of intentions to hit targets known to be located on or near kindergartens, civilian media offices, mosques, and schools in order to reach supposed Hamas targets - despite these also being areas where civilians are at risk of being killed and injured, and critical infrastructure destroyed.

In some other theatres which Airwars monitors, attacks on civilian areas - as well as infrastructure such as power supplies, water and sanitation systems - have had devastating knock-on effects on the provision of essential services, which can force people to flee areas and prevent their later return.³²

Case study: Israeli strikes on Hamas tunnel systems in Gaza

A particular example in Gaza of the devastating consequence for civilians resulting from militant targets being reportedly embedded within populated areas is the 'metro' system of tunnels which the Israel Defense Forces describe as "a complex underground system allowing terrorists to hide, train, and transport weapons."³³

Airwars assessments found that between 56 and 68 civilians were killed in four civilian harm events where Israeli forces reported targeting tunnels. Of these, at least 25 fatalities were likely children. Up to 168 civilians were also reported injured in these events.

One of these incidents was the deadliest single event of the May 2021 Israeli-Palestinian conflict, sometimes referred to by local sources as the 'al-Wahda Street massacre.' As many as 49 civilians from three different families, including up to 18 children, were killed in a series of strikes that caused two buildings to partially collapse in the early hours of May 16th, when the IDF sought to destroy what it said were a tunnel and command centre beneath the street. On the morning of May 16th, the IDF stated that "as part of the continuing wave of strikes on the Hamas 'Metro' tunnel system, about thirty targets were attacked by IDF fighter jets using approximately 100 guided armaments."³⁴

32 'Seeing Through the Rubble: The civilian impact of the use of explosive weapons in the fight against ISIS', Roos Boer, Laurie Treffers, Chris Woods, Airwars & PAX, March 2020, reviewed at <https://airwars.org/wp-content/uploads/2020/10/PAXAirwars-Through-the-Rubble.pdf>.

33 'Israel says it has destroyed more than 60 miles of a vast Hamas tunnel network called the 'Metro'', Ryan Pickrell, Insider, May 20th 2021, reviewed at <https://www.businessinsider.com/israel-gaza-strikes-destroy-hamas-tunnel-network-2021-5>.

34 See Israeli Air Force Facebook post, May 16th 2021, at <https://www.facebook.com/IsraeliAirForce.EN/videos/783069599012975/> and in IDF statement to journalists via WhatsApp, May 16th 2021.

Since the event, the Israeli military has both admitted to carrying out the strikes, and to causing civilian casualties. Lieutenant Colonel Jonathan Conricus, an IDF military spokesman, said that the IDF was “investigating and adjusting. We will adjust for the future in terms of the type of ammunition, perhaps angle and size.”³⁵ The New York Times reported that the IDF had not known the exact location of the command centre, nor how far it extended under nearby buildings. Colonel Conricus also asserted that when the bombs exploded deep underground, the IDF had unexpectedly dislodged building foundations.^{36 37}



“A short while ago, IDF fighter jets struck a tunnel shaft in the southern Gaza Strip belonging to the Hamas terror organization, which contained servers and military equipment. The tunnel shaft was located adjacent to a kindergarten and a mosque, proving once again how the Hamas terror organization deliberately places its military assets in the heart of densely populated civilian areas. The IDF takes all possible precautions to avoid harming civilians during its operational activities.”

Official IDF statement and imagery published May 14th 2021.³⁸

May 16th 2021

Among the extensive casualties reported during the al-Wahda Street attack, as many as 23 members of the al-Kulak family were killed, including up to nine children. Up to 16 members of the Al-Ouf family were also killed, including as many as six children. Additionally, Raed Ishkontana’s wife and four children died and several other families lost multiple children, including the al-Kolak sisters Hala (13), Yara (9) and Rula (6); and the al-Franji siblings Dima (15), Yazan (13), Amir (9), and Mira (aged 11).

35 ‘Israel military spokesman says civilian casualties will be investigated’, Yaron Steinbuch, New York Post, May 17th 2021, reviewed at <https://nypost.com/2021/05/17/idf-spokesman-says-military-probing-civilian-casualties/>.

36 See Airwars assessment ISPT082 at <https://airwars.org/civilian-casualties/ispt082-may-16-2021/>.

37 “Dreams in the Rubble: An Israeli Airstrike and the 22 Lives Lost”, New York Times, June 17th 2021, <https://www.nytimes.com/2021/06/17/world/middleeast/gaza-israel-airstrike-tunnel.html>

38 See IDF statement, ‘First Week Summary: Operation Guardian of the Walls’, IDF, reviewed at <https://www.idf.il/en/articles/defense-and-security/israel-under-fire/>, and associated video here: http://l5k.me/ER1no_#phnx

Shihab Agency reported from the search operation for those who were still missing after the Israeli forces' airstrike on Al-Wahda Street on May 16th 2021.



Significant differences between civilian harm attributed to the same belligerent in two different theatres has then, as this report shows, been explained in part by the nature of the targets.³⁹ The imminent threat to citizens in Israel posed by Palestinian rockets, for example, likely led to less time available for planning and intelligence gathering for strikes - while the accusation that Hamas embedded within civilian populations has been used by some to excuse Israel Defense Forces of responsibilities to limit civilian harm.

However reports from local sources about both the level of destruction, and the nature of those civilian casualties, also shows that in many cases civilians were killed where no militants appeared to be present - and that even where there were reported military targets, such as the reported Hamas network of tunnels, the loss of civilian life was far greater than even the IDF had expected.



@Esraa1997622 showed the destruction after "Israel targeted 5 homes on Al-Wahda Street without warning" (Image via Twitter on 16th May 2021).

³⁹ As noted in our Methodology section, Airwars' own primary focus is on casualty mitigation rather than broader questions of compliance with International Humanitarian Law. We again here note those civil society organisations which have raised significant concerns about belligerent IHL violations by both parties to the conflict during May 2021 - such as the Al Mezan Center for Human Rights, Human Rights Watch, and B'Tselem.

Civilian harm drivers: population density

Urban civilian casualties from Israeli strikes in Gaza

Gaza is one of the most heavily populated regions of the world, with the Palestinian Bureau of Statistics estimating that over two million people were living in the 360 square kilometer territory in 2021 - over a third of those living in densely populated Gaza city.⁴⁰ For comparison, while London's population density is around 5,700 people per square kilometer, the rate is more than 9,000 people per square kilometer in Gaza city.⁴¹

Other recent urban battles in cities such as Aleppo, Raqqa, Mosul and Tripoli which have been monitored by Airwars demonstrate that - despite sometimes significant efforts by belligerents to limit civilian casualties from their own actions - extensive deaths and injuries will result from the use of wide area effect explosive weapons in densely populated urban areas. That is why Airwars actively supports international efforts to restrict their use.⁴²

As the Airwars map on the following page indicates, during the May 2021 conflict, significantly greater civilian casualties were recorded in areas of higher population density; mainly in the north of Gaza, and in and around Gaza city. Using OCHA damage estimates as a proxy for sites of strike locations, it becomes clear that strikes in less densely populated areas did not account for comparable levels of civilian harm.



Funeral for the 10 women and children killed in Israeli strikes on Al Shati camp on May 15th, 2021. (Image posted by @activestills)

40 'Estimated Population in Palestine Mid-Year by Governorate, 1997-2021', Palestinian Central Bureau of Statistics, reviewed at https://www.pcbs.gov.ps/Portals/_Rainbow/Documents/%D8%A7%D9%84%D9%85%D8%AD%D8%A7%D9%81%D8%B8%D8%A7%D8%AA%20%D8%A7%D9%86%D8%AC%D9%84%D9%8A%D8%B2%D9%8A%2097-2017.html.

41 'Israel-Palestinian conflict: Life in the Gaza Strip', BBC News, May 20th 2021, reviewed at <https://www.bbc.co.uk/news/world-middle-east-20415675>.

42 Airwars is for example a member of iNew, the international NGO campaign which "calls for immediate action to prevent human suffering from the use of explosive weapons in populated areas [EWIPA]." We also support the efforts of the UN Secretary General and many States to restrict their use. For more information see <https://www.inew.org/>

The Gaza Strip, May 2021

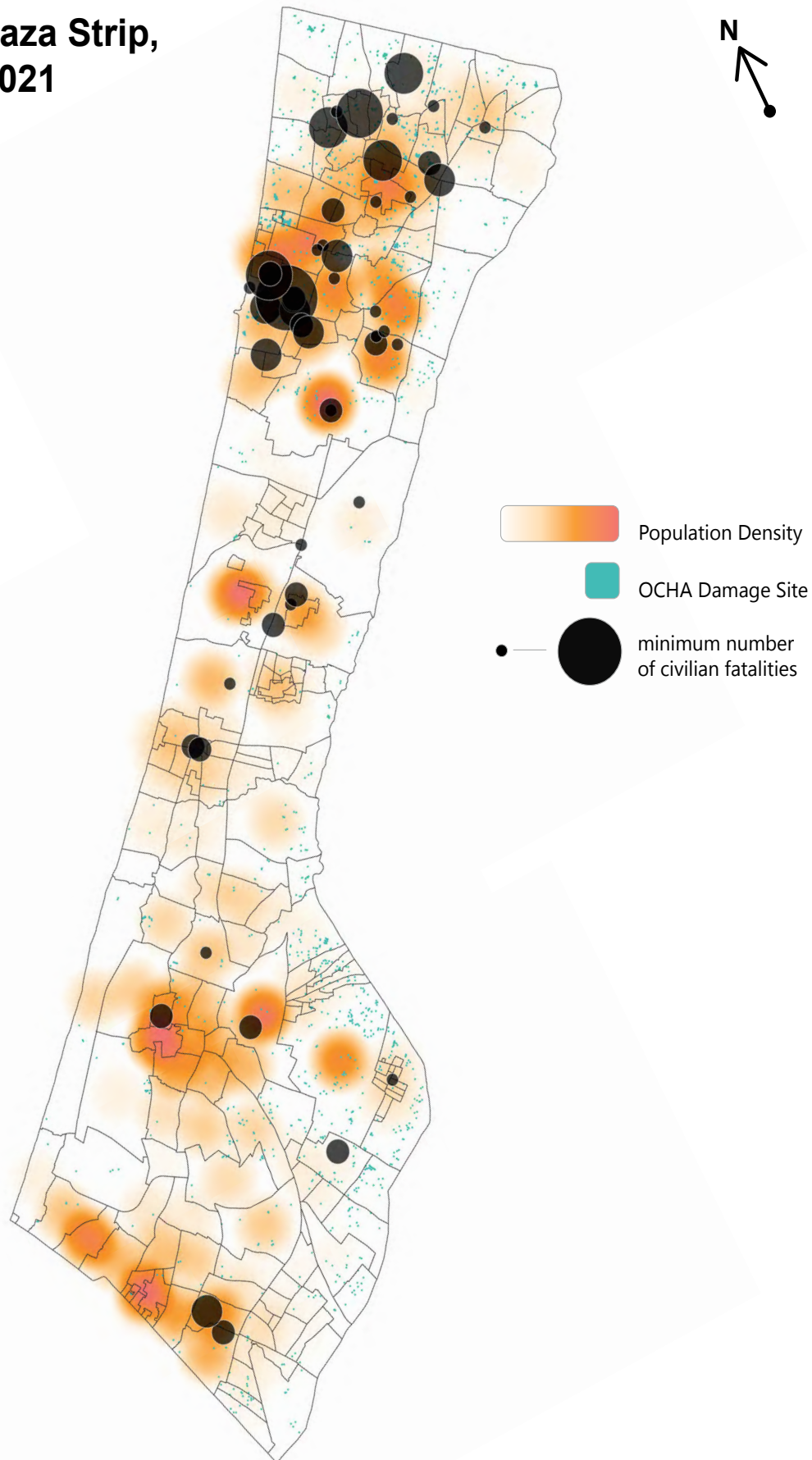


Figure 13: This overlays onto population density data, the minimum number of reported civilians killed in likely Israeli strikes on the Gaza Strip during May 2021. Damage assessments as reported by OCHA act as proxies to indicate Israeli strikes where no casualties were reported (and as such would not be included in Airwars' own databases). The larger black circles indicate areas where more civilians were reported killed. As the map shows, these are found in the most densely populated areas (shaded in dark orange). By contrast, despite a significant number of strikes in the south of Gaza - limited civilian casualties were recorded.

These high levels of civilian casualties during May 2021 - at least 151 civilians killed and 555 injured in just eleven days of fighting according to Airwars - could and should have been anticipated by the IDF. According to the Israeli human rights organisation B'Tselem, in the four major campaigns Israel has conducted in the Hamas-controlled territory since 2008, at least 2,374 Palestinian civilians in Gaza have been killed by explosive weapons use, with the injury toll far higher.⁴³

Major combat operations between Israel Defense Forces and Palestinian groups in Gaza 2008-2021

Year	IDF operation	Palestinian civilian fatalities	Israeli civilian fatalities
2008 ⁴⁴	Cast Lead	759	3
2012 ⁴⁵	Pillar of Defense	87	4
2014 ⁴⁶	Protective Edge	1,391	5
2021 ⁴⁷	Wall Guardian	137	9
		2,374	21

IDF press statements on strikes on Gaza, released throughout the eleven day conflict in 2021, demonstrate that Israeli forces were aware that harm to civilians would be a likely consequence of their offensive. There were for example at least 17 mentions of "civilians" or strikes in "densely populated areas" in official statements made by the IDF to journalists throughout the conflict, an Airwars review found.⁴⁸

Airwars has also identified at least two occasions where the IDF reported that it chose not to strike based on the presence of civilians. For example, on May 19th it released "footage of IDF strikes that were postponed and canceled due to the presence of civilians, as well as strikes against rocket launchers embedded in civilian infrastructure".⁴⁹ This does not explain why many other strikes were taken in which civilian populations remained at high risk.

Prior warning of some IDF strikes

As part of its efforts to mitigate civilian harm, the IDF on occasion warned civilians in Gaza shortly before an airstrike was due to take place. This is rarely seen in other conflicts. With hundreds of thousands of civilians killed by explosive weapon use in Syria since 2011, communities have had to rely upon civil society or privately funded mechanisms, such as Hala Systems, to give notice of impending airstrikes.⁵⁰ In Mosul, civilians were sometimes warned via leaflets dropped from the air to stay at home and to stay away from ISIS⁵¹ -- though the success rate was reported to be limited at best, and at worst risked further endangering civilian lives by telling civilians not to evacuate the intense urban fighting.⁵²

43 B'Tselem is cited here for consistency across the four major combat operations. For alternative estimates, see for example the AI Mezan Center for Human Rights at <https://www.mezan.org/en/posts/15/Reports+and+Studies>

44 'Fatalities during Operation Cast Lead', B'Tselem, reviewed at <https://www.btselem.org/statistics/fatalities/during-cast-lead/by-date-of-event>.

45 'Human Rights Violations during Operation Pillar of Defense: 14-21 November', B'Tselem, May 2013, reviewed at https://www.btselem.org/download/201305_pillar_of_defense_operation_eng.pdf

46 '50 Days: More than 500 Children: Facts and figures on fatalities in Gaza, Summer 2014', B'Tselem, July 20th 2016, reviewed at https://www.btselem.org/press_releases/20160720_fatalities_in_gaza_conflict_2014.

47 'Words Fail Us', B'Tselem, October 2021, reviewed at <https://wordsfailus.btselem.org/>.

48 In a review of IDF statements made to journalists via Whatsapp between May 9th - May 21st.

49 IDF statement made to journalists via WhatsApp, also via IDF Spokesperson Unit, May 19th 2021, video reviewed at https://spokesperson.gincher.net/releases/5L3il6mSjGt_8zeDINExE

50 See Hala Systems at <https://halasystems.com/>.

51 'Iraqi army drops leaflets over Mosul in preparation for offensive', Ahmed Rasheed, Reuters, October 16th 2021, reviewed at <https://www.reuters.com/article/us-mideast-crisis-iraq-mosul-idUSKBN12G0GN>.

52 'Iraq: Civilians killed by airstrikes in their homes after they were told not to flee Mosul', Amnesty International, March 28th 2017, reviewed at <https://www.amnesty.org/en/latest/press-release/2017/03/iraq-civilians-killed-by-airstrikes-in-their-homes-after-they-were-told-not-to-flee-mosul/>.

While IDF daily press releases asserted that they routinely warned civilians of impending strikes, according to our assessments we found only two out of 116 civilian harm events where local sources said that they had been warned before an attack. In both cases, local sources claimed that there had been insufficient time to respond. IDF statements often did not include sufficient information (such as exact time and location) to tie an action to a civilian harm event or individual strike. That said, in two additional assessments, we were able to link IDF statements to civilian harm incidents where prior warnings were reported by Israeli forces to have been announced; although local sources themselves did not mention whether there had been such warnings. In 18 more events, local sources explicitly stated that there had been no such warnings.

Airwars' own research focus is on events where civilian harm was locally alleged - excluding those incidents where civilian harm was avoided due to prior warnings. It is however known that the IDF was able successfully to warn civilians to evacuate some sites during the Gaza campaign. Human Rights Watch for example highlighted a series of strikes between May 11th and May 15th, where all tenants were successfully evacuated from four high-rise towers - Hanadi, al-Jawhara, al-Shorouk and al-Jalaa.⁵³ An Airwars investigation with The Guardian into the al-Jalaa attack also found that civilians were successfully able to evacuate the high rise building following a warning just 90 minutes prior to the strike - though dozens of lives were left devastated by the complete destruction of their homes and possessions.⁵⁴

On May 16th, the IDF referenced its use of advance warnings in a statement entitled Proof of Precision of IDF strikes, asserting that "the IDF, and the Air Force in particular, attach paramount importance to accuracy and reducing civilian harm to civilians." It included that when planning a target the IDF devotes time to preparing for the attack and where feasible uses tools including "advance warnings, roof knocking, street knocking, target clearing operations and a variety of professional calculations."⁵⁵



Airwars investigation with The Guardian into the al-Jalaa attack, 28 Jul 2021.

Although it appears to be an exceptional practise for a belligerent to attempt to warn civilians before attacking, Airwars is unable to measure how effectively this warning system reduced civilian harm in Gaza during May 2021, due to a lack of overall public transparency from the IDF in declaring specific sites and warning times.

As reviews of other recent urban conflicts show, despite such efforts on the part of belligerents to reduce civilian casualties, wars waged in densely populated urban areas will bear a high price for civilians.

53 'Gaza: Israel's May Airstrikes on High-Rises', Human Rights Watch, August 23rd 2021, Reviewed at <https://www.hrw.org/news/2021/08/23/gaza-israels-may-airstrikes-high-rises>

54 'Countdown to the airstrike: the moment Israeli forces hit al-Jalaa tower, Gaza', Kaamil Ahmed, Joe Dyke and Anas Baba, The Guardian, July 28th 2021, at <https://www.theguardian.com/global-development/ng-interactive/2021/jul/28/countdown-to-demolition-the-story-of-al-jalaa-tower-gaza-israel-palestine>

55 Statement released to journalists by IDF via WhatsApp, May 16th 2021, also seen at Evidence of Hamas' Abuse of Civilian Infrastructure, IDF, May 16th 2021, reviewed at <https://www.idf.il/en/minisites/operation-guardian-of-the-walls/idf-pilots-calls-off-strike/>

Urban civilian casualties from Israeli strikes in Syria

Extreme violence and high civilian casualties have characterised the Syrian civil war since it began in 2011. Over time, an increasing number of foreign parties have also been drawn into the fighting, both state and non-state actors. Some nations such as Russia and Iran have directly supported Bashar al-Assad's Syrian regime forces, aided by militia groups such as Hezbollah. Others have joined the multi-nation US-led Coalition, targeting the so-called Islamic State. Still more states such as Turkey have conducted unilateral campaigns within Syria - in Ankara's case, targeting both Kurdish and ISIS forces.

Often these foreign interventions have been marked by significant deaths and injuries among civilians - whether from Russian airstrikes on Aleppo and Eastern Ghouta; from Turkish attacks on al-Bab; or from US, British and French strikes on Raqqa and eastern Deir Ezzor. Frequently such actions have targeted some of the most densely populated regions of Syria.

Israel's actions in Syria reflect a different, more targeted campaign as discussed in detail earlier in this report. Nonetheless, when controlling for population density in Syria, Airwars found that - despite the overall low levels of civilian harm resulting from Israeli action compared to other actors - civilians were more likely to have been harmed when Israeli strikes hit more heavily populated areas.



Image of the damaged vehicle caused by strikes on a car and passer-bys on Al-Maghrabi Street on May 12, 2021. (Image posted by @MuathHumaid)

Given only limited Israeli official transparency regarding its strikes in Syria - and relatively limited data on population density in a country ravaged by civil war, where over six million people are presently internally displaced - the ability to make direct comparisons is limited.⁵⁶

Nevertheless, population density is also a compelling argument for helping explain the wide discrepancy between civilian harm counts from IDF actions in Gaza compared to Syria.

⁵⁶ 'Humanitarian Needs Overview: Syrian Arab Republic', Humanitarian Programme Cycle, March 2021, reviewed at https://www.humanitarianresponse.info/sites/www.humanitarianresponse.info/files/documents/files/syria_2021_humanitarian_needs_overview.pdf

Syria

airwars.org

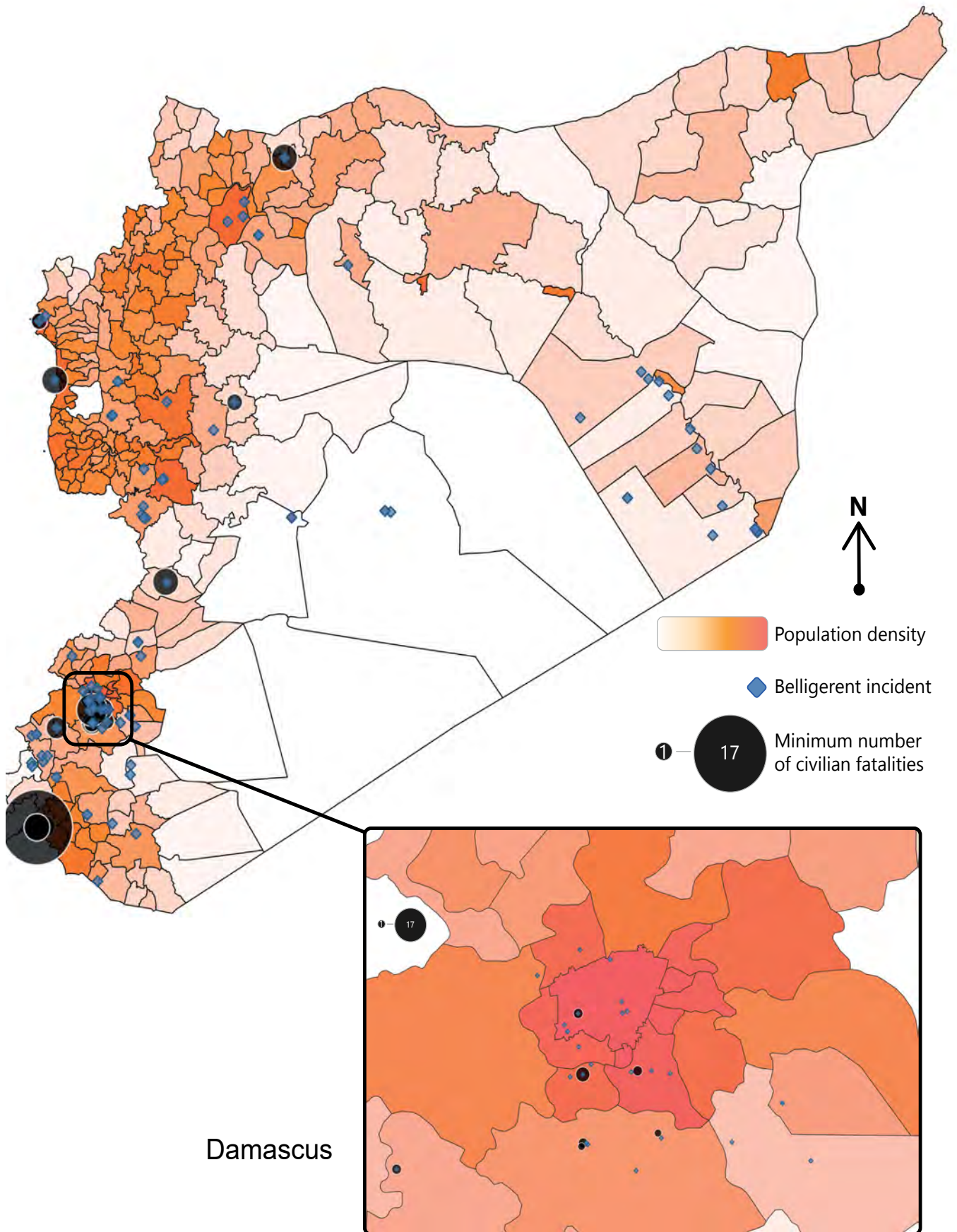


Figure 14: This overlays onto population density the minimum number of reported civilians killed in likely Israeli strikes in Syria from January 2013 to October 31st 2021. As the map shows - most reports of belligerent harm are in areas where the map is faded lighter orange - in other words, in areas of lower population density. The pullout shows the densely populated city Damascus, and surrounding neighbourhoods, where many civilian fatalities from IDF actions were reported.

As the map above shows, of the few reported Israeli civilian harm events in Syria monitored by Airwars, those that did take place generally occurred in areas of relatively higher population density. Taking a closer look at the area around Damascus, for example, we identified six events that account for between 13 and 35 civilians likely killed and a further 30 and 71 injured by what we have determined to be 'fair' or 'contested' Israeli actions.⁵⁷ Between them these likely account for over a third of all reported civilian deaths and over half of all civilian casualties tracked by Airwars which are linked to Israeli actions in Syria.⁵⁸

In an event that was likely a result of an Israeli strike, between two and ten people were killed when on November 12th 2019, an attack targeted the populated neighbourhood of al-Mazza in Damascus. In a relatively rare case for IDF actions in Syria, a member of a militant group was targeted in his family home. Local sources reported significant damage to nearby buildings, cars and windows in the residential neighbourhood - clear signs of a weapon being used that had wide area effects in an urban area.⁵⁹

Between two and ten civilians were reported injured in the attack - including a child. The regime's official Syrian Arab News Agency (SANA) reported that the airstrike had targeted the leader of the Palestinian Islamic Jihad movement, Akram al-Ajouri. His son Mu'az alAjouri was also reported killed, along with another person named Abdullah Yousef Hassan. Mu'az al-Ajouri's daughter Batoul and wife were reported injured. No other victims of the event were locally named.

Urban civilian casualties from Palestinian strikes in Israel

The Israeli government invests heavily in protecting civilians in urban areas from attacks - with for example the Iron Dome defence system selectively targeting those Palestinian militant rockets deemed the greatest threat to civilians - those which are heading towards urban centres⁶⁰

Civilian harm events in Israel in May 2021 predominantly took place in those areas where the barrage of rockets fired from Gaza were able to break through such defences.

Population density mapping in Israel proved challenging due to a lack of open source shape files for municipal locations. As a proxy for population density data, other information was used - such as images and descriptions of high-rise blocks, as well as satellite imagery, and geolocation points. Airwars found that it was likely that 17 out of the 33 reported civilian harm incidents resulting from Palestinian rockets striking Israel during May 2021 occurred in densely populated areas.⁶¹

57 Of those in areas of the highest population density within Damascus, Airwars assessments indicate that some casualties may have resulted from Syrian regime anti-aircraft fire targeting Israeli aircraft over civilian areas - accounting for three of the six events.

58 See Airwars assessments ISSY004, ISSY009, ISSY008, ISSY010, ISSY014, ISSY003, searchable via <https://airwars.org/civilian-casualties/?country=syria&belligerent=israeli-military>

59 See Airwars assessment ISSY004 at <https://airwars.org/civilian-casualties/issy004-november-12-2019/>

60 See for example 'How Israel's Iron Dome Actually Works,' Bloomberg Quicktake, May 27th 2016, video accessed at https://www.youtube.com/watch?v=b4a_ie0J0hU&t=1s.

61 'Shapefiles' are agreed administrative boundaries in which population numbers can be situated - therefore making it possible to map population density onto geographic areas. Unlike in Gaza where shapefiles have been provided by the Palestinian Bureau of Statistics, and in Syria where shapefiles have been provided by UN OCHA, Airwars was unable to identify open source shapefiles for suitable administrative boundaries in Israel.

Israel

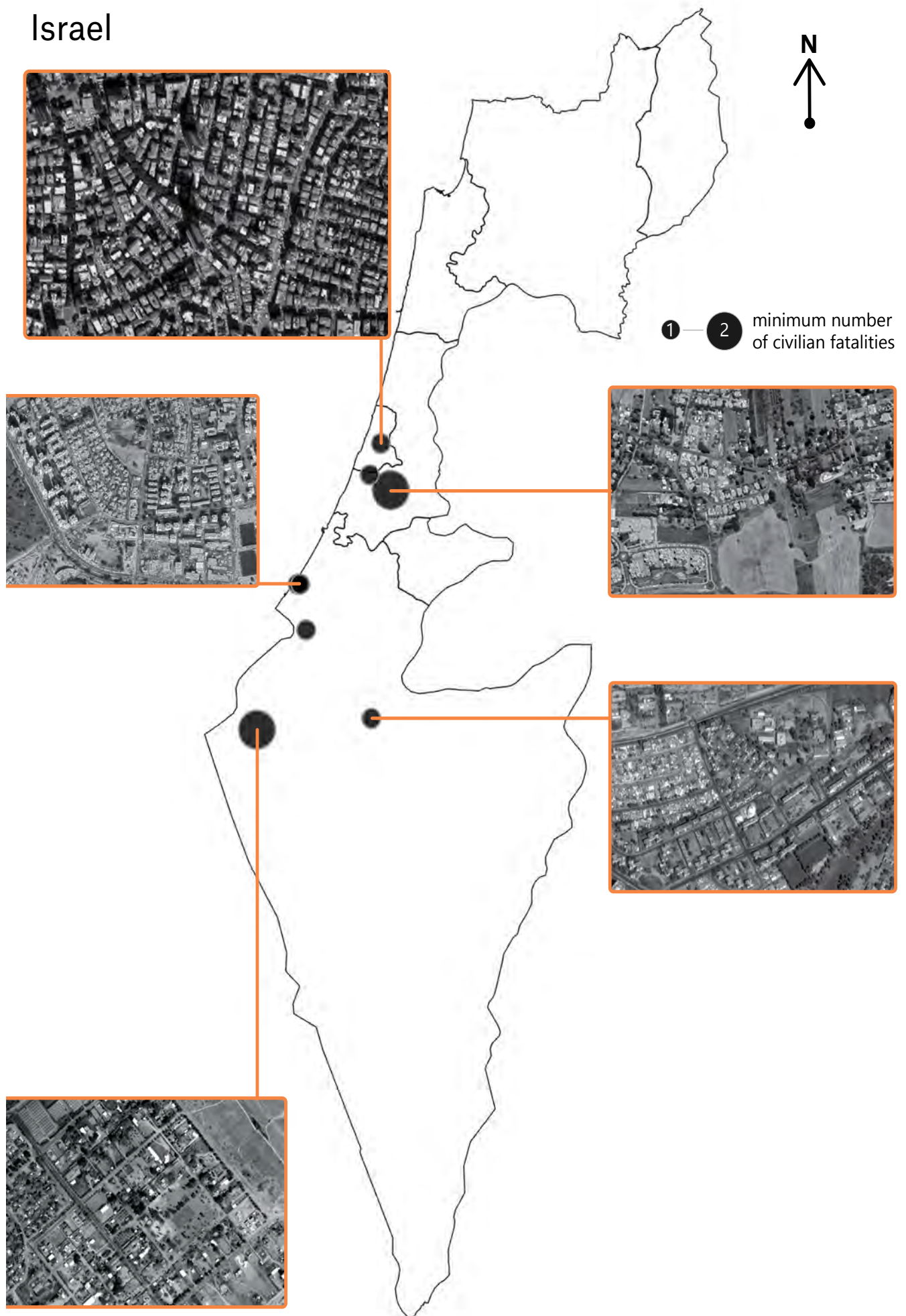


Figure 15: This shows the minimum reported civilian fatalities in Israel directly resulting from Palestinian militant actions in May 2021. As satellite images show, these fatalities were predominantly clustered in residential areas.

One such example took place in Ashdod on May 17th, where Airwars' Hebrew-language researchers identified at least three civilians reported injured in a heavy barrage of rockets fired from Gaza that hit a four-storey residential building. al-Qassam claimed responsibility for the attack, although did not on this occasion acknowledge any civilians harmed in the incident. Local reports said that most of the residents had been protected by hiding in the stairwell of the building - but that shattered glass had injured three people.



Damage caused by rockets fired at Givatayin on May 11, 2021. (Image posted by HebMix via Facebook)

Casualties in context: why urban strikes remain so problematic

Our findings on Gaza, Syria and Israel support well established literature regarding the highly problematic use of Explosive Weapons in Populated Areas (EWIPA) - which point to the deadly cost to civilians of wars waged in and upon urban centres.

This phenomenon is certainly not restricted to actions by the IDF, or by Palestinian militant groups. Indeed, the Gaza campaign in particular can be seen as part of a profoundly worrying trend in which States and others conduct intensive military actions in urban areas, often with devastating results. Of the five permanent members of the United Nations Security Council for example, only China has not conducted major military attacks on urban centres in the past decade.

This significant shift towards large-scale urban fighting, where heavy use of explosive weapons, such as bombs, missiles, rockets and artillery shells has been a central feature across conflicts, has led the International Committee of the Red Cross, for example, to warn that "Armed conflicts are increasingly fought in population centres, but often with weapon systems that were originally designed for use in open battlefields. When used in populated areas, explosive weapons that have wide-area effects are very likely to have indiscriminate effects. They are a major cause of harm to civilians and of disruption of services essential for their survival."⁶²

62 Cited in 'Explosive weapons in populated areas', International Committee of the Red Cross, at <https://www.icrc.org/en/explosive-weapons-populated-areas>

The use of Explosive Weapons In Populated Areas (EWIPA)

The use of EWIPA causes disproportionate harm to civilians and civilian infrastructure. According to Action on Armed Violence, on average, civilians constitute around 90% of those injured or killed when explosive weapons are used in populated areas. Damage and destruction of civilian infrastructure - including housing, power supplies, water and sanitation systems - has severe knock-on effects for communities, often for many years after a conflict ends, and can hamper post-conflict reconstruction.

Civilian casualties as a proportion of overall deaths fall to 25% when strikes are conducted in areas that are less populated, according to AOAV.⁶³ In addition to this direct impact, the destruction of civilian infrastructure can weaken communities for years and hinder post-conflict recuperation. Use of explosive weapons in populated areas is also a major driver of forced displacement. Most militaries that Airwars monitors claim that their operations have been conducted in compliance with International Humanitarian Law (IHL), and that they are well-equipped to limit civilian harm from explosive weapons during operations in urban areas. Yet recent campaigns in cities such as Mosul, Raqqa, Hawija, Aleppo, Tripoli and Gaza have seen the same pattern of harm where explosive weapons have been used in populated areas resulting in extraordinary numbers of civilian casualties. This demonstrates that even in cases where civilian deaths might have been within the boundaries of international law, the scale of civilian harm can nonetheless be devastating.

The consistent failure to adequately protect civilians in populated environments has been a subject of international advocacy efforts from successive United Nations Secretaries-General, who since 2009 have called upon States to avoid using explosive weapons with wide area effects in populated areas. The International Network on Explosive Weapons (INEW) has called on States to stop use of explosive weapons with wide area effects in populated areas; and to assist victims, and share data on casualties, strikes and other explosive weapon use to facilitate transparency and accountability. INEW has also called for the development of new international standards.

Following an international conference convened by Austria in 2019, Ireland has led a series of consultations to draw up an international Political Declaration to strengthen the protection of civilians from the use of explosive weapons in populated areas. In mid 2021, Belgium became the first country to pass a parliamentary resolution supporting a presumption against such use. Other nations have also supported calls to avoid use of explosive weapons with wide area effects in populated areas. The Political Declaration is expected to be finalised in early 2022.

⁶³ See <https://aoav.org.uk/>

Conclusion: High civilian casualties from urban strikes are both a global and local concern

The civilian harm events resulting from reported Israeli strikes in Gaza in May 2021, in Syria over the last eight years, and from Palestinian rocket attacks on Israel, are the latest in a series of troubling case studies that undermine a narrative that warfare is possible within urban environments without causing significant civilian deaths and injuries⁶⁴

For comparison, during the recent eight month campaign to drive ISIS from Mosul, at least 9,000 civilians and as many as 20,000 were credibly reported to have been killed by all parties to the fighting - most killed by explosive weapons with wide area effects. At the start of that battle in late 2016, the United Nations had estimated that up to a million non-combatants remained trapped within the besieged city. The extensive use of explosive weapons by the US-led Coalition contributed considerably to civilian harm and infrastructure damage, with Airwars estimating that there were likely at least 1,168 to 1,722 civilian fatalities in the vicinity of Mosul resulting from Coalition actions alone during the battle.⁶⁵

High civilian casualties in Gaza, then, are symptomatic of an escalating and profoundly troubling global military trend. In his 2021 annual report to the United Nations on the Protection of Civilians in Armed Conflict - dated May 3rd 2021 but published coincidentally on the last day of fighting between Israel and Palestinian forces - UN Secretary General Antonio Guterres insisted that "Even in cases in which parties to conflict reaffirm that they only use explosive weapons in compliance with the law, the level of civilian harm caused is often devastating. The facts on the ground continue to underline the need for parties to avoid the use of explosive weapons with wide-area effects in populated areas and to reassess and adapt their choice of weapons and tactics to avoid these well-documented consequences for civilians."⁶⁶

This Airwars report has presented three very different scenarios: civilians in Gaza bombarded by one of the most advanced militaries in the world; civilians in Israel killed and injured by a belligerent in self-proclaimed attacks that specifically targeted civilians in residential areas; and the comparably exceptional case of low civilian harm in Syria from Israeli actions - particularly when compared with other foreign actors operating in Syria.

Bringing together what appear to be dramatically different conflict environments are those civilians caught in the violence, primarily in urban areas who are killed and injured by wide area effect explosive weapons. Where, when and how civilians have been harmed tell an important story about how choices made by belligerents can and do continue to have devastating impacts upon civilian lives - and clearly demonstrate why the use of wide area effect explosive weapons in populated areas must be restricted.

64 'Reports of Civilian Casualties in the War Against ISIS Are Vastly Inflated', Stephen J. Townsend, Foreign Policy, September 15th 2021, reviewed at <https://foreignpolicy.com/2017/09/15/reports-of-civilian-casualties-from-coalition-strikes-on-isis-are-vastly-inflated-lt-gen-townsend-cjtf-air/>.

65 'Seeing Through the Rubble: The civilian impact of the use of explosive weapons in the fight against ISIS', Roos Boer, Laurie Treffers, Chris Woods, Airwars & PAX, March 2020, reviewed at <https://airwars.org/wp-content/uploads/2020/10/PAXAirwars-Through-the-Rubble.pdf>

66 'Secretary-General's Remarks to the General Assembly Meeting on the Situation in the Middle East and Palestine', United Nations, May 20th 2021, reviewed at <https://www.un.org/sg/en/content/sg/statement/2021-05-20/secretary-general%E2%80%99s-remarks-the-general-assembly-meeting-the-situation-the-middle-east-and-palestine-delivered>.

Civilian harm in focus: Case studies from Syria, Gaza and Israel

Airwars civilian harm estimates are built casualty by casualty, event by event, based primarily on reporting by affected communities themselves. Here we highlight some of those victims killed and injured in the three locales discussed in this report: Gaza, Syria and Israel. These are just some of the hundreds of locally reported incidents of civilian harm collated for this study. The full assessment database is permanently available on the Airwars website.⁶⁷

Syria: Families destroyed

Despite the relatively low levels of civilian harm from Israeli actions in Syria identified by Airwars, the impact on communities when strikes have gone wrong can be devastating.

July 1st 2019: Damascus: Elaf Rateb Bakri Pasha, Rateb Mustafa Bakri Pasha, Anas al-Bayat, Abdul Rahman, Rama Arna'out⁶⁸

On July 1st 2019, between five and 16 civilians were reportedly killed when Israeli warplanes struck several military sites in the Damascus countryside, specifically the Sahnaya neighborhood. This incident is considered by Airwars to be the first large-scale civilian casualty event from recent Israeli actions in Syria. Among those killed were at least two children. A seven month old was killed along with both his mother and father, while a young girl died alongside her father, a doctor.



Image of Dr **Ratib Mustafa Bakri Pasha** and his daughter **Elaf Ratib Bakri Pasha**, killed in alleged Israeli strikes on the Damascus countryside on July 1st 2019. (Image via Baladi News)

In addition to the two families killed, as many as 50 other people were injured in this event, including 20 named by local sources.

The Daily Telegraph reported that the Israeli military had declined to comment on Syrian claims of civilian deaths in this incident, telling its reporter: "We are not commenting on foreign reports."⁶⁹

⁶⁷ See <https://airwars.org/conflict/israeli-military-in-syria-the-gaza-strip/>

⁶⁸ See Airwars assessment ISSY003 at <https://airwars.org/civilian-casualties/issy003-july-1-2019/>

⁶⁹ 'Syrian anti-aircraft missile lands in Cyprus as Israeli strikes 'kill civilians' near Damascus', Raf Sanchez, The Telegraph, July 1st 2021, reviewed at <https://www.telegraph.co.uk/news/2019/07/01/israeli-strikes-kill-civilians-syria-stray-regime-missile-crashes/>

November 19th-20th 2019: Damascus: Ayoub al-Safadi, Nadia al-Safadi⁷⁰

Later in the same year, between November 19th-20th 2019, Israel launched a series of airstrikes on Iranian and regime locations around Damascus, in what it said was retaliation for alleged Iranian-made rockets launched into Israel. In one of the targeted locations, a family suffered the loss of a husband and wife, while their 14-year-old son was injured.



Home of the **al-Safadi** family - **Ayoub al-Safadi** and his wife **Nadia al-Safadi** were killed when an alleged Israeli missile destroyed the two-storey building they resided in. Their 14-year-old son **Ahmad al-Safadi** was injured. (Image posted by Beat Tema on Facebook)

In another of the targeted locations around the same time, a 17-year-old girl was injured alongside several others by shrapnel in a residential building in the Qudsaya suburb of Damascus. The mother of the injured girl told SANA that “after the smoke and dust disappeared, I saw my 17-year-old daughter crying out while she was soaked in her blood so that her father had to take her to the Mouwasat Hospital in Damascus, where she is currently receiving treatment.”

The Israel Defense Forces acknowledged that they carried out strikes across Syria that evening in response to a rocket attack on Israel that they attributed to Iranian militias, but did not acknowledge any civilian harm.⁷¹

⁷⁰ See Airwars assessment ISSY005 at <https://airwars.org/civilian-casualties/issy005-november-19-2019/>

⁷¹ “#BREAKING: We just carried out wide-scale strikes of Iranian Quds Force & Syrian Armed Forces targets in Syria in response to the rockets fired at Israel by an Iranian force in Syria last night”, @IDF, November 20th 2019, Twitter: <https://twitter.com/IDF/status/1196973332689833985?s=20>

The Gaza Strip: Children harmed

As outlined in this report children paid a high price during the conflict in Gaza in May 2021, as they have done in previous rounds of escalation - with over a third of civilians reported killed said to be children.

May 13th 2021: Al-Jenina - Gaza: Ibrahim Mohammed Al-Rantissi, Siham Yusuf Azara (Al-Rantisi), Shaima Diab Mohammad Musa⁷²

One child victim was Ibrahim Mohammed Al-Rantissi, less than two years old, who was killed alongside three other family members when Israeli airstrikes were reported to have hit a three-storey house. The strikes were likely targeting al-Qassam militant Raed Al-Rantissi, who was also killed in the attack. Another 15 civilians were reportedly wounded⁷³

Al-Araby reported that on the day of the strikes, women in the Rantissi family had gathered at eight o'clock in the evening to celebrate the first day of Eid al-Fitr, bringing food and sweets as part of the celebration. Shortly after they gathered, an Israeli missile struck their home.

Raeda Al-Rantissi, whose mother was also killed in the airstrike told Al-Araby: "The Israeli missile violated the sanctity of our house, and turned it into rubble, within which bodies, toys, clothes, and bedding were flying". She added that "Everything turned to ashes, (there was) the smell of death and gunpowder, toys were scattered, screams rose due to the tragedy".⁷⁴

May 15th 2021: al-Shati refugee camp: Yamen Abu Hatab, Bilal Abu Hatab, Youssef Abu Hatab, Mariyam Abu Hatab, Yasmine Hassan Abu Hatab, Maha Abu Hatab (Al Hadidi), Abdul Rahman al-Hadidi, Suhaib al-Hadidi, Yahya al-Hadidi, Osama al-Hadidi⁷⁵

During the night of May 15th at least eight children were reported killed in an Israeli strike on a house in al-Shati 'Beach' refugee camp. Sources reported that two mothers, who were sisters-in-law, died in the strike, with each losing four children, all aged between five and fourteen. A five month old child, Omar al-Hadidi, was found alive amidst the rubble in his dead mother's arms. The family was reportedly celebrating the long weekend after Eid.

Alaa Abu Hattab, whose wife, children, sister and his sister's children were all killed in the strike, gave Human Rights Watch this eyewitness account: "I left my house on foot at about 1:30am to go to some of the local shops that were open late during the run-up to Eid to buy toys and snacks for the kids for the Eid festival and to buy some food, as we were hungry.

Abu Hattab said that about 15 minutes after he had left, he heard "a very loud explosion that shook the whole area. I ran back towards the smoke and saw it was my house. It was all rubble. I felt like everything was revolving around me. I was in shock and I fainted. When I regained consciousness, I saw rescue workers looking for bodies under the rubble and recovering body parts. The attack had shredded the bodies. Other parts remained under the rubble because they could not find them.

⁷² See Airwars assessment ISPT041 at <https://airwars.org/civilian-casualties/ispt041-may-13-2021/>

⁷³ See Airwars assessment ISPT033 at <https://airwars.org/civilian-casualties/ispt033-may-12-2021/>

⁷⁴ 'The Tragedy of the Rantisi family...Israel turns the joy of Eid into a mass funeral in Rafah', Al Araby News, May 15th 2021, reviewed at <https://www.alaraby.com/news/%D9%85%D8%AC%D8%AA%D9%85%D8%B9-23748>.

⁷⁵ See Airwars assessment ISPT068 at <https://airwars.org/civilian-casualties/ispt068-may-15-2021/>.

There were no militants in or near my house and no rockets or rocket launchers there. I still don't know why they bombed my house and killed my wife and children and my sister and her children."

The IDF has admitted to carrying out the strike, with Avichay Adraee, a spokesman for the Israeli army, commenting in a tweet that the IDF "targeted a number of Hamas officials inside an apartment used as a terrorist building in the al-Shati refugee camp," adding that the incident was still "under examination".



Funeral for the 10 women and children killed in Israeli strikes on Al Shati camp on May 15th, 2021. (Image posted by @activestills)

The Gaza Strip: Journalists at risk

Attacks on media were reported widely in Gaza during May 2021, with the Committee to Protect Journalists publishing a statement just three days into the conflict urging Israeli forces to refrain from bombing media outlets⁷⁶ Two days later, on May 15th, the complete destruction of Al Jazeera and Associated Press (AP) offices⁷⁷ housed in the 11-storey al-Jalaa building, was filmed live on Al Jazeera.⁷⁸ Israeli forces gave advanced warning to residents and AP and Al Jazeera, with no civilian casualties recorded in the incident.

However, Airwars has identified another six incidents where journalists were harmed by reported Israeli strikes. According to Airwars assessments, three civilian journalists were killed in the conflict, and another six were wounded. While there was no indication from sources as to whether or not these journalists were intentionally targeted by the IDF, The Committee to Protect Journalists has called on the Israeli government to clarify if Israeli authorities carried out deliberate attacks on the homes of journalists.

⁷⁶ 'Israeli air strikes destroy buildings housing more than a dozen media outlets in Gaza', Committee to Protect Journalists, May 13th 2021, reviewed at

<https://cpj.org/2021/05/israeli-air-strikes-destroy-buildings-housing-more-than-a-dozen-media-outlets-in-gaza/>

⁷⁷ 'Countdown to the airstrike: the moment Israeli forces hit al-Jalaa tower, Gaza', Kaamil Ahmed, Joe Dyke, Anas Baba, Garry Blight, The Guardian, July 28th 2021, reviewed at <https://www.theguardian.com/global-development/ng-interactive/2021/jul/28/countdown-to-demolition-the-story-of-al-jalaa-tower-gaza-israel-palestine>

⁷⁸ "That tower is where Al Jazeera's offices are... were... housed." @hallamohieddeen has the awful job of witnessing and describing the destruction by #Israel of our colleagues' building in #Gaza", @swilsonnews, May 15th 2021, <https://twitter.com/swilsonnews/status/1393545932743061507?s=20>

May 12th 2021, Tal al-Hawa, the Gaza Strip: Mariam Mohammad Odah at-Tilbani, Zeid Mohammad Odah at-Tilbani, Reema Saad, Hala Hussein Ra'fat al-Rifi⁷⁹

One of the journalists killed was 30-year old Reema Saad, who was four months pregnant. She was killed in a strike on May 12th alongside her five-year-old son, three-year-old daughter and husband. Her sister, Samar, described Reema Saad as "ambitious... always discussing her plans to start a project assisting people in finding freelance jobs".

May 19th, Al-Radwan, Gaza City: Yousef Abu Hussein⁸⁰

The death of Yousef Abu Hussein, a journalist with Al-Aqsa Radio (a station affiliated with Hamas) on May 19th, was widely publicised in international media outlets. Yousef was killed when Israeli forces allegedly fired three missiles at a five-storey building in the Sheikh Radwan neighbourhood, hitting Mr Hussein's family home. His father told Al Jazeera that the rest of the family had managed to escape when the missile struck, "but my boy, Yousef... was killed".

The Committee to Protect Journalists (CPJ) condemned the attack, and "called on Israeli authorities to immediately clarify whether they deliberately struck his home." As of November 3rd 2021, CPJ confirmed to Airwars that they had yet to hear back from the IDF.

Israel: Older persons at risk

In Israel, six of the 33 civilian harm events resulting from Palestinian rocket fire which were identified by Airwars involved people over the age of 60.

May 19th 2021, Sderot, Israel: (names unknown)⁸¹

In one incident in Sderot on May 19th - officially claimed by al-Qassam militants - a 65-year-old man and a 72-year-old were reportedly wounded in their basement alongside other family members when the house was hit by rockets. The 72-year-old sustained head injuries in an attack at night that reportedly also damaged cars and other buildings in the area, and cut off the electricity supply.

May 13th 2021, Shtulim, Israel: Miriam Arie⁸²

In at least three cases, elderly civilians were reported to have died or been injured while running to bomb shelters or after hearing sirens warning of attacks. This was the case for 84-year-old Miriam Arie, who died after sustaining a head injury on May 13th during a reported Hamas rocket attack.

Ms Arie had emigrated to Israel in 1949 from Yemen, and in a 2016 interview with local media described her family life in Israel: "I am already a great grandmother, I have nine children, I had another child named Gabriel, he died of epilepsy. I have 26 grandchildren and 9 great grandchildren". A paramedic who was at the scene reported that Ms Arie slipped after alarms sounded in the town of Shtulim at 10.38pm on May 13th, alerting residents to an impending attack.

79 See Airwars assessment ISPT021 at <https://airwars.org/civilian-casualties/ispt021-may-12-2021/>

80 See Airwars assessment ISPT116 at <https://airwars.org/civilian-casualties/ispt116-may-19-2021/>

81 See Airwars assessment PALIS030 at <https://airwars.org/civilian-casualties/palis030-may-19-2021/>

82 See Airwars assessment PALIS021 at <https://airwars.org/civilian-casualties/palis021-may-13-2021/>

Israel: Access to bomb shelters

Israel's advanced warning siren system, and network of over a million bomb shelters, likely played a significant role in protecting civilians during May 2021, despite thousands of rockets being fired from Gaza towards residential areas.⁸³ There has been much coverage of the role of Israel's Iron Dome defence system in protecting civilians from rocket attacks. However Israeli authorities have also invested heavily in bomb shelters and warning sirens - estimated in 2015 at \$140 million spent on siren warning systems, and over \$384 million on reinforcement of buildings and the construction of bomb shelters⁸⁴

May 12th, Sderot, Israel: Ido Avigal⁸⁵

In Sderot, for example, one of the towns closest to the border with Gaza - Israeli authorities have put significant resources into the fortification of buildings and construction of bomb shelters.⁸⁶ Despite this extensive work, Airwars assessments indicate that at least one child was killed and between five and ten other civilians were injured by rocket attacks in and around the city during May 2021. In total, two children were reported killed by Palestinian fire in Israel during the offensive. Five-year-old Ido Avigal was taking shelter in a safe room when he was hit in the stomach by shrapnel that broke the room's thick glass⁸⁷

This reflects the intensity of the attacks Hamas directed at residential areas in Israel. The day before Ido was killed, al-Qassam posted on its Telegram channel after sending a series of five rocket attacks towards the populated city: "The enemy admits that there were injuries, direct damage to a building, and power outages after the recent al-Qassam bombing of the usurped Sderot". Al-Qassam militants are unusual amongst belligerents Airwars monitors in acknowledging civilian harm following strike events - not as an admission of accountability, but instead as a boast of civilians harmed.

Cases such as Ido's are exceptions to what is otherwise one of the most advanced protective systems in the world. An article published by Haaretz following the May conflict nevertheless pointed to four incidents that showcased what journalist Bar Peleg has described as the "lethal" impact of poverty in war - especially with regards to limited access to bomb shelters⁸⁸

The investigation highlighted two Thai workers killed in a factory with limited access to bomb shelters; the death of a disabled Israeli man who was killed in the home where he was living; that of Indian care worker Soumya Santosh who died while looking after an elderly Israeli woman in her charge; and a father and daughter killed in the Arab-Israeli village of Dahmash⁸⁹. All incidents are also detailed on the Airwars website.⁹⁰

83 'Doomsday dens: Inside Israel's bomb shelters - in pictures', The Guardian, August 14th 2021, reviewed at

<https://www.theguardian.com/artanddesign/gallery/2017/aug/14/israel-bomb-shelters-adam-reynolds-photography>

84 'The Effectiveness of Rocket Attacks and Defenses in Israel', Michael J Armstrong, Journal of Global Security Studies, Volume 3, Issue 2, April 2018, Pages 113-132, April 11th 2021, reviewed at <https://academic.oup.com/jogss/article/3/2/113/4964794>.

85 See Airwars assessment PALIS015 at <https://airwars.org/civilian-casualties/palis015-may-12-2021/>

86 'A fortified Sderot continues life under the threat from Gaza', Eliyahu Kamisher, The Jerusalem Post, July 29th 2016, reviewed at <https://www.jpost.com/Israel-News/A-fortified-Sderot-continues-life-under-the-threat-from-Gaza-462713>.

87 See Airwars assessment PALIS015 at <https://airwars.org/civilian-casualties/palis015-may-12-2021/>

88 'Israeli Victims of the Latest Gaza Conflict Show How Lethal Poverty Is, Especially in Wartime', Bar Peleg, Haaretz, May 22nd 2021, reviewed at <https://www.haaretz.com/israel-news/premium-victims-of-latest-gaza-conflict-show-how-lethal-poverty-is-especially-in-wartime-1.9833463>.

89 More details on access to bomb shelters and other essential services within Arab-Israeli areas in Israel have been covered for example by Human Rights Watch: <https://www.hrw.org/news/2010/10/08/israel-grant-status-long-denied-arab-village-central-israel>, and New Israel Fund Media and Policy Director Elisheva Goldberg in <https://jewishcurrents.org/road-to-nowhere/>

90 See <https://airwars.org/conflict/israeli-military-in-syria-the-gaza-strip/>

Annexes

Annex A: Civilian harm grading

The Airwars approach to civilian harm assessments can best be described as remote, original language hyperlocal monitoring of casualty claims by affected communities - along with a review of broader reports and claims by belligerents, media, and other investigators.

Airwars has employed this standard methodology⁹¹ to identify, assess and report on allegations of civilian harm in Syria dating back to 2013 from reported Israeli strikes; and from the May 10th-20th 2021 conflict affecting Gaza and Israel - that is, primary language research of open source materials where civilian harm was alleged (in Arabic, Hebrew, and English); geolocation of events; archiving of all open source materials; and a provisional assessment of the incident based on all currently available information. Our categorisations are as follows:

Confirmed

A specific belligerent has accepted responsibility for the killing or injuring of non-combatants or allied forces in a particular incident.

This accounts for seven incidents in Israel where al-Qassam militants directly claimed responsibility for killing civilians. In Gaza, the Israel Defense Force admitted to having killed civilians in one event in Gaza; they are yet to acknowledge any civilian harm from their actions in Syria.

Fair

Where, in the view of Airwars, there is a reasonable level of public reporting of an alleged civilian casualty incident from two or more credible sources (often coupled with biographical, photographic or video evidence). Crucially, this includes likely or confirmed actions by a belligerent in the near vicinity for the date in question. We believe these cases, in particular, require urgent investigation.

In the majority of cases, reported civilian harm events in Gaza and Israel had multiple sources. This accounts for 120 civilian harm incidents in Gaza likely resulting from Israeli forces; 27 civilian harm events in Israel likely resulting from militant rocket fire from Gaza; and 12 civilian harm events in Syria resulting from reported Israeli actions.

Weak

These are presently single source claims. Nevertheless, they often feature biographical details of victims along with visual evidence from a reputable source – and with international strikes confirmed in the near vicinity for the date in question.

None of the civilian harm events in Israel were graded weak, while seven events in Gaza and one event in Syria were graded weak.

91 See 'Methodology', Airwars, at <https://airwars.org/about/methodology/>

Contested

These occur where there are competing attribution claims: multiple belligerents are reported, or casualties are also attributed to ground forces. For example, both Israeli actions as well as misfires from militants in Gaza might be reported by local sources as being responsible for civilian harm.

In Israel, one event was graded contested. In Gaza, five events were contested (with attribution claims also to civilian harm resulting from Palestinian militant misfire); and in Syria five events were also contested.

Discounted

Incidents where our researchers or others can either demonstrate that those killed were combatants; or that other parties were most likely responsible. This categorisation also applies if we determine that an incident likely did not result in any civilian casualties, despite initial reports.

At least three civilian harm events in Gaza were discounted after open source investigation revealed that only belligerents had been injured, and no civilian harm had occurred. No locally reported events in Syria or Israel have been discounted.

Assessment of belligerent statements

In Israel and Gaza, our primary language researchers cross-checked posts made on the Hamas-linked Al Qassam Telegram channel with local allegations of civilian harm in Israel; and all IDF public press statements against allegations of civilian harm in Gaza.

While not all statements made by Al Qassam and the IDF contain sufficient information on location and timing to match each civilian harm allegation, in cases where we were able to link announced strikes to allegations of civilian casualties, we mark the likelihood of the strike as 'declared'. If Al Qassam or the IDF also admitted to civilian harm, we marked the grading of civilian harm itself as 'confirmed'.

While Airwars sought to employ a comprehensive approach to scraping belligerent statements, it is possible that some assertions made by belligerents have since been revised or deleted. As such, we see our database as an evolving resource, and should any new information come to light we will update the assessment categorisations.

If you have new information about a particular event; if you find an error in our assessment work; or if you have concerns about the way we are reporting our data, please reach us at info@airwars.org.

Annex B: Airwars findings in context

Airwars' own assessments of civilian harm from recent Israeli and Palestinian actions represent one methodological approach of several.

For reference, here we have collated all known credible casualty reviews to October 31st 2021 by NGOs, international agencies, and States.

Gaza		
Source	Total number of civilians killed by Israeli forces	Total number of Palestinian civilians killed by militant rockets misfired in Gaza
Al Mezan	151	21
B'tselem ⁹²	137	20
UN OCHA ⁹³	130 (minimum)	Not available
Palestinian Ministry of Health ⁹⁴	243 (no distinction between militants and civilians found in data set)	Not available
The Meir Amit Intelligence and Terrorism Information Center (ITIC) ⁹⁵	122	20
Airwars	151-192	15-20

Israel		
Source	Total number of Israeli and overseas civilians killed by Palestinian forces	Total number of civilians who died in 'indirect' harm incidents
B'tselem ⁹⁶	9	Not stated
UN OCHA ⁹⁷	13	Not available
Israel Ministry of Foreign Affairs ⁹⁸	12	3 (likely included in the 12 totalled)
The Meir Amit Intelligence and Terrorism Information Center (ITIC) ⁹⁹	12	Not stated
Airwars	10	5

92 'Words Fail Us', B'Tselem, October 2021, reviewed at <https://wordsfailus.btselem.org/>.

93 'Gaza Strip: Escalation of hostilities as of 3 June 2021', United Nations Office for the Coordination of Humanitarian Affairs, June 6th 2021, reviewed at <https://www.ochaopt.org/content/gaza-strip-escalation-hostilities-3-june-2021>.

94 'Israel aggression against Gaza Strip - May 2021', Palestinian Ministry of Health, May 21st 2021, Reviewed at: <https://www.moh.gov.ps/portal/%d8%a7%d9%84%d8%b9%d8%af%d9%88%d8%a7%d9%86-%d8%a7%d9%84%d8%a5%d8%b3%d8%b1%d8%a7%d8%a6%d9%8a%d9%84%d9%8a-%d8%b9%d9%84%d9%89-%d9%82%d8%b7%d8%a7%d8%b9-%d8%ba%d8%b2%d8%a9-2021-israeli-aggression-against/>

95 'An analysis of the names of Gazans killed during Operation Guardian of the Walls indicates that about half of those killed as a result of Israeli attacks were terrorist operatives', The Meir Amit Intelligence and Terrorism Information Center, June 22nd 2021, Reviewed at: https://www.terrorism-info.org.il/app/uploads/2021/06/E_093_21.pdf

96 'Words Fail Us', B'Tselem, October 2021, reviewed at <https://wordsfailus.btselem.org/>

97 'Gaza Strip: Escalation of hostilities as of 3 June 2021', United Nations Office for the Coordination of Humanitarian Affairs, June 6th 2021, reviewed at <https://www.ochaopt.org/content/gaza-strip-escalation-hostilities-3-june-2021>.

98 'Operation Guardian of the Walls', Israel Ministry of Foreign Affairs, May 20th 2021, reviewed at <https://mfa.gov.il/MFA/ForeignPolicy/Terrorism/Palestinian/Pages/Operation-Guardian-of-the-Walls-10-May-2021.aspx>.

99 'An analysis of the names of Gazans killed during Operation Guardian of the Walls indicates that about half of those killed as a result of Israeli attacks were terrorist operatives', The Meir Amit Intelligence and Terrorism Information Center, June 22nd 2021, Reviewed at: https://www.terrorism-info.org.il/app/uploads/2021/06/E_093_21.pdf

Annex C: Parties to the conflicts

All Israeli actions within Gaza during May 2021 were conducted by the Israel Defense Forces (IDF). Airwars reviewed at least 980 individual press statements published by the IDF throughout the eleven day conflict, as well as hundreds of messages posted by Palestinian militants on channels such as Telegram.

Two Palestinian armed factions in Gaza dominated the conflict with Israel in May 2021: Hamas's armed wing al-Qassam, and Islamic Jihad's armed wing - also known as the al-Quds brigade.¹⁰⁰

Al-Qassam was the primary belligerent responsible for civilian harm events in Israel. The al-Qassam telegram channel was scraped by Airwars researchers to identify which civilian harm events could be linked to 'declared' belligerent strikes; a total of 16 incidents were able to be associated with strikes declared by al-Qassam, although only in seven incidents did al-Qassam directly acknowledge civilian harm. Another three events were not publicly declared by al-Qassam, but were instead linked to the group by local sources.

According to Airwars assessments, Islamic Jihad were reported by local sources to have declared that they carried out attacks linked to two civilian harm events in Israel - accounting for between 20 and 27 injuries, with all but one of those in one strike in Ashkelon, on May 12th. Islamic Jihad were also often the targets of Israeli strikes in the May conflict. Airwars found eight incidents of civilian harm where Islamic Jihad militants had also been reported killed in the near vicinity, or where Israeli forces had allegedly been targeting militant weapons - such as ammunition warehouses or anti-tank missiles.

In Syria, the IDF conducts airstrikes and occasional missile strikes against targets which have included the Lebanese militant organisation Hezbollah; Iranian-backed proxies fighting with Syrian regime forces; Iranian forces themselves; and, on occasion, Syrian regime forces.

¹⁰⁰ Members of Fatah were at times mentioned in local reporting linked to those killed in Gaza. However, given that there has been no large-scale organised Fatah military presence in Gaza since 2007, and given the fact that the group is not believed to have access to advanced weaponry, individuals with links to Fatah who were killed during the May conflict have been categorized as civilians rather than belligerents in Airwars assessments.

About this report

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