ACLED Methodology and Coding Decisions around the Yemen Civil War

After staging protests against the removal of fuel subsidies, the Houthi Movement overran the Yemeni capital Sana'a in September 2014. Shortly after, the Peace and National Partnership Agreement was signed, stipulating the formation of a technocratic government including advisors from the Houthis and the Southern Movement (Al Hirak). In January 2015, the Houthis put President Abdrabbuh Mansour Hadi, Prime Minister Khaled Bahah, and several cabinet ministers under house arrest, leading to their resignations and precipitating the constitutional crisis. The Houthis seized the opportunity to dismiss the government and form an executive body known as the Supreme Revolutionary Committee, chaired by Mohammed Ali Al Houthi. In the following weeks, Saudi Arabia and its allies launched a military intervention to restore the government of President Hadi and prevent Aden from falling to the Houthis. These events marked the beginning of the Yemen Civil War, which has killed thousands of people and prompted a major humanitarian crisis (ACLED, 9 February 2018).

The conflict presents some important methodological challenges for the recording of political violence: violent events unfold in a number of ways, which are not replicated in other contexts; a variety of actors partake in the conflict, reflecting the highly volatile and fragmented socio-political environment; media coverage often suffers from reporting biases and little access to Yemen's most remote regions. The report aims to outline ACLED's efforts to address these challenges and accurately capture manifestations of violence during the Yemen Civil War.

ACLED's work is conducted in collaboration with the Yemen Data Project (YDP), which contributes to enhance conflict monitoring and data sharing. Separately, YDP collates data on Saudi-led coalition airstrikes in Yemen since 2015.

What does ACLED cover in Yemen?

ACLED's coverage of political violence and protest in Yemen spans from January 2015 to real time.

Yemen's conflict environment is known to be one of the most volatile in the region. The current civil war, with its wider implications for the region, has added complexity to an already fractured political setting (European Council of Foreign Relations, February 2017).

As a result, ACLED records a wide range of violent events, including air / drone strikes and armed battles between opposing factions, as well as typically less reported episodes like tribal or

communal clashes, assassinations, bombings – either suicidal or remotely-activated – and peaceful or violent demonstrations. ACLED does not track criminal or domestic violence, nor records natural deaths from famine or diseases.

Which actors are recorded?

As a consequence of a highly volatile conflict environment, **ACLED has recorded nearly 400 distinct conflict agents operating in Yemen since 2015**. Many of these actors defy traditional classifications, and require further scrutiny:

- ACLED treats the forces allied with both the government of President Hadi and the Houthi-led executive bodies as **state forces**. It is important to note that the classification does not imply legitimacy, but rather acknowledges the fact that there currently exist two distinct governing authorities exercising *de facto* control over different portions of the Yemeni territory. These military or paramilitary actors often maintain no more than a formal relation with the government – such as in the case of the Elite Forces in Hadramawt ([United Nations Security Council, 26 January 2018](#)) – or may have split from their former allies – the Saleh-led Republican Guard being the most notable case. To reflect this fragmentation, they are identified by their respective regime years (2012 onwards for the Hadi government, and 2015-2016 and then 2016 onwards for the Houthi-Saleh and Houthi bodies), their police or military status, and their specific name.

- In comparison to other 'civil war contexts,' like in Syria, the number of actors classified as **rebels** in Yemen is relatively low. This is because the main 'rebel group' active in Yemen – the Houthis – transformed into a state actor following the formation of the Supreme Revolutionary Committee in February 2015. Contrarily, the secessionist Southern Transitional Council and its allied forces (the Security Belt, the Shabwani Elite, and other forces), which maintain a formal relation with the government, have had their ACLED actor designation changed from 'state forces' (INTER 1) to 'rebel group' (INTER 2) in the data from 9 August 2019 onward. This change accounts for the pro-STC takeover of Aden in August 2019 which marks a definitive transformation in those groups' identity from formal state forces to *de facto* rebel groups. Additional rebel groups coded in Yemen include the Southern Movement, and Islamist armed groups like Al Qaeda in the Arabian Peninsula (AQAP), Ansar al Sharia, and the Yemeni branch of the Islamic State (IS).

- **Political militias** are a primary agent of violence in Yemen. They include a wide range of armed groups that operate independently, in cooperation with state forces or as the armed wing of political parties or rebel factions. Although some of them might be commonly regarded as government forces, they operate outside of the formal lines of military command. A notable example are the National Resistance Forces, a coalition of militias active along the western coast bringing together the Giants Brigade, the Tihama Resistance, and the Guardians of the Republic ([ACLED, 20 July 2018](#)). The Popular Resistance and the Southern Resistance also identify composite cartels of local actors operating across much of central and southern Yemen, often in conjunction with, or at the behest of, state and rebel

forces. Often subsumed within the above-mentioned larger coalitions, armed wings of Yemen's political parties – including the General People's Congress (GPC) or Al Islah Party – are also recorded as political militias.

- **Tribal, clan or other communal groups** are coded when reported to be operating 'on behalf of' their communities, and not when fighting within the ranks of the army, of rebel groups, or of larger coalitions. These actors make up the vast majority of all actors recorded in Yemen, although they are typically reported to be involved in a limited number of events.

- **External forces** include both forces of foreign governments and private security operators. The Saudi-led coalition is coded using the tag name of 'Operation Decisive Storm' from 26 March 2015 to 21 April 2015 and 'Operation Restoring Hope' from 22 April 2015 onwards, with the participating countries reportedly involved in an event recorded as associate actors (despite leading the coalition, Saudi forces are not directly involved in each event) ([ACLED, 31 July 2018](#)). In a number of cases, the coalition operates in conjunction with Yemeni ground forces and is therefore coded as an associate actor. The United States, which has operated in Yemen with drones and ground forces, is coded as a separate actor.

- Similarly, ACLED aims to record the political, tribal or societal identity of **civilian actors**. Doing this allows users to track specific trends in civilian targeting and their exposure to the conflict. Among the civilian groups most regularly targeted, and recorded by ACLED as associate actors, are fishermen, farmers, clerics, tribal shayks, and members of political parties like the GPC and Al Islah.

How are events sourced?

Each week, researchers from ACLED and our partner organization YDP review hundreds of Arabic and English language sources to provide the most comprehensive database on political violence in Yemen. Over 600 local and foreign media outlets and news agencies have been used to record political violence and protest events in Yemen since 2015. In addition, selected social media accounts are monitored for information on events in hard-to-access contexts, while reports produced by reputed international institutions and non-governmental organizations supplement the regular coding process.

Nearly two-thirds of events recorded since 2015 were sourced through ACLED's partnership with YDP. YDP shares news reports outlining relevant political or conflict dynamics with ACLED researchers; ACLED researchers then verify their pertinence, code in accordance with ACLED's interpretation of political violence, and supplement coding through the review of a multitude of additional sources to account for reporting lags or to capture additional events. This extensive monitoring effort has allowed ACLED and YDP to provide the most comprehensive coverage of political violence across Yemen, in an attempt to adequately address the multiple challenges that both local and foreign media face in their daily reporting ([Columbia Journalism Review, 2 September 2019](#)). Among these challenges are that all warring parties have attempted to manipulate the war narratives by capturing independent media and state-owned news agencies, as

well as actively polarizing public discourse ([Atlantic Council, 3 May 2017](#)). Media stations have been targeted by destructive violence ([The Independent, 12 February 2016](#)), government repression severely hampers the ability of local journalists to report independently ([The Media Line, 25 August 2019](#)), and international media access continues to be limited, resulting in often inaccurate accounts of the conflict ([Washington Post, 3 August 2018](#)). According to Yemeni researcher and journalist Afrah Nasser, "[a]s a result of the hindered and biased media landscape, both the international community and more particularly the Yemeni public receive a distorted picture of the Yemen war" ([Atlantic Council, 3 May 2017](#)).

In this highly polarized and often restricted media environment, the data collection relies on a wide spectrum of sources which, when triangulated, account for the multiple partisan and geographical biases. Overall, more than 90% of events recorded by ACLED are sourced through Yemeni media (mostly national); most of these are sourced via ACLED's partnership with YDP. These include the official media channels of warring parties (i.e. the governments' respective news agencies), the Houthi-affiliated Al Masirah TV and Ansar Allah Media Center, and the Giants Brigade's Al Amaliqah website, as well as national and local outlets displaying a variety of political leanings.

These groups are partisan in the conflict and, as such, they might have incentives to share distorted information. However, relying merely on other official or independent sources risks introducing another type of bias into the data, namely the recording of violence only in areas where such sources have access or have vested political interests. Research conducted by [Bellingcat](#) and the [Yemeni Archive](#) have shown that official Saudi-led coalition sources have often downplayed or deliberately obscured the impact of air strikes on civilian populated areas, and that only partisan media sources or social media accounts reported the occurrence of such incidents. Excluding information from these sources comes at the cost of providing a partial view of the conflict.

ACLED instead holds the inclusion of events from these sources relevant, and has determined that while some of the information may indeed be biased (e.g. providing higher casualty numbers), not all information is. For example, they typically tend to be reliable on whether or not an event occurred. This is why, unless otherwise determined, ACLED researchers tend to record events reported by Houthi sources and other parties in the war. Additional details that are considered to be less reliable in the Yemen context, including the number of fatalities or the identity of the actors involved, are triangulated when possible and always coded using the most conservative interpretation available when discrepancies between reports exist. Some of the most recurring violent incidents, such as drone strikes or landmine explosions in Yemen's most remote areas, are particularly prone to reporting lags, and more accurate information only surfaces months after their occurrence.

The geographical coverage of these sources, however, is not uniform across Yemen. Along the frontline, sources affiliated with governments or armed groups widely report the occurrence of incidents, yet they often tend to only acknowledge losses among their opponents' ranks. This is especially evident in the sparsely populated areas of Al Jawf and Hajjah governorates, where the limited presence of independent reporting has often made it difficult to corroborate the credibility of the information by triangulating multiple sources. In these contexts, ACLED researchers often have to rely on unilateral real-time reporting, although subsequent news gathering may help

corroborate the information and adjust initial biases due to the real-time nature of the data collection. Elsewhere, the prevalence of subnational sources is higher in the southern governorates of Aden and Abyan, where a rich media environment consisting of dozens of local outlets is helpful in capturing most of the low-intensity violence occurring in these areas. Subnational sources are used for approximately 20% of events in the above governorates, versus less than 3% nationwide.

Meanwhile, foreign media (regional, international) sources account for sourcing in nearly 5% of events since 2015 (and less than 1% of events more recently in 2020). Among these, Gulf-based media is currently limited and often tends to engage in reporting biases. For example, Emirati media The National and Gulf News[1] display a tendency to report specifically on cases where regional interests are at stake and foreign troops are active on the ground. For example, the highest proportion of events recorded using these two sources is in the western coast governorates of Hodeidah and Taizz, where the UAE was spearheading an offensive against Houthi forces in 2018. Similarly, the Saudi Al Arabiya media has reported heavily on the northern governorates of Hajjah and Sadah, which border Saudi Arabia.

A limited yet increasing proportion of events is sourced through new media, most notably reputable Twitter accounts and Telegram channels. These provide valuable information about the activity of non-state groups and activity from Yemen's easternmost governorates. Over 15% of events involving rebel groups like AQAP and IS are captured through new media sources, pointing to their importance in tracking conflict incidents. Indeed, as these groups suffered several setbacks which severely curbed their operational capacities, social media and encrypted messaging applications became increasingly important tools to promote their activity.

In addition to the daily monitoring of traditional and new media sources, ACLED regularly reviews 'Other' sources, mainly reports produced by the UN, non-governmental organizations like Human Rights Watch, Amnesty International, New America Foundation, The Bureau of Investigative Journalism, and local monitoring groups and think tanks such as Mwatana Organization for Human Rights and the Sana'a Center for Strategic Studies. These reports are a useful resource to update information that is often not available or accurate in real-time reporting, like total fatality estimates or geolocation. They also significantly supplement ACLED's coverage of violence against civilians where such instances fail to be reported by traditional media or require months of investigations; these include, among other examples, mine-related incidents and violence targeting women in conflict environments. Additional, yet limited, data from ACLED partners such as the Aid Workers Security Database further supplement the data.

Where does violence take place, and how are locations recorded in Yemen?

The coding of locations in Yemen reflects the irregular natural and physical geography of the country. Violent events were recorded in both **urban and rural spaces**, with significant regional variations within the country. The variety of the recorded locations reveals the composite

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[1] Coded in the source column as 'Gulf News (UAE)' and 'National (UAE)' respectively.

subnational geography of the conflict, which bears further implications for the conduct of the conflict.

Over 4,200 distinct locations have been recorded by ACLED in Yemen. These include towns (and neighborhoods in major cities like Sana'a, Aden, Hodeidah, and Ta'izz), villages, and other populated places, as well as natural locations like the Red Sea islands, the desert areas in the north-east of the country spanning across the border with Saudi Arabia, rugged mountainous areas, and valleys. Depending on the accuracy of the sources and the size of the recorded location, researchers will select the appropriate geo-precision level to reflect the precision of the coordinates.

Events on the Saudi-Yemeni border

Reporting on the Yemeni-Saudi border faces major shortcomings as reports from the border regions can rarely be triangulated due to unilateral and partisan reporting. Events often occur in either mountainous or desert areas which span between Saudi and Yemeni territory, resulting in exact locations often being unknown.

Following a review of open source information (Medium, 21 February 2020; Twitter, 4 December 2018), ACLED assumes that events reportedly taking place in the Saudi locations listed in **Table 1** below can confidently be re-coded to a corresponding location in Yemen directly across the border. For events in these locations, a short explainer is added to the notes: "*ACLED defaults to coding the event on the Yemeni side when the source describes a large area along the Saudi-Yemeni border*." See **Table 1** below for information on the location changes.

Table 1

Formerly coded Saudi Admin 1	Formerly coded Saudi Location	Formerly coded Saudi Latitude	Formerly coded Saudi Longitude	Newly coded Yemeni Admin1	Newly coded Yemeni location	Newly coded Yemeni latitude	Newly coded Yemeni longitude
Jizan	Wadi al Jarah	16.8165	43.2147	Sadah	Wadi al Jarah	16.8251	43.2277
Najran	Al Buqa	17.4712	44.6451	Sadah	Al Buqa	17.3317	44.6066
Jizan	Rahwan	16.8333	43.2167	Sadah	Tuwayliq	16.8500	43.2167
Asir	Aqabat al Alb	17.5667	43.4000	Sadah	Aqabat al Alb	17.5449	43.4545
Jizan	At Tuwal	16.5294	42.9676	Hajjah	At Tuwal Border Crossing	16.4962	42.9921
Najran	As Sawah	17.4047	44.1073	Sadah	As Sawh	17.3481	44.1279
Najran	Al Ajashir	17.3138	45.6726	Sadah	Al Ajashir	17.1833	44.8000
Asir	Al Mijazah	17.5204	43.5667	Sadah	Al Mijazah Frontline	17.4871	43.5174
Asir	Al Raboah	17.5760	43.3246	Sadah	Ar Raboah Frontline	17.5407	43.3593
Najran	Jabal al Sudais	17.4361	44.1611	Sadah	As Sudais	17.3883	44.1491
Jizan	Jabal ad Dud	16.7602	43.2406	Sadah	Jabal ad Dud Frontline	16.7611	43.2584
Jizan	Jabal ad Dukhan	16.7481	43.2140	Sadah	Jabal ad Dukhan	16.7441	43.2266

However, there are additional locations along the Saudi-Yemeni border for which ACLED did not manage to establish a direct corresponding location in Yemen, but which are nonetheless also likely to have taken place in Yemeni territory.

As such, ACLED has adapted certain procedures to deal specifically with events near these locations in which it is known that the geographic location is uncertain (i.e. events coded with geo-precision levels above 1).

Indeed some events occurring in these locations on the border between Saudi Arabia and Yemen fall on the Saudi side of the border. Events falling on the Saudi side of the Yemeni-Saudi border which are coded with a geo-precision of 1 remain unchanged.

The majority of events coded at a geo-precision of 2, with a few caveats noted below, are coded to one of **four standardized locations** in Yemen based on geographic proximity. ACLED views locations coded at a geo-precision of 2 along the Saudi border as uncertain; these are events that occurred in very close proximity to the border, without clear information distinguishing the specific country in which they may have occurred. There is evidence, using open-source intelligence, that some events claimed to have occurred in Saudi Arabia actually took place in Yemen ([Medium, 21 February 2020](#)). Given this, and as these events are associated with the war in Yemen, ACLED has determined that such events and their respective fatalities ought to be aggregated with the Yemen data, instead of the Saudi Arabia data. These events are assumed to not be already captured elsewhere in either country.

The four standardized locations are **Al Buqa**, **Al Malahit**, and **Baqim Junction** in Sadah governorate, and **Harad** in Hajjah governorate. A list of Saudi locations from which events are moved to the four corresponding Yemeni locations can be found in **Table 2** at the end of this section.

However, not all events on the Saudi side of the border with a geo-precision of 2 are moved to the corresponding Yemeni locations. It is highly likely that Houthi drone activity indeed takes place on the Saudi side of the border; these events are often within 20km of the border, yet frequently do not have a precise location. The following sub-event types reflect such activity and hence their location has been kept on the Saudi side of the border: '*Looting/property destruction,*' '*Disrupted weapons use,*' and '*Air/drone strikes*' which are perpetrated by the 'Military Forces of Yemen (2016-) Supreme Political Council.'

Events coded with the sub-event type '*Shelling/artillery/missile attacks*' with keywords in the Notes section including "missile," "precision-guided artillery rocket," "precision guided artillery rocket," or "artillery rocket" are also kept in Saudi Arabia as such events capture Houthi ballistic missile et al. activity and are very likely to have actually occurred on the Saudi side of the border.

Events capturing transfers of territory are likewise most often kept in Saudi Arabia as they are assumed to reflect changes to the specific location that was coded. As such, events with the following sub-event types are not moved: '*Government regains territory,*' '*Non-state actor overtakes territory,*' and '*Non-violent transfer of territory.*'

The events which are moved to Yemeni locations are edited as follows:

- All events have their geo-precision changed to 3 in order to reflect that these locations are estimates.
- The Notes column of these events are appended with the following phrase: "*ACLED uses a Yemeni location close to the border to record events between pro-Houthi and anti-Houthi troops where the location reported within 20km of the border in Saudi Arabia has an unclear geoprecision."*
- Interaction codes are amended, as necessary (see ACLED's Codebook for information on Interaction code and what they mean).

Events which remain on the Saudi side of the Yemeni-Saudi border, and where fatalities are reported to have occurred but where the exact number of fatalities is unknown, continue to be coded with an estimated 10 fatalities. This is to reflect that the Saudi side of this border is engaged in a war, given the activity and proximity to Yemen. See the ACLED Fatality Methodology.

Table 2 below shows the Saudi locations along the Saudi-Yemeni border and outlines their corresponding location of the four chosen locations on the Yemeni side of the border.

Table 2

Formerly coded Saudi admin1	Formerly coded Saudi location	Formerly coded Saudi latitude	Formerly coded Saudi longitude	Newly coded Yemeni admin1	Newly coded Yemeni location	Newly coded Yemeni latitude	Newly coded Yemeni longitude
Najran	Akifah	17.4953	43.7585	Sadah	Al Buqa	17.3317	44.6066
Najran	Al Fauwaz	17.4783	44.2463	Sadah	Al Buqa	17.3317	44.6066
Najran	Al Khadra	17.4046	44.0200	Sadah	Al Buqa	17.3317	44.6066
Najran	Ash Shurfah	17.5235	44.3095	Sadah	Al Buqa	17.3317	44.6066
Najran	Bir Askar	17.6062	44.0352	Sadah	Al Buqa	17.3317	44.6066
Najran	Khubash	17.5440	44.7350	Sadah	Al Buqa	17.3317	44.6066
Najran	Nahuqah	17.4359	44.1157	Sadah	Al Buqa	17.3317	44.6066
Najran	Najran	17.4933	44.1277	Sadah	Al Buqa	17.3317	44.6066
Najran	Rajla	17.4994	44.2284	Sadah	Al Buqa	17.3317	44.6066
Najran	Siqam	17.4836	44.2300	Sadah	Al Buqa	17.3317	44.6066
Najran	Wadi Aleeb	17.6450	43.7625	Sadah	Al Buqa	17.3317	44.6066
Jizan	Ad Dair	17.3375	43.1364	Sadah	Al Malahit	16.7685	43.2758
Jizan	Al Abadiyah	16.8417	43.1820	Sadah	Al Malahit	16.7685	43.2758
Jizan	Al Aridah	17.0394	43.0859	Sadah	Al Malahit	16.7685	43.2758
Jizan	Al Dafiniyah	16.7875	43.1931	Sadah	Al Malahit	16.7685	43.2758
Jizan	Al Khobh	16.7818	43.2157	Sadah	Al Malahit	16.7685	43.2758
Jizan	Al Khushel	16.8801	43.1373	Sadah	Al Malahit	16.7685	43.2758
Jizan	As Sahhar	16.9512	43.1505	Sadah	Al Malahit	16.7685	43.2758
Jizan	Ash Shabakah	16.7825	43.2297	Sadah	Al Malahit	16.7685	43.2758
Jizan	Bani Malik	17.3982	43.1947	Sadah	Al Malahit	16.7685	43.2758

Jizan	Jabal Juhfan	16.6836	43.1822	Sadah	Al Malahit	16.7685	43.2758
Jizan	Jabal Malhama	16.8587	43.1656	Sadah	Al Malahit	16.7685	43.2758
Jizan	Qarn Muzabbar	16.7868	43.2018	Sadah	Al Malahit	16.7685	43.2758
Jizan	Qays	17.0340	43.2160	Sadah	Al Malahit	16.7685	43.2758
Jizan	Sala	17.0403	43.1518	Sadah	Al Malahit	16.7685	43.2758
Jizan	Samitah	16.5960	42.9440	Sadah	Al Malahit	16.7685	43.2758
Jizan	Wadi Awjabah	17.1080	43.1271	Sadah	Al Malahit	16.7685	43.2758
Asir	Al Maarif	17.5667	43.4500	Sadah	Baqim Junction	17.4008	43.4498
Asir	Al Osha	17.5597	43.6139	Sadah	Baqim Junction	17.4008	43.4498
Asir	Zahran	17.6723	43.5236	Sadah	Baqim Junction	17.4008	43.4498
Jizan	Abu ad Darbah	16.5533	43.1139	Hajjah	Harad	16.4097	43.0588
Jizan	Abu ar Radif	16.6186	43.1312	Hajjah	Harad	16.4097	43.0588
Jizan	Ahad al Masarihah	16.7099	42.9550	Hajjah	Harad	16.4097	43.0588
Jizan	Al Kirs	16.5773	42.9476	Hajjah	Harad	16.4097	43.0588
Jizan	Al Mezaab	16.5766	43.0916	Hajjah	Harad	16.4097	43.0588
Jizan	Al Mubakharah	16.5386	43.0841	Hajjah	Harad	16.4097	43.0588
Jizan	Al Muwassam	16.4167	42.8258	Hajjah	Harad	16.4097	43.0588
Jizan	Al Qanboor	16.4150	42.8931	Hajjah	Harad	16.4097	43.0588
Jizan	Ar Ramadah	16.6915	42.9930	Hajjah	Harad	16.4097	43.0588
Jizan	Ghawiyah	16.5651	43.1110	Hajjah	Harad	16.4097	43.0588
Jizan	Hamdah	16.7619	42.9222	Hajjah	Harad	16.4097	43.0588
Jizan	Mathan	16.4266	42.9238	Hajjah	Harad	16.4097	43.0588
Jizan	Ramdah	16.4667	42.9000	Hajjah	Harad	16.4097	43.0588
Jizan	Samitah	16.5960	42.9444	Hajjah	Harad	16.4097	43.0588
Jizan	Shaib adh Dhib	16.5471	42.9796	Hajjah	Harad	16.4097	43.0588

How does ACLED record fatalities?

Fatality data are typically the most biased, and least accurate, part of any conflict report as they are particularly prone to manipulation by armed groups, and occasionally the media. As such, all figures should be treated as 'reported fatalities.' These estimates include both combatants and non-combatants.

ACLED does not code fatality figures according to which group suffered fatalities because most source reports do not offer this level of detail, and instead report on the total number of deaths arising from a conflict event. The only exception to this is in events with civilians coded as actor 2: because ACLED treats civilians as unarmed non-combatants, the number of fatalities reported for each event with civilians coded as actor 2 – typically coded under '*Violence against civilians* or '*Explosions/Remote violence* – is taken to be the reported number of civilians killed (unless the perpetrator dies as a result of his action, like a suicide bomber). As such, ACLED's conservative **estimates of civilian fatalities used for analysis do not include civilians that may have died**

during fighting between armed groups or as a result of the remote targeting of armed groups (e.g. an airstrike hitting militant positions but that also kills civilians).[2]

Fatality counting in the Yemeni Civil War faces several obstacles, which make any effort to provide reliable estimates highly difficult ([Washington Post, 3 August 2018](#)). Scarce or biased reporting, as well as limited media access to the sites of violence, may indeed result in substantially different fatality estimates arising from the same event, uncertain figures, or one-sided coverage of conflict events in certain areas. This partially explains why official estimates, which rely on selected data from health facilities, tend to be significantly lower compared to what is perceived to be the real impact of the conflict in Yemen ([The Guardian, 16 January 2017](#)).

To avoid artificially increasing the number of reported fatalities, ACLED has taken several steps to ensure that fatality estimates during the Yemen Civil War are the most accurate possible and least subject to media biases:

- Researchers triangulate reported fatality counts to always select the most conservative available, unless more recent or verified information is released;
- High fatality estimates reported by only one source are verified thoroughly, and discarded if they are not confirmed by multiple sources;
- If 'casualties' are reported, ACLED assumes that there have been injuries, but not fatalities;
- If fatality estimates are unknown – and this happens often as many reports tend to be vague and only mention the occurrence of "deaths and injuries" or "losses" – ACLED uses a standard estimate of 10, or 3 when the event is known to have caused less than 10 fatalities (e.g. the bombing of a motorcycle resulting in *some* fatalities). Additional intermediate estimates are used to capture other inaccurate reported figures (e.g. dozens, scores, etc.)

Although the use of a discretionary fatality estimate can result in artificially increasing the number of fatalities, we can easily assume that there are several cases where fatalities go under reported or are not reported at all. In the end, these expedients help control the inherent bias and avoid inflating fatality counts significantly while ensuring consistency within the country and across other regions. For more information on fatalities, see [ACLED's Fatality Methodology](#).

Saudi-led coalition reporting of airstrikes and associated Houthi fatalities since October 2021

On 10 October 2021, the spokesperson of the Saudi-led coalition announced the killing of more than 400 Houthi fighters from airstrikes in Al Abdiyah district of Marib governorate over the preceding 96 hours (6 through 9 October 2021) ([Saudi Press Agency, 10 October 2021](#)). The next day, a new announcement claimed the killing of more than 156 Houthi fighters from airstrikes in the same district over the preceding 24 hours ([Saudi Press Agency, 11 October 2021](#)). This represented a significant shift in reporting. Before that, the Saudi-led coalition only rarely published fatality figures from its airstrikes, and never with that level of precision. For more than three months, similar announcements with the same canned language were made on a near daily basis. They

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[2] ACLED has developed a tool which automatically combines all events featuring targeted VAC and E/RV attacks against unarmed protesters and civilians into a single file. It is available for download on our curated data page, [here](#).

mostly reported on Marib governorate, though also the governorates of Al Bayda, Al Jawf, Shabwah, and later Taizz and Hajjah, coinciding with anti-Houthi offensives on the ground. An example of the canned language used is as follows: "الاستهدافات دمرت 22 آلية عسكرية وخسائر بشرية بأكثر من 250 عنصرا" ("the targeting destroyed 22 military vehicles, and human losses of more than 250 personnel").

On 31 January, Saudi-led coalition reporting shifted again. While near daily announcements about the specific number of operations carried out and the specific numbers of vehicles destroyed continued (as outlined above), the specific numbers about the fatalities were removed from the reports. The reports instead only reported unspecified "human losses," which, according to [ACLED's Fatality Methodology](), would be coded as 10 fatalities.

This short-lived, precise (yet high) reporting of fatalities from Saudi-led coalition airstrikes resulted in a dramatic 332% spike in fatality data between October 2021 and January 2022, compared to the three months prior to the initial reporting shift. These figures would suggest that the months following the initial shift in reporting represent the deadliest time period of the entire conflict in Yemen. While more than 1,000 fatalities in a single week was reported only once between January 2015 and September 2021 (week of 3-9 November 2018), this new reporting had returned 10 weeks of 1,000+ fatalities in the 16 weeks after these events had begun to be reported. Although fighting had indeed intensified on the ground with an increase in political violence events since September 2021, overall levels of political violence remained relatively low compared to previous years. In other words, the trends reported following this initial shift underlined an unrealistically dramatic shift in conflict patterns, especially when considering the lack of such reporting by other primary sources. This is why ACLED has decided to not code the precise number of fatalities reported by Saudi sources during this brief shift in reporting, instead opting to treat these reports as an 'unspecified number' of fatalities, which ACLED codes as 10 fatalities in war zones like Yemen, according to [ACLED's Fatality Methodology]().

The strategy of coding reported fatalities from all of these reports since October 2021 – both those with 'precise reporting' between 10 October 2021 and 30 January 2022, as well as those since 31 January 2022 which note "unspecified losses" – as 10 allows ACLED to capture the rise in airstrike fatalities, while avoiding the injection of an artificial fatality spike in the data. The outside experts who were consulted confirmed the likelihood of an increase in Houthi fatalities from Saudi-led coalition airstrikes, though there was no general sense across them that the exact fatality figures provided by the Saudi-led coalition were accurate. This decision is also consistent with ACLED's overall conservative approach to coding fatalities, as well as ACLED's additional caution when coding fatalities reported by conflict actors (*for example, see [ACLED's decisions in the Afghan context]()*). Note that ACLED integrates these fatalities into battle events whenever possible to reflect the recent increase in Saudi-led coalition air support to ground offensives confirmed by outside experts, rather than attribute them to isolated air/drone strike events in frontline areas.