

Bomb the area, gas the tunnels: Israel's unbridled war on Gaza's underground

Sunday 9 February 2025, by [ABRAHAM Yuval](#) (Date first published: 6 February 2025).

Unable to pinpoint Hamas commanders in Gaza's tunnels, the Israeli army decimated entire residential blocks with bunker-buster bombs to crush the passages below and flood them with lethal fumes, an investigation reveals.

Contents

- [Part 1: The gas effect - A \(...\)](#)
- [Creating death traps](#)
- [Part 2: Endangering hostages](#)
- [‘The focus was revenge’](#)
- [‘If they don't know where \(...\)](#)
- [Part 3: ‘Tiling’ neighborhoods](#)
- [‘You end up dropping 10 \(...\)](#)
- [‘Imagine this was Tel Aviv](#)

The Israeli army intensively bombarded residential areas in Gaza when it lacked intelligence on the exact location of Hamas commanders hiding underground, and intentionally weaponized toxic byproducts of bombs to suffocate militants in their tunnels, an investigation by +972 Magazine and Local Call can reveal.

The investigation, based on conversations with 15 Israeli Military Intelligence and [Shin Bet](#) officers who have been involved in tunnel-targeting operations since October 7, exposes how this strategy aimed to compensate for the army's inability to pinpoint targets in Hamas' subterranean tunnel network. When targeting senior commanders in the group, the Israeli military authorized the killing of “triple-digit numbers” of Palestinian civilians as “collateral damage,” and maintained close real-time coordination with U.S. officials regarding the expected casualty figures.

Some of these strikes, which were the deadliest in the war and often used American bombs, are known to have killed Israeli hostages despite concerns raised ahead of time by military officers. Moreover, the lack of precise intelligence meant that in at least three major strikes, the army dropped several 2,000-pound bunker-buster bombs that killed scores of civilians — part of a strategy known as “tiling” — without succeeding in killing the intended target.

“Pinpointing a target inside a tunnel is hard, so you attack a [wide] radius,” a Military Intelligence source told +972 and Local Call. Given that the army would have only a vague approximation of the target's location, the source explained, this radius would be as large as “tens and sometimes hundreds of meters,” meaning these bombing operations collapsed multiple apartment buildings on their occupants without warning. “Suddenly you see how someone in the IDF really behaves when given the opportunity to wipe out an entire residential block — and they do it,” the source added.

The investigation also reveals how Israel has known for years that the use of bunker-buster bombs

releases the lethal gas carbon monoxide as a byproduct, which can kill people inside a tunnel through asphyxiation even at a distance of hundreds of meters from the strike location. After discovering this by chance in 2017, the army first tested it as a strategy in Gaza in 2021, and employed it in its efforts to kill Hamas commanders after October 7. This way, the army could attack targets without knowing their precise location, and without having to rely on direct hits.

“The gas stays underground, and people suffocate,” Brig. Gen. (res.) Guy Hazoot, the only source willing to be named, told +972 and Local Call. “[We realized] we could effectively target anyone underground using the Air Force’s bunker-buster bombs, which, even if they don’t destroy the tunnel, release gases that kill anyone inside. The tunnel then becomes a death trap.”

Palestinian rescue workers search for bodies and survivors under the rubble of a destroyed residential building following Israeli bombardment in Gaza City, Gaza Strip, May 16, 2021. (Mohammed Zaanoun/Activestills)

In January 2024, a spokesperson for the Israeli army told +972 and Local Call in response to [a previous investigation](#) that it “has never used and does not currently use byproducts of bomb deployment to harm its targets, and there is no such ‘technique’ in the IDF.” Yet our new investigation reveals that the Air Force conducted physio-chemical research on the effect of the gas in enclosed spaces, and the military has deliberated over the method’s ethical implications.

Three Israeli hostages — Nik Beizer, Ron Sherman, and Elia Toledano — were definitively killed by asphyxiation as a result of a Nov. 10, 2023, bombing that targeted Ahmed Ghandour, a Hamas brigade commander in northern Gaza. The army told their families that, at the time of the bombing, it was unaware that hostages were being held near Ghandour. However, three sources with knowledge of the strike, which was led by the Shin Bet, told +972 and Local Call there was “ambiguous” intelligence indicating that hostages might be in the vicinity, yet the attack was still authorized.

According to six sources, this was not an isolated case but one of “dozens” of Israeli airstrikes that likely endangered or killed hostages. They described how the military command greenlighted attacks on the homes of suspected kidnappers and the tunnels from which senior Hamas figures were directing the fighting.

While attacks were aborted when there was specific, definitive intelligence indicating the presence of a hostage, the army routinely authorized strikes when the intelligence picture was murky and there was a “general” likelihood that hostages were present in the vicinity of a target. “Mistakes definitely happened, and we bombed hostages,” one intelligence source said.

Israel’s efforts to maximize the chances of killing senior militants hiding underground also included attempts to crush parts of a tunnel network and trap the targets inside. Sources described incidents where vehicles fleeing an attack site were bombed without specific intelligence about who was inside, based on the assumption that a senior Hamas figure might be trying to escape.

“The entire region felt and heard the explosions,” Abdel Hadi Okal, a Palestinian journalist from Jabalia who witnessed several major Israeli bombing operations — which Palestinians often refer to as “fire belts” — during the early weeks of the war, told +972 and Local Call. “Entire residential blocks were targeted with heavy missiles, causing buildings to collapse and fall on top of each other. Ambulances and Civil Defense vehicles were unable to contend with the scale of the bombardment, so people had to use their hands and some light equipment to pull bodies from under the rubble of houses. There was no possibility for anyone to survive.”

Palestinians recover the dead and rescue the wounded members of the Shaqura family, buried under the rubble of their home in the centre of Khan Younis, southern Gaza Strip, November 6, 2023.
(Mohammed Zaanoun/Activestills)

Part 1: The gas effect - A surprise discovery

The gas effect was discovered unintentionally in October 2017. At the time, Brig. Gen. (res.) Guy Hazoot led a division in the Southern Command. He recounted the sequence of events to +972 and Local Call, corroborated by three other military sources.

According to Hazoot, the then-IDF Chief of Staff Gadi Eizenkot was abroad and had tasked his deputy, Aviv Kochavi, with addressing a pressing issue: Palestinian Islamic Jihad (PIJ) had dug a tunnel underneath the fence that encages the Gaza Strip, reaching about two kilometers from Kibbutz Kissufim. Kochavi ordered the Air Force to bomb the tunnel with a bunker-buster bomb but instructed them to avoid killing more than five PIJ operatives to prevent unnecessary escalation in Gaza.

Then, something unexpected happened. “Even though we fired the bombs on [the Israeli side] of the border, everyone in the tunnel [inside Gaza] died,” Hazoot explained. “Another 12 PIJ rescue personnel entered after the explosion and also died from suffocation. Even those with masks died.” This was the “breakthrough moment,” Hazoot said, when it became clear that bunker-buster bombs detonated in tunnels dispersed carbon monoxide gas as a byproduct, which remained in the tunnel for days.

Carbon monoxide, known as the “silent killer,” is colorless, odorless, and tasteless, and is particularly lethal to humans. Annually, approximately [30,000 people](#) die from inhaling it due to faulty heaters, engines, and furnaces in enclosed spaces with low oxygen levels.

The Air Force subsequently conducted a physio-chemical study on the effect of the gas in confined spaces, which found that it was difficult to predict the precise radius of its lethal spread. “There are probabilities,” a source in the Air Force explained to +972 and Local Call. “It’s not binary, where everyone within this radius dies and beyond it no one does. There’s a radius of high probability, medium probability, and low probability of dying from the gas.”

Security sources noted that using bunker-buster bombs that release gas underground as a byproduct overcame the challenge of having to pinpoint a target’s exact location inside a tunnel. But it also presented a dilemma.

“It was made clear to us how sensitive this issue is, the very fact that this effect exists,” the Air Force source said. A source who participated in a discussion about the use of the technique in 2021, led by the then-chief of the army’s Southern Command, Eliezer Toledano, explained: “Everyone took it very seriously in the discussion, the fact that gas is what kills. They feared it would cause significant damage to [Israel’s] image.”

Palestinians try to rescue survivors and pull bodies from the rubble after Israeli airstrikes near Al-Aqsa Martyrs Hospital, killing many people in Deir Al-Balah, in central Gaza, October 22, 2023.
(Mohammed Zaanoun/Activestills)

Military officials emphasized to +972 and Local Call that the intent was to use the chemical byproduct solely to kill Hamas operatives “who intended to fight the IDF.” Hazoot, along with other security sources, also stressed that the bombs themselves are “conventional weapons,” as the gases are a byproduct of standard bombs, not chemical or biological warheads. “The gases have nowhere

to escape,” Hazoot said. “They stay underground, and people suffocate. It’s a conventional weapon, only its effect underground is different. The bombs become more lethal.”

However, Michael Sfar, an Israeli human rights lawyer and expert in international law, told +972 and Local Call: “Even if the bombs releasing the gas are conventional and the gas is only a byproduct, the deliberate use of this ‘side effect’ as a method of warfare violates prohibitions outlined in the laws of armed conflict. The use of toxic or asphyxiating gas in combat contravenes the provisions of the Chemical Weapons Convention and longstanding international declarations predating it, and is classified under the Rome Statute of the International Criminal Court as a war crime.”

Sarah Harrison, a senior analyst at the International Crisis Group and a former Pentagon lawyer who advised U.S. armed forces, affirmed that the intentional use of carbon monoxide as a weapon is illegal under customary international law. While bunker-buster bombs are not outlawed per se, “if the intent is to only use the conventional weapon as a device to transport what is otherwise a chemical weapon, then that would be, in my opinion, an illegal use,” she told +972 and Local Call. “There are lots of lawful weapons you can use unlawfully.”

In response to our inquiry, a spokesperson for the Israeli army again denied that it uses this technique to kill Hamas leaders, calling the allegation “baseless.”

Creating death traps

Hazoot and other sources revealed that Israel’s first attempt to employ bunker-buster bombs to cause mass fatalities among militants through gas-induced asphyxiation was in “Operation Lightning Strike,” the massive bombing of Hamas’ tunnel network during the broader “Operation Guardian of the Walls” in May 2021.

Ahead of that operation, a source from the Israeli Air Force explained, professional ranks in the Air Force raised concerns that the extensive use of bunker-buster bombs to detonate underground could cause entire buildings above ground to collapse, endangering large numbers of civilians. “There was an effort to convey to the command level that this operation was risky, that buildings might collapse, and that we didn’t fully understand what might happen,” the source said. “But they went ahead with it anyway.”

These predictions materialized during the operation on May 16, 2021. The attack on Hamas’ tunnel network in the Rimal neighborhood of Gaza City collapsed several residential buildings, [killing](#) 44 civilians.

Hazoot explained that during “Guardian of the Walls,” the army aimed to mislead Hamas into believing that Israeli troops were about to invade Gaza, prompting its operatives to retreat into the tunnels. In the attack to follow, he told the Israeli newspaper Israel Hayom in an [interview](#) last year, the army expected to kill “between 500 and 800 operatives” through asphyxiation upon dropping “460 bunker-buster bombs on them simultaneously.”

A devastated quarter of the Rimal neighborhood in the heart of Gaza City following Israeli bombings, Gaza Strip, October 23, 2023. (Mohammed Zaanoun/Activestills)

The deception failed: Hamas operatives did not enter the tunnels. Yet the bombardment proceeded regardless.

The sources stated that these attacks shocked some within the Air Force and Southern Command, as

they felt the actions lacked military logic once it became evident that Hamas operatives were not retreating to the tunnels — foreshadowing some of the army’s [modes of operation](#) since October 7. “At a certain point, [the army] realized Hamas had figured out the strategy. And they said, ‘Well, let’s just blow everything up and create destruction,’” a military source claimed. “There was no rational decision-making. It didn’t feel like there was a purpose. It felt like an attempt to display power.”

According to Hazoot, Hamas soon caught on. “Hamas learned lessons from ‘Guardian of the Walls,’” he explained. “They purchased 1,300 blast doors and distributed them throughout the tunnels. They created multiple ventilation shafts to disperse the gases and also implemented new tunnel-digging techniques involving twists and turns” — techniques which, according to Hazoot, helped to trap gas and prevent it from spreading further.

Indeed, a Hamas spokesperson confirmed to +972 and Local Call: “Al-Qassam Brigades took measures to protect its elements in the tunnels from the gases that the Israeli army was sending during its strikes.”

An intelligence source involved in Israeli military activity in both Gaza and Lebanon told +972 and Local Call that the understanding within the security establishment is that Hezbollah Secretary General Hassan Nasrallah likely also died from asphyxiation — though in Lebanon gas was not weaponized as a deliberate assassination method, as it was in Gaza.

“With Nasrallah, dozens of bombs were dropped, and the IDF hoped one of them would detonate and directly kill him in the bunker,” the source said. “In Gaza, on the other hand, when attacking a tunnel, you don’t know exactly where the senior figure is located. So you attack several areas of the tunnel, creating the potential that he will die from asphyxiation.”

The army’s deliberate use of gas-induced asphyxiation as an assassination technique in Gaza was also highlighted by Nir Dvori, a military analyst for Israel’s Channel 12, in his account of the bombing that killed senior Hamas militant Marwan Issa in Nuseirat refugee camp in March 2024. “The Air Force used bunker-buster bombs and especially heavy explosives to strike the underground compound,” Dvori [wrote](#), citing military sources. “The reason for the heavy bombardment and secondary explosions was to ensure that anyone not killed by the blast itself or the tunnel collapse would die from asphyxiation or inhalation of hazardous substances.”

Smoke rises after Israeli airstrikes in several location in the Gaza Strip, October 9, 2023. (Atia Mohammed/Flash90)

Part 2: Endangering hostages

‘There was some indication of a hostage, but there was pressure to act’

Militants were not the only ones who died from gas exposure. On Nov. 10, 2023, the Israeli army bombed a tunnel that it had identified as the hiding place of the commander of Hamas’ Northern Gaza Brigade, Ahmed Ghandour. The attack also killed three Israeli hostages: Ron Sherman, Nik Beizer, and Elia Toledano. The army [recovered their bodies](#) and returned them to Israel the following month.

Initially, the army told the hostages’ families that the three men had been murdered by Hamas. Later, however, they said that Sherman, Beizer, and Toledano — whose bodies were found intact and bore no gunshot wounds — had died from carbon monoxide poisoning caused by Israeli bombing.

Ten months after her son Nik's death, Katya Beizer was summoned to a meeting with a senior Military Intelligence officer and an Air Force commander responsible for the attack. They explained that the military was unaware of the hostages' presence in the tunnel and that her son had died from a bomb dropped by the Air Force, which released toxic gas.

"They said this type of weapon releases gases," Katya told +972 and Local Call. "I asked what kind of gases, and they immediately clarified that it was a conventional weapon, nothing prohibited." She recounted that during the conversation, they admitted that the use of gas was intentional because it was "the only way to reach someone inside the tunnel."

Sherman's mother, Ma'ayan, [told](#) the Israeli investigative outlet The Hottest Place in Hell that the head of the army's Hostages and Missing Persons Command Center, Maj. Gen. Nitzan Alon, explained to her that "the bombs are conventional, but they do have a certain side effect that causes the release of toxic gases due to a chemical reaction, and that's the cause of death." He also apologized, saying, "We didn't know they were there."

Nine days before Ron's death, on Nov. 1, 2023, Ma'ayan Sherman had received a WhatsApp message from someone at the Hostages and Missing Persons Command Center assigned to her family. The message — seen by +972 and Local Call — included a flyer distributed by Hamas, with the bold red heading: "A Message to the Israeli People." The image showed her son Ron, looking frightened, his hands raised, with text in both Hebrew and Arabic reading: "Your sons are held captive by the resistance," and "The bombing of Hamas leaders will affect their fate."

The officer reassured Ma'ayan that this was "only psychological warfare" and added, "There is no change as far as the IDF is concerned. The working assumption is that Ron is alive."

Family and friends mourn at the funeral of Israeli soldier Ron Sherman who was abducted by Hamas on October 7 and whose body was recovered during a military operation in the Gaza Strip, at the cemetery in Lehavim, southern Israel, December 15, 2023. (Flash90)

Today, Sherman views the flyer as further evidence that the military knowingly endangered her son's life. "Ignoring the flyer doesn't make sense," she said. "When I received the flyer, they told me to stay quiet. They told me not to talk about it."

However, +972 and Local Call have learned that the military's claim that it had no intelligence that hostages were being held near Ghandour is false. Three security sources with knowledge of the attack's planning revealed that the Shin Bet's operations division, which led the strike, had received additional vague intelligence that could indicate a "medium likelihood" of hostages' presence at the site.

"The operation targeting Ghandour was led by two reservists who worked in an impressive and professional manner, but they didn't know if hostages were there," a security source with knowledge of the operation explained. "There was some indication of a hostage's body, or perhaps a live hostage, but it was unclear how to interpret it as the information was ambiguous," the source added. "They didn't know if the hostage was alive or dead, and even if alive, it wasn't clear if they were in this particular location or another. And no one asked too many questions. Everyone understood the pressure to act."

A second security source corroborated this account. "The failure was that they assumed they were dealing with corpses — that the hostages were already dead," the source said. "If Ghandour had been a less critical figure in the fighting, they might have handled it differently."

"There was an obsession with eliminating Ghandour," a third security source familiar with the strike

explained. “There was a maneuver [of Israeli ground forces] in northern Gaza, and there was a strong desire to take him out. Target analysts operate like salespeople. They want their target to be bombed.”

‘The focus was revenge’

This was not an isolated mistake. Six intelligence sources described similar cases where strikes targeting Hamas operatives underground were approved even when there was a likelihood that hostages might be harmed. They emphasized that this was not due to negligence by soldiers; instead, it was the result of a policy that was in effect during at least the first six months of the war.

That policy, the six sources explained, permitted the authorization of airstrikes so long as there was no positive indication that hostages were present alongside the target; in other words, commanders were not required to rule out such a possibility. This applied even when the intelligence picture was murky, or there was a “general, nonspecific” likelihood of hostages being held at the location.

In the sources’ view, the large gray area between having a positive indication of the presence of hostages, and being able to rule out their presence, enabled “dozens” of strikes that endangered and killed hostages.

Israeli soldiers stand at the entrance to an underground tunnel used by Hamas in Beit Lahia, northern Gaza Strip, November 28, 2024. (Oren Cohen/Flash90)

Security sources suggested that one reason for this policy was the organizational separation between the attacking units — such as those in the Gaza Division, the Southern Command, and the Shin Bet — and the Hostages and Missing Persons Command Center, which reports to the army’s Special Operations Division and is responsible for relaying “no-strike zones” in which hostages are suspected to be held. This separation, they said, created a problematic dynamic resembling a “tug of war” between different entities.

Three intelligence sources highlighted this issue during the first weeks of the war, particularly in dozens of strikes carried out by the Gaza Division on the homes of Hamas operatives suspected of abducting Israelis on October 7. “No one knowingly bombed a hostage; that didn’t happen,” one source emphasized. “But the thirst for revenge against the kidnappers was so great that they bombed their houses without knowing whether hostages were inside.”

A second source also confirmed participating in “dozens” of strikes against the homes of suspected kidnappers. “The hostages simply didn’t factor into the initial fire policy,” the source said. “I remember going home for the first time after a week or two and realizing there were protests, and everyone was talking about the hostages. It felt surreal.”

These strikes on suspected kidnappers’ homes continued for about two weeks until the intelligence picture became clearer and a significantly larger number of “no-strike zones” were communicated from the Hostages and Missing Persons Command Center to the Gaza Division.

“It was insane,” the first source said. “You’re bombing the house of someone suspected of being a kidnapper. By sheer luck, we didn’t kill dozens of hostages. There weren’t ‘no-strike zones,’ and you didn’t know where the hostages were. I voiced [my frustrations] loudly — it infuriated me. They didn’t take it into consideration. It wasn’t the number one priority. The focus was revenge against the kidnappers.”

“These were typically Nukhba operatives,” the second source explained, referring to Hamas’ special

forces, “and as part of the operation, we’d bomb their houses. There was a chance the [hostages] were there. In hindsight, we know they were kept more underground, but mistakes definitely happened, and we bombed hostages.”

The military has not disclosed how many hostages, if any, were killed by Air Force strikes during the first two weeks of the war. Hamas, however, claimed in three separate Telegram messages that 27 hostages were killed in Israeli airstrikes during the week following October 7. Overall, according to the Hostages and Missing Families Forum, 30 hostages are known to have died in captivity after being kidnapped alive to Gaza.

The permissive fire policy was also evident in strikes targeting senior Hamas leaders, which were often carried out under the direction of the Shin Bet or Southern Command. “There’s a certain disconnect within the Shin Bet’s operations division from the rest of the IDF chain of command,” a security source noted. “It’s a very insular body that demands a lot of attention and resources. Its sole purpose is to kill every senior Hamas figure, and for them, the success of the war hinges on this goal.

Members of the Civil Defense intervene in the immediate aftermath of an Israeli bombing in the Sheikh Radwan area north of Gaza City, Gaza Strip, October 23, 2023. (Mohammed Zaanoun/Activestills)

“I had an issue with how some people there were willing to do absolutely anything to achieve that objective,” the source continued. “The number of [civilians] they were willing to kill — the way they saw it, everything was just an obstacle in their way, even the hostages.”

Other sources qualified these statements, emphasizing that the issue of hostages was often taken seriously but largely depended on the commander. A security source noted that, in the early stages of the war, the commanders’ political opinions also played a role. “Every strike targeting a senior figure is carefully weighed,” the source said. “Sometimes it depends on how loudly the intelligence officer shouts, how much the person in charge cares, and even their political stance. Given that the issue of the hostages [became politicized](#), there were those who believed that the end justified the means.”

At the time of the assassination of Ghandour in November, the tunnel complex where he was located had not been designated as a “no-strike zone” by the Hostages and Missing Persons Command Center. Therefore, formally, the Shin Bet had no reason to avoid directing the strike against him, despite intelligence materials that raised questions among some analysts.

“To ensure you’re not targeting a hostage, you’d need to know the exact location of every single one,” a security source explained. “You don’t know that. So when you strike a senior Hamas figure, there’s a reasonable chance you’re also killing a hostage.” This probability increased because, according to the sources, the army had intelligence that Hamas leaders often surrounded themselves with hostages in tunnels.

‘If they don’t know where the hostages are and still bomb tunnels, it’s a policy’

On Feb. 14, 2024, the Israeli army bombed a tunnel complex beneath the city of Khan Younis, aiming to kill commanders of Hamas’ local battalion. Six hostages — Alexander Danzig, Yoram Metzger, Haim Perry, Yagev Buchshtav, Nadav Popplewell, and Avraham Munder — were being held nearby, and their tunnel was filled with carbon monoxide.

In June, the military informed the families that the six hostages had died in Hamas captivity. Osnat Perry, the wife of 80-year-old Haim, recounted how a military delegation came to her home and explained that the hostages “died from carbon monoxide gas as a result of the deep strikes.” The estimated distance between the hostages and the site of the bombing was between 120 and 200 meters — within the suspected lethal range of the gas, as assessed by the military.

“They weren’t directly hit, but the tunnel they were in became filled with this gas, which is highly toxic and kills within minutes,” Osnat explained, adding that she took comfort from the fact that, according to the military delegation, her husband’s death would have been pain-free. “Death from this gas is painless because people lose consciousness immediately, and within a few minutes, they die as if they’re falling asleep.”

The army’s claims that Perry died from carbon monoxide came three months before his body, and the bodies of the five other hostages who were with him, were retrieved from Khan Younis in August. All six bodies, according to both the army and the families, bore signs of gunshot wounds, and at least some bore evidence of abuse by their captors.

Family and friends attend the funeral service of Yoram Metzger, who was killed while in captivity in the Gaza Strip, at the Cemetery in Kibbutz Nir Oz, southern Israel, August 22, 2024. (Flash90)

In December, the IDF Spokesperson [announced](#) that the “most plausible possibility” was that, following the strike, the kidnappers executed the hostages and were themselves killed as a “byproduct” of the attack. According to the military, it was also possible that the hostages died from the gas released by the strike and were later shot by other militants who arrived at the tunnel some time later. As Haaretz [reported at the time](#): “The military estimates that had they not been executed, the hostages would have died from inhaling the gas released by the strike.”

“What we were told was very clear: if the captors hadn’t executed them due to the army’s proximity, they would have died from the gas,” Osnat said. Speaking before the ceasefire, she added that talking about it “tears her soul apart” but she does so in the hope of preventing it from happening to the remaining hostages.

The families were informed that at the time of the strike, the military had no positive indication that hostages were present at the site. However, following the incident, which the army classified as a mistake, the approval process for such strikes was tightened. Instead of permitting strikes to proceed as long as there was “no specific indication” of the presence of hostages, a military source explained, greater weight would now be given to the clarity of the intelligence about the hostages’ locations, and general indications about their proximity to senior Hamas commanders.

“When the first mistake happened, with Ron Sherman, it became clear there was a danger,” Osnat said. “But then it kept happening, over and over. I requested a meeting with the defense minister and still haven’t received one. I want to ask him if this is a policy. Because this isn’t a one-off mistake by the military or an operational error. If they don’t know where all the hostages are and still decide to bomb tunnels, then it’s a policy.”

Among the relatives of hostages killed in Gaza, there were concerns that highlighting the role of the Israeli government or military in the deaths of their loved ones could be interpreted — particularly abroad — as absolving Hamas of responsibility for its crimes. This, they said, has made it difficult for them to voice public criticism.

Rani, the son of Yoram Metzger who died in the tunnel with Perry, emphasized that regardless of the exact cause of death, responsibility lies with Hamas which committed a war crime by abducting his

80-year-old father. “From the very beginning, we’ve said that our father was murdered by Hamas, not by anyone else,” he said. A relative of another hostage killed in Gaza, who preferred to remain anonymous, told +972 and Local Call: “My relative died because of an Israeli order. No doubt about it. But I’m not going to give our enemies ammunition.”

In response to our inquiry, a spokesperson for the Israeli army stated: “The investigation into the deaths of six hostages in an underground tunnel in the Khan Younis area, and the investigation into those of three hostages held in the tunnel compound from which the commander of Hamas’ northern brigade, Ahmed Ghandour, operated, were presented transparently to their families and the public in recent months. It should be emphasized that in both cases, the IDF had no indications or suspicion of hostages being at or around the site of the attack.”

Fire and smoke rises during Israeli airstrikes on the Gaza Strip, October 8, 2023. (Atia Mohammed/Flash90)

Part 3: ‘Tiling’ neighborhoods

‘They didn’t know where he was, so they bombed extensively around the area’

The lack of precise intelligence as to the locations of senior militants underground also led the Israeli military to adopt a particularly lethal targeting method: wiping out several adjacent apartment buildings, without warning their inhabitants. By bombing these residential blocks, the army aimed to crush parts of the tunnel network believed to be underneath, therefore trapping the target inside or killing him by flooding the tunnel with toxic gas.

To maximize the chances of assassinating a target, the army command authorized the killing of “hundreds” of Palestinian civilians in these strikes — which, according to the sources, were carried out in coordination with American officials who received live updates regarding the approved “collateral damage” figures.

[Previous investigations](#) by +972 and Local Call, corroborated by a recent investigation by the [New York Times](#), found that Israel loosened constraints after October 7 to allow for strikes on Hamas leaders that would risk killing more than 100 civilians. In response to our inquiry for this investigation, an Israeli army spokesperson denied these reports, suggesting that “the claims that the IDF approved and implemented an attack during the war from which hundreds of civilians were expected to be killed, and that the IDF bombed ‘entire neighborhoods,’ are baseless.”

In an [interview](#) with MSNBC shortly before his presidential term ended, Joe Biden described voicing his disapproval over this policy to Israeli Prime Minister Benjamin Netanyahu on his first visit to Israel after October 7. “I said, ‘Bibi, you can’t be carpet bombing these communities,’” Biden recounted. “And he said to me: ‘Well, you did it. You carpet bombed’ — not his exact words, but — ‘You carpet bombed Berlin. You dropped a nuclear bomb. You killed thousands of innocent people.’”

“He was going after me for saying, ‘You can’t indiscriminately bomb civilian areas. Even if the bad guys are there, you can’t take out two-, ten-, twelve-, fifteen-hundred innocent people in order to get the one bad guy,’” Biden continued.

According to Biden, Netanyahu responded that these were people who had killed Israelis and were “all over in these tunnels, and no one has any idea how many miles of tunnels there are.” Biden conceded that, in his view, this was a “legitimate argument.”

On Oct. 17, 2023, the Israeli Air Force carried out a strike in Al-Bureij refugee camp targeting

Ayman Nofal, the commander of Hamas' Central Brigade. Two security sources stated that the strike had been approved with a "collateral damage" figure of up to 300 Palestinians civilians, while a third source claimed the approved number was 100. The strike — which succeeded in killing Nofal, and is [estimated](#) to have killed at least 92 civilians, including 40 children — was executed over a "very wide radius," according to the sources, consistent with the attack method detailed above.

Palestinians wait to receive the bodies of their relatives who were killed in an Israeli airstrike, at Al-Najjar Hospital, southern Gaza Strip, December 7, 2023. (Abed Rahim Khatib/Flash90)

"I saw [the strike] with my own eyes, on the screen, in real time," recounted an intelligence source involved in the assassination attempt, who tracked it via a drone. "I saw all the dead people lying nearby. They looked like ants. I honestly remember seeing rivers of human bodies there after the explosion. It was very hard. [The army] didn't know exactly where he was, so they bombed extensively around the area to ensure he was killed."

Amro Al-Khatib, a resident of Al-Bureij camp, witnessed the attack. "Between 16 and 18 family homes were wiped out in the strike," he told +972 and Local Call. "We pulled out many dead, in pieces."

Khaled Eid lost 15 members of his family, including his parents, and spent three days searching through the rubble until he found fragments of their bodies. "We searched for them with our hands, along with volunteers and family friends," he told +972 and Local Call.

Two weeks later, the Southern Command approved a series of airstrikes targeting Hamas' Jabalia Battalion commander Ibrahim Biari, in Jabalia refugee camp. This strike was even more devastating and drew stronger international criticism.

The attack deliberately flattened an entire residential block, according to a security source involved in the operation. A Wall Street Journal investigation, which included satellite imagery analysis, found that the bombing leveled at least 12 residential buildings. The heart of the camp was reduced to craters — which contained the bodies of [at least 126 people](#), including 68 children.

"During [that attack], the head of the targets branch in the Southern Command said, '[Biari] is killing soldiers right now, and we have to take him out already,'" a security source involved in the strikes recalled. "They were frantic about it because it was right around the time we were maneuvering in the Jabalia area."

The source noted that the permissible number of civilian casualties was set at "around 300," but the calculation was imprecise. According to him, Chief of Staff Herzi Halevi personally approved the killing of hundreds of Palestinians in the strike after "deliberating" on the matter.

"A whole neighborhood died for Ibrahim Biari," said another intelligence source who worked on the operation. He explained that although Biari was only a battalion commander, the breakdown in Hamas' chain of command during the war elevated battalion commanders to "influential levels, heavily involved on the ground, and critical to managing the fighting." The source said that as a result, unprecedented authorizations were granted to kill hundreds of civilians in order to assassinate these figures.

Palestinians returning to Jabalia amid the ceasefire between Israel and Hamas, in northern Gaza, January 19, 2025. (Omar El Qataa)

Palestinians who survived the strike told +972 and Local Call that it wiped out entire families — three generations — with no one left to bear witness, corroborating [testimonies](#) given to Airwars.

Wafa Hijazi, 22, was buried alive but survived. “The attack turned our house into a mass grave,” she told +972 and Local Call. “There was terror. Total darkness. And a cloud like a boiling flame that covered the place. That’s how my mother died, and all my sisters and their babies.”

Buried under the rubble, Hijazi tried to scream but couldn’t. Then the hand of her father, who wasn’t home at the time of the bombing, reached in to pull her out. When she emerged, she found her mother’s hand severed from her body, as well as the body parts of her younger brothers.

‘You end up dropping 10 bombs when you’re not even sure the target is there’

In the strikes targeting Biari and Nofal, the army employed what it calls a “broad-area attack,” involving the destruction of entire residential blocks and mass Palestinian casualties. The strikes relied on a “polygon” — a general estimate, within a wide radius, of where the target might be — which could not always be narrowed down.

“The goal is to collapse the tunnel system and trap [the target] inside,” a security source explained. “Because the layout is so intricate, you want to ensure there are no escapees. In underground warfare, you almost never have an exact coordinate, just a polygon. There’s no choice but to attack broadly.”

After receiving broad coordinates from the intelligence agencies, the Air Force would then drop bunker-buster bombs all over the area. “We would get some kind of polygon, a rectangle in Gaza, and they’d tell us: ‘Somewhere in here there’s an underground complex, but we can’t pinpoint it any further,’” an Air Force source involved in tunnel-targeting strikes explained. “We know the blast radius of a bunker-buster bomb, which is a few meters, [so we take that as] a square and then ‘tile’ the area [with bombs].”

There wasn’t always certainty that these strikes, over such broad areas, would hit the intended target. “Tiling” an entire polygon required a large number of bombs, and according to the source there were not always enough. “[Sometimes] we would only cover 50 percent of the area, but we’d prefer to have a 50 percent chance of success than none at all. If the polygon is 20 [units wide], for instance, you might drop three bombs longways and three across, so you end up dropping about 10 bombs on an area where you’re not even sure if [the target] is there.”

Palestinians at the rubble of a destroyed building after an Israeli airstrike in Khan Younis, southern Gaza Strip, November 6, 2023. (Atia Mohammed/Flash90)

This partial intelligence picture led to instances in which the army dropped bunker-buster bombs that killed scores of Palestinians, while the target underground survived. This happened twice in strikes aimed at the commander of Hamas’ Rafah Brigade, Mohammed Shabana.

“The first time, the strike failed because a [technological] capability hadn’t been sufficiently developed yet and the polygon was off,” a source involved in these operations said. “The second time, there was an issue with the bombs: there simply weren’t enough.”

Another intelligence source involved in the assassination attempts on Shabana explained that the airstrikes were based on weak intelligence. “[These were] much broader attacks than you really need,” he said. “They wanted him to have no chance of getting out of there alive. So they just bombed the entire neighborhood.”

Such strikes are almost always conducted using bombs dropped at a 90 degree angle with delay

mechanisms to ensure they detonate underground and maximize the chances of killing the target. During the first year of the war, the United States supplied Israel with 14,000 MK-84 bombs, each weighing 2000 pounds, which were used in these operations. In May, however, the Biden administration suspended a shipment of 1,800 of these bombs due to concerns about the conduct of the war and Israel's invasion of Rafah.

An intelligence source described an instance when the army was planning to target a commander in Gaza with "80 bunker-buster bombs" in order to "tile" a very wide radius. However, a decision was made to conserve resources. "They knew he was underground but didn't know exactly where," the source said. Ultimately, approval was given to use 10 bombs. "It wasn't enough — he survived," the source added.

In recent weeks, further evidence has emerged that the Israeli military was relying on limited intelligence while conducting its attacks on Gaza. After the ceasefire came into effect, the army [admitted](#) that two Hamas leaders it had previously claimed to have killed — Al-Shati Battalion commander Haitham Al-Hawajri in December 2023, and Beit Hanoun Battalion commander Hussein Fayad in [May 2024](#) — had actually survived. The army conceded that the prior announcements were made on the basis of "incorrect" intelligence.

One security source said the United States supplied Israel with its own intelligence, but it wasn't as useful as the army hoped. "We had high expectations regarding the Americans, but they were dashed," a security source said. "They were deeply committed to the issue of the hostages and to [killing the then-leader of Hamas in Gaza, Yahya] Sinwar because they believed that the sooner Sinwar was eliminated, the sooner the war would end. They made a strong effort and shared intelligence with us, but in the end, their sources weren't as good as ours."

Hamas members attend the funeral of Al-Qassam Brigades fighters who were killed by the Israeli army in recent months, in Al-Hajj Musa Mosque in Khan Younis, southern Gaza Strip, January 31, 2025. (Abed Rahim Khatib/Flash90)

'Imagine this was Tel Aviv. Nobody would accept such a thing'

According to an Israeli intelligence source, the person responsible for improving and fortifying Hamas' tunnel infrastructure was Mohammed Sinwar, the brother of Yahya and his successor as the group's leader in the Gaza Strip. After the tunnel bombings of "Operation Lightning Strike" in 2021, he analyzed Israel's strikes and improved the tunnels accordingly.

"[Mohammed Sinwar] identified that Israel strikes in straight lines and realized the need for branching paths," the source said. "They're smarter than we give them credit for."

According to the source, the addition of branching paths to the tunnels led Israel to conduct strikes over even wider areas. "You can determine that a senior figure is in a certain neighborhood, but that's a very broad radius because it's kilometers of tunnels and you don't know which branch he went into," the source said.

"You're lucky if you get even one indication that a senior figure is in a certain tunnel route," the source continued. "Unless someone explicitly says, 'This is Mohammed Shabana's tunnel,' you sometimes can't even tell that it's a senior figure's tunnel — it could just be a supply tunnel."

Nevertheless, the source admitted that before October 7, he didn't think he would see a senior Israeli commander ordering the destruction of an entire residential block to target a single Hamas figure.

All 15 security sources interviewed for this story, including those highly critical of Israeli policies, emphasized that Hamas designed its tunnel infrastructure to allow its senior commanders to direct fighting from beneath or close to densely populated areas. (A Hamas spokesperson described this claim as “completely false.”) However, experts in international law stressed that even in this case, Israel is still obligated to protect civilians.

“Imagine this was Tel Aviv and not Jabalia, and that in order to reach “the Pit” [the nickname for the Israeli army’s underground operations center at the Kirya, situated near residential and commercial areas in Tel Aviv], the neighborhoods around the Kirya would be bombed,” the human rights lawyer Michael Sfar said. “You don’t know where the military tunnels under the Kirya reach, you don’t know exactly where your target is, and you want to make sure he is killed. So you bomb [the adjacent streets]? Nobody would accept such a thing.”

Palestinians at the site of an Israeli airstrike in Rafah, southern Gaza Strip, December 4, 2023. (Abed Rahim Khatib/Flash90)

Suhad Bishara, legal director of the Haifa-based human rights organization Adalah, concurred. “Even when there is a legitimate military target, if the military force knows that it is likely to disproportionately harm civilian lives, then it is prohibited under international law,” she explained. “This is all the more true when you do not know exactly where your military target is, and therefore determine a radius and strike it indiscriminately, while harming many civilians.”

“The discourse in Israeli society is that it’s their fault — they build beneath schools,” an intelligence source said. “But is it legitimate to blow up a school? Is it legitimate to kill dozens of people because of that, as we did?”

“We bombed a lot of ambulances that we knew had Hamas operatives inside them,” a second intelligence source said. (A Hamas spokesperson stated that “Israel has not provided any evidence of the use of ambulances in resistance operations,” and described the allegation as “a pretext to destroy the health sector in the Gaza Strip.”) “They’re despicable. But you ask yourself: is it worth it? You’re faced with a very difficult situation. And you’re simply given a free hand. If we didn’t have to manage our munitions economically, we would’ve kept destroying things in insane quantities.”

Five sources emphasized that these tactics were driven by pressure from the political and military leadership who wanted to present a victory image to the public. “They approved triple-digit [civilian casualties], even for battalion commanders, because we were getting more desperate for some kind of successful targeted killing,” one intelligence source said. “Every success like that, people see it on TV.”

“What bothered me most was how blatantly they lie in the [Israeli] media,” a second intelligence source added. “[They say] we’re about to get them, we’re about to win, we’re about to eliminate senior figures.

“It was obvious how much the army, the security establishment, and the Shin Bet were aligned with the media,” the second source continued. “Everything they wanted to convey was reflected [in the news stories]. The military reporters are ultimately fed by these systems, which feel completely comfortable lying when needed. In the first months of the war at least, I had the feeling that the media and the army were one — that the media was an arm of the military.”

Four intelligence officials stated that the brutality of Hamas’ attack on October 7 made it easier for them and their commanders to justify large-scale attacks on civilians in Gaza. According to the sources, the belief that all Palestinians in the Strip were “involved” to some extent in enabling

Hamas' activities was never official policy, but it was present in hallway conversations and coffee breaks "all the time."

While one source justified attacking residential blocks by claiming that the civilians living above a tunnel must have known Hamas was operating underneath them, another intelligence source found it harder to justify. "The people responsible for most of the killings are the intelligence personnel, not the forces on the ground," he said. "We killed many more people than [combat] soldiers or pilots, because we actually told them where to bomb."

Yuval Abraham

P.S.

- +972 Magazine. February 6, 2025:
<https://www.972mag.com/tunnels-hamas-lethal-gas-bombs-gaza/>

This article has been updated to include responses to +972 and Local Call's inquiries from Hazem Qassem, a Hamas spokesperson in the Gaza Strip, that were received after publication.

In partnership with with Local Call.

This investigation was co-published in Hebrew on Local Call. Read it [here](#).

- Yuval Abraham is a journalist and activist based in Jerusalem.

Our team has been devastated by the horrific events of this latest war - the atrocities committed by Hamas in Israel and the massive retaliatory Israeli attacks on Gaza. Our hearts are with all the people and communities facing violence.

We are in an extraordinarily dangerous era in Israel-Palestine. The bloodshed unleashed by these events has reached extreme levels of brutality and threatens to engulf the entire region. Hamas' murderous assault in southern Israel has devastated and shocked the country to its core. Israel's retaliatory bombing of Gaza is wreaking destruction on the already besieged strip and killing a ballooning number of civilians. Emboldened settlers in the West Bank, backed by the army, are seizing the opportunity to escalate their attacks on Palestinians.

This escalation has a very clear context, one that +972 has spent the past 13 years covering: Israeli society's growing racism and militarism, the entrenched occupation, and an increasingly normalized siege on Gaza.

We are well positioned to cover this perilous moment - but we need your help to do it. This terrible period will challenge the humanity of all of those working for a better future in this land. Palestinians and Israelis are already organizing and strategizing to put up the fight of their lives.

Can we count on your [support](#)? +972 Magazine is the leading media voice of this movement, a desperately needed platform where Palestinian and Israeli journalists and activists can report on and analyze what is happening, guided by humanism, equality, and justice. Join us.

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