“The injury has had a profound impact on how I perceive myself. I feel limited. I'm not the type to sit still for extended periods; I enjoy being active and independent. But now, I can't even move”.

Najwa, a 48-year-old mother of four sons and one daughter from Gaza. Her house was bombed.

Use of explosive weapons in Gaza, destruction, and risks

Contextual updates: civilians and civilian infrastructures

The Gaza Strip is one of the most densely populated places in the world, with a total area of 365 km² (41 km long and 6 km and 12 km wide in the north and the south respectively) housing a population of about 2.3 million. The Gaza Strip has been under Israeli occupation since 1967, and effectively under a full blockade since Hamas won the Palestinian elections in Gaza in 2006. Ever since Israel has been completely controlling the movement of people and with severe restrictions on what is allowed in and out. This, combined with the closure of Gaza’s southern border with Egypt, has created a chronic humanitarian crisis long before the October 7, 2023 war, with roughly 80% of Gaza’s population dependent on humanitarian aid as per OCHA 2023 Humanitarian Response Plan. Because of the chronic lack of space (spurned by the occupation and the blockade), populated areas in Gaza cannot expand horizontally, leaving any other option but to propel the construction vertically, further adding to population density. Since 2006, Gaza has endured five previous wars, each with significant destruction of private and civilian property, and large portions still awaiting reconstruction.

More than 12,000 bombs have been dropped on Gaza,¹ a region measuring around 40 kilometers in length and densely populated with approximately 2.3 million people, including around 1 million

children. These bombs, with significant destructive capabilities, vary in size from 150 kg to 1000 kg.

In Gaza, over 15,000 individuals, including more than 6,100 children and more than 4,000 women, have been killed since October 7, as per the latest data shared by the Government Media Office (GMO) on the 2nd of December; 73 percent of the total fatalities are reportedly children and women. The GMO, operating under the authorities in Gaza, has been responsible for documenting casualties since the Ministry of Health in Gaza ceased its reporting on 11 November due to service and communication breakdowns in northern hospitals. After a week of ceasefire, bombardments resumed, and between December 1 and December 2, at least 193 Palestinians have been killed and 652 injured, according to the Ministry of Health in Gaza (MoH). No Israeli fatalities have been reported in this context. Operations to save hundreds of people reported to be under the rubble were still ongoing on 2 December in the afternoon hours.

Before the resumption of hostilities following a temporary ceasefire that started on 24 November it was reported that over 2,700 individuals, including 1,500 children, had been reported missing, heightening concerns about potential entrapment or casualties under the rubble. According to the Palestinian Ministry of Health (MoH), there are more than 30,000 Palestinians injured. It’s worth mentioning that rescue missions are not only hindered by continuous military operations but also by the rubble blocking access roads which could not be removed due to hostilities and lack of fuel for equipment. Survival rates of people trapped are dropping with each passing day, even more so of people still stuck under layers of destroyed buildings where contamination (with explosive ordnance) is highly likely.

The remaining 12 hospitals in the south are partially functional. The bed capacity across Gaza has declined from 3,500 before the war to 1,400 presently amid a surge in those seeking treatment. According to the WHO, only one of the currently functional hospitals can treat critical trauma cases or perform complex surgery.

According to the MoH, in Gaza’s main hospital Al Shifa 43 patients, including five premature babies, have died since November 11 when the Israeli army surrounded the hospital grounds, due to lack of fuel to power oxygen machines at the intensive care unit (ICU) and incubators at the neonatal intensive care unit. The WHO also notes that, since October 7th, there have been 164 attacks on health care in the Gaza Strip, further adding to the amassing challenges for those injured to access any kind of treatment.

As attacks on Gaza continue, thousands of children have been orphaned, their lives shattered, and some without a single surviving family member, prompting medical personnel in Gaza to introduce a new acronym in the last month: WCNSF (Wounded Child No Surviving Family). This underscores the devastating impact on Gaza’s population specifically attributable to explosive weapons.
On 18 November, three schools in the northern region of Wadi Gaza that have been serving as shelters for internally displaced persons (IDPs) have been targeted, resulting in numerous fatalities. Tragedies unfolded in schools like Tal Az Za’atar in Beit Lahia and UNRWA’s Al Fakhouri in Jabalia, where over 7,000 IDPs sought refuge. Between October 7 and November 16, at least 71 IDPs lost their lives, and 573 were injured in UNRWA facilities across Gaza.

About 1.8 million people in Gaza, 80 percent of the population, are estimated to be internally displaced. Around 1.1 million internally displaced persons (IDPs) are recorded in 156 UNRWA facilities throughout Gaza. Approximately 86 percent (958,000) of them are registered in 99 UNRWA shelters located in the southern region. An additional 191,000 IDPs are believed to reside in 124 public schools, hospitals, and various places like wedding halls, offices, and community centers. The remaining IDPs are staying with host families. Thousands have no other options but to sleep outdoors in harsh weather conditions, which coupled with collapsed water and sanitation systems seriously raises environmental and health concerns, especially for the spread of diseases as a tendency to open defecation increases while possibilities to keep the basic good hygiene are rapidly declining. The MoH stated that IDPs fleeing from the north have been reporting the presence of dead bodies in the streets. Doctors are performing surgeries without anesthesia, including patients injured by Israeli bombardments.

OCHA reported that, as of November 22, 26 out of 36 hospitals in Gaza are non-functional, with the remaining 11 providing very limited services amid fuel shortages, damage, and continued heavy shelling and bombardment.

According to the Ministry of Public Works and Housing, as of November 18, at least 45% of Gaza’s housing units are reported to be destroyed or damaged. Additionally, 300 education facilities have reportedly sustained damage, 113 health facilities have been attacked, and 11 bakeries are reported to have been destroyed. Furthermore, 25 hospitals and 52 healthcare centers are out of service, while 55 ambulances have been damaged. 20 Water, Sanitation, and Hygiene (WASH) facilities have been affected, and at least three churches and 77 mosques have been damaged due to bombing and shelling. Explosive weapons have caused the destruction of vital civilian infrastructure, including 10,000 buildings destroyed, more than 43,000 residential buildings, and over 225,000 partially damaged housing units. On 4 and 5 November, seven water desalination facilities across the Gaza Strip were directly hit and sustained major damage, including three sewage pipelines in Gaza City, two water reservoirs (in Gaza City, Rafah, and Jabalia refugee camp), and two water wells in Rafah. As it is winter in Gaza and heavy rainfall is not uncommon, Gaza municipality warned about the imminent risk of sewage flooding.

Israeli bombardments have reportedly destroyed multiple solar panels on the roofs of standing buildings, especially in Gaza City. Shifa and Nasser hospitals, water wells, and bakeries are among

---

8 Available at: [OCHAoPt Flash Update #44](#)
9 Available at: [OCHAoPt Flash Update #43](#)
10 Ibid.
11 [وزارة الصحة الفلسطينية](https://moh.ps).
12 Available at: [OCHAoPt Flash Update #48](#)
13 Available at: [OCHAoPt Flash Update #43](#)
14 Ibid.
15 Available at: [OCHAoPt Flash Update #30](#)
the affected facilities. This destruction has eliminated one of the remaining sources of energy that is not dependent on fuel.16

The devastating impact of explosive weapons on civilians is not limited to direct harm on their lives and health. More often than not, reverberating or “domino” effects follow the destruction or damage of critical infrastructure and multiply the humanitarian impact of the use of these weapons. Even when civilian infrastructure is not directly targeted, and the attack is launched against a legitimate military objective, infrastructure, and services are often either directly impacted by the intensity of the original blast of the weapon, which is intended to destroy wide areas, or suffer from reverberating effects of the attack.

Civilians living in populated areas generally rely on centralized essential services. According to ICRC,17 these services contain three main components each: hardware, including infrastructure and equipment; people (especially operations and maintenance staff); and consumables (such as fuel, chlorine, and medicine). These components are interdependent, meaning that no component is sufficient on its own. The importance of having fuel, working services, accessible shelters, and functioning hospitals, is essential in Gaza, now.

Since October 7, in the West Bank 243 Palestinians have been killed, including 65 children and 3,270 have been injured by Israeli forces or Israeli settlers. In the span of eight weeks, the number of Palestinians killed in the West Bank has surpassed more than half of the total casualties for the entire year. The year 2023 has already become the deadliest for Palestinians in the West Bank since OCHA started documenting casualties in 2005.18

According to the Palestinian MoH, first-response emergency capabilities have been overwhelmed by the increase of injuries by Israeli forces, with a high demand for emergency medical supplies in hospitals.19 The impact of explosive weapons is evident, causing widespread devastation, displacement, and loss of life in both Gaza and the West Bank.

Since October 7, approximately 1,200 Israelis have been killed,20 240 held as hostages, and 5,400 Israelis have been injured21 by Palestinian armed groups, the vast majority of them on the first day of the conflict. More than 125,000 Israelis have been reportedly displaced due to the conflict.22 The ongoing launch of rockets against Israeli population centers causes some additional deaths and injuries every week, damages civilian infrastructure and creates explosive ordnance contamination.

---

**Defining Explosive Ordnance, Explosive Weapons in Populated Areas and Prohibited Weapons**

According to International Mine Action Standards (IMAS),23 the term Explosive Ordnance (EO) includes all munitions containing explosives, nuclear fission or fusion materials and biological and

---

16 Ibid.
17 Source: *The impact of explosive weapons on urban services: Direct and reverberating effects across space and time*
18 Source: *Hostilities in the Gaza Strip and Israel | Flash Update #57 | United Nations Office for the Coordination of Humanitarian Affairs - occupied Palestinian territory (ochaopt.org)*
19 وزارة الصحة الفلسطينية (moh.ps).
20 Ibid
chemical agents. This includes bombs and warheads; guided and ballistic missiles; artillery, mortars, rockets and small arms ammunition; all mines, torpedoes, and depth charges; pyrotechnics; cluster bombs and dispensers; cartridge and propellant actuated devices; electro-explosive devices; clandestine and improvised explosive devices; and all similar or related items or components explosive in nature.

‘Explosive Weapons in Populated Areas’ (EWIPA) is used to describe the impact of explosive weapons (ordnance) - especially those with wide area effects - when used in populated areas. They create an unacceptably high risk of indiscriminate harm to civilians. Further, if these weapons do not explode on impact, they become known as unexploded ordnance (UXO), which can cause harm to civilians for generations by causing accidents and leaking toxic residue into drinking water, soil, and air.24

Effects of Explosive Weapon Blasts on Human Bodies and Minds

Effects caused by explosive weapons can be categorised in three stages as explained by the United Nations Institute for Disarmament (UNIDIR25):

Primary effects are the immediate impacts caused by the high-pressure blast wave resulting from the detonation of explosive weapons. This can include the immediate physical injuries and fatalities caused by fragmentation, explosives, and the release of thermal heat.

Secondary effects are those created by the interaction of the blast wave and the environment in which the explosive weapons detonate. For example, as the blast wave travels through the air, it can be absorbed by surrounding structures, causing the collapse or destruction of buildings. Civilians may then suffer injuries or fatalities from the structural collapse of the building, shattered glass, or fire.

Similar to the impact of explosive weapons that HI has witnessed in other armed conflicts where explosive weapons have been used with high intensity (Yemen, Syria, Iraq, etc.), the main kinds of sustained injuries from the use of explosive weapons in Gaza are fractures, peripheral nerve injuries, amputations of one or several limbs, spinal cord injuries, traumatic brain injuries, and burns. Sometimes, injured civilians arrive at hospitals with a combination of multiple injuries that are extremely difficult or sometimes impossible to treat.

The level of pain and suffering related to these injuries is difficult to measure and understand for people who are not experiencing it. The lack of medical care and lack of painkillers due to the siege imposed on the Gaza Strip means that many people suffer needlessly and may develop impairments that could have been avoided. This by itself can be incredibly traumatic.

Children are more affected by the trauma of explosions from a physical perspective: as they have thinner skin, weaker bones and smaller weight, they are especially vulnerable to blast injuries.

---


In addition to these physical injuries, the mental health and psychological status of persons injured are always impacted negatively, sometimes definitely. This is without counting the suffering of the family members. The traumatic event itself (bombardment, building collapse, severing of limb, etc.) can lead to symptoms of Post-Traumatic Stress Disorder. Especially when the trauma is multiple (meaning the person has experienced multiple traumatic events in their lives), the mental health consequences can be very profound. Symptoms include emotional distress (anxiety and depression), intrusive memories, cognitive changes (concentration, memory problems, suicidal ideations, etc.), behavioral changes (self-isolation, aggression, avoidance, ...), physical symptoms (psychosomatic ailments such as chronic headaches, hyperventilating, phantom pains, etc.), social difficulties (reduced ability to socialize with others, difficulties in maintaining relationships, etc.)

Even before the current crisis, due to the constant trauma of war, four out of five children in Gaza were living with depression, grief and fear, according to a 2022 report More than half of them struggle with suicidal thoughts and the trauma of witnessing the deaths of other children. Symptoms of acute trauma in Gazan children have increased to 91% since October 7. Early childhood trauma can lead to significant changes in physical development (i.e. stagnating growth, regression, aphasia, cognitive impairments, etc.) and psychological development (personality, ability to socialize, trust and attachment, etc.)

According to Amnesty International and the Arab Center there were cases of whole families that were killed by collapsing buildings while sheltering from attacks, and thousands of civilians were injured by building debris. Most of the injuries caused by debris are physical trauma to bodies: head, neck, chest, abdomen, and extremities, causing fractures often ending in traumatic amputations. Effects often lead to internal bleeding and spinal cord injuries.

In 2022, the Multi-Sectoral Needs Assessment (MSNA) done in Gaza by OCHA reported that 21% of households had at least one person with disabilities among their members. This percentage is likely to increase during the current war due to the primary and secondary effects of explosive weapons use in populated areas: persons with chronic conditions suffer from the loss of loss of access to treatments and the deterioration of living conditions, which can and put their lives at risk; persons with injuries lack access to early rehabilitation services, necessary to avoid further long-term complications and permanent disability. A life-long impairment can be very difficult to process, especially when it is the result of interpersonal violence (war), or if the impairment could have been avoided with adequate medical care. The resulting disability can lead to profound regret, resentment, feelings of anger, depression, anxiety, chronic stress, feelings of helplessness, loss of control, poor self-image, loss of self-confidence. People with new disabilities, especially severe injuries and impairments caused by war, become largely dependent on their caregivers. This increases the pressure and burden of caregiving on the entire person’s social network. This is especially the case with children with disabilities, who may also become more vulnerable to further protection risks.

---

28 Amid Israel’s attacks Gaza’s traumatised children need psychological aid | Israel-Palestine conflict News | Al Jazeera: “These symptoms, such as abdominal pain, headaches, foot pain, involuntary urination and rapid heartbeats, were direct consequences of the relentless bombings in the Gaza Strip”.
30 Source: “An Open-Air Graveyard”: The Unfolding Health Catastrophe in the Gaza Strip (arabcenterdc.org)
**Tertiary effects**, according to UNIDIR, are the long-term impacts on people’s living conditions caused by explosive weapons damage. These effects are caused by damaging or destroying vital infrastructure, such as shelter, sanitation systems, health facilities, and livelihoods. It also includes the wide range of consequences caused by reduced access to services and the destruction of infrastructure that people need to survive. For many practitioners, these tertiary effects are understood as long-term, indirect, or reverberating effects.

**Impact of explosive weapons blasts on civilian infrastructures**

When critical civilian infrastructure, such as energy, food, water, and sanitation systems, are damaged or destroyed the provision of basic needs and essential services, such as healthcare and education, are disrupted. These services are often interconnected and, as a result, damage to one component or service can negatively affect services elsewhere, causing harm to civilians that can extend far beyond a weapon’s impact area.

The destructive impact of explosive weapons used in the Gaza Strip, in over a month, has extended to roads, water, electricity, and other critical infrastructure. The continuous bombardment and the interruption of supply chains further diminish access to essential services in general and pose a significant challenge to healthcare provision in particular. The presence of unexploded ordnance additionally compounds the problem by limiting access to these services, threatens civilians on the move and increases the risk of new accidents.

For example, a recent UN report on Gaza states that ‘there has been a 92% drop in water consumption from pre-conflict levels. Even though the water supply to Gaza’s water network has been catastrophic before October 7, such a drop in water consumption underscores how crucial a functioning water network in Gaza is in general and the devastating effects that its collapse might have on the population. With the vast majority of sewage stations now inoperative, the people of Gaza face a water and sanitation crisis of catastrophic proportions.’

The decimation of road networks compounds the crisis. Without roads, the vital arteries of support cannot function. The damage and destruction of housing, schools, hospitals, places of worship, and cultural heritage sites further aggravate civilian suffering.

---

31 Available at: https://unidir.org/files/publication/pdfs/protecting-civilians-from-the-effects-of-explosive-weapons-en-293.pdf
32 Ibid, 1.4 Preamble
33 Available at: https://reliefweb.int/report/occupied-palestinian-territory/critical-infrastructure-collapsing-gaza
Significant damage has been inflicted upon critical rehabilitation and mental health and psychosocial support (MHPSS) infrastructure and facilities in Gaza Strip at all levels of the health system. According to the data collected from the Rehabilitation Task Force (RTF) actors in Gaza: 2 specialized rehabilitation hospitals were severely damaged (Al Wafa Medical Rehabilitation and Specialized Surgery Hospital in Gaza City and Sheikh Hamad bin Khalifa al-Thani Hospital for Rehabilitation and Prosthetics in North Gaza), freezing their operational capacity to deliver early rehabilitation services for conflict-affected persons with injuries.

The environment can also be impacted by using explosive weapons through the contamination of air, soil, water, and other resources.

**A political action to end human suffering caused by the use of explosive weapons in populated areas**

After a decade of active advocacy and negotiations, along with the diligent collection of data and evidence, the **Political Declaration on Explosive Weapons in Populated Areas (EWIPA)** was finalised in June 2022 and endorsed on 18th November the same year in Dublin by 83 States, including Palestine. The Political Declaration commits governments and militaries to adopt policies and rules of engagement that better protect civilians from the harm caused by explosive weapons and work to develop new norms and standards against bombing and shelling in populated areas. In addition to prevention, the Declaration also addresses the grave humanitarian impacts of past and ongoing use - promoting comprehensive assistance to victims, access to conflict zones by humanitarian actors, and improved data-gathering.

This declaration stands as a landmark, marking the first international acknowledgment of the harm and suffering inflicted on civilians due to the use of explosive weapons in cities, towns, and other places where civilian live. It recognises that the use of EWIPA presents one of the greatest threats to civilians in armed conflicts today. In addition, it recognises that beyond the thousands of civilians that are directly killed and injured by blast and fragmentation every year, countless more suffer long-lasting impacts: families lose loved ones; homes, schools, hospitals, and essential infrastructure are reduced to rubble; and people are forced to flee the towns and cities in which they live and work.

International Network on Explosive Weapons (INEW) is a network of civil society organisation, co-founded by HI. INEW has played a pivotal role in coordinating the involvement of civil society in shaping the text of the Political Declaration. INEW has called on both Israel and Palestinian armed groups to stop the use of heavy explosive weapons in populated areas due to the high risk of harm to civilians. The civil society group has also called on the 83 states that have endorsed the Political Declaration to make good on their undertaking to "actively promote the Declaration" and to "seek adherence to its commitments" by the parties to the conflict, including through their public statements, as a means to strengthen the protection of civilians.
Ahmad, a 38-year-old physiotherapist serving at a hospital in Rafah, southern Gaza, shares the story of Ali, a 14-year-old from the northern part of Gaza.

On October 13, 2023, Ali and his family left their home after the Israeli military dropped flyers asking people in the north to evacuate to southern Gaza. While fleeing on foot on Salah Al-Din Road connecting Gaza’s north and south, an Israeli air-launched missile struck the convoy, claiming the lives of several of his family members, including Ali’s mother, father, and brother. Ali and his other brother sustained injuries, with Ali suffering severe burns on his chest, neck, arms, and other parts of his body. Ali’s injuries to his left leg were so severe that the doctors amputated it above the knee, while his right leg had so many fractures that he needed an external fixator to keep the leg intact and to heal correctly.

After being transferred to another hospital, the doctors there discovered that the external fixator was not put in place correctly, and that Ali needed another surgery to fix it. At present, the hospital doesn’t have the necessary assistive devices for Ali. The HI team in Gaza reached out to provide a wheelchair, but Ali remains at the hospital without a place to go. To make things worse, Ali is separated from his brother who is in intensive care in another hospital. Ali comes from a low-income household and used to sell ice cream at the beach to support his family. Ali has nowhere to go now and is still at the hospital until today.

Tahany, a 53-year-old mother of five, shares her testimony from Jenin refugee camp.

After October 7th escalation between Hamas and Israel, the Israeli army continued to raid the camp almost every night. On October 30th, as Tahany and her family were asleep in their home, now protected only by an iron door replacing the one destroyed in previous incursions, they were woken up by the sound of bombs and the smoke that was seeping into their home. "We were sleeping and woke up to a loud noise, and the smell of smoke. When we went out, we heard loud screams and saw a crowd of people in the area. We found out that an Israeli airstrike struck a gathering of people in the camp who were close enough to cause damage to our house" Tahany’s described.

They were forced to flee to seek safety elsewhere. The electricity in the house had been cut off and Tahany and her family used the light from their mobile phones to see the damage to their building. When she turned to her daughter, she saw her bleeding fingers, while her husband who was standing next to their daughter had blood on his hand. Their injuries were not severe, so she checked herself, only to find that shrapnel had hit her shoulder and chest. "I went to the hospital, but the doctors couldn’t remove the shrapnel. Instead, I will have to
keep receiving treatment until my body rejects the pieces of shrapnel on its own, for 6 - 7 months,” explained Tahany. The doctors explained that such shrapnel cannot be surgically removed as it may further damage the affected tissue, and she will need to receive intravenous anti-inflammatory and pain relief treatment for 6-7 months in order to keep her body temperature at bay, so that her body can maintain its strength and reduce possibilities of infection while it works to reject the shrapnel pieces.

Tahany pointed out that what happened to her keeps recurring in the camp. As explosive weapons are being used more often, Tahany points out that people also need to be aware about unexploded ordnance, and that they should not approach or touch suspicious objects, as consequences could be disastrous. She also emphasized the harm caused by shrapnel from air-to-surface explosive weapons, which can also be lethal. Tahany also noted how important it is to teach people about first aid, so that they can help when needed and know how to act correctly in emergency situations.

Recommendations

To parties to the conflict:

- Reach a long-lasting ceasefire immediately. The safety of civilians and civilian infrastructure must be prioritized. Humanitarian pauses are not enough to prevent further deaths and injuries and ensure humanitarian assistance to the victims;
- Stop the use of explosive weapons with wide area effects in populated areas;
- Immediately abide by international humanitarian law and UN Security Council Resolution 2286 (2016), which specifically refers to the bombing of hospitals and health facilities;
- Support full and unfettered humanitarian access for all international and national NGOs, to all areas of Gaza with civilians, including the governorates of Gaza City and the North
- Open all borders (Rafah, Kerem Shalom, Érez) that can support the delivery of humanitarian aid to the entire population, both in the Southern and Northern Gaza Strip, prioritizing the necessary items to allow hospitals and rehabilitation centers to restart functioning normally: fuel, medicines, medical consumables, mobility aids, and the required water pumping and electrical equipment.
- Parties to the conflict must be held accountable for grave breaches of IHL. Cooperation with the Commission of Inquiry on the Occupied Palestinian Territories, encompassing East Jerusalem and Israel, as well as collaboration with the Prosecutor of the International Criminal Court (ICC) in their investigation initiated in March 2021, is imperative for addressing crimes stemming from recent events.

To donors and UN agencies:

- Commit humanitarian funding to meet existing funding needs fully and significantly scale up humanitarian mine action activities, i.e. risk education, victim assistance, advocacy, non-technical survey and urgent marking, as well as technical surveys and Explosive Ordnance disposal after the end of the active phase of the conflict;
To UN Member States:

- **Use all diplomatic means to reach a ceasefire** as soon as possible. The safety of civilians and civilian infrastructure must be prioritized. A long-lasting ceasefire is the only way to prevent further deaths, injuries, and human suffering, and escalation of the conflict in the region.

- Loudly and publicly **condemn the continuous use of explosive weapons with wide area effects in populated areas**, in addition to the targeting of schools and hospitals where civilians are especially likely to be injured and killed;

- Actively **support the EWIPA political declaration** that addresses the harm caused by explosive weapons in populated areas and that **commits States to develop operational policies and procedures to stop the use of explosive weapons with wide area effects in populated areas and to provide assistance to victims and affected communities and recognize their rights.**