Figure 1: Examples of reported conflict incidents directly affecting food security in Gaza, 7 October-11 December 2023, and existing and emerging challenges

- 9 October: Imposition of a ‘complete siege’ by Israel preventing the movement and supply of water, food, and other essential items such as fuel into Gaza.
- 15 October: A partial restoration of water supply was announced to Gaza's south but its delivery to those in need remained undermined by a lack of fuel to pump it.
- 24-30 November: A humanitarian pause allowed increased but still insufficient food aid into Gaza.
- 1 December: An average of 100 aid trucks per day have entered Gaza since the humanitarian pause ended. This compares with an average of 500 trucks (including commercial and fuel) which entered Gaza each day prior to 7 October.
- 10 October: An unspecified number of fishing boats were destroyed by shelling on the coast of Khan Younis.
- 11 October: The sole power plant in Gaza shut down after running out of fuel following Israel’s imposition of a siege, thereby creating severe impediments for agriculture, fishing and food processing and distribution, all of which depend upon electricity.
- 15 November: The last functioning mill in Gaza was destroyed, halting the production of flour within Gaza for the foreseeable future.
- Large areas of vegetation on agricultural land in northern Gaza (and increasingly since December in southern Gaza) have been degraded. See satellite images within this report.
- Mass forced displacement, primarily from northern to southern Gaza, has led to large scale dependency on food aid. If the displacement is long-term, it also risks reducing available land for agriculture and undermining food production in the south.
- Access Restricted Areas which overlap with agricultural land and that have caused long-term disruption to farming activities pre-dating the current crisis.
- Location of bakeries destroyed by air-delivered explosive weapons (13 reported incidents). Heatmap showing approximate locations of explosive weapons striking agricultural land (57 reported incidents).

“[P]arents are crying like the children, they are hopeless and can’t […] feed […] their children […]. They don’t have money. […] They don’t have income […]. [T]here is nothing left for them to survive, in terms of food, water, sanitation.”

Displaced resident, Gaza, December 2023

Introduction

Violence has severely escalated in the occupied Palestinian territories, especially in Gaza, following a series of attacks by Hamas-affiliated militant groups from Gaza into southern Israel on 7 October 2023 that killed more than 1,000 Israeli and foreign nationals.
On 9 October Israel imposed a “total siege” on the already blockaded Gaza Strip, preventing the supply of water, food and fuel into Gaza. A seven-day humanitarian pause that started on 24 November allowed for some food aid to reach civilians. However, the humanitarian pause ended on 1 December and heavy conflict violence resumed. By mid-December, the Gaza Health Ministry reported that at least 19,000 people had been killed in Gaza since 7 October.

This document provides an update to the first Gaza flash analysis issued by Insecurity Insight in November. It documents a highly concerning trend in reported conflict incidents directly affecting food security in Gaza between 7 October and 11 December 2023:

- At least 13 bakeries have reportedly been destroyed or severely damaged.
- Fishing ports have been damaged and food shops and markets destroyed.
- Satellite image analysis appears to show large-scale reductions in vegetation on agricultural land and the destruction of large greenhouses positioned alongside newly created military transportation routes. Since early December this process of land degradation appears to have been expanding in southern Gaza, adding to large areas of land already degraded in the north (see Figures 2 and 3).
- Agricultural land has been struck by explosive weapons on at least 57 occasions. This creates clearly foreseeable long-term and negative consequences for food production due to land contamination.
- At least seven water facilities, including reservoirs, have been destroyed or severely damaged.
- Recurrent communications blackouts and severe obstacles to accessing electricity have further disrupted food production, processing and distribution, as well as aid responses.
- Testimonies from displaced Gaza residents reveal the severe challenges facing their attempts to access sufficient nutritious food and their adoption of negative coping strategies such as foregoing meals.

The data covering conflict incidents directly affecting food security in Gaza as documented in this report is available for download on the Humanitarian Data Exchange (HDX).

The context: food security in Gaza

Remote World Food Programme (WFP) surveys of Gaza residents conducted during the humanitarian pause in late November 2023 had extremely concerning findings, especially in the northern governorates. In these areas:

- 82% of interviewed households had poor food consumption levels, almost half of households reported severe or very severe hunger on the household hunger scale, and 95% of participants were employing extreme consumption coping strategies due to the lack of food or money to buy it.

Results in the southern governorates were also highly worrying:

- 38% of interviewed households had poor food consumption levels, a third of households reported severe or very severe hunger on the household hunger scale, and 95% of participants were employing extreme consumption coping strategies due to the lack of food or money to buy it.

Since the end of the humanitarian pause, the already grave situation has again deteriorated. Among internally displaced persons (IDPs) in the southern governorates, further WFP
surveys conducted between 3 and 12 December found an 18-point increase in households experiencing severe levels of hunger (from 38% to 56%) compared with surveys undertaken during the pause.

Although acutely aggravated since 7 October, food insecurity in Gaza pre-dates the current crisis. In 2022, 1.3 million people, accounting for over half of the territory’s population, were estimated to need food security and livelihood assistance. Recurrent violence and a decades-long Israeli blockade of Gaza restricting the movement of people and commodities are key contributing factors. Since September 2000, farmers’ access to their land has been limited by an Israeli-imposed Access Restricted Area between 300 and 1,500 metres wide on the Gaza side of the Israel-Gaza border fence. Farmers have faced grave security threats in this area, which overlaps with historically fertile agricultural land. Buffer zones on Gaza’s coastline have also limited fishing to within three nautical miles of the coast, which has effectively placed 85% of the fishing areas officially allocated to Gaza off limits.

Reported conflict incidents directly affecting Gaza’s food production, processing and distribution infrastructure, 7 October-11 December 2023

Civilian infrastructure for the production, processing and distribution of food has been damaged or destroyed on a large scale. At least 13 bakeries producing bread – a staple part of Gazan diets – are reported to have been destroyed by Israeli air-delivered explosive weapons. The bakeries were primarily in the northern half of Gaza. Several were in refugee camps, including the only bakery in the al-Maghazi camp in Deir al-Balah governorate in the centre of Gaza, which is said to have been frequented by thousands of citizens every day prior to its destruction. “Dozens” of civilians are reported to have been killed and injured in some of the attacks on bakeries, while bakery workers were also killed in at least one of the air strikes.

The capacity of bakeries that have not been directly damaged or destroyed to continue functioning has been hampered by a lack of electricity and fuel caused by the siege, and a lack of water, which requires fuel for its desalination. Gaza’s last operating seawater desalination plant reportedly shut down on 17 October. Moreover, the energy-generating equipment of some bakeries has also been damaged. This includes the Al-A’elat bakery – said to be one of the largest bakeries in Gaza – which reportedly had its generators and solar panels struck by air-delivered explosives on 4 November. The combined impact of these factors had resulted in not a single bakery reported to have been damaged or destroyed to continue functioning in northern Gaza by 7 November. As of 11 December, the activities of the few bakeries functioning in southern Gaza remained intermittent. Furthermore, the production of flour in Gaza to supply the remaining bakeries was halted for the foreseeable future on 15 November, when the last functioning mill in Gaza was destroyed by Israeli artillery shelling. Civilians have often had to queue for four to six hours to buy bread at the bakeries operating intermittently in the south, and have sometimes returned home empty-handed due to insufficient supplies.

“Our daily life [has] turned into [a] daily struggle to secure food for [our] kids and […] survive.”

Displaced resident, Gaza, November 2023

In addition to bakeries, marketplaces are reported to have been damaged by Israeli air-delivered explosive weapons on at least seven occasions. This includes a marketplace bombed on 9 October in the Jabalia refugee camp. At least 69 people were reportedly killed in this incident, some of whom were on their way to buy bread at the time of the attack. Marketplaces in the Jabalia refugee camp were also reported to have been struck again by Israeli air-delivered explosive weapons on 20 November, and on 24 November by “phosphorus bombs”, which can cause serious burns to people and objects.
Given recurrent communications blackouts and the high intensity of explosive weapons use with wide-area effects in urban areas, it is likely that more markets and food shops have been damaged than have been reported. This is especially apparent when considering that UN Satellite Centre (UNOSAT) analysis suggests that at least 10,049 structures in Gaza had been destroyed as of 26 November, while a further 8,243 had been severely damaged and 19,087 moderately damaged. It is likely that some of these structures were food shops, markets, or buildings for distributing food or water. As early as 10 October, UN OCHA reported that at least five of its Food Security Sector (FSS) partner contracted shops in Gaza that distribute food had been destroyed. Even if shops and markets are still able to function, damaged roads, insecurity, and fuel shortages have meant that they are unable to obtain fresh supplies to restock their shelves or stalls.

Furthermore, satellite imagery suggests that large areas of vegetation on agricultural land have been seriously degraded, while greenhouses may have been destroyed (see Figures 2 and 3). In north-eastern Gaza, on the border with Israel, approximately three square kilometres of agricultural land appears to have been severely damaged by conflict-related actions between 22 October and 11 December (see Figure 2). The images indicate that transportation routes may have been created from Israel into northern Gaza in these areas. Israel is known to have used bulldozers in Gaza in its current operations to create routes for its armed vehicles. It is possible that such practices were partly responsible for the degradation evident in these satellite images. Figure 3 similarly shows a considerable reduction in vegetation on a strip of agricultural land approximately four kilometres in length and surrounding what appears to be a newly created transportation route from Israel into southern Gaza towards Khan Younis. The degradation occurred during the first 11 days of December alone, corresponding with the resumption of fighting after the end of the humanitarian pause and the expansion of Israel’s operations into southern Gaza. At least one group of greenhouses approximately 1.3 hectares in area also appear to have been destroyed. Overall, analysis of UNOSAT data suggests that 18% of agricultural land in Gaza has been damaged due to the ongoing violence, with this figure reaching as high as 38% in North Gaza governorate.

Explosive weapons use has contributed to this damage. These weapons reportedly struck agricultural lands in Gaza on at least 57 occasions between 7 October and 8 December. Most often, the incidents occurred in areas surrounding Gaza City, Rafah and Khan Younis. The majority of incidents involved explosives fired by Israeli tanks, with all such incidents having occurred since 20 October. The remaining incidents involved air-delivered explosive
weapons. The contamination of farmland by explosive weapons remnants and unexploded ordnance (UXO) will have long-term negative and foreseeable consequences even after the current violence has decreased. This is because of the risk of farmers and their livestock being killed or injured by the later detonation of UXO.6

The violence has resulted in the overwhelming majority of agricultural activities stopping,7 while some of the few farmers who have continued to farm their land have been injured or killed. The Gaza Ministry of Agriculture reported that, as of 6 November, Israeli air-delivered explosive weapons had killed almost 20 farmers working in areas east of Khan Younis alone. Given the overall extent of civilian casualties in Gaza since 7 October, it is likely that the number of farmers killed is considerably higher than is known.

Fishing activities in Gaza have completely halted, while ports and fishing boats have been damaged.8 Shelling by Israeli gunboats off the coast of Khan Younis and the port of Gaza City on 10 October destroyed an unspecified number of fishing boats and damaged the port. Israel is reported by Human Rights Watch to have used artillery-fired white phosphorus shells in attacks on Gaza City port on 10 and 11 October.

Water distribution and supply facilities essential for sanitation and food preparation have suffered large-scale damage and destruction. Seven water facilities (including reservoirs) in Gaza City, Jabalia refugee camp and Rafah were reportedly destroyed or severely damaged during the first week of November alone. While some water desalination in Gaza has resumed, trucking remains the main means of distributing water in Gaza, but this is itself very limited by damage to transportation infrastructure.

The desperation of civilians is likely to have played an important role in contributing to thousands of people forcibly entering UN warehouses on 28 October in Deir al-Balah in the central Gaza Strip and looting food, including flour and wheat. Many who looted the food said they had “no flour, no aid, no water”. Key informants expressed concern in November that such incidents would recur due to the scarcity of food. These fears materialised on 17 December when aid trucks carrying food through the Rafah crossing into Gaza were boarded by large numbers of Gazan civilians who looted food aid. Indeed, there are concerns that the conflict induced food insecurity in Gaza is contributing to civil disobedience. One displaced civilian suggested that:

“The starvation is making people aggressive. The survival mode is at its highest mode ever.”

Displaced resident, Gaza, December 2023
Flash Analysis Report: Over Two Months of Attacks on Food Security in Gaza December 2023

The impact on food security: severe consequences for food availability, access and utilization

- Civilians’ inability to access sufficient nutritious food

“Women are knocking on the doors of the remaining houses seeking a portion or a handful of flour to bake anything for their children using wood.”

Displaced resident, Gaza, December 2023

In addition to the acute security challenges faced by people travelling to food shops and markets, barriers to restocking food outlets caused by the severe damage inflicted on roads have resulted in shop shelves or market stalls being empty. In some cases, only items with limited nutritional value have been available. One displaced person in Gaza who managed to reach a supermarket in early November recalled:

“The shelves of food were empty! What [was] remaining [were] sauces and some candies; people [were] moving around with their carts empty trying to find something useful to eat! But there [was] nothing!”

Displaced resident, Gaza, November 2023

Reduced food availability has increased prices, which in turn have reduced people’s ability to afford to buy food. In late November, the WFP reported that wheat prices had increased by approximately 50% compared with September 2023, vegetables by 200% and rice by 45%, while fuel prices had risen by over 500% (fuel is needed to both cook food and power vehicles distributing food supplies). Simultaneously, even people who would normally be able to afford to buy food now depend on food aid, because cash is becoming harder to obtain. All 55 branches of Gaza’s ten banks have suspended their operations, and only ATMs are still functioning, but even those who can reach these facilities have faced long queues.

Food security and international humanitarian law

International humanitarian law (IHL) obliges conflict parties to protect the access of civilians to food and water during armed conflict. Customary IHL, as compiled by the International Committee of the Red Cross, prohibits attacks against objects indispensable to the survival of the civilian population. These include foodstuffs, crops, livestock, and drinking water supplies (Rule 54). IHL further provides that the parties to the conflict must allow access for humanitarian relief to civilians in need (Rule 55) and ensure the freedom of movement of authorised humanitarian relief personnel. The UN Security Council reaffirmed these principles in 2018 when it unanimously passed Resolution 2417 requiring all conflict parties to protect civilian infrastructure critical to the functioning of food systems and markets and the delivery of humanitarian aid.

Other relevant principles under IHL include the obligations of:

- occupying powers to provide food to the population under their occupation to the fullest extent of the means available to them; and
- all conflict parties to ensure, to the greatest practicable extent, that if a civilian population has been evacuated for imperative military reasons or the security of the civilians involved, they can go to a location where adequate nutrition is available to them.

The impact on food security: severe consequences for food availability, access and utilization

Website
• Mass forced displacement with immediate and long-term consequences for food insecurity

As of 11 December, 1.9 million people were reported to be internally displaced in Gaza, accounting for approximately 85% of the territory’s population. Their loss of their private assets and livelihoods has forced them to depend on food aid. Tragically, however, this has been insufficient (as documented below). People have primarily been displaced to southern Gaza, but subsequent requests from Israel for civilians to leave parts of the south have prompted repeated movement cycles. After dangerous journeys with limited access to food and water, displaced people have found overcrowded conditions and have sometimes been forced to sleep on the streets. The situation has been dire even for those who have reached shelter, as one Gazan resident reported:

“The shelters are completely overcrowded. They are trying to organise themselves, with women and children sleeping inside, and the men outside due to the overcrowding. Most people are sleeping on the bare floor. Diarrhoea is widespread.”

Displaced resident, Gaza, October 2023

Older demographic groups have equally been affected:

“The elderly don’t have mattresses to sleep on, they sleep on wet floors, on the sand.”

Displaced resident, Gaza, December 2023

This exacerbates the overcrowding that had already existed in Gaza prior to 7 October. Even before the latest escalation of violence, most refugee camps in Gaza, including the Beach and Jabalia camps, lacked land on which crops could be grown. Instead, food production was largely only possible in these camps on the rooftops of buildings. The long-term displacement of so many people will aggravate this situation.

• Severe challenges facing the provision of food aid and humanitarian assistance

The efforts of food aid providers to provide aid have been seriously hampered, despite its widespread need. Since hostilities resumed on 1 December, approximately 100 aid trucks have entered Gaza per day through the Rafah crossing, a figure considerably lower than the average daily flow of 500 trucks prior to the escalation of hostilities on 7 October. At the Israeli-controlled Kerem Shalom crossing, aid trucks were screened on 12 December for the first time since 7 October and allowed into Gaza through the Rafah crossing. However, this remains insufficient and only 25 aid trucks had been screened at the Kerem Shalom crossing as of 18 December. Moreover, because of the siege, the lack of water or fuel to cook staple foods such as rice and lentils has meant that even the inadequate amount of food aid that has been allowed into Gaza has sometimes been made useless, because it cannot be cooked.

In addition, aid workers have suffered grave security threats and have themselves been displaced. Communication blackouts imposed by Israel have meant that aid organisations have been unable to ascertain whether staff members are still alive, and have made it almost impossible to effectively coordinate aid responses. Ultimately, this has further reduced the availability of and access to food in Gaza. Reflecting the personal struggles of so many of Gaza’s residents, food aid workers have resorted to burning wood, old food packets, and debris from damaged buildings to try and make bread, which risks further negatively affecting their health due to the fumes emitted. This illustrates how the crisis has also affected those who should in normal circumstances be able to alleviate food shortages, and highlights the breakdown of support systems that results in devastating consequences for the most vulnerable. One civilian stated:

“The situation is catastrophic; it’s just self-management at this stage.”

Displaced resident, Gaza, October 2023
Negative coping strategies have become widespread. These include using unsanitary water for cooking, and adults skipping meals and rationing their water intake to prioritise younger children. The remote WFP survey in late November found that 42% of respondents in northern governorates reported knowing people who were “compelled to consume wild or raw food to cope with hunger”, while 35% reported the same in southern governorates. One displaced Gaza resident reported:

“We struggle to find bread and flour. The men are not drinking potable water in the house to ensure the children can drink the little available supplies.”

Displaced resident, Gaza, November 2023

However, this weakens adults caring for the more vulnerable. In some cases, lactating mothers have found it difficult to breastfeed infants because they themselves are not getting enough food. While food shortages are apparent across Gaza, their prevalence is especially notable in the north, where the violence has been most intense and the presence of aid agencies is very limited. Some families with elderly and disabled members have felt obliged to remain in northern Gaza despite the high intensity of the violence so that they can support less mobile family members. This highlights how the violence impacts the most vulnerable demographic groups in particular.

Farmers have also adopted negative coping strategies, including the harvesting of crops ahead of schedule in the first days of the hostilities in anticipation of future security risks. Meanwhile, the malnourishment of livestock has worsened. In late November, it was reported that livestock in northern Gaza faced starvation due to a “shortage of fodder and water.” This has led to some farmers prematurely slaughtering their livestock. Measures such as these will reduce food availability and access further in the coming weeks and months, requiring even higher levels of imports and food aid than in the past.

Conclusions

“When we look at the sky, we don’t see clear sky. They are grey skies. Not from rain clouds, but clouds from the heavy bombardments. The shelling. […] We are breathing the bombs every day.”

Displaced resident, Gaza, December 2023

Infrastructure Damage and Agricultural Land Degradation:

• The reported information indicates clear, direct, and severe damage and destruction of infrastructure vital for the production, processing, and distribution of food by Gaza’s civilian population.

• Satellite images show large areas of agricultural land degraded by military operations alongside the destruction of agricultural infrastructure, including greenhouses. Limited precautions appear to have been taken to protect agricultural lands for food production.

• Indications of increased agricultural land degradation in southern Gaza in early December following the earlier destruction of large areas of vegetation on agricultural land in northern Gaza are especially concerning.

• Farmers, herders and rural workers have faced extreme security risks from explosive weapons and land contamination. Even after the violence has ended, agricultural land will require clearing of explosive remnants of war.
Impact on Food Availability, Access, and Utilization:

- Food availability, access and utilization among Gazan civilians have been severely affected. Food stocks have been seriously depleted and remaining food is less nutritious.

- Livelihoods have been destroyed, whilst skyrocketing inflation has made access to food unaffordable.

- Transport infrastructure needs repairing to enable the distribution of food and associated goods essential for its production.

- Water scarcity, limited gas, and the consequences of mass displacement have made cooking and effectively utilizing remaining food extremely challenging.

- Poor-quality diets and lack of access to safe water will have long-term consequences and may increase mortality rates and health deterioration in the short term.

Recommendations

“With every sunshine we hope that this sunshine will bring a ceasefire, so that we can at least go to bed at night without the fear of airstrikes, of attacks, of being killed, of losing family.”

Displaced resident, Gaza, December 2023

General proposals:

- All conflict parties should agree to an immediate humanitarian ceasefire to ensure the protection of civilians and civilian infrastructure and allow for the increased delivery of vital, life-saving humanitarian assistance.

- Third party states should actively promote and monitor the implementation of UNSC Resolution 2712 (2023), which calls for urgent humanitarian pauses to the fighting and the establishment of safe corridors throughout the Gaza Strip for a sufficient period to enable rapid and unhindered access for humanitarian actors consistent with international humanitarian law.

- All conflict parties must immediately stop the targeting of civilians and infrastructure critical to the survival of the civilian population, including food production and distribution facilities.

- All actors should work towards increasing the quantity and diversity of humanitarian assistance entering Gaza through all available crossing points and ensuring safe unfettered humanitarian access to all parts of the Gaza Strip.

- Israel should agree to allow the immediate entry of sufficient fuel into Gaza to restart vital civilian infrastructure, including food production and distribution sites.

- Israel must take all feasible precautions to limit damage to agricultural land for the production of foodstuffs.

Specific proposals:

- All parties should work towards scaling up the entry of humanitarian and commercial goods through the Kerem Shalom crossing for distribution across all parts of the Gaza Strip. It is only with the entry of commercial goods and the provision of cash and voucher assistance that supply chains will be restored and civilians will have access to basic services.
• The daily number of trucks filled with humanitarian aid entering Gaza should be significantly increased. This should include an upscaled provision of food, water and sanitation resources to address the dire needs of the local population.

• Humanitarian aid should include personal, domestic, and institutional hygiene items; cleaning products; and the vital entry of spare parts and materials necessary for the urgent repairs of war-damaged water infrastructure.

• Increased quantities of fuel should immediately enter into Gaza to enable the proper functioning of hospitals; water extraction, purification distribution infrastructure, and food preparation; and communications networks for the coordination of the humanitarian response.

• Water supplies should be provided for Gaza’s population in line with the minimum humanitarian emergency response standards of 15 litres per person per day for drinking, cooking and sanitation purposes. This requires fully restoring the uninterrupted Mekorot water supply lines from Israel into Gaza.

• Sufficient food should be allowed to enter the Gaza Strip each month to meet the recommended minimum nutritional requirements of 2,100 calories per person per day, with 10-12% of the total energy provided by protein and 17% by fat. Gas for cooking and fresh food should also be provided.

• Telecommunications in Gaza should be safeguarded to allow the use of electronic payments through PalPay and financial service providers and to facilitate people’s access to markets.

• All parties to the conflict must prevent attacks on humanitarian workers and assets, including deconflicted (geolocalised) offices and facilities and cargo movements.

• Objects that are indispensable for the survival of the civilian population must be protected, including foodstuffs, crops, livestock, agricultural assets, and drinking water installations and supplies, as well as those necessary for food production and distribution such as farms, markets, mills, and food-processing and storage sites. Targeting these objects is a direct violation of UNSC Resolution 2417, which forbids the use of hunger as a weapon of war.

1 The incidents in this report have not been independently verified and do not reflect a complete or representative sample of all incidents directly affecting food insecurity in Gaza during the analysed period.
2 Key informant interview.
3 There are conflicting reports regarding the exact number of bakeries damaged and destroyed by explosive weapons in Gaza. This figure includes reported examples of specific bakeries affected.
4 Key informant interview.
5 Incidents reported by the Armed Conflict Location & Event Data Project, acleddata.com, accessed 12/12/2023.
7 Key informant interview.
8 Multiple key informants reported that fishing activities in Gaza had been brought to a complete halt.