



# **Rapid Food Security Assessment**

*Report on the impact of the conflict on Gaza livelihoods*



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## Executive Summary

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On 14 November 2012 the Israeli Air Force (IAF) launched an airstrike that targeted and killed the acting chief of Hamas' military wing and one of his associates. This incident was followed by an escalation in violence ending on the 21 November with a declaration of a cease fire after 8-days. In the aftermath of the conflict, the Food Security Sector (formerly Agriculture, food and Cash for Work sectors) embarked on a rapid qualitative assessment to determine the impact of the conflict on the population's food security status by analyzing food production, availability, accessibility and access stability during and in the aftermath of the conflict. The field assessment team conducted 58 key informant interviews, 7 focus group discussions with cooperatives and associations and 30 focus group discussions of different livelihood groups with special attention given to women (an additional 6 focus groups).

The main findings of the assessment in terms of food access and availability were as follows:

- The assessment found that Gazan households remain highly food insecure but this status was not appreciably exacerbated by the conflict. In terms of food access, the price and demand for bread did not fluctuate significantly during the conflict. The price of bread remained stable before, during and after the conflict and price controls are in place by local authorities.
- While slight shortages of certain fresh foods (some vegetables, dairy products, eggs) were experienced during the conflict, supplies of food commodities have returned to pre-conflict levels, with no shortages reported and no difficulties to procure the commodities from wholesalers.

The Ministry of Agriculture estimated the total direct and indirect losses of all sub-sectors at US\$ 20.6 million. The hardest hit sub-sector was crop production which sustained US\$ 16.6 million in direct and indirect losses. The livestock sector sustained US\$ 2.2 million in damages, fisheries US\$ 590,000 and water infrastructure for agriculture US\$ 1.2 million. The qualitative assessment, designed to complement the MoA damage assessment found the following.

- Credit ceilings from suppliers have decrease or completely halted as farmers lost all or partial income for the season.
- The resilience of farmers has deteriorated as frequent losses of assets incurred since Operation Cast Lead has exhausted their ability to cope with crisis.
- The 8-day war prevented farmers and wage workers from feeding their livestock or tending to their lands resulting in either livestock losses, emaciation or spoiling of over ripe crops.
- For livestock farmers assistance is needed to prevent further losses due to winter conditions. For crop farmers, re-planting of crops must happen immediately to maintain their income for the current season.

## Introduction

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In the aftermath of the conflict which took place from the 14 November to the 21 November 2012, the Food Security Sectors embarked on a rapid qualitative assessment to determine the impact of the conflict on the population's food security status by analyzing food production, availability, accessibility and access stability during and in the subsequent period after the conflict.

The assessment gathered information and met the following objectives:

- a. Analysed changes to food production in the Gaza Strip caused by damage to the agricultural sector, including seasonal crops, permanent crops, livestock, fisheries and infrastructure.
- b. Assessed changes to food availability and prices in the Gaza Strip including local production, wholesale markets, retail markets, and humanitarian aid.
- c. Established changes in Gaza households' food access, identify changes to income and expenditures, and explore household coping mechanisms.
- d. Estimated the number of persons requiring food, agriculture and other livelihood support assistance as a direct result of the conflict, recommend the types and approximate duration of assistance.

The assessment was conducted using a rapid participatory approach and paid close attention to livelihood groups already known to be either food insecure or at risk of becoming so. The assessment focused on areas most affected by bombardment, and was carried out through:

- A secondary data review of the most recent reports covering humanitarian, food security, agriculture and market conditions to get a snapshot of the food security, livelihood conditions and the factors which affect it. Existing data was analysed from institutions, organizations, government agencies. The focus was on the 60 percent of the Gaza Strip population who were found to be either "food insecure" or "vulnerable to food insecurity" in the 2011 Socio-economic and Food Security report.
- Semi-structured interviews and focus group discussions (FGD) with key informants and organizations. The food security sector carried out FGDs and interviews necessary to obtain a comprehensive overview of the impact of the conflict on food security respectively. The selection of key informants will take into account: status (IDPs/camp refugees/non-camp refugees/non-refugees), location (urban/rural), main livelihoods and involvement in key activities affecting food supplies.

### I. FOOD ACCESS

The rapid assessment found neither significant changes regarding access to food at the households level, nor changes to income and expenditure patterns. Gazans remain highly food insecure, but this status was not exacerbated by the conflict. Household food access is primarily linked to economic access, and households which suffered loss of housing, productive assets, and income sources were more greatly affected than others.

Certain segments of the population were identified in the survey as having lost an income source that will take several months or years to replace and may require longer-term emergency food assistance support. These households include those who have lost productive land, crops or trees which require several years to regenerate (such as olive trees), livestock, equipment, and/or employment. Without a reliable income source to meet their food and other basic requirements, these households are currently relying on: external humanitarian assistance; support from relatives and neighbours; and credit authorized by shop-keepers. While their food consumption patterns have not been significantly altered as a result of the conflict, their resilience and capacity to self-sustain has eroded and they could need additional support in the future.

Pre-conflict economic access to food was already seriously constraint as a result of the blockade. With the Gaza Strip's unemployment rate currently at 32 percent<sup>1</sup>—and with approximately 40 percent<sup>2</sup> of the population classified as poor—the delay in payment of public sector salaries may be the tipping point to push previously self-sufficient families into dependency on assistance. Even before the conflict began, the most recent Palestinian Central Bureau of Statistics labour force survey (3<sup>rd</sup> Quarter 2012) shows that the number of employed persons in the Gaza Strip decreased by 11,000.<sup>3</sup>

#### **Specific results of the assessment include:**

The price and demand for bread did not fluctuate significantly during the conflict. The price of bread remained stable before, during and after the conflict and price controls are in place by local authorities (NIS 7, or approximately US\$1.83 for 2.7 kg of flat bread, which is the daily requirement of an average family) and wheat flour is being provided by the various mills at a set prices, as well as by WFP and UNRWA. All 47 bakeries in the Gaza Strip have returned to full functioning capacity, although there were reported concerns about the restoration of adequate supplies of cooking gas, spare parts and regular electricity service.

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<sup>1</sup> PCBS, Labour Force Survey, Third Quarter, November 2012.

<sup>2</sup> Using the National Poverty Line.

<sup>3</sup> Employment decreased from 249,600 in the 2nd Quarter of 2012 to 238,600 in 3rd Quarter of 2012.

## **II. FOOD AVAILABILITY**

Similar to food access, food availability in the Gaza Strip—including local production, wholesale markets, retail markets and humanitarian aid—was not appreciably affected by the conflict.

Field visits and market observations indicate that the flow of construction materials and other food items via the underground tunnels resumed shortly after the conflict ended and the volume of goods entering the Gaza Strip has nearly reached pre-conflict levels. Prices of construction materials in local markets, including aggregate, cement and steel bars are similar to the prices recorded prior to the Israeli offensive.

Restrictions on the movement of people and goods through the Gaza crossings still hinder free market access, but official imports are steadily increasing. This is shown by the Kerem Shalom crossing which has already returned to pre-conflict volumes, although the import of basic construction materials remains restricted. Traders' main priority is the opening of the crossings so that supplies (and sales) can increase. According to local and official sources in Gaza, tunnel activity continues to increase.

The tunnels under the border with Egypt, primarily used for the transfer of restricted items and fuel into Gaza, sustained significant damage resulting from Israeli airstrikes. However, following repairs performed since the ceasefire, activities resumed and gradually increased, reportedly reaching 80 percent of pre-conflict levels.

### **Specific assessment findings include:**

While slight shortages of certain fresh foods (some vegetables, dairy products, eggs) were experienced during the conflict, supplies of food commodities have returned to pre-conflict levels, with no shortages reported and no difficulties to procure the commodities from wholesalers. The market is connected and functioning well, with all items (food and non food) available in all governorates at the same prices.

The levels of food stocks kept in stores are also comparable to the volumes prior to the conflict. This typically includes a stock of 2 to 4 weeks for main food staple items.

Overall, prices have returned to pre-conflict levels. Consumers, shopkeepers and traders all confirmed that the prices didn't fluctuate during the conflict. Consumer demand has also returned to pre-conflict levels.

### III. FOOD PRODUCTION

There are 13,909 plant holdings, 3,362 animal holdings in addition to 3,131 mixed holdings in the Gaza Strip of which 27 percent rely on agriculture as the main income source for the household. These holdings employ 46,563 workers of which 14 percent are women and 6 percent are permanent paid workers.

#### ❖ *Crop Farmers*

According to the agricultural census there are 3,400 winter field crop holdings and 5,030 winter vegetable holdings. The total area of these holdings is 45,000 dunums of which 65 percent are irrigated. The MoA assessment documented damages to 3,033 dunums representing 7 percent of the total cultivated area during winter months in the Gaza Strip. **Out of the livelihood groups, crop farmers sustained the most direct damage.** Considering that the average holding is 3.7 dunums this means that this damage is estimated to have affected 817 farmers employing a total of 1,700 workers.

Farmers whose greenhouses were totally damaged are concerned that if they cannot rehabilitate their greenhouses on time, they will not be able to re-plant their land this season and therefore will lose their income entirely. Others whose greenhouses suffered partial damages are in fear of losing what is left of their season's produce if they are unable to repair the damages. All farmers are under strain to pay back their debts to suppliers and are afraid they will lose their credit networks. One male participant said:

*"If we are able to repair green houses within a 2 week period, we might be able to plant again for this season; however, if we don't, we need to wait for the next season."*

As the short space of time left for them to catch up with the current season is passing quickly, all directly affected farmers see that their priority is to repair damaged assets in order not to lose income for the current winter season. Some farmers expressed their inability to finance repairs since they have not recovered losses incurred since 2008's Operation Cast Lead. They reported having had to deal with higher prices of materials at the market due to increased demand at a time where they were already indebted to the suppliers, further exacerbating their precarious economic situation. A participant stated:

*"We are exhausted from the number of times we have had to rebuild our lives; farmers sold their gold and sometimes land after the 2008 war to have to rebuild all over again. What is left for us to sell this time?... Nothing!"*

Farmers who were not affected directly suffered economic losses due the inability to access their land during the 8-days of the operation. As a result of not being able to tend their land, their crops became overripe or spoilt. Those who produced for export could not meet the standards for export markets and were forced to sell their crops locally for much lower prices. The farmers reported that

the ban to export to West Bank and Israeli markets remains a strain on their livelihood even after the ceasefire agreement was reached; they were expecting further relaxation on trade restrictions.

There are more than 10,600 tree holdings in the Gaza Strip with 1.3 million trees planted on 34,000 dunums. Of the total number of trees: 38 percent are citrus fruits; 35 percent are olive trees; 3 percent are date palm; the remainder are comprised of various fruit trees [guava, figs, almonds, apples, etc.].

Despite only direct damage to 149 palm trees reported in the Ministry of Agriculture's damage assessment, farmers recounted their past experiences during Operation Cast Lead in which the trees surrounding those directly damaged were hit with particles from explosives and would die a few months later. In addition, they said that the missiles had left large craters and destroyed irrigation wells and networks which will require land rehabilitation. However, the most pressing concern for date palm farmers is the Red Palm Weevil infestations.

Since the conflict coincided with the citrus fruit harvest season, farmers' inability to access their orchards during the hostilities led to losing part of their crops. Farmers generally supply the market with citrus fruit gradually, however as they were unable to access their land for eight days, upon the end of the conflict local markets were flooded with citrus fruit leading to a sharp decrease in price. For example one box of clementine dropped from NIS 35 before the war to NIS 15 after the war, while a box of oranges dropped from 50 NIS to 35 NIS during the same period.

For fruit tree farmers who sustained damages, their main priority requirements are to rehabilitate land (as bombardment left craters), repair irrigation networks and to provide them with seedlings. Women requested small income generating projects, as it will take 5 years until new trees begin producing. Cash for work to cultivate their land was suggested in order to compensate for this season's losses.

#### ❖ **Livestock Farmers**

**The Gaza Strip produces 76 percent of the poultry it consumes while poultry represent 77 percent of their average protein intake.** The latest statistics available indicates that there are 8 million birds in Gaza's poultry farms (including layers, broilers, mothers and turkey) reared in 841 holdings. **The MoA damage assessment indicates the loss of more than 74,000 birds.**

Poultry farms which were not directly damaged reported as much as 30 percent of losses in poultry due to the sounds of explosions. At the same time, all poultry farmers reported incurring some losses due to the lack of fodder or inability to reach their farms during the 8-days of war. They sometimes had to pay inflated transportation and labour costs in return for the risk that workers and drivers took to deliver the fodder and feed the birds. One participant said:

*"Chicks are like children they need 24 hour care, in the 8-days we only focused on our own children."*



Women reported that the small holdings of poultry (around 15-20 birds) they owned, helps in feeding their children. These are women whose husbands are either unemployed or receive low pay. These women cannot afford to buy large quantities of feed (usually buying 1 or 2 days worth of feed at a time). The feed they purchased was insufficient to feed the chickens during the 8-day period. A female participant stated:

*“During the war, the chicken shared whatever rice was available in the house with the family. The rice was sufficient to satisfy the children but not the chickens. The chickens lost weight and ended up being sold very cheap after the war. I cannot replace them.”*

Farmers with partially damaged farms are concerned that they will lose their remaining poultry if their farms are not repaired for the winter season. They have temporarily repaired damages but more immediate permanent solutions are required to ensure protection from the winter weather. Gas heating and chicken feed was identified as a priority to avoid further losses. The frequent losses they incurred since Operation Cast Lead had exhausted their ability to cope with crisis. The ceilings for which they can buy inputs from suppliers have decreased substantially since Operation Cast Lead. The farmers reported that the reoccurring conflict had led to the disappearance of small farmers who opted to cut their losses by becoming paid workers for a growing number of large farmers.

Cattle, goats and sheep losses were limited in numbers. The impact of the 8-day escalation in violence was felt most heavily by those who were directly hit. However, due to the high value per animal (regardless of cow, goat or sheep) and the fact that most of the herders are small herders, individuals perceive this as a major loss. These farmers will have lost their major source of income unless otherwise compensated. However, sheep and goat farmers reported that their priority needs are long term and mainly to improve their herd management practises. Cattle farmers are primarily commercial farmers and so recovery for these farmers is not difficult as they have more than one farm. If no assistance arrives, they are able to cover the cost of repairs.

#### ❖ **Fishers:**

According to the Department of Fisheries, there are 3,097 registered fishers in the Gaza Strip who are reliant on the fishery sector for their livelihoods. Only half of the fishers will rely on fishing throughout the whole year, while the remaining will rely on casual labour in construction or farming as an additional source of income.

Fishers reported an increase in fuel prices after the war which had implications on their profitability. Despite the extension of the fishing limit to 6 NM from 3 NM before the war, fishers reported that their fish catch did not improve substantially and sometimes their fishing trips are not worth the cost of labour and fuel. They continue to fish despite days when they are unable to cover the costs and express their steadfastness in the face of their livelihood challenges. A fisher stated:



*“The real fisherman does not leave the sea no matter what; his blood is mixed with the sea salt.”*

Fishers reported that to make a decent income they need to fish at a 20 NM limit. Before the war, they would risk pushing the limits of where they can fish. They stated:

*“The Israelis sometimes see us in the sea, they keep calm until we throw our nets in the sea then they start shooting and saying we are in the restricted area. So we lose our nets and go back with zero fish and no nets.”*

According to the Fishermen’s Syndicate, gains from the expansion to the 6 NM was limited to large trawlers, compared to the Hasaka or the Purse Seiners which rely mainly on the sardine season. There has been no change in the number of fishers as a result of the change in access to the sea.

The short term priorities identified by fishers is to repair or replace damaged boats, fishing nets and other broken fishing gear such as the oars. As fishing does not guarantee a sizable or regular income, the long term priorities they identified is to create alternative sources of income to compensate for times when fishing is insufficient to meet their basic needs.

#### ❖ **Buffer Zone**

Most of the buffer zone land is located on agricultural land which has been targeted over time to prevent or discourage access to the restricted areas, such as the levelling of farm land and uprooting of fruit trees. This gradually eliminated the means of production and the residential housing located in the restricted areas, reducing the number of people willing to access these areas.

For Fruit tree farmers, Operation Cast Lead was perceived to have had a greater impact on their livelihoods compared to the recent escalation. As most fruit trees are grown along the buffer zone area they incurred losses since Operation Cast Lead. A female participant stated:

*“Our land in the buffer zone is the only asset that we have, you invest the money and the bulldozers come. It happened to me. I wish had used the money saved up to better feed my kids rather than planting for the bulldozers”.*

Another participant stated:

*“We need security, not aid. Guarantee us security and stability and we can manage our living”.*

The ceasefire agreement that was reached after the latest escalation of violence on the 21 November entailed the withdrawal of Israeli forces from land where Israel had unilaterally expanded the buffer zone. In the current period of political uncertainty, farmers and key informants in North Gaza and the Middle Area have reported that they can access areas which

were previously restricted; however, they are still reluctant to invest in land there out of fear of military bulldozing.

As most farmers have experienced frequent reoccurrence in the destruction of their lands, they expressed scepticism in reinvesting, requiring a guarantee in the future to return to their farm land in the buffer zone. Few farmers said that they are preparing the land; however, they will plant low cost crops such as parsley and lettuce. This way, losses will not be as heavy despite the knowledge that these crops will not provide substantial return.

Farmers in Khan Yunis and Gaza governorate had similar experiences, however, they reported that they attempted to cultivate the land with wheat and barley since they think that the quality of the soil has deteriorated and is unsuitable to plant vegetables.

Some farmers expressed fear of going beyond 300 meters from the fence. Since the land has been restricted for 10 years, and with the frequency of military operations in the area, farmers still express fears that the land needs to be cleared of unexploded ordinance before they feel secure about accessing this area. In addition farmers who returned to their lands were unable to distinguish boundaries between their own land and others. They said:

*“The land is destroyed in a way that we cannot tell where the boundaries of our land used to be.”*

These farmers expressed that clarification by the authorities of land registry issues within the Buffer Zone is a priority for them to be able to return and cultivate their land.



## Recommendations

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1. Immediate reconstruction of the completely damaged and partially damaged agricultural assets including greenhouses, irrigation networks, water wells, and animal sheds. Special attention should be given to farmers who are at risk of missing the season to grow vegetables and those with partially damaged poultry farms that are under threat of losing more poultry due to cold weather.
2. Clarify the area permitted to farm near the security fence, provide a political guarantee of physical security in persons and investments, clearance of unexploded ordinances and soil testing of potential contaminants. Also, ensuring a mechanism is in place for land registry issues are all preconditions for restoring agriculture productivity around the buffer zone.
3. Strengthening livelihood resilience to reinforce coping mechanisms through longer term Linking Relief Rehabilitation Development (LRRD) approaches; closer linkages between the organizational units for emergency aid, reconstruction/rehabilitation and long-term development cooperation.
4. Provide land rehabilitation package in addition to assessing soil quality to restore land that was damaged from the war. In the long term, improve access to agriculture land in previously restricted areas through the development of agriculture infrastructure (roads, irrigation systems, GWWTU).
5. Support small herders who have lost all or part of their herds by replacing their stocks lost during the conflict.
6. Provide support to fishers to repair fishing nets, partially damaged boats and other fishing equipment and tools. As fishing does not guarantee a sizable or regular income, long term priorities are to create alternative sources of income to compensate for times when fishing is insufficient to meet their basic needs.
7. Support agricultural wage workers who have lost their employment due to the destruction of farms with alternative sources of income until farms have been reconstructed.
8. Continue providing food assistance to beneficiary populations who were food insecure before the hostilities. Food insecurity in the Gaza Strip was high before the conflict, and the pre-existing caseload of food assistance beneficiaries still require external assistance to meet their basic food and non-food needs, prevent hunger, limit distress coping mechanisms, and respond to shocks.
9. Further assessments are needed of households who have suffered productive asset losses and housing damage during the conflict. Households affected by the conflict are reporting to be coping well, but further review and monitoring is required. Assistance may include employment support through job creation activities, food assistance, and/or other extra economic support (pay the rent, compensation for the direct loss and rehabilitation of domestic and productive assets) to facilitate recovery and increase their resilience.
10. Support emergency preparedness at the household level and prepositioning of critical food and non-food items of relief organizations.
11. Advocate for alleviating the adverse economic and social conditions imposed on the Palestinian people through easing of the blockade, lifting movement restrictions, and unhindered opening of border crossings.

## Annex I – Ministry of Agriculture Damage Assessment

Category	Unit	Quantity	Total Estimated Losses (US\$)
<b>Crop Production (total)</b>			<b>16 606 240</b>
Trees	dunum	940	9 403 000
Demolished Greenhouse	dunum	278	2 502 000
Partially Damaged Greenhouses	dunum	840	924 000
Open field Vegetables	dunum	1 856	1 113 600
Field Crops	dunum	9	1 800
Strawberries	dunum	50	200 000
Date Palms	tree	149	149 000
Demolished Storage Room	square metre	992	99 200
Fertiliser sprayers	sprayer	5	3 250
Fence	metres	32 870	230 090
Metal Gates	gate	3	300
Crater	crater	990	1 980 000
<b>Livestock Production (total)</b>			<b>2 229 550</b>
Layer Chickens	area	2 300	345 000
Layer Chickens	bird	20,380	101,900
Broiler Chickens	area	9 600	672 000
Broiler Chickens	bird	51 265	205 060
Turkey	bird	58	580
Chicks	chick	3 100	6 200
Rabbits	rabbit	40	600
Household Sheds	area	6 605	132 100
Cattle Farms	area	3 350	234 500
Cattle Killed	head	67	134 000
Sheep Farms	area	1 514	105 980
Sheep Killed	head	539	215 600
Other Animals	head	9	18 000
Roof Asbestos	square metre	798	3 990
Beehives	beehive	360	54 000
<b>Fisheries (total)</b>			<b>586 900</b>
Hasaka Boats	number	10	40 000
Partially Damaged Hasaka	number	35	35 000
Totally Damaged Engines	number	5	25 000
Partially Damaged Engines	number	18	36 000
Partially Damaged Fisherman Rooms	number	10	20 000
Refrigerator	number	2	10 000
Refrigerator Display	number	5	2 500
Snares	number	12	1 200
Fishing Nets	number	420	105 000
Other Machines	number	8	3 200
Empty Crates	number	50	500
Management Building	number	1	250 000
Scout lighting	number	50	5 000
Auction	number	1	10 000
Generator	number	16	4 800
Research station			38 700
<b>Water Infrastructure for Agriculture (total)</b>			<b>1 191 536</b>
Concrete Pools	square metre	1 364	75 020
Plastic Pools	number	12	12,000
Water Pumps	engine	41	28 700
Water Tanks	cubic metres	63	6 250
Irrigation Networks	dunum	1 488	446 250
Main Water Pipelines	metre	16 229	64 916
Well Rooms	square metre	304	30 400
Wells	number	24	528 000