



**FOOD SECURITY SECTOR**  
*Strengthening Humanitarian Response*

**Report of the Rapid Qualitative  
Assessment of the Livelihood Conditions  
of Agricultural Producers in the Gaza  
Strip**

**December 2014**

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# PART ONE: INTRODUCTION

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## 1. Background

The humanitarian crisis in the Gaza Strip has recently reached unprecedented scale. On 7 July 2014, the Israeli army launched a large-scale military operation in the Gaza Strip, codenamed “Protective Edge”, with the stated objective of stopping Palestinian rocket firing at southern Israel, destroying the military infrastructure of armed groups. Punctuated by a short periods of lull and ceasefires, the military operation continued for seven straight weeks, with unprecedented aerial bombardment, shelling and ground incursions.

The human cost of this most recent crisis has been huge, with more than 2,350 casualties, 2,285 Palestinians killed, of whom 1,563 have been identified as civilians, including 538 children<sup>1</sup>. About half a million people were displaced at the height of the conflict and more than 11,200 injured, resulting in an increase in the number of poor, unsheltered persons, disabled, orphans, and female-headed households. At the time of writing this report, around 12,000 internally displaced people (IDPs) whose homes have been destroyed during the assault were still being sheltered in UNRWA administered collective centers across the Gaza Strip since the July-August 2014 hostilities<sup>2</sup>, during which Israeli forces destroyed or damaged over 100,000 homes.

Moreover, essential infrastructure, which was already at breaking point prior to the assault, has sustained severe damage. An estimated 20,000 tons of explosives fired by the Israeli military have left many buildings and large areas of Gaza reduced to rubble, including scores of water reservoirs, wells and power stations. While some repairs have been made, extensive disruption in water supply, sanitation services, and energy supplies continues to disrupt the normalcy of life in Gaza, and seriously undermines the viability of various economic sectors.

Israeli military strikes also did not spare government and UN facilities, municipal centers, and public utilities, seriously impeding the provision of basic services to Gaza’s 1.8 million inhabitants. Gaza’s only power plant was directly targeted and put out of service. Damages sustained by this plant far exceed the previous damages that it had sustained in the 2008 assault, when it was also directly targeted. Unable to meet local demand through electricity purchases from Israel and Egypt, Gaza’s Electricity Company is continues to implement an austerity distribution scheme, entailing rolling cycles of six hours of supply followed by 12 hours of outage, rendering it very difficult for a large swathes of economic sectors to resume normal operations and recuperate losses sustained during the 51 days of the assault, particularly since the cheap fuel smuggled from Egypt is no longer available.

The agriculture sector which has been in a steady and serious decline since 1990s, has been one of the worst hit economic sectors in the recent assault. Assessments conducted by the Palestinian Authority’s (PA) Ministry of Agriculture (MoA) indicate that 30 percent of agricultural land was damaged during the assault, most of which described as being part of the most fertile and productive agricultural areas in the Gaza Strip. MoA further reports that about 40 percent of livestock in the Gaza Strip has perished in the bombardment or from lack of feed and water, when owners could not

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<sup>1</sup> OCHA reports available at: <http://www.ochaopt.org/content.aspx?id=1010361>  
[http://www.ochaopt.org/documents/humanitarian\\_dashboard\\_november\\_2014\\_02\\_dec\\_2014.pdf](http://www.ochaopt.org/documents/humanitarian_dashboard_november_2014_02_dec_2014.pdf)

<sup>2</sup> OCHA, Protection of Civilians Weekly Report (20 – 26 JANUARY 2015), available at:  
[https://www.ochaopt.org/documents/ocha\\_opt\\_protection\\_of\\_civilians\\_weekly\\_report\\_2014\\_01\\_30\\_english.pdf](https://www.ochaopt.org/documents/ocha_opt_protection_of_civilians_weekly_report_2014_01_30_english.pdf)

access their farms. MoA also reports substantial damages and losses in the fisheries sector, where 52 small and 2 large fishing boats were seriously damaged or destroyed. Analysis of satellite imagery from UNOSAT conducted by FAO corroborates much of these estimates: It shows that damages cover 1,039 dunums of greenhouses, 6,377 dunums of orchards (200,000 trees), 6,514 dunums cultivated with seasonal crops, and more than 16,200 dunums of arable land. The areas most affected in the agricultural sector are Khan Younis, followed by Rafah, Gaza, North Gaza, and Middle Gaza.

The current crisis comes against a backdrop of heightened vulnerability and instability. Between the second quarter of 2013 and the same quarter of 2014 the unemployment rate in the Gaza Strip increased from 27.9 percent to an astounding 44.5 percent, mainly as a result of the destruction of the tunnels with Egypt and the following collapse of the construction sector of the economy. Though illegal and largely uncontrolled, the tunnel trade provided a lifeline for besieged Gaza as they were a primary supply for food and non-food items, including much needed construction materials and agricultural inputs banned from entry into the Gaza Strip.

## 2. Assessment Context

The World Food Programme (WFP), on behalf of the members of the Food Security Sector (FSS), contracted Al-Sahel Company for Institutional Development and Communication to undertake an emergency food security assessment (EFSA) in the Gaza Strip in the aftermath of the 51 day Israeli assault on the territory. The EFSA was envisaged to concurrently include a rapid damages and losses assessment (DaLA) in the agricultural sector. The DaLA was intended to provide programmatic recommendations for FSS member organisations through providing information on the extent and value of damage in the agriculture sector, and identifying vulnerable groups and their needs. Both the magnitude and scale of damage and losses, and the needs of the agricultural communities and groups were not known at the time when the EFSA was commissioned.

The EFSA was planned to take place over a period of seven weeks, starting on 17 August and ending on 6 October 2014. However, due to unforeseen delays, the field work did not actually begin until 16 September 2014. By then, several assessments were underway, including a comprehensive Ministry of Agriculture (MoA) assessment of the damages and losses in the agricultural sector. With this, and the unforeseen delay in coalescing the secondary data needed to design the DaLA methodology, the FSS requested Al-Sahel to focus its efforts on undertaking the food security assessment component.

As the field work was taking place in Gaza, Al-Sahel and FAO in the West Bank were in close coordination to produce the needed baseline data and maps for undertaking the DaLA. This resulted in an impressive initial analysis of damages in agricultural area through comparative analysis of satellite imagery. By the time the first draft of the EFSA report was submitted to the FSS on 12 October 2014, however, MoA had published its report on the damages and losses in the agriculture sector, and this was being used by the PA, World Bank and several donors to design early recovery programmes and interventions. The objective of the DaLA as originally designed has thus been largely met, though independently from the EFSA.

In light of these circumstances, and based on consultations with FSS members, it was mutually agreed to change the scope of the DaLA component to focus on providing an in-depth understanding of the livelihood conditions and needs of farmers in the Gaza Strip in the aftermath of the most recent crisis. More specifically, the objectives of the assessment are the following:

- Assess the level and scale to which Gaza farmers (in plant, livestock and fishery sub-sectors) have resumed production, according to the level of damage and losses sustained in the various farming communities;

- Identify the constraints facing Gaza farmers to resume production at pre-assault levels, with a focus on constraints that remain largely unaddressed; and
- Make actionable programming recommendations for supporting early and long-term recovery in the agriculture sector.

This report provides the results of the assessment. In the following paragraphs, we present the methodology followed in undertaking the assessment, and we highlight the limitations of the assessment and its findings, as well as present the structure of the report.

### 3. Assessment Methodology

The assessment followed a qualitative inquiry approach which was based on rapid participatory assessment techniques, and guided by standard data collection tools that were developed at the onset of the assessment in consultation with the FSS. The following points provide an overview of the methods and tools that were used:

- Secondary research: A review of the most recent reports covering the humanitarian, food security, agriculture and market conditions was undertaken to get a snapshot of the food security and livelihoods situation in the Gaza Strip prior to and in the aftermath of the recent crisis. Particular attention in this review was given to the results of the assessments of damages and losses in the agricultural sector which were undertaken by MoA and the United Nations Development Programme (UNDP). Other reports reviewed included an analysis of satellite maps produced with the support of FAO, reports issued by the professional associations in the aftermath of the war, OCHA briefing reports and other UN agency reports. This review did not only provide context for the assessment, but it was also crucial for informing the design of the assessment methodology and tools.
- Focus group discussions: A total of 13 focus group discussions were conducted with 175 farmers engaged in plant production (81), livestock breeding (86) and fishing (8) in a purposive sample of 10 farming communities (Table 1). Farmers invited to participate in the discussion were selected in consultation with farmers' organisations in the targeted communities on the basis of criteria that ensures representation of the most affected and least affected farmers in these communities. While farmers who participated in the discussions were selected on the basis of their main livelihood activity (i.e. plant production, livestock production, and fishing), most of them, and except for fisherfolk, had mixed agricultural holdings. The FGDs focused on engaging farmers in discussing the central questions of the assessment, namely:
  - to what extent have farmers have been able to resume production and recover from the impact of the assault?
  - what are the factors that have influenced the ability of farmers to resume production, both positively and negatively?
  - what kind of support do farmers need to recover and be able to resume their pre-assault livelihoods?

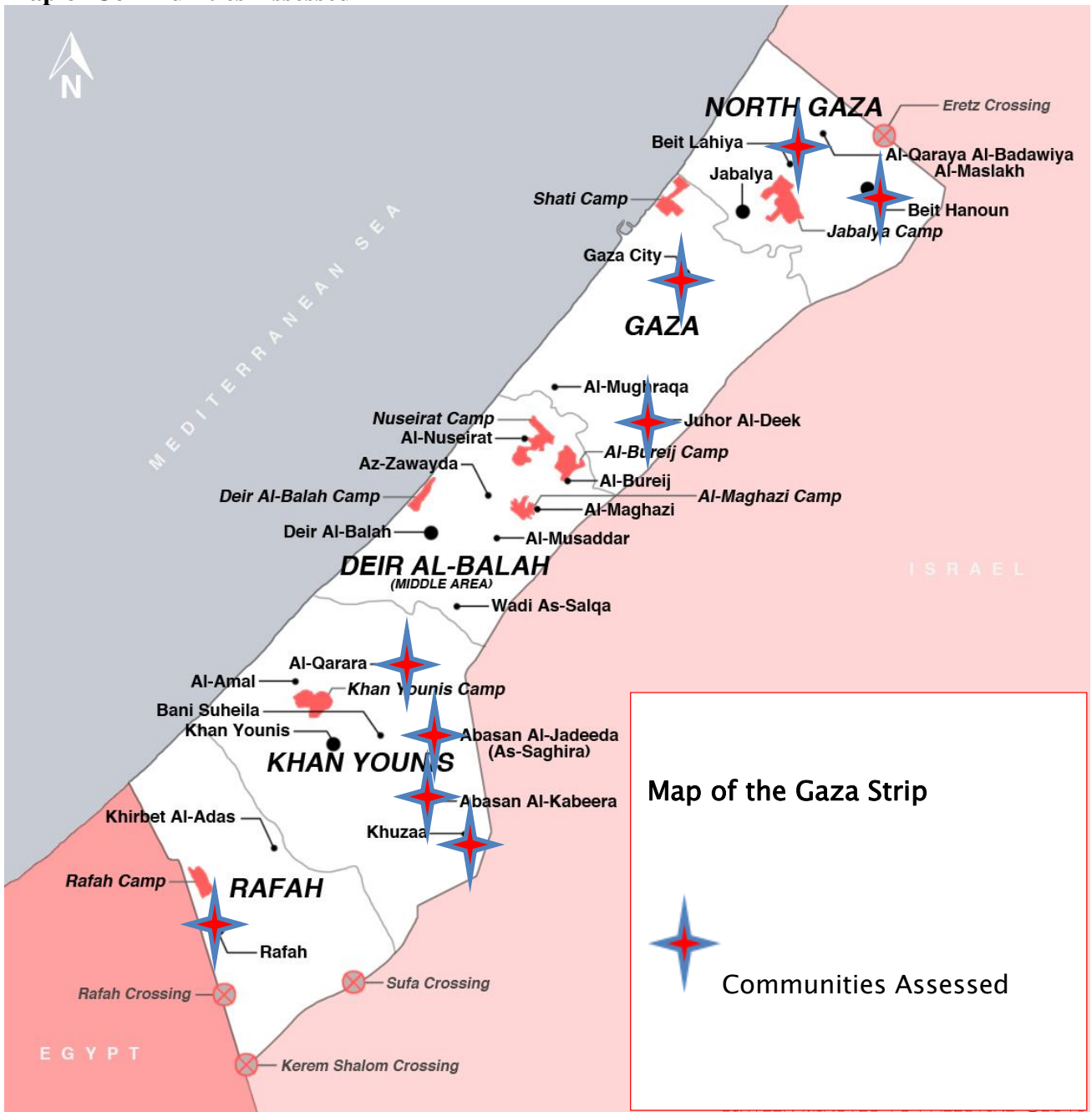
**TABLE 1: FGDS ORIGANISED WITHIN THE FRAMEWORK OF THE ASSESSMENT**

<b>Community</b>	<b>Description of FGDs conducted</b>
Beit Hanoun and Beit Lahia	2 focus group discussions were organised with: <ul style="list-style-type: none"> <li>• Plant production farmers (11)</li> <li>• Livestock farmers (8)</li> </ul>
Juhur Adeek	2 focus group discussions were organised with: <ul style="list-style-type: none"> <li>• Plant production farmers (16)</li> <li>• Livestock farmers (16)</li> </ul>
Al-Qarara	2 focus group discussions were organised with: <ul style="list-style-type: none"> <li>• Plant Production Farmers (13)</li> <li>• Livestock farmers (15)</li> </ul>
Khuza'a	2 focus group discussions were organised with: <ul style="list-style-type: none"> <li>• Plant production farmers (10)</li> <li>• Livestock farmers (12)</li> </ul>
Abbassan Al-Kabeera and Abbasan Al-Jadeeda	2 focus group discussions were organised with: <ul style="list-style-type: none"> <li>• Plant production farmers (17)</li> <li>• Livestock farmers (14)</li> </ul>
Rafah	2 focus group discussions were organised with: <ul style="list-style-type: none"> <li>• Plant production farmers (14)</li> <li>• Livestock farmers (21)</li> </ul>
Gaza City	1 focus group with fisherfolk from Gaza city and Deir Al-Balah (8)

- In-depth, semi-structured interviews: a total of 30 in-depth semi-structured interviews with key informants were organised to validate the FGD results and help the assessment team gain a deeper understanding of the ways through which farmers have been coping with their recent plight. These interviews included individual and group interviews with farmers' organisations such as the fishermen syndicate and producer cooperatives, as well as within individual livestock breeders, vegetable farmers, fruit farmers, nursery operators, and fishermen.

For all FGDs and semi-structured interviews, the assessment team developed and used standard interview guidelines to make consistent the data collection process among the different team members visiting different areas at different times. These included a list of common suggested questions for most stakeholders being interviewed to allow for cross-checking data, and a suggested reporting format to facilitate identification of trends and triangulation during the analysis. Each team member contributed reports corresponding to the interviews and observations for which he/she was tasked. These were drawn upon in writing this report.

# Map of Communities Assessed





## **Limitations**

Despite the large number of stakeholders interviewed and the significant efforts made to triangulate data collected within the framework of the this assessment, the findings emerging from this assessment cannot be generalised to the entire farmer population in the Gaza Strip. Such generalization requires a quantitative assessment based on statistical sample-to-population. The findings presented in this report, however, can be generalized to the farmers' population within farming communities consulted, and, given the number of farmers and stakeholders consulted, provided a fairly good indication of the needs of various farmer groups for programming purposes.

Efforts made by the assessment team to include the voice of women in the assessment have failed, as none of the women producers invited turned up to the focus group discussions. While this did not allow the assessment to provide a gendered analysis of the impact of the assault, informal interviews conducted with a few women producers in Rafah and Beit Lahia suggest that the general findings presented in this report are also very much applicable to women producers.

The extent of damage and losses reported by the farmers interviewed and consulted could not be independently verified by the assessment team due to the lack of credible baseline data on the holdings and land-use by these farmers. Hence, data on damages and losses presented in this report are largely based on self-reported estimates of damages and losses. At times, the assessment team felt that these estimates were inflated. Accordingly, data on damages and losses presented in this report should not be taken out of the assessment's context and limitations.

Additionally, the assessment was undertaken in the months of November and December, when seasonal plant production is mostly rainfed. Hence, changes in land use and farming patterns towards rain-fed agriculture highlighted in this report do not necessarily reflect a long-term impact. Discerning such impact will require undertaking a follow-up assessment of land use after the winter cultivation season is over.

## **4. Report Structure**

The report is presented in four sections. This section provided the background to the assessment and introduced the methodology thereof in brief. Section two presents the main assessment findings, a discussion of the humanitarian crisis and its consequences on agricultural production and livelihoods, coping mechanisms, and needs as expressed by farmers interviewed themselves. Section three provides the conclusions and recommendations of the assessment. The Annex includes the list of people interviewed.

## PART TWO: FINDINGS

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This section of the report presents the findings of the assessment. It first begins with providing an overview of the level to which their agricultural livelihoods of farmers consulted have been impacted by the war. An assessment of these farmers coping strategies and the constraints they face in restoring their livelihoods is then presented. The final section consolidates the assessment findings and specifically addresses FAO's request for profiling the farmers' groups according to the level to which they have sustained losses in their livelihoods, and the type of assistance required for each of these groups in the next 1-6 months, and, as far as possible, in the next 6-18 months assuming that their immediate needs are met.

### 1. Taking Stock of the Damages: Loss of Livelihood Assets Reported by Farmers Interviewed

Since the 1990s, agriculture in Gaza has been in a steady and serious decline. While Israeli military restrictions on access and movement have been destructive in all economic sectors, the agricultural sector has been one of the worst hit. Seventeen percent of Gaza lies in an area designated by Israel as a Buffer Zone and is largely off-limits, including 35 percent of its agricultural and grazing land, while more than 3,000 fishermen do not have access to 85 percent of the maritime areas agreed in the 1995 Oslo Accords. As a result, fewer crops have been grown and the fish catch has decreased dramatically. The Blockade imposed on Gaza Strip since 2007, which has severed Gaza's producers from their main local market in the West Bank and from export markets in Israel and Europe has been particularly undermining agricultural growth, development and livelihoods.

Against this precarious backdrop, the recent crisis has dealt yet another serious blow to the agricultural sector in Gaza in general and agricultural livelihoods in particular, with negative consequences for food security and agriculture sector development in the Gaza Strip. This was clear through discussions with farmers and stakeholders across Gaza, where nearly all interviewed farmers reported sustaining damage in their farm holdings and assets during the assault, including harvest losses and damages to farm facilities and equipment such as tractors, irrigations pipes, water pumps and farm sheds.

#### 1.1. Fresh Produce Farmers

Of the interviewed 81 farmers engaged in plant production, 77 (95 percent) reported damages in their agricultural fields and productive assets, mostly as a result of bulldozing and land razing, bomb impact craters, and physical destruction of greenhouses. As result of these damages, these farmers reported being forced to reduce the area of land they used to cultivate by some 267 dunums, representing about 28 percent of their collective land holdings.

The majority of farmers interviewed (63, or 78 percent) indicated that damages in their farmland were mainly caused by land razing. Collectively, these farmers reported that land razing was responsible for the 81 percent (217 dunums) of the total damage their lands had sustained during the assault. Damages reported in relation to land razing include complete destruction and uprooting of olive, citrus and guava orchards (200 dunums); destruction of irrigation networks, water pipes, reservoirs and water wells; and destruction of greenhouses (48 dunums). The highest damages were reported by farmers from Juhor ad Dik, 'Abasan al Kabira and Al-Qarara, where land razing damages in these communities accounted for 85 percent (185 dunums) of all damages linked to land razing by farmers interviewed from assessed communities. While the level of damage caused by land razing differs from one community to another and from one field to another within the same community, the overwhelming majority of farmers interviewed indicated that they have not been

able to repair the damages caused by land razing as such repair requires significant financial resources which they do not have.

About 47 percent (38) of the farmers interviewed reported having greenhouses prior to the assault. Of these farmers, 53 percent (20) farmers reported damages in their greenhouses. Most of these farmers (75 percent or 15 farmers), however, have attributed their greenhouse damages to land razing rather than bombardment. Greenhouse damages are mostly concentrated in Rafah, Beit Lahia, and 'Abasan al Kabira. Damages in these communities accounted for 80% of all greenhouse damages reported in the assessed communities, with almost all damages reported described as being complete and irreparable damages.

## **1.2. Livestock Breeders**

Nearly 85 percent (73 out of 86) of interviewed livestock breeders reported animal deaths as a result of the assault, with the overwhelming majority of them reporting death of more than half of their animal holdings. More specifically, animal breeders interviewed within the framework of the assessment reported deaths of 56 percent (289 heads) of their cattle, 46 percent (603 heads) of their sheep and goats, and 77 percent (266,745 birds) of their poultry holdings as a direct result of the assault. Other livestock deaths caused by the assault reported by farmers include 350 rabbits, 45 ducks and 63 beehives. In addition to these deaths, 72 percent (62) livestock breeders reported either complete or serious damage to some 47 dunums of animal farm structures as a result of bombardment and ground operations.

Most cattle and cow deaths were reported in Al-Qarara, which accounted for 41 percent of all large ruminant deaths reported by interviewed livestock breeders. Khuza'a farmers reported almost one third of all sheep and goats deaths reported by interviewed breeders, followed by Juhor ad Dik and Al Qarara farmers who reported about one quarter and one fifth of all small ruminant deaths reported, respectively. Juhor ad Dik and Khuza'a farmers were the largest holders of poultry, hence reported about two thirds of all poultry deaths reported by farmers interviewed and close to half the area of damaged animal farms.

## **1.3. Fisherfolk**

Fishermen interviewed reported irreparable damages in four of their large boats (launches and trawlers) and in nine of their small boats (hasakas) as a direct consequence of Israeli shelling of the Gaza Sea Port. Reportedly, these boats used to be a main source of livelihood for some 23 fishermen, most of whom are heads of large households. In addition to boat losses, five of the interviewed farmers reported sustaining damages in their fishing gear when rooms where they used to store them were bombed. Equipment damaged beyond repair in these rooms include sonar, and GPS equipment necessary for locating fish, boating motors, nets, and fishing poles. While damages sustained by the fishery sector are relatively small in comparison with damages sustained by the plant and animal production sectors, losses linked to lost fishing revenue during the war are quite substantial and have negatively impacted fisherfolk's food access to food during the war.

## **2. Recovering the Losses: Extent to Which Farmers Have Resumed Production**

Discussions with farmers strongly suggest that a large proportion of farmers have not resumed production, and those that have resumed their agricultural have not yet returned to their pre-assault levels of activity. In the following sections, we present the assessment findings in this regard for the different groups of farmers.

### **2.1. Plant Producers**

Analysis of data gathered through discussions with farmers reveals a clear reduction in the area under cultivation as a result of the assault in all communities assessed; a strong indication that farmers have not been able to recover their losses, repair damages in their lands, and restore their lost agricultural assets. In total, this reduction amounts to 28 percent of the area under cultivation prior to the assault. The data also shows a clear shift in land use patterns towards open field, rain fed agriculture, which is deemed less risky by farmers. More specifically, the assessment shows a reduction in the area cultivated under greenhouses by 44 percent, a reduction in irrigated vegetables in open fields by 53 percent, and a reduction in the area under cultivation with fruits trees, including olives, by 72 percent. The area under cultivation with rain fed crops, including field crops, reported by interviewed farmers has increased by some 208 dunums, or 2.7 times more than the same season in 2013, offsetting the reduction in the total area under cultivation by the interviewed farmers by 78 percent.

The level to which plant producers have been able to recover and resume production of the same type of crops they used to cultivate prior to the assault pre-war was largely found to be a factor of the extent and nature of damage farmers have sustained. Hence, and based on discussions, farmers can be grouped into four broad categories in terms of the level to which they have resumed production:

- **Hard-hit farmers:** This category comprised 22 percent of the farmers interviewed, i.e. 18 out of the 81 farmers who participated in the discussions. It includes farmers who have a single land holding (i.e. one contiguous parcel) that had been completely razed, and/or had their source of irrigation destroyed. These farmers reported substantial reduction in the area they cultivate, in several cases by as much as 90 percent, highlighting their inability to restore their livelihoods without external support to rehabilitate their land and restore access to water for irrigation. In the majority of cases, these farmers have only cultivated part of their land with rain-fed field crops that they had received from humanitarian organisations such as the International Committee of the Red Cross (ICRC). Most of the farmers in this category are from Juhor ad Dik, Abasan al Jadida and Al-Qarara. They typically own lands in or near the access restricted areas where major ground operations had taken place.
- **Severely affected farmers:** This group comprised 31 percent of the farmers interviewed, or 25 farmers. It includes farmers who witnessed severe razing of the majority of their land holdings and/or had most or all of their physical agricultural assets (greenhouses, agricultural machinery and tools) completely destroyed by bombardment, but their access to water for irrigation has not been affected. Generally, this group of farmers reported both a substantial reduction in the area of land they cultivate (anywhere between 30-50 percent) as a result of inability to reclaim their destroyed lands and rebuild their destroyed greenhouses, but they also reported an increase in open field vegetable and field crops production. The main source of livelihood of the majority of the farmers interviewed in this category has thus shifted from fruit and intensive agriculture under greenhouses, to, mainly, unprotected vegetable production. Farmers in this category were found in all assessed communities, reflecting the wide scale impact of the assault on the agricultural sector.
- **Moderately affected farmers:** This group of farmers comprised 42 percent of all farmers interviewed within the framework of the assessment, i.e. 34 out of 81 farmers interviewed. Damage typologies witnessed by this category of farmers include any one or more of the following: limited-scale (relative to the preceding categories) razing of land as a result of tank trails, uprooting and/or death of trees during the ground operations, damage/destruction of irrigation pipes, tearing and damage in greenhouse cover (plastic, mesh, etc.), and loss of farm equipment. Interviewed farmers falling into this category reported reducing the area of land they cultivate as a result of damages they sustained. However, most of these farmers indicated that the decrease in the area of their land under cultivation is relatively small,

especially when considering the magnitude of damage and loss of livelihoods witnessed by other farmers. Discussions suggest that the overwhelming majority of these farmers have been able to rehabilitate the damages they have sustained in their lands and agricultural assets quickly, which enabled them to resume almost the same level of production as prior to the assault.

- **Unaffected Farmers:** This group comprised very small number of those farmers interviewed (4 farmers, or 5 percent of all plant production farmers interviewed). These farmers reported no direct damages in their lands or to their agricultural assets, but highlighted that they have incurred economic losses as a result of their inability to tend to and market their crops during the assault. Reportedly, farmers in this category are either not cultivating or dismantling their greenhouses due to lack of returns on marketing production in local markets in Gaza.

In addition to their financial inability to reclaim damaged lands, farmers in the above four categories consistently reported facing several constraints that prevent them from recovering from the impact of the assault and resuming their agricultural activities to pre-assault scale. While many of these constraints existed before the assault, they seem to have worsened as a result of the assault, negatively impacting agricultural livelihoods and prospects for agricultural development in Gaza. The most salient of these constraints are summarised in the following paragraphs.

**Increased risk and restrictions when trying to access agricultural lands along the border with Israel, in the immediate vicinity of the Buffer Zone.** While access to land within several hundred meters of the border fence was restricted before the assault, farmers interviewed noted that the risk associated with accessing and undertaking any type of agricultural activity in this land has become higher than ever after the assault. The described access to this land as highly dangerous, noting multiple incidents have taken place after the ceasefire where farmers were fired upon as soon as they attempted to rehabilitate their lands in or near the previously known access restricted area. As a result of the destruction that took place during the assault, highly risky access, the uncertainty of the ceasefire, and Israeli military actions in the area along the border with Israel, farmers have been opting not to cultivate lands they used to cultivate in and in the immediate vicinity of this area.

**Greater water availability and access problems, combined with deteriorating water quality, after the assault.** Water availability problems are mainly linked to severe damages in water wells, reservoirs, irrigation networks and main water lines along the border area. As most of these damages are yet to be repaired, orchards are reportedly slowly dying of thirst while large swathes of land that used to be cultivated with vegetables can only be used now to grow low-value rain-fed crops. Water access which was already precarious before the assault due to water scarcity and deteriorating quality (increased level of salinization) and different demands for water (especially with a rapidly growing population), has become even more problematic due to the increased cost of water extraction resulting from the increased reliance on expensive fuel imports from Israel as cheap fuel that used to be smuggled from Egypt through the tunnels is no longer available. As irrigation costs increase and the ban on exports continues, irrigated agriculture is increasingly being viewed as unviable by Gaza farmers which may also explain the voluntary reduction of areas under cultivation with irrigated crops by interviewed farmers.

**Inability to secure capital and competing livelihood demands as a result of the assault** were also identified by interviewed farmers as key constraints to agricultural livelihood development, particularly for farmers whose productive assets have been destroyed along with their homes. Discussions revealed that these farmers are now heavily reliant on external assistance to secure their very basic needs, including housing, and need substantial financial and other forms of assistance before they can recover from the assault. Not only do most of them not have sufficient cash or

savings to reinvest in building up their livelihood assets, but they also report being unable to secure the needed credit from input suppliers without first paying off their outstanding debts.

Farmers' whose agricultural assets had only been partially destroyed and whose sources of irrigation have not been greatly affected reported resuming farming activities, albeit at a significantly lower scale than pre-war. Most interviewed farmers in this category reported tapping their social capital for loans to repair damages and resume their farming activities, including credit from input suppliers, and indicated that without such credit they would not have been able to resume their livelihood activities.

Most farmers who reported repairing their partially damaged greenhouses have indicated that they were only able to undertake minor and makeshift repairs due to lack of adequate financial resources on the one hand, and lack of availability of materials needed for more durable repairs on the other hand. This is why **the continuation of the Blockade and the lack of availability of essential materials for greenhouse construction, such as metal, and replacement parts for water pumps and agricultural machinery damaged during the assault were also highlighted in all focus group discussions as being key additional constraints** facing farmers and undermining their ability to recover from the impact of the assault. It is worth noting here that several greenhouse and open field farmers who have rehabilitated their damaged lands linked the Israeli bombardment of their land to reduced land productivity and crop quality. Such link was made by twelve different farmers from Al-Qarrara, Rafah and Khuza'a, who reported significantly lower than usual crop productivity and quality despite. While crop yield and quality are a function of several factors other than soil, verification of the impact of bombardment on soil characteristics, quality and safety for cultivation seems to be warranted, particularly as many farmers have expressed fear that their agricultural lands have become contaminated and unsuitable for cultivation for human consumption.

With scarce land and water, limited inputs, almost non-existent export opportunities, low local purchasing power and lack of investment, the productivity and profitability of different agricultural sectors seems to have hit rock bottom after the assault. As discussions have revealed that most farmers have received various forms of assistance during and after the assault, a large part of the agricultural sector seems to be sustained with subsidised donor support (such as rehabilitation of green houses, subsidised or free inputs). This is the case, for instance, for vegetable cultivation in greenhouses, which cannot be maintained without such support unless large scale and guaranteed export is made possible.

## 2.2. Livestock Breeders

While discussions with livestock breeders who have sustained losses during the assault revealed that most breeders are eager to resume production, very few of them have been able to restock to the pre-assault levels. Particularly affected in this regard are livestock breeders whose majority or all of their animals have perished during the assault, and who have also had their sheds destroyed. Within this group, the most hard hit are breeders whose homes have also been completely or severely destroyed.

### **Breeders of Large-Ruminants**

All 22 large ruminant farmers who participated in the assessment discussions reported at least one death in their animals during the assault, collectively reporting the death of 289 milking cows representing 62 percent of their total holdings of large ruminants prior to the assault. While 9 farmers (41 percent) reported restocking through imports and purchases from other farmers after the ceasefire, none of them has restocked to the pre-assault level.

In discussions, farmers expressed reticence to restock highlighting several constraints in this regard. For small-scale producers with holdings of five or less heads, the main constraints voiced were the **inability to secure the cash needed to restock and the low productivity of available milking**

**cows in the local market.** Reportedly, most livestock exported to Gaza from Israel are animals that have been culled because of problems of fertility, disease, or mastitis that compromise productivity in the dairy sector. Currently, milking cows in the Gaza Strip yield an average of only 14 litres of milk per day and have lactation periods ranging between 180-250 days.

Medium- and large-scale ruminant breeders highlighted several additional constraints to restocking. These included **lower demand for both red meat and fresh milk due to loss of purchasing power by end consumers and loss of production capacity by dairy processors in Gaza (as a result of damages sustained during the assault); increasing cost of production and reduced demand for red meat and dairy products; lack of availability in farm construction materials due to import restrictions; and increasing cost of production due to the increasing cost of feed.** We explore these constraints further in the following paragraphs on the basis of the discussions with livestock farmers.

According to farmers, farm construction materials, particularly cement and metal sheets and pipes, are generally not available except in limited quantities and through the black market, making their prices very high. While shortages in farm construction materials and farm equipment has been problematic before the war due to the restrictions on their import, the impact of these shortages on the viability of the livestock sector in general has become more pronounced as a result of increasing supply shortages. Hence, there was a consensus among livestock farmers interviewed that any interventions aiming at supporting livestock farmers to restock and recover from the impact of the assault will most likely face challenges in the supply of farm construction materials and in ensuring feeding of restocked farms.

The availability of and access to feed is not generally a problem in the Gaza Strip. However, as the flow of imports continues to be hampered by the blockade imposed by Israel since 2007, the availability of and access to inputs continues to be uncertain. Feed shortages have occurred several times since 2007 and have created significant increases and volatility in feed prices. Unable to cope with increasing prices and the associated diminishing returns from milk sales, a large number of farmers in Gaza sold off their cows after 2007. At the time data was collected for this assessment, feed concentrates and hay were available in the Gaza markets and prices were comparable to those in the West Bank.

When asked whether it is still possible to improve the availability and quality of locally produced feed, there was consensus among stakeholders that such improvements are not only possible but very much relevant to the farmers needs. Facilitating the establishment of silage making centres -through for example capacitating Gaza feed mills to produce silage and alternative feed and linking them with plant production farmers, and the promotion of innovative feed production practices of leading farmers such as those of using rain-fed fresh corn cultivated in December for feed were two examples highlighted by stakeholders to demonstrate where improvements can be introduced. According to stakeholders, such innovations could substantially reduce the reliance on feed imports.

Discussions revealed that the recent crisis has had almost no impact on the way milk is marketed in the Gaza Strip, though, as noted earlier, it confirmed increasing challenges faced by processors. According to farmers, almost all cows' milk produced in the Gaza Strip continues to be commercialized locally through formal and informal market channels; i.e. marketed to satisfy local demand, with very small quantities allocated for farmers' own-household and on-farm consumption.

While discussions with farmers strongly suggest that the availability of fresh milk in the Gaza market has been reduced due to the losses described above, the prices processors and consumers are willing to pay for fresh milk remain quite low as the case was before the war: The price that farmers receive for their raw milk when sold to informal dairies ranges between 1.8-2.3 NIS per litre, and when selling raw milk to end consumers, however, farmers receive 3-3.5 NIS per litre. In interviews,

processors highlighted that they are unable to pay higher prices for fresh milk due to production cost over-runs they are facing as a result of longer electricity cuts and greater reliance on diesel generators for production and product preservation and competition from imports. Both farmers and processors agree that consumers' purchasing power has been further undermined after the war, rendering their ability to recuperate their cost over-runs even more difficult than before the war. In an attempt to recover their costs and maintain market share, dairy processors in the Gaza Strip seem to have increased reliance on powdered milk at the expense of fresh milk purchases.

### **Breeders of Small Ruminants**

As noted in 1.2 above, 47 of the sixty small ruminants breeders interviewed reported losing 603 heads of sheep and goats during the assault, or 46 percent of their total holding of small ruminants. When asked whether they have restocked their lost animals, slightly less than half of these breeders reported that they have, and reported restocking 25 percent of their holdings of sheep and goats in July 2014, on average.

Both breeders who have restocked and those who reported not restocking highlighted facing much of the same constraints in restocking their animals, most of which are similar those highlighted by other livestock breeders. Constraints highlighted include: **lack of financial capacity to restock to pre-assault levels; limited availability of high quality sheep and goat breeds; inability to provide the needed quantities of feed for larger herds due to inability to access finance from feed suppliers; inability to rebuild destroyed animal shelters due to the lack of construction materials; low marketing opportunities for red meat as a result of low consumer demand and purchasing power; and -for farmers who have lost their homes- competing livelihood demands such as shelter and food.**

### **Poultry Farmers**

Of the 86 livestock farmers met, 66 reported having holdings of chicken (broilers and layers) prior to the assault, and 36 of them were specialised poultry farmers with holdings of 500 or more chicken. All interviewed poultry farmers indicated witnessing deaths in their chicken during the assault, albeit to varying degrees. Altogether, they reported losing close to 77% of their chicken holding (206,000 birds), as well as the destruction of some 12 dunums of farm structures and hundreds of chicken farm equipment such as heaters and feeders, and loss of some 32 tons of feed.

Only 36 farmers (55%) reported that they have restocked after the assault mostly by tapping credit from input suppliers, but none of them have restocked to the pre-assault levels. Several reasons were given by farmers to explain the low restocking levels, including: **inability to rebuild destroyed or rehabilitate damaged farms structures due to the lack of financial capacity and lack of availability of the needed construction materials due to the restrictions on import of these materials; inability to provide the needed environmental conditions for breeding such as heating and cooling due to the limited power supply and lack of availability of heating gas; increasing production costs as a result of increasing prices of heating gas and diesel fuel; and, most importantly, lack financial returns from chicken breeding due to unfavourable regulation of chicken prices to end-consumers by the authorities in charge.**

At the time of the assessment, farmers were selling chicken to retailers at a price ranging between NIS 8-8.5 per kilogram, which does not cover their production costs which is estimated to be in the realm of NIS 8.2-8.5 per kilogram in the best managed farms. Retailers interviewed reported selling chicken to end-consumers at government set prices of NIS 9 per kilogram, and also highlighted that such prices are not covering their operational costs.

Awash with debt and little prospect for livelihood improvements, many of the livestock breeders met who have not been affected or partially affected reported liquidating their agricultural investments,



while others have kept a very small ownership of livestock for subsistence and income. Prior to this, these farmers, like their colleagues who are still maintaining their ownership of animals, have resorted to their associations for help, reduced the quantity of feed they provide to their animals and sold some of them to provide for the others. Farmers who have lost all of their animals during the assault and those who have liquidated their assets reported coping by pursuing petty trade, seeking and increasing reliance on food assistance, and reducing both expenditure and consumption. Like plant production farmers, this group is highly vulnerable and its degeneration poses a threat to the sustainability of local production of food (however limited).

### **2.3. Fisherfolk**

Discussions with fishermen reflect quite a bleak picture for the prospects of recovery of the fishery sector in the Gaza Strip under the current closure regime. Not only are interviewed fishermen whose boats have been destroyed and seriously damaged during the assault unable to replace or repair their damaged boats due to the import restrictions and the high prices of inputs needed for repair, but they are also facing increasing restrictions on access to sea since the ceasefire as well as increasing fishing costs as the cheap fuel that used to be smuggled from Egypt is no longer available in the local market.

In all discussions, fishermen signalled the continuation of the naval blockade and the limit of six nautical miles on the distance that fishermen can sail out to sea as the key constraint to the recovery and development of the fishing sector. Farmers in these discussions pointed that restrictions on fishing have increased since the ceasefire, as the allowed fishing distance has been practically reduced from six to five nautical miles. Fishermen highlighted that Israeli forces have regularly shot at Gaza fishing boats, and sometimes even within the allowed fishing distance. They also highlighted increasing incidence of unexplained boat seizures and arrests of fishermen by the Israeli navy while at sea, noting the arrest of some 61 fishermen and the seizure of 12 fishing boats between September and December 2014.

As a result of reduced income due to loss of fishing capacity (boats and gear), restrictions on access to sea, low profits due to increasing fishing costs and inability to export any of their “high quality” catch, all fishermen interviewed reported lower levels of activity than pre-assault. Reportedly, some 30 percent of the fishing boats are currently not being used due to the lack of feasibility of fishing, the reduction in the permitted fishing distances, and/or the lack of spare parts and maintenance equipment. Furthermore, it is estimated that only 2-3 operate daily; while most of the purse seiner boats (used mostly to catch “high quality” fish at long distances off shore) have not operated since the ceasefire.

The sharp decrease in domestic demand for fish (as result of the loss of purchasing power among consumers and the freeze on exports) combined with less quantities of catch has considerably reduced fishing income, which is also being squeezed by increasing fuel prices. Fishermen met estimated that their income from fishing has decreased by more than 50 percent from what it was the same time a year before.

To cope with their losses and constraints, fishermen reported reducing their fishing activities (particularly for large boats whose operation requires large amount of fuel), resorting to looking for second jobs (all those interviewed who have tried have failed in these venture); seeking assistance from local humanitarian organizations; selling property and productive assets (when available); reducing expenditures (including expenditures on food); reducing quality and quantity of meals; and abstaining from or delaying paying debts (including debts for municipalities and their associations).

### 3. Needs Expressed by Farmers

In all focus group discussions, farmers were engaged in two participatory exercises to identify their need. The first of these was a piling exercise through which farmers were asked to discuss and agree on the farmers groups that are most vulnerable and provide a profile for these groups. Building on this, the second part of the discussion engaged farmers in identifying the types of assistance received by the various groups of farmers, and then in prioritise the agriculture-related recovery needs of each farmer group identified earlier through a participatory ranking exercise.

The following table consolidates the results of these two exercises in all focus group discussions . It first begins with listing the farmers groups in order of their vulnerability as perceived by farmers themselves. It then provides a profile for each group and the assistance they have received so far, and then lists their immediate and medium-term needs. Medium term needs are based on the assumption that identified immediate needs will be met. Both short- and medium-term needs are limited only to those needed for agricultural livelihood recovery.

## Profile of Gaza Farmers and Their Needs

Group	Profile of farmers within group	Typology of Assistance Received	Key Constraints and Immediate (1-6 months) Needs	Key Constraints and medium-term (6-18 months) needs
<b>Plant Production Farmers</b>				
<b>Most-affected farmers</b>	<ul style="list-style-type: none"> <li>- Have one holding of land that was completely razed in ground operations.</li> <li>- Had their source of irrigation (well) completely destroyed, rendering well irreparable.</li> <li>- Have lost all or most of their agricultural equipment.</li> <li>- Had their home destroyed.</li> </ul> <p>(most impacted within group are horticulture and greenhouse farmers).</p>	<b>Assistance provided by:</b> <ul style="list-style-type: none"> <li>- Union of Agriculture Works Committees</li> <li>- Norwegian People's Aid,</li> <li>- Oxfam GB,</li> <li>- ANERA</li> <li>- FAO,</li> <li>- Palestinian Hydrology Group</li> <li>- International Committee of the Red Cross Society</li> </ul>	<b>Key constraints:</b> <ul style="list-style-type: none"> <li>- Lack of cash/financial capacity to reinvest in agriculture.</li> <li>- Access to water for irrigation.</li> <li>- High cost of and lack of availability of some inputs, including water</li> <li>- Lower access to credit from input suppliers.</li> </ul> <b>Needs:</b> <ul style="list-style-type: none"> <li>- Assistance to reclaim razed land, particular de-compacting soil, soil analysis, supplementation and fixation.</li> <li>- Access to water for irrigation (water provision through assistance).</li> <li>- Access to inputs for cultivation, including seeds, seedlings, fertilisers, and basic equipment.</li> <li>- Support basic livelihood needs such as housing, food, education, and health.</li> </ul>	<b>Key Constraints:</b> <ul style="list-style-type: none"> <li>- Lack of a reliable source of water for irrigation.</li> <li>- Lack of availability of key inputs due to the blockade.</li> <li>- Low levels of income. hence inability to invest.</li> <li>- Lack of access to external markets.</li> </ul> <b>Needs:</b> <ul style="list-style-type: none"> <li>- Financial support to rehabilitate damaged wells.</li> <li>- As relevant, financial support to reconstruct damaged greenhouses.</li> <li>- Support to reinvest in purchasing agricultural equipment and machinery.</li> <li>- Lifting of Blockade.</li> </ul>
<b>Severely-affected farmers</b>	<ul style="list-style-type: none"> <li>- Have more than one holding of land, but not all have been equally affected</li> <li>- Had most of their holdings severely razed, or heavily bombarded, rendering most of this land uncultivable without rehabilitation.</li> <li>- Have noticeably increased their open field agricultural activities</li> <li>- Main source of irrigation was either unaffected or quickly repaired after the assault.</li> </ul>	<b>Assistance received:</b> <ul style="list-style-type: none"> <li>- Land rehabilitation (small scale)</li> <li>- Rehabilitation of water ponds and wells.</li> <li>- Inputs, particularly field crop seeds, irrigation networks,</li> </ul>	<b>Key constraints:</b> <ul style="list-style-type: none"> <li>- High cost of water extraction as a result of reliance on expensive diesel fuel and electricity shortages</li> <li>- Lack of cash/financial capacity to reinvest in agriculture.</li> <li>- Access to water for irrigation in some parcels owned (water provision).</li> <li>- Inability to access some of their land holdings.</li> </ul> <b>Needs:</b> <ul style="list-style-type: none"> <li>- Cheaper fuel/more reliable supply of electricity</li> <li>- Assistance to reclaim razed land</li> <li>- Access to inputs for cultivation, including seeds, seedlings, fertilisers, and basic equipment.</li> <li>- Assistance to reclaim razed land, particular de-compacting soil, soil analysis, supplementation and fixation.</li> </ul>	<b>Key constraints:</b> <ul style="list-style-type: none"> <li>- Limited financial capacity to invest in agriculture.</li> <li>- Lack of greenhouse construction materials due to the continuation of the Blockade.</li> <li>- Inability to access external markets</li> </ul> <b>Needs:</b> <ul style="list-style-type: none"> <li>- Financing/Assistance to rebuild greenhouses and cover operating expenses (including inputs)</li> <li>- Lifting of Blockade.</li> </ul>

Group	Profile of farmers within group	Typology of Assistance Received	Key Constraints and Immediate (1-6 months) Needs	Key Constraints and medium-term (6-18 months) needs
<b>Moderately affected farmers</b>	<ul style="list-style-type: none"> <li>- Sustained relatively minor damage to their agricultural land</li> <li>- Repaired most, but not all, damages either with own resources or through assistance.</li> <li>- Main source of irrigation was either unaffected or quickly repaired after the assault.</li> </ul>	<ul style="list-style-type: none"> <li>seedlings and pesticides.</li> <li>- Plastic sheets for greenhouses.</li> </ul>	<p><b>Key constraints:</b></p> <ul style="list-style-type: none"> <li>- High cost of water extraction as a result of reliance on expensive diesel fuel and electricity shortages.</li> <li>- Loss of production capacity due to limited financial capacity to either fully rehabilitate land/greenhouses or secure needed inputs.</li> </ul> <p><b>Needs:</b></p> <ul style="list-style-type: none"> <li>- Cheaper fuel/more reliable supply of electricity to facilitate water extraction.</li> <li>- Inputs for greenhouse rehabilitation, particularly metal, irrigation.</li> </ul>	<p><b>Key constraints</b></p> <ul style="list-style-type: none"> <li>- Inability to access external markets.</li> </ul> <p><b>Needs:</b></p> <ul style="list-style-type: none"> <li>- Lifting of Blockade</li> </ul>
<b>Least-affected farmers</b>	<ul style="list-style-type: none"> <li>- Lands held/owned not near the buffer zone.</li> </ul>	None.	<p><b>Key constraints:</b></p> <ul style="list-style-type: none"> <li>- High cost of water extraction as a result of reliance on expensive diesel fuel and electricity shortages.</li> <li>- Inability to access markets due to the Blockade (many farmers reported not cultivating their unaffected greenhouses)</li> </ul> <p><b>Needs:</b></p> <ul style="list-style-type: none"> <li>- Cheaper fuel/more reliable supply of electricity to facilitate water extraction.</li> <li>- Lifting of Blockade.</li> </ul>	N/A

Group	Profile of farmers within group	Typology of Assistance Received	Key Constraints and Immediate (1-6 months) Needs	Key Constraints and medium-term (6-18 months) needs
<b>Livestock Breeders</b>				
<b>Severely Affected Breeders</b>	<ul style="list-style-type: none"> <li>- Poultry, and large ruminant breeders whose farms have been entirely damaged (mostly located in the eastern parts of the Gaza Strip)</li> <li>- Breeders who have lost the majority of their animals and currently have 20-30% of their animal holdings pre-assault</li> </ul>	None	<p><b>Key Constraints:</b></p> <ul style="list-style-type: none"> <li>- Lack of financial resources to reinvest</li> <li>- Lack of needed farm construction materials</li> <li>- Low quality cow breeds (culls from Israel)</li> <li>- High cost of feed concentrates</li> <li>- Low market demand due to low consumer purchasing power.</li> <li>- For poultry breeders in particular, limited availability of gas for farm heating and irregular supply of electricity, as well as unfavorable regulation of market prices for chicken.</li> </ul> <p><b>Needs:</b></p> <ul style="list-style-type: none"> <li>- Assistance in removal of rubble to enable reconstruction or land rehabilitation.</li> <li>- Financial assistance to rebuild destroyed farms/compensation for damages and losses</li> <li>- Financial support to restocking.</li> <li>- Improving supply of gas.</li> </ul>	<p><b>Key constraints:</b></p> <ul style="list-style-type: none"> <li>- Low consumer demand and unfavourable market prices.</li> <li>- Limited financial capital and insufficient returns to finance farm development and maintenance.</li> <li>- High production costs, mainly as a result of high feed prices and limited supply of electricity and gas.</li> </ul> <p><b>Needs:</b></p> <ul style="list-style-type: none"> <li>- Assistance to financing operational cost (mainly feed and inputs)</li> <li>- Protection through establishment of a risk mitigation fund.</li> </ul>
<b>Moderately Affected Breeders</b>	<ul style="list-style-type: none"> <li>- Breeders who have lost part of their animals, but whose farm structures either remain intact or sustained minor damages.</li> </ul>		<p><b>Key Constraints:</b></p> <ul style="list-style-type: none"> <li>- Lack of financial resources to reinvest</li> <li>- Low quality cow breeds (culls from Israel)</li> <li>- High cost of feed concentrates</li> <li>- Low market demand due to low consumer purchasing power.</li> <li>- Low prices for milk paid by processors.</li> <li>- For poultry breeders in particular, limited availability of gas for farm heating and irregular supply of electricity, as well as unfavorable regulation of market prices for chicken.</li> </ul> <p><b>Needs:</b></p> <ul style="list-style-type: none"> <li>- Compensation for damages and losses</li> <li>- Assistance to restock.</li> <li>- Improving supply of gas and electricity.</li> </ul>	
<b>Least-affected Breeders</b>	<ul style="list-style-type: none"> <li>- Have lost a relatively small part or none of their animal holdings during the assault.</li> </ul>		<p><b>Key Constraints:</b></p> <ul style="list-style-type: none"> <li>- High cost of feed concentrates</li> <li>- Low market demand due to low consumer purchasing power.</li> <li>- For poultry breeders in particular, limited availability of gas for farm heating and irregular supply of electricity</li> </ul> <p><b>Needs:</b></p> <ul style="list-style-type: none"> <li>- Feed</li> <li>- Improving supply of gas and electricity</li> </ul>	

Group	Profile of farmers within group	Typology of Assistance Received	Key Constraints and Immediate (1-6 months) Needs	Key Constraints and medium-term (6-18 months) needs
<b>Fishermen</b>				
<b>Severely Affected Breeders</b>	<ul style="list-style-type: none"> <li>- Fishermen who have lost fishing boats and equipment, particularly affected in this group are large boat owners (trawlers and launches) . These are typically owned by several fishermen, and employ scores of fishermen.</li> </ul>	<b>Assistance provided by:</b> <ul style="list-style-type: none"> <li>- Union of Agriculture Works Committees</li> <li>- Norwegian People's Aid,</li> <li>- International Committee of the Red Cross Society</li> </ul>	<b>Key Constraints:</b> <ul style="list-style-type: none"> <li>- Lack of financial capacity to replace destroyed boats or repair severely damaged boats.</li> <li>- Lack of availability of boat building materials and spare parts</li> </ul> <b>Needs:</b> <ul style="list-style-type: none"> <li>- Coordinate the supply and entry of boats, boat motors, spare parts and fishing equipment into the Gaza Strip with the Israeli authorities.</li> <li>- Cash &amp; in-kind assistance to enable fishermen to replace/repair severely damaged boats.</li> </ul>	<b>Key Constraints:</b> <ul style="list-style-type: none"> <li>- Restrictions on fishing</li> </ul> <b>Needs:</b> <ul style="list-style-type: none"> <li>- Lifting of the Blocakde</li> </ul>
<b>Moderately affected farmers</b>	<ul style="list-style-type: none"> <li>- Fishermen whose boats have not been affected, but whose fishing gear has been lost as a result of bombardment of fishers rooms</li> </ul>	<b>Assistance received:</b> <ul style="list-style-type: none"> <li>- Drifting gillnets (maltash) with floats.</li> <li>- Lead and ropes for fishing net installation.</li> <li>- Fiberglass for repair and maintenance of boats.</li> </ul>	<b>Key Constraints:</b> <ul style="list-style-type: none"> <li>- Lack of financial capacity to replace destroyed fishing equipment.</li> <li>- Limited availability and high prices of availability of spare parts.</li> </ul> <b>Needs:</b> <ul style="list-style-type: none"> <li>- Provision of replacement equipment, maintenance materials and spare parts.</li> </ul>	
<b>Least-affected farmers</b>	<p>Nb: fishermen in this category are not directly affected by the assault. They are affected by the prolonged Blockade and access to sea restrictions</p> <ul style="list-style-type: none"> <li>- Purse seine hasaka fishermen as their fishing catch has significantly declined due to restrictions on fishing distances</li> <li>- Owners of trawler boats due to the increase in fuel and restrictions on fishing distances.</li> <li>- Motor Hasaka owners due to the increase in fuel and restrictions on fishing distances.</li> <li>- Small hasaka owners due to access restrictions.</li> </ul>		<b>Key Constraints:</b> <ul style="list-style-type: none"> <li>- Restrictions on fishing distances/low fish catch.</li> <li>- High cost of fishing (due to high fuel costs) renders fishing economically unviable (due to low demand)</li> </ul> <b>Needs:</b> <ul style="list-style-type: none"> <li>- Cash assistance to enable fishermen to meet their households' basic needs.</li> <li>- Lifting the Blockade.</li> </ul>	

## PART THREE: CONCLUSION AND RECOMMENDATIONS

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The 51 day assault on the Gaza Strip has caused unprecedented loss of life and devastation. It has aggravated human suffering and exacerbated the already precarious livelihood conditions in the Gaza Strip, particularly for farmers and fishermen whose livelihood assets and lifetime investments were destroyed during the assault.

Evidence gathered during this assessment strongly suggests that, three months after the ceasefire, the livelihoods of the of farmers engaged in plant and livestock production continues to be constrained, with the majority of them not able to recover their losses and resume production at the same scale as prior to the assault. The key constraints identified by these farmers reflect the nature and magnitude of damages and worsening access conditions ensuing the assault. These include increased restrictions on access to agricultural lands along the border with Israel, in the immediate vicinity of the Buffer Zone; greater water availability and quality problems; inability to secure capital for agriculture as result of emerging livelihood demands such as housing; lower demand due to loss of purchasing power by end consumers and loss of production capacity by industrial buyers in Gaza (as a result of damages sustained during the assault); increasing cost of production as a result of power supply shortages and import restrictions; lack of availability of essential inputs due to import restrictions; and increasing cost of production due to the increasing cost of feed.

Things are much worse for fishermen too. Not only are fishermen whose boats have been destroyed and seriously damaged during the assault unable to replace or repair their damaged boats due to the import restrictions and the high prices of inputs needed for repair, but they are also facing increasing restrictions on access to sea since the ceasefire as well as increasing fishing costs as the cheap fuel that used to be smuggled from Egypt is no longer available in the local market. The continuation of the naval blockade and the limit of six nautical miles on the distance that fishermen can sail out to sea are further undermining fishermen's ability to recover. As a result of reduced income due to loss of fishing capacity (boats and gear), restrictions on access to sea, low profits due to increasing fishing costs and inability to export any of their "high quality" catch, all fishermen interviewed reported lower levels of activity than pre-assault. Reportedly, some 30 percent of the fishing boats are currently not being used due to the lack of feasibility of fishing, the reduction in the permitted fishing distances, and/or the lack of spare parts and maintenance equipment. Furthermore, it is estimated that only 2-3 operate daily; while most of the purse seiner boats (used mostly to catch "high quality" fish at long distances off shore) have not operated since the ceasefire.

Discussions had within the framework of this assessment have underscored the critical need for lifting the Blockade imposed on Gaza since June 2007 as a prerequisite for the full recovery and development of the agricultural sector in the Gaza Strip. Farmers interviewed feel that until the closure is lifted and freedom of movement for both people and goods is granted, there will be little scope for action other than that of humanitarian-emergency nature and small-scale recovery to address development needs in the Gaza Strip in general, and in the agriculture sector in general. Hence, and anticipation of the lifting of Blockade, short term interventions aiming at supporting the recovery of Gaza's farmers by the members of the Food Security Sector should focus on enabling these farmers to restore and reclaim their damaged asset, and, to the extent possible, replace completely destroyed assets. Medium-term interventions should focus on strengthening the viability of the sector through supporting to farmers and agricultural value chains to enhance their productivity, reduce production costs, and strengthen local market systems and linkages. More specifically, this means:

## **On the Short-Term:**

### **For plant production farmers:**

- 1) Providing farmers whose lands have been razed and bombarded with support to reclaim their lands. This should include fully subsidising the cost of land levelling, soil testing, fixation and treatment activities as needed.
- 2) Rebuilding and rehabilitating damaged wells and irrigation networks, including prioritizing coordination with CoGAT for the entry of needed pumps, turbines and spare parts.
- 3) Supporting farmers access to inputs needed for cultivating their reclaimed lands, including the provision of water ponds, tree seedlings and irrigation networks.
- 4) Prioritising mobilizing and channelling funding for rebuilding of destroyed agricultural water reservoirs and coordination for the entry of cement, gravel and metal needed for this purpose.
- 5) Providing fuel subsidies to farmers to enhance the viability of their agricultural activities, including lobbying the Palestinian Authority and the de-facto authorities in Gaza to exempt value added taxes on fuel used for irrigation purposes and agricultural inputs, at least temporarily.
- 6) Integrating locally produced fresh fruits and vegetables into food parcels and vouchers currently being distributed by Food Security Sector members to induce local demand.

### **For livestock farmers:**

- 7) Assisting farmers whose farms have been completely or partially destroyed in removing the rubble to enable land rehabilitation and reconstruction.
- 8) Providing material and cash assistance to farmers to rebuild makeshift animal sheds using local materials until such time construction materials is allowed to enter Gaza for commercial purposes.
- 9) Provide farmers with assistance to restock their animals, and at the same time provide adequate feed (3-6 months) for the restocked animals, possibly through a voucher system.
- 10) Integrating locally produced fresh chicken and eggs into food parcels and vouchers currently being distributed by Food Security Sector members to induce local demand.
- 11) Providing technical assistance to the PA and the de-facto authorities in Gaza to review their meat and egg price regulation policies with the view of creating a more enabling market environment for livestock producers.

### **For fisherfolk**

- 12) Providing all fishermen whose boats have been partially damaged with fiberglass and there needed maintenance materials to repair and repair their boats.
- 13) Providing all Gaza fishermen whose storage rooms have been bombarded with replacement equipment, including GPS and sonar equipment, boat motors, oars, and nets.
- 14) Providing fuel subsidies to fishermen to enhance the viability of their fishing activities, including lobbying the Palestinian Authority and the de-facto authorities in Gaza to exempt value added taxes on fuel used for fishing purposes, at least temporarily.

**On the medium-term,** provide farmers, farmers organisations and agricultural value chain actors with technical assistance and incentives to enhance production and productivity through extension, improved farm management, crop diversification and greater capacity to produce high-value, climate and saline-tolerant crops; and to reduce production and marketing costs through enhanced agricultural practices, tapping wind and solar energy, collective marketing and purchasing and greater local market linkages.



## ANNEXES

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## Annex 1: List of Farmers who Participated in Discussions and Interviews

### Plant Production Farmers

Rafah	Fayez Salem Irmeilat Bassam Huessien Al-Qadi Fawzi Fayez Irmeilat Kamal Ahmad Al-Sha'er Nofal Suleiman Ash-Shawi <b>Hammam Hamdi Al-Nahhal</b> Imad Mohammad Abu Al-Khair Zakareya Ramadam Dhair Hamad Mohammad Abu Zaid Abdel Fatah Suleiman & Nabil Abu Jazar Fadi Zeidan Dhair Ra'fat Ahmad Jarad Hussein Mohammad Al-Sha'er Kareem Abdel Mu'ti Abu Shanab
Abbasan	Akram Marzouq Musa Bassam Suleiman Salem Abu Amer Zaki Mohammad Ahmad Musabeh Ammar Sa'di AlShawaf Abedrabbo Ismail AlShawaf Hamdan Abed Ahmad Qdeih Ossama Mahmoud Ali Abu Daqqa Yousef Abdelrahman Abu Sa'adeh Naji Mahmoud Al-Breem Yousef Ismail Abu Ilian Rani Mahmoud Mussalam Abu Sa'adeh Anwar Ahmad Awad Al-Shawaf Khalil Mahmoud Ahmad Al-Breem Omar Baha' Abu Draz Sami Salem Abu Draz Ahmad Naji Abu Draz Khalil Ahmad Hamdan
Al-Qarara	Mohammad Saleh Al-Najjar Saleh Mohammad Al-Najjar Ahmad Mattar Abdelkareem Al-Abadleh Reyad Khaled Hussein Al-Agha Zuhair Shihdeh Suleiman Abu Lehya Bassam Reyad Salman Abu Eid Mahmoud Ahmad Shihadeh Ammawi Mohammad Khaled Musa Al-Astal Mustafa Ahmad Shihadeh Al-Ammawi Salah Al-Abadleh

	Naseem Ahmad Al-Astal
	Izzedeen ---
	Ahmad ---
Khuza'a	Ahmad Suleiman Qudeih
	Fawzi Mohammad Ali Qudeih
	Manar Obaid Abdallah Qudeih
	Mohammad Suleiman Salem Abu Irjeileh
	Adnan Sha'ban Abu Reideh
	Atef Odeh Hamad Qudeih
	Hasan Musalam Hamed Qudeih
	Rasmi Hussein Salman Suboh
	Ameen Sa;dan Suleiman Rock
Juhr A'Deek	Isma'il Abdelazziz Mohammad Qudeih
	Munir Farhan Mohammad Abu Issa
	IsmailAhmad Hussein Abu Issa
	Fathi Kareem Mohammad Abu Issa
	Marwan Saleh Hussein Hajjaj
	Mohammad Deeb Salem Ayyad
	Sami Musa Awad Matar
	Wa'el Nabhan Ahmad Hijji
	Bassam As'ad Ahamd Abu Issa
	Hammad Suleiman Hussein Al-Nabaheen
	Jehad Ghazi Khalil Hijji
	Ali Rashad Rashed Al-Dous
	Jawad Ghazi Khalil Hijji
	Said Youni Hajraq
	Ahmad Nihad Ghazi Hajji
	Mohammad Hassan AbdIkrim Abu Issa
	Abed Hassan Abed Waked
Beit Lahia & Beit Hanoun	Akram Younis Awadallah Abu Khousa
	Akram Idrees Ahmad Khdeir
	Nimer Ahmad Hasan Ma'rouf
	Fares Mohammad Abdelhai Ma'rouf
	Mohammad Abdelhai Ma'rouf
	Mohammad Fa'ek Khader Khdeir
	Abdelkhalik Fayek Khader Khdair
	Atef Yousef Ibrahim Zibben
	Shaher Fayek Khader Khdair
	Abdallah Mohammad Abu Halimeh
	Ibrahim Suleiman Ghuneim

## Livestock Farmers

Juhr A'Deek

Walid Ahmad Attallah  
Hassan Salameh Ishtaiwi  
Ahmad mubarak Soraki  
Mohammad Ahmad Al-Masri  
Ramadan Salim Atallah  
Taher Abdelahman Abu Itaiwi  
Nabil Abdelrahim Shamali  
Fraih Sa'di Fraih Shamali  
Imad Salim Abdelaziz Abu Ayesb  
Ibrahim Abdelmajid abu Saif  
Salem Nimer Abu Itaiwi  
Salameh Mohammad Abu Itaiwi  
Fadi Mohammad Az'Zawara'  
Karim Musbah Habeeb  
Mohammad Sa'di Fraih Shamali  
Saleh Khaled Musa Az'Zawara'

Rafah

Hamed Salim Nasasra  
Sami Mohammad Dhair  
Fawaz Ayed Irmeilat  
Mohammad Abdelrahman Hamdan  
Ahmad Mohammad Al-Qadi  
Mohammad Radwan Abu Sha'ar  
Mohammad Mahmoud Al-Reyadi  
Adel Mohammad Dhair  
Ossama Suleiman Abu Sheikha  
Anwar Humeid Qishta  
Suleiman Mabrouk Abu Batan  
Fuad Salman Al-Arja  
Ahmad Salman Al-Hashas  
Manar Hamdi Abu Sha'ar  
Mohammad Mohammad Abu Zaid  
Mohammad Madyouf Abu Dhair  
Zeyad Mahmoud Ashour Dhair  
Mufeed Zeedan Dhair  
Daher Ramadan Dhair  
Zakareya Eid Hashem Tubasi  
Khairy Ibrahim Dhair

Abbasan Al-Kabeera

Mohammad Salman Abu Mutlaq  
Rajab Ibrahim Qdeih  
Mohammad Azmi Masoud Qdaih  
Ahmad Abdelghani Qdaih  
Mohammad Abdelhadi Abu Daqqa  
Ibraheem Abdelrahman Musa  
Sami Ahmad Rizeq Qdaih  
Ibraheem Salman Hamdan  
Mahmoud Salman Khalil Shawaf  
Ayman Mohammad Ali Abu Nasr

Al-Qararra

Ahmad Salah Ahmad Qdaih  
Saed Sami Salem Abu Daraz  
Baha Salem Abu Daraz  
Mohammad Abdelaziz Qdaih  
Maher Musa Mustafa Al-Astal  
Hassan Mustafa radwan Al-Astal  
Abdelrahman Ali Al-Astal  
Sami Suleiman Suleiman Abu Tair  
Mus'ab Hamad Ahmad Al-Astal  
Ahmad Odeh Taher Al-Astal  
Ahmad Mohammad Ghanem Abu Jame'  
Mahmoud Mohammad Ghanem Abu Jame'  
Sa'eed Eid Abed Abu Ayd  
Tawfeeq Abdelghafour Hussein Al-Farra  
Jibara Salem Jibara Al-Farra  
Rajab Suleiman Illian Fayyad  
Ali Ali Hassan Abu Shab

Khuza'a

Mohammad Nathir Kamal Al-Agha  
Suleiman Daher Atteya Wishah  
Samir Salman Salem Qdaih  
Hussein Ahmad Khalil Al-Breem  
Khalil Suleiman Najjar  
Ismail Ahmad Ismail Suboh  
Adnan Sha'ban Salem Abu Sara  
Qais Suleiman Ibrahim Qdaih  
Tawfeeq Mahmoud Ahmad Qdaih  
Suleiman Hussein Salman Qdaih  
Awad Subhi Hussein Suboh  
Hassan Mussalam Mahmoud Qdaih  
Bassam Abdelmalek Mohammad Abu Irjeileh  
Salem Mahmoud Hamed Qdaih  
Jamil Abdallah Mansi Qdaih  
Abdallah Suleiman Suboh Qdaih  
Mohammad Mahmoud Khalil Al-Breem  
Marwan Awwad Hamad Qdaih  
Hamdan Mohammad Hussein Najjar  
Rajab Abdulrahman Radwan  
Ahmad Ibrahim Mohammad Najjar  
Mohammad Salim Musallam Qdaih

**Fishermen**

Mifleh Khalil Hassan Abu Reyala  
Yousef Mohammad Mohammad Abu Odeh  
Khaled Ibrahim Abdelmu'ti Al-Habeel  
Eyad Rajab Mohamma Al-Hissi  
Amjad Said Mohammad Saadallah  
Amjad Ismail Ahmad Al-Shurafi  
Jamal Yousef Amjad Abu Watfa  
Zakareya Fadel Hassan Baker