EMMA

Emergency Market Mapping & Analysis

Broiler Chicken Market System

Gaza Strip, Occupied Palestinian Territory

October 2013

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EMMA Final Report

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Section 1. Executive summary

Chicken meat is the most consumed meat product in Gaza, mainly because of its relative affordability compared to other protein sources. Broiler chicken is widely produced in the Gaza Strip, from household-level to very large-scale farms. Considered as an activity with potential for income generation, broiler chicken production has been encouraged over the past five to ten years by various NGOs for household-level and small-scale farmers in urban, peri-urban and rural areas. The present EMMA study focused on these as target population, covering the five governorates of the Gaza Strip.

The key analytical questions which the EMMA attempted to answer were as follows:

1. What are the constraints of the target group to start and sustain broiler production?
2. What is the capacity of the market to absorb an increase in the supply? What would be the implications of this increase?
3. What would be the most appropriate interventions to effectively support sustainable broiler production by small-scale producers?

The study used a livelihoods perspective and looked at the broiler chicken market as an income market. It also looked at the impacts of the previous two wars (Cast Lead in December 2008-January 2009 and November 2012) to analyse what the impacts of a future similar crisis could be.

Answers to the key analytical questions:

1. ***What are the constraints of the target group to start and sustain broiler production?***

Major constraints on start-up of small-scale poultry production:

- Start-up requires a significant investment relative to the income/assets of the target group. Based on Oxfam's poultry production project, capital investment plus operational costs for a 1st production cycle of 250 chicks is 5117 NIS (as compared to average annual income of 8000-17000 NIS for very poor/poor HH). This includes: shelter, feeders, chicks, feed, wood shavings, heating, water and veterinary costs.
- Most HH within the potential target group of those wishing to start/re-start small scale poultry production do not have the financial resources to do so independently (i.e. without support). Potential sources of financing include: NGOs, gifts/loans from relatives; limited access to commercial credit/loans.
- Formal training opportunities do not exist.

Major constraints on small-scale producers to sustain broiler production

- Economic access to inputs: Access to chicken feed is hampered by high prices (commodity imported from Israel). Availability and price of gas also constitutes a major constraint: Gaza is currently faced with an ongoing gas supply deficit, translating into both availability problems and increasing price trends; inability to provide effective heating results in increased production losses
- Small-scale producers are not registered by or supported by the Ministry of Agriculture (MoA) (e.g. extension, veterinary services); they consider them to be disruptive to the market as some small-scale producers sell below the minimum prices in order to secure cash income quickly
- Small-scale producers tend to rely on sourcing chicks/feed from middlemen/traders more than large/medium scale producers who may be able to source directly from hatcheries/importers as traders more likely to offer credit facility to small-scale producers (hatcheries may require cash payments). Traders will extract their own profit margin in this chain thereby reducing potential income/profits accruing to small producers. Producers who default on credit repayments are subjected to court proceedings by traders/credit providers.
- Profitability: Baseline profits for small-scale producers are 0.8-1.5 NIS/kg. In cases of large losses in production the profit margin is reduced to 0.5 NIS/kg on average

<u>Impacts of an emergency on poultry production market:</u>

- Loss of production and related assets/financing along the market chain at all levels
- Very limited/no capacity for independent recovery amongst small-scale producers – unable to access government compensation for losses relating to conflict

2. ***What is the capacity of the market to absorb an increase in the supply? What would be the implications of this increase?***

A 3% annual population growth rate suggests that market demand can potentially increase. Retailers/butchers report they have the capacity to manage increased volumes. Potential impact of supply increase on prices: unclear based on available evidence: speculatively could decrease egg import prices, but increased supply in the market could also reduce selling prices (although this would be linked to demand i.e. if it was an excess supply)
However, there does not seem to be current unmet demand (in terms of those who can afford to purchase fresh chicken meat at current prices). Poor/very poor HH are not able to increase consumption without a decrease in prices, or increase in purchasing power. There could be a reduction in demand for poultry meat in the short/medium term based on reduced purchasing power/ability to afford it

<u>Recommendations for response</u>

- Supporting creation of new small-scale chicken farms shall be avoided, especially for households with no previous experience in it;
- Promote support for already engaged small-scale broiler producers as livelihood protection, i.e. selecting beneficiaries of old projects and making accessible further training if needed and facilitation with MoA for registration and other benefits;
- Support provision of inputs for small-scale producers with potential for sustainability to restart their production, with a focus on those who experienced losses as a result of wars;
- Facilitation of follow-up trainings in poultry production management;
- Advocate with Ministry of Agriculture to improve/provide positive support and registration for small-scale producers; advocate to relevant ministries to provide compensation for losses resulting from conflicts and/or epidemics;

- Facilitate access to credit providers for small-scale producers to prevent them remaining dependents on middlemen for financial services;
- Conduct further analysis on chicken feed, gas and credit market

Section 2. Context

According to the Palestinian Central Bureau of Statistics last July update, the Population of the Gaza Strip is 1.7 million. Since the attacks of 2009 until 2012, the Strip has seen an improvement of the general situation with unemployment going from 38.6% to 28.7% in 2011, to increase again in the latter half of 2012 to 31.9%. There has been no formal update on the unemployment situation for the second half of the 2013 but the halt of the tunnel traffic has led to a total halt of the construction activity, whilst average wage levels in Gaza remain low. In the prevailing context of the blockade this situation is not likely to improve significantly, meaning that vulnerable households with low incomes and limited or no employment will continue to require support to meet their basic food and non-food needs.The steady improvement of the food security situation in Palestine and specifically in Gaza since 2009 was reversed in the second half of 2012.

Such a de-development pattern has been further aggravated by the consequent rise of overall unemployment going from 21 percent in 2011 up to 23 percent in 2012, with the percentage of unemployed women being on average 10 percent higher than the global one. An annual population growth rate of 3 percent and a growth of the labour force of 7 percent have also negatively affected employment patterns.

In 2012, 57 percent of households in the Gaza Strip were food insecure, a surge from 44 per cent in 2011. On the other hand, the share of food secure households dropped from 23 to 10 percent.

Section 3. EMMA methodology

EMMA (Emergency Market Mapping and Analysis) is a rapid market analysis that allows stakeholders to understand the main features and dynamics of a market system linked to a crisis in order for the decision makers to consider a range of appropriate and innovative response options and to mitigate risks of disrupting markets. The EMMA toolkit was created to be used in the first few weeks after sudden-onset crises. However, it is now often applied in more chronic contexts such as protracted crises or as an analysis to inform contingency planning.

In the case of Gaza, the present EMMA was organized to familiarize the humanitarian actors with market analysis in emergencies. It was led by Oxfam GB and involved a number of actors from various NGOs (local and international), UN agencies (FAO, WFP) and Government departments (including technical staff of the Ministry of Agriculture).

A sensitization session was held on October 20th to present the EMMA methodology and examples of its use across the world, to a larger audience of 50 people. The actual induction training was organized on October 21st and 22nd for all the EMMA fieldwork participants, followed by 5.5 days of fieldwork from October 23rd to 29th (with a day off on October 25th). A presentation of the results for each of the selected market systems was held on October 30th.

Three critical market systems were selected on day 2 of the induction training:

- The water market system;
- The wheat flour market system;
- The poultry (broiler chicken) market system.

The participants divided themselves into 3 groups according to their preferences in the market to be analysed.

This report covers the poultry market system. The team was composed of 11 members (see list in Annex 1). Initial discussions were held around the actual market to cover under the general poultry market. The choice of the broiler chicken market against the egg-layer market was made, considering the relative higher value potential for small producers. However, both markets are very much linked as producers often grow both kinds of chicken.

Interviews were held with various actors of the market system (see detail in Annex 3), in parallel with desk-based research on secondary information (see Bibliography in Annex 2).

Table 1 - List of actors interviewed

Main Actors	Number of interviewees
Traders (large and small)	5
Hatcheries	4
Chicken feed providers	3
Broiler chicken producers (different sizes)	13
Retailers (slaughters)	12
Business Consumers (Restaurants)	2
Consumers (poor & very poor households)	11
NGOs/INGOs/UN	4
Ministry of Agriculture	1
Gas provider	1

Analysis of the information gathered and review of the preliminary maps were done on a daily basis to ensure adjustments if necessary. The last day of fieldwork focused on the response analysis.

Section 4. The target population

The target population for this EMMA is composed of the small-scale and household-level broiler chicken producers in the five governorates of the Gaza Strip.

The size of producers is defined according to the number of broiler chicken produced per cycle (one cycle lasts for 35 to 40 days depending on the variety of chicken and type of chicken feed provided), as follows:

- Household-level producers: households selling most of their production as their main livehood. Up to 500 broiler chicken produced by cycle;
- Small-scale producers: from 500 to 1,000 units;
- Medium-scale producers: from 1,000 to 5,000 units;
- Large-scale producers: above 5,000 units (a small number of very large-scale producers produce up to 300,000 units).

The total number of medium- and large-scale producers in the Gaza Strip is 1,422 (according to the official registration records of the Ministry of Agriculture). It was not possible to get a figure for the small-scale producers, as there is no official registration for them. It was considered to contact each of the 25 municipalities of the Gaza Strip to have an approximated number of such producers in each of their areas; however, the limited time for study and the uncertainty of most of the municipalities on the actual numbers did not allow to provide even an approximate figure. Further research shall be conducted in order to get a better picture on this.

According to FAO, the approximated number of household-level producers is 550.

Table 2 - Seasonal calendar for broiler chicken producers (pk = peak)

Livelihoodactivity	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Production												
Broiler production			pk	pk	pk			pk	pk	pk		
Feed Consumption												
Concentrate	pk	pk	pk								pk	pk
Feed consumption	pk	pk	pk								pk	pk
Labour												
Men	pk	pk	pk								pk	pk
Women	pk	pk	pk								pk	pk
Marketing												
Sale of poultry manure												
Sales of poultry							pk	pk	pk			
Increased production costs	pk	pk									pk	pk
Profit margins			pk	pk	pk	pk						
Diseases - Infections												
Intestine infection	pk	pk	pk							pk	pk	pk
Gambora	pk	pk	pk								pk	pk
Avian flu												
New Castle	pk	pk	pk								pk	pk
Infectious Bronchitis (Cold)	pk	pk	pk								pk	pk

Table 2 shows the seasonal calendar for broiler chicken production. The number of production cycles per year averages 5 to 6 cycles of 35 days. There is no local chicken feed production: all feed items are imported through Israel. Labour activities consist of feeding, checking medical condition of chickens and clean the chicken shelters. Women in household-level and small-scale farms primarily conduct these activities, while men in larger-scale farms lead it.

Manure is sold as fertilizer, especially at the beginning of winter for olive trees and in spring for vegetable production (in open field). Broiler chickens are sold all year round but there are peaks during festive times and Ramadan.

Main diseases occurrence increases with winter due to the cold and difficulties to get access to gas for heating shelters. While the avian flu happens mainly through episodic outbreaks, *gambora* and Newcastle diseases are common and a cause of high mortality.

Table 3 - Calendar of activities per production cycle

Days	-1	-2	-3	-4	-5	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
Preparation activities																																									
Sterilization																																									
Covering the floor with wood residue																																									
Preparing nursery room																																									
Heating the nursery room, water with																																									

medicine, feed																																									
Feed consumption																																									
Starter (protein 20%)																																									
Fattening 1 (protein 18%)																																									
Fattening 2 (protein 16%)																																									
Labour																																									
Preparation																																									
Feeding																																									
Vaccination																																									
Marketing																																									
Diseases – Infections possibility																																									
Intestine infection																																									
Gambora																																									
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Section 5. Critical market system

Chicken meat is the most consumed meat product in Gaza, mainly because of its relative affordability compared to other protein sources. Broiler chicken is widely produced in the Gaza Strip, from household-level to very large-scale farms. Considered as an activity with potential for income generation, broiler chicken production has been encouraged over the past five to ten years by various NGOs for household-level and small-scale farmers in urban, peri-urban and rural areas. The present EMMA study focused on these as target population, covering the five governorates of the Gaza Strip.

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3. **What would be the most appropriate interventions to effectively support sustainable broiler production by small-scale producers?**

The study used a livelihoods perspective and looked at the broiler chicken market as an income market. It also looked at the impacts of the previous two wars (Cast Lead in December 2008-January 2009 and November 2012) to analyse what the impacts of a future similar crisis could be.

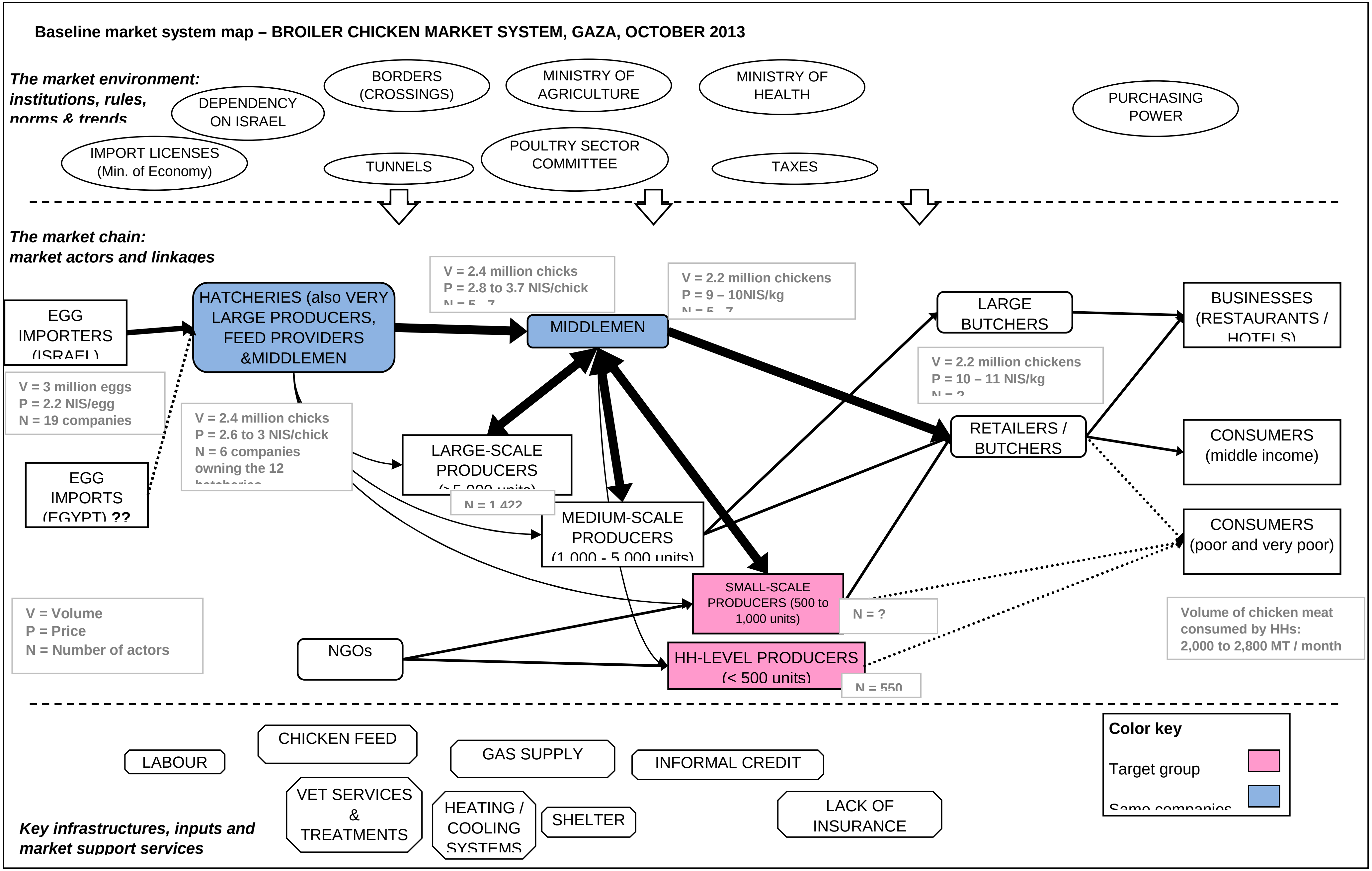
Section 6. Market-system maps

The map below depicts the market system, its actors and the interactions between them in a baseline situation (outside war times), as per October 2013.

The market environment

The main feature of the market environment is its dependency on Israel for fertilized eggs and chicken feed imports mainly. Since Cast Lead (December 2008 – January 2009), all fertilized eggs production factories in the Gaza Strip were destroyed, leaving the territory completely dependent on imports for its broiler chicken production. Opening of crossings is therefore vital for this market system to be functional. It was also reported that fertilized eggs were imported from Egypt through the tunnels, even after the closure of more than three quarters of the 1,000 existing tunnels in July 2013. However, the volumes and frequency of these imports were difficult to document and further research may be required.

The number of eggs imported is set by the Ministry of Agriculture at 3 million each month. This figure has been constant since 2009. The MoA also supports the production activities, essentially for registered producers which are the large and medium-scale. It provides technical support and veterinary services. Compensation mechanisms are also provided to producers who suffer losses as a result of conflicts or diseases. However, the Ministry of Agriculture does not provide support to the small-scale and household-level producers as they are not registered and seen as disturbing the market. The government intervenes in the market to set minimum selling prices for



Baseline market system map – BROILER CHICKEN MARKET SYSTEM, GAZA, OCTOBER 2013
The market environment: institutions, rules, norms & trends
DEPENDENCY ON ISRAEL
BORDERS (CROSSINGS)
MINISTRY OF AGRICULTURE
MINISTRY OF HEALTH
PURCHASING POWER
IMPORT LICENSES (Min. of Economy)
TUNNELS
POULTRY SECTOR COMMITTEE
TAXES
The market chain: market actors and linkages
EGG IMPORTERS (ISRAEL)
HATCHERIES (also VERY LARGE PRODUCERS, FEED PROVIDERS &MIDDLEMEN
V = 2.4 million chicks
P = 2.8 to 3.7 NIS/chick
N = 5 - 7
MIDDLEMEN
V = 2.2 million chickens
P = 9 – 10NIS/kg
N = 5 - 7
LARGE BUTCHERS
BUSINESSES (RESTAURANTS / HOTELS)
V = 3 million eggs
P = 2.2 NIS/egg
N = 19 companies
V = 2.4 million chicks
P = 2.6 to 3 NIS/chick
N = 6 companies owning the 12 hatcheries
V = 2.2 million chickens
P = 10 – 11 NIS/kg
N = ?
LARGE-SCALE PRODUCERS (>5,000 units)
N = 1,422
RETAILERS / BUTCHERS
CONSUMERS (middle income)
EGG IMPORTS (EGYPT) ??
MEDIUM-SCALE PRODUCERS (1,000 - 5,000 units)
CONSUMERS (poor and very poor)
SMALL-SCALE PRODUCERS (500 to 1,000 units)
N = ?
V = Volume
P = Price
N = Number of actors
NGOs
HH-LEVEL PRODUCERS (< 500 units)
N = 550
Volume of chicken meat consumed by HHs: 2,000 to 2,800 MT / month
LABOUR
CHICKEN FEED
GAS SUPPLY
INFORMAL CREDIT
Color key
Target group
Same companies
VET SERVICES & TREATMENTS
HEATING / COOLING SYSTEMS
SHELTER
LACK OF INSURANCE
Key infrastructures, inputs and market support services

chicken meat (10 NIS/kg) to help protect producers and ensure a minimum profit margin of 0.5 NIS per chicken for producers. However, a large number of small-scale and household-level producers sell below this minimum price so as to ensure their competitiveness.

A poultry sector committee also exists and consists of representatives from the Ministry of Agriculture, large producers and larger traders of the market. It essentially influences all decisions taken by the MoA regarding the broiler chicken market.

The market chain

- Egg importers: There are 19 companies in Gaza importing fertilized eggs from Israel. The number of eggs imported is set by the Ministry of Agriculture at 3 million per month. At this level, the price is NIS 2.2 per egg. There were reports of eggs imported from Egypt through the tunnels (estimated 1 million in September 2013) but this information could not be confirmed through the interviews during this assessment.

- Hatcheries: 12 hatcheries (out of 16 prior to the wars) are functioning in Gaza. Six companies own them and they produce each month 2.4 million chicks. At this stage, the selling price of each chick is between NIS 2.6 and 3. It is very important to note that the six companies owning the 12 hatcheries are also, for most of them, egg importers, chicken feed providers, very large producers and traders. They share a substantial power situation over the entire market chain as they control both 'raw material' (eggs and chicks) and inputs (chicken feed).

- Middlemen: The companies above-mentioned also act as middlemen traders towards the producers. A large proportion of producers (especially the small ones) source the chicks and chicken feed on credit from them; at the end of the production cycle, they then 'return' their production to these middlemen who will then decide on the profit margin to pay back to the producers. In this system, the producers are very much dependent on the middlemen and hatcheries regarding their profit margin and they have very little power over the development of their businesses. At this stage, the selling price of a chick averages NIS 2.8 to 3.7.

- At the end of a production cycle, the total number of chicken produced averages 2.220 million (a difference of 0.8 million between the number of eggs imported and chicken produced is explained by the various losses along the chain, between the hatcheries (estimated loss 20%) and the production cycle (estimated loss 5 to 10%)). Their selling price amounts to NIS 9 to 10 per kg. The average meat weight for each chicken produced in Gaza is 1.5 to 1.7 kg.

- Retail: Slaughter of chickens happens at the retail stage. Indeed, there is no slaughterhouse in Gaza. The Government is planning to establish a central slaughterhouse in 2014, however as of now, the retailers are responsible for slaughtering the chickens themselves. At this stage, the selling price to the customer amounts to NIS 10 to 11 per kg of meat. The main customers are the businesses (restaurants and hotels) as well as the middle-income households. It was found that the poor and very poor consumers do not generally buy fresh chicken meat but preferably buy frozen chicken meat as the latter is more affordable (but not produced locally). The average volume of chicken meat consumed each month in Gaza amounts to 2,000 to 2,800 MT per month.

- Considering the frequency of production and the actual consumption of chicken meat per month, it appears that the supply meets the demand under all conditions listed above (in terms of price and quality).

- NGOs also constitute important actors in the market chain as they have been frequently providing household-level and small-scale producers with assets for broiler chicken production over the past five to ten years.

The market infrastructures, inputs and support services

- Chicken feed: This vital input for broiler chicken production is almost entirely imported through Israel, mostly by the same companies importing fertilized eggs and owning the hatcheries. The producers estimate the feed requirements to 3 to 4.5 kg per chicken, which amounts to 7,200 to 10,800 tonnes as an estimated monthly feed requirement for Gaza (based on production estimates pre-losses). However, this last figure does not take into account potential seasonal variations. The import buying price per tonne is NIS 2,550 and selling price from importers to traders is between NIS 2,650 and 2,800 per tonne. The producers reported buying chicken feed at NIS 100 to 150 per bag of 50kg. It is important to remind that the producers (especially the small ones) are very much dependent on the same companies which provide them with chicks for their provision of chicken feed.

- Veterinary services: The government provides veterinary services, especially to the registered producers (large- and medium-scale), through periodic monitoring visits. Visits are also held for hatcheries to check quality of processes, cleanliness, sterilization conditions, etc. Vaccinations and treatments are available from private veterinary at a fee. Veterinarians also conduct autopsies on dead animals to determine cause of death and apply prophylaxis treatment to the farm if necessary. The main constraints mentioned by the Government veterinary services are the lack of continuous training of their staff and the poor quality of farm infrastructures. For the household-level and small-scale producers, their only source of such services is through private vets who provide awareness sessions (especially through the various NGOs programmes), diagnosis and treatments. According to one private vet doctor who was interviewed during this EMMA, the average veterinary cost per cycle for 1,000 broiler chickens is NIS 400 under the best conditions. However, one of the main issues is the self-diagnosis by farmers who lack knowledge and experience – in that case, the amount for the same number of chickens can go above NIS 1,000 per cycle. Water quality is also a problem, as the use of domestic water that is often non drinkable (salty) damages kidneys of the chickens. It was also mentioned that, because of the blockade, veterinary treatments are either very expensive or inappropriate, therefore hampering furthermore the possibility of quality veterinary conditions.

- Gas supply: Gas for heating systems is required year-round for the early stages of chick development. During the winter period, it is required for most of the production cycle. In the Gaza Strip, the total number of gas suppliers is 14. They import entirely from Israel (especially after tunnel closure) and must ration their distribution and share between all customers (which include all businesses, restaurants, farms of all types, private customers, etc.). Therefore, the supply is very tight and has a great influence on the quality of the production in the case of broiler chickens, as many losses are due to inappropriate heating of the shelters.

- Lack of insurance: Producers reported that there is no insurance system in place to cover them in case of losses. The Ministry of Agriculture and other relevant ministries intend to provide compensations for the registered producers after the wars but no payment was yet made. Small-scale producers do not access any kind of compensation.

- Informal credit: As in many sectors of business in Gaza, credit is a key feature of this market chain. Indeed, producers depend substantially on informal credit from their suppliers to source chicks and inputs, and are therefore very much dependent on their suppliers. Almost no credit is taken externally.

Section 7. Key findings – results of the gap and market analyses

This section attempts to answer the first two key analytical questions, which were:

1. *What are the constraints of the target group to start and sustain broiler production?*
2. *What is the capacity of the market to absorb an increase in the supply? What would be the implications of this increase?*

1. What are the constraints of the target group to start and sustain broiler production?

a. Major constraints on start-up of small-scale poultry production

The key assumption here is that the majority of households looking to start-up small-scale poultry production would fall within the very poor and poor wealth groups (i.e. those without a stable source of income or livelihood and very limited or depleted asset-base).

- Start-up requires a significant investment relative to the income / assets of the target group. Based on Oxfam's poultry production project, capital investment plus operational costs for a 1st production cycle of 250 chicks is 5,117 NIS (as compared to average annual income of 8000-17000 NIS for very poor/poor HH). This includes: shelter, feeders, chicks, feed, wood shavings, heating, water and veterinary costs
- Most HH within the potential target group of those wishing to start/re-start small scale poultry production do not have the financial resources to do so independently (i.e. without support)
- Potential sources of financing include: NGO grants/in-kind provision; gifts/loans from family or friends; selling existing assets to generate income; accessing commercial credit/loans (very limited options available for those without requisite collateral/guarantors)
- Formal training opportunities for poultry production/farm management (other than those provided through NGO support) do not exist; otherwise reliant on guidance/learning from neighbours, etc.

b. Major constraints on small-scale producers to sustain broiler production

- Primary constraint: Economic access to inputs
  - Feed prices / Access: feed of requisite quality (nutrient content, etc.) is almost all imported from Israel and is very expensive (100-150 NIS per 50kg). Those who have dropped out of small-scale production report that high feed costs was a major factor
  - Gas Prices/Availability: Gaza is currently faced with an ongoing gas supply deficit relative to need/demands meaning poultry producers are faced with both availability/supply problems and high/increasing gas price trends. Inability to provide effective heating results in increased production losses

- Governmental (MoA) support: Small-scale producers are not registered by or supported by the MoA (e.g. extension, veterinary services); they consider them to be disruptive to the market as some small scale producers sell below the minimum prices in order to secure cash income quickly

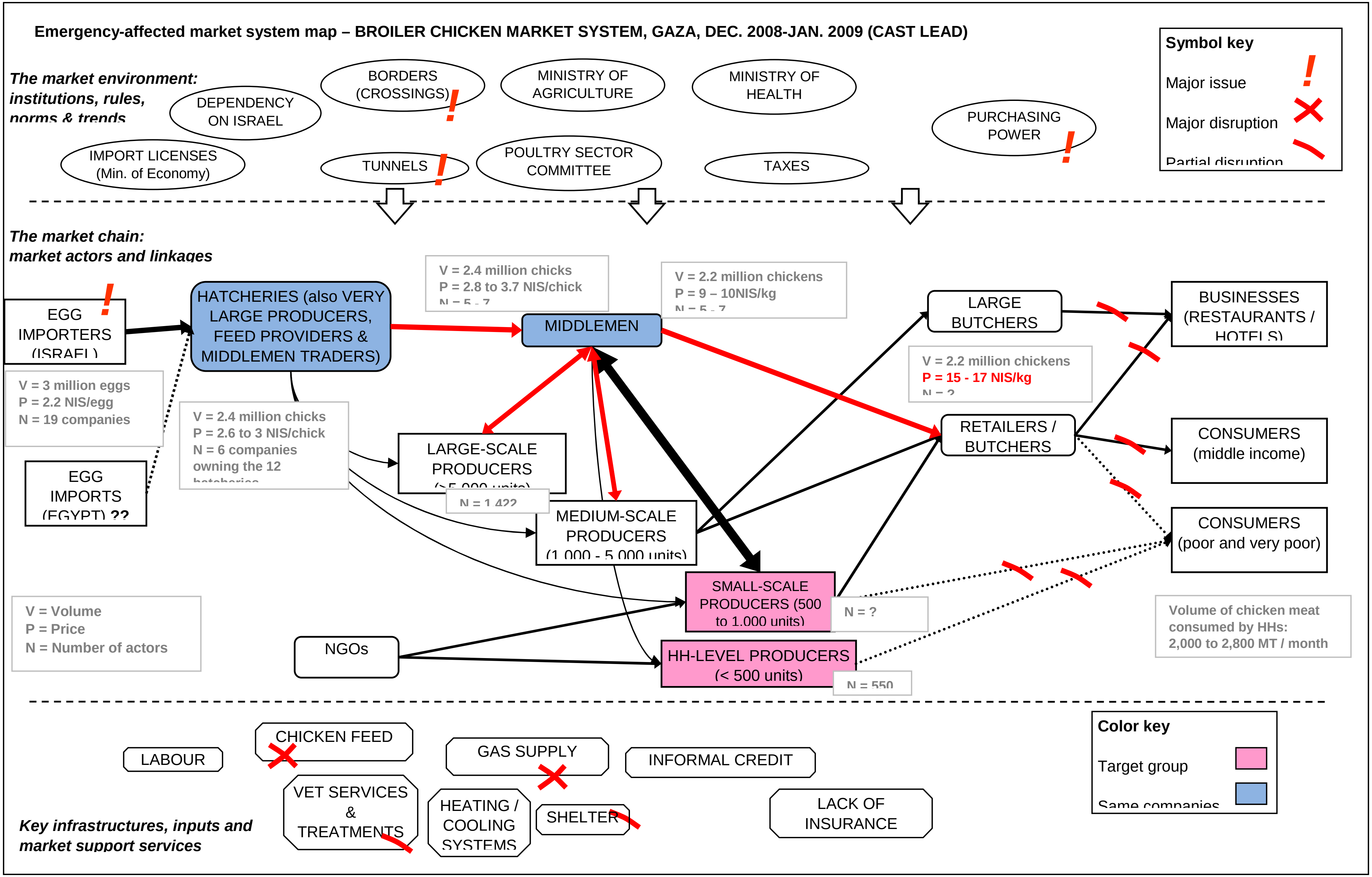
- Role of middlemen / traders (and credit access):
  - Small-scale producers tend to rely on sourcing chicks/feed from middlemen/traders more than large/medium scale producers who may be able to source directly from hatcheries/importers as traders more likely to offer credit facility to small-scale producers (hatcheries may require cash payments). Traders will extract their own profit margin in this chain thereby reducing potential income/profits accruing to small producers
  - Producers who default on credit repayments (outside of conflict situation) are subjected to court proceedings by traders/credit providers
  - A small percentage (estimated at 5%) of small-scale producers are required to sell back chickens to those who supply them chicks and feed (on credit); may reduce their potential income/profitability

- Market / Selling prices: The government intervenes in the market to set minimum selling prices for chicken meat (10 NIS/kg) to help protect producers and ensure a minimum profit margin of 0.5 NIS per chicken for producers. As such small-scale producers are not necessarily at a disadvantage as compared to larger producers (although some do sell below the minimum)

- Profitability**:** Baseline profits for small-scale producers are 0.8-1.5 NIS/kg. In cases of large losses in production the profit margin is reduced to 0.5 NIS/kg on average

Emergency Situation ('Cast Lead' type in terms of intensity and duration (3 weeks) of conflict)

The map below shows the impact of an emergency situation on the market system.


Emergency-affected market system map – BROILER CHICKEN MARKET SYSTEM, GAZA, DEC. 2008-JAN. 2009 (CAST LEAD)
Symbol key
Major issue
Major disruption
Partial disruption
The market environment: institutions, rules, norms & trends
BORDERS (CROSSINGS)
MINISTRY OF AGRICULTURE
MINISTRY OF HEALTH
DEPENDENCY ON ISRAEL
PURCHASING POWER
IMPORT LICENSES (Min. of Economy)
TUNNELS
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The market chain: market actors and linkages
V = 2.4 million chicks
P = 2.8 to 3.7 NIS/chick
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EGG IMPORTERS (ISRAEL)
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BUSINESSES (RESTAURANTS / HOTELS)
V = 3 million eggs
P = 2.2 NIS/egg
N = 19 companies
V = 2.2 million chickens
P = 15 - 17 NIS/kg
N = 2
V = 2.4 million chicks
P = 2.6 to 3 NIS/chick
N = 6 companies owning the 12 hatcheries
LARGE-SCALE PRODUCERS (>5,000 units)
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EGG IMPORTS (EGYPT) ??
N = 1,422
MEDIUM-SCALE PRODUCERS (1,000 - 5,000 units)
CONSUMERS (poor and very poor)
SMALL-SCALE PRODUCERS (500 to 1,000 units)
N = ?
V = Volume
P = Price
N = Number of actors
Volume of chicken meat consumed by HHs: 2,000 to 2,800 MT / month
NGOs
HH-LEVEL PRODUCERS (< 500 units)
N = 550
LABOUR
CHICKEN FEED
GAS SUPPLY
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Color key
Target group
Same companies
VET SERVICES & TREATMENTS
HEATING / COOLING SYSTEMS
SHELTER
LACK OF INSURANCE
Key infrastructures, inputs and market support services

The likely impacts of such an emergency on the broiler chicken production market are as follows:

- Imports of eggs are stopped by the importers on Gaza side due to increased risks. Imports of feed are continued
- Farms and infrastructure are destroyed or damaged: large-scale farms are more vulnerable as they are more likely to be located within or near the buffer zone and to be directly targeted. Small-scale producers are also affected by a loss of production
- Displacement of small-scale and household-level producers from homes and farms also increase the risk of loss of production
- There is an increased lack of access to gas for heating, further impoverishing the shelter conditions and leading to increased losses in production
- Producers are unable to physically access markets to purchase feed and inputs. The demand decreases (a large chicken feed provider reported he sold only 20% of the usual level of sales during Cast Lead)
- Veterinary services are also affected, mainly by access issues linked to security
- There is an increase in feed costs due to additional transportation costs, especially since it is not possible to stock pile feed due to a 20-day expiry period
- There is an increase in selling prices to consumers and decrease in demand due to reduced purchasing power (temporary business closure of retailers, restaurants,etc.)
- A prolonged recovery period is expected of up to 4 months

In conclusion, the main impacts of an emergency are both a huge loss of production and related assets along the market chain at all levels and a very limited or no capacity for independent recovery amongst the small-scale producers (unable to access government compensation for losses relating to conflict).

2. **What is the capacity of the market to absorb an increase in the supply? What would be the implications of this increase?**

A 3% annual population growth rate suggests that market demand can potentially increase. Egg importers report that they could increase supply by up to 1 million eggs per month but are constrained by the Government policy, restricting the number of total imported eggs to 3 million per month. Retailers/butchers report they have the capacity to manage increased volumes.
The potential impact of supply increase on prices remains unclear based on available evidence: speculatively could decrease egg import prices, but increased supply in the market could also reduce selling prices (although this would be linked to demand i.e. if it was an excess supply).
However, there does not seem to be current unmet demand (in terms of those who can afford to purchase fresh chicken meat at current prices). Poor/very poor HH are not able to increase consumption without a decrease in prices, or increase in purchasing power. The middle-income consumers reported that they consumed less than they would prefer. But, critically, the tunnel closure in addition to financial challenges in the Palestinian Authority is likely to have moderate to severe impacts on purchasing power amongst significant numbers of the middle-income group (delayed, reduced or no salary payments, decrease in business / trade / construction activities, etc.).
There could be a reduction in demand for poultry meat in the short/medium term based on reduced purchasing power/ability to afford it.

Section 8. Main recommendations and conclusions

Based on the findings of the analysis, the response logic is articulated around 2 main axes:

- Promote support for already engaged small-scale broiler producers as livelihood protection, i.e. selecting beneficiaries of old projects and making accessible further training if needed and facilitation with MoA for registration and other benefits; and
- Promote support of small-scale producers by the relevant Ministries, first by encouraging registration.

The response options framework (Table 4) provides a list of potential response options with their advantages and disadvantages. The response recommendations framework that follows (Table 5) provides recommendations on the most feasible activities.

Table 4 - Response options framework

OPTION	ADVANTAGES	DISADVANTAGES
Provision of inputs for **restart-up** (complete poultry units: shelters (that have alternative usage), chicks (250), feed for 1 cycle) + training. Provision of feed only for 2nd cycle *+ additional Cash for Work during start-up period for target HH*	- Source of protein for HH consumption - Enables start-up of income generating activity (income source)	- Sustainability? (after 2nd cycle when support stops) - Appropriate target group = non-destitute (to avoid temptation to sell inputs) - CfW may not be feasible/appropriate for all HH
Provision of appropriate heating and cooling systems (in-kind)	- Improve production through reduced losses relating to temperature; potential to increase profits in relation to reduced losses and increase sustainability	- High gas/fuel prices and limitations in supply (sustainability issue depending on financial capacity to pay for fuel) - Maintenance costs - *Not sufficient in itself if other constraints not addressed? (e.g. feed access)*
Training in poultry production/farm management	- Improve production and management (e.g. disease control); potential to reduce losses - Contributes to sustainability; relatively low cost to provide - Builds longer term capacity	- Commitment/motivation required to attend - Follow-up required
In-kind distribution of gas (canisters) *Can be done seasonally or on continuing basis?*	- Ability to maintain production throughout the year; reduction in losses	- Unreliable supply due to import restrictions - High prices/expensive - Market distortion - Aid dependency; not sustainable
Provision of gas vouchers (to be exchanged with suppliers) *Can be done seasonally or on*	- Ability to maintain production throughout the year; reduction in losses	- Unreliable supply due to import restrictions - High prices/expensive

continuing basis?		- Less market distortion compared to in-kind - Aid dependency; not sustainable
Distribution of feed (in-kind) for xx period When is appropriate (as contingency measure if there was significant price increase)	- Improved sustainability of production	- Unreliable supply due to import restrictions - High prices/expensive - Market distortion - Aid dependency; not sustainable
Provision of feed vouchers for xx period *(Full requirement or partial?)*	- Improved sustainability of production	- Unreliable supply due to import restrictions - High prices/expensive - Market distortion - Aid dependency; not sustainable
Facilitating access to credit providers (for small scale producers)	- Encourages self-sufficiency - Profit margins accruing to middlemen can go to the producers (cutting out the middleman)	- Few appropriate credit providers - Requirement for collateral/guarantees/ insurance from commercial providers
Re-establishing fertilised egg production in Gaza	- Self-sufficiency/independence of the market in Gaza (no longer reliant entirely on Israeli/tunnel imports) - Continued availability during closures/crisis periods	- Susceptible to destruction/damage during conflict (destroyed in Cast Lead) - Lack of appropriate space/supplies - Large investment - Requires continuous/annual re-supply of layers
Establish a central poultry slaughter house for Gaza	- Controls health + hygiene in the process - Enables better stock management (managing surplus through freezing)	- Potential loss of business/employment for independent butchers/retailers - Cultural preference to see where the animals are slaughtered - Reduces selling options for female producers
Advocate to relevant ministries to provide compensation for losses resulting from: - Conflict related - Disease/epidemic	- Encourage farmers to maintain production	- Financial capacity of government to provide??
Advocacy for MoA to ensure that there is gas supplies (quota) dedicated for poultry producers	- Ability to maintain production throughout the year; reduction in losses	- Supply issues - Competition/market prioritisation??
Improvement of veterinary services		- MoA laboratories need to

(through MoA to small producers)		be upgraded
Advocate with MoA to improve/provide positive support for small-scale producers	- Price regulation - Access to extension services - Registration	- MoA currently not in favour of small scale producers (perceived market price distortion – selling under guide price)
Advocate (to Min of Economy) for a reduction/removal of import taxes on poultry feed	- Reduced buying price for producers - Many developing countries reduce/remove these taxes to support agriculture	- Reduces government revenue - Govt reluctance to set precedent on import tax reduction/removal

Table 5 - Response recommendations framework

Response activities or combinations	Key risks and assumptions	Timing Issues	Likely effect on market system and target groups	Indicators
Provision of inputs for **restart-up** (complete poultry units: shelters (that have alternative usage), chicks (250), feed for 1 cycle) + training. Provision of feed only for 2nd cycle *+ additional Cash for Work during start-up period for target HH*	-The donor refuse to afford assistance for the same BNF for the another cycle -Some BNFs can sell the inputs during the first days after the distribution process	-Provide all inputs for the first cycle -Provide only fodder for the 2nd cycle -It needs 80 days (40 days for each cycle) to make a clear impact	-Encouraging poor and very poor families to start/ continue their own business. -Increase the supply and in turn decrease the broiler chicken prices. -Alleviating the poverty and increase the ability of targeted groups to cover their own needs. -Preventing malnutrition -Avoid resorting to negative coping mechanisms (i.e. debts, using past savings, selling assets) -Women Empowerment through involving them effectively in	-The food security of the targeted population is improved. - The average income and purchasing power of the targeted group are improved. - The health conditions of theses targeted families are improved. - The number of women involved in broiler chicken breeding is increased by at least 10%.

			broiler chicken breeding	
Training in poultry production/farm management	- Cooperation of Ministry of agriculture in providing training sessions - The availability of qualified experts in broiler chicken breeding	4 days before distribution of inputs	- Improved production and management (e.g. disease control); potential to reduce losses - Contributes to sustainability; relatively low cost to provide - Builds longer term capacity	- The awareness of the targeted group towards best practices in broiler chicken breeding is raised. - The number of losses among chicks is decreased by 15%.
Re-establishing fertilized egg production in Gaza	- Not enough/adequate space for fertilized eggs farms - Israeli restrictions on establishing such kind of farms - It needs political decisions to be taken at national levels	3 years for establishing fertilized egg production	- Self -sufficiency/ independence of the market in Gaza (no longer reliant entirely on Israeli/tunnel imports) - Continued availability during closures/crisis periods	- Al least 25% of the eggs used for the hatcheries are produced locally with lower prices - The prices of eggs used for hatcheries are decreased by at least 10%
Advocate to relevant ministries to provide compensation for losses resulting from: - Conflict related - Disease/epidemic	- Lack of financial sources needed to compensate the affected farmer. - Cooperation of MoA and governmental bodies to solve this issue	Immediately after the crisis	-Encouraging producers to continue broiler chicken production and therefore ensuring the sustainability of income for these targeted families.	- The number of producers is maintained at the same level - 100% of producers are encouraged to continue working in broiler

				chicken breeding.
Improvement of veterinary services (through MoA to small producers)	- Strong collaboration from MoA - Israeli restrictions on the importing of some medical substances and equipment needed to improve veterinary services sector - MoA have qualified veterinarians - Lack of fund needed to upgrade the services.	5 years to have qualified veterinary experts + establishing specialized veterinary laboratories	- Mitigate the losses in chicks which in turn affect the prices and the profitability of the producer - Assisting the poor and very poor families to cope up with the expenses of veterinary services. - better preparedness for any potential crisis/emergency situation	- The number of losses is decreased by 20% - Veterinary services are provided to producer with lower prices - The number of qualified veterinarians is increased
Advocate with MoA to improve/provide positive support for small-scale producers	- Cooperation of MoA in stabilizing the prices and providing the needed support to small-scale farmers	All over the year	- Price regulation - Access to extension services will be improved - Registration fees will be reduced	- The number of producers is maintained at the same level - The number of producers who is encouraged to continue working in broiler chicken breeding
Facilitating access to credit providers (for small scale producers)	- Project's success is not guaranteed to pay back the credit - Positive coordination and cooperation from micro-credit NGOs to ensure the	3-6 months for coordination and building linkages with micro-credit associations	- Encourages self-sufficiency - Profit margins accruing to middlemen can go to the producers (cutting out the middleman)	- The number of succeeded projects funded on credit is increased. - The number of producers

	success and profitability of the funded project. - The producers don't prefer to use loans because of the high risky nature of broiler chicken breeding, in addition to interest rate			received loans
To conduct further EMMA analysis for feed, gas and credit market	-Cooperation of all concerned parties (i.e. Ministries, NGOs, Traders, Providers, etc.) in conducting such these studies	1-3 months to conduct the three studies	- To have a more clear overview of the targeted markets - To have a better understanding of the linkages between different main actors in the market chain	- The number of interviewees - Market Analysis Reports

ANNEX 1 – TEAM MEMBERS

Name	Organization
Emmeline Saint (EMMA leader)	Independent Consultant emmelinesaint@gmail.com
Dalia Younis	Ma'an
Mahmoud Jorany	Ministry of Agriculture
Afaf Seyam	
Hazem Almadhoun	Première Urgence – Aide MédicaleInternationale
Jehad Abu Hassan	Première Urgence – Aide MédicaleInternationale
Rana Hannoun	FAO
Enam Abu Nada	Oxfam GB
Ruth McCormack	Oxfam GB
Mohammad Abu Rayya	Ard El Insan

Annex 2 – Bibliography

Oxfam – *Assessment report, Gaza*, September 2006

Oxfam – *Gaza Needs Assessment & Analysis: Food Security & Livelihoods*, December 2012

FAO, WFP, UNRWA– *Rapid Food Security Assessment*, December 2012

Oxfam, FEG– *Household Economy Analysis – Livelihood Baseline Report, OPT: Gaza Strip*, June 2013

PCBS, WFP, FAO, UNRWA– *Socio-Economic & Food Security Survey: West Bank and Gaza Strip*, 2012

Oxfam – *Small-Scale Livestock Production Support in Gaza: A brief study of impacts, cost-effectiveness & sustainability*, January 2013

RICS– *Urban Agriculture and Eco-Sanitation: the strategic potential toward poverty alleviation in the Gaza Strip*, August 2007

ODI– *Sanctuary in the City? Urban Displacement and Vulnerability in the Gaza Strip*, HPG Working Paper, December 2012

World Bank– *Stagnation or Revival? Palestinian Economic Prospects*, March 2012

News articles:

Al Ahram Weekly – *Live chickens being imported through Rafah Tunnels*, July 9th 2013, http://weekly.ahram.org.eg/NewsQ/3292.aspx

Al Ahram Weekly – *Gaza in a bind again (impacts of tunnel closures on economy)*, September 11th 2013, http://weekly.ahram.org.eg/News/4075/19/Gaza-in-a-bind,-again.aspx

Electronic Intifada – *Once plentiful, chickens now rare in Gaza*, March 19th, 2009, http://electronicintifada.net/content/once-plentiful-chickens-now-rare-gaza/8139

Ma'an News – *Gaza government stops chicken imports from Egypt*, May 4th, 2013, http://www.maannews.net/eng/ViewDetails.aspx?ID=591765

ANNEX 3–LIST OF ACTORS INTERVIEWED

	Category	Name	Gender	Location	Phone
1	Farmer	EslamEshtewy	M	Bait Lahya	0599 501 404
2	Farmer	Salah Taha	M	Bait Lahya	0599 222 160
3	Farmer	Jalal Mai	M	Bait Lahya	0598 727 672
4	Farmer	Ahmad Abu Halob	M	Bait Lahya	0599 501 434
5	Feed provider (large)	TawfeeqBakran	M	Gaza - Al Zaytoon	N/A
6	Feed provider (small)	Abu Omar El Ghoul	M	Gaza - Fras	0592 866 441
7	Gas Provider	DabanCompany	M	Middle Area	N/A
8	Government (MoA)	Muhammad Mushtaha	M	Gaza Strip	N/A
9	Hatchery	Eid Hamada	M	Gaza North	0599 884 030
10	Hatchery	Eiad Gaboun	M	Rafah	0599 409 730
11	Hatchery	TawfekBakroun	M	Gaza	0599 428 500
12	Hatchery	Mohammed El Masrey – Eiad Gaboun	M	Khan Younis	0599 409 730
13	Householdlevelproducer	Nahla Qudaih	F	Khan Younis	0599564955
14	INGO (ACF)	Iman Judeh		Gaza Strip	0598 810 550
15	Large trader	NaheadMontherEbeed	M	Gaza North	0599 465 695
16	Large trader	Abeed El Sawafery	M	Gaza	0599 333 719
17	Large trader	Majdy Abu Saied	M	Middle Area	N/A
18	Large-scaleproducer	Nedal Abu Draz	M	Khan Younis	0597690777
19	Large-scaleproducer	Mohammed Shamali	M	Gaza	0599429093
20	Medium-scaleproducer	SofianQudaih	M	Khan Younis	0598153678
21	Medium-scaleproducer	Khairy Abu Hassoun	M	Rafah	N/A
22	Medium-scaleproducer	Rehab Abu Jazar	F	Rafah	N/A
23	Medium-scaleproducer	Rebhi Bannar	M	Middle Area	0599304845
24	Medium-scaleproducer	Mazen Abu Isayed	M	Middle Area	0599617481
25	Restaurant	Al Afiah Restaurant		Gaza	N/A
26	Restaurant	Muaz Restaurant		Gaza	N/A
27	Retailer / Slaughter	Shaher Jamal El Helow	M	Gaza	0598 051 901
28	Retailer / Slaughter	Ahmad Monther Ebeed	M	Gaza North	0597 960 067
29	Retailer / Slaughter	Talee El Mahmom	M	Rafah	0598 678 492
30	Retailer / Slaughter	Samer Jomaa	M	Rafah	N/A
31	Retailer / Slaughter	Ahmad Habosh	M	Gaza	0599 224 478
32	Retailer / Slaughter	Saleam Abu Karsh	M	Gaza Nasar	0599 888 764
33	Retailer / Slaughter	Mohammad Abu Karsh	M	Gaza	0598 166 720
34	Retailer / Slaughter	Mohammad Abu Amra	M	Gaza El Sabra	N/A
35	Retailer / Slaughter	Mahmoud Dalol	M	Gaza El Sabra	9267346
36	Retailer / Slaughter	Yehea Eshtewy	M	Gaza El Zaytoun	N/A
37	Retailer / Slaughter	Hateem Nabhan	M	Middle Area Nuseirat	9024793
38	Retailer / Slaughter	Mohammed El Korday	M	Middle Area Boraj	8257729
39	Small trader	Nore El DeenGaboun	M	Rafah	0599 858 885
40	Small trader	Khalead El Najar	M	Middle Area Magazy	N/A
41	Small-scaleproducer	Wissam Al Haddad	M	Gaza- Al Sabra	0598195207
42	UN FAO	Adham Barakat		West Bank & Gaza	0598 929 985

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This is part of a series of emergency market mapping assessments, conducted by multi-agency teams to help inform and shape better programming by humanitarian and development actors in the Gaza strip. The information in this publication is to the best of our knowledge correct at the time of the assessment (October 2013).