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Gaza Urban & Peri-urban Agriculture Platform

Olive Value Chain Report

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This report provides a description of the actual situation for the olive value chain in the Gaza Strip, a mid-term vision for a more effective and inclusive olive market sector, constraints and scenarios that have to be taken into account as well as proposed strategies to enhance systemic changes in the sector necessary to progress towards the mentioned vision. Specific attention is given to gender dynamics and risk analysis.

1 Value Chain characteristics

Olives are important both economically and culturally for the people of Gaza. Olives are the single biggest crop in the Palestinian economy and are a significant symbol of traditional society, identity and ties to the land. Although olives are grown throughout Gaza, Al-Zaitoon district, southeast of Gaza City, is one of the most important areas in the olive sector. Olive quality in this district is regarded as the highest in the Gaza Strip (zaytoon is the Arabic word for olive).

In Al Zaitoon there are roughly 400 small-medium scale producers (1-13 dunums), and 50 large-scale producers (13+ dunums). Approximately 50% of those working on small-medium olive farms are women, who are particularly engaged during the harvesting period. About 85% of the labour on small-medium farms is unpaid family labour.

There are 21 processing units (olive presses) operational in the entire Gaza Strip, which press between 100-400 tonnes of unbranded brine olives depending on seasonality (100 tonnes of olives equals about 25 tonnes of oil). The chain is controlled by men and women are excluded from male-run olive cooperatives although they play a crucial role in weeding, grading and sorting the olives and storing. Likewise, in the West Bank the olive oil sector is a very much male dominated economic activity.

Men have overall managing/leading roles in the farms, as they oversee the overall cycle of cultivation from the start: ploughing, irrigation, weed and pest control and fertilising, to packing and transporting the fruits to the market. Women are involved in manual picking of the olives. In addition, women process the olive fruits into unbranded brine cured olives and olive oil in small processing units at the household level and sell their produce to neighbours. They can only sell small volumes through informal networks within their communities, with only small profits. They are not engaged in marketing to retailers or supermarkets.

1.1Olive fruits

The main olive varieties used are: Souri (90%, used for both fruit and oil), K18 and Shemlali (remaining 10%, only used for oil). Souri olive production is cyclical and alternates every year; good years can be followed by bad ones with a harvesting time lasting from September to November. Olive trees are well suited for the environment of Gaza, being tolerant to both saline water and drought. They can also be cultivated in poor soils (although yields and quality of fruits and oil will be impacted).

The production yield of olives depends to a large extent on the age of the trees. Trees start to become economically productive after 5-10 years, producing 1-1.5 tonnes per dunum (333rotl[1] – 500rotl). From 10-20 years of age trees produce around 2 tonnes per dunum, and trees over 20 years-old produce around 2.5 tonnes per dunum. A key characteristic of the Souri olive tree variety however is large quantity production in one year, followed by lower

[1]ROTL is a unit of weight in some Moslem countries near the Mediterranean. It varies between 2/3 kg.

quantities the following year. In Al-Zaitoon district most trees are 5-10 years old, hence the figures of 333 rotl – 500 rotl per dunum are used for calculating yields (1 rotl = 3 kg). The two main olive products are olives fruits cured in brine, and olive oil.

In Al-Zaitoon district roughly 80% of production is sold directly by producers to consumers, while 20% is sold by producers to traders in bulk. Larger-scale farmers more frequently sell to traders due to the larger market volumes they can offer. Around 40% of the produce[2]is pressed into oil and sold to the market, while the remaining 60% is sold as fruits to the market to be processed into pickled and table olives. The price is established per quantity unit of rotl. When selling directly to a consumer the price ranges from 20-35 NIS/rotl. Large farmers are able to short sell their produce to traders for 10-25 NIS/rotl before harvesting time, with traders taking on part of the risk. Because of the low capacity for cold storage in Gaza, the olives must be pressed within 48 hours after harvesting, because fruits perish quickly. The trader pays a deposit of around 25% of the value to book the crop, paying the balance at harvest time. From this point on the trader effectively takes responsibility for paying for the labour (pruning and harvesting) and any additional inputs. Depending on the quality of orchard management, olive produce varies each year, this influences the supply/demand price (higher price when yields and supply are low and vice versa).

The table below illustrates average income made depending on the market chain and level of yield:

Table 1 Producer income when selling direct to consumers

	dunum)	dunum)
Low price (20 NIS)	-	10.000
High price (35 NIS)	5.250	-

** Note: 80% of production sold direct to consumers*

Table 2 Producer income when short-selling to traders

	dunum)	dunum)
Low price (10 NIS)	-	5.000
High price (25 NIS)	3.750	-

** Note: 20% of production sold direct to traders*

Olive orchards are characterised by their environmental sustainability, including resistance to poor soil and saline water (although with better growing conditions, quality of the olives and oil will be better, as will the prices). Olive trees are rain-fed however, farmers in Gaza tend to irrigate olives at least four times per year. Only a minority of farmers, in order to intensify olive production, use once a year both chemical and organic fertilisers, while some pesticides are used when deemed necessary. The low use of chemicals is due to the high costs of these inputs, not affordable to many farmers, but at the same time represents an opportunity to steer toward a more organic type of farming.

[2]Ministry of Agriculture data refer to the total volume of olive fruits pressed into oil and the fruits sold without pressing for each pressing unit in Gaza.

The table below describes the inputs used in olive production. It should be noted that the actual labour costs per dunum depend on the amount of family labour used (i.e. un-paid work) and the yield (as lower yields take as little as half the time to harvest). Medium and large-scale producers hire seasonal labourers for two months, mostly for harvesting. Smaller- scale farmers mainly depend on household labour, depending on the size of land and availability of household labour. Labourers are paid 40 NIS per day and labour costs depend on the size of the yield to be harvested. Approximately 50% of all labour is carried out by women. Paid women labourers in Al-Zaitoon distric,t generally receive the same wages as men.

Table 3 Annual cost of inputs per dunum (NIS) for olive fruit production

	Low yield season, 150 rotl per dunum	High yield season, 500 rotl per dunum
Pesticides	300	500
Organic fertilisers	1000	1000
Chemical fertiliser	400	600
Water	1200	1200
Land ploughing (to mix fertilisers with soil and kill grass)	150	150
Labour (40 NIS/day, person days/dunum depend on yield)	300	800
Total costs	**3350**	**4250**

* *Additionally, plastic piping is laid every 10 years costing ~1000 NIS per dunum*

Table 4 Producer profits (NIS) per dunum when selling fruits directly to consumers

	low yield, high price	high yield, low price
Income	5250	10000
Costs	3350	4250
Profit	**1900**	**5750**

* For the low yield fields, labour has been estimated at half the cost of high yield fields. The „low yield, high price" and „high yield, low price" values in bold are understood to be the most likely scenarios for most producers.

** It can be expected that for small-scale farmers with only a few dunums that the costs will be lower (and profits higher) as they will use their own labour in part.

1.2 Olive oil

Traders buy roughly 20% of the total olive fruit harvest to produce olive oil. The pressing of olives into oil is carried out by private presses. There are in total 21 presses in Gaza Strip and 5 presses in the Al-Zaitoon district.

Pressed oil is bottled into unlabelled 16kg (20 litres) tin or plastic containers and then distributed to local markets. Traders sell oil directly to favoured consumers, to the wholesaler (6% commission) or directly to retailers.

Some medium and small-scale olive producers also press their olives at private presses, but endure a longer waiting time as these presses give priority to pressing traders" olives(with larger quantities). This negatively affects the quality attributes of the products of small- and medium-scale olive producers, which in turn reduces the price they can fetch for their oil. Usually only traders or relatively large-scale producers have sufficient quantities to press olives individually, while small-scale producers do sometimes merge their products collecting their fruits together to short go into pressing process.

Quality of pressed oil depends very much on quality of harvesting, pressing techniques used and storage. One harvesting method consists of hitting olives branches with sticks to let the olives fall on the ground. For good quality olives without damage, they should be hand-picked or caught softly.

Distribution is very underdeveloped, as direct/individual sales from farmers to presses to consumers and local retailers dominate the market. Only a limited quantity of oil is labelled and present in the market. Gaza consumers tend to buy in bulk in large unlabelled containers, often once a year, and with no regulatory system in place for quality control.

Production and presses are currently not meeting the requirements of domestic demand due to the low quality and supply of the product. There is a high local demand for both olive fruits and olive oil as olives are a key component of local food consumption and the Palestinian diet. Brined cured olives are offered at every meal in Gaza. Olive oil is also a key ingredient that is increasingly replacing sunflower/corn oil. As a result, large quantities of oil are imported from the West Bank and in some seasons from Syria. Imported oil is often cheaper than locally produced oil.

The table below shows that fruits add more value than oil when sold, but not all olives can be sold as table olives. They should be handled as two products from the same value chain. In general however, both oil and table olives need to be better processed to fetch a higher price.

Table 5 Costs, income and profit for olive oil producers and traders (NIS/dunum)

	Producer		Trader	
	Low yield, high price	High yield, low price	Low yield, high price	High yield, low price
Cost of buying olive fruit from producer			**3750**	**5000**
Production costs per dunum fruit	3350	4250	300	800
Pressing costs 0.9 NIS per dunum of fruit	135	450	135	450
Total Costs per dunum of fruit pressed	3485	4700	4185	6250
Total Costs per rotl of fruit pressed (costs per dunum/rotl per dunum)	23.2	9.4	27.9	12.5
Total costs per rotl of oil 1 rotl fruit in high yield = 600gm oil (factor conversion = 5), 1 rotl fruit in low yield = 800 gm oil (factor conversion = 3.75)	87.1	47.0	104.6	62.5
Average price received for a 16kg container of oil	600	400	600	400
Average price per rotl (container 16kg/rotl3kg, conversion 5.33)	112.6	75.0	112.6	75.0
Oil Profit per rotl (average oil price – costs per rotl of oil)	25.4	28.0	7.9	12.5
Oil profit per dunum (oil profit per rotl* rotl per dunum)	**763.4**	**2804.7**	**317.8**	**1672.5**

*The above table assumes „low yield high price „and „high yield low price" scenarios

1.3 Chain actors and recent interventions

Major stakeholders in the olive value chain include local producer committee, especially in al-Zaytoun district, local NGOs (mainly the National Society for the Protection of Olives, UAWC, PARC, MAAN and the Palestinian Environmental Friends), INGOs (including Oxfam, CARE and ICRC), and government institutions (mainly the MoA who provides limited extension services on pest control). Traders play a key role as importers, importing oil and pickled olives from the West Bank. In 2013, olive oil (low quality) was brought from Syria into Gaza through the tunnels between Gaza and Egypt. There is one large processor (Abu Humaid) in Gaza who imports olive fruits from the West Bank but does not buy from local producers. Input suppliers import chemical fertiliser and pesticides. Local nurseries produce seedlings locally in Gaza. Framers also buy manure from animal breeders. The best fertiliser however is organic (cow, sheep, chicken dung; all can be/is produced within Gaza Strip. Fertilising trees needs to be done once every 4 years with 3 bags (40 kg) of dung/tree of cow dung).

Olive production has received significant support in recent years, including the provision of technical support for packaging, field trials, training and extension services, the introduction of water harvesting cisterns for supplemental irrigation, improvement of irrigation practices, as well as the distribution of olive seedlings and free inputs. These interventions have

resulted in some improvements in orchard management practices and fruit quality. However, the support was provided to only a minority of farmers and improvements in productivity were limited (nor did these interventions ensure the sustainability, as they provided free inputs and some extension services using paid agronomists for short period of time (couple of months). Furthermore, there still have been serious incidences of pests and diseases, notably olive fruit fly damages and Peacock Eye disease.

Producers need to organise in groups so that it will become feasible to make breakthroughs in productivity of orchards and harvesting techniques (cooperative buy-in of small simple tools, etc) and in creating economies of scale for the pressing and storage of olives and marketing.

Table 6 List of major actors in the olive sector

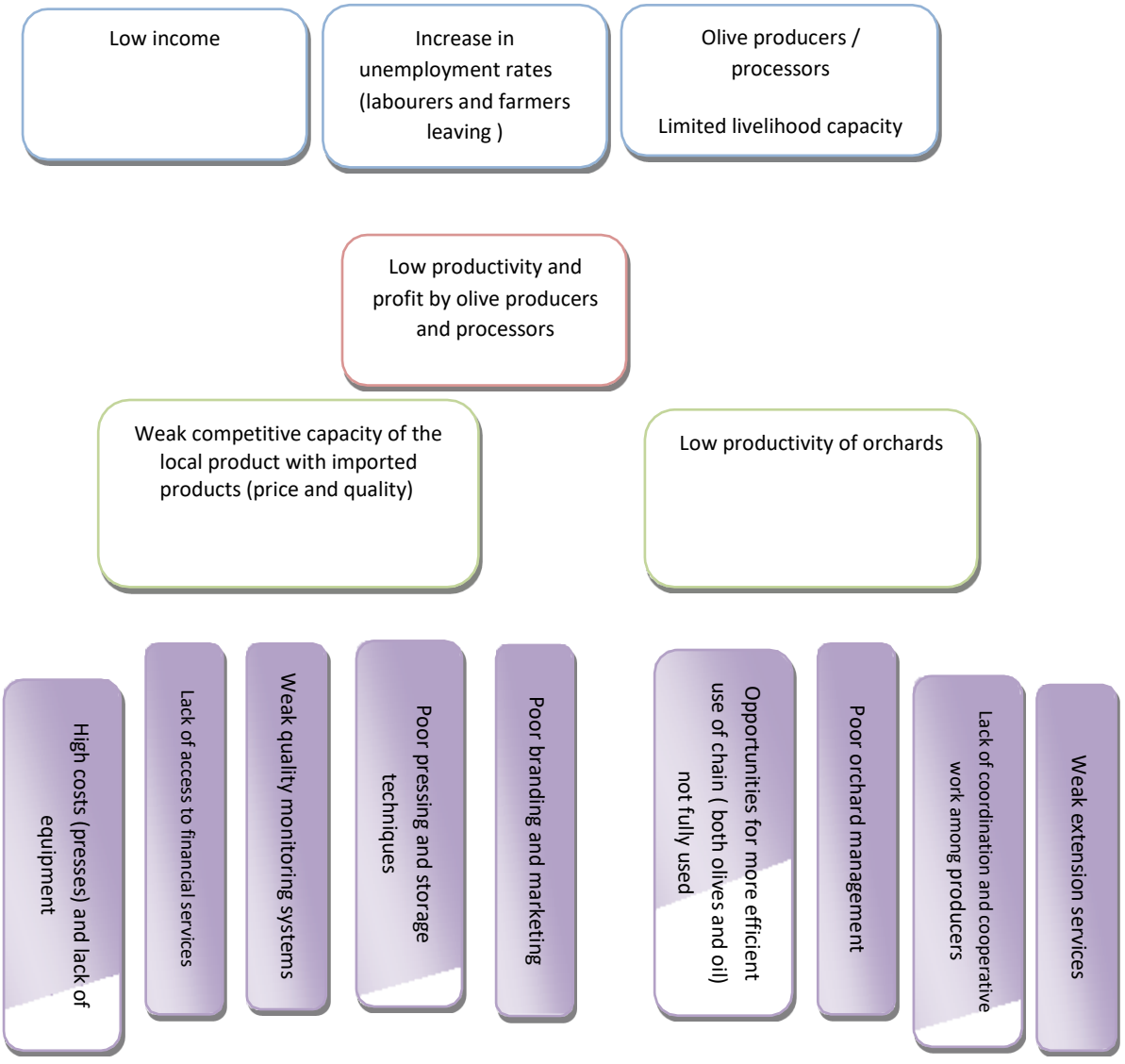
Actor	Description
Local producer committees (especially in Al-Zaytoun district	Representing olive producers in the Al-Zaytoon area. Liaising and networking with NGOs to channel support to producers. All the local producer committee members are men.
National Society for the Protection of Olives	The main CBO in Al Zaytoon area which implements various donor funded projects such as the rehabilitation of agricultural lands, and expansion of olive tree cultivation through providing farmers olives seedlings, trainings and free inputs. All CBO members are men.
UAWC	A local NGO specialising in agricultural development in Gaza, UAWC has implemented many projects such as the improvement of irrigation practices through providing olive farmers drip irrigation, tension meters - to measure water stress of the trees- and training.
PARC	A local NGO specialising in agricultural development in Gaza, PARC has implemented many projects such as the improvement of irrigation practices through providing olive farmers drip irrigation, tension meters and training. It also promotes organic olive production through supporting olives farmers with pest traps, organic pesticides and training.
MAAN	Implemented awareness programmes on the use of fertilisers and pesticides for olives (safe use of pesticides, improved productivity)
Palestinian Environmental Friends	A local NGO based in Rafah. PEF produced compost by using the cake of olive and distributed the compost to olive farmers and other farmers. All the board are men, and the majority of executives and project staff are men (25% women)
Oxfam	Oxfam has funded a project for the safe use of pesticides and to improve the productivity of olives and other commodities. This project was implemented in partnership with MA'AN.
CARE	CARE has funded projects for the rehabilitation of agriculture lands and expansion of olive tree cultivation. This project was implemented in partnership with UAWC and PARC.
ICRC	ICRC promoted use of organic fertilisers and pesticides to be used in olive orchards
Ministry of Agriculture	Provide extension on the pest control.
Abu Humaid	Large processor in Gaza who imports olive fruits from the West

	Bank but does not buy from local producers. All his employees are men.

1.4 Challenges and constraints in the olive sector

The diagram below presents a problem tree analysis highlighting the key challenges and constraints encountered in the Gaza Strip olive and olive oil sector, detailing underlying causes and effects on Palestinian male and female farmers and other actors in the olive value chain. This problem tree was made by the participants to a workshop of the GUPAP held on 20 March 2014 in Gaza City. Participants are representatives of the 30 organizations that are playing a key role in the Urban and Peri-urban Agricultural sector.

Diagram 1- Problem Tree Analysis for the Olive Sector in the Gaza Strip



The main challenges are related to low orchard productivity and weak competitiveness of local oil and processed fruits compared to imported products.

The main causes for the low productivity of orchards are:

1. Low productivity and fluctuation between low/high yield years because of poor orchard management practices.
2. Almost all of the olive orchards are cultivated in a traditional way, not as a commercial activity, with very few inputs and minimal orchard management (providing good manure, soil tillage, water conservation, pruning, pest management).
3. Improper use of irrigation (especially supplementary irrigation) and use of low quality water.
4. Lack of a proper disease management model especially for pests such as Spiloceaeoleaginea, Dacusoleaegmel, Euphyllura olivine costa, Phloeotribusscabaeoidesbern and Rhynchitescribripennis.
5. Insufficient agricultural extension (at local and national levels)
6. There is traditionally little organisation among olive producers to coordinate and cooperate in olive related activities. Besides family solidarity networks, farmers are not used to work together and organise themselves in professional and structured cooperatives. Collaboration is needed for joint pressing, storage and marketing. Olive orchard production remains often an individual farmer"s business. Such organisation (in cooperatives) is a necessity to create added value to the chain. For many it is a side crop, but not just for home consumption. Many families have some area with olive trees, that alone they cannot press or market. Small farmers are often left out when delivering olives to presses and further processing. Cooperatives will provide members/small farmers better access to the necessary processing steps, be it for table olives or for olive oil.
7. Lack of optimisation of a “dual track production chain”: only developing the olive fruit chain will mean that there is a lot of unused olives but that can still be used for making quality oil. Only developing the olive oil chain will mean losing the added value table olives (fresh or pickled).

The main causes for the low competitiveness of products are:

1. Poor technological skills during pressing and post-harvesting, notably with respect to pressing and storage techniques, including better separation of damaged and high quality olives, better washing, better crushing, centrifuging machinery to separate oil from water (has to be done in two phases) plus an extremely clean press environment to avoid poor smell, a, odours that affect the quality of the oil.
2. Low processing quality, due to: 1) Delays in pressing (olives should be processed within 48 hours of harvesting), especially among smallholders. 2) Low quality of presses, with dirty press environment, inadequate machinery, improper filters and inadequate storage. Current pressing machines are old and few farmers have access to the needed stainless steel storage tanks (nor to cold storage) and keep their olive oil in plastic containers, and the stored product rapidly deteriorates
3. There are no adequate financial services that can support olive producers and presses to make initial investments in improving quality of equipment, storage, olives and olive oil; especially to improve quality of olive oil pressing; for the latter investments are necessary of around 50,000 to 100,000 USD/press. For processing into table (pickled) olives and olives paste light equipment is needed (see experience in the West Bank).
4. The MoA provides irregular and ineffective extension (and cannot reach all the farmers) and other support services (quality control) due to lack of financial and human resources and knowledge.

5. Poor branding and marketing practices (packaging).

Women face other specific problems especially when processing the olive fruits into unbranded brine cured olives and olive oil in their homes. They do not have access to finance and assets and are not able to purchase the needed equipment and inputs (such as storage and packaging equipment and materials). Therefore, their production is low and of irregular quality. The poor access to finance is exacerbated by financial institutions" high requirements standards for guarantees.

Improvements could be facilitated in the process of pressing olives in order to obtain higher quality olive oil and in improving storage facilities and techniques. Several projects have also been implemented to make better use of olive oil by-products (such of use of olive cake in composting and as animal fodder). However, they remained on small scale and did not benefit from research support to validate and improve on results, or for scaling up, as they did not establish regular links between farmers and research/extension institutions. In addition, there was a lack of marketing linkages within such innovations.

2. Vision, scenarios and proposed interventions

2.1 Vision

The following vision was developed by a large number of local actors actively involved in the Gaza olive sector in a workshop facilitated by the project of the Gaza Urban and Peri-urban Agriculture Platform GUPAP (March 20th, 2014)

> *"All olive farmers and processors (men and women) generate an income that will achieve an adequate standard of living, guaranteeing the dignity of households, sustaining their food security and improving their socio-economic situation. The olive sector becomes a key pillar in the Gaza economy, introducing better performing olive varieties, improved orchard management and pressing facilities so as to produce higher quality olives and olive oil, while ensuring the access of a greater number of low-income households to the various olive products".*

2.2 Scenarios

The olive sector in the Gaza Strip is considered as one of the least affected sectors by social, political, economic and institutional factors in comparison with other agricultural sectors. In part this is due to a relative independence on external inputs and markets, for another part to the importance of olive and olive oil in the Palestinian Gaza family food pattern, as well as due to the ability to store olive oil for longer periods. Two scenarios were defined that represent the projected political and economic contexts that could affect the way the olive sector may grow in the Gaza Strip in future.

- **First scenario: Political stability.** A political stable environment will entail the existence of a national unity government grouping all spectrums of society. This government will establish diplomatic relations and will gain international support and Israel"s commitment towards a long term reconciliation and progress in the peace process.

- **Second scenario: Political instability:** Foreseen political instability entails the continuation of political disagreement, reluctance towards national reconciliation, failure of negotiation efforts with Israel, constant tension at all levels, with potential signs of a third popular uprising (Intifada). Political instability will also mean that the Government in Gaza does not enjoy international support, entailing the continued siege and closure, while donors continue their support to provide urgent humanitarian assistance with some development projects. This situation entails a lack of stability in all political, social and economic aspects.

In view of the unlikelihood of the first scenario to materialize, strategies and interventions for the olive sector in the Gaza Strip will work under the assumption of the second and current scenario. Resultant strategies to achieve the vision formulated in section 2.1 will take into account the constraints posed by this scenario and work notably on systemic changes that encompass decreasing dependence on external inputs, that promote better orchard management and harvesting, improve oil pressing and work on creating higher value products for the local market in the form of table olives (pickled and /or stuffed) and olive paste (tapanane).

2.3 Needed systemic change

In view of the vision above, the analysis of the current context for the olive sector, the challenges and constraints mentioned in section 1, and the scenario under which strengthening of the olive sector in the Gaza Strip has to be achieved, the project Consortium recommends that the following systemic changes are facilitated by the project and operated by the local actors involved in the sector.

Where most of the here recommended systemic changes in the olive value chain would be necessary under both scenarios (more and les political stability), they become critical for the survival of the olive sector in the Gaza Strip under the second scenario. For the olive sector the following three systemic changes are essential to pursue:

1. Optimising the olive chain and improved use of olives for different chain products (oil, table olives) by facilitating better processing and storage for higher quality products for a local market.
2. Better support (service supply and extension) and producer coordination for joint pressing and processing; improved linkages between research, extension and direct chain actors.
3. A deliberate focus on women, being key players in processing, to support them in diversifying and increasing quality of table olive products (pickled and/or stuffed olives, olive paste) and their local marketing.

2.4 Proposed strategy and interventions

The vision for the olive sector is to work on achieving increased income and a good standard of living for olive producers, processors and other actors in the chain. This can be achieved through the improvement of their production and processing practices, requiring on their turn development and use of new capacities and practices, to achieve higher profits. Furthermore, by improving product quality and applying production quality standards both in orchards and processing/storage facilities competitiveness of the Gaza olive products with products from Israel and West Bank will be improved. As a consequence, it is foreseen that

the living conditions and income of small producers (poor families and women) as well as those of the processing units and potentially other actors involved in the sector will improve and increase.

A long-term development strategy should go through the reinforcement of technological innovation in orchard practices, harvesting, processing and storage practices and increasing product quality and hence economic profitability. This requires increasing and improving extension and training; enhancing access to finance, certification of product quality and consumer marketing. Improvement of the processing and production sector will increase demand for better and other support services such as production of local products against competitive prices (organic fertiliser, cold storage using solar energy, processing equipment, etc.).

Proposed interventions include:

1. Facilitate the establishment of a local olive platform in Zaytoon District for coordination and cooperation with all actors in the olive sector to enhance the quantity and quality of production and processing/storage[3]. Based on a process of match making and partnering among producers, processors, traders, consumers and service organisations (research, training, extension), linkages will be strengthened and trust will be built, and joint interventions will be tested and monitored. Facilitation and capacity building could be provided to these local chain platforms to help them improve specific support and functions (quality control, processing of table olives, storing, filling, packaging, branding etc.). Such a platform could also be instrumental to facilitate access of farmers and processors to sources of information (weather forecasts, pest protection and prevention, market prices, etc.) and encourage and support learning and exchange between olive producers and processors.

2. Facilitating access to co-financing for improved processing. Special emphasis should be put however on the involvement of financial institutions in such platforms to facilitate more permanent access of olive producers and processors to financial services. Private service providers that are encouraged to better and more appropriately support producers and processing/marketing may also need co-investment funds.

3. To facilitate women‟s access to extension/training initiatives. Women processors will be supported to improve household-based processing, product diversification and quality. Co-funding could be specifically facilitated to support women involved in the processing units to access capital and equipment, and to cope with possible market shocks and hazards.

4. Build capacity of extension institutions, including local extension departments of MoA, the National Society for the Protection of Olives and UAWC to better support producer groups and promote good orchard management, pest and disease management using participatory training approach (PTD, UPA producers‟ learning and action field

[3]The National Society for the Protection of Olives, a well-known CBO respected by different market actors, could be the local platform coordinator

schools). Link with research institutions including the Faculty of Agriculture of al-Azhar University and Faculty of Science of the Islamic University with a view to provide better support to producer groups &processing units, provide updated information and researches for new initiatives, help developing new potential products, improve the quality of produce, and develop new processing techniques. Extension institutions will be encouraged to involve more women or train their men staff to be more gender sensitive in order to more effectively reach women producers and processors.

In addition, the local olive chain platform and GUPAP will be encouraged to:

1. Improve quality standards of olive oil through facilitating knowledge development and funding for better processing techniques with more modern equipment and olive mill management as well as better storage. Introduce a simple toolkit (as is used in the West Bank) to test free acidity levels as an indicator of olive oil quality (the lower free acidity, the better quality). This should go together with promoting cold storage (based on solar energy) to enable oil and fruits to be well preserved and sold beyond the peak harvest season. Important knowledge inputs for this action could be sought from relevant expertise developed over the last 8 years in the West Bank.

2. Promote better use of olive by-products such as waste from the presses for making compost or use in animal fodder. There is a high demand for good fertilisers in Gaza. Olive residues are already used by one cooperative as input for animal fodder pellets.

3. Also through the above platform, supplementary irrigation methods might be introduced to producer groups - this would not only directly promote olive productivity and quality, but would also allow for inter-cropping of annual plants.

2.5 Gender dynamics

Apart from the specific problems women encounter in the olive sector as already mentioned in section 1, women, in comparison with men, face more difficulties in accessing information, training, financing the market, as they are subject to restrictions in access to assets and movements, especially if married or divorced. They also have poor communication and coordination with other market actors (ex. extension and training services; retailers). It has to be recognised here that the olive sector in Palestine is dominantly a men"s trade, although women are highly involved in processing at household level. It is often difficult for them to be involved in knowledge and skills training or become part of an extension programme. They need support in processing the olive fruits into unbranded brine cured olives for table olives, pickled and /or stuffed, and/or olive paste and olive oil in their homes.

2.6 Risk analysis

In the case of the Olive Value Chain, risks are less closely related to the blockade of the Gaza strip described under Scenario 2, as compared to other urban agricultural sectors. The intervention strategy is targeting foremost the local market as demand is far from satisfied even for low quality olives and olive oil. The main impediment created by a continuing closure of the Gaza Strip is in obtaining modern press equipment from outside (new or second-hand from abroad or the West Bank).

The main risks as related to development of a viable olive value chain are the following:

1. Farmers may be reluctant to make new investments as it will take between 4 and 6 years before trees to bear high volumes of fruits. However better orchard management might already results in improvements after 1-2 years" time.
2. Furthermore, there is some expressed risk that Israeli forces might take actions that destroy trees, during incursions or other military actions that involve levelling of land. In fact a tendency is observed where farmers take calculated risks to plant notably olive trees within the so-called high-risk zone where tree planting is not tolerated by the Israeli military forces. They take these risks to explore how far they can go in gaining back lost arable land, while this is most easy with olive trees that do not require much care as compared to other fruit trees.
3. There is an important risk that value chain actors will be unwilling to accept a zero distribution approach as the olive sector has always received large volumes of free inputs.
4. There may be a risk of male olive growers and processors not accepting women developing new olive products and obtaining the benefits of this.
5. Market actors may not accept and are unwilling to test new pressing and storage techniques such as more performing pressing machinery and cooling by solar energy, and hence are not inclined to take the correlated risks to invest in such technologies.