



International Labour Organisation

**Report on value chain analysis:
The tomato sector in Mafrq Governorate
Jordan**



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1. Executive summary

This report covers the process and results from the value chain analysis conducted on the tomatoes sector in Mafraq Governorate. The exercise was a part of the ILO project 'Enhancing access to employment and livelihoods for Jordanian host communities affected by the Syrian refugee crises' in the northern governorates of Jordan.

The project strategy aims at addressing constraints and creating better livelihoods for the large number of enterprises, women and men, affected by the refugee crisis. It endeavours to do so through four intervention areas: 1) value chain development of selected sectors in Irbid and Mafraq to stimulate job creation and enterprise growth; 2) enabling business environment improvements, including addressing labour market challenges, through public-private sector dialogue; 3) developing effective employment services and structures for employment generation; and 4) local capacity building to support business start-up and expansion through entrepreneurship capacity building.

The value chain analysis was conducted in a participatory manner and led to the identification of a number of constraints and opportunities for developing the sector. These are grouped into the following categories: 1) Improve inputs in terms of quality and price, 2) Develop new products and increase production with technological upgrading, 3) Market development, 4) Improve efficiency of value chain, 5) Improve support structures and services for the sector, and 6) Improve the enabling environment. At the end, the report presents an intervention plan for how to address the issues and provide solutions with a view to increasing employment and livelihood opportunities for host communities in the Mafraq governorate.

2. Background

The value chain work is taking place in the context of the ILO project to support the enhancement of employment opportunities and livelihoods for Jordanian host communities affected by the Syrian refugee crisis. Besides sharing information on the situation of the host communities and the overall project, this section will also provide background information concerning the Governorate of Mafraq as well as the tomato sector and choice of value chain.

2.1 Project background

The Syrian refugee crisis continues to deepen, leading to great human tragedy. In Jordan there are over a million Syrians, as of the end of 2013, from which over 560,000 are registered as

refugees and more than half of whom reside in Mafraq and Irbid. A particular characteristic of the Syrian refugee population is its vulnerability due to its predominantly high proportion of women, children and elderly. The number of conflict affected people is expected to rise considerably as there appears to be no political solution or an end to the fighting in sight.

This situation has had implications for local communities. Local people are experiencing fierce competition in the labour market due to the fact that Syrian labourers are filling positions and are very competitive in terms of both wages and skills. Jordanian employers value Syrian and other non-Jordanian workers but as Jordanian unemployment rises, the Government is seeking support to combat the rising unemployment rates in Jordanian host communities. Additionally, since Syrian refugees do not have official work permits, all those working are doing so on an informal basis causing the Jordanian labour market to become increasingly informalized.

Moreover, the competition for jobs as well as for public services (education, health, sanitation etc.), has created tensions between local and refugee communities. It is crucial to support stable conditions in Jordan, and essential to maintain the existing goodwill of the Jordanian Government and people, in order to receive and manage the huge refugee inflows. Jordanian authorities are concerned about internal security, due both to potential clashes between refugees belonging to the two Syrian factions and an increase of violence, beggars and criminality, especially in Northern governorates.

The most affected governorates are Mafraq and Irbid. In the third quarter of 2013 Mafraq (including the Za'atari refugee camp) had an estimated refugee density of nearly 55 per cent, whilst Irbid was the second most affected, with a refugee density of 22 per cent.¹

Jordan is currently seeing an annual growth rate of 2.7 per cent but this is not enough to meet the growth in the labour force even without the influx of refugees. Every year 60,000 youth enter the labour market. Official unemployment has increased from 12.7 per cent in 2010 to an estimated 13.1 per cent in 2013. Women and youth are most affected, with 22.3 and 22.8 per cent official unemployment respectively. Unofficial overall unemployment is probably higher.

There is therefore a great need for interventions that generate jobs and improve incomes, in particular in communities that host large numbers of refugees. A recent assessment of employment generation and training in host communities conducted by the ILO, (under the framework of the consolidated host community support), also recommended that consideration should be given to rapid implementation of small employment creation projects targeted at municipalities with especially high refugee densities². This calls for a series of

¹ UNHCR: <https://data.unhcr.org/syrianrefugees/country.php?id=107>

² Host community assessment for the UN host community platform - Livelihoods and employment group (still draft)

practical local-level interventions that stimulate job creation and business growth as well as an enabling environment. This is, in turn, expected to mitigate negative employment and wage impacts from the inflow of Syrian labour in the affected governorates.

The cooperation was started with partners in Irbid and Mafraq Governorates as well as upon a central level to implement the start-up phase of a response to the refugee crisis. The project is implemented under the framework of the ILO support to the response to the Syrian refugee crisis. The component named '*Enhancing access to employment opportunities and livelihoods in host communities*', was in turn implemented under the framework of the UNDP project '*Mitigating the impact of the Syrian refugee crisis on Jordanian vulnerable host communities*' and the already existing government agreement with the Ministry of Interior. The project has four interventions areas:

1. Value chain development in selected sectors in Irbid and Mafraq
2. Business enabling environment improvement, including addressing labour market challenges
3. Developing effective employment services and improving employability
4. Local capacity building to support business start-up and expansion

The value chain analysis of the current report belongs to component one, with all the components being complementary, and supporting each other.

2.2 Mafraq Governorate

Al-Mafraq is one of the governorates of Jordan, located to the north-east of Amman. It has a population of about 293,000, making up 4.5% of Jordan's population. Its capital is Mafraq, which is known for its military bases.

The governorate covers the entire North-Eastern part of the kingdom and is the only governorate in Jordan that has borders with three countries: Iraq to the east, Syria to the north, and Saudi Arabia to the south. It is bordered by Irbid and Jerash governorates to the west, and by Zarqa governorate to the south. Mafraq governorate is the second largest by area in the kingdom, but yet the second smallest by population density (after Ma'an). The climate is dry most of the year. The western region of the province is part of the fertile Houran plateaus that extend through Southern Syria, the Golan Heights and Northern Jordan.



The population is 30% urban and 70% is rural. Jordanian citizens make up about 94% of the population. The female to male ratio is 48.17 to 51.83 and a population density of 10.8 persons per km². The civil war in Syria resulted in the immigration of more than 560,000 registered Syrian refugees to Jordan, mostly settled in Mafraq and Irbid Governorates, and probably up to one million when including unregistered refugees. In July 2012, the Zaatari refugee camp was opened in Mafraq Governorate for Syrian refugees. Demographics of Mafraq Governorate 2004 Census 2011 Estimate:

The Department of Statistics census from 2012 showed that the Ministry of Labour issued 14,000 work permits to foreigners that year in the Governorate of Mafraq alone. Out of these permits, 10,000 were for farm workers, of which the vast majority were Egyptian. At the same time, the same census shows that the unemployment rate for the Governorate was at 11.8% or 8,532 people.

2.3 The tomato sector

Before choosing this sector, other relevant sectors were also considered for creating jobs and generating business opportunities. A number of criteria were assessed, such as outreach to affected populations, gender, market opportunities, employment growth potential, appeal to host communities, creating employment for women, and the interests of stakeholders and potential partners. A short list was prepared and discussed with Mol and at forums in the governorates. In both governorates, agro-business sectors were prioritised for the start-up phase with olives in Irbid and tomatoes in Mafraq. a

The tomato sector is a traditional source of income and livelihood in Mafraq and falls under the agriculture sector in broader economic terms and is important particularly to the rural poor households owing to the following reasons:

- Tomatoes provide income and hold potential for increasing the household income
- Tomatoes can be grown without advanced technology
- There are large areas of suitable agricultural lands

In keeping with the objectives of the project as well as the VCD philosophy, the selection of the tomato sector in Mafraq governorate can be justified on the basis of the points below:

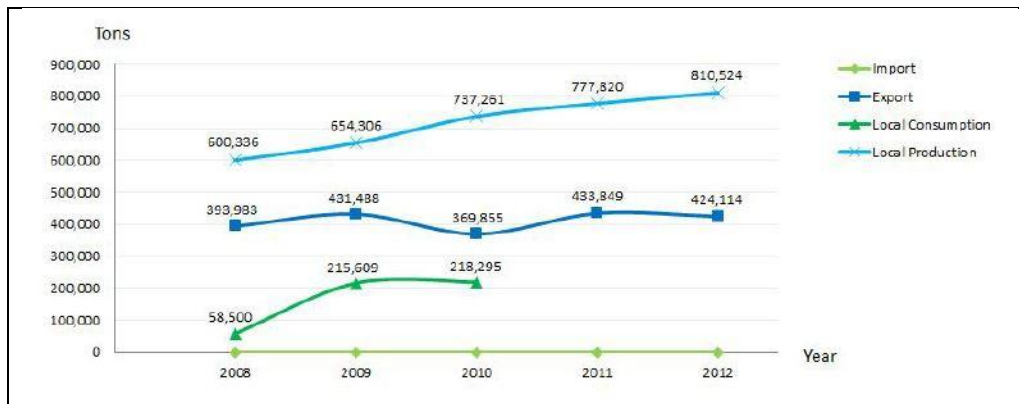
- Involvement of rural / poor households is considerably high in the sector
- It is a common small scale livelihood option in the governorate
- Presence of a clear value chain

- Input resources are adequately available
- There are opportunities for both export and expanding local market
- There is ample scope for improvements

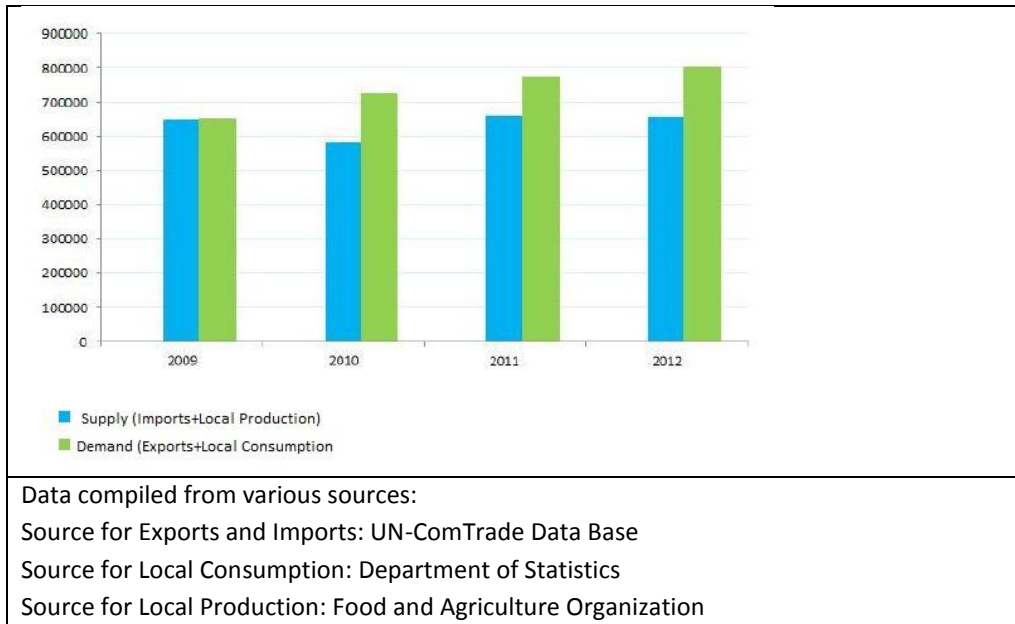
Jordan is considered to be in an advantageous position as a potential relatively low cost supplier of tomatoes. The local producers can pursue a strategy of selecting top quality products to endeavour to meet demand in the European, Gulf, and local markets with a variety of presentations including fresh and processed tomatoes.

Agriculture forms a central element of the economy for Mafraq Governorate, especially on the Houran Plateau in the western part of the governorate. The total area of fruit farms in the governorate for 2008 was 48.676 km², with a total production of 101874 tons of fruits, mainly apples and peaches, according to the ministry of Agriculture. The total area of vegetable farms in the province for 2008 was 8.295 km² with a total production of 15540 tons, with tomatoes, onions, garlic, and lettuce being the main products.

Jordan ranked 26th in global production of tomatoes in 2012, with the production of 810,524 tons of tomatoes, equal to 0.49% of global production. Egypt ranked 5th in global production of tomatoes in the same year, producing 5.1% of global production³.



³ UN Food and Agriculture Organization.



The sector is characterized by relatively small producers, who are, due to lack of other options, required to sell their produce through municipal wholesale markets. In general, producers tend to gradually improve their production technology, while maintaining their relatively traditional post-harvest practices. Their production is largely supply-driven, while the current marketing system does not induce improvements with regard to produce quality.

There are a number of tomato exporters who procure the fresh produce for exporting to neighbouring countries. Generally, they lack a long-term export strategy, reflected by the absence of investment in appropriate marketing facilities, equipment, etc. The emphasis of exporters, in particular those using road transport, appears to be on bulk shipments of low quality produce, packed in a traditional way by a variety of domestic producers for an undefined market. Shipments to the region, including the Gulf States, are customarily sold through local commission agents, without any forward sales agreements regarding quality, quantity, or price. Exporters are accustomed to responding to the oversupply situation in the domestic market rather than specific requirements of well-defined target markets.

Three tomato paste factories that were established in recent years have failed as a result of their inability to organize the production of farmers. Hence, farmers' production needs to be prolonged over an extended period of time, to match the capacity of the factories, and secured with long term contractual relationships that would take into consideration quality, quantity, variety, and continuity of supply. Unfortunately, the tomato paste factories traded just like the exporter in that they relied on random tomato oversupply situations to operate rather than long term contractual programs with tomato producers.

One factory in Mafraq is still in operation and has facilities for producing tomato paste and juice. It is however experiencing difficulties as it cannot produce at competitive prices, and is struggling with competition from imports, mainly from China. They complain that the cost of the raw materials are too high, and even hard to get when demand often exceeds supply. Interestingly, one of the new large sources of demand is the large Zaateri refugee camp, which has increased the demand for tomatoes considerably. All in all, this means that there is great, and probably increasing, demand to be met with the consequent opportunities for livelihood creation and economic growth to be explored.

3. Analytical framework: ILOs approach to value chain analysis

The project applied the participatory value chain development methodology of ILO, which is one of ILOs main tools for employment creation. It bases itself on the ILO manual 'Value Chain Development for Decent Work – A Guide for Development Practitioners, Government and Private Sector Initiatives' (2009)⁴ which is a well-tested tool that can be initiated rapidly. The strategy is to strengthen local capacity for value chain development and ensure local ownership of the process while at the same time conducting the value chain analysis.

The work was initiated with sensitization of stakeholders concerning value chain approaches and how to conduct a participatory value chain analysis, following the approach of the ILO guideline. The stakeholders were keen on the idea and methodology and it was decided to go ahead with one value chain in each governorate to start with. Following the guideline, local facilitators were trained to assess local value chains in a 'learning-by-doing approach. Under the projects facilitation, they undertook the data collection, conducted extensive interviews and held focus group meetings with stakeholders, including market actors and target groups. Thereafter, the facilitator teams conducted the analysis under the guidance of an ILO specialist, leading to a complete set of prioritised interventions.

3.1 The value chain

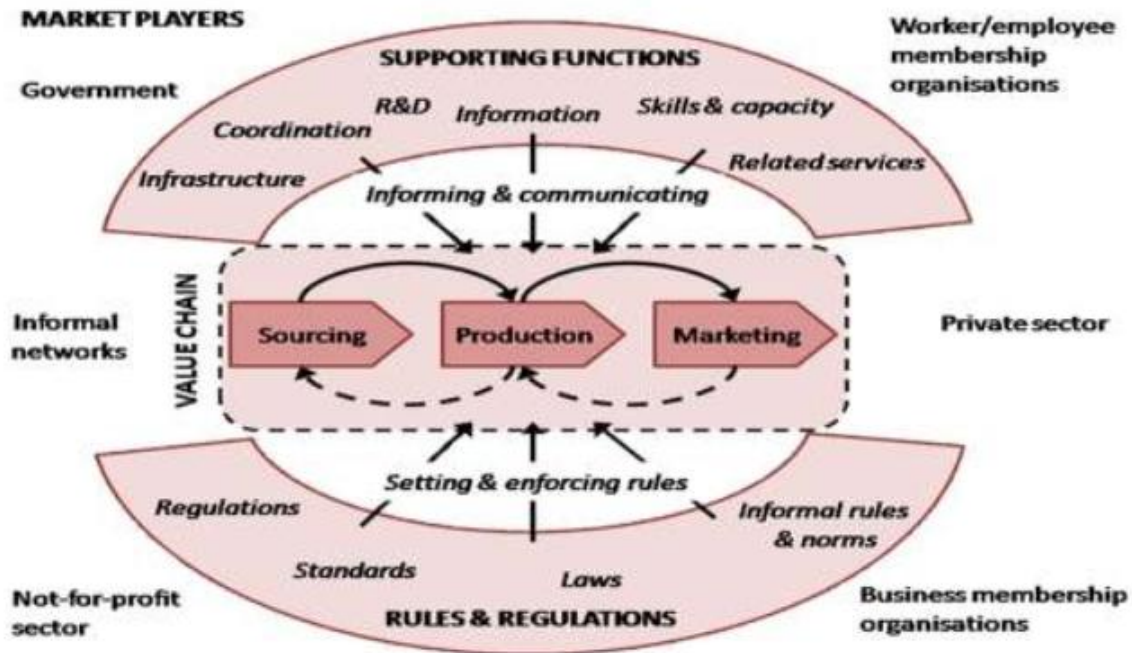
The term Value Chain refers to the fact that value is added to preliminary products through the combination of other resources (for example tools, manpower, knowledge and skills, other raw

⁴http://www.ilo.org/wcmsp5/groups/public/---ed_emp/---emp_ent/---ifp_seed/documents/instructionalmaterial/wcms_115490.pdf

materials or preliminary products). As the product passes through several stages of the value chain, the value of the product increases.

The figure below (from the manual) sketches the value chain approach and aspects to be considered:

The market system:



Source: Springfield Centre

Taking a value chain approach to economic development and poverty reduction (that includes creation of Decent Jobs) involves addressing major constraints and capitalizing on opportunities faced by input suppliers, producers, processors, traders and other businesses at multiple levels and points along a given value chain. This will inevitably include a wide range of activities such as improving access to necessary inputs, developing the capacity and skills of human resources, improving working conditions and productivity, strengthening the delivery of business and financial services, enabling the flow of information, facilitating improved market access, or increasing access to higher-value markets or value-added products. Value chain analysis identifies opportunities and constraints of a particular local/regional sector and analysis its market integration. The end result is an action plan or implementation matrix that proposes various solutions addressing identified opportunities and constraints.

3.2 Participatory value chain development for decent work

The approach for value chain development is to strengthen local capacity for value chain development in the process and ensure local ownership. A local lead is needed, i.e. a focal point organisation, to support the work locally. Local facilitators are trained and undertake the actual data collection and conduct the analysis under the guidance of ILO experts. This immediately addresses the specific value chain on which the work is conducted and, in turn, builds local capacity for undertaking such analysis and address constraints. The participatory approach

ensures local ownership and thereby the sustainability of the interventions. The participatory approach also advises a highly consultative methodology for both stakeholder engagement and research.

The first sensitisation workshop was held for main stakeholders of the governorate to inform about the project and to gauge the buy-in of stakeholder. Under the guidance of an ILO value chain development consultant, participants learned about the project and the value chain methodology and agreed to go ahead. Thereafter they were asked to appoint organisations and staff to join the research team. The governorates and key partners proposed team members for the value chain teams and as soon as the teams were appointed the facilitator training started. The training applied the methodology of learning-by-doing and was done with the two-pronged goal whereby participants are trained in the methodology and to do the value chain assessment while at the same time actually conducting the assessment, leading to the value chain analysis and intervention plan. See annex A for the list of the value chain team

Upon completion of the facilitator training, workshops were held where the facilitator team presented their initial results in the so-called hypothesis workshop and prepared for the field research and data collection. The research phase lasted the next two weeks where the facilitator team conducted focus group meetings and interviews to gather data and assess challenges and opportunities in the sector. The data was processed and, finally, findings were shared and validated with local stakeholders in the so-called presentation workshop.

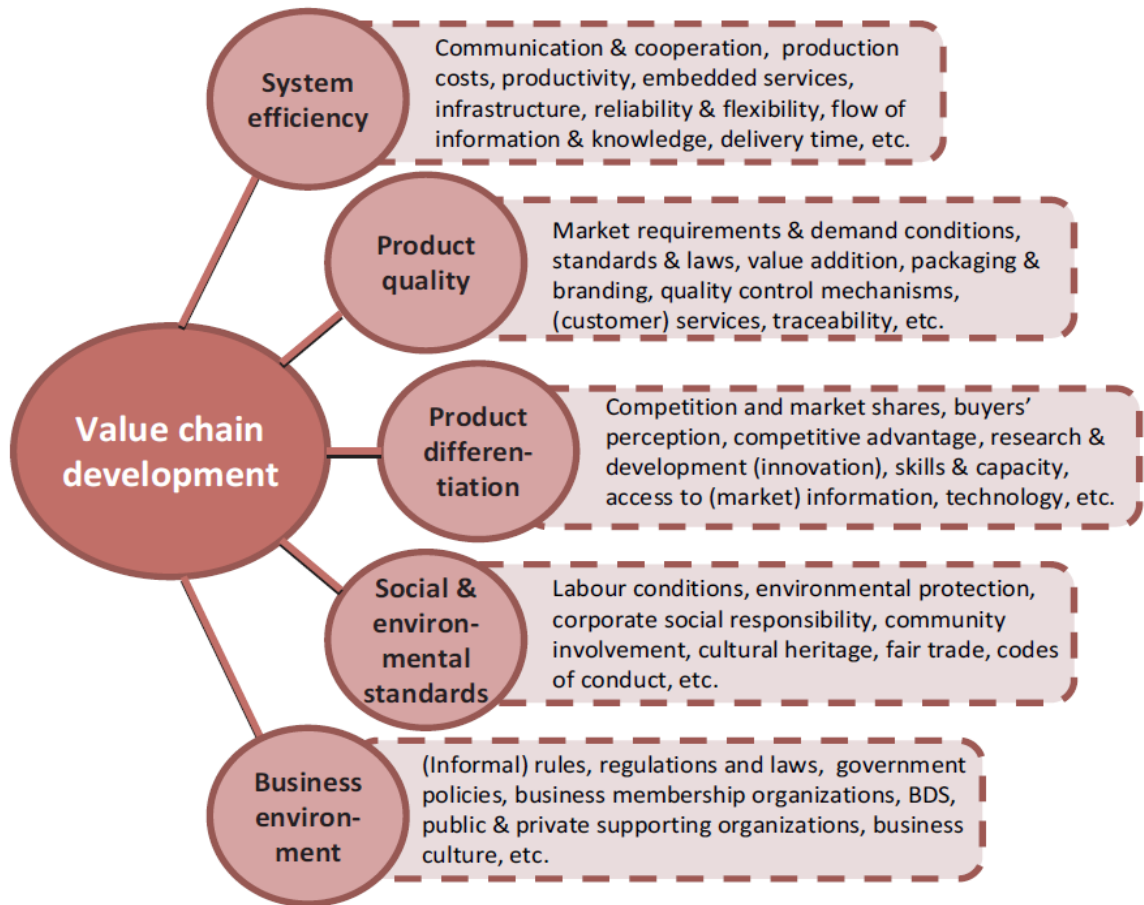
Upon completion of the value chain assessments, the intervention plan was made. An important factor is that the exercise identifies what needs to be done and who can do it, whilst promoting the concept of bringing stakeholders and resources together on tackling constraints, developing opportunities, and sourcing resources jointly. Hence, more work is needed to engage other stakeholders, whether that be central government or other development partners, to support the implementation. As for ILOs further support, a budget has been made available to start implementation during the so-called bridging phase of the project in the first half of 2014. The interventions will be implemented under the lead of local stakeholders, with assistance of ILO.

3.3 The five value chain drivers

To add a slightly more detailed set of factors that may influence the dynamics of the value chain, the ILO VCD approach emphasizes five drivers for value chain development. These are: system efficiency, product quality and specifications, product differentiation (competition), social and environmental standards (especially labour condition and practices), as well as policy

and regulatory frame work which affects the overall performance of the sector, as depicted below.

Five drivers of change for value chain development:

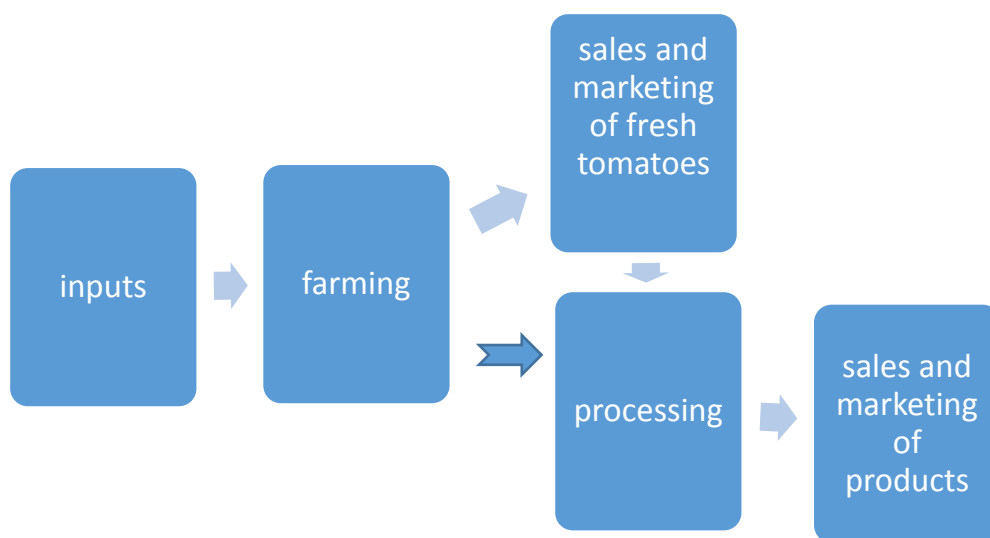


These aspects or drivers will be considered throughout the analysis of the value chain in the section dealing with the findings.

4. Main findings from the analysis

The value chain analysis is divided into three analytical groups: The value chain itself, supporting functions and rules and regulations as depicted in the figure on page 8.

Concerning the chain the research team identified five stages:



Based on this framework, the research team identified processes and constraints along the value chain, looking first at 1) inputs and sourcing, then 2) farming and production and finally 3) distribution and marketing.

4.1 First level: Input and sourcing

Mafraq has large cultivation areas and favourable weather conditions as well as access to relatively cheap labour. However, the tomato growing sector lacks professionalism and production technology. Access to irrigation water and diseases control is also an issue.

When discussing inputs, participants listed the inputs for the farming process, such as tilling equipment, seedlings, water pumps and irrigation equipment, fertilizers, poly tunnel covers, pesticides, manual tools and wooden crates for packaging. Two issues were highlighted in the research: the first is related to the quality of those inputs and the second to their price.

Regarding quality, it was assessed that the quality of the available inputs are not monitored as much as they should be, and thus their quality and effectiveness cannot be guaranteed. For example, the seedlings are not categorized based on their origins in order to allow the grower to choose the seedlings needed. So an initiative is needed to ensure the supply of **adequate seedlings** to the tomato growers in Mafraq, including the production of special seedlings for green houses.

The fertilizers and pesticides also tend to be of poor quality, according to several growers. In fact, some growers have faced major problems as a consequence of the application of useless, if not harmful, fertilizing materials in their fields. Thus, it can be concluded that there is room for improvement concerning the quality and standard of the farming inputs and **better quality control** is needed.

Moreover, the tomato growers suffer from **the rising costs** of a number of core items, especially the costs of inputs which keep rising continuously as opposed to the price of the end product. Many of the inputs are imported, relatively expensive and subject to fluctuating market prices and taxes. This is especially true for the wooden crates; these crates are usually imported from Syria, however the conflict in Syria has made it difficult to continue to obtain these crates at reasonable prices. Added to this crisis are the high import tariffs, increasing the price paid by the farmers which has to be reflected in the price of the end product.

Moreover, small-hold farmers find it difficult to get to use **mechanical tilling equipment** due to its high rental costs on one hand, and the rising cost of fuel on the other.

Concerning water, there is reportedly enough ground water available but it needs to be pumped up from about 600 meters underground. This means that **pumping the water up** requires fairly advanced equipment, which is prohibitively expensive. Concerning irrigation, the price of electricity is reportedly the major restraining factor. More research is needed to understand how reliable the supply of water is and if tomato production can be up-scaled in a sustainable manner.

4.2 Second level: Production

The great advantage is that the products are in high demand locally and internationally but the lack of knowledge in production techniques, poor quality fruit and poor cooperation between the value chain players remains a challenge.

Concerning planting and growing, the tomato growers in Mafraq have worked in the industry for many years, however they stick to traditional methods and varieties. They are not aware of the diversity of today's market demands and **focus only on producing one type of tomato**.

There are many varieties now that are also in high demand such as cherry tomatoes, industrial tomato varieties (for tomato paste manufacturing), as well as organic tomatoes at premium prices. Yet, these types are currently not produced as the growers do not seem to be aware of the market opportunities or market access is constrained.

Labour

There is a demand for more labour at farm level but this is most likely to be filled by immigrant workers since local Jordanians are less attracted to farm work. Getting enough labour to the farms seems to be one of the major production issues. The growers have also complained about the complexity in the process to get a license, for hiring migrant workers, from the Ministry of Labour. It is very costly and hence encourages informal practices. The **bottleneck concerning hiring of immigrant labour should be resolved**, and should not be considered an issue if it does not mean job losses for Jordanians

Jordanian workers are less interested in the field work but rather prefer jobs further up the value chain. Hence, it should be explored how **more jobs and livelihood opportunities can be created in higher value adding activities**, such as processing, either at industrial scale or cottage industry level. The latter may be particularly relevant for female entrepreneurs who can produce from home or in smaller production cooperatives. There is an opportunity to engage women in household production of tomato paste and dried tomatoes, initially, by building their capacity and linking them up with microcredit institutes. This can be done through an organized partnership with local technical stakeholders, such as IRADA, to conduct the technical capacity building and conduct the relevant feasibility studies.

Some stakeholders claim that **inappropriate working conditions for farm workers and low pay (possibly under the minimum wage) is the reason that Jordanians are not prepared to work on farms** and that if the conditions and pay were better, then Jordanians would take up farm work. A rapid study should be made to assess this situation with its cultural dimension, and if there is really significant potential for creating jobs for host communities at local farms, simply by improving the working conditions.

Increase quality and quantity of fresh produce

There seems to be an increasingly **high demand for tomatoes**, far exceeding what is currently being met by local producers. Hence, efforts should be invested into expanding production to essentially keep pace with current market demand, for example the tomato factory in Mafraq which reportedly cannot get enough fresh produce, as well as that of new potential markets.

Generally production is characterised by low-tech and traditional methods of growing tomatoes. Hence, to boost the sector there is a **need for technological upgrading and introduction of higher yielding methods**. Options for transfer of advanced technology include:

- a. Use of proper varieties that are appropriate for the area and are marketable locally and internationally. These must also be clearly identifiable as produced for the fresh or processing markets.
- b. Only strictly controlled use of pesticides and fertilizers, permitted internationally.
- c. Use of modern agricultural technologies required by GlobalGAP and accepted by importing countries.
- d. Training for the labour force on applications of modern agricultural techniques, ranging from planting, to proper harvesting and/or processing, in order to attain the high quality production that meets national and international specifications.

Transfer of advanced technology in the areas of picking, grading, cooling, storage, packaging, processing, and transporting through:

- a. Continuous consultation and co-ordination with the buyers, importers, and the parties involved in order to stay informed about the pre-set conditions, specifications, and standards that precede the preparation processes for marketing locally and for export marketing.
- b. Investment in picking, grading, packaging, cold storage, and equipment needed to ensure proper handling of products and preserving its quality during its stay in the storage.
- c. Training technical staff that are able to prepare the product within the required specifications, efficiency, and at minimum costs.
- d. Providing the paste factories with the high quality raw materials required to maintain a high quality product at every stage until it reaches the consumer.
- e. Maintain highest sanitation conditions inside and outside the Packaging Centres, Paste Factories, and Sun Drying Sites through installing appropriate systems and training specialized staff.
- f. Installing proper systems and following appropriate measures and practices to insure fulfilling all production and value adding requirements.
- g. Acquiring certificates and licenses that attest to the conformity of the products and the production practices to the requirements.

Upgrading production methods should increase yield and improve the quality whereby the produce should also become more price competitive.

Product differentiation

As growers and the whole production system in Mafrag tends to focus on one traditional variety of tomato, options for increasing income and reaching new markets through product differentiation needs to be explored.

One product that sees very high international demand is sundried tomatoes. Jordan's local production of **sun-dried tomatoes** in 2010 was 185 tons, but a further 281 tons of sun-dried tomatoes were imported in the same year. See annex C for further details. Also **tomato paste** sees huge demand internationally and even in the domestic market there are opportunities; Jordan currently imports over a third of its tomato paste, mainly from China and Syria, so promoting local produce on the domestic market may offer good marketing opportunities. See annex D for further details.

There is also a **huge market for organic tomatoes**. There is some organic growing going on **but the mechanisms for control and certification are not in place**. So even if some producers label their products 'organic' this is not certified and there are reportedly a great number of producers that take advantage of the lack of controls and falsely sell their products labelled as organic. An initiative should be launched for such certification, possibly through a farmers' association or a standards and control board.

Overall, the option of introducing new varieties of tomato and new production methods, such as organic farming, to meet market demand and market trends, should be explored. **Pilots and demonstration models** should be launched to test new species and research and refine methods that introduce farmers in practical ways, with a view to increasing their awareness and confidence to engage in new ideas.

More value adding activities

The large tomato **factory has idle capacity** due to an increasingly sustained lack of tomatoes from the farmers at an affordable price. Currently farmers are selling for export, for example to Iraq or to the Zaateri camp, and get far higher prices than the factory can economically pay. There should however be a possibility of increasing production and through more effective methods be able to supply tomatoes to the factory at a competitive price. Hence, there seems to be plenty of unfulfilled demand domestically that suggests a need for more efficient production to ensure prices are competitive.

There are many options for smaller businesses to enter into manufacturing of various tomato products. These include paste, sundried tomatoes and juice. A **market assessment should be made** to assess business opportunities for higher value adding businesses in the tomato value chain.

There is apparently a **reluctance from the growers to developing their activities away from the traditional methods** because of the uncertainty concerning costs and market demand. Hence, there is a need for assessing and documenting the demand and at the same time demonstrate the method and profitability of changing practices and product types.

Finally, there is very **little cooperation and exchange of information** between tomato growers. Bringing the farmers together to develop the sector, work together on developing new markets and new products could bring great benefits. The same applies on the input side where cooperation for purchasing in bulk, increased bargaining power or creating joint businesses to supply goods and services they lack, could be a great lever for development of the sector. Even working together to enter into dialogue with government and advocate for changes and assistance could bring advantages to the farmers. Currently, there is however little sense of initiative towards joint efforts. Therefore, launching an initiative to **sensitise growers to the concept of having a business association, working together, usefulness of cooperatives and advocacy work** is recommended. This would hopefully lead to further cooperation, strengthened bargaining positions and empowerment of the farmers.

4.3 Third level: Sales and marketing

Tomato producers in Mafrq have fairly good access to both local and international markets. However, a number of challenges remain such as poor transport/logistics, lack of long term planning and cheap imports that often compete with local fresh and processed products. Moreover, the political instability in the region could result in sudden boarder closures and many other unforeseen problems.

Mafrq Governorate is characterized by numerous small-holder tomato producers who are estimated to produce about 70% of the total volume of tomatoes produced in Jordan. However, this structure has led to certain marketing challenges. These challenges include:

Domestically, tomato growers are almost entirely reliant on the central market in Amman (Souk Wasit) to sell their tomatoes, and this makes them very dependent on the traders and day to day price volatility.. Those traders ultimately control the prices of the tomatoes, securing that their share of the profits is intact in all events, while the risk of any losses sits solely with the farmers. An alternative **market option is lacking at present**. The monopoly of the central market traders puts the growers in a very weak bargaining position. Ideas for viable alternatives are crucial, such as, joint marketing through producer cooperatives, or virtual buyer / seller platforms, in order to create a fairer, more transparent and wider marketplace.

The tomato harvest is seasonal, leading to a supply glut in small windows of time whilst demand supersedes supply at most other times of the year. One solution could be to promote the wider usage of **greenhouses to lengthen the season**, which would also protect and improve the quality of the fruit. Hence, there is a need for awareness raising and training in the use of greenhouse technologies, possibly including production of low cost greenhouses, and better packaging and transportation to reduce post-harvest losses. Access to new market channels, for

example through the large – currently totally underutilised - tomato processing facility just outside Mafraq, needs to be explored.

Moreover, given the **lack of cold storage facilities**, growers are forced to sell their products immediately after harvest to avoid any losses. Such facilities could put the growers in a better bargaining position where they can hold on to their produce when market prices are low.

The **demand for tomatoes fluctuates** due to the lack of political stability in the region, especially between Jordan and its neighbouring countries. The exports opportunities vary and may suddenly disappear, leading to losses for the growers. In recent years, the growers were affected because of the instability in Iraq which has only changed this year, again allowing the growers to export their products in larger quantities to Iraq.

As earlier mentioned, the tendency is that the growers produce only one variety of tomatoes with **little knowledge of market demands and trends**. Hence, providing farmers with better knowledge of market opportunities could be a great lever for development of the sector. A proper **study of market opportunities**, possibly in conjunction with a sector wide marketing plan, should be conducted.

Locally, **demand can also be furthered if cottage industries are promoted**. However, it appears that the relationship between tomato growers and the small-scale producers of household products such as tomato paste or dried tomato is unstable and tense due to discouraging past experiences. Yet, these firms are still surviving and may have a capacity to purchase and produce more quantities of tomatoes than currently is the case.

Another factor that is negatively affecting the export potential of the sector is the fact that **freight prices from Jordan are higher**, in fact much higher than from similar tomato exporting countries in the region, such as Egypt. Work in co-operation with the freight companies and transport services to reduce the price, improve product handling operations and reduce the time taken for transportation in order to preserve the quality of the produce during transit, and at a reasonable costs is needed.

4.4 System efficiency

There are opportunities for reducing costs and increasing efficiencies in the market if value chain stakeholders – large and small – work together. Buyers want to buy products of the highest possible quality at the lowest possible price; they want quick and flexible responses to their orders and short delivery times. In order to achieve these market requirements all opportunities for increasing system efficiency need to be explored – and this requires cooperation and coordination of activities amongst value chain stakeholders.

The tomato value chain in Mafraq sees **very little cooperation - whether horizontally or vertically – and there is no formal mechanism for promoting the interests of the sector or cooperation.** The sector could benefit a lot from cooperation between farmers and along the value chain between sellers, buyers and service providers. There seem to be many shared problems which could be overcome by helping the producers in getting better organised. This could for example be in a business association that takes responsibility, for example, for quality certification of inputs, certification of producers, market access and advocacy for support from government when needed.

There is reportedly a lack of trust between farmers and government institutions. Stakeholders are **missing a government role in protecting and helping the sector**, whether on the level of the sustainability of export operations, which need planning and political stability, or concerning taxes that negatively affect the stakeholders in all stages of the value chain. This can be mended though **promoting dialogue** where stakeholders articulate their difficulties and work with the local government on how to resolve issues, with the joint goal of stimulating economic growth and job creation. However, there is also a lack of initiative from the entrepreneurs to look for solutions for the sector whether through creating coordination mechanisms or through developing the product. Stakeholders would of course also need to understand and appreciate the importance of getting involved and cooperating to address joint issues.

4.5 The supporting factors

Supporting factors include the widest range of institutions, structures and establishments, such as governmental organizations, the private sector and civil society organizations that somehow can be considered a support or service provider for the sector. The supporting factors include infrastructure, information and data, training and expertise, research, development and coordination

Infrastructure: the need for rehabilitation of the agriculture roads is one of the most pressing factors concerning production operations, and would contribute to avoiding the damage of the products. Electricity is available but the contracting company adopts rigid rules regarding money collection and the price is a heavy burden on both growers and business owners.

Coordination: The research findings indicated that there is very little collaboration and coordination from the side of potentially supporting institutions.

Data and Research: There are research centres (such as the National Centre for Agriculture Research) but they are reportedly lacking resources. The lack of human resources and the limited budget, results in poor research work and very weak mechanisms for sharing the

research results and applying them on the ground. Some data is available, but the tendency is that it is either not accurate or not published and shared with the public. On a positive note, it should be mentioned that the National Centre lately contributed to addressing the diseases that affected tomatoes, especially the Tuta Absoluta which is considered a destructive infection. The interventions of the researchers in the centre contributed to a large extent to eradicating this disease.

Training: Some public departments such as the Department of Agriculture, governmental programmes such as IRADA and the National Centre of Agriculture Research, as well as NGOs, conduct various technical and managerial trainings. However, most of these trainings are not associated with any field work, which is huge problem as this is exactly what the farmers need, field based training. This could be done by agriculture engineers and extension officers from governmental departments, except for the scarce numbers of agriculture engineers and their transportation budget that's reportedly too restricted, for them to operate effectively in the field. So **growers are hardly receiving any services and support**, and growers in remote areas are particularly negatively affected.

4.6 Enabling Environment

Any economic sector is influenced by a number of factors that go beyond direct production related activities, such as the rules and regulations governing the geographical and sectoral area, including informal rules and social values.

Rules and regulations: Value chains do not exist in isolation but they are embedded into a highly complex social, economic, political and cultural environment, which determines the nature and success of business transactions within the chain (e.g. investments or business start-ups). The business environment can be seen as consisting of an immediate environment in which enterprises are part of markets in which they use various resources and markets in order to produce products and services. The market in turn is influenced by regulations, institutions and interventions that immediately affect a particular sector (such as labour regulations).

Laws and standards: Despite the existence of national standards and regulations for agricultural production, these are not enforced and hence not effective. **Information of standards etc. are also not disseminated** to the growers.

Growers also find that the **level of taxes are too high**.

Many growers talked about the control and **monopoly-like influence** that few larger farmers have on the dynamics of the sector. It was assessed to be due to their connections with the

government which served only a few large farmers. This structure may marginalize smaller farmers and put them in a more disadvantaged position.

Concerning the laws and regulations, growers and entrepreneurs find that many of **the laws in the sector are unclear and ambiguous** which leads to discretionary interpretation of the rules and laws. Moreover, entrepreneurs and farmers are not involved and have **no say in policy making** and other legislative activities that affect their businesses.

Hence, there is a need to disseminate clear guidance on standards, laws and regulations that affect the operations of farmers and entrepreneurs in the tomato sector.

Social & environmental standards: Consumers are becoming increasingly aware of social and environmental standards and are increasingly demanding products that fulfil these requirements. Retail and multinational companies are feeling pressure from consumer organizations, media, governments and NGOs to improve social standards in their supply/retail chains and to minimize environmental impact. The ILO's International Labour Standards are playing an increasingly important role and are being included in codes of conduct of private sector CSR initiatives. Here again, it is more than a matter of doing business in a socially responsible way: it is in the commercial interests of companies to react to this consumer demand. Ensuring good social and environmental standards also means being able to trace products and services all the way back to their origin. This requires that businesses along the value chain cooperate.

Across the tomato value chain in Mafraq there is however **very little knowledge of social and environmental standards, which will prove to be very decisive in endeavours to reach international costumers**. Therefore, efforts are needed to sensitise growers and other value chain stakeholders to the importance of respecting decent standards across the value chain, and for all stakeholders to agree on doing so, as any weak links can prove detrimental for all the farmers and businesses in the sector.

4.7 Decent Work in the tomato value chain and gender

Growers in the tomato sector employ workers mainly from Egypt and Syria. These workers need permits from the Department of Labour. There does however, despite their legitimacy, seem to be **a decent work deficit for the farm workers**: regulations for health and professional security are mostly not enforced. Pay could be unfair in comparison to the daily number of working hours. In addition, fields are usually not equipped with restrooms for workers. Growers also would not mind employing minor children if those were able to perform the required work. Moreover, there are no criteria to respect gender differences in employing and choosing

adequate jobs for women. Finally, the inspectors of the Department of Labour do not seem to be performing the needed effort for the enforcement of these criteria.

The number of Jordanian males working in Agriculture is negligible, and the number of females, mostly working as temporary daily pickers, is marginal. It is estimated that **50,000 Syrian refugees are working illegally** (without working permits) in the Northern Governorates. The Ministry of Labour does not have a capacity to control the illegal workers from the refugee camps. Workers caught working without permits are returned to the camps or deported. There is reportedly also **child labour**, and there are no measures to safeguard occupational health and safety.

In summary, the findings from the data collection and analysis of the identified issues can be grouped into the following intervention areas:

1. Improve inputs in terms of quality and price
2. Develop new products and increase production with technological upgrading
3. Market development
4. Improve efficiency of value chain
5. Improve support structures and services for the sector
6. Improve the enabling environment

These are described in details with proposals for action in the intervention matrix in the next section.

5. Intervention matrix

Based on the findings, intervention areas have been identified. Together with stakeholders from the sector, the core team has formulated intervention proposals and activities, which it believes will improve the conditions in the tomato value chain, create more income and pro-poor growth and hopefully make the sector more competitive. These are presented in the intervention matrix. Not surprisingly, there are topics that are overlapping between the categories but they are still presented in each intervention area to have the complete picture group by group.

The Department of Agriculture has been appointed as main partner by the governorate. It is however recommended that a task force and a larger group of partners become involved as ‘responsible partners’ (therefore the column is left blank until stakeholders have gone through this process and decided).

| Constraints and opportunities | Interventions | Activities | Responsible partner | Expected outcomes |
|--|--|--|---------------------|---|
| Intervention area 1: Improve inputs in terms of quality and price | | | | |
| Poor quality inputs | Ensure quality control of inputs, especially for fertilizers and pesticides. | Establish a central nursery and experimental fields Support the governmental nursery to produce special seedlings for greenhouses Establish nurseries that sell plants for farmers at a reasonable price | | Improved competitiveness due to cheaper inputs and ability to produce better quality products |
| Rising prices for inputs | Establishment of agri-banks for agricultural supplies (not funds) | Explore options and find out who can provide support with agricultural supplies | | |

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| High prices for pumping water and irrigation | Support of renewable energy systems to farms Facilitate access to financing | Promotion campaign Disseminate information about financing and other support options | | |
| | Introduce water conserving growing methods (e.g. drip irrigation) | Make a water conservation campaign Create demonstration model | | |
| Poor quality or wrong types of seedlings | Ensure correctly labelled seedlings and provision of appropriate varieties of tomato, including those for green houses | Establish nurseries that sell plants for farmers at a reasonable price as a business development service, preferably private sector-led or through a business association, farmers association or a cooperative. | | |
| Intervention area 2: Develop new products and increase production with technological upgrading | | | | |
| Growers meet obstacles when endeavouring to get permits for migrant labour | Bottleneck concerning hiring of labour should be resolved (possibly in conjunction with component 3 and the Local Employment Council) | Assess whether migrant labour is a threat to jobs for local and if better conditions for farm workers would attract more unemployed Jordanians to work on farms | | Higher yield, better ability to meet new market demands, more business opportunities, better and more competitive products |
| Business opportunities in higher value added activities | Examine jobs and livelihood opportunities in higher value adding activities Explore cottage industry market and income | Prepare a catalogue of opportunities Make demonstration training and projects for new products such as sundried tomatoes and cottage industry style production of paste and | | |

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| | opportunities (as a part of a large market study, see later section) | juices. Introduce new methods of packaging | | |
| High unmet demand for tomatoes | Need for technological upgrading and introduction of higher yielding methods | Use of proper varieties that are appropriate for the area and are marketable locally and internationally. This must be clearly identified as produced for fresh or processing markets. Controlled use of pesticides and fertilizers permitted internationally. Use of modern agricultural technologies required by GlobalGAP and accepted by importing countries. Training farmers on application of modern agricultural techniques covering the range from planting, to proper harvesting and/or processing, GAP etc. in order to maintain high quality production that meets the national and international specifications. | | |
| | Transfer of advanced | Continuous consultation and co- | | |

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| | <p>technology in the areas of picking, grading, cooling, storage, packaging, processing, and transporting.</p> | <p>ordination with the buyers, importers, and the parties involved in order to stay informed about the pre-set conditions, specifications, and standards that precede the preparation processes for marketing locally and for export marketing.</p> <p>Awareness of need for investment in picking, grading, packaging, cold storage, and equipment needed to ensure proper handling of products and preserving its quality during its stay in the storage.</p> <p>Training technical staff that are able to prepare the product within the required specifications, efficiency, and at minimum costs.</p> <p>Providing the paste factories with the high quality raw materials required to maintain a high quality product at every stage until it reaches the consumer.</p> <p>Maintain highest sanitation conditions</p> | | |
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| | | <p>inside and outside the Packaging Centres, Paste Factories, and Sun Drying Sites through installing appropriate systems and training specialized staff.</p> <p>Installing proper systems and following appropriate measures and practices to insure fulfilling all production and value adding requirements.</p> <p>Acquiring certificates and licenses that attest to the conformity of the products and the production practices to the requirements.</p> | | |
| Focus on one traditional variety of tomato | <p>Increasing income and reaching new markets, through product differentiation to be explored</p> <p>Introduce new varieties and production methods</p> | <p>Make pilot models on new varieties (e.g. cherry tomatoes), for demonstration and documented for training and research.</p> <p>Make pilots on new products (e.g. sundried tomatoes), demonstrated and documented for training and research.</p> | | |

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| | | <p>Make pilots on new production methods (e.g. organic tomatoes, hanging plants), demonstrated and documented for practical training and research.</p> <p>Gauge interest of farmers and offer training if desired</p> | | |
| No use of green houses and other more modern technologies and method for growing tomatoes | <p>Introduce greenhouse technology to increase yield and prolong season</p> <p>Introduce new crops planting methods (hanging plants)</p> | <p>Make demonstration model</p> <p>Conduct awareness campaign about advantages of growing tomatoes in greenhouses and use the hanging plants method</p> | | |
| Little quality control and poor enforcement | <p>Introduce better quality control</p> <p>Create awareness of advantages of being certified</p> | <p>Activating quality assurance systems in agricultural production</p> <p>Conduct training and awareness campaigns about quality certificates (GAP/HACCP/ISO) and advantages of having these, such as meeting requirements of international buyers</p> | | |
| Intervention area 3: Market development | | | | |
| Little knowledge of market opportunities | Preparing a market study and marketing plan to serve both local and international | <p>Conduct marketing study</p> <p>Prepare joint/sector-wide marketing</p> | | Access to new markets, more income and |

| | markets | strategy | | business opportunities |
|--|---|---|--|------------------------|
| | | Promote understanding of international markets requirements and standards | | |
| Lack of market choices domestically and dependence on monopolistic traders | <p>Activating the central market of Mafraq to reduce dependency on traders</p> <p>Establish marketing cooperatives to participate in market management</p> <p>Reduce the negative price impact from tomato gluts by levelling out the supply through usage of cold storage facilities and greenhouses to prolong the season</p> | <p>Advocate to the government for the establishment of a vegetable market in Mafraq</p> <p>Create awareness of options to decrease dependence of a few traders, how to strengthen their bargaining position and cooperate to have their own sales organisation, possibly in the form of a cooperative</p> <p>Establish cold storage facilities, possibly through a cooperative</p> <p>Create awareness on how the season can be lengthened in greenhouses</p> | | |
| High freight prices and slow transit processes | Identify and address freight issues to make export more competitive | Create opportunity to discuss the implications of the freight challenges on the competitiveness of the tomato sector and how it affects all levels of the value chain. | | |

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| | | Identify the source of the problem and find solution | | |
| Intervention area 4: Improve efficiency of value chain | | | | |
| No cooperation - whether horizontally or vertically – | Enhance cooperation and exchange of information between tomato growers | Sensitization meeting to build awareness on advantages of cooperation, running a small business association and advocating for government support | | Sector capacity to address problems, empowerment of farmers |
| No mechanism for promoting the interests of the sector | Create a business association | Conduct training in establishing a business association Provide assistance in starting up the association | | |
| Poor cooperation between stakeholders in the sector | Create a forum for stakeholders in the sector, both private sector and government. | Organise regular meetings (monthly?) Support the chambers of commerce and industry to include agriculture and strengthen their capacity to assist small agro businesses | | |
| Intervention area 5: Improve support structures and services for the sector | | | | |
| Growers and other stakeholders receive very little services, information and support | Improve the service delivery and information provision of local extension offices under the Department of Agriculture | Provision of training and information, such as: Targeting farmers and households to improve production methods, quality | | Better support leading to better methods and know-how |

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| | | <p>and quantity</p> <p>Agricultural manufacturing training</p> <p>Awareness on the effectiveness of greenhouses agriculture</p> <p>Integrated Field Management training</p> <p>Issuing brochures and information fact sheets for climate and environmental changes, diseases and market needs</p> | | <p>which in turn improves products and business</p> |
| | <p>Encourage establishment of cooperative and/or forums to enhance coordination and collective work of existing institutes and individuals, and to provide services i.e. packaging, cooling, and marketing services to member farmers.</p> | <p>Awareness creation</p> <p>Possibly support in the form of technical assistance for organisational development</p> | | |
| | <p>Improve access to business development services (in conjunction with component 4)</p> | <p>Create awareness on entrepreneurship training options</p> <p>Pilot entrepreneurship training for farmers and for small-scale cottage industry producers</p> <p>Conduct information campaign about access to technical assistance and</p> | | |

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| | | financing Assist relevant finance institutions and funds in making it easy for farmers to access loans. | | |
| Intervention area 6: Improve the enabling environment | | | | |
| Little government support and no dialogue | Increase dialogue and advocacy capacity of the stakeholders in the value chain (possibly in conjunction with component one on improving the overall business environment of Mafraq Governorate) | <p>Improve competitiveness by reducing input prices: Advocate for lower taxes and lower prices on electricity</p> <p>Advocacy for solving the foreign labour issue with the MOL</p> <p>Include the agricultural unions and cooperatives in governmental related decision making processes.</p> <p>Expanding the role of the chambers of commerce and industry to include agriculture and agro businesses or create a separate business membership organisation to advocate for the growers' interests</p> | | Dialogue leading to addressing of problems, better business and livelihoods |
| Unclear regulatory framework | Improve regulatory framework and ensure that stakeholders understand their rights and duties | <p>Disseminate clear guidance on standards, laws and regulations</p> <p>Review of laws and regulations</p> | | |

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| | | relevant to all level of production and quality in the Tomato sector. | | |
| Little knowledge of social and environmental standards, which will prove to be very decisive in endeavours to reach international costumers | Increase knowledge of social and environmental standards | <p>Conduct assessment to identify deficits in terms of knowledge and implementation of social (incl. labour) and environmental standards</p> <p>Conduct training for extension service trainers to train farmers</p> <p>Cooperate with international buyers to understand their requirements, possibly in the form of a buyer-seller forum</p> | | |

Institutional structures for implementation needs further decision from the group of local stakeholders. Please see next and final section for recommendations and follow-up activities.

6. Recommendations and next steps

Other follow-up actions and recommendations include the following:

- The analysis of the findings and proposed solutions should be further reviewed and revised in a verification workshop with project beneficiaries, i.e. farmers, both large and small and other businesses operating in the tomato sector.
- Then the report should be presented to the Local Committee meeting to get comments, feedback and inputs as soon as possible.
- The responsible partners should be more detailed and allowing for a wider group of local organisations to implement interventions, in cooperation with Department of Agriculture which remains the main partner. The Local Committee meeting and verification workshop can be used for gathering inputs and securing commitment.
- The Local Committee of the governorate is overall responsible for monitoring implementation but it is recommended that a task force is formed which will be responsible for securing smooth implementation on a day-to-day basis. The task force should be led by either DoA or the governor's office and regular meetings – for example monthly – should be held to ensure the coordination and monitoring of implementation of sector specific activities.
- ILO and local partners already agreed on which activities will be supported by ILO for the first period (first half of 2014). Further partnerships and sources of funding needs to be identified.
- The intervention matrix should be seen as a living document that can be revised when needed.
- Proper monitoring and documentation system for value chain development activities should be established for the project. The larger ILO project 'Local Economic Development for enhance access to employment and livelihood opportunities for host communities' is expected to start in the course of 2014. A monitoring framework based on the DCED guidelines is envisaged and the tomato value chain should be captured in this framework.
- A gender specialist should be invited to assess possible gender dimensions of the value chain and adjust interventions to take into account the different needs and roles of women and men by promoting equal opportunities for both sexes.

In sum, there huge opportunities for expanding the tomato sector and use it as a vehicle for creating income, business and livelihood opportunities. A number of issues will however need to be tackled and it will take effort, initiative and cooperation from all stakeholders in

and around the value chain to succeed in addressing the constraints and taking advantage of the opportunities offered.

Annex A: Members of the value chain team

List of Participants in Mafraq -Value Chain Exercise

| Name | Job Title | Address |
|---------------------------|---|--|
| Jamal AL Sarhan | Assistant of the Governor office | Mafraq Governorate |
| Dr.Yousef Al Shriadeh | Director | Vocational Training Institute for the Ma |
| Abdel Hameed Al Harahsheh | Director | Directorate of Labour in Mafraq |
| Odeh Al Sroor | Chairman | Farmers Union |
| Awni Al Shdeifat | Director | Mafraq Governorate Directorate of Agri |
| Hussein Al Khaldi | Engineer | Directorate of Agriculture Western Badi |
| Hazem Shdeifat | Cooperatives Director of Mafraq Governorate | Cooperatives Director of Mafraq Gover |
| Amal Al Roomi | Vegetarian agricultural production engineer | Mafraq Agriculture |
| Saif Al Sardi | Engineer | Research and Agriculture Extension Cen |
| Doaa' Dalahmeh | Engineer | Directorate of Agriculture-Amman |
| Sharif Bani Hani | Engineer | Diretor of Environment |
| Bayan Bani Hani | Engineer | Engineers Syndicate |
| Mohammad Arsalan | Director | Chamber of Industry-Zarqaa |
| Mohammad Sarhan | Engineer | Badia Agriculture |
| Jamal Sroor | | Badia Agriculture |
| Hazaa Hitheban | Farmer | Um AL Sarb-Mafraq |
| Ghaleb Al Khawaldeh | Director | Agricultur Fund |
| Sultan Mahmoud | Farmer | Um al Jemal-Mafraq |
| Ayman Abu Kishek | Farmer | Um al Jemal-Mafraq |
| Ayyob Abu Shaqoora | Farmer | Dafyaneh-Mafraq |
| Omar Abu Shaqoora | Farmer | Al Manara-Mafraq |
| Othman Abu Shaqoora | Farmer | Al Hamdyeh-Mafraq |
| Akef Al Khashman | Farmer | Sama Al Sarhan-Mafraq |
| Mohammad Shdeifat | Engineer | Agriculture Engineers Syndicate |
| Mohammad Al Saoon | Chirman of association | Sabha-Mafraq |
| Nidal Fetyan | local community | Mafraq |
| Botros Al Kawakeet | Engineer | National Center for Researches |
| Mohammad AL Omoosh | Engineer | National Center for Researches |
| Afaf Al Athamat | Engineer | National Center for Researches |
| Firas Al Harahsheh | Engineer | Agriculture Engineers Syndicate |
| Kasem Al Kataan | Farmer | Sabha-Mafraq |
| Manal Khaleel | Liasion Officer | Princess Basma Center for Development |
| Khaldoon Abu Qamo | Farmer | Mghayer AL Sarhan |
| Odeh Mohammad | Farmer | Zatari |

| | | |
|--------------------|----------------------|--|
| Mohammad Farajat | Farmer | Mafraq |
| Anwar Katan | Farmer | Sabha-Mafraq |
| Yousef Abu Rabee | Farmer | Al Ashrafyeh |
| Rakan Al Katan | Farmer | Sabha-Mafraq |
| Khalaf AL Taoon | Farmer | Sabha-Mafraq |
| Faleh Al Saoon | Farmer | Sabha-Mafraq |
| Hussein Al Zawahi | Farmer | Sabha-Mafraq |
| Abdel Hadi Al Madi | Agriculture Engineer | Directorate of Northern Agriculture Badi |
| Sami Abu Dijleh | Farmer | Sabha-Mafraq |
| Ibraheem Abu Saleh | Farmer | Mafraq |

Annex B: Institutional mapping

| VC player/ institution | Their role? | Support to the tomato value chain? |
|--|--|---|
| Ministry of Labour | Work permits to foreign labour. | Lower cost of labour. |
| Governorate of Irbid | Liaison between producers and Central Government. | Facilitate farmers obtaining permits and legalization. |
| Ministry of Agriculture | Technical and statistical help to producers. | Improve production and techniques. |
| Universities & Research Centres, Extension Services. | Improve production techniques and new varieties. | Alleviate low productivity, improve excellence. |
| Ministry of Trade and Industry | Facilitating marketing & exports of Agricultural products. Bilateral agreements. | Help producers and exporters market and export their products freely. |
| Farmers Union, Exporter's Associations | Organize farmers, processors, and exporters. Act as a platform for negotiations amongst all. | Boost production and exports. |
| Ministry of Transportation | Help in providing logistical solutions and organize transporters. | Boosts and facilitates exports. |

Employers representatives:

- Jordanian Chamber of Industry, Amman – Has recently established a SMEs Directorate and will launch support programmes. They also have a SME department in Irbid. The Chamber expressed strong willingness to cooperate and preparedness to engage by means of its local affiliates across the country (in this case relevant only for Irbid and Mafraq). One issue emphasized was the fact that entrepreneurs generally come to them only to get loans but not other services and training, reportedly because availability of such services is limited.
- Jordanian Chamber of Commerce, Irbid – Adequate infrastructure, capacity and willingness to assist entrepreneurs and engage in creating an enabling environment. They have established a One-Stop-Shop with representation of a number of Government agencies to assist enterprises in handling government procedures.

Governmental entities:

- The Directorate of Labour in the two Governorates – key members of the Local Committee and willing to cooperate.
- The Vocational Training Corporation (VTC) – In charge of vocational training in both Irbid and Mafrq. Training offered is demand driven and often done in cooperation with employers. Should be linked to possible intervention in employment services. They offer training in OSH. Has the structure and interest in cooperation on offering various trainings that would have to be delivered under the project, including tailor-made short-term trainings.
- IRADA – A government programme offering advisory services for business start-up and finance. A close partner of the project under the entrepreneurship component.
- The Development and Employment Fund – advisory services and financing
- The Local Committees in the two Governorates will play a key role as each of them comprises members, representing local stakeholders (Private sector, civil society organisations and government –). The Committees expressed that it had seen many visits from international organisations but not seen any assistance yet, which underscores the importance of delivering meaningful assistance rapidly. The Committees are mandated under the Ministry of Interior, which is also represented in the Committees. The proposed work of the current project, especially component 3, was received very well by the Ministry and it is important to keep them in the loop concerning the work with the LCs.
- There are 48 professional associations in Jordan – however few are represented in the Northern governorates.

Workers representatives:

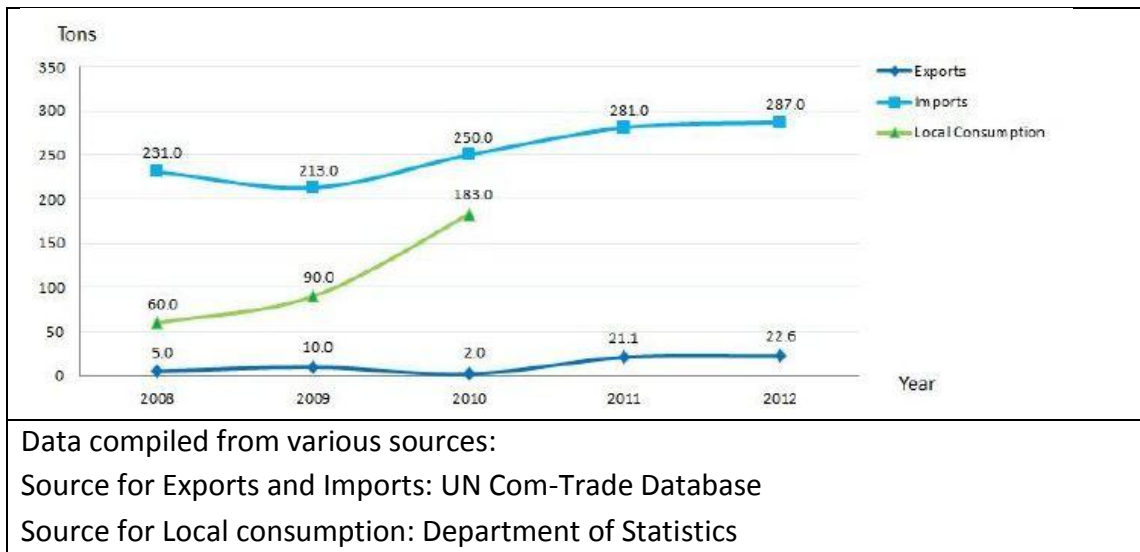
- The Confederation of Trade Unions in Jordan – supportive of the project and willing to cooperate. Unfortunately not present (yet?) at governorate level.

Annex C: Glance on Sun Dried Tomatoes Global Production

Italy is the main global supplier of sun-dried tomatoes, with 76% of global supply, followed by Greece with 11% of global supply. The main suppliers in the MENA region for sun-dried tomatoes are Israel, Morocco, Egypt, Tunisia, and Lebanon; Israel produces 9,597 Tons of sun-dried tomatoes.

The main global importer for sun-dried tomatoes is Europe with 50% of global demand. The main importers in the MENA region is the Gulf region importing 25,562 tons of sun-dried tomatoes, followed by Morocco with 714 tons, Lebanon 365 Tons, and Egypt 339 tons of sun-dried tomatoes.⁵

Jordan's local production of sun-dried tomatoes in 2010 was only 185 tons, compared to an imported 281 tons of sun-dried tomatoes in the same year.



This means that Jordan is standing humbly in the production of sun-dried tomatoes; whilst there is strong demand for the product in the Gulf and in Europe.

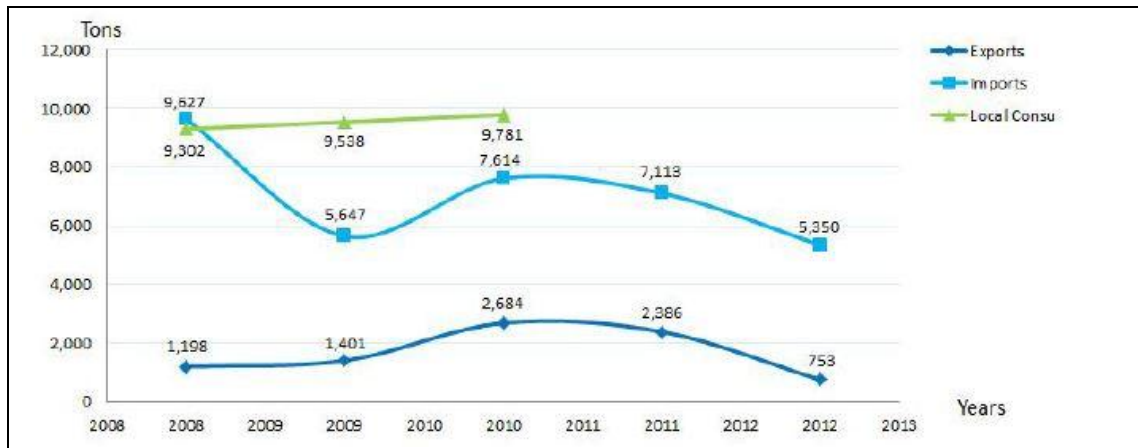
⁵ UN Com-Trade Data Base for Global demand on importing and exporting sun-dried tomatoes.

Annex D: Glance on Tomato Paste Global Production

China is considered the main global supplier for tomato paste with 33% of global supply, followed by Italy with 23%. The main suppliers of tomatoes paste in the MENA region is Turkey with 102,886 Tons followed by Iran with 37,969 Tons of tomato paste in export.

Tomato paste global demand rests 64% on other countries, leaving 24% for Europe, 7% Russia, and 5 % Japan.

Jordan's local production of tomato paste in 2010 was 12,465 tons, compared to imports in the same year of 7,614 tons of tomato paste. Jordan exports 35% of tomato paste to Palestine, 26% to Saudi Arabia and 17% to Lebanon. Jordan imports 60% of tomato paste from China followed by 26% from Syria.



Data compiled from various sources:

Source for Exports and Imports: UN Com-Trade Database

Source for Local consumption: Department of Statistics
