



Strategic guidelines for the tomato and cucumber value chain in Gaza Strip

ILS LEDA



September 2022

ACKNOWLEDGEMENTS

This document-proposal was elaborated by the ILS LEDA team (Acerra Francesca, Canzanelli Giancarlo, Milio Vincenzo, and Rucireta Giulia), that worked on inputs provided by the Vegetables Focus Group.

Our greetings go, then, to all the components of the Focus Groups: Sabrin Abu Aloun, Sabrin Shubir, Shahrazad Abu Swirih, Mohamed Reziq, Awsam Alqebt, Sabha Sarhan, Mohamed Subih, Hanaa Shurrab, Issa Khalifa, Ammar Alrifi, Doaa Alrayis, Eman Kali, Sahar Alsirri, Sofian Bahar, Fatma Abu Naiam, Laila Alzubidi, Karema Alshrafi, Hassan Taysseer, Fawzia Mobark, Tariq Ammar, Haneen Albrim, Jaber Abu Alamreen, Soliman Qudeih, Mohammed Qudeih, Fadi Soboh, Wael Alnaqa, Fedaa Abu Ilaein, Smaher Shaheen.

The work was possible thanks to the precious facilitation provided by WeWorld-GVC field team: Marwa Joudah, Najat Bureim, Samir Mukhaimer, Doaa Kalakh and the collaboration of the WeWorld-GVC team.

INDEX

ACKNOWLEDGEMENTS.....	2
CHAPTER 1. INTRODUCTION	4
CHAPTER 2. METHODOLOGY	5
CHAPTER 3. BACKGROUND	6
CHAPTER 4. THE VALUE CHAIN PERFORMANCE	7
4.1. COMPETITIVE ADVANTAGE	7
4.2. MARKET POSITIONING.....	9
4.2.1 <i>Tomato market positioning, according to RESCO Focus group</i>	11
4.2.2 <i>Cucumber market positioning, according to the RESCO Focus Group</i>	11
4.3. GENDER GAPS	12
4.4. SUSTAINABILITY	14
4.5. VALUE CHAIN COMPONENTS	16
4.6. OBSTACLES	21
CHAPTER 5. THE STRATEGIC GUIDELINES FOR COMPETITIVE AND INCLUSIVE DEVELOPMENT	23
5.1. THE METHODOLOGY FOR THE ELABORATION OF THE STRATEGIC GUIDELINES FOR THE VEGETABLES VALUE CHAIN DEVELOPMENT	23
5.2. FROM POTENTIAL AND NEEDS TO ACTION	24
5.3. THE STRATEGIC ACTIONS.....	26
REFERENCES.....	42
ANNEX 1. SUSTAINABILITY FACTORS AND NEEDS FOR THE VEGETABLES VALUE CHAIN IN GAZA	43
ANNEX 2. ACCESS TO RESOURCES FOR THE VEGETABLES VALUE CHAIN	45
ANNEX 3. PROFESSIONAL PROFILES AND JOB OPPORTUNITIES IN THE VEGETABLES VALUE CHAIN	48

Chapter 1. INTRODUCTION

This paper has been elaborated in the framework of the project “*Adolescents and Youth (AYs) for GREEN: Gaza Resilient Economy and Environment.*”

It is one of the expected results of the A&Y project, related to the Specific Objective: “To strengthen socio-economic resilience of vulnerable Adolescents and Youth (AYs), promoting/mainstreaming HDN approaches in 11 communities close or within the Access Restricted Areas (ARAs), in Gaza Strip: Khan Younis (Al Qarara, Abassan, AL Kabira, Khuzaa, Bani Suhaila, Alfukhari), Rafah (Al-Naser, Al Shokat), North Gaza (Beit Lahia, Beit Hanoon, Jabalia, UM Al Nasser)”.

The project is run through a partnership between Save the Children Italia Onlus, WeWorld-GVC, ILS LEDA, SYFS, Save the Children International OpT.

The paper aims at recommending strategic guidelines and a plan of action for the development of a competitive, inclusive, and sustainable TOMATO AND CUCUMBER value chain in the targeted territories.

The VEGETABLE value chain is one of the six prioritised value chains for the exercise, the other being date palm, livestock, beekeeping, poultry and recycling. The prioritisation was made in accordance to the following elements:

- Presence in the target communities/governorates
- Competitive advantages
- Resilience
- Prioritization from public policies
- Presence in the target communities

According to the Focus Group, the interviewed vegetable value chain experts, and the secondary literature review, tomatoes and cucumber were selected as the most competitive vegetables in the Gaza Strip with higher potential of development.

For this purpose, the WeWorld/ILS LEDA comprehensive territorial approach CPA (Community Protection Approach)-RESCO (REsources for Sustainable COmpetitiveness), which addresses protection risks within communities, while fostering economic and social value chain development, was used.

The present paper includes the part of the approach regarding the assessment of the value chain competitive, inclusive and sustainable needs and opportunities, leading to the formulation of the correspondent development strategy, through the use of the RESCO tool.¹

In particular, chapter 2 will provide details about the RESCO methodology for the value chain assessment; chapter 3 will describe the background of the value chain; chapter 4 will analyse the assessment of the competitive advantages, market positioning, inclusiveness, and sustainability of

¹ ILS LEDA has been applying RESCO in 13 countries during the last 20 years.

the value chain in the target areas; and, finally, chapter 5 will outline the Strategic Actions Guidelines and priorities for the value chain development.

Chapter 2. METHODOLOGY

In general, the RESCO methodology seeks to recommend value chain strategic guidelines and plans and it can be applied to any sector. The RESCO methodology will assess the main characteristics, potential, and obstacles for each of the six selected value chains, by involving the main territorial actors.

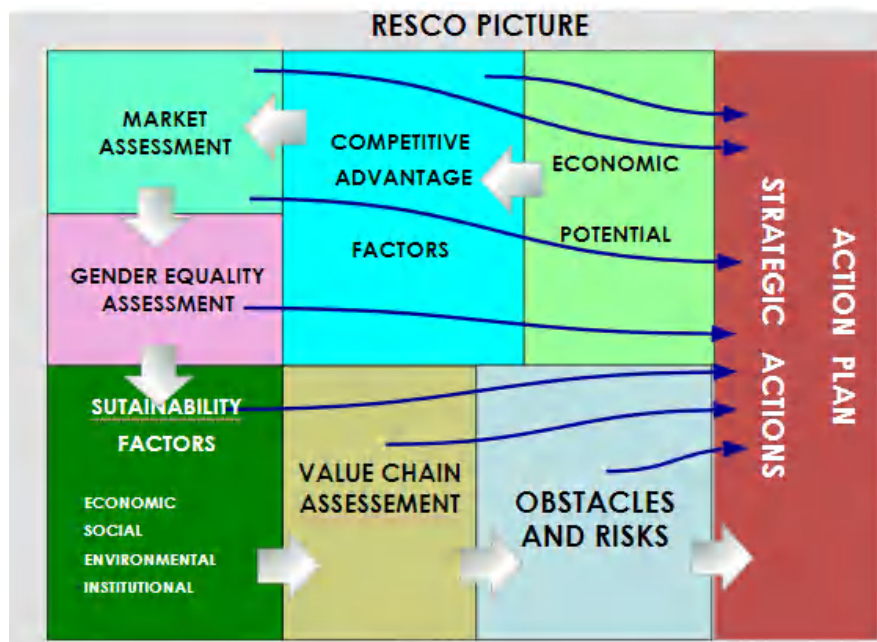
The assessment considers six main components, i.e.: the competitive advantage, the market positioning, the gender dimension/equality, the sustainability (financial, social, environmental), the value chain status, the obstacles and risks (to the value chain development).

For each component a set of factors are considered and, for each factor, specific variables are evaluated, according to a special scoring methodology. The assessment is carried out by following these steps:

- 1) Webinars with 15 people representing local actors of the public and private sector, through a questionnaire
- 2) Consulting secondary literature

The picture below illustrates the RESCO methodology logical and chronological flow.

Figure 1. RESCO methodology flow (Source. ILS LEDA)



Chapter 3. BACKGROUND

Fresh fruits and vegetable value chain is a relevant subsector from an export viewpoint. It has been a major source of employment and a large percentage of Palestinians depend on it as either a main or a secondary source of income (Paltrade, 2014).

As emerged from the secondary literature review and the analysis of the questionnaires handed out to the local communities, the vegetable value chain was prioritised for the following reasons:

1. It is present in all the municipalities of the Rafah governorate, in four communities in Khan Younis governorate, and in two municipalities (Beit Lahia and Beit Hanoon) of the North Governorate.
2. It contributes to Food security. In fact, vegetables play an important role in providing 91% of domestic consumption food. The climate variability in Gaza allows production of vegetables all year round, also with the current use of greenhouses in the coastal and semi-coastal areas. Open field vegetables are the most common pattern of planting. The most common vegetable crops are tomatoes, cucumbers, eggplants and squash (Tubaile & Alkowni, 2001).
3. Its products are resistant and adapt themselves to the environment; in fact, with respect to Gaza land and water scarcity, coupled with low tolerance of arable crops to salty water, have promoted the vegetable sector as vegetables can tolerate salty water better and income per unit of land is higher as compared to other crops (OXFAM, 2016).
4. Several products and by-products of the vegetable value chain can be produced with locally available inputs and equipment, and they are complementary to other value chains. In particular, as the insecurity continues, households are opting to sow vegetables and grains rather than olives and citrus. This is because the seed, input cost associated with cultivating vegetables and grains and the water requirement, are relatively low compared to olives and citrus as is the labour investment. Also, the time it takes to harvest these short-cycle crops is shorter than the years it takes for a tree to start yielding fruit. Finally, many of the citrus and olive groves adjacent to the buffer zone have been destroyed by Israeli bulldozers and limits have been imposed to make sure that crops planted in these areas fall under a meter high (OXFAM, 2013). With regards to land use, the vegetable sector has developed in a direction from open cultivation on a limited area of land to greenhouse cultivation and covered open cultivation. Farmers grow a variety of vegetables to counterbalance effects of prices and yield fluctuations. They grow vegetables under different production methods (OXFAM, 2016). A strong shift in the cropping pattern from cereals to more remunerative fruit and vegetable crops in many countries will lead to decreased supply of cereals and crop residues to animal feeding. This change has resulted in generation of huge quantities of fruit and vegetable by-products and wastes. For example, fruit and vegetable processing, packing, distribution and consumption can cause environmental hazards. Alternatives to such disposal methods could be recycling through livestock as feed resources and further processing to extract or develop value-added products. Such an approach will convert “wastes to opportunities for development” in addition to contributing to sustainable intensification of livestock industry. Such unconventional resources can act as an excellent

source of nutrients and help to bridge the gap between demand and supply of feedstuffs for livestock (Growler Agrovot, 2015).

Chapter 4. THE VALUE CHAIN PERFORMANCE

The value chain performance, its opportunities and needs were assessed according to the following components:

- 1) Competitive advantage
- 2) Marketing positioning
- 3) Gender gaps
- 4) Sustainability
- 5) Value chain components
- 6) Obstacles

4.1. Competitive advantage

The RESCO focus group (September 2022) stated that the most valuable competitive advantages of the vegetable value chain in the targeted Governorates are related to tomatoes and cucumbers.

The competitive advantages for tomatoes and cucumber are:

⇒ The particular **healthiness**, due to the limited and controlled chemicals or pesticides used in farming, to make clean products and free from contamination. They are considered among the basic foodstuffs in the consumer's needs because of the demand and the nutrients they contain, such as iron. Cucumbers are often used for diet purpose, especially for losing weight, as they contain a lot of vitamins; they are also used in face masks for skin and in cosmetics due to their proprieties.

This healthiness factors induce specific organoleptic characteristics, such as:

- a) As far as tomatoes are concerned, it refers to the sweet taste and the redness and tenderness of their peel, and it makes local tomatoes more desirable than those that are imported
- b) As for the local (baladi) cucumber, grown in open field, it refers to its strong flavour and the sweetness in its taste, which makes it more desirable than the cucumber grown in greenhouses.

⇒ **Multi Harvest:**

- ♣ tomato local production is available all year round, due to the fact that farmers can also plant them in greenhouses and start harvesting the crop within 3 months.
- ♣ Cucumber is grown for more than one season. It is grown both outside (plant 3 times in a year) and in greenhouses (all year round). There are many types of cucumber in Gaza, the most common is called "local cucumber" and it is harvested more than once; a special type of cucumber is grown for making pickles and is called "baby cucumber".

⇒ **Abundance:** Tomato and cucumber are considered essential types of vegetables in each house in Gaza and there are different varieties at the local level. They are abundantly available due to the farmers' high level of awareness and knowledge and the use of good quality seeds. Also, another reason for their abundance is that they are grown over all the seasons of the year. The seeds are characterised by their high adaptability to the environment of the Gaza Strip. There are many types of seeds related to tomatoes, about 20 to 30 types of them (Izmir - Atasha - 194- 93 – Akre), the first type being grown is the Izmir type' this type used to have an excellent quality; Cucumber seeds include Alstra - Samar - Lena varieties. Due to their abundance, they cover the local market demand, also thanks to the support and caring from agriculture associations. In fact, there is interest and follow-up by institutions that support the farmers' sector.

Furthermore, the RESCO focus group assessed those factors impacting with the aforementioned competitive advantages and the result gave the 3 main causes (see figure 2a for tomatoes and figure 2b for cucumber):

- 1) The **ecosystem**, including microclimates, plants, soil, water, corresponds to the specific natural system made up of living organisms and the physical environment where they interact in an interdependent manner.
- 2) The **services**, corresponding to the presence of financial and non-financial business services, capable both of supporting existing businesses and establishing new businesses.
- 3) The **geo position**, corresponding to the specific position of the area, for instance on borders (facilitating trading), on the coast (with presence of harbours or wonderful coastal attractions), in strategic corridors, in proximity to inputs, important infrastructures, etc.

Figure 2a. Causes of competitive advantages of the tomato value chain in the Gaza Strip
(Source. RESCO Focus Group, 2022)

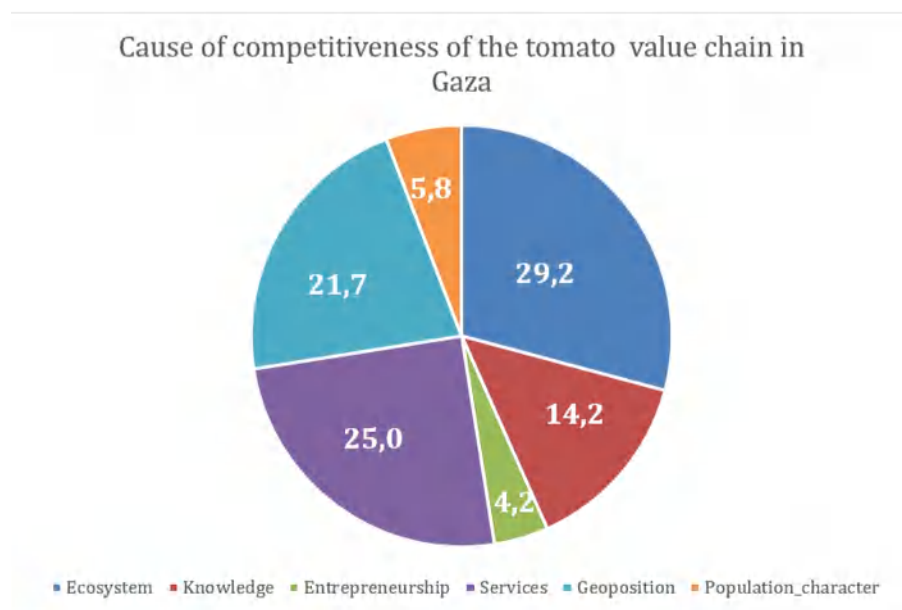
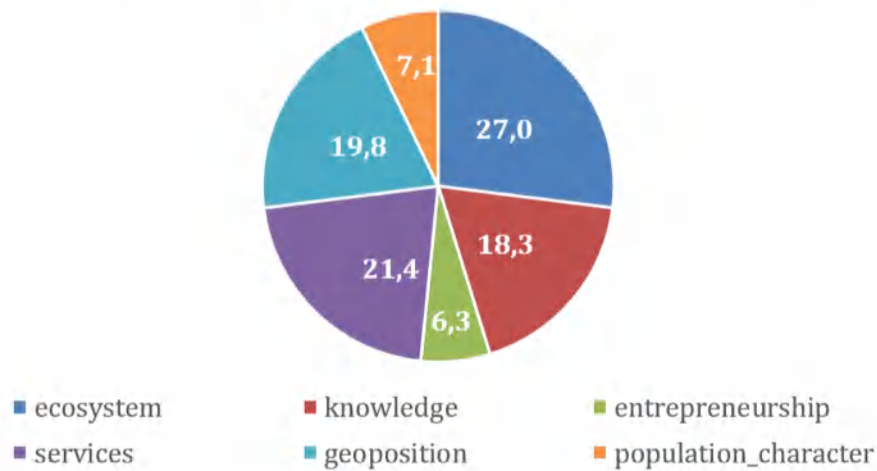


Figure 2b. Causes of competitive advantages of the cucumber value chain in the Gaza Strip

(Source. RESCO Focus Group, 2022)

Cause of competitiveness for cucumber value chain



4.2. Market positioning

In general, according to Tecnavio (2022), the market is dominated by large enterprises, and it makes it difficult for the entry of new vendors. Nevertheless, there are chances for small producers to entry in niches, through diversifying their product portfolios, introducing organic products and attracting consumers.

Furthermore, the current crises and the high fuel cost, favour the products close to the market.

In the growing markets the competitiveness will be played on two main directions:

- i) Product performance, with special regard to
 - Product diversification
 - Specific quality, performance regarding taste, appearance, size of the fruit, etc.
 - Organic products
 - Health, with regard to the pesticide (no chemical ones), the use of alternative methods of pest control, such as integrated pest management, pest-exclusion nets, etc., the disease resistance
 - High seed quality (drying beads maintain high seed quality during storage)
- ii) Processing, with special regard to
 - Transportability
 - Postharvest losses reduction (Quickly cooling, long and cold storage)
 - The use of new technologies, such as precision drip irrigation, robotics (for instance to move the plants out into the field to grow then bring them back in at the end of the season for early harvest), internet of things wireless connectivity (for monitoring a host

of environmental and growing conditions in real time, measuring soil moisture, humidity, and temperature, through sensors, etc.), well packaged products

- Reduction of dependence on seasonality

Tomato market trends

According to EMR (2020) in 2020, 42 million tons of processed tomatoes were consumed globally. Their consumption is expected to grow further, growing at 3.8% in the forecast period of 2022-2027 to attain 51 million tons in 2026.

The Asia Pacific is the largest producer of tomatoes accounting for over half their global production. Middle East and Africa followed Asia Pacific as their leading producer. The United States, on the other hand, is the largest tomato processing country with a global market share of over 35%.

Only around one-fifth of the tomatoes produced globally are processed with the majority of them being consumed fresh. Processed tomatoes find their maximum application in sauces, which accounts for nearly 30% of their total global application. In 2018, about 12 million tons of sauces were consumed globally. Pastes are another application segment that dominated the market.

The additional health benefits of processed tomatoes along with their longer shelf life is driving their demand.

Tomato puree is an especially significant processed product as it finds expansive use across various value-added products like tomato juice, ketchup, paste, strained tomato pulp, pickles, pasta, pizza sauces, salsa, gravies, ready-to-eat curries, and tomato-based powder products.

The leading distribution channels in the market are supermarkets and hypermarkets, convenience stores, specialty stores, and online stores, among others.

The Middle-East countries with the highest volumes of tomato production in 2019 were Turkey (12M tonnes), Iran (6.7M tonnes), and Jordan (864K tonnes), together accounting for 89% of total production.

These countries were followed by the Syrian Arab Republic and Israel, which together accounted for a further 4.3%.

Cucumber market trends

The cucumber market demand is still increasing by 4% during the period 2022-2026.

Competitive factors are product pricing, product differentiation, innovation, packaging, quality, and brand image, to gain a competitive advantage. Intense competition and price wars between vendors can decrease their profit margins (Tecnavio, 2022)

Major consumer countries are US, Canada, China, India, and France.

In the Middle East, Turkey dominates export structure, distantly followed by Jordan and Palestine, whereas Iraq and Qatar are the major import country (Indexbox, 2022).

4.2.1 Tomato market positioning, according to RESCO Focus group

Regarding the current and desired market positioning for tomato, according to the RESCO focus group perception:

- The current markets are mainly local and for governorate, covering from 90 to 100% of the production. Only fresh tomatoes are also sold at the national level, only to Israel and the West bank. Because of occupation restrictions there isn't an international market.
- Producers would like to modify this picture, mainly increasing:
 - The governorate and national markets in all the cases, except for tomato pasta which registers a desire for decrease at the governorate level in favour of national and international growth. In the majority of the cases, the increase in the above-mentioned areas is compensated by the decrease at local level, as it is illustrated in the following table;
 - The focus group expressed the desire to reach the international market for fresh tomato, tomato pasta and dry tomato by 10%, 10%, 40%.
- As for the buyers, in general, producers sell the products to intermediaries, supermarkets, industries and public entities. In the case of dry and pickled tomatoes, the production is completely sold to supermarkets, while for the plants to industries.

Table 1 – Current and desired markets for tomato value chain in Gaza (according to the focus group perception)

Product	Market Positioning	Local	Governorate	National	Inter-national	Total
Fresh tomato	Current Market	30	50	20	0	100
	Desired Market	20	50	10	10	100
Tomato pasta	Current Market	5	95	0	0	100
	Desired Market	40	40	10	10	100
Dry tomato	Current Market	95	5	0	0	100
	Desired Market	10	10	40	40	100
Pickled tomato	Current Market	95	5	0	0	100
	Desired Market	50	50	0	0	100
Plants	Current Market	100	0	0	0	100
	Desired Market	100	0	0	0	100

4.2.2 Cucumber market positioning, according to the RESCO Focus Group

Regarding the current and desired market positioning for cucumber, according to the RESCO focus group perception:

- The current markets are mainly local and for governorate, covering from 90 to 100% of the production. Only the fresh cucumber is also sold at national level (30%).
- Producers would like to modify this picture, mainly increasing:

- The governorate and national markets in all the cases, except for pickled cucumber and cosmetics which register a desire for decrease at the governorate level in favour of national and international growth. In the majority of the cases, the increase in the above-mentioned areas is compensated by the decrease at local level, as it is illustrated in the following table.
- The focus group expressed the desire to reach the international market for fresh cucumber, pickled cucumber and cosmetics, by 10%
- As for the buyers, in general, producers sell the products to intermediaries and final individual consumers. In the case of fresh and pickled cucumbers, there is a small share of products destined to supermarkets, industries and public entities. In the case of cosmetics, the production is also sold online, via social media and about 1% to pharmacies.

Table 2 – Current and desired markets for cucumber value chain in Gaza (according to the focus group perception)

Product	Market Positioning	Local	Governorate	National	Inter-national	Total
Fresh cucumber	Current Market	20	50	30	0	100
	Desired Market	10	70	20	10	100
Pickled cucumber	Current Market	30	70	0	0	100
	Desired Market	10	30	50	10	100
Cosmetics	Current Market	10	90	0	0	100
	Desired Market	10	50	30	10	100
Plants	Current Market	100	0	0	0	100
	Desired Market	100	0	0	0	100
Compost	Current Market	100	0	0	0	100
	Desired Market	40	60	0	0	100

4.3. Gender gaps

The RESCO focus group highlighted the following assessment with regard to the gender gaps, with reference to three elements:

- Women's participation to the value chain activities
- Women's access to the value chain assets
- The implementation of governmental measures

Table 2 – Gender Gaps for tomato and cucumber value chain in Gaza

Value chain participation	SATISFACTORY	PARTIALLY SATISFACTORY	NOT SATISFACTORY
Women working globally in the value chain			
Women in key position in local government with respect to the value chain development			
Women in leadership positions in the value chain?			
Women participating in representative bodies (eg: workers groups, trade unions, etc.)			
Women promoted last year in the value chain?			
Women benefited from training in the value chain, in the past year			
Access to assets	SATISFACTORY	PARTIALLY SATISFACTORY	NOT SATISFACTORY
Equality in the access to labour in the value chain for men and women			
Equality in the access to finance in the value chain for men and women			
Equality in the access to business services in the value chain for men and women			
Equality in the access to the resources produced (and the choice on how to use of these resources) for men and women, Within the framework of the value chain			
Legislation and measures	SATISFACTORY	PARTIALLY SATISFACTORY	NOT SATISFACTORY
Quality of the implementation of the Gender Equality National Strategy /measures/services			
Quality of Gender equality measures taken at company level			
Quality of the implementation of the reconciliation measures and facilities between family and work responsibilities			
Correspondence of the public care facilities for children and elderly are sufficient to the demand			
How the issues of sexual harassment, abuse and exploitation at work are sufficiently taken into account in the value chain (understanding of the issue, support for victims, measures against perpetrators, etc.)			
How the violence suffered by women in the private sphere (e.g. domestic violence, forced marriages, etc.) is sufficiently taken into account in the value chain (understanding of the problem, care for victims...)			

According to the secondary literature review, in the Gaza Strip, women (0.4% of total number of farmers), are leading and managing their own vegetable farms, and most of them are heads of families (head of households). This percentage is very low, mainly because women do not have access to land although they can inherit property/land under the applicable law (OXFAM, 2016).

The RESCO focus groups confirmed this aspect, and highlighted the following detailed critical issues regarding gender gaps are the following ones:



- Women's participation to the value chain activities

Very critical issues

- Few women in key position in local government department dealing the value chain development
- Few women in leadership positions in the value chain
- Few women participate in representative bodies (eg: workers groups, trade unions, etc.)
- Few women promoted in the value chain last year

- Women's access to the value chain assets.

Partially critical issues

- Inequality in the access to labour in the value chain for men and women
- Inequality in the access to business services in the value chain for men and women
- Inequality in the access to the resources produced

- Implementation of governmental measures

Very critical issues

- Public care facilities for children and elderly insufficient to the demand

Partially critical issues

- Gender equality rights not respected at company level
- The violence suffered by women in the private sphere and the sexual harassment, abuse and exploitation at work are not taken into account in the value chain.

4.4. Sustainability

The RESCO segment for assessing the sustainability of the value chain focused on the following variables:

- *Economic sustainability*
- *Environmental sustainability*
- *Green economy*
- *Institutional sustainability*
- *Social sustainability*

Annex 1 shows detailed results of the RESCO focus group, from which it will be possible to prioritise the needs to be addressed.

Economic sustainability

Vegetables is an important economic activity in the Gaza Strip with more than 200 formal enterprises providing around 30% of formal jobs (every donum requires about 3 workers). The work of women is limited. The community is entitled to stay on, and use the land.

According to participants, the lands planted with tomatoes are high, but the cucumbers are low, and the quantities available in Gaza are sufficient for the needs of the market.

Environmental sustainability

As far as the environment is concerned, the RESCO Focus Group assigned high priority to:

- Favours the establishment of Natural Reserve or Protected Zones, the improvement of the public regulations (plans or programmes) for protecting natural resources/environment, the development of Information Campaigns about environmental sustainability
- Improving the initiatives or programmes addressing the participation of citizens, through supporting voluntary corps for environment protection, the active work of association or foundation, organizing conferences or debates on environment sustainability, and promoting university education on environment sustainability and promoting support and funding from government and local agencies.
- Facilitating the access to resources, such as drinking water, irrigation water (as water is a high cost for farmers, one cubic metre of water pumped from wells is 2 shekels, but public well water is 2.5 shekels), electrical energy, access to public resources, access to private resources (land properties).
- Promoting green economy development, with particular reference to the differentiated collection of waste and building waste warehouse, and the development of the circular economy (supporting recycling enterprises and enterprises for the generation of alternative energies – such as Agricultural Relief –, spreading organic food production); conservation of natural, historical and cultural heritage.

Lower priority has been assigned to

- Favours the preservation of rare animal species

Institutional sustainability

As for the institutional sustainability, the RESCO Focus Group assigned high priority to:

- Improving the level of attention of the official government for the development of the value chain in the territory
- Improving the Institutional attention to social needs such as shelter, health, security, non-formal education and vocational training.

Lower priority has been assigned to

- Improving the level of execution of government plans for the value chain development in the territory, through raising the commitment of farmers in their implementation
- Facilitating the creation and access to specific financial mechanisms for the value chain (loan facilities, etc.)

- Improving the Institutional attention to social needs such as water, sanitation and child protection.

Social sustainability

With regard to social sustainability, the RESCO Focus Group assigned high priority to

- Improving social sustainability, through supporting enterprises that use their social responsibility for social investments, and generating employment for people with mental and/or physical disabilities.

Financial sustainability

Finally, as for the financial sustainability, the RESCO Focus Group assigned high priority to

- Improving the potential to secure loans for the business sector
- Promoting the creation of financing specific mechanisms for the value chain (credit lines, etc.)

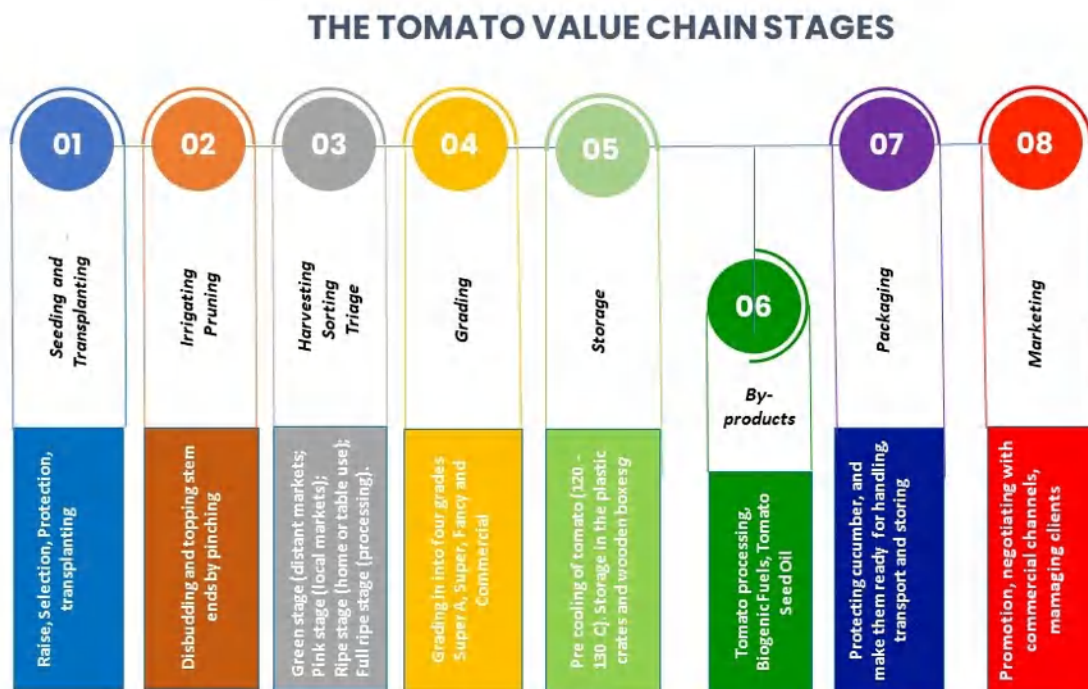
Lower priority was assigned to:

- Favouring incentives/programmes supporting the livelihoods of specific groups in the community

4.5. Value chain components

The following figures show the stages (Figures 3a and 3b) and components (Figure 4) of the tomato and cucumber value chain.

Figure 3a. The tomato value chain stages (Source. ILS LEDA)



The RESCO focus group assessed the following main components of the vegetables value chain:

- 1) Inputs (raw materials, human resources, durable and not durable equipment)
- 2) Complementary activities
- 3) Buyers
- 4) Services
- 5) By-products

Annex 2 shows the detailed results of the RESCO Focus group.

The main results of the assessment are:

INPUTS

The RESCO focus group highlighted the following as high priority needs:

- Improve the quality of seeds, fertilizers (the farmers use livestock fertilizers), organic nutrients and agrichemical supplies, as well as irrigation, due to the high price, shortage or bad quality of the inputs such as the high cost of agricultural supplies and the high cost of land rental. There are many types of seeds in Gaza, imported from Israel that grown in Gaza nurseries, but some seeds have low quality and produce low quality crops. Furthermore, repeated use of the land weakens it and it needs to use a special gas to renew the soil, which costs is high.
- Improve the quality of the soil, as is it contaminated by various factors:
 - the exposed soil/polluted due to the use of the Namagor pesticide, the residues of the pesticide remain in the ground.
 - The presence of the worm in the ground
 - Pollution due to poor land use by farms
 - The farmers in Gaza Strip have to go the intensive cultivation due to the limited lands and capacities, so this led to land contamination because the lands don't have the needed chance to refresh, cleaned and sterilized in the proper way.
- Access to finance is difficult due to the complex conditions and standards required by the banks. There is high interest to be paid for the banks, and this interest precludes taking loans to improve agricultural operations.
- Access to information, mainly regarding the market's demand. As for market information, there is no government orientation towards agricultural products

Whereas, lower priority needs are:

- to credit line for vegetable green production
- Access to information on technologies; in particular, on green farming technologies. In fact, according to the FG participants, there is information about technology, but farmers need support and development (the price is high for tools) and they must import them from abroad.
- Access to supplies for tools and machineries, which are too expensive

SUPPLY FOR GREEN ECONOMY

As for the value chain supply for green economy, the RESCO Focus group highlighted the following lower priority needs:

- Access to equipment for alternative energy, that is not available because of its high costs
- Access to proper equipment for waste recycling and access to supplies made by recyclable material due to lack of farmers awareness and high costs

SERVICES

As far as the access to services to the value chain is concerned, the RESCO Focus group highlighted the following high priority needs:

- The access to soil quality monitoring

Lower priority needs are:

- The access to technical, administrative, organizational services has to be improved because today it's done by consultants from the MoA but it doesn't cover all Gazan areas
- The access to marketing and commercialization services, to be improved, because the sector is affected by the excessive power of intermediaries.
- The access to training, available but it doesn't cover all farmers
- Support in the development of alliances, associations, cooperatives and networking improving the producers' awareness

EQUIPMENT

As for the value chain equipment, the RESCO Focus group highlighted the following high priority needs:

- Support system - tomato cages, strake, trellises, spirals and cucumber sorting/grading machine, to be renovated because of their low quality
- Tiller cultivator, due to its high cost of selling or renting. Among its disadvantages, nematodes can be transmitted from one land to another, so the machine must be sterilized before and after ploughing the land, increasing the final time and cost. There is an alternative to using nematodes, via solar sterilization and ventilation.

BUYERS

According to the secondary literature review, in general, vegetable trading is not specialised, in fact, traders market vegetables in a manner that is more based on social relations and trust than in a commercial manner. In addition to this system, women sell small quantities of consumers directly to consumers in the neighbourhood.

With regard to buyers, the RESCO Focus group assigned high priority to the following needs:

- Reduce the power of intermediaries

- Stimulating public entity to buy local tomato and cucumber (schools, hospitals, local administrations, others)

Lower priority needs are:

- Access to individual consumers, fair-trade circuits, and industry to be improved

ADDITIONAL ACTIVITIES

According to the Focus group, lower priority needs are:

- Access to fairs, festivals, cultural events and eco-tourism activities, as well as fairs for organic products, to be improved because at the moment they are not present in Gaza

BY-PRODUCTS

The new by-products that could be introduced in Gaza are:

- Canned tomatoes
- Tomato paste (concentrate)
- Passata (creamed tomatoes)
- Tomato powder
- Biogenic fuels
- Tomato seed oil
- Cucumber juice
- Cucumber powder
- Cucumber waste for packaging materials

The by-products that could be improved in Gaza are:

- Tomato sauce
- Dried tomatoes
- Pickled tomatoes
- Crushed Italian tomatoes
- Tomato puree
- Tomato juice
- Tomato pulp
- Tomato pomace
- Tomato seed and skin extract for pharmaceutical products
- Tomato waste for food industry (enriched tomato derivatives, pasta making and sweets)
- Cucumber extract for beauty products: cosmetics, shampoos, soaps, essential oil, etc.
- Cucumber and tomato waste used for compost and as feed
- Cucumber seedlings used in the production of charcoal, as the charcoal is covered during its preparation

4.6. Obstacles

The following table shows the obstacles prioritised by the RESCO Focus Group for achieving a competitive, inclusive, and sustainable development of the vegetables value chain in the *Gaza Strip, with particular reference to the 11 target communities*, according to the priorities assigned by the RESCO Focus Group.

The prioritised obstacles regard:

- Access to services, including:
 - Financial services: access to credit, guarantee funds, assurance, etc.
 - Improvement of productivity and competitiveness: safe storage and post-harvest handling facilities, post-harvest support (logistics, storage, transport), agronomic services, organic production
 - Infrastructure: Irrigation and water supply; roads
 - Marketing: Excessive power to middlemen; weak marketing strategy (no brand); lack of group marketing and collaboration with other actors of the value chain
 - Information: on new technologies; financial resources and local, regional, national, international networks
 - Innovation: Relations with research institutions, generation and dissemination of technologies; resistance of entrepreneurs to innovation, in particular poor medium- and long-term vision
 - Training: on the use of fertilizers and agrochemicals, organic production, for increasing productivity, quality, and traceability
 - Capacity building: administrative and managerial know-how; legal, commercial support; managerial and entrepreneurial capacities

- Regulatory framework, regarding the weak support from local and national government to the value chain; the difficulties in accessing national plans; the lack of access to specific professional integration programmes; the relations between public authority and communities; lack of consideration for gender inclusion in the company and discrimination in hiring.

Figure 5. Obstacles to the Vegetables Value Chain Development (Source. RESCO Focus Group)

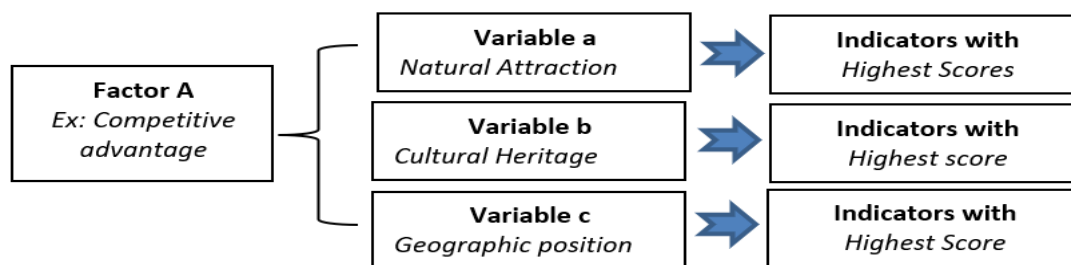


Chapter 5. THE STRATEGIC GUIDELINES FOR COMPETITIVE AND INCLUSIVE DEVELOPMENT

5.1. The methodology for the elaboration of the Strategic Guidelines for the vegetables value chain development

The RESCO methodology for the elaboration of the Strategic Guidelines for the vegetables value chain development uses the inputs proceeding from the RESCO assessment (interviews), from the analysis of the secondary literature, and from the consultations with experts, and classifies all these findings in a number of fields of intervention.

The inputs refer to the impact indicators of each variable corresponding to each factor either if it is positive (points of strengths), or negative (points of weaknesses), as illustrated in the following example.



The correspondent strategic actions should be addressed in order to:

- ❖ Maintain the points of strengths in the long term;
- ❖ Remove the points of weaknesses, as they represent obstacles to the development of the value chain.

RESCO, finally, uses a simple algorithm for deriving the strategic actions for each one of the “variables” corresponding to the different “factors”.

In particular, the formula is, as follows:

$$Sa = f(V_i, Fa_n)$$

Sa = Strategic Actions

V_i = Variable “i” of the Component “j”

Fa_n = Factor “n”

5.2. From potential and needs to action

The main potential and needs referred to each factor and correspondent variable were illustrated in chapter 5.

The ILS LEDA RESCO methodology for elaborating strategic guidelines for actions, addressing the identified needs, includes:

- 1) Identifying one or more strategic guidelines for each need
- 2) Clustering similar or complementary actions
- 3) Eliminating duplicates
- 4) Including each guideline in correspondent “strategic fields”

A strategic field (or area) of action corresponds to a cluster of complementary actions, that, all together, facilitate concentrating the attention on priority focuses, in accordance with the results of the RESCO Assessment.

These fields could be various, depending on the RESCO assessment results, and the project context in which it is implemented. ²

Making this clustering is useful for two reasons:

- 1) It allows highlighting the priority focus of the strategic development guidelines
- 2) It allows identifying the specific competence needed for implementing the actions corresponding to the strategic fields

Accordingly, the RESCO exercise identified the following objectives:

1. valorising the tomato and cucumber value chain competitive advantages based on the **healthiness of its products, the multi harvest capacity and abundance**, depending on the ecosystem, services and geo position
2. Increasing sales on the governorate and national markets and reach international markets (by 10-40% depending on products)

In the case of the AYs for GREEN Project, the following strategic fields were identified:

- *Participatory Governance*. It includes all the actions needed for improving the participation of the value chain actors to build a favourable environment for the competitive, inclusive, innovative, and sustainable development of the value chain.

It needs competences, such as: boosting social dialogue, networking of diverse actors, negotiation capacities, communication, knowledge about public planning, fund raising.

- *Capacity building*. It includes all the actions needs mainly for improving the technical, managerial, and entrepreneurial capacities of the local actors and the people in search of jobs.

² In ILS LEDA’s experience, the most scored fields of analysis were: Governance, Capacity Building, Service support, Marketing, Social Inclusion, Innovation, and Environmental protection.

It needs competences in technical issues related to the value chain, and more comprehensive capacities in training entrepreneurs and people to exploit the opportunities offered. Special educational capacities are also requested.

- *Services*: It includes all the actions needed for providing the necessary know how and assistance to producers, local actors, and population in an efficient and effective way, possibly strengthening existing service providers.

It needs competence in service management, demand-supply analysis and monitoring, business administration, technology transfer, commercialization, access to credit.

- *Infrastructure*. It includes all the actions needed to build relevant physical and virtual infrastructure.

It needs competences in preparing tenders, evaluating project proposals, design physical agriculture infrastructure (mainly post-harvesting), and informatic infrastructure (web sites, IT, social webs, etc.)

Considering the priorities emerged from the analysis of the vegetables value chain status and potential, and the AYs for GREEN Project goals (see table below) these strategic actions are clustered according to three levels of priorities:

Priority N° 1: Actions correspondent to the objectives and proposals of the AYs for GREEN Project, and, at the same time, correspondent to the “High Priorities (HP)” indicated by the RESCO group

Priority N° 2: Actions correspondent to the “High Priorities (HP)” indicated by the RESCO group, but not explicitly foreseen by the AYs for GREEN Project plan of activities and budget

Priority 3: Actions not included in the previous cases, and recommended to be carried out beyond the AYs for GREEN Project

In the framework of the AYs for GREEN Project, the Value-chain strategic guideline will:

A - Contribute to Increase awareness of issues affecting vulnerable adolescents and youth; strengthen capacity to support youth in terms of economic and social empowerment, their participation in decision-making processes, as well as promote gender equality (OP1.1)

B - Indicate the priorities for supporting:

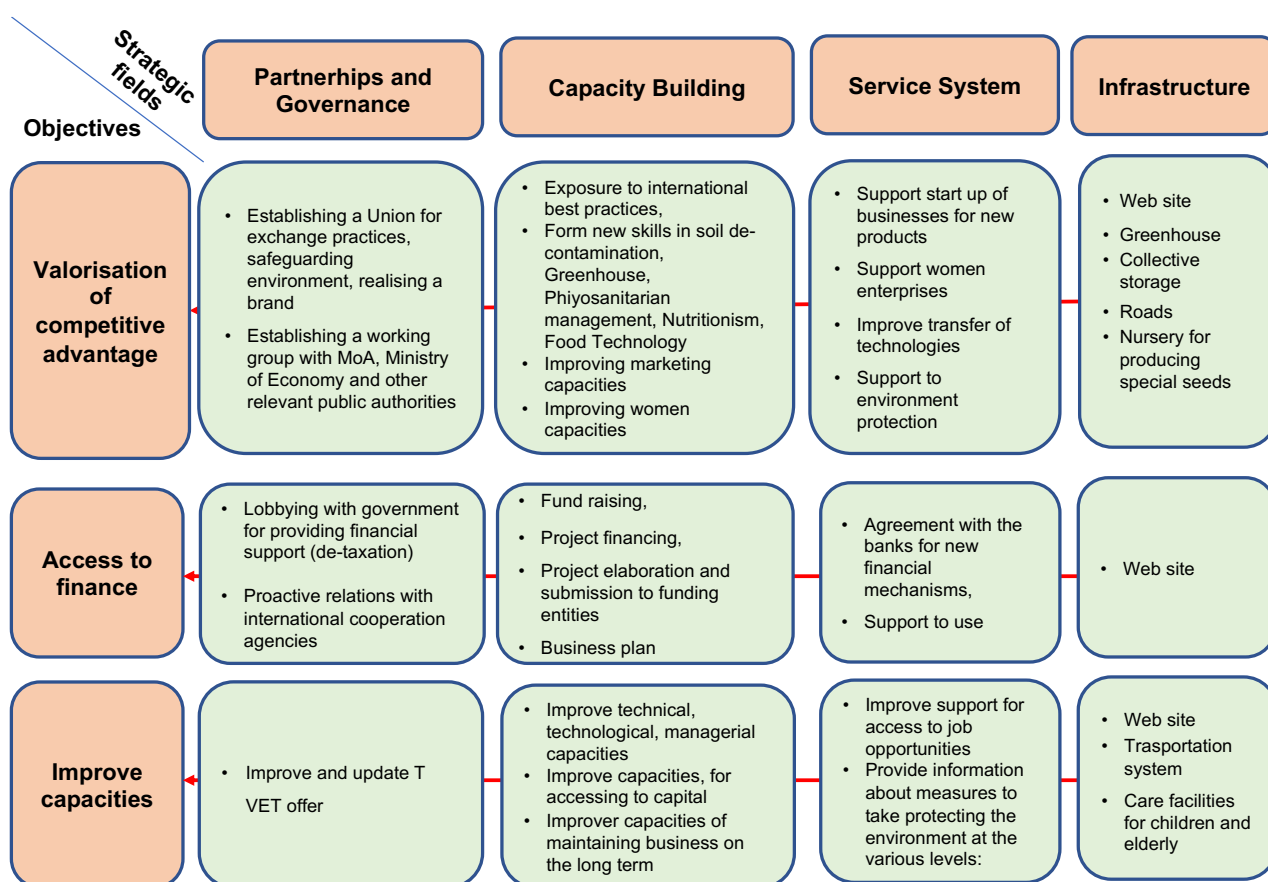
° the most promising economic sectors and setting-up new economic activities (A2.4), for which 120 talented youth (male and female) will receive seed funds and support to develop their own youth-friendly businesses in the social or agricultural sector, which will either generate their own incomes or generate a social practice change

° the relative knowledge gaps to be addressed by ad-hoc TVET opportunities (A2.3), through which 100 on-the-job training and coaching opportunities will be offered to 100 TVET adolescents, youth and university graduates, in partnership with the private sector

° the criticalities that should be addressed through the community led initiatives (A1.5), aimed at designing community initiatives focusing on improving an enabling environment in terms of essential infrastructures to strengthen the livelihood potentials for new entrepreneurs, better protection of communities, their resources and environment.

The following picture summarizes the strategic macro-actions for each field of action:

Figure 6. Strategic Objectives by Fields for Tomato and Cucumber value chain(Source. ILS LEDA)



5.3. The strategic Actions

The strategic guidelines for action are described with reference to:

- ⊗ the priorities, as previously defined,
- ⊗ the strategic field: Governance, Capacity Building, Service System, Infrastructure
- ⊗ the level of application, that could be
 - Multi-value chain, correspondent to those actions that are common to all the value chains, and should be carried out through a common governance mechanism
 - Value Chain, correspondent to those actions that are specific for the value chain, and should be carried out through a value chain governance mechanism
 - Community level, correspondent to those actions that regard the involvement of community actors and beneficiaries, and shall be carried out through a community level governance mechanism (Community Protection Committee). This level regard only the priority 1 actions, referred to the A&Y Green Project.

A.1.1 GOVERNANCE

MULTI-VALUE CHAIN LEVEL

AM111 – Realise a Federation of Unions, composed of the representatives of the six value chain Unions, with the aim of coordination, access to finance, links with international organisations,. promoting all together the value chain products

Action Plan

AM1.1.11: Realise a Workshop, for at least 30-35 participants on the following topics:

**The importance of establishing a Federation of the value chain Unions in order to coordinate common activities, access to financing sources, facilitate links with international organisations.*

**Simulation exercise to establish action priorities.*

**Rules for operation.*

The participants are selected as it follows: 11 people working within the value chains selected at community level ; the rest as representatives of each value chain ; in both cases at least the 40% are women.

AM1.1.12: Define an action plan for the following 12 months.

AM1.1.13: Realise a website linked to the website of all the six value chain Unions.

AM1.1.14: Define the procedures to communicate with the value chains.

AM1.1.25: Monitor the implementation of national government support

AM112 – Facilitate the establishment of a multi-value chain Working Group between the Federation of Unions and national authority departments –Agriculture, Economy, Education, the Environmental Quality Authority (EQA), the Palestinian Water Authority (PWA), etc.– for common activities: introducing/improving incentives programmes supporting the community livelihoods of specific groups in the community; Introducing or improving specific financial mechanisms; Identifying, among the national development plan, what measures can be used for supporting the value chains; boosting circular economy; facilitating access to fair trade; facilitating sales to public institutions

Action Plan

AM1.1.21: Identify representatives from each institution

AM1.1.22: Realise a meeting for presenting the territorial strategic development priorities, as resulted by the CPA-RESCO exercise

AM1.1.23: Identify programmes or plans from each involved institution that could provide support to the value chains

AM1.1.24: Solicit and commit each institution to facilitate the use of the identified programmes at support of the prioritised value chains, and take correspondent measures

AM1.1.25: Monitor the implementation of national government support

VALUE CHAIN LEVEL

AV111 – Realise a union of the Tomato&Cucumber value chain actors (UToC-VC), starting from the participants to the Focus Group, for taking common initiatives, with the aim of:

- ✚ exchange best practices and finding best solution as far as animal care, and wealth, nutrition, and quality improvement, as well as strain;
- ✚ favour the access to finance, to markets, and technology;
- ✚ safeguard the ecosystem, through boosting organic production, activating green economy, mainly in the areas of recycling;
- ✚ carry on a brand policy, proper advertising, labelling, traceability, and geographical recognition;
- ✚ Realise the «Tomato Varietal Map» taking into account the conditions of the production areas with respect to climate, soil and water recognition

Action Plan

AV1.1.11: Realise a 2-3 days training session for the Focus Group on “Value Chain Management: How to establish a (UToC-VC), through identifying and carrying out collective actions on access to agrichemical supplies, organising collective purchasing, establishing relationships with other agriculture sectors (mainly for fodder), and national government, safeguarding the ecosystem”

AV1.1.12: Identify the best organizational form of the union

AV1.1.13: Meetings with other value chain actors for stimulating their membership

AV1.1.14: Realise the formal procedure for the establishment of the new organization

AV1.1.15: Realise meetings with other Palestinian Vegetables organisations, and establishing links with them

AV1.1.16: Make an action plan

AV1.1.17: Design and implement a web site of the organization (see AV141)

AV112 – Promote and realise collective sales through outsourcing a specialised co-operative

Action Plan

AV1.1.21: Realise a workshop with the focus groups on the "Advantage of a collective sales" focusing on:

- the benefits in terms of increased negotiation power, and increased income, provided the quality standard of the products is the same (or it is possible to standardise different qualities);
- the general regulation of a collective sale: price setting, delivery timing and conditions, inclusion of not of the packaging, costs and budget;
- introduction of a good practice;
- the constitution of a co-operative;

AV1.1.22: Selection of the farmers, belonging to the target municipalities, interested in participating to the collective sale

AV1.1.23: Technical assistance in the constitution of the co-operative, including elaboration of its business plan, and possible fund raising for the necessary investment (warehouse, packaging machine, initial cost of inputs)

AV1.1.24: Assistance to the co-operative’s start up

A.1.2 CAPACITY BUILDING

MULTI VALUE CHAIN LEVEL

AM121 – Improve entrepreneurial aptitude and enable medium, and long-term entrepreneurial vision, with a positive approach to innovation, with priority to women, through working on:

- i. the positive factors influencing the entrepreneurial developmental vision, such as financial implications, contribution to the community and recognition of the community, and removing the negative factors, such as work-family unbalance, additional stress, and potential risks
- ii. improve management capability on administration, planning, funding, competitive advantage, innovating, and marketing

Action Plan

AM1.2.11: Select the implementing entities (university, TVET, etc.), and realising an agreement with them

AM1.2.12: Define criteria for selecting the beneficiaries (e.g.: women, young, small, entrepreneurs and cooperatives; business in expansion, etc.), and selection modalities (call for selection, origin from the targeted communities, decision taken by the CPCs, etc.)

AM1.2.13: Identify the participants' entry profile, and know-how

AM1.2.14: Design the appropriate training course(s) -approximately 10 days for 30-35 participants and the schedule.

The participants are selected as it follows: 11 people workin within the value chains selected at community level ; the rest as representatives of each value chain ; in both cases at least the 40% are women

AM1.2.15: Implement the course, foreseeing the monitoring of two outputs: [1] the increase on individual know-how; [2] the enterprise evolution (medium term monitoring about the impact of the course

AM122 – Improve capacities in environment protection and green economy:

- a) mainly on how to protect the environment at the various levels: population behaviour; public authorities' policies, and business behaviour and production (towards green economy);
- b) realising awareness campaign on the importance of protecting the environment and combating climate change, on the importance of Waste management sustainable practices for reducing CO₂;
- c) facilitating exchange of information on best practices on how combating climate change, also linking to international network and programs, such as Climate Action Network, Network Nature, European Environment agency, UN Environment Program, EEP Africa, etc.
- d) how to access to information (to input, new technologies, credit lines, etc.), mainly in the areas of recycling, and organic productions, highlighting the most advanced processes and technologies, and the public program at support, including possible available incentives.

Action Plan

AM1.2.21: Select the implementing entities (university, TVET, etc.), and realising an agreement with them

AM1.2.22: Define criteria for selecting the beneficiaries (e.g.: young, small, entrepreneurs and cooperatives; business already operating in the field of organic production or recycling, etc.) belonging to the six value

chains and the 11 municipalities, and selection modalities (call for selection, origin from the targeted communities, decision taken by the CPCs, etc.)

AM1.2.23: Identify the participants' entry profile, and know-how

AM1.2.24: Design the appropriate training course(s) - approximately 10 days for 30-35 participants and the schedule.

The participants are selected as it follows: 11 people working within the value chains selected at community level ; the rest as representatives of each value chain ; in both cases at least the 40% are women

AM1.2.25: Implement the course, foreseeing the monitoring of two outputs': [1] the increase on individual know-how; [2] the enterprise evolution (medium term monitoring about the impact of the course

AM1.23 – Realise a training intensive 8-10 days course on “Know how for accessing to capital” addressed to service providers, with particular reference to:

- Elaboration of business plans for accessing to bank finance
- Know-how on project financing, and achievement of the conditions for eligibility for accessing to the funding opportunities from national and international private and public entities
- Improvement of capacities in negotiation

Action Plan

AM1.2.31: Select the implementing entities (university, TVET, etc.), and realise an agreement with them

AM1.2.32: Select at least 15 service providers interested to this kind of course

AM1.2.33: Identify the participants' entry profile, and know-how: about 30-35 participants from each community

AM1.2.34: Design the training course - approximately 10 days -, and the schedule, to be carried on through 3 sessions:

Session 1: Elaboration of business plans (B.P.) for accessing to bank finance

- What is a B.P and what for; Model for a B.P. for a small farm. Deep Explication of the various parts
- Simulation of a BP
- Elaboration of a BP. 3 working group work on 3 different cases
- Presentation and discussion in plenary session

Session 2: Know-how on project financing (P.F.)

- What is the P.F., and what for; criteria for identifying the sources of funds at national and international levels (for instance as per international cooperation: embassies, and websites with tenders, and grants)
- Models for requesting the funds
- Simulation of a project proposal for tender
- Establishment of three working groups for the preparation of correspondent proposals
- Presentation and discussion in plenary

Session 3: Improvement of capacities in negotiation

- How to make the environment comfortable
- How to establish negotiation parameters
- What support documentation

- What communication strategy
- What exit strategy

AM1.2.35: Evaluation of the increase in individual know-how

AM1.24 – Realise a cycle of communitarian conferences (one for each municipality) for improving awareness on the importance of environmental protection for a local sustainable development, and for maintaining the value chain competitiveness

Action Plan

AM1.2.41: Preparation of the conferences, mainly from the speakers' side, that will include:

- Representative of AYS for GREEN project
- Representative of the CPCs
- Representative of the Palm date Focus Group
- Experts from TVETs, universities and other relevant service providers
- Representative of the European Union
- Representative of the Gaza and National Authorities

AM1.2.42: Launch of the conferences, via media, and social media

AM1.2.43: Organisation of the conferences

AM1.25 – Improve capacities in project financing and favouring access to capital, through:

- ✚ Introducing a guarantee fund and solidarity insurance funds
- ✚ Facilitating an agreement with banks for access to capital, use national programmes, and interacting proactively with international cooperation
- ✚ Support for facilitating access to international funding, through projects, grants, crowdfunding, etc.; to bank credit (guarantee fund, solidarity revolving fund, etc.), local companies (social responsibility)
- ✚ agreements with financial institutions that reduce difficulties (guarantees, interest, grace period, insurance, etc.) of access to credit
- ✚ identifying national programmes and plans for the development of the value chains and facilitating their implementation in Gaza
- ✚ using international cooperation proactively
- ✚ identifying appropriate opportunities, such as: asset finance for equipment (disbursed direct to suppliers where possible), revolving credit, guarantee fund, insurance, etc.

Action Plan

AM1251 Identify at least 10 service providers for the participation to the training activity, organized on an intensive course

AM1252 Identify the trainer, and contract her/him

AM1253 Design the course, to be carried out on 4 days, as it follows:

1st day: Interactive lectures on:

- *How to find information on funding opportunities and international cooperation agencies*

- How to understand the peculiarities and requirements from each agency
- Guidelines on how to write down project proposals

2nd day: Simulation: An interactive simulation on an example of project proposal, and how it will be evaluated

3rd day: Working groups: At least 3 working groups are organized for elaborating three project proposals correspondent to 3 different donors

4th day: Evaluation in plenary session

AM1254 Evaluate the knowledge increase

VALUE CHAIN LEVEL

AV121 – Improve environment protection, through realizing awareness campaigns for

- ✚ sensitising positive behaviours for the environment safeguard addressed to the population (inducing non-polluting behaviour), institutions (favouring and implementing strategies and initiatives for environmental protection) and producers (using alternative practices for fertilization, protection from plant diseases, etc.)
- ✚ sensitising about the advantages of carrying out circular economy initiatives and businesses (recycling tomato residues from seed and skin, organic production, water and electricity management, business for producing out from the recycled materials).

Action Plan

AV1.2.11: Define at least 50 participants selected among producers, representatives of NGOs, public authorities, etc., coming from each municipality, for their participation to a 4 days' workshop about environment protection (applying non-polluting behaviour, designing and implementing strategies and initiatives favourable to environmental protection, using alternative practices for fertilization, protection from plant diseases, etc.) and circular economy benefits (waste recycling, re-use, re-generation, with particular reference to organic waste, paper, plastic and glass wastes)

AV1.2.12: Organise at least three webinars with the first dissemination at community level of the selected people on the three topics including illustration of best practice

AV1.2.13: Evaluating the results

AV122 – Improve environment protection, through strengthening know how on soil decontamination, through biologic remediation, phito-remediation, physical remediation, bacterial and fungal degradation, etc.

Action Plan

AV1.2.21: Establish contacts with institutions favouring and implementing strategies and initiatives favourable to the environmental protection

AV1.2.22: Apply for membership

AV1.2.23: Realise, at least, five workshops or webinars on the "Best practices on how combating climate change", identifying the specific topic for each one, and committing to each one of the organizations to introduce one or more best practices

AV1.2.24: Carry out the abovementioned workshops or webinars

AV1.2.25: Systematise the contents and findings of each workshop or webinar

AV123 – Create more professionals for the following job opportunities, to the particular benefit of women and young people, linked to the value chain strategies, through training-on-the job:

Administration	Accountant
	Business Administration
	IT manager
Marketing	Sales manager
	Marketing manager
	Social media expert
	Public relation officer
Farming	Farm manager
	Farm Engineer
	Agriculture engineer
	Mechanic
Storage	Storage operator
	Refrigeration system operator
Horticulture Industry	Production manager
	Industry engineer
	Storing manager

Action Plan

AV1.2.31: Select the implementing entities (university, TVET, etc.), and realise an agreement with them

AV1.2.32: Define criteria for selecting the beneficiaries (e.g.: women, young people, small, entrepreneurs and cooperatives; business in expansion, etc.), including participants from each municipality, and selection modalities (call for selection, origin from the targeted communities, decision taken by the CPCs, etc.)

AV1.2.33: Identify the participants' entry profile, and know-how

AV1.2.34: Design the appropriate training course(s) - approximately 10 days for 30-35 participants. They are selected as it follows: 11 people working within the value chains selected at community level ; the rest as representatives of each value chain ; in both cases at least the 40% are women. Define the course program and the schedule

AV1.2.35: Include in the training topics such as gender equality, sensitisation against violence and harassment against women

AV1.2.36: Implement the course, foreseeing the monitoring of two outputs: [1] the increase in individual know-how; [2] the enterprise evolution (medium term monitoring about the impact of the course)

AV124 – Reinforce the TVET system for introducing vocational course on new skills for the following job opportunities, to the particular benefit of women and young people, such as the following

Administration	Financial Grant Officer
	Fund raising manager
Marketing	Food broker
	E-marketing
	Multimedia designer
Farming	Phitosanitary manager
	Greenhouse maintenance engineer
Horticulture Industry	Food nutritionist
	Food Technologist
	Quality assurance manager

Storage	Packaging machine operator
Research	Research and Development manager
	Research and development laboratory operator

Action Plan

AV1.2.41: Select the implementing entities (university, TVET, etc.), and realise an agreement with them

AV1.2.42: Define criteria for selecting the beneficiaries (e.g.: women, young people, small, entrepreneurs and cooperatives; business in expansion, etc.), including participants from each municipality, and selection modalities (call for selection, origin from the targeted communities, decision taken by the CPCs, etc.)

AV1.2.43: Identify the participants' entry profile, and know-how

AV1.2.44: Design the appropriate training course(s) - approximately 10 days for 30-35 participants. They are selected as it follows: 11 people working within the value chains selected at community level ; the rest as representatives of each value chain ; in both cases at least the 40% are women. Define the course program and the schedule

AV1.2.45: Implement the course, foreseeing the monitoring of two outputs: [1] the increase in individual know-how; [2] the enterprise evolution (medium term monitoring about the impact of the course)

A.1.3 SERVICES

MULTI-VALUE CHAIN LEVEL

AM131 – Improve service providers' assistance for

- ✚ administrative, organisational, legal, and commercial sector
- ✚ accessing to finance, such as opportunities of the banking system, of national program measures and incentives, international funding agencies, including, for each one, procedures, and conditions for eligibility and access

Action Plan

AM1.3.11: Realise a quick check-up (via e-mail, telephone, etc.) on the interest of service providers in providing consultancy on the above-mentioned topics

AM1.3.12: Verify the capacities of the service organizations in providing effective, and efficient assistance, through meeting them, and obtain/sharing needs for capacity building

AM1.3.13: Identify experts for capacity building of service providers

AM1.3.14: Prioritise and detail the content of the training

AM1.3.15: Realise the capacity building, that could be organized through coaching (for instance 10 days coaching for each topic) for at least 2 service providers/each

AM132 – Realise a map of the available services, facilitate coordination of the services, and more proximity to the businesses, through an HUB for providing information and consultancy at distance

Action Plan

AM1.3.21: Conduct a one-day training session of the AYs for GREEN project on "Territorial Service System: What is it, What for, How to build it"

AM1.3.22: Identify the service providers supporting businesses and agriculture development in Gaza, through meeting each one individually, and collect information about their activity (ILS LEDA provides a tool). At the end of the meeting identifying the interest to join the Hub

AM1.3.23: Conduct 1-2 days' workshop with the interested service providers, for analysing possible synergies and coordination, according to existing networks, and -possibly- identifying the way how to manage and operationalize this coordination through the Hub

AM1.3.24: Realise the map of the available services, with geo-localisation and identify the informatic modalities of interaction (Social Group, etc.)

AM1.3.25: If agreed at the end of the workshop, make the system working, through simple operational regulations (how to manage the demand, how to provide comprehensive support through diverse competences, how to get the funds of the coordination and promotion, etc.)

AM1.3.26: Realise a communication campaign of the Hub

VALUE CHAIN LEVEL

AV131 – Favour access to job opportunities provided by the Tomato&Cucumber value chain potential development, through carrying out information campaign on business and job opportunities, with priority to young people and women, generated by the value chain development in all its components

Action Plan

AV1.3.11: Prepare a brochure illustrating the main characteristics of the Gaza vegetable value chain development strategy, as envisaged by the Project

AV1.3.12: Prepare a simple lecture about the topic

AV1.3.13: Realise a one-day workshop for each community, organized in two sessions:

Session A – Morning: Introduction and debate on Questions and Answers

Section B – Afternoon (after lunch break): Individual Meetings with interviews on curriculum and opportunities for the participants

AV132 – Support start-up of new young and women enterprises for by-products, such as:

- ✚ Tomato by-products, such as canned tomatoes, tomato paste (concentrate), tomato puree, passata (creamed tomatoes), dried tomatoes, tomato juice, tomato pulp, tomato powder, tomato residue for recycling such as tomato pomace, tomato residues as ingredients to food industry (enriched tomato derivatives, pasta making and sweets), and for pharmaceutical industry (extracted by skin and seeds)
- ✚ Cucumber by-products, such as cucumber juice, cucumber powder, cucumber extract for beauty products (cosmetics, shampoos, soaps, essential oil, etc.), and cucumber waste for packaging material, biogenic fuels.

Action Plan

AV1.3.21: Advertise the organisation of a public conference on the initiative "SYOB: Start-up Your Own Businesses" for young people, and the organization of a first launching workshop

AV1.3.22: Prepare a public workshop for launching SYOB with the participation of at least 50-60 people, (of which at least 50% women) including participants from each municipality, according to the following steps:

- introduce Tomato&Cucumber value chain development strategy, and the new business opportunities
- introduce the organization of the SYOB training course
- introduce the minimum requirements for participating to the training course, and submitting to participants a test-questionnaire on entrepreneurial skills
- select 30 people for the training course

AV1.3.23: Realise the training course focused on the following main sessions:

Session 1

- What is an entrepreneur: its economic, social, and communitarian role; the propension to risk, and the passion to find innovative solutions
- Basic elements for administrating a business
- Written test submitted to each participant
- Selection of the 2/3 of participants (or the people with a minimum score to the test) to access to the following sessions

Session 2

- How to make a business plan

Session 3

- Form working groups, according to the business (among the targeted ones) chosen from each participant
- Coaching the preparation of the business plans, facilitating access to basic information (market perspective, and technologies), and drafting of the business plan

AV1.3.24: Provide grants to the best business plans

AV1.3.25: Organise “post start-up” entrepreneurial coaching

AV133 – Improve Business support with priority to:

- ✚ Support for increasing productivity, and quality, including reduction of production losses and traceability
- ✚ Support businesses operating for the circular economy

Action Plan

AV1.3.31: Realise a quick check-up (via e-mail, telephone, etc.) on the interest of service providers in providing consultancy on the above-mentioned topics, about project financing and circular economy

AV1.3.32: Verify the capacities of the service organizations in providing effective, and efficient assistance, through meeting them, and obtain/sharing needs for capacity building

AV1.3.33: Identify experts for capacity building of service providers

AV1.3.34: Prioritise and detail the content of the training

AV1.3.35: Realise the capacity building, that could be organized through coaching (for instance 10 days coaching for each topic) for at least 2 service providers/each topic

AV134 – Exposure to the new technologies, with specific regard to innovative ones, such as precision drip irrigation, robotics (for instance to move the plants out into the field to grow then bring them back in at the end of the season for early harvest), internet of things wireless connectivity (for monitoring a host of environmental and growing conditions in real time, measuring soil moisture, humidity, and temperature, through sensors, etc.), and also to applying the External-Input and

Sustainable Agriculture (LEISA) approach, that makes optimal use of combinations of locally available internal and external inputs and indigenous and scientific knowledge.

Action Plan

AV1.3.41: Identify institutions working on vegetable value chain and aimed at disseminating new technologies, such as World Vegetable Center, Euvrin, Vegetable Science international Network (VEGNET), Horticulture Innovation Lab, European Cooperative Programme for Plant Genetic Resources (ECPGR), etc.

AV1.3.42: Establishing links with these institutions working and facilitate the Union's membership to them

AV1.3.43: Identify at least 10 new technologies of possible interest for the value chain

AV1.3.44: Elaborate a project for the transfer of technology, including feasibility plan, prioritizing and detailing the content of the training

AV1.3.45: Raising funds for implementing the project and the transferring the technology

A.1.4 INFRASTRUCTURE

MULTI-VALUE CHAIN LEVEL

AM141 – Design and realise a Website for the Federation of Unions, linked to the website of the six Value Chain Unions, for facilitating exchange of information, inform about the interesting initiatives, being a vehicle of communication with the extern, national and international communities

AM142 – Realise water and electricity communitarian infrastructure with particular reference to equipment for alternative energies such as solar panels, biofuel and others

AM143 – Build public care facilities for children and elderly

Action Plan

Each community will select the infrastructures to prioritise, which will be realised based on budget availability.

For each one of the prioritised infrastructure the action plan is the following:

AM1.4.A:1 Share the prioritized infrastructure with the value chain focus group

AM1.4.A2: Define the terms of reference for the infrastructure

AM1.4.A3: Define the desired place of installation

AM1.4.A4: Launch the call for selection

AM1.4.A5: Assess the candidates and select the winner(s)

AM1.4.A6: Define and execute the grant contract

AM1.4.A7: Monitor the execution

VALUE CHAIN LEVEL

AV141 – Realise a WEB site for the Union

AV142 – Realise more greenhouses

AV143 – Realise water conserving growing methods (e.g., drip irrigation)

AV144 – De-contaminate communitarian soil

AV145 – Build a cold collective storage facility

AV146 – Re-habilitate rural roads

AV147 – Realize a nursery for producing special seeds

Action Plan

Each community will select the infrastructures to prioritise, which will be realised based on budget availability.

For each one of the prioritised infrastructure the action plan is the following:

AV1.4.A1: Share the prioritized infrastructure with the value chain focus group

AV1.4.A2: Define the terms of reference for the infrastructure

AV1.4.A3: Define the desired place of installation

AV1.4.A4: Launch the call for selection

AV1.4.A5: Assess the candidates and select the winner(s)

AV1.4.A6: Define and execute the grant contract

AV1.4.A7: Monitor the execution

A.2 PRIORITY 2

A.2.1 GOVERNANCE

MULTI-VALUE CHAIN LEVEL

AM211 – Involve universities in order to include issues related to environmental protection in university curricula

VALUE CHAIN LEVEL

AV211 – Link the UToC-VC with:

- ✚ research institutions for favoring innovative solutions for the value chain development
- ✚ international networks, such as Vegetable Science International Network (VEGINET), etc.

AV212 – Establish a working group with MoA, Ministry of Economy and other relevant public authorities for:

- ✚ sharing the proper support measures, incentives or measures to support the value chain
- ✚ dissemination of information about national programs and regulatory measures,
- ✚ Improve transportation system

AV2.13 – Improve the marketing capacities through:

- ✚ Realizing a Gaza Vegetable Brand or mechanism of recognition and assurance that products under the Gaza Vegetable Label have certain reliable characteristics of quality, nutrition, healthy, social, ethical, environmental values, etc., through: establishing the minimum

performance required for the use of the label; the procedures for getting the label; The control system for evaluating, and monitoring the performance for maintaining the label

- ✚ Establishing a link with national authorities competent on monitoring market characteristics trends (demand and supply)

A.2.2 CAPACITY BUILDING

MULTI-LEVEL VALUE CHAIN

AM221 – Facilitate gender equality, through: (a) awareness campaigns for facilitating gender equality in the distribution of roles and activities within the value chain; (b) strengthening capacity of women for combating harassment (recognising the phenomenon, reporting or denouncing it, verifying if it happens to other women, knowing the law and the women rights; supporting TVET in improving their offer of integrated professional training for women, including issues such as: Awareness, Self-esteem, Gender equality principles, Negotiation power; Defence against harassment; Information about job opportunities; Professional training for responding to the job opportunities

A.2.3. SERVICES

MULTI-VALUE CHAIN LEVEL

AM231 – Support for facilitating access to international funding, through projects, grants, crowdfunding, etc.; to bank credit (guarantee fund, solidarity revolving fund, etc.), local companies (social responsibility) Facilitate the dissemination of information on international cooperation programmes

AM232 – Improve social sustainability, through supporting enterprises that use their social responsibility for social investments, facilitating SMEs managed by young people under 35 years of age/total SMEs, generate employment for people with mental and/or physical disabilities, generate employment for people with low skills and professional curricula

AM233 – Improve specific support to women entrepreneurs, through a special help desk for:

- ✚ supporting companies in favouring women access to job
- ✚ providing information to women about the opportunities of jobs provided by the value chain development strategy
- ✚ Adapting services for the development of the value chains to the needs of women

AM234 – Strengthen initiatives or programmes (cleaning campaigns, waste collection, training courses with/involving schools, reforestation campaigns, rational management of water resources, etc.), for improving the participation of citizens, the presence of voluntary corps for environment protection, and the active work of association or foundations; Facilitate fund raising for organising at least 3 Conferences or debates on environment sustainability and climate change, involving international experts, and agencies

VALUE CHAIN LEVEL

AV231 – Improve services for environmental protection, through

- ✚ Improving service providers capacity in assisting the farmers in using bio-fertilisers
- ✚ Supporting farmers in using available techniques for decontaminating the soil, such as biologic remediation, phito-remediation, physical remediation, bacterial and fungal degradation, etc.

AV232 – Realise awareness campaigns on the benefits of innovations regarding either the products (focusing the vegetable local competitive advantage, and the trends on that consumer preferences), the processes (focusing the new available technologies), and organisation (focusing the new needs for cooperation either internally between the actors of the value chain for instance on issues such as logistic, commercialisation, marketing, resilience, access to inputs and know how

AV233 – Carry out transfer of technology, through:

- ✚ realising or strengthening research laboratories for favouring introduction of innovation in the vegetable production,
- ✚ networking with national and international know how carriers' organisations, such as Vegetable Science International Network (VEGINET), etc.
- ✚ build capacity of service providers in supporting transfer of new technologies

AV234 – Provide information on:

- ✚ existing local, regional, national, international networks, including farmers and/or value chain, and/or women, and/or scientific networks related to the vegetables value chain
- ✚ new technologies, through establishing (or registering on) specialised institution working on vegetables value chain
- ✚ new trends on market demand, and the new competition scenarios that will be faced also in the internal market

A.2 PRIORITY 3

AV.3 GOVERNANCE

VALUE CHAIN LEVEL

AV311 – Realise collective purchasing of fertilizers

AV312 – Lobbying with public authorities for facing the problem of salinity in the water

AV313 – Lobbying with public authorities to reduce the price of equipment (coops and cages, feeding and drinking equipment, heater management equipment, breeder/laying nests, egg washer, slaughter) through proper taxation and by reducing bureaucratic procedures

AV314 – Share value chain marketing strategy

AV315 – Facilitate the organization of at least 1 annual initiative (fairs, festival, cultural event, etc.) for promoting the Gaza vegetables products supporting the fundraising (international agencies' opportunities, sponsorships, crowdfunding and business social responsibility)

AV316 – Constitute a Union of women workers, and establish a direct telephone assistance service where to report the harassment, managed by a women association

A.3.2 CAPACITY BUILDING

VALUE CHAIN LEVEL

AV321 – Exposure to best practices on the solution for desalinate water

AV322 – Improve capacities of providers of equipment maintenance services

A.3.3 SERVICES

VALUE CHAIN LEVEL

AV331 – Support the production of organic nutrients, substituting the chemical pesticide

AV332 – Improve social sustainability, through facilitating SMEs managed by young people under 35 years of age/total SMEs, and generate employment for people with low skills and professional curricula

REFERENCES

- EMR (2020). *Global Tomato Processing Market Outlook*. Retrieved from <https://www.expertmarketresearch.com/reports/tomato-processing-market>
- Indexbox (2022). *World - Cucumbers and Gherkins - Market Analysis, Forecast, Size, Trends and Insights Update: COVID-19 Impact*. Retrieved from <https://www.indexbox.io/store/world-cucumbers-and-gherkins-market-report-analysis-and-forecast-to-2020/>
- Marzin, J., Uwaidat, A., Sourrisseau, J. M. (2019). *Study on Small-scale Agriculture in the Palestinian Territories Final Report*. Food and Agriculture Organization of the United Nations (FAO). Retrieved from <https://agritrop.cirad.fr/592999/1/Marzin%20Uwaidat%20Sourrisseau%202019%20Study%20on%20OSSA%20in%20Palestine%20with%20FAO%20WBGS%20final.pdf>
- OXFAM (2013). *HEA Livelihood Baseline Report Occupied Palestinian Territory: Gaza Strip*. Retrieved from https://www.oxfamitalia.org/wp-content/uploads/2013/07/Gaza_book_LOW_final.pdf
- OXFAM (2016). *Vegetable Value Chain Report*. Retrieved from https://gupap.org/wp-content/uploads/2016/08/Annex-3-4_Vegetable-Value-Chain-report-FINAL-1.pdf
- Palestinian Central Bureau of Statistics (2012). *Agricultural Statistics Survey, 2010/2011, Main Results*. Ramallah, Palestine. Retrieved from <https://www.pcbs.gov.ps/Downloads/book1903.pdf>
- Palestinian Central Bureau of Statistics (2012b). *Agricultural Census 2010, Final Results – Rafah Governorate*. Ramallah, Palestine. Retrieved from <https://www.pcbs.gov.ps/Downloads/book1856.pdf>
- Palestinian Central Bureau of Statistics (2012c). *Agricultural Census 2010, Final Results – Khan Yunis Governorate*. Ramallah, Palestine. Retrieved from <https://www.pcbs.gov.ps/Downloads/book1896.pdf>
- Palestinian Central Bureau of Statistics (2012d). *Agricultural Census 2010, Final Results – North Gaza Governorate*. Ramallah, Palestine. Retrieved from <https://www.pcbs.gov.ps/Downloads/book1848.pdf>
- Paltrade (2014). *The state of Palestine National Export Strategy 2014-2018*. Retrieved from <https://www.paltrade.org/uploads/16080477701846317454.pdf>
- Technavio (2019). *Cucumber and Gherkins Market by Distribution Channel and Geography - Forecast and Analysis 2020-2024*. Retrieved from https://www.technavio.com/report/cucumber-and-gherkins-market-industry-analysis?utm_source=pressrelease&utm_medium=bw&utm_campaign=t_auto_week22&utm_content=IRT_NTR40239
- WFP (2007). *Rapid Food Security Needs Assessment in Gaza Strip Effect of Import Restrictions and Freeze on Exports on the Food Security in Gaza Strip*. Retrieved from <https://documents.wfp.org/stellent/groups/public/documents/ena/wfp171915.pdf?iframe>

ANNEX 1. SUSTAINABILITY FACTORS AND NEEDS FOR THE VEGETABLES VALUE CHAIN IN GAZA

Variables	Scores		
Programmes for protecting the environment	Many	Some	Few
Natural Reserve or Protected Zones			
Public regulations (plans or programmes) for protecting natural resources/environment			
Information Campaigns about environmental sustainability			
Effectiveness of the programmes for protecting the environment	High	Medium	Low
Natural Reserve or Protected Zones			
Public regulations for protecting natural resources/environment			
Information Campaigns about environmental sustainability			
Programmes for facilitating the involvement of citizens in the environment protection	High	Medium	Low
Initiatives or programmes for facilitating the participation of citizens			
Presence of voluntary corps for environment protection			
Active work of association or foundation			
Conferences or debates on environment sustainability			
University education on environment sustainability			
Effectiveness of the programmes for facilitating the involvement of citizens in the environment protection	High	Medium	Low
Initiatives or programmes for facilitating the participation of citizens			
Presence of voluntary corps for environment protection			
Active work of association or foundation			
Conferences or debates on environment sustainability			
University education on environment sustainability			
Access to environmental resources	High	Medium	Low
Drinking water			
Irrigation water			
Electrical energy			
Access to public resources			
Access to private resources (land properties)			
Green Economy	High	Medium	Low
Is the differentiated collection of waste applied?			
Is the circular economy spread in the district?			
Presence of recycling enterprises			
Presence of enterprises for the generation of alternative energies			
Organic food production			
Conservation of natural heritage			
Preservation of rare animal species			
Conservation of historical and cultural heritage			
	Low contamination	Medium contamination	High contamination

Perception on the atmospheric contamination in the territory/area			
Perception of the risks in the territory/area	Low	Medium	High
Floods			
Drought			
Landslide			
Earthquake			
Typhoons/hurricanes/cyclones			
Sand storms			
Fires			
Release of hazardous materials (chemicals, oil, toxic waste)			
Institutional Sustainability: Governmental programs	High	Medium	Low
Level of execution of government plans for the value chain development in the district			
Level of attention of the official government for the development of the value chain in the region			
Presence of specific financial mechanisms for the value chain (loans facilities etc.)			
Institutional attention to social needs	High	Medium	Low
Shelter			
Water			
Sanitation			
Livelihoods			
Health			
Child protection			
Security			
Access to justice			
Administration / civil documentation			
Formal education			
Non-formal education			
Vocational training			
Social Sustainability	High	Medium	Low
Ability to generate employment for people with mental and/or physical disabilities			
Ability to generate employment for people with low skills and professional curricula			
SMEs managed by young people under 35 years of age / total SMEs			
Enterprises that use their social responsibility for social investments			
Financial Sustainability	High	Medium	Low
Potential to secure loans for the business sector			
Availability of financing specific mechanisms for the value chain			
Availability of incentives/programmes supporting the livelihoods of specific groups in the community			

ANNEX 2. ACCESS TO RESOURCES FOR THE VEGETABLES VALUE CHAIN

	Easy availability = Low priority
	Medium availability = Medium priority
	Non availability = High priority

VALUE CHAIN PERFORMANCE: INPUTS				
VARIABLE	COMPONENT			
		YES	WEAK	NO
INPUTS 1 – Farming	Seeds			
	Fertilizers			
	Pesticides			
	Organic nutrients			
	Agrichemical supplies			
	Water			
	Raw materials			
	Energy			
INPUTS 2 - Environment-Infrastructure	Soil			
	Irrigation			
	Nurseries			
	Fencing and flooring			
INPUTS 3 – Human Resources	Highly qualified staff			
	Low-skilled staff			
INPUTS 4 – Financial Resources	Own			
	Banks			
	Government programmes			
INPUTS 5 - Information	Information on market demand			
	Technology information			
INPUTS FOR GREEN ECONOMY	Bio-fertiliser			
	Credit lines for green livestock			
	Non contaminated soil			
	Information for green farming technology			
VALUE CHAIN PERFORMANCE: EQUIPMENTS AND BUYERS				
EQUIPMENT (DURABLE GOODS)	Garden rake			
	Garde trowel			
	Pump Sprayer			
	Irrigation equipment			
	Support system - tomato cages, strake, trellises, spirals			
	Pruners			
	Tiller cultivator			
	Cucumber sorting/grading machine			
	Egg handling (basket, nest, packaging, case for transporting eggs)			
	Egg washer			
	Storage: Warehousing, Cold rooms			

	Cucumber powder			
	Cucumber extract for beauty products: cosmetics, shampoos, soaps, essential oil, etc.			
	Cucumber waste for packaging materials			

ANNEX 3. PROFESSIONAL PROFILES AND JOB OPPORTUNITIES IN THE VEGETABLES VALUE CHAIN

HORTICULTURE GENERAL JOB OPPORTUNITIES		
Area	Position	Duties
ADMINISTRATION	Accountant	Ensuring a company is operating securely and effectively
		Preparing and reviewing operational reports
		Drafting of reports for management control
		Verifying that taxes are paid promptly and correctly, according to the calendar of tax deadlines
		Maintaining all policies and procedures manuals
		Issuing and inserting the invoices
		Monitoring of payments and collections
		Managing and maintaining all department databases
		Preparing periodic and annual tax returns (tax return, single certification, VAT settlement)
	Management Control Responsible	Carrying out economic accounting of the company's production and distribution system
		Drawing up the financial statements
		Developing short and medium term forecasts
		Analysing and simulating the results of actions in prefigured contexts
		Producing management reports, documents, which examine and report on the state and economic-financial performance of the company, evaluating its overall performance and proposing the necessary corrections in the event of any imbalances
		Verifying the compliance with legal obligations for general accounting
		Assisting managers in compiling annual budget information and reports
	Purchase Manager	Organizing the procurement of raw materials and ensure their assortment, defining the quantity and delivery times
		It implements the plan of supplying the raw materials necessary for the production process
		Collecting data relating to the raw material requirements of the production area, collaborating with the Production Manager, the Controller and the Sales Manager
		Carrying out surveys of and identifies the best quotes offered by suppliers based on the quality / price ratio, delivery times and payment conditions
		Managing relations and negotiations with suppliers with whom it defines the order and delivery procedures, the payment methods and verifies compliance with the agreed procedures, managing any complaints and returns
		Checking the incoming quality of the purchased goods and follows the handling and flow process towards the production cycle
		Dealing with the storage of raw materials and inventory management
	IT Manager	Dealing with the company information system, proposing hardware and software updates, developing its own programs for the improvement of company activities and solving IT problems of current management

COMMERCIALIZATION / MARKETING		Managing the website, taking care of e-mail, any Intranet-Extranet network and, possibly, the system for managing electronic commerce
	Financial Grants Officer	Assuming responsibility for compliance with all local, national, and international grants
		Overseeing approved funding contracts from a financial perspective to ensure that documentation and reporting requirements are met prior to due dates
		Preparing and/or reviewing information and reports for internal and external stakeholders
		Developing and modifying policies/procedures/systems in accordance with government regulations and organizational needs and objectives
		Overseeing external monitoring visits, reviews, audits, and cross-site evaluations
		Facilitating regular meetings with fiduciary partners to ensure proper spend of all available funding
		Working with Program Managers to create program budgets
	Fund Raising Manager	Developing and managing campaigns that bring in funds from various sources
		Developing and executing fundraising strategies
		Fostering ongoing relationships with possible donors
		Elaborating proposals in collaboration with the other company sectors for receiving funds, including participation to calls for tenders
		Planning and hosting fundraising events
	Sales Manager	Managing and coordinating relations with commercial channels, negotiations and commercial contracts with customers who purchase company products
		Managing the company's customer / distributor portfolio, through communication and promotion actions
		Defining the commercial policy of the company, understood as a way of configuring offers based on the types of customers / distributors served, the needs and tastes of consumers and the characteristics of competitors
		Promoting alliance and partnership policies with other companies or with customers / distributors satisfaction
Managing relations with the production and Quality Control area		
Monitoring local and national regulations		
Marketing manager	Developing and executing a results-driven, multi-platform communications strategy and plan in line with corporate and brand direction while reflecting local priorities	
	Performs analysis of the market served and potential markets, in terms of detecting the needs of customers / distributors and consumers, following the evolution of demand and the behavior of competitors	
	Conceiving, developing and managing communication and promotion campaigns aimed at customers / distributors and consumers, identifying the best business development policies, promoting and protects registered trademarks or, in any case, owned by the company	
	Creating and managing all marketing materials and collateral in line with brand direction	
	Implementing online marketing activities including social media, demand generation, lead generation, etc.	
	Tracking effectiveness of various campaigns and course corrections as required	

	<p>Managing communications spend and working with vendors and agencies to create and/or localize communications and marketing activities and develop supporting assets</p> <p>Leading the planning and implementation of PR and initiatives related to the brand</p>
E-Marketing manager	<p>Assisting in the formulation of strategies to build a lasting digital connection with consumers</p> <p>Planning and monitoring the ongoing company presence on social media (Twitter, Facebook etc.)</p> <p>Launching optimized online adverts through Google Adwords, Facebook etc. to increase company and brand awareness</p> <p>Maintaining partnerships with media agencies and vendors</p> <p>Preparing online newsletters and promotional emails and organize their distribution through various channels</p> <p>Providing creative ideas for content marketing and update website</p> <p>Collaborating with designers to improve user experience</p> <p>Measuring performance of digital marketing efforts using a variety of Web analytics tools (Google Analytics, WebTrends etc.)</p> <p>Acquiring insight in online marketing trends and keep strategies up-to-date</p>
Social Media Manager	<p>Leading the business' social media content strategy and calendar to drive engagement, audience growth and conversation across all social platforms</p> <p>Establishing flexible short term and long-term social media goals across all platforms and consistently analyze to measure success</p> <p>Designing and implementing content plan to align with business goals and communication strategy</p> <p>Developing, implementing, and managing innovative ideas and promotions that influence campaigns, driving greater relevance, engagement, and growing social media communities</p> <p>Collaborating with departments to ensure that social media campaigns and concepts are appropriately integrated and amplified across platforms to support established objectives</p> <p>Interacting with customers on social channels, answering customer service questions, customer reviews, and escalate as applicable</p> <p>Working relationship with digital creative agency</p>
Food Distributor or Broker	<p>Selling product to stores</p> <p>Negotiating product placement and pricing</p> <p>Assessing current supply and inventory for clients</p> <p>Creating an actionable promotion plan for clients' products</p> <p>Discussing the discontinuation of products</p> <p>Connecting brands and manufacturers with potential buyers</p> <p>Networking with wholesalers, manufacturers and store owners</p>
Public Relation Officer	<p>Creating and maintaining a positive company brand for employees and clientele</p> <p>Promoting and maintaining with governmental authorities, for lobbying</p> <p>Working closely with function managers in the process of company product launches to ensure maximum exposure and protocols are followed</p>

		Prepares internal and external communications
		Providing support as a media liaison and write media releases, speeches and promotional materials
		Creating public relations opportunities and media coaching for senior managers, working with clients, advertising agencies, media and suppliers, value chain actors, and sectoral local and national unions
		Promoting positive issues and addressing negative issues, assisting with the management of incidents that arise
	Multi-media Designer	Ideating, creating and editing of graphic/packaging design, digital and multimedia content
		Networking with printers and other stakeholders on new artworks, packaging updates and colour-proofs
Assisting in the development of marketing collaterals for print and digital media, including video editing and website content updates etc.		

HORTICULTURE FARMING SPECIFIC JOB OPPORTUNITIES

Area	Position	Duties
FARMING	Farm manager	Supervising all steps of crop production or ranging, including planting, fertilizing, harvesting, and herding
		Making decisions about crops by evaluating factors such as market conditions, disease, soil conditions, and the availability of federal programs
		Planning the combination of crops they grow, so that if the price of one crop drops, they have enough income from another crop to make up for the loss
		Choosing and buying supplies, such as seed, fertilizer, and farm machinery
		Supervising maintenance of farming equipment
		Maintaining farm facilities, such as water pipes, fences, and animal shelters
		Recording financial, tax, production, and employee information
		Monitoring the prices for their products
		Tracking disease and weather conditions
		Monitoring trees for insect infestations and disease
	Harvester	Preparing and positioning plant for operation
		Operating tractor-drawn and self-propelled plant to plough land and sow, fertilise, cultivate and harvest crops, and avoid damaging crops
		Adjusting speed, height and depth of implements
		Operating plant to hold, lift and cut plants
		Operating attachments to lift, swing, release and sort trees and logs, and operating auxiliary plant such as chipping machines and log splitting machines
		Feeding felled trees into processors to strip limbs and cut into logs and loading logs onto stockpiles and into trucks
		Keeping log tallies and writing work reports
		Servicing plant and performing minor repairs
		Adjusting, and repairing farm machinery and equipment in readiness for planting and harvesting activities
		Ordering spare parts for vehicles and equipment

	<p>Operating tractors and associated equipment for soil conditioning, tilling, seeding, spraying, harvesting, baling and mobile storage systems</p> <p>Harvesting a range of crops including operating Headers and trucks for grain harvesting.</p> <p>Operating GPS Guidance technology on a range of agricultural equipment</p> <p>Transporting seed and harvested crops and deliver to customers and grain storage facilities</p> <p>Performing maintenance services on vehicles and agricultural equipment during seeding and harvesting</p> <p>Operating machinery and equipment associated with draining and irrigation works and other farm activities such as fencing and bale storage</p> <p>Handling seed, fertiliser, and farm chemicals</p>
Farm Engineer/Plant supervisor	<p>Caring for plants general health and growth</p> <p>Finding the best methods for farming</p> <p>Managing Soil Control</p> <p>Caring about water salinity control</p> <p>Preventing and careingagainst insect and disease attack</p> <p>Finding the best Intercropping methods</p> <p>Realising quality control on the use of chemicals</p> <p>Maintaning tools, parts and equipment used in palm date farming</p>
Agriculture Engineer	<p>Assuring general farming practice are safe, sustainable, and friendly to the environment</p> <p>Looking into new technology that will help in the improvement and/or increment in agricultural produce, land use, and control of resources</p> <p>Recommending ways by which the safety and well-being of other agricultural workers, animals, and farm/agricultural produce are maintained at all times</p> <p>Designing agricultural machinery and/or equipment, as well as crop storage facilities, animal, and crop processing, and overseeing the construction and/or setting up of these facilities</p> <p>Designing and supervising food processing plants and other related mechanical systems</p> <p>Testing agricultural machinery so as to ensure that operations within the farm are carried out smoothly and efficiently</p> <p>Conducting educational programs that help farmers with relevant information that they need for the improvement and enhancement of their agricultural produce</p> <p>Preparing sketches, drawings, proposals, and budgets needed for previously planned agricultural sites</p>
Mechanic	<p>Consulting equipment operating manuals, blueprints, and drawings</p> <p>Performing scheduled maintenance, such as cleaning and lubricating parts</p> <p>Carrying on diagnose and identifying malfunctions, using computerized tools and equipment</p> <p>Preparing and positioning plant for operation</p> <p>Operating tractor-drawn and self-propelled plant to plough land and sow, fertilise, cultivate and harvest crops, and avoid damaging crops</p> <p>Operating plant to hold, lift and cut plants</p>

		<p>Inspecting, repairing, and replacing defective or worn parts, such as bearings, pistons, and gears</p> <p>Overhauling and testing major components, such as engines, hydraulic systems, and electrical systems</p> <p>Disassembling and reassembling heavy equipment and components</p> <p>Travelling to worksites to repair large equipment, such as cranes</p> <p>Maintaining logs of equipment condition and work performed</p>
STORAGE	Storage operator	<p>Adapting the vegetables by various means (baskets made of palm leaflets, modern packing containers, transport by air or by sea)</p> <p>Protecting the vegetables when packed so that it will remain in good condition under various circumstances and for various periods of time.</p> <p>Labelling of packages in proper manner for marketing</p> <p>Storing, through: fumigation, washing, storage, refrigeration, hydration, dehydration, curing</p> <p>Controlling quality of the amount of water in the fruit during hydration and dehydration</p> <p>Storing</p> <p>Grading</p> <p>Realising final control of quality before sending to consumers</p>
		<p>Performing planned maintenance, regular servicing, and repairs to refrigeration equipment of all types, sizes, and temperature ranges</p> <p>Replacing faulty refrigeration parts</p> <p>Assessing, recommending and installing new refrigeration systems, as well as ice machines and other types of beverage equipment</p> <p>Observing and testing newly-installed systems to ensure they work properly</p> <p>Troubleshooting, repairing, and overhauling equipment such as air compressors, pumps, air handlers, air dryers, heat exchangers, other environmental changing devices, other mechanical equipment or electrical pneumatic and electronic components.</p> <p>Installing and replacing all types of pumps or refrigeration equipment according to prints, specifications, diagrams, or other instructions.</p> <p>Reading gauges and instruments, and adjusting mechanisms such as valves, controls, and pumps to control level of fluid pressure and distribution in systems.</p> <p>Operating various refrigeration recovery equipment in compliance with national regulations</p> <p>Soldering with sil-fos and silver solder, layout, and fit piping.</p> <p>Testing malfunctioning systems and components using electrical, mechanical, digital, and pneumatic controls.</p> <p>Maintaining cooling towers, water treatment facilities, and tower distribution system.</p> <p>Maintaining records of repairs or equipment requiring future service</p>

HORTICULTURE FOOD INDUSTRY SPECIFIC JOB OPPORTUNITIES



Area	Position	Duties
PRODUCTION	Production Manager	Coordinating and planning production in order to achieve the established objectives
		Organising and coordinating the production departments, deciding the processing criteria and production rhythms
		Allocating the workforce and follows the internal logistics
		Managing and monitoring the transformation flows of raw materials into finished products, esytablising workflow policies and procedures that improve efficiency without compromising safety or quality
		Coordinating the production activity with that of the other sectors of the company
		Evaluating machine resources to ensure continued production and minimal downtime, and intervenes in the event of production stoppages or poor quality products
		Establishing a balance between increased productivity and reduced costs of manufacturing operations, setting productivity goals
		Ensuring all safety and health standards are met to keep an organization accident-free
		Communicating regularly with upper management regarding problems or issues impacting production
		Motivating, supporting and providing guidance to production staff
	Food Industry Engineer	Developing new food products and processing methods using computer modeling software
		Coordinating with other engineers on projects such as designing packaging machinery, manufacturing facilities, or distribution networks
		Conducting research on food science topics such as new ingredients, processing techniques, or food preparation methods
		Developing new methods for processing foods to improve taste, appearance, storage life, and other characteristics
		Consulting with manufacturers about how their current equipment could be improved
		Conducting tests on new products to determine shelf life, nutrient retention, taste, odor, etc.
		Designing equipment that meets specific product requirements, such as machinery for cutting vegetables or machines that dispense beverages
		Evaluating new food processing technologies and equipment to ensure they meet industry standards
	Industrial Engineering	Conducting sensory tests to evaluate products based on taste, smell, texture, and other characteristics
		Reviewing production schedules, processes, specifications, and related information
		Designing production processes that maximize efficiency and reduce waste
		Developing and implementing process improvements and technological upgrades
		Designing control systems to minimize costs and production issues
		Developing design and production standards in cooperation with management and user personnel
	Preparing material and equipment lists, purchase orders, cost analyses, and estimated production costs	

		Designing the layout of facilities and determining personnel requirements	
		Training staff for new processes and providing instructions and manuals	
		Managing process documentation and preparing production reports	
	Food Nutritionist		Formulating/reformulating foods to make them healthier (i.e. lower salt, higher fibre, higher protein)
			Supporting Product Development of new products and reformulations
			Assisting with the design of products for people with special medical needs
			Monitoring regulatory compliance
			Following scientific literature and marketing trends and advising the business on trends that could be feasibly supported by nutritional science
			Advising food safety/toxicology, and allergens
			Nutrition labelling compliance with Food Standards and other local and international laws Nutritional education
			Addressing consumer enquiries
			Preparing nutritional marketing material for in-house use or for public use
			Publicing speaking related to general nutrition and/or products
	Food Technologist		Designing new food products based on market developments
			Studing issues related to the improvement of existing products
			Studing the processes and technologies most suitable for the production of a specific food
			Carrying on research on raw materials and on food and organic derived products
			Maintains relations with suppliers of raw materials
			Defining and monitoring the purchase, storage and processing phases of the raw materials used in food production
			Defining and monitoring the various stages of food processing and storage
	Production Worker		Developing the quality control systems for food products
			Weighs, measures, mixes, dissolves and boils ingredients
			Add materials, such as spices and preservative to food and beverages
			Operates heating, chilling, freezing, pasteurising, carbonating, sulphuring and desulphuring plant
			Monitors product quality before packaging by inspecting, taking samples and adjusting treatment conditions when necessary
			Operates machines to peel, core, slice, dice, pit and juice vegetables
			Cleans equipment, pumps, hoses, storage tanks, vessels and floors, and maintains infestation control programmes
			Regulates speed of conveyors and crusher rollers
			Packages and bottles products
	Moves products from production lines into storage and shipping areas		
QUALITY CONTROL	Product quality laboratory manager	Following and drawing up the manuals for the quality of products and production processes	
		Developing business improvement plans, follows and coordinates laboratory activities, controls suppliers and production processes	

		Organising, coordinating and scheduling checks, analyzes and specific procedures to assess the quality of incoming raw materials and outgoing finished products, and therefore verifies whether they meet the requirements of the regulations or market requests
		Supervising the controls and tests, and verifying the factors that determine a quality deterioration of the products
		Reviewing and reporting the principle causes of quality loss and nonconformance
		Checking the stages of the production process, the materials purchased and check the progress of the products after commercial distribution, providing, in case of problems, the withdrawal and the necessary analyzes
		Following the company's relations with verification and control bodies and authorities as well as relations with external laboratories.
	Product quality control analyst	Taking care of the execution of tests, acceptance tests and laboratory analysis of products; elaborates the results verifying their congruence with the reference standards
		Monitoring the quality standards during all stages of the production process of an agri-food company
		Checking that the processing and storage of the food produced complies with the regulations
		Completing tests required for food product packaging, and checking that the packaging of the food produced complies with the regulations
		Guarantees the periodic maintenance of the systems
RESEARCH LABORATORY	Research and Development Manager	Carrying out research aimed at the design of new products and packaging, the improvement, from a qualitative point of view and cost reduction, of the products already marketed by the company and the optimization of processes
		Identifying and defining product / process quality standards
		By monitoring the various stages of production, from the purchase and storage of raw material to the storage of the finished product, according to the pre-established quality standards
		By carrying out product analyzes, including the assessment and quality control of raw materials, semi-finished products, finished products, packaging and as regards the production and processing of food products
	Choosing the most suitable machinery and equipment for production and for the analysis laboratory	
	Research laboratory operator	Carrying out all activities related to research in the laboratory as established by the laboratory manager: carrying out tests / tests in the laboratory, implementing research programs and experimental analyzes, drawing up the technical documentation, checking the procedures and quality of the research, and experimentation with new products / components
		Verifying compliance with research standards
STO RAG		Managing the entire packaging process from start to finish, including designing new packages or labels and ordering supplies

	Storing Manager	Supervising and/or carrying out the activities that make it possible to prepare the food product for storage, transport and sale: crimping, bottling, pasteurization, sterilization, labeling, palletizing, wrapping, i.e. all those operations that serve to protect the product and preserve it from deterioration
		Reviewing contracts with vendors to ensure compliance with company policies and standards
		Coordinating with suppliers to ensure that adequate materials are available for production runs
		Evaluating the environmental impact of various packaging materials to identify more sustainable solutions
		Developing new packaging materials, such as biodegradable plastics or recycled paperboard
		Determining the best approach to use when designing packaging for a new product
		Reviewing artwork for product labels or packaging designs for content violations, such as inappropriate language or images
		Maintaining inventory records for all raw materials and finished products to ensure efficient use of storage space and effective production planning
		Carrying out all the activities necessary for the preparation of the machinery and their proper functioning
	Packaging machine operator	Preparing the machinery for packaging
		Carrying out the daily set-up of the machinery and, where necessary, making corrections
		Taking care of the loading of materials (with bottles, tetrapak cards, labels, etc.)
		Taking care of sterilization, pasteurization, and all those processes that preserve food products from deterioration (cellophane wrapping, seaming, etc.)
		Making sure that the machines operate in compliance with production standards
		Carrying out random checks on the packaged product
		Identifying manufacturing defects
		By recording the data relating to the operation of the machinery
		Guaranteeing the hygienic-sanitary safety of the premises and machinery
		Preventing the contamination of food by physical, chemical and biological contaminants
	Warehouse manager	Liaising with customers, suppliers and transport companies
		Coordinating and monitoring the receipt, order, assembly and dispatch of goods
		Using space and mechanical handling equipment efficiently, making sure quality, budgetary targets and environmental objectives are met
		Having a clear understanding of the company's policies and vision and how the warehouse contributes to these
		Coordinating the use of automated and computerised systems where necessary
		Responding to and dealing with customer communication by email and telephone
		Keeping stock control systems up to date and make sure inventories are accurate
		Planning future capacity requirements
Organizing the recruitment and training of staff, as well as monitoring staff performance and progress		

Other	Waste management and recycling	See Corrispondent Organic Waste Job Opportunities
-------	--------------------------------	---



Cover photo: by [Huzeyfe Turan](#) on [Unsplash](#)

Funded by the

