

Study Report

**SCOPING STUDY FOR THE
IMPLEMENTATION OF
MOBILISE PROJECT IN
TUNISIA**

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The MOBILISE project aims at launching a scalable and institutionally entrenched circular talent development programme between the Netherlands and Tunisia, Egypt and Ethiopia for the strengthening of climate-smart agriculture. The project, which specifically targets the agricultural sector, seeks to meet the demands of the labour market in the participating countries by involving partners from the public and private sector while developing cooperation with local higher educational institutions.

MOBILISE, November 2023

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Executive Summary

Horticulture is a major sector in the Tunisian agriculture not only in terms of cultivated areas, employment and added value but also in terms of export. The Netherlands is the main partner of Tunisia for importing several horticultural products such as tomatoes, pepper, and lettuce.

Tunisia is attracting national and Dutch private sector investors to produce vegetables thanks to its geographical location close to Europe and its low-cost energy.

Despite this situation, horticultural sector is facing many challenges related to climate change resulting in a severe drought from seven years forcing farmers to manage differently their water resources.

A Higher Education institute and a TVET agency offer training in horticulture but none of them has a curriculum addressing climate change adaptation in this sector.

MOBILISE project arrives at just the right time to contribute to support Tunisia in addressing the water scarcity issue by developing a cooperation with specialized education institutes in the Netherlands while demonstrating the benefit of circular migration.

This sensitive topic has been the focus of few projects implemented by European institutions in Tunisia in the last five years but only one was targeting the agricultural sector. The project will build on the lessons learnt from these projects, will develop partnerships with the private sector and the relevant stakeholders to have a sustainable impact.

Table of contents

Acknowledgments	2
Executive Summary	3
Table of contents	4
List of Tables	6
Acronyms and Abbreviations	7
1. Introduction	8
1.1 Objective and Rationale of the Assessment	8
1.2 Report Structure	9
2. Literature review	10
2.1 Inventory of similar projects in the country	10
2.2 Lessons Learned and Best Practices:	14
3. Mapping of the national horticulture sector	16
3.1 Overview of the national sector	16
3.2 Focus on the relevant horticulture subsectors	17
3.2.1 Sectorial cooperation Tunisia – The Netherlands	17
3.3 Mapping of sectorial stakeholders	20
3.3.1 Stakeholder groups and their roles	20
3.3.2 Inventory of most relevant stakeholders	20
3.3.2.1 Professional organizations and Public Authorities	20
4. Labour market assessment	25
4.1 Labour market requirements	25
4.2 Skills gap	25
4.3 Expected developments	25
5. Higher Education in Agri-domains	26
5.1 The Higher Education System	26
5.2 Career Development Programs	31
5.3 Business Start-up Programs and Incubators	31
5.4 Legal framework for educational cooperation	34
5.4.1 Accreditation authorities	34
5.4.2 Policies and regulations	34
6. Legal and Policy Framework	35
6.1 Policy and Strategy Framework	35
7. Recommendations	36

7.1	Better matching of labour market requirements and training offer.....	36
7.2	Potential target groups for the talent development program.....	36
7.2.1	Higher Education students.....	36
7.2.2	Professionals from private sector	36
7.3	Composition of the multi-stakeholder platform	36
7.4	Recommendations on the legal pathways for circular migration.....	37
8.	Bibliography	38
ANNEXES	39
A.	Interviewed companies.....	39

List of Tables

Table 1: List of circular migration projects in Tunisia	11
Table 2: Professional Organisations and Public Authorities	21
Table 3: Private companies in the horticultural sector	22
Table 4: Agricultural research organisations in Tunisia	23
Table 5: Other relevant stakeholders	24
Table 6: Higher Education Institutes in Agriculture	27
Table 7: Education programs in agriculture	28
Table 8: Career Development programs	31
Table 9: Business startup programs and incubation.....	32

Acronyms and Abbreviations

APIA	Agence de Promotion des Investissements Agricoles
AVFA	Agence de Vulgarisation et de Formation Agricole
BTP	Brevet de Technicien Professionnel
BTS	Brevet de Technicien Supérieur
CAP	Certificat d’Aptitude Professionnelle
EU	European Union
EUD	European Union Delegation
GDA	Groupement de Développement Agricole
GDP	Gross Domestic Product
INAT	Institut National Agronomique de Tunis
IRESA	Institut de Recherche et d’Enseignement Supérieur Agricoles
ISA-CM	Institut Supérieur d’Agriculture – Chott Meriem
MSB	Mediterranean School of Business
MSM	Maastricht School of Management – Maastricht University
MT	Metric Ton
NGO	Non-Governmental Organization
SME	Small and Medium Enterprise
SMSA	Société Mutuelle de Services Agricoles
SMU	South Mediterranean University
SMVDA	Société de Mise en Valeur et de Développement Agricole
USD	United States Dollar
VET	Vocational Education and Training

1. Introduction

1.1 Objective and Rationale of the Assessment

The 'MOBILISE: Circular Talent Development for Climate-Smart Agriculture' project is a 4-year project (2023-2027) financed by the European Commission, via the International Centre for Migration Policy Development (ICMPD) as donor agency, and implemented by Maastricht University - Maastricht School of Management (UM-MSM) in cooperation with Aeres University of Applied Sciences (Aeres) from The Netherlands, the Mediterranean School of Business (MSB-SMU) from Tunisia, the Kafr El Sheikh University (KU) from Egypt and the Hawassa University (HU) from Ethiopia.

The main objective of the project is to contribute to the Migration Partnership Facility (MPF) program of the European Commission by setting-up a scalable, institutionally embedded circular talent development program between The Netherlands and Tunisia, Egypt, and Ethiopia in favour of strengthening climate-smart agriculture, both in Europe and in the participating countries. As such, it is meant to further explore and possibly develop new legal pathways of circular migration, with the potential to scale-up to other countries and possibly other economic sectors.

In particular, the specific objectives are:

- a. To develop longer-term circular migration (regulatory) systems.
- b. To successfully pilot of a circular migration scheme in favour of strengthening European climate-smart agriculture.
- c. To demonstrate the benefits of the circular migration program to participants on return.

Within the framework of the first specific objective, in the first six months of the project, four needs assessment/scoping studies are conducted for The Netherlands, Tunisia, Egypt, and Ethiopia as first step for project implementation.

These studies will map out available resources and lessons learned from other projects in the same and similar countries, as well as relevant actors, their roles and responsibilities, the labour needs and the possible mechanisms and targets for the talent development activities.

The overall goal of this scoping study is to guide the MOBILISE project as it decides on the design of the new circular talent development program in the horticulture field to be developed by the Dutch and local higher education institutes in Tunisia.

Specifically, the scoping study should enable the MOBILISE project to prepare an agenda of priority cooperation areas within the theme; identify on-going work and lessons learned within the scope of the theme by other donors and related institutions; identify potential partners and relevant stakeholders; and provide recommendations that enable MOBILISE to build a coherent programme within the policy framework of circular migration.

1.2 Report Structure

The report is prepared and presented in 4 major parts as follows: the first part describes the Tunisian horticulture sector (production, international trade, relevant stakeholders, etc.) and assesses the labour market needs in terms of profile and skills, the second part reviews the Higher education and vocational training offer in Tunisia, the third part identifies the national policy framework in Tunisia related to immigration and labour regulations and the last part of the report makes recommendations to build a coherent programme in Tunisia.

2. Literature review

2.1 Inventory of similar projects in the country

Circular migration projects and talent development programs funded by international donors (EU, Swiss Cooperation, Belgian Cooperation, etc.) have been implemented in Tunisia in the last decade. Some of the projects currently implemented are presented hereafter:

Table 1: List of circular migration projects in Tunisia

Project / Program Name	Implementing organization	Donor	Domain	Location	Target beneficiaries	Services provided
Enhancing youth's employability in Tunisia through vocational apprenticeships and professional internships in Belgium and Tunisia (03/2018-02/2019)	International Organization for Migration	Government of Belgium (Budget: 350,000 €)	Circular migration Technical training.	Tunisia and Belgium	<ul style="list-style-type: none"> - 20 students enrolled in the professional training system. - 10 recently graduated from university. 	<ul style="list-style-type: none"> - 6-months internship in a Belgian enterprise (for University graduated) and 3-months training in a Belgian VET school and 3-months apprenticeship in Belgium (for students in the VET system), to enable them to reinforce their knowledge, acquire new professional competences, and increase their probability to find an appropriate job in the Tunisian labour market. - 5-month support to find an employment in an enterprise based on the offers available in the Tunisian labour market. If an opportunity is available, they are supported for another cycle of apprenticeship/internship during five months.
Mentor 2 (07/2021-06/2024)	City of Milan	EU	Circular and temporary migration	Tunisia, Morocco and Italy	<ul style="list-style-type: none"> - 50 Fresh graduated from Tunisia and Morocco 	<ul style="list-style-type: none"> - 6-months internships in SMEs or institutions in Milan or Piemonte region for young Tunisian and Moroccan. - Technical and financial support for entrepreneurs starting their projects and for young seeking professional insertion after coming back from Italy. - Build strong territorial networks made up of different partners (local, regional, and national authorities, NGOs, universities and research firms, businesses, and other stakeholders), to

						ensure the sustainability of circular mobility between the three countries.
Perspectives (2022-2026)	Swisscontact	Swiss Agency for Development and Cooperation	<ul style="list-style-type: none"> - Engagement of the Tunisian diaspora in Switzerland - Circular migration 	Tunisia and Switzerland	<ul style="list-style-type: none"> - Tunisian resident in Switzerland - Fresh graduated and young talents with 2 years of experience, aged between 18 and 35 	<ul style="list-style-type: none"> - Facilitation of investment and the transfer of know-how between the diaspora and Tunisian SMEs - Promotion of the circular migration of qualified young Tunisians who have completed their studies or are still undergoing vocational training. - Support the Tunisian authorities in building effective local, regional, and strategic governance structures and implementing concrete government measures to integrate migration into the policy framework.
THAMM - OFII (2022-2025)	OFII – French Office for Immigration and Integration	EU	Circular mobility between Tunisia and France & EU	Tunisia and France	<ul style="list-style-type: none"> - 384 Young talents aged between 18 and 35 - 250 Seasonal workers (agriculture, tourism, etc.) 	<ul style="list-style-type: none"> - Circular mobility program promotion - Reinforce cooperation between public administrations in Tunisia, France/EU - Strengthen employability of qualified job seekers in Tunisia and abroad - Develop attractiveness of Tunisia for Tunisian Diaspora
THAMM – ENABEL (08/2020 - 08/2023)	ENABEL – Belgian cooperation	EU (Budget: 4.6 m €)	Innovative mobility mechanism based on partnership, competence development and supporting talents to	- Tunisia, Morocco, Belgium	<ul style="list-style-type: none"> - 170 Workers and youth willing to migrate - Training and qualification institutions - Public and private institutions organising 	<ul style="list-style-type: none"> - Establishment/Improvement of mobility schemes between Belgium and Morocco, Belgium and Tunisia and, on an experimental basis, Morocco and Tunisia. - Improvement of the cooperation between relevant stakeholders in the field of regular migration and regular mobility, in particular for intermediation.

			access jobs in Tunisia and in Europe		international migration	
THAMM – GIZ (2019-2023)	GIZ – German Cooperation	BMZ and EU		- Tunisia, Morocco, Egypt & Germany	- 300 BTP, BTS and Licence graduates	- 6-months training in German language before departure - 3-years of training-employment in German enterprises - Scholarship of 1,000 euro/month

2.2 Lessons Learned and Best Practices:

- i. Enhancing youth's employability in Tunisia through vocational apprenticeships and professional internships in Belgium and Tunisia
 - A good skills-matching process between the Belgian and the Tunisian labour markets' structure was the main enabling factor of the project.
 - The support of key stakeholders benefitted the implementation of the project.
 - 31 Tunisian graduates had opportunity to intern with 12 Belgian companies to upscale their professional skills: 24 out of 31 interns were employed in Tunisia, 2 interns decided to continue their studies, 3 were employed abroad, and 2 were dismissed by their host companies for unsatisfactory performance.
 - The project offered the opportunity for Belgian companies to understand Tunisia's market potential: four host companies manifested the intention to open a branch in Tunisia.

Main constraints:

- Multiple administrative and logistical procedures related to the intern's relocation to Belgium.
 - Underdeveloped soft skills of the interns.
 - Lack of pre-departure support.
- ii. THAMM-OFII

The project has 2 components:

 - Seasonal migration for agriculture unskilled workers. The first-time immigrants are coopted by their peer-immigrants and are offered a work contract for a period of 3 to 6 months in a farm in France. At the end of the working season, they come back to Tunisia. The first-time immigrants do not require any training before starting to work in France. Co-optation generally results in a concentration of immigrants coming from the same city/village working in the same farms and reduces the opportunities for immigrants from other areas. It is also results in a better control of first-time immigrants as the peer-immigrants have family ties with them or know their relatives in the city/village of origin.
 - Young professional exchange. For this component, the best results are obtained by companies in Tunisia that use this facility to train their employees to gain new skills during the working period in a French company (3 to 12 months that can be extended to 24 months). It is also used by young people planning to start a new farming activity in their family farm and benefit from a financial support from OFII (5,000 euro per project).

iii. PERSPECTIVES:

- It is relevant to identify companies in the hosting country having or willing to have activities in Tunisia.
- Duration of the internship abroad is from 6 to 18 months to attract hosting companies, that will invest in training the beneficiaries.
- It is important to negotiate with the hosting country authorities, tax, and social security incentives on the internship allowance to encourage companies to accept the beneficiaries.
- Develop partnerships with Diaspora associations and Chambers of Commerce to improve visibility of the project and reach private sector.

iv. THAMM-GIZ:

- The internship allowance offered to beneficiaries (1,000 euros/month) is insufficient to cover the cost of living in Germany.
- Delays in obtaining visa for beneficiaries could hinder the project achievements. A green corridor for visa application has to be implemented by the German Embassy to reduce the visa processing time for project's beneficiaries.
- The length of visa issuing threatened the smooth running of the program. The German Embassy successfully implemented a fast track for visa application to circular migration candidates.

3. Mapping of the national horticulture sector

3.1 Overview of the national sector

Agriculture accounted for 10.1 percent of the GDP in 2022¹. The agribusiness industry accounts for 3.1 percent of Tunisia's GDP and 22 percent of value added in the industrial sector. There are about 1,100 formal food processing companies in the country, of which about 20 percent are exporters.

Tunisia is a net importer of agricultural products. In 2021, Tunisia imported for \$2.6 billion, chiefly cereals, sugar, and vegetable oils. The same year, Tunisia exported \$1.8 billion. Tunisia is a world-leading exporter of dates, and the fifth largest exporter of olive oil. Additionally, seafood, tomatoes, and citrus are major agricultural export products.

The vegetable value chain in Tunisia has a high strategic importance, particularly for supplying the Tunisian market with tomato, pepper, and cucumbers during the cold months and for generating around 84 m USD of exports annually. The high value-added production under greenhouse is limited to a reduced number of Governorates in the Sahel, Sfax, Sidi Bouzid and in the South, however. Greenhouses are mainly owned and managed by small holders that have low technical and financial capacities. They supply the domestic market and, on a lower scale, Libyan traders. A reduced number of commercial greenhouse farms are located in Gabès. They are producing in compliance with international standards for export to Europe and Gulf countries.

Vegetable crops covers 140,000 ha in Tunisia, of which 7,740 Ha (5 percent) are under greenhouse. From this 7,740 ha, 400,000 MT is produced, which represents 14 percent of total Tunisian horticulture production in quantity and 20 percent in value. There are three different types of greenhouses utilized in Tunisia: unheated greenhouses, heated greenhouses, and tunnels.

Tree crop production significantly contributes to agricultural production, employment creation and export earnings in Tunisia. Tree crops (excluding olive trees) cover around 450,000 ha. Total production of tree crops is around 1.2 million MT yearly, which represents 30 percent of the value of agricultural production. In addition, tree crop production provides a significant source of employment, accounting for 25 percent of full-time agricultural employment and 51 percent of seasonal agricultural employment.

¹ World Bank

Of the 450,000 ha of tree crops, 30 percent is irrigated land and 70 percent is rain-fed. In non-irrigated areas, almond, pistachio, fig trees and grape vines are the main tree crops. In irrigated areas, palm trees, citrus, peach, apricot and plum are the main crops.

3.2 Focus on the relevant horticulture subsectors

Tunisia exported vegetables for 83.7 m USD in 2021. The main exported vegetables were tomatoes (62.0%), dried vegetables (15.7%), artichoke (5.0%), pepper (4.9%) and lettuce (2.9%).

Export of fruit from Tunisia was valued to 308.7 m USD in 2021. Main exported fruit were dates (83.1%), stone fruit (5.5%), berries (4.7%) and citrus (3.1%).

3.2.1 Sectorial cooperation Tunisia – The Netherlands

The Netherlands is a major partner of Tunisia in vegetable trade.

It is the main destination for Tunisian vegetables for a total of 32.9 million USD exports in 2021 (39.2% of the Tunisian exported vegetables). Imports from The Netherlands are limited to potatoes seeds for a total value of 2.1 m USD in 2021.

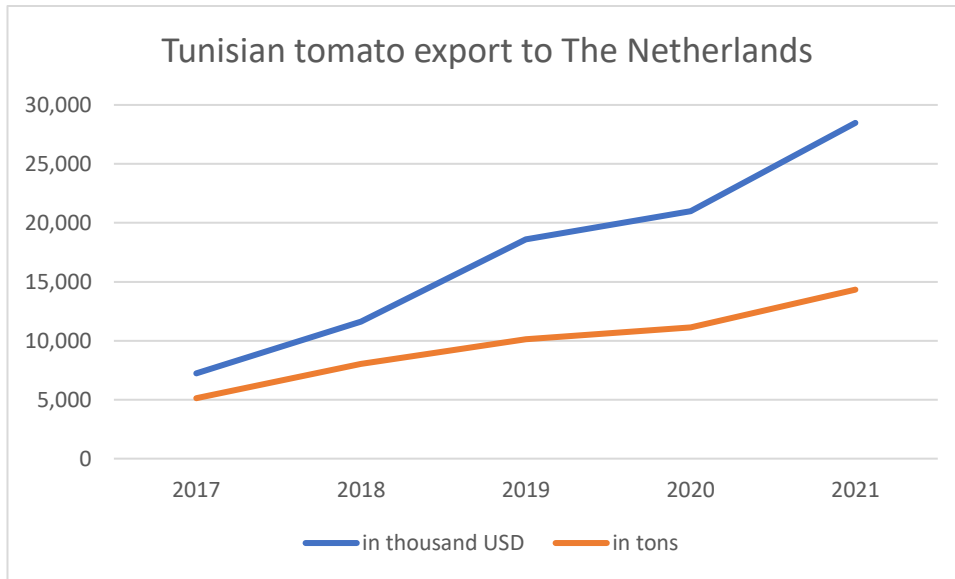
Export of Tunisian fruit to The Netherlands are mainly dates (6.4 m USD/2,824 tons in 2021) while imports from The Netherlands are close to zero (0.01 m USD in 2021).

Tunisia imported 5.6 m USD of vegetable seeds from The Netherlands in 2021 (12.5% of the imported vegetable seeds).

The main exported products to The Netherlands are:

- Tomatoes
Tomato is the major horticultural product exported by Tunisia mainly to the EU (92.6%). Export increased at CAGR of 12.7% from 2017 to 2021 when it reached 23,846 tons.

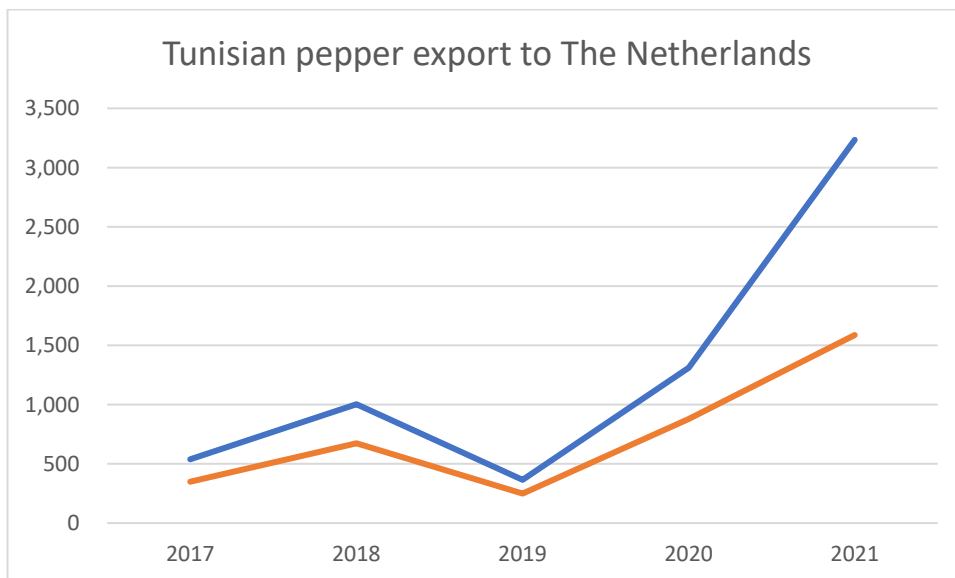
The Netherlands is the main market for Tunisian tomato. It represented 54.8% of the exported tomatoes in 2021.



SOURCE: ITC

Volume of exported tomato to The Netherlands nearly tripled between 2017 and 2021, increasing from 5,128 tons in 2017 to 14,334 in 2021 while value has increased almost fivefold (from 7.2 to 32.9 million USD).

- Pepper



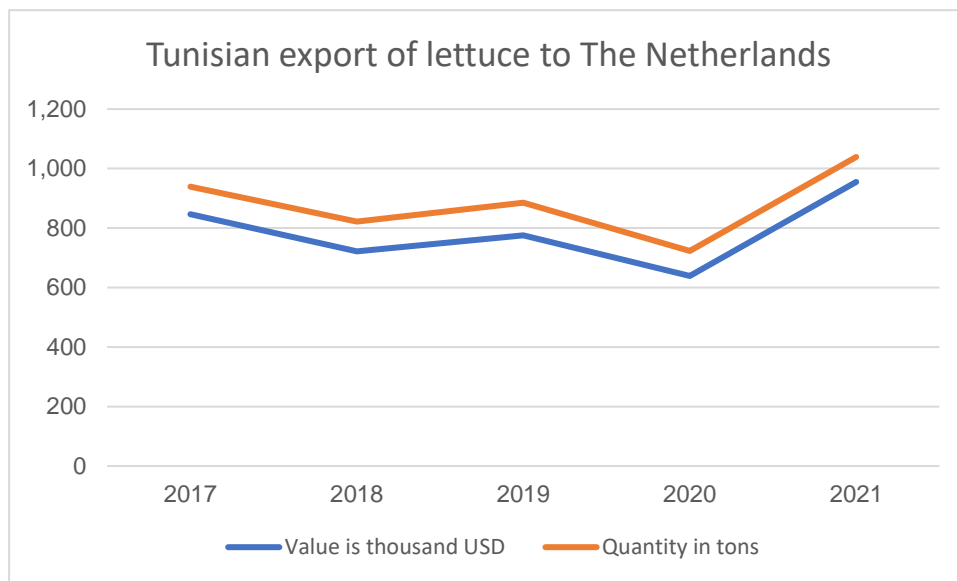
SOURCE: ITC

The Netherlands is the main market for Tunisian pepper (78.3% of the exported pepper in 2021).

Exports increased from 349 tons (0.5 m USD) in 2017 to 1,587 tons (3.2 m USD) in 2021.

- Lettuce

Lettuce is the third product exported to the Netherlands in terms of volume and value.



SOURCE: ITC

Exports to the Netherlands remained stable between 2017 and 2021, despite a slight decrease in 2020 because of the COVID-19 pandemics. Exported volume increased from 939 tons in 2017 to 1,039 tons in 2021 while value increased from 0.8 m USD in 2017 to 1 m USD in 2021.

In 2021, The Netherlands became the first market destination for Tunisian lettuce (39% of exported value) taking over the position of Russia that was impacted by the war in Ukraine.

3.3 Mapping of sectorial stakeholders

3.3.1 Stakeholder groups and their roles

Three main groups of stakeholders intervene in the horticultural value chain:

- Public organizations:
 - o Ministry of Agriculture, Water Resources and Fisheries through its departments and agencies (General Direction of Agricultural Production, General Direction of Studies and Agricultural Development, Extension services and agricultural training agency - AVFA, Agricultural investment promotion agency -APIA, etc.),
 - o Ministry of Commerce through its departments and agencies (General Direction of local trade, General Direction of external trade, Export promotion Centre – CEPEX, etc.)
- Private organizations: individual small and medium farmers and producers' organizations (Groupement de Développement Agricole – GDA, Société Mutuelle de Services Agricoles – SMDA), commercial farms (SMVDA and agricultural companies), inputs suppliers, packers, processors, traders, and exporters.
- Civil society: Farmers Unions, Interprofessional organizations.

3.3.2 Inventory of most relevant stakeholders

3.3.2.1 Professional organizations and Public Authorities

The main National Professional organizations and Public Authorities involved in the agricultural sector in general and the horticultural sector in particular are presented hereafter:

Table 2: Professional Organisations and Public Authorities

Organisation name	Organisation type	Information source	Area of influence / Services description	Interest for the project	Recommended engagement*
Groupelement Interprofessionnel des Légumes (GIL)	Multi-Stakeholder Platform	www.gil.com.tn	Management, promotion, and regulation of the vegetable value chain	High	Engage in project activities
Groupelement Interprofessionnel des Fruits (GIF)	Multi-Stakeholder Platform	www.gifruits.com	Management, promotion, and regulation of the fruit value chain	Medium	Inform
Agence de Promotion des Investissements Agricoles (APIA)	Public organisation	www.apia.com.tn	Investment approval in agriculture to get public financial and tax incentives.	Medium	Consult
Agence de Vulgarisation et de Formation Agricole (AVFA)	Public organisation	www.avfa.agrinet.tn	Extension services and Vocational training in agriculture	High	Engage in project activities
Centre Technique des Cultures Protégées et Géothermiques	Public organisation	www.ctcpg.com.tn	R&D, Studies, and technical advisory in greenhouse crops	Medium	Consult
Centre Technique de l'Agriculture Biologique	Public organisation	www.ctab.nat.tn	R&D, Studies, and technical advisory in organic agriculture	Low	Inform
Institut de la Recherche et de l'Enseignement Supérieur Agricoles	Public organisation	www.iresa.agrinet.tn	Promotion of agricultural research. Monitoring of the activities of agricultural research and higher education institutes.	High	Consult
Union Tunisienne de l'Agriculture et de la Pêche (UTAP)	Farmers Union	www.utap.org.tn	Advocacy	Medium	Consult
Union Tunisienne de l'Industrie, du Commerce et de l'Artisanat (UTICA)	Business owners Union	www.utica.org.tn	Advocacy	Medium	Consult
SYNAGRI	Farmers Union		Advocacy	Medium	Consult

Table 3: Private companies in the horticultural sector

Company name	Sector	Location of operations	Size (staff; turnover)	Main products	Details	Dutch/ European partners (if applicable)	Interview (Y/N)
Cinquième saison - San Lucar Group	Geothermal greenhouse	Hamma, Gabès		Tomato, berries	Imm. Amen Bouhaira, 1053 Les Berges du Lac, Tunis	Austrian/Spanish partner (San Lucar)	Y
Desert Joy - Agricare Group	Geothermal greenhouse	Hamma, Gabès		Tomato		Dutch partner (Agrocare)	N
Hortimag Group - Server	Geothermal greenhouse	Hamma, Gabès	14 ha greenhouse 180 employees	Tomato	Z.I Saint Gobain, 2014 Megrine		Y
Hortimag Group - Rainbow Horticulture	Greenhouse	Fondouk Jedid, Nabeul	10 ha greenhouse 180 employees	Tomato	Z.I Saint Gobain, 2014 Megrine	Dutch partner (Rainbow Group and Grow Group)	Y
Hortimag Group - Grow Tunisia		Takelsa, Nabeul	5 ha greenhouse 200 employees Supplies 100% of the plant needs of the geothermal production.	Vegetable plants	Z.I Saint Gobain, 2014 Megrine	Dutch partner (Grow group)	Y
Maison de l'oasis	Geothermal greenhouse	Hamma, Gabès	4.6 ha glass greenhouse 120 employees	Tomato		Dutch partner (A&G van den Bosch)	Y
Primed		Gafsa	Management: 25 Workers: 200-400 Production of 6,000 tons of lettuce	Lettuce		No	N
Sadira	Tree crops	Mornag		Grape, citrus, stone fruit, berries.		No	N

Table 4: Agricultural research organisations in Tunisia

Organisation name	Organisation type	Information source	Services description	Interest for the project	Recommended engagement*
Institut National de Recherche Agronomique de Tunis – INRAT	Public	www.inrat.agrinet.tn	Research and experimentation in field crops, horticulture, zootechnics and fodder production, plant protection, rural economics and biometry, biotechnology and plant physiology and other agronomic fields	Medium	Inform
Institut des Régions Arides – IRA	Public	www.ira.agrinet.tn	Research and experimentation in tree crops, oasis farming, livestock farming, the fight against desertification and silting.	Medium	Inform
Centre Régional de Recherche en Horticulture et Agriculture Biologique - CRRHAB	Public	www.iresa.agrinet.tn/CRRHAB.pdf	Research and experimentation in horticulture and organic farming	Medium	Inform
Centre Régional de Recherche en Agriculture Oasienne - CRAO	Public	www.crao.agrinet.tn	Research and experimentation in oasis farming	Medium	Inform
Institut National de Recherche en Génie Rural, Eaux et Forêts - INRGREF	Public	www.inrgref.agrinet.tn	Research and experimentation in rural engineering, water and forestry	Low	None
Institut de l'Olivier	Public	www.iosfax.agrinet.tn	Research and experimentation in olive farming	Low	None
Institut National des Sciences et Technologies de la Mer - INSTM	Public	www.instm.agrinet.tn	Research and experimentation in fisheries and aquaculture	Low	None
Institut de Recherche Vétérinaire de Tunisie - IRVT	Public		Research and experimentation animal health	Low	None

Table 5: Other relevant stakeholders

Organisation name	Organisation type	Information source	Area of influence / Services description	Interest for the project	Recommended engagement*
Challenge Fund for Youth Employment	Program funded by RVO		Job creation for youth	2 of the fund beneficiaries (Herbiotech and Water Spirit) are potential employers for MOBILISE beneficiaries	Consult
HIVOS	NGO		Green Entrepreneurship	Project implemented in Tunisia, Egypt. Potential networking for MOBILISE entrepreneurship beneficiaries	Consult
SPARK	NGO			Preparation of a project in tree crop development with an entrepreneurship component. Work with private incubators and accelerators (Wiki Startup and Flat6Lab)	Consult

4. Labour market assessment

4.1 Labour market requirements

Interviews have been conducted with the main vegetable producers and exporters in order to assess their needs in terms of employee's profiles. The main knowledge and skills they require are in the field of:

- Technical knowledge of horticultural operations.
- Good horticultural practices.
- Water management.
- Smart horticulture and adaptation to climate change.
- Soft skills (team management, communication, time management, problem solving, etc.)

4.2 Skills gap

The main knowledge and skills students are prepared in TVET schools at BTS level, are horticultural operations (Theory 30%, Practice 70%). In Higher Education institutes, at BSc level are horticultural operations (Theory 60%, Practice 40%). Smart horticulture and soft skills are not delivered in both types of educational institutes.

4.3 Expected developments

Small and medium farmers and commercial farms are becoming more aware about water scarcity as Tunisia has been suffering from drought for 5 years.

Producers are interested in new solutions allowing to optimize the use of irrigation water and to adapt to climate change. These solutions include smart irrigation, smart greenhouses, hydroponics, and other digitalisation solutions for agriculture.

5. Higher Education in Agri-domains

5.1 The Higher Education System

There are 9 public agricultural universities in Tunisia, 2 of which offer specializations related to horticulture: INAT in Tunis and ISA-CM in Chott Meriem (130 km South of Tunis).

ISA-CM delivers a bachelor's degree and an agronomy engineer diploma. INAT offers only agronomy engineer diploma.

Table 6: Higher Education Institutes in Agriculture

Organization	Location	Specialization	Level of Diploma (number of graduated in 2020)
Institut National Agronomique de Tunis – INAT www.inat.tn/fr	Tunis	Agronomy Food processing Agroeconomy Rural engineering	Engineer (117) PhD (71)
Institut Supérieur Agronomique de Chott Mariem – ISA-CM www.isa-cm.agrinet.tn	Chott Mariem, Sousse	Horticulture	Engineer (73) Master (27) PhD (18)
École Supérieure des Ingénieurs de Medjez el Bab – ESIM www.esier.agrinet.tn	Medjez el Bab, Beja	Rural Engineering	Engineer (104) PhD (12)
École Supérieure des Industries Alimentaires de Tunis – ESIAT www.esiat.agrinet.tn	Tunis	Food processing	Engineer (36) Master (45)
École Supérieure d’Agriculture de Mograne – ESA Mograne www.esamograne.agrinet.tn	Mograne, Zaghouan	Farm Management Marketing of agricultural products Natural Resources Management	Engineer (56) Master (23)
École Supérieure d’Agriculture du Kef -ESAK www.esakef.agrinet.tn	Le Kef	Field crops	Engineer (42) Master (30)
École Supérieure d’Agriculture de Mateur – ESA Mateur www.esamateur.agrinet.tn	Mateur, Bizerte	Livestock breeding Forage crops	Engineer (44) Master (19)
Institut Sylvo Pastoral de Tabarka – ISPT www.isptabarka.agrinet.tn	Tabarka, Jendouba Governorate	Forestry	Master (22)
Institut Supérieur de Pêche et d’Aquaculture de Bizerte – ISPAB www.ispab.agrinet.tn	Menzel Jmil, Bizerte	Fisheries Aquaculture	Master (17)

Table 7: Education programs in agriculture

Program Name	Providing organization	Diploma / Certification awarded	Duration	Delivery methods	Contents	Enrollment criteria
Advanced technician in Horticulture	Lycée Sectoriel de Formation Professionnelle Agricole en Agrumiculture et viticulture de Bouchrik, Grombalia, Nabeul	BTS – Advanced technician certificate	3 years	On-site	Planning, organisation and monitoring of agricultural work relating to horticultural production, processing and marketing	Baccalauréat (13 years of study)
Advanced technician in Horticulture	Centre Sectoriel de Formation Professionnelle Agricole en Cultures Maraîchères de Primeurs de Chott Mariem, Sousse	BTS – Advanced technician certificate	3 years	On-site	Planning, organisation and monitoring of agricultural work relating to horticultural production, processing and marketing	Baccalauréat (13 years of study)
Horticulture technician	Centre Sectoriel de Formation Professionnelle Agricole en Cultures Maraîchères de Primeurs de Chott Mariem, Sousse	BTP – Technician Certificate	2 years	On-site	Horticulture farm management	Achievement of the 5th year of secondary school (11 years)
Horticulture technician	Centre de Formation Professionnelle Agricole de Zerkine, Gabès	BTP – Technician Certificate	2 years	On-site	Horticulture farm management	Achievement of the 5th year of secondary school (11 years)
Tree crop technician	Lycée Sectoriel de Formation Professionnelle Agricole en Agrumiculture et viticulture de Bouchrik, Grombalia, Nabeul	BTP – Technician Certificate	2 years	On-site	Management of tree crops	Achievement of the 5th year of secondary school (11 years)
Tree crop technician	Centre de Formation Professionnelle Agricole de Sidi Bouzid	BTP – Technician Certificate	2 years	On-site	Management of tree crops	Achievement of the 5th year of secondary school (11 years)
Tree crop technician	Centre de Formation Professionnelle Agricole de Ben Arous	BTP – Technician Certificate	2 years	On-site	Management of tree crops	Achievement of the 5th year of secondary school (11 years)

Horticulture professional	Centre de Formation Professionnelle Agricole d'El Alia, Bizerte	CAP – Certificate of Professional Aptitude	2 years	On-site	Market gardening operations	Achievement of the first level of secondary school (9 years)
Horticulture professional	Centre de Formation Professionnelle Agricole de Testour, Béja	CAP – Certificate of Professional Aptitude	2 years	On-site	Market gardening operations	Achievement of the first level of secondary school (9 years)
Horticulture professional	Centre de Formation Professionnelle Agricole de Zerkine, Gabès	CAP – Certificate of Professional Aptitude	2 years	On-site	Market gardening operations	Achievement of the first level of secondary school (9 years)
Horticulture professional	Centre de Formation Professionnelle Agricole de Jammel, Monastir	CAP – Certificate of Professional Aptitude	2 years	On-site	Market gardening operations	Achievement of the first level of secondary school (9 years)
Tree crop professional	Centre de Formation Professionnelle Agricole de Takelsa, Nabeul	CAP – Certificate of Professional Aptitude	2 years	On-site	Tree crop operations	Achievement of the first level of secondary school (9 years)
Tree crop professional	Centre de Formation Professionnelle Agricole de Sbeitla, Kasserine	CAP – Certificate of Professional Aptitude	2 years	On-site	Tree crop operations	Achievement of the first level of secondary school (9 years)
Tree crop professional	Centre Sectoriel de Formation Professionnelle Agricole de l'Arboriculture en Zones Arides de Boughrara, Sfax	CAP – Certificate of Professional Aptitude	2 years	On-site	Tree crop operations	Achievement of the first level of secondary school (9 years)
Tree crop professional	Centre de Formation Professionnelle Agricole de Ben Arous	CAP – Certificate of Professional Aptitude	2 years	On-site	Tree crop operations	Achievement of the first level of secondary school (9 years)
Tree crop professional	Centre de Formation Professionnelle Agricole de Testour, Béja	CAP – Certificate of Professional Aptitude	2 years	On-site	Tree crop operations	Achievement of the first level of secondary school (9 years)
Tree crop professional	Centre de Formation Professionnelle Agricole de Sidi Bouzid	CAP – Certificate of Professional Aptitude	2 years	On-site	Tree crop operations	Achievement of the first level of secondary school (9 years)

Tree crop professional	Centre de Formation Professionnelle Agricole de Souassi, Mahdia	CAP – Certificate of Professional Aptitude	2 years	On-site	Tree crop operations	Achievement of the first level of secondary school (9 years)
Market gardening competence	Centre de Formation Professionnelle Agricole d'El Alia, Bizerte	Certificate of competence (skilled worker)	7 months	On-site	Good professional practices in market gardening	
Market gardening competence	Centre de Formation Professionnelle Agricole de Testour - Bèja	Certificate of competence (skilled worker)	7 months	On-site	Good professional practices in market gardening	
Market gardening competence	Centre de Formation Professionnelle Agricole d'El Fja, Médenine	Certificate of competence (skilled worker)	7 months	On-site	Good professional practices in market gardening	
Greenhouse horticulture competence	Centre de Formation Professionnelle Agricole de Kébili	Certificate of competence (skilled worker)	7 months	On-site	Good professional practices in greenhouse horticulture	
Greenhouse horticulture competence	Centre Sectoriel de Formation Professionnelle Agricole en Phéniciculture de Degache, Tozeur	Certificate of competence (skilled worker)	7 months	On-site	Good professional practices in greenhouse horticulture	
Greenhouse horticulture competence	Centre de Formation Professionnelle Agricole d'El Alia, Bizerte	Certificate of competence (skilled worker)	7 months	On-site	Good professional practices in greenhouse horticulture	
Greenhouse horticulture competence	Centre de Formation Professionnelle Agricole de Zerkine, Gabès	Certificate of competence (skilled worker)	7 months	On-site	Good professional practices in greenhouse horticulture	
Greenhouse horticulture competence	Centre de Formation Professionnelle Agricole d'El Fja, Médenine	Certificate of competence (skilled worker)	7 months	On-site	Good professional practices in greenhouse horticulture	

5.2 Career Development Programs

Table 8: Career Development programs

Program Name	Providing organization	Services provided	Enrollment criteria	External partnerships
Career and Alumni Center	SMU (South Mediterranean University)	Support students and SMU graduates in finding internships, national and international jobs.	SMU Graduates	BIAT Bank, Bank ABC, Banque Zitouna, EY, Deloitte, INSOMEA
Centre de Carrières et de Certification des Compétences - 4C	Ministry of Higher Education and Scientific Research	Support students and graduates in finding internship and jobs. Certification training in soft skills (design thinking, communication, English, etc.). Awareness raising in entrepreneurship.	Student and graduates.	GIZ, Private sector

5.3 Business Start-up Programs and Incubators

APIA developed with the support of international donors, a network of 7 business incubators located in 6 regions in Tunisia. Each incubator has a focus on one value chain. The incubators offer training and coaching to the incubees.

SMU started an incubator in 2021. It offers support to 10 to 12 startups in different specialities (agri-tech, food-tech, health-tech, ed-tech and also low tech) in a 6-months program that includes training, coaching, conferences and networking events. Beneficiaries of the first cohort were SMU Alumni. In the second cohort, SMU opened the application to external candidates. The third cohort will be selected in October 2023 and will be composed of at least half of external candidates.

Detailed information on the incubators is presented hereafter:

Table 9: Business startup programs and incubation

Program Name	Providing organization	Services provided	Enrollment criteria	External financing / sponsorships
Agri-Création	APIA and hosted by INAT	Support of entrepreneurs from ideation to starting. Training and coaching. Co-working space and facilities provided to entrepreneurs.	Graduated from University in all specialities. Project in agriculture and related services. Relevance and the innovativeness of the project idea. Approval from the selection committee	Funded by APIA budget. Additional funding by international donors' programs (GIZ, AFD, EU)
Foodtech	APIA and hosted by ESIAT	Support of entrepreneurs from ideation to starting. Training and coaching. Co-working space and facilities provided to entrepreneurs.	Graduated from University in all specialities. Project in food processing. Relevance and the innovativeness of the project idea. Approval from the selection committee	Funded by APIA budget. Additional funding by international donors' programs (GIZ, AFD, EU)
Agro-Tech	APIA and hosted by ESA Mograne	Support of entrepreneurs from ideation to starting. Training and coaching. Co-working space and facilities provided to entrepreneurs.	Graduated from University in all specialities. Project in agriculture and related services. Relevance and the innovativeness of the project idea. Approval from the selection committee	Funded by APIA budget. Additional funding by international donors' programs (GIZ, AFD, EU, Italian Cooperation)
Aqua-Tech	APIA and hosted by INSTM Monastir	Support of entrepreneurs from ideation to starting. Training and coaching. Co-working space and facilities provided to entrepreneurs.	Graduated from University in all specialities. Project in fishery and aquaculture. Relevance and the innovativeness of the project idea. Approval from the selection committee	Funded by APIA budget. Additional funding by international donors' programs (GIZ, AFD, EU)

Excellence Agricole	APIA and hosted by Institut de l'Olivier, Sfax	Support of entrepreneurs from ideation to starting. Training and coaching. Co-working space and facilities provided to entrepreneurs.	Graduated from University in all specialities. Project in the olive value chain. Relevance and the innovativeness of the project idea. Approval from the selection committee	Funded by APIA budget. Additional funding by international donors' programs (GIZ, AFD, EU)
Agri Valorisation	APIA and hosted by Institut des Régions Arides, Médenine	Support of entrepreneurs from ideation to starting. Training and coaching. Co-working space and facilities provided to entrepreneurs.	Graduated from University in all specialities. Project in agriculture and related services. Relevance and the innovativeness of the project idea. Approval from the selection committee	Funded by APIA budget. Additional funding by international donors' programs (GIZ, AFD, EU)
ESA Kef	APIA and hosted by ESA Kef	Support of entrepreneurs from ideation to starting. Training and coaching. Co-working space and facilities provided to entrepreneurs.	Graduated from University in all specialities. Project in agriculture and related services. Relevance and the innovativeness of the project idea. Approval from the selection committee	Funded by APIA budget. Additional funding by international donors' programs (GIZ, AFD, EU)
SMU Incubator	SMU	4 to 6-month incubation : training course in the ideation phase, through workshops, mentoring, coaching. Co-working space.	Graduated and alumni from SMU (50%) and external candidates (50%) selected through a call for proposals (40 applications received). Focus on agri-tech and health-tech. Organisation of a boot-camp for 20 startups and selection of 12 startups to be incubated. 3rd cohort will start in October 2023.	Funded by SMU

5.4 Legal framework for educational cooperation

5.4.1 Accreditation authorities

For Higher Education diplomas:

Ministry of Higher Education and Scientific Research

Direction Générale de la Rénovation Universitaire whose “Agriculture committee” assesses the program modifications and the creation of new curricula once a year. Applications must be submitted in March and approval is granted in May.

For TVET diplomas:

Centre National de Formation des Formateurs et d’Ingénierie de Formation – CENAFFIF

The design and development of vocational training programmes are carried out exclusively by CENAFFIF using a skills-based approach and a customer-oriented approach (close collaboration with professional federations) that aims to determine the skills of the profession following an analysis of the needs of companies.

They are designed in modules and are reviewed every five years.

CENAFFIF:

- Establishes methodologies for the various areas of training engineering and produces teaching resources.
- Draws up job descriptions, standards, and training programmes to meet the skills needs of the economy.
- Assists with the implementation of training programmes in establishments.
- Defines methodologies for evaluating the training system and ensures the production of the teaching and learning resources required for the proper application of training programmes.

5.4.2 Policies and regulations

Main policies and regulations concerning higher education and TVET are presented hereafter:

- Law No. 93-12 of 17 February 1993, creating CENAFFIF².
- Law No. 2003-77 of 11 December 2003 amending and supplementing Law n° 93-12 of 17 February 1993³.
- Order No. 1397 of 20 June 1994 relating to the setting of the national employment scale.
- Decree No. 2139 of 8 July 2009 on the national classification of qualifications.

² www.cenaffif.nat.tn/wp-content/uploads/2020/07/fr1.pdf

³ www.cenaffif.nat.tn/wp-content/uploads/2020/07/fr2.pdf

6. Legal and Policy Framework

6.1 Policy and Strategy Framework

ANETI, National Agency for Employment and Self-employment, is a public establishment. Its main mission is the implementation of the government policy related to the promotion of the employment.

ANETI is involved in circular migration by:

- organising operations for the placement of Tunisian labour abroad and overseeing their implementation,
- facilitating the reintegration of migrant workers into the national economy after their return.

There are bilateral agreements for migration with:

- France:

Signed in 2008, it offers 9,000 job opportunities per year as follow:

- Young professional contracts (1,500/year): 1-year contracts with the possibility of 6 months extension, to gain professional experience to improve their employability in Tunisia or to allow them to start their business upon return.
- Talent passports (1,500/year) for senior executives, permitting renewable 3-years residence permits.
- Contracts as part of the list of professions (3,500/year): fixed-term and permanent contracts in a list of professions set for Tunisia.
- Seasonal contracts (2,500/year): 3-to-6-month seasonal contracts in a year.

Annual beneficiaries of this agreement vary from 1,600 to 4,000 per year, mainly for seasonal contracts and contracts in the list of professions set for Tunisia.

- Switzerland

2 agreements signed in 2012:

- Exchange agreement for young professional (150/year).
- Agreement on Migration including a programme of assisted voluntary return to those who wish returning voluntarily to Tunisia and benefit from assistance enabling them to create their own project.

7. Recommendations

7.1 Better matching of labour market requirements and training offer

- Pre-departure program should focus on soft skills development (communication, leadership, team management, problem solving, English language, etc.).
- Program of the technical training should focus on innovation in smart irrigation, smart greenhouses, and adaptation to climate change.
- After-return program for entrepreneurs should focus on networking with players from the horticulture value chain and access to finance.

7.2 Potential target groups for the talent development program

7.2.1 Higher Education students

- Students from ISA-CM (BSc and MSc) and AVFA (BTS) for the job placement component.
- Graduated from ISA-CM and SMU for the entrepreneurship component.

7.2.2 Professionals from private sector

- Technical staff in charge of water management and/or climate change adaptation.

7.3 Composition of the multi-stakeholder platform

Private sector:

- Chambre de Commerce Tuniso-Néerlandaise de Commerce et d'Industrie
- UTAP (Farmers Union)
- Synagri (Farmers Union)
- UTICA (Business owners Union)
- CONECT (Business owners Union)

Public sector:

- Ministry of Employment and TVET
- Ministry of Agriculture, Water Resources and Fisheries
- Ministry of Higher Education and Scientific Research
- AVFA
- GIL
- APIA
- IRESA
- ANETI

Other partners:

- EU Delegation in Tunisia
- Netherlands Embassy in Tunisia

7.4 Recommendations on the legal pathways for circular migration

- Involve the General Direction of International Job placement and foreign manpower (Ministry of Employment and TVET) as institutional partner of MOBILISE.
- Select AVFA or ISA-CM as technical partner of the project. Cooperation with these 2 institutions have strengths and weaknesses:
 - o AVFA's graduated BTS in horticulture have a sound practical experience in horticulture. It is long and complicated to change curricula of TVET trainings, but creation of certificates is very easy as it is managed directly by AVFA. Consistent experience in cooperating with private sector and international programs (NUFFIC).
 - o ISA-CM's BSc graduated has less practical and more theoretical experience. Change and creation of new curricula in BSc is simple. ISA-CM is eligible to benefit from the Dutch Embassy program for Higher Education institutes.
- Start as soon as possible, negotiation with the Dutch Embassy to create an accelerated visa process for the program applicants.
- Negotiate with Dutch authorities, tax, and social security incentives on the internship allowance to encourage companies to accept the beneficiaries.
- Involving private sector from the beginning of the program highly improves the job placement rate after returning from Europe.
- Involve in priority Dutch companies having business interests in Tunisia (trade or investment) or planning to start business with Tunisia.
- Make sure that the Dutch companies that will host the program's beneficiaries for the internship make a commitment to not hire them after the training in the Netherlands. In other programs, 50 to 60% of the interns were hired by the hosting companies.

8. Bibliography

- Ministry of Agriculture, Water resources and Fisheries, 2020 Statistical yearbook, December 2022

ANNEXES

A. Interviewed companies

Company	Contact person	Address	No. Employees	Main products	Potential engagement in MOBILISE	Comments
Cinquième saison – San Lucar Group	Mr Walid KALBOUSSI, Country Director Mobile: +216-95-185-185 Mr Fayçal GHANDRI, HR Director Mobile: +216-97-325-265	Imm. Amen Bouhaira, 1053 Les Berges du Lac, Tunis		Tomato, berries	High	Very interested in contributing in all the project's stages. Interest in sending employees to be trained in the NL, to hire beneficiaries upon return in TN and outsource services to entrepreneurs from the project.
Hortimag Group	Mr Ali Ridha GHARIANI, General Director Mobile: +216-29-533-713 Mr Azaiez GHARIANI, Deputy Director Mobile: +216-29-799-897	Z.I Saint Gobain, 2014 Megrine	Server: 180 Rainbow Tunisia: 180 Grow Tunisia: 200	Tomato, nursery plants	High	Very interested in sending employees to be trained in the NL, to hire beneficiaries upon return in TN.
Maison l'Oasis	Mr Heithem BOUASSIDA, Managing Director Mobile: +216-98-457-072	Awled Ennour, El Hamma, Gabès	120	Tomato	High	Very interested in sending employees to be trained in the NL