SwitchMed is an initiative that supports and connects stakeholders to scale up eco and social innovations.

We are SwitchMed.
SwitchMed is an initiative that supports and scale-ups eco and social innovations

The SwitchMed Programme was launched in 2013 by the European Union to speed up the shift to sustainable consumption and production patterns in the Southern Mediterranean, notably through the promotion of circular economy approaches. The Programme aims at achieving productive, circular and sharing economies in the Mediterranean by changing the way goods and services are consumed and produced so that human development is decoupled from environmental degradation.

Its activities benefit 5 countries in the Southern Mediterranean: Algeria, Egypt, Israel, Jordan, Lebanon, Morocco, Palestine, and Tunisia. Through policy development, demonstration activities and networking opportunities, SwitchMed supports and connects stakeholders to scale-ups eco and social innovations. The Programme supports policy makers, eco-innovative small and medium sized enterprises, industries, start-ups, and entrepreneurs in the Southern Mediterranean countries; which have identified job creation and natural resource protection as priority issues that also contribute to their economic stability.

SwitchMed, which works with a wide range of stakeholders, is committed to catalyse the market of sustainable products and services in the Mediterranean via:

- Capacity building in industry service providers targeting small and medium sized enterprises for resource efficiency improvements;
- Trainings for start-ups and entrepreneurs to build skills in design, business plan, marketing and financing of sustainable products and services;
- Engagement with policy makers to establish a regulatory and policy framework to boost market for sustainable products and services;
- Empowerment of citizens and civil society organisations to lead socially innovative solutions addressing environmental challenges;
- An Action Network of stakeholders to link with similar initiatives and networks, exchange information and to scale-up current activities.

SwitchMed is implemented by the United Nations Industrial Development Organisation (UNIDO) together with the United Nations Environment Programme Mediterranean Action Plan (UN Environment/MAP), the Regional Activity Centre for Sustainable Consumption and Production (SCP/RAC) and the UN Environment’s Economy Division. Each of the implementing organisations brings its specialised experience and tools to partner with the eight countries on activities that span policy development, capacity building, business support services, demonstration activities and networking.

The United Nations Industrial Development Organisation (UNIDO) supports the development of green industry and sustainable production in the southern Mediterranean. It does so through a comprehensive approach that both presents the business case of resource efficiency in industries, and helps service providers increase their capacity to deliver sustainable production services matching the industry needs. In addition, UNIDO is cooperating with a number of national institutions addressing policies on sustainable production.

At the start of the project, the UNIDO designed TEST methodology is delivered to the service providers and local enterprises. In collaboration with the UNIDO TEST expert team, the service providers identify and select companies to take part in the TEST project, based on the companies potential for improvements and top management commitment. Crucially, the company staff also receive the TEST training, enabling them to implement the technical measures and management solutions identified by the service provider. Their active participation in the training and in the implementation of the project ensures the sustainability of all identified actions at company level.

The TEST implementation approach has to date successfully demonstrated the profitability and effectiveness of introducing best practices and integrated management systems in terms of cost reduction, productivity increase and environmental performance, extending the experience gained to other industries in the region. UNIDO, together with local partners, also promotes business partnerships between local businesses and EU Eco-Innovative companies, creating an area of shared prosperity on the principles of a sustainable and inclusive socioeconomic development.

SwitchMed beneficiaries in Tunisia

- 4 Pilot projects from policy-makers
- 26 Industries from the food sector joined MED TEST II
- 8 Incubated green entrepreneurs
- 1 Civil Society Organisation

Tunisia’s facts and numbers

Population
- Capital and largest city: Tunis.
- Life expectancy at birth: 74.98 years.
- Population growth: 1.1% annually.
- Major Religions: Islam (state religion; 99.1% Sunni), others (1%; including Christian, Jewish, Shia, Bahá’í).
- Form Of Government: Unitary semi-presidential republic.

Geography & Economy
- Currency: Tunisian dinar.
- Urban population: 67.05%.
- GNI per capita: $1.68 million (2016)
- Land boundaries: Algeria (945 km) and south-eastern border with Libya (459 km)
- Coastline: Borders the Mediterranean Sea.

Through policy development, demonstration activities and networking opportunities, SwitchMed supports and connects stakeholders to scale-ups eco and social innovations. The Programme supports policy makers, eco-innovative small and medium sized enterprises, industries, start-ups and entrepreneurs in the Southern Mediterranean countries; which have identified job creation and natural resource protection as priority issues that also contribute to their economic stability.

SwitchMed, which works with a wide range of stakeholders, is committed to catalyse the market of sustainable products and services in the Mediterranean via:

- Capacity building in industry service providers targeting small and medium sized enterprises for resource efficiency improvements;
- Trainings for start-ups and entrepreneurs to build skills in design, business plan, marketing and financing of sustainable products and services;
- Engagement with policy makers to establish a regulatory and policy framework to boost market for sustainable products and services;
- Empowerment of citizens and civil society organisations to lead socially innovative solutions addressing environmental challenges;
- An Action Network of stakeholders to link with similar initiatives and networks, exchange information and to scale-up current activities.

SwitchMed is implemented by the United Nations Industrial Development Organisation (UNIDO) together with the United Nations Environment Programme Mediterranean Action Plan (UN Environment/MAP), the Regional Activity Centre for Sustainable Consumption and Production (SCP/RAC) and the UN Environment’s Economy Division. Each of the implementing organisations brings its specialised experience and tools to partner with the eight countries on activities that span policy development, capacity building, business support services, demonstration activities and networking.

The TEST implementation approach has to date successfully demonstrated the profitability and effectiveness of introducing best practices and integrated management systems in terms of cost reduction, productivity increase and environmental performance, extending the experience gained to other industries in the region. UNIDO, together with local partners, also promotes business partnerships between local businesses and EU Eco-Innovative companies, creating an area of shared prosperity on the principles of a sustainable and inclusive socioeconomic development.

SwitchMed Programme was launched in 2013 by the European Union to speed up the shift to sustainable consumption and production patterns in the Southern Mediterranean, notably through the promotion of circular economy approaches. The Programme aims at achieving productive, circular and sharing economies in the Mediterranean by changing the way goods and services are consumed and produced so that human development is decoupled from environmental degradation.

Its activities benefit 5 countries in the Southern Mediterranean: Algeria, Egypt, Israel, Jordan, Lebanon, Morocco, Palestine and Tunisia. Through policy development, demonstration activities and networking opportunities, SwitchMed supports and connects stakeholders to scale-ups eco and social innovations. The Programme supports policy makers, eco-innovative small and medium sized enterprises, industries, start-ups and entrepreneurs in the Southern Mediterranean countries; which have identified job creation and natural resource protection as priority issues that also contribute to their economic stability.

SwitchMed, which works with a wide range of stakeholders, is committed to catalyse the market of sustainable products and services in the Mediterranean via:

- Capacity building in industry service providers targeting small and medium sized enterprises for resource efficiency improvements;
- Trainings for start-ups and entrepreneurs to build skills in design, business plan, marketing and financing of sustainable products and services;
- Engagement with policy makers to establish a regulatory and policy framework to boost market for sustainable products and services;
- Empowerment of citizens and civil society organisations to lead socially innovative solutions addressing environmental challenges;
- An Action Network of stakeholders to link with similar initiatives and networks, exchange information and to scale-up current activities.

SwitchMed is implemented by the United Nations Industrial Development Organisation (UNIDO) together with the United Nations Environment Programme Mediterranean Action Plan (UN Environment/MAP), the Regional Activity Centre for Sustainable Consumption and Production (SCP/RAC) and the UN Environment’s Economy Division. Each of the implementing organisations brings its specialised experience and tools to partner with the eight countries on activities that span policy development, capacity building, business support services, demonstration activities and networking.

The TEST implementation approach has to date successfully demonstrated the profitability and effectiveness of introducing best practices and integrated management systems in terms of cost reduction, productivity increase and environmental performance, extending the experience gained to other industries in the region. UNIDO, together with local partners, also promotes business partnerships between local businesses and EU Eco-Innovative companies, creating an area of shared prosperity on the principles of a sustainable and inclusive socioeconomic development.

SwitchMed Programme was launched in 2013 by the European Union to speed up the shift to sustainable consumption and production patterns in the Southern Mediterranean, notably through the promotion of circular economy approaches. The Programme aims at achieving productive, circular and sharing economies in the Mediterranean by changing the way goods and services are consumed and produced so that human development is decoupled from environmental degradation.

Its activities benefit 5 countries in the Southern Mediterranean: Algeria, Egypt, Israel, Jordan, Lebanon, Morocco, Palestine and Tunisia. Through policy development, demonstration activities and networking opportunities, SwitchMed supports and connects stakeholders to scale-ups eco and social innovations. The Programme supports policy makers, eco-innovative small and medium sized enterprises, industries, start-ups and entrepreneurs in the Southern Mediterranean countries; which have identified job creation and natural resource protection as priority issues that also contribute to their economic stability.

SwitchMed, which works with a wide range of stakeholders, is committed to catalyse the market of sustainable products and services in the Mediterranean via:

- Capacity building in industry service providers targeting small and medium sized enterprises for resource efficiency improvements;
- Trainings for start-ups and entrepreneurs to build skills in design, business plan, marketing and financing of sustainable products and services;
- Engagement with policy makers to establish a regulatory and policy framework to boost market for sustainable products and services;
- Empowerment of citizens and civil society organisations to lead socially innovative solutions addressing environmental challenges;
- An Action Network of stakeholders to link with similar initiatives and networks, exchange information and to scale-up current activities.

SwitchMed is implemented by the United Nations Industrial Development Organisation (UNIDO) together with the United Nations Environment Programme Mediterranean Action Plan (UN Environment/MAP), the Regional Activity Centre for Sustainable Consumption and Production (SCP/RAC) and the UN Environment’s Economy Division. Each of the implementing organisations brings its specialised experience and tools to partner with the eight countries on activities that span policy development, capacity building, business support services, demonstration activities and networking.

The TEST implementation approach has to date successfully demonstrated the profitability and effectiveness of introducing best practices and integrated management systems in terms of cost reduction, productivity increase and environmental performance, extending the experience gained to other industries in the region. UNIDO, together with local partners, also promotes business partnerships between local businesses and EU Eco-Innovative companies, creating an area of shared prosperity on the principles of a sustainable and inclusive socioeconomic development.

SwitchMed Programme was launched in 2013 by the European Union to speed up the shift to sustainable consumption and production patterns in the Southern Mediterranean, notably through the promotion of circular economy approaches. The Programme aims at achieving productive, circular and sharing economies in the Mediterranean by changing the way goods and services are consumed and produced so that human development is decoupled from environmental degradation.

Its activities benefit 5 countries in the Southern Mediterranean: Algeria, Egypt, Israel, Jordan, Lebanon, Morocco, Palestine and Tunisia. Through policy development, demonstration activities and networking opportunities, SwitchMed supports and connects stakeholders to scale-ups eco and social innovations. The Programme supports policy makers, eco-innovative small and medium sized enterprises, industries, start-ups and entrepreneurs in the Southern Mediterranean countries; which have identified job creation and natural resource protection as priority issues that also contribute to their economic stability.

SwitchMed, which works with a wide range of stakeholders, is committed to catalyse the market of sustainable products and services in the Mediterranean via:

- Capacity building in industry service providers targeting small and medium sized enterprises for resource efficiency improvements;
- Trainings for start-ups and entrepreneurs to build skills in design, business plan, marketing and financing of sustainable products and services;
- Engagement with policy makers to establish a regulatory and policy framework to boost market for sustainable products and services;
- Empowerment of citizens and civil society organisations to lead socially innovative solutions addressing environmental challenges;
- An Action Network of stakeholders to link with similar initiatives and networks, exchange information and to scale-up current activities.

SwitchMed is implemented by the United Nations Industrial Development Organisation (UNIDO) together with the United Nations Environment Programme Mediterranean Action Plan (UN Environment/MAP), the Regional Activity Centre for Sustainable Consumption and Production (SCP/RAC) and the UN Environment’s Economy Division. Each of the implementing organisations brings its specialised experience and tools to partner with the eight countries on activities that span policy development, capacity building, business support services, demonstration activities and networking.

The TEST implementation approach has to date successfully demonstrated the profitability and effectiveness of introducing best practices and integrated management systems in terms of cost reduction, productivity increase and environmental performance, extending the experience gained to other industries in the region. UNIDO, together with local partners, also promotes business partnerships between local businesses and EU Eco-Innovative companies, creating an area of shared prosperity on the principles of a sustainable and inclusive socioeconomic development.

Swi...
Table of contents

1. Support to policy-makers
2. Enabling a green growth for industries
3. Green Entrepreneurship
4. Civil Society Organisations empowerment
5. Enabling access to finance
6. Business Networks & Intermediaries
7. Networking Facility
Engagement with policy makers to establish a regulatory and policy framework to boost the market for sustainable products and services.
Implementing circular economy measures in the Mediterranean

The Mediterranean policy-makers developed within the SwitchMed programme a Regional Sustainable Consumption and Production Action Plan, including a Roadmap towards circular economy for its implementation in the Mediterranean as well as eight Sustainable Consumption and Production National Action Plans (SCP-NAPs).

The SCP Regional Action Plan was adopted in February 2016 by the 22 Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (known as Barcelona Convention), during their 19th Ordinary Meeting of the Contracting Parties. The SCP Regional Action Plan is a substantive contribution to the implementation of the 2030 Agenda for Sustainable Development. It is a strategic document that gives clear guidelines on the actions that should be developed in the region to shift towards sustainable consumption and production patterns, long-term sustainability, circular economy and new paradigms in the use of resources. It is also responding constructively to the climate change challenges. The document is structured around 4 key areas which are essential for the socio-economic development and for the job market in the region but are at the same time highly contributing to the pollution loads and to the environmental degradation of the Mediterranean. Those 4 areas are: food, fisheries and agriculture sector, tourism, goods manufacturing and housing and construction sector.

At national level SwitchMed, under the coordination of UN Environment’s Economy Division, provided advisory services to the governments of the eight programme countries in the Mediterranean on mainstreaming SCP into national development planning. Eight multi-stakeholder nationally-owned and nationally driven policy processes were undertaken to best respond to the national priorities on SCP. Given the difficulty to implement the full range of SCP policies and instruments at once, project countries select a limited number of priority areas to be addressed in their SCP National Action Plans, which contribute to poverty alleviation, environmental sustainability and the development of a green economy.

The SCP-NAP processes were tailored to the needs and specific country situations and allowed the synergies and integration with national development plans and national sustainable development strategies. During these national processes a total of over 40 national workshops, round-tables and nationally-tailored training sessions were organised to reinforce national capacity on SCP. The processes were inclusive and saw the participation of a large and diverse group of national stakeholders, representing different relevant government institutions, private sector, civil society, academia and media representatives. In total, 1,500 national stakeholders actively participated. As a result, eight SCP National Action Plans were developed, which are a first step in a country’s response to the 2015 adopted Sustainable Development Goals (SDGs) and in particular Goal 12: Sustainable Consumption and Production.

Moreover, there are national demonstration pilot projects implemented on the ground to promote implementation of policies and actions, which effectively change patterns of consumption and production and implement circular economy measures in the priority sectors previously selected by the target countries. In total, 20 pilot projects were implemented by the end of 2018: 2 in Algeria, 2 in Egypt, 3 in Israel, 2 in Jordan, 1 in Lebanon, 3 in Morocco, 2 in Palestine and 4 in Tunisia.

Meet our focal points in Tunisia

The National Focal Points (NFP) are key actors in SwitchMed and play a specific role in implementing policy activities and disseminating results at national level in their respective countries. A national coordination mechanism has been established in each country, coordinated and guided by the focal points appointed by their respective national governments. In most of the participating countries, two focal points—one from the Ministry of the Environment and one from the Ministry of Industry—work in tandem to lead the implementation of SwitchMed at national level.

Republic of Tunisia Ministry of the Environment and Sustainable Development

Ministry of Local Affairs and Environment

It is responsible for proposing legislation on environmental protection, nature conservation and improving quality of life. Its mission is to work towards integrating the concept of sustainable development into national strategies and plans. In cooperation with other ministries and parties concerned, the ministry establishes measures to protect and guard against environmental risks, and tackle potential or anticipated environmental problems before they actually occur, thus reducing or eliminating potential environmental threats. It also protects and develops spaces reserved for wildlife and landscape development, as well as open spaces needed for the growth of future generations.

Ministry of Industry and Small and Medium Enterprises

Created in 1972, the Ministry of Industry and Small and Medium-Sized Enterprises is the public body responsible for implementing government policy relative to industry and agribusiness services, energy and mining cooperation, industrial cooperation, and energy and mining safety.
The tourism and agri-food industries are now the main priorities for the Tunisian National Action Plan

The Ministry of Environment and Sustainable Development in Tunisia has adopted a Sustainable Consumption and Production (SCP) National Action Plan for two sectors that are considered the highest priority: the tourism and agri-food industries, over the next ten years (2016-2025).

The process to develop an SCP-NAP was started with an extensive assessment of the State of the Art on SCP in Tunisia and the publication of a structured report. This publicly available report is formulated around six chapters:

(i) Overview of SCP internationally and the experience of some countries in its implementation;
(ii) Institutional, legal and policy frameworks to implement SCP in Tunisia;
(iii) SCP in the primary sectors namely agriculture and livestock, fisheries and forestry;
(iv) SCP in the secondary sectors namely industry, power generation and construction;
(v) SCP in the sectors of transportation, tourism and trade;
(vi) State of play in the waste management and water-sanitation sectors.

Based on the results of this assessment report two ten-year plans have been developed for the tourism and agri-food sector. The action plans have been drawn up following and in-depth consultation process involving a large and diverse group of national stakeholders in Tunisia (government, private sector, civil society, media, academia).

The SCP-NAPs were built upon already existing and validated national strategies and plans to assure coherence, sustainability and implementation of the plans. Among the reference documents used are Tunisia’s National Industrial Strategy at the Horizon 2016 (2008), the National Strategy for the Green Economy (2015), the National Strategy for Climate Change (2012), the Guide to Sustainable Industry in Tunisia.

The development of the strategy and action plan for the development of the agri-food sector was based on a participative approach that involved the different actors linked to the sector: Ministry of Industry, Ministry of Agriculture, Ministry of Environment and Sustainable Development, Ministry of Health, Agency for the Promotion of Industry, International Center for The Environment of Tunisia (CITET), National Agency for the Protection of The Environment, Technical Center for Agri-Food, Tunisian Union of Agriculture and Fisheries as well as NGOs and civil society associations. The key stakeholders involved in the work on the tourism sector are: Ministry of Tourism, National Federation of Hotels, Tourist Funcière Agency, Tunis International Center for Environmental Technology, National Office of Thermalism and Hydrotherapy among others.

These action plans are a response to the need to insert sustainability in the daily actions. The aim is to raise awareness among Tunisian organizations in terms of the impact of their actions on the quality of life of present and future generations. Each ten-year action plan presents clear objectives, key activities and a list of expected achievements and impacts.

Objectives

The Ten-Year Agri-food Action Plan 2016-2025 puts forward the following proposals: (i) streamlining the use of natural resources and minimizing the causes of damage (pesticides and waste); (ii) promoting sustainable agricultural practices and local knowledge and (iii) ensuring sustainable agricultural activity.

While the Ten-Year Tourism Action Plan 2016-2025’s objectives are: (i) promoting sustainable resource management and encouraging collective action, (ii) developing sustainable waste management and recycling, (iii) improving the quality of the options available and offering environmental certification, (iv) encouraging an integrated social and societal approach, (v) promoting the consumption of local and organic products and (vi) appraising the risk of flooding and coastal erosion.

Achievements and impacts

Each two ten-year plan includes a list of expected achievements and impacts - detailed lists are in the relevant SCP-NAPs:

Agri-food sector suggestions

- Establishment of a national registry of industrialized products;
- Promote sustainable procurement in public institutions;
- Promotion of rail transport as an alternative to road transport;
- Conduct a study on the valorization of industrial waste from the agro-food industry in Tunisia;
- Development / dissemination of a manual on best practices in the use of pesticides and training programs on organic fertilization methods and cultivation techniques;
- Tourism sector:
  - Introduce the theme of consumption of local/organic products and economic practices in the 4- and 5-stars hotel (magnetic cards, water saving practices);
  - Identify the list of tourism activities that can be part of sustainable tourism, considering the cultural aspects and the natural and cultural archaeological activities (rehabilitation, accessibility...);
  - Develop and disseminate a good practice guide for consumers adapted to rural tourism;
  - Developing a specific regulatory framework for ecotourism and other forms of sustainable tourism;
  - Develop tourist circuits integrating the sectors ecotourism and promote the creation of specialized agencies in Ecotourism circuits;

Implementation of the Sustainable Consumption and Production National Action Plans has started in Tunisia and first results will be monitored and presented during 2019.
The valorisation of olive by-products is booming in Tunisia

The production of olive oil is considered to be one of the largest agricultural business sectors in the Mediterranean area. Specifically in Tunisia, which is the world’s largest exporter of olive oil, the sector employs an average of 200,000 people and makes up 4% of the country’s economy, as it is the world’s largest exporter and accounts for the largest share of its agricultural exports. It also represents one of the main sectors of the European Union’s agricultural sector. In fact, Tunisia has more than 60 million olive trees in an area covering 1.7 million hectares, making it the third largest producer in the world. According to the National Oil Office, Tunisia has 1.25 billion olives, 1.75 billion kg of by-products, and 40 bottling plants, along with a number of refineries and co-packed butchers. However, there are less than ten processing units for olive industry by-products such as leaves, olive pomace that consists of olive pulp, skin, stone and water, and olive stones. By-products are important as they could be used generally for direct combustion, animal feed and as foodstock for direct combustion or pelleting manufacturing. During the harvesting season, most oil mills discharge their waste into the natural environment without prior treatment, contributing to the degradation of soils and rivers. In Tunisia, it is estimated that 1 million tonnes of pomace, approximately 70,000 tonnes of leaves and some 150,000 tonnes of high-energy value sludge arising from the extraction of residual oil – making a total of two million tonnes of waste from all over the country. This has led the Ministry of the Environment and Sustainable Development to adopt a National Action Plan to manage mill wastewater in order to prevent and mitigate environmental emergencies.

Main aspects carefully studied during the Eco-audit on sustainable olive oil production in Tunisia

Eco-audit on sustainable olive oil production in Tunisia

14  Chapter 1  Support to policy-makers

2 Preliminary assessments (marketing, fundraising)

2 Comprehensive action plans (2016-2018)

12 Months mentoring on access to finance ongoing in Tunisia

12 Months’ mentoring on marketing and commercial strategies, including basic marketing, communication and digital tools

Synergy created between the ongoing project with GLIZ to facilitate the sustainable sourcing of organic olives from farmers to be turned into organic olive oil by Sabra Olive Oil

1 Study visit carried out aimed at knowledge exchange in Europe

1 Marketing study carried out, in order to improve the marketing and communication strategy to reach new clients to ultimate consumer sales, especially those made of by-products

3 Main aspects carefully studied during the eco-audit: energy, water and solid waste management, amongst other included air pollution, the quality of oil, noise and prevention and preparedness for environmental emergencies
Reducing the environmental impact of holidays without compromising the quality of the guest experience is possible.

Located in the Dorsale Mountains, an hour’s drive from Tunis, Dar Zaghouan is one of the ecological accommodation establishments in Tunisia to have adopted a circular economy model. Every decision made during the development of this farm offers an alternative ecotourism experience that benefits the natural and social environment that would otherwise be lost.

For its founder, ex-banker and nature lover Skander Zribi, preserving the environment is an essential part of Dar Zaghouan’s mandate. The eco-lodge uses solar energy and solar water heaters to reduce the need for non-renewable energy resources. Eco-friendly agricultural techniques are also used on the bed and breakfast’s farm, the place where much of the restaurant’s food is grown and harvested. The activities offered to guests all address conservation issues related to the surrounding area.

Today, Dar Zaghouan is a renowned haven of peace and tranquility, popular among tourists, especially among city dwellers from Tunisia looking for tranquillity. Over twelve years, Skander’s estate has grown to include newly refurbished accommodation for fifty guests, a restaurant serving local dishes, a large meeting room for hosting events, a traditional hammam and two swimming pools for summer visitors to enjoy. Skander explains that, “Since I first launched my eco-tourism project in 2008, I have always been very keen on preserving the environment and raising awareness about sustainability among Tunisians and foreign customers.”

Dar Zaghouan offers an alternative tourism experience in an area that has seen a growing number of international tourists, at the moment that represents 30% of our capacity. We see that the facility’s approach and there is a growing demand for these sorts of services and products,” the resort founder explains.

In 2012, Skander decided to take on a new challenge and convert Dar Zaghouan into an eco-friendly guesthouse, making significant investments in the respect of the natural environment and in the expectation of minimising its impact on the environment. Five years later, he started building a new eco-lodge in order to increase the capacity of his eco-lodge. The new building features six separate rooms to accommodate between 6 and 16 people. “Despite using recycled and local materials, such as neboul terracotta and sfax wood, to build the new eco-lodge, we invited local craftsmen using ancestral techniques, we weren’t incorporating any sustainability measures. And that is why SwitchMed came along at the perfect time,” explains Skander. “I was thrilled to find out that my business had been selected as a pilot project out of the many other applications. Soon afterwards, we started looking at what circular economy measures could be taken into consideration for the eco-lodge and so make the business more environmentally sustainable. The project was to pioneering one of the two priority sectors included in the Tunisian National Action Plan entitled ‘Circular economy under the SwitchMed framework,’ says Magali Outters, a policy expert at the Regional Activity Centre for Sustainable Consumption and Production and organisational leader for the development of the project.

Experiments conducted by SwitchMed developed a feasibility study on the potential integration of sustainable measures related to water, energy and waste for the eco-lodge that was under construction. After a preliminary assessment and over the course of two years, Dar Zaghouan received continuous technical support in eco-construction and, as a result, sustainable features and models in line with those recommendations were implemented.

“By 2016, the eco-lodge was furnished with greywater treatment to use treated greywater for flushing the toilets, greywater from the Hamman and showers is managed using biodegradable cutlery, dishes and cups at temporary events. Obtaining international recognition through a sustainable green tourism label would highlight our efforts and enable us to tell potential guests about these efforts,” says Skander. SwitchMed experts looked at the different eco-labels and identified the Green Key Labelling as being best-suited to Dar Zaghouan, offering advice on how to monitor and reduce the consumption of resources and to identify which aspects needed to be improved in order to meet all the strict criteria that ensure the integration of optimum levels of sustainability in the management and operation of the tourism establishment. “We have already managed to meet the basic criteria to secure the Green Key Label thanks to the support provided by SwitchMed,” stresses Skander. “The programme also helped me to reduce the environmental impact of my establishment, by improving the quality of the services and the guest experience,” he adds.

“Dar Zaghouan in 2018 hosted a national workshop on ecotourism in Tunisia. Dar-Zaghouan travelled to France as part of a week-long SwitchMed training course to visit five eco-lodges located in the Rhône-Alpes region. ‘Having the opportunity to meet other people who have also had the experience of setting up eco-lodges and who have encountered and already overcome obstacles and problems, was really valuable for me in terms of learning what works and what doesn’t work. I was also very pleased that I was able to host a national workshop on ecotourism in Tunisia organised by the SwitchMed programme. In that workshop I had to promote my business on a national scale as a model for circular economy with significant reductions in energy and waste flows.’

Alongside traditional, eco-friendly agricultural construction techniques we are also engaged in social entrepreneurship,” explains Skander. “By providing an outlet within the area, we are enabling around fifteen artisans from the region to produce and sell local products, like cheese and handicrafts, promoting Zaghouan’s heritage.” Most importantly, we also created 11 green jobs, 8 of which were for women, which represents 50% of the income for the households concerned, contributing to the empowerment of women, as well as preserving the traditional knowledge for which they represent a major recourse.

Dar Zaghouan has met all the mandatory criteria and is managed by an auxiliary system that allows for a substantial consumption of resources per person, for instance, the use of wood energy and the installation of solar panels. Other measures include swapping all lights to LED and the installation of a biomass boiler to heat water and air in the eco-lodge, which have been installed locally and the burning of olive pulp on days when there is no sun, as well as by the solar thermal collectors on sunny days, which is managed by an auxiliary system that allows the use of one of the other depending on the weather conditions. These measures all translate into a positive impact on the environment.

Dar Zaghouan has been certified to carry the Green Key label, which is equal to 5 tonnes of CO₂, emitted 0.6 tonnes of CO₂ per year, representing a reduction of 4 tonnes of CO₂ has been produced using biodegradable cutlery, dishes and cups at temporary events.

The substantial consumption of resources per tourist, for instance, of approximately 550 litres of water per night remains above the strategic objective of 470 litres per night for Tunisia. Of the 470 litres per night per person, which is twice the national average of 0.5 kg per inhabitant per day, is still high too and need to be reduced. Although the landscape and natural wealth as is the incorporation of new technologies, these resources are poorly exploited, and the development of ecotourism in Tunisia remains at an embryonic stage.

However, there is growing international demand for a kind of tourism that respects the natural and social environment that would otherwise be lost to the competitive offers of other destinations. The recommendations for the development of the national level circular economy model piloted at Dar Zaghouan are based on following specific best practices, such as the use of eco-building methods leading to resource efficiency and taking into account the potential for the valorisation of eco-lodges which integrate nature reserves, and the valorisation of waste generated by the site, without forgetting the importance of gaining relevant international green labels and certifications.

Further information at: http://www.darzaghouan.com/

Main achievements benefiting Dar Zaghouan in 2018

1. Year of continuous technical support in eco construction and sustainability measures thanks to 3 expert missions

2. Eco-audit carried out to advice on sustainable management and operation of the tourism eco-lodge

3. Eco-lodge built following circular economy criteria, which included 6 separate rooms to accommodate from 6 to 16 people, as per the recommendation of the eco-audit and promoted nationally as a model for circular economy demonstrating the priorities of the National Action Plan. 30% of energy saved

5% Of electricity saved through wood energy and the installation of solar panels

40% Of total water consumption saved

740 m² of rainwater recovered per year

11 Green jobs created, 8 of which were for women to contribute to their empowerment and preserve the traditional knowledge.

Green Key Label eco-labelling certification evaluation and mentoring. The certification is in process

1 Week-trip to France to visit 5 eco-lodges to enhance hands-on knowledge and exchange experiences among other like-minded enterprises

1 National workshop on ecotourism in Tunisia hosted in Dar Zaghouan
In Tunisia, tourism is an important economic activity and has a ripple effect on both domestic and international markets. The country has the potential to diversify its tourism sector and encourage the preservation of natural resources. The project proposed by these two entrepreneurs was aimed at changing consumption patterns for both local and foreign tourists, and building awareness regarding sustainability. The idea was that ecotourism should promote a sense of environmental ethics and must be based on a ‘biocentric’ rather than homocentric approach, where nature is accepted as it is without expectations of change.

Ecotourism in Tunisia has a long history, dating back to the 1970s. The country is rich in natural and cultural heritage, offering a range of attractions for visitors, from the desert landscapes of the Sahara to the coastal areas of the Mediterranean. The project aimed to develop new ecotourism products and services, and to implement sustainable practices.

The project was supported by the Tunisia Ecotourism company, which has a new partner, Louhichi. The company has worked on developing ecotours, promoting the concept of ‘Another look at Tunisia’, which aims to showcase local culture and nature. The company has also worked on promoting sustainable products, such as Berber pottery and handicrafts.

The main achievements of the project included:

2. Years of continuous expert support and training
3. New ecotours created, which consist of a range of natural and mixed culture-nature tours at different sites, with the focus on environmental education and discovery.
4. New eco-stays designed and organised, promoting other areas of the country and switching to more sustainable business models.
5. Online platform developed, to promote sustainable products produced by local crafters, many of which are women,
6. New green jobs created for 16 female and 8 male employees.

Eco tours already sold in France (new partnerships created)

Communication and marketing strategy enhanced, including tools and messages sharpened to the newly created circuits

Website developed providing information on all the tour details and the values of the company

Online platform developed, to promote sustainable products produced by local crafters, many of which are women,

Final workshop on ecotourism with more than 50 relevant stakeholders active in the sector including Tunisia Ecotourism, aimed to capitalise good practices and experiences learned in the pilot project.

Main achievements benefitting Tunisia Ecotourism in 2018

Diversifying the tourism sector in Tunisia

In Tunisia, tourism is an important economic activity and has a ripple effect on both domestic and international markets. The country has the potential to diversify its tourism sector and encourage the preservation of natural resources. The project proposed by these two entrepreneurs was aimed at changing consumption patterns for both local and foreign tourists, and building awareness regarding sustainability. The idea was that ecotourism should promote a sense of environmental ethics and must be based on a ‘biocentric’ rather than homocentric approach, where nature is accepted as it is without expectations of change.

Ecotourism in Tunisia has a long history, dating back to the 1970s. The country is rich in natural and cultural heritage, offering a range of attractions for visitors, from the desert landscapes of the Sahara to the coastal areas of the Mediterranean. The project aimed to develop new ecotourism products and services, and to implement sustainable practices.

The project was supported by the Tunisia Ecotourism company, which has a new partner, Louhichi. The company has worked on developing ecotours, promoting the concept of ‘Another look at Tunisia’, which aims to showcase local culture and nature. The company has also worked on promoting sustainable products, such as Berber pottery and handicrafts.

The main achievements of the project included:

2. Years of continuous expert support and training
3. New ecotours created, which consist of a range of natural and mixed culture-nature tours at different sites, with the focus on environmental education and discovery.
4. New eco-stays designed and organised, promoting other areas of the country and switching to more sustainable business models.
5. Online platform developed, to promote sustainable products produced by local crafters, many of which are women,
6. New green jobs created for 16 female and 8 male employees.

Eco tours already sold in France (new partnerships created)

Communication and marketing strategy enhanced, including tools and messages sharpened to the newly created circuits

Website developed providing information on all the tour details and the values of the company

Online platform developed, to promote sustainable products produced by local crafters, many of which are women,

Final workshop on ecotourism with more than 50 relevant stakeholders active in the sector including Tunisia Ecotourism, aimed to capitalise good practices and experiences learned in the pilot project.

Main achievements benefitting Tunisia Ecotourism in 2018

Diversifying the tourism sector in Tunisia

In Tunisia, tourism is an important economic activity and has a ripple effect on both domestic and international markets. The country has the potential to diversify its tourism sector and encourage the preservation of natural resources. The project proposed by these two entrepreneurs was aimed at changing consumption patterns for both local and foreign tourists, and building awareness regarding sustainability. The idea was that ecotourism should promote a sense of environmental ethics and must be based on a ‘biocentric’ rather than homocentric approach, where nature is accepted as it is without expectations of change.

Ecotourism in Tunisia has a long history, dating back to the 1970s. The country is rich in natural and cultural heritage, offering a range of attractions for visitors, from the desert landscapes of the Sahara to the coastal areas of the Mediterranean. The project aimed to develop new ecotourism products and services, and to implement sustainable practices.

The project was supported by the Tunisia Ecotourism company, which has a new partner, Louhichi. The company has worked on developing ecotours, promoting the concept of ‘Another look at Tunisia’, which aims to showcase local culture and nature. The company has also worked on promoting sustainable products, such as Berber pottery and handicrafts.

The main achievements of the project included:

2. Years of continuous expert support and training
3. New ecotours created, which consist of a range of natural and mixed culture-nature tours at different sites, with the focus on environmental education and discovery.
4. New eco-stays designed and organised, promoting other areas of the country and switching to more sustainable business models.
5. Online platform developed, to promote sustainable products produced by local crafters, many of which are women,
6. New green jobs created for 16 female and 8 male employees.

Eco tours already sold in France (new partnerships created)

Communication and marketing strategy enhanced, including tools and messages sharpened to the newly created circuits

Website developed providing information on all the tour details and the values of the company

Online platform developed, to promote sustainable products produced by local crafters, many of which are women,

Final workshop on ecotourism with more than 50 relevant stakeholders active in the sector including Tunisia Ecotourism, aimed to capitalise good practices and experiences learned in the pilot project.

Main achievements benefitting Tunisia Ecotourism in 2018

Diversifying the tourism sector in Tunisia

In Tunisia, tourism is an important economic activity and has a ripple effect on both domestic and international markets. The country has the potential to diversify its tourism sector and encourage the preservation of natural resources. The project proposed by these two entrepreneurs was aimed at changing consumption patterns for both local and foreign tourists, and building awareness regarding sustainability. The idea was that ecotourism should promote a sense of environmental ethics and must be based on a ‘biocentric’ rather than homocentric approach, where nature is accepted as it is without expectations of change.

Ecotourism in Tunisia has a long history, dating back to the 1970s. The country is rich in natural and cultural heritage, offering a range of attractions for visitors, from the desert landscapes of the Sahara to the coastal areas of the Mediterranean. The project aimed to develop new ecotourism products and services, and to implement sustainable practices.

The project was supported by the Tunisia Ecotourism company, which has a new partner, Louhichi. The company has worked on developing ecotours, promoting the concept of ‘Another look at Tunisia’, which aims to showcase local culture and nature. The company has also worked on promoting sustainable products, such as Berber pottery and handicrafts.

The main achievements of the project included:

2. Years of continuous expert support and training
3. New ecotours created, which consist of a range of natural and mixed culture-nature tours at different sites, with the focus on environmental education and discovery.
4. New eco-stays designed and organised, promoting other areas of the country and switching to more sustainable business models.
5. Online platform developed, to promote sustainable products produced by local crafters, many of which are women,
6. New green jobs created for 16 female and 8 male employees.

Eco tours already sold in France (new partnerships created)

Communication and marketing strategy enhanced, including tools and messages sharpened to the newly created circuits

Website developed providing information on all the tour details and the values of the company

Online platform developed, to promote sustainable products produced by local crafters, many of which are women,

Final workshop on ecotourism with more than 50 relevant stakeholders active in the sector including Tunisia Ecotourism, aimed to capitalise good practices and experiences learned in the pilot project.
Lead in paint is a serious threat to the long-term health and well-being of children, and throughout the world. It is a common practice in many countries to use lead-based paints, which is why it was prioritised as one of the key toxic chemicals, provided a concrete view of the Tunisian lead-free paint ecosystem. The authorities explained how the substitution of lead in paints and the available alternatives may also lead to cost savings through the production chain such as the handling of less hazardous waste. Also, as demand for safer alternatives is rising, the price of the alternatives is gradually going down, while the price of lead has increased approximately three times since 2005. The importance of labelling products appropriately was highlighted, as it would allow consumers to make better informed decisions when acquiring paints. Consumers are willing to pay more for a product that is safe for their health and environmentally friendly. The pilot project raised awareness among participants and urged policy makers to take action and positive results are already taking place. The Ministry of Environment issued a law weeks after the event, that a new law is already in drafting. Ms Asma Fenira, CAP Groupe Alliances, mentioned that it is also a priority to advocate for the protection of the industrial sector that has switched to acting responsibly, preventing the environmental and health risks associated with lead-based paints. The authors explained how the substitution or zinc plating. All of which are technical solutions or zinc phosphate primers, used for corrosion protection of steel, iron or aluminium. The drawbacks presented in the technical guidelines or zinc-phosphate primers (ZRPs) have the unique ability to provide increased protection for many years. It is also Zinc phosphate primers, used for corrosion protection of steel and iron or aluminium. The drawbacks presented in the technical guidelines or zinc-phosphate primers (ZRPs) have the unique ability to provide the protection for many years.
Demonstrating the business case of a resource efficient and cleaner production (RECP) in the chemical, food, leather, mechanical, and textile sectors in Tunisia’s industry.
Working towards a resource efficient and greener production

At SwitchMed we support the adoption of sustainable production in the southern Mediterranean that enables industries to increase their ability to produce with lower cost, while reducing their environmental footprint. We do so through the MED TEST II project, a comprehensive approach that demonstrates the business case of a resource efficient production in industries in the southern Mediterranean, while advancing the supply of national capacities on sustainable production services.

Transforming industries to meet the needs of changing market conditions and a rising resource scarcity calls for a change in knowledge, attitudes and practices that can lead to a production that requires less resources and reduces pollution. The MED TEST II project, preceded by the United Nations Industrial Development Organisation (UNIDO), applies the methodology named the Transfer of Environmentally Sound Technologies (TEST), a concept that addresses the challenges and barriers industries are facing in becoming more resource saving, energy efficient, and less-polluting.

The TEST concept approaches all management levels of a business, involving people with different professional backgrounds and operational responsibilities, in order to enhance and sustain the efficient use of production inputs and environmental performance. Connecting the resource efficient and cleaner production (RECP) assessments with present-day standards in environmental and energy management systems, helps building cross-cutting understanding and capacities within various management areas of a company and enables a holistic understanding of the environmental performance. Furthermore, this approach encourages the production of goods that are responsibly managed throughout their life cycle, helping building cross-cutting understanding and capacities within various management areas of a company and enables a holistic understanding of the business performance. Furthermore, this approach encourages the production of goods that are responsibly managed throughout their life cycle, and increases the ability of companies to access international markets with high quality products and to reach compliance with environmental standards.

The MED TEST II project has displayed that the potential for improvements in resource savings within the production of the southern Mediterranean industry is significant. In the eight SwitchMed countries, the MED TEST II project identified 1,450 improvement measures within the 125 demonstration companies. The identified measures have stimulated a total investment of 87.6 million euros out of which 43% of the measures had a payback period below 6 months. A short payback period combined with an annual saving potential worth 41.7 million euros, has contributed to a high implementation rate of the identified measures (75%), showing that investments in RECP is a feasible and a profitable business decision. Through the identified RECP measure in the MED TEST II project, industries in the Southern Mediterranean region now can annually save 3,512,660 m³ of water, 707 GWh of energy, reducing the solid waste generation with 19,602 tons and CO₂ emissions with 97,525 tons per year. In addition, 682 professionals from industries, service providers, government institutions and academia received training on the TEST methodology during the demonstration phase of MED TEST II in the SwitchMed target countries.

Resource efficiency is key in switching towards circular economy models. The MED TEST II project has revealed how additional economic and environmental benefits can be gained from the RECP approach using an integrated methodology of TEST that gives businesses an opportunity to invest in their future while reducing their environmental footprint.

Partners for green growth in industries

Strengthening national capacities and competencies related to Resource Efficient and Cleaner Production (RECP) is not only one of the key objectives of the MED TEST II project, it is also an effective way to ensure a sustainable impact that endures beyond the life of the project. For this reason, UNIDO is working closely with government institutions and industry and civil society stakeholders to raise the profile of RECP in the eyes of policy makers and knowledge networks able to strengthen national capacities with their RECP expertise.

Funded by the Ministry of Industry and Small and Medium-Sized Enterprises and the Ministry of Local Affairs and Environment, the MED TEST II Project in Tunisia was implemented by a consortium of five sector-specific centres, including and headed by CNCC, CETTEX, CETIME and CTAA. The MED TEST II project brought influential organisations and institutions to achieve the sustainable application and implementation of RECP in Tunisia. Training, combined with onsite technical assistance, is provided by local service providers with the support of international sector and thematic experts. The idea behind this approach was to demonstrate the business case for RECP in five of Tunisia’s most important industry sectors, and establish reference cases for national service providers willing to offer the TEST concept to interested industries through Tunisia. Together with its Tunisian partners, UNIDO uses capacity-building activities and industry demonstrations to illustrate more sustainable manufacturing techniques and new green business models within 26 companies from the chemical, food, leather, mechanical, and textile sectors, thus stimulating the capacity of Tunisian industry to transform into a more resource-efficient production model.

A: Centre National du Cuir et de la Chaussure (CNCC)

Established in 1969, the CNCC is linked to the Ministry of Industry and works to develop and promote the leather industry sector in Tunisia. By providing Tunisian companies with technical assistance, coaching, analysis, testing, training, R&D, and promotion, the CNCC can give qualified support to the leather industry on how to adapt to new requirements and economic developments.

The CNCC has been the lead technical implementing partner for the MED TEST II project in Tunisia throughout the life of the SwitchMed programme, and has also demonstrated the TEST methodology in Tunisia’s leather sector.

B: Centre Technique de la Chimie (CTC)

It was founded in 1996 under the supervision of the Ministry of Industry and Technology. The CTC offers the chemical industry in Tunisia assistance in modernising production methods, improving technology and quality control. During the MED TEST II project, the CTC was responsible for demonstrating the TEST methodology in selected companies from the Tunisian chemical sector.

C: Centre Technique du Textile (CETTEX)

Established in 1969, the CETTEX is linked to the Ministry of Industry and Technology. The CETTEX offers the textile and clothing industry in Tunisia assistance in modernising production methods, improving technology and quality control. During the MED TEST II project, the CETTEX was responsible for demonstrating the TEST methodology in selected companies from the Tunisian textile sector.

D: Centre Technique de l’Agro-alimentaire (CTAA)

The Centre Technique de l’Agro-alimentaire (CTAA) was founded in 1996 and is currently funded by the Ministry of Industry. CTAA’s mission is to provide advice, assistance and support to industrial enterprises in the agro-food sector in Tunisia. CTAA promotes the growth and development of the sector by providing companies with technical assistance, training, R&D, promotion and facilitation of information campaigns as well as laboratories and quality improvements. As part of the MED TEST II project, CTAA was responsible for demonstrating the business case for RECP in selected companies from the food sector.

E: Centre Technique du Textile (CETTEX)

Established in 1969, the CETTEX is linked to the Ministry of Industry and Technology. The CETTEX offers the textile and clothing sector assistance in modernising production methods, improving technology and quality control. During the MED TEST II project, the CETTEX was responsible for demonstrating the TEST methodology in selected companies from the Tunisian textile sector.
Resource efficiency: a major opportunity for Tunisia’s industries

In the aftermath of the revolution, Tunisia remains a country full of challenges that will continue to require innovative solutions that can support the economic development of the country. While important steps in reforming the society have been taken, the economic growth has unfortunately not maintained the same pace with high unemployment figures and shrinking domestic demand as a result. For instance, the slow recovery of the buckled tourism sector has also affected the Tunisian food industry, as much of the domestic consumption remains linked to the development of this so important economic sector. This development, together with the regional security risk, has of course posed to become a growing threat to Tunisia’s long term economic competitiveness.

Still, the country is determined to mobilize all efforts to accelerate its development and strives to increase its GDP while creating new employment opportunities. But in order to get there, the economic challenges that Tunisian SMEs are facing must be addressed, so that they can maintain their competitiveness and their role as an employer. The economic challenges of the Tunisian industry is closely connected to the reliance of expensive, carbon fossil fuels for energy, an increasing water scarcity, and soaring prices for imported raw materials. Creating opportunities for Tunisia’s industry to save resources would not only improve the economic situation of the businesses, but would also help to ensure the availability of resources for other parts of society.

With 26% of Tunisia’s GDP, industries, and especially SMEs, continue to play a key role in the process of economic diversification, not only as a resource consumer, but also as a supplier to other economic sectors and as a driver of economic growth and job creation. But the way industries deal with waste, energy and water needs to change fundamentally, especially if Tunisian businesses are going to be able to compete on the growingly important global export market. Therefore, industries require tools and investments that would make the production more resource and energy efficient, non-polluting, and safe – maintaining the role of the industry as a job creator. A more resource efficient production will also help businesses to generate responsibly managed products through their life cycle, while increasing productivity and maintaining access to international markets with good quality products that meet international standards. Therefore, if Tunisia’s industry is about to change and tap into the full extent of their potential, it is fundamental that other businesses and sectors pick up and follow the business case of RECP – as it was demonstrated in the MED TEST II project. UNIDO, together with stakeholders from the civil society, government and the industry have developed a scaling-up roadmap on how to expand the RECP concept in Tunisia. An action plan that will support the facilitation and reinforcement of national competencies around the topic of RECP and green growth has been developed with the ambition to mainstream the RECP approach throughout the industry in Tunisia.

If other businesses decide to take on the approach of a resource efficient production in the industry of Tunisia, the RECP concept could become a core element in assisting the economic development of the country, contribute to a more equal resource distribution, and maintain the role of the industry as a job creator. A more resource efficient production will also help businesses to generate responsibly managed products throughout their life cycle, while increasing productivity and maintaining access to international markets with good quality products that meet international standards. Therefore, if Tunisia’s industry is about to change and tap into the full extent of their potential, it is fundamental that other businesses and sectors pick up and follow the business case of RECP – as it was demonstrated in the MED TEST II project. UNIDO, together with stakeholders from the civil society, government and the industry have developed a scaling-up roadmap on how to expand the RECP concept in Tunisia. An action plan that will support the facilitation and reinforcement of national competencies around the topic of RECP and green growth has been developed with the ambition to mainstream the RECP approach throughout the industry in Tunisia.

Private sector investments in resource efficiency has compared to the MED TEST initiative grown with 40% in the MED TEST II project. This clearly shows that there still is a significant potential and profitability for the RECP concept in Tunisia.

Turning challenges into opportunities is at core to the UNIDO TEST methodology as it supports industries with a toolset to address the rising energy and raw material costs by integrating saving measures into current business operations. In 2009 UNIDO introduced the TEST concept in Tunisia as part of the MED TEST initiative, which was co-funded by the GEF and the Italian government. Between 2009-2011, the initiative targeted 4 industrial sectors and 11 industries, to become more resource efficient, safe and less pollutant and could already then reveal that there is a huge potential for resource efficiency in SMEs of Tunisia. Following the outcomes of the MED TEST initiative, the MED TEST II project, functions as a unique and innovative part of the SwitchMed programme and seeks to further demonstrate how the business case of a resource efficient and cleaner production can be unscaled throughout the Tunisian industry.

The MED TEST II project, implemented in Tunisia from 2015 to 2017, has enabled the 26 Tunisian industries, from the food, leather, textile, chemical, and the mechanical sectors, to identify 364 RECP measures. Thanks to the MED TEST II project, the 26 industries will reduce their annual water consumption with 448,950 m³ and their energy consumption with 111.2 GWh per year. These investments will require 14.1 million euros in investment from the businesses, with an average payback period of 1.5 years and accumulate annual savings worth 9.7 million euros for the 26 industries. Correspondingly, the leverage for...
In Tunisia 26 industries from the food, chemical, mechanical, textile, and leather sectors joined MED TEST II:
Why Tunisian businesses should improve resource efficiency

Rachid Nafti's profile:

Rachid Nafti is a Senior TEST expert and has been working with UNIDO in developing the Southern Mediterranean industry for many years. He has a background in environmental management and is a consultant and search engine in the environmental field. With 25 years of experience in the management, coordination and monitoring of environmental projects in Tunisia, North Africa and the Middle East region, Rachid shares with us how UNIDO managed to attract SMEs into the MED TEST II project, where the biggest challenges lie ahead for Tunisia's growing industry, and how the tools of TEST could remedy these challenges.

As a Tunisian, working for UNIDO in Tunisia, you have a unique insight into the current situation as it relates to resource efficiency in the Tunisian Industry. What are the biggest challenges facing Tunisian businesses? By many measure, Tunisia has the best chance to become more cost efficient through the identified saving measures annually save 448,960 m3 of water and 111.2 GWh of energy, reducing their CO2 emissions with 38,227 t per year and 2,371 t of solid waste reduction could also be achieved. Now these figures matter, especially in a country like Tunisia where water is much needed elsewhere and where energy needs to be imported at a very high cost. Consequently, switching to more resource efficient production is not only good for the businesses it is also contributing to a better environment and the redistribution of resources to other parts in the society.

Where do you see the challenges regarding the implementation of resource efficiency at different scales in Tunisia and what impact could this have for the future development of the country? Although, the adoption of RECP is evident to me, we still need to look on how the situation looks like in Tunisia and what needs to be done in order to make the most of the achievements of the MED TEST II project. This is important because we want to understand the structural barriers that hinder a sector wide uptake of RECP in industries. At UNIDO we have, in consultations with the national partners, the government, and key stakeholders developed a roadmap for scaling up resource efficiency measures. A set up of actions have been developed to support the uptake of RECP in Tunisia. The action plans which will have for the business and its ability to remain profitable.

If you want to make business listen, you need to speak the language of the business, which eventually is about how to make more money.

The numbers that we could present from the MED TEST I project were naturally helpful in raising awareness on this issue. But essential, the demonstration projects gave us numbers from the companies that confirmed that the TEST methodology really made an impact. So, together with the company managers during the MED TEST II project to identify savings in energy, water, and raw materials, which will help the company to save. Cost Accounting tool set up an effective and systematic approach to the production process. This could in some cases simply be a fine tuning of the equipment or in some cases an investment in a more efficient technology. In any case, it is when you reveal the monetary value of the losses that a business is doing every day that managers start to listen to improvement measures that can be done in their production.

What can be done to make investments in resource efficiency for SMEs more attractive? As already illustrated above, the potential of the resources lies in the prospectives business needs to make savings in valuable resources and hence, costs. In the end, a resource efficient production leads to lower production costs, which again will enable industries to make new investments into the business, to upgrade technologies, expand the production, and create new jobs. Now this is at the moment an issue, but also when you look on the growing market demand for instance on the issue of raising awareness on the benefits amongst industries and policy makers for RECP, but also on how to strengthen the national capacities on RECP in Tunisia. But also, if you look on the growing market demand for environmental friendly products, this has also become a growing issue for Tunisia's export industry. If Tunisia's industry choses to take the path of RECP, this would add additional value, not only to the industry, but also to our position in the MENA region and Africa as a whole. When innovation and development go hand in hand.

Rachid Nafti is a Senior TEST expert and has been working with UNIDO in developing the Southern Mediterranean industry for many years. He has a background in environmental management and is a consultant and search engine in the environmental field. With 25 years of experience in the management, coordination and monitoring of environmental projects in Tunisia, North Africa and the Middle East region, Rachid shares with us how UNIDO managed to attract SMEs into the MED TEST II project, where the biggest challenges lie ahead for Tunisia’s growing industry, and how the tools of TEST could remedy these challenges.

As a Tunisian, working for UNIDO in Tunisia, you have a unique insight into the current situation as it relates to resource efficiency in the Tunisian Industry. What are the biggest challenges facing Tunisian businesses? By many measure, Tunisia has the best chance to become more cost efficient through the identified saving measures annually save 448,960 m³ of water and 111.2 GWh of energy, reducing their CO₂ emissions with 38,227 t per year and 2,371 t of solid waste reduction could also be achieved. Now these figures matter, especially in a country like Tunisia where water is much needed elsewhere and where energy needs to be imported at a very high cost. Consequently, switching to more resource efficient production is not only good for the businesses it is also contributing to a better environment and the redistribution of resources to other parts in the society.

Where do you see the challenges regarding the implementation of resource efficiency at different scales in Tunisia and what impact could this have for the future development of the country? Although, the adoption of RECP is evident to me, we still need to look on how the situation looks like in Tunisia and what needs to be done in order to make the most of the achievements of the MED TEST II project. This is important because we want to understand the structural barriers that hinder a sector wide uptake of RECP in industries. At UNIDO we have, in consultations with the national partners, the government, and key stakeholders developed a roadmap for scaling up resource efficiency measures. A set up of actions have been developed to support the uptake of RECP in Tunisia. The action plans which will have for the business and its ability to remain profitable.

If you want to make business listen, you need to speak the language of the business, which eventually is about how to make more money.

The numbers that we could present from the MED TEST I project were naturally helpful in raising awareness on this issue. But essential, the demonstration projects gave us numbers from the companies that confirmed that the TEST methodology really made an impact. So, together with the company managers during the MED TEST II project to identify savings in energy, water, and raw materials, which will help the company to save. Cost Accounting tool set up an effective and systematic approach to the production process. This could in some cases simply be a fine tuning of the equipment or in some cases an investment in a more efficient technology. In any case, it is when you reveal the monetary value of the losses that a business is doing every day that managers start to listen to improvement measures that can be done in their production.

What can be done to make investments in resource efficiency for SMEs more attractive? As already illustrated above, the potential of the resources lies in the prospectives business needs to make savings in valuable resources and hence, costs. In the end, a resource efficient production leads to lower production costs, which again will enable industries to make new investments into the business, to upgrade technologies, expand the production, and create new jobs. Now this is at the moment an issue, but also when you look on the growing market demand for instance on the issue of raising awareness on the benefits amongst industries and policy makers for RECP, but also on how to strengthen the national capacities on RECP in Tunisia. But also, if you look on the growing market demand for environmental friendly products, this has also become a growing issue for Tunisia's export industry. If Tunisia's industry choses to take the path of RECP, this would add additional value, not only to the industry, but also to our position in the MENA region and Africa as a whole. When innovation and development go hand in hand.
Case studies from Tunisia

NOEL TUNISIE is a Tunisian company specialized in producing shoes for children under their own brand, but also as an exporter to various brands in France. With over 500 employees, the company is also an important employer in the Beja region. Improving the efficient use of materials in the production was together with the prospect of making water and energy savings, one of the reasons why NOEL TUNISIE decided to join the MED TEST II project. The TEST team could through the application of the Material Flow Cost Accounting tool quickly identify that leather summed up significant costs in the production. NOEL TUNISIE identified measures that will valorise leather scrap and together with the installation of new cutting machines, the production can be optimized saving 64 t of leather per year and 12 t of steel for the cutting equipment. All in all, the MED TEST II project could identify savings in raw material, energy and water worth 1.3 million euros requiring investments of 1.4 million euros. The project demonstrated to NOEL TUNISIE on the importance of operating resource efficient and cost effective.

TERIAK is a producer of pharmaceuticals for the local and export markets (35%), employing 500 individuals in the Tunis region. With an annual production capacity of 650 t, any savings in the use of raw materials would make a significant impact on the production cost for the business. The TEST team suggested several options for improving the manufacturing process of the medication, such as: optimizing the process of filling the powdered products, increasing the size of the batches manufactured in order to reduce control times and cleaning water, improve performance and reduction of losses during filling capsules, and raising staff awareness about issues of improving yields and productivity. These actions helped TERIAK to save raw materials, energy and water while reducing waste worth 34,520 euros with a minimal investment of 8,467 euros. Collectively, the MED TEST II project could identify savings worth 219,750 euros in TERIAK and will also help the company to reduce 1216 t of CO2 emission per year.

ABCO is a producer of canned fish for the local and export market (49%) with an annual capacity of 4 555 t. As a flag ship enterprise in the Tunisian food industry, with 300 employees, ABCO has already adopted several management standards, such as the ISO 9001, ISO 22000, CE, FDA. Through the MED TEST II project, the company could make preparations to obtain the ISO 14001 certificate. Thanks to the project ABCO could also identify savings in energy, water and raw material consumption to annual value of 84,384 euros. A particularly innovative solution was found for the de-frosting of fish. By using an aerosol technology the annual water consumption used for this process can be reduced with 2,628 m³ and saving 20 t of sardines per year. On the whole, the MED TEST II project could identify savings in energy, water and raw material consumption worth 84,384 euros.

The Compagnie Tunisienne des Filtres – MISFAT – is a business which specialises in the manufacture of air and fuel filters for motor vehicles, and has 1,000 employees. Producing annually over 16 million filters, primarily for the export market (80%), the company was looking for new innovative ways in how reduce their production costs and to improve their environmental performance as this has increasingly become a requirement from international customers. Through the MED TEST II project improvement measures in the powder-coating and surface treatment processes could be identified. These measures would enable Misfat to annually save 11.7 t of coating powder and oil, worth 92,500 euros and only require investments of 55,400 euros, making it an outstanding investment with a brief payback period for the company. On the whole, Misfat was able to identify annual savings worth 415,522 euros through the MED TEST II project.

Total savings by the selected companies

<table>
<thead>
<tr>
<th>Company</th>
<th>Total savings, p.a</th>
<th>Water savings, p.a</th>
<th>Energy savings, p.a</th>
<th>Material savings, p.a</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOEL TUNISIE</td>
<td>1,211,511€</td>
<td>20%</td>
<td>3%</td>
<td>34.7%</td>
</tr>
<tr>
<td>TERIAK</td>
<td>219,750€</td>
<td>4.5%</td>
<td>0.5%</td>
<td>23.5%</td>
</tr>
<tr>
<td>ABCO</td>
<td>84,384€</td>
<td>1.4%</td>
<td>1%</td>
<td>22%</td>
</tr>
<tr>
<td>MISFAT</td>
<td>415,522€</td>
<td>9%</td>
<td>7.4%</td>
<td>17%</td>
</tr>
</tbody>
</table>

“The MED TEST II project made us aware the importance of our different uses of energies and materials and so from us to advocate for the protection and prevention of pollution throughout the realization of our products while respecting the regulation, improving performance environment and using energy and raw materials responsibly.”
Marc Leroux, General Manager, NOEL

“The MED TEST II project has allowed us to implement a large number of measures which are beneficial to the environment with considerable economic gains. This simply sustains and consolidates the company’s strategy in terms of sustainable development.”
Imed Ellouze, QSE Director, MISFAT

“The MEDTEST II project has allowed us to improve our cost accounting in place by determining the hidden costs and environmental issues. The TEST approach has also helped us to save resources and improve our energy management system.”
Samy Bellagha, Deputy General Director, ABCO

“The MED TEST approach with its different aspects was the frame ideal to reinforce our commitment to the environment.”
Ms. Asma Sellami, Production Manager, TERIAK

“Thanks to the MED TEST II project we were able to improve our cost accounting in place by determining the hidden costs and environmental issues. The TEST approach has also helped us to save resources and improve our energy management system.”

Ms. Imed Ellouze, QSE Director, MISFAT

“The MED TEST II project made us aware the importance of our different uses of energies and materials and so from us to advocate for the protection and prevention of pollution throughout the realization of our products while respecting the regulation, improving performance environment and using energy and raw materials responsibly.”
Marc Leroux, General Manager, NOEL

“How the MED TEST approach with its different aspects was the frame ideal to reinforce our commitment to the environment.”
Ms. Asma Sellami, Production Manager, TERIAK

“Thanks to the MED TEST II project we were able to improve our cost accounting in place by determining the hidden costs and environmental issues. The TEST approach has also helped us to save resources and improve our energy management system.”
Samy Bellagha, Deputy General Director, ABCO

“The MEDTEST II project has allowed us to implement a large number of measures which are beneficial to the environment with considerable economic gains. This simply sustains and consolidates the company’s strategy in terms of sustainable development.”
Imed Ellouze, QSE Director, MISFAT

“Thanks to the MED TEST II project we were able to improve our cost accounting in place by determining the hidden costs and environmental issues. The TEST approach has also helped us to save resources and improve our energy management system.”
Samy Bellagha, Deputy General Director, ABCO
Annual environmental impact savings identified in the 26 Tunisian food industries

101 professionals
from academia, business associations, government institutions and industries received training on the TEST tools during the demonstration phase of MED TEST II in Tunisia.

448,950 = 1,462
m³ per year of annual water savings
Tunisian households annual water consumption

35,227 = 7,479
tonnes of annual CO₂ savings
passenger vehicles driven for one year

111.2 = 77,000
GWh per year of annual energy consumption savings
Tunisian households annual energy consumption

26 = 9,700,000
companies
euros saved annually
Scaling up a resource efficient and cleaner production throughout the Tunisian industry

The transition to circular economy is becoming a central issue in sustainable development strategies at international, regional and national level. To this end, the United Nations 2030 Agenda for Sustainable Development urges member countries to ensure sustainable consumption and production patterns for prompting resource and energy efficiency (SDG 12). By adhering to the goals of this agenda, Tunisia is committed to include the dimension of sustainable development in all of its public policies. At the regional level the SwitchMed program is, consequently, designed and implemented to facilitate the transition to Sustainable Consumption and Production (SCP) patterns in the Southern Mediterranean region. At the national level, Tunisia's commitment to sustainable development is realized through the adoption of a national strategy (NSSD) and the development of an action plan for sustainable consumption and production patterns (SCP NAPP). In addition, the new investment law of 2016 encourages investments in sustainable production by providing financial incentives called sustainable development allowance.

In this sense, the achieved results from the MED TEST II project are conclusive as they confirm the relevance and effectiveness of the TEST methodology as an instrument for industries that wish to overcome challenges related to a sustainable consumption and production. The cost effective measures, often with brief payback periods, will allow businesses to integrate RECP solutions in their current production without threatening the day-to-day business operations. However, despite the many benefits a more resource efficient production would offer and a relatively favourable institutional framework for SCP, the situation on the ground is still subdued regarding the uptake and generalization of sustainable production modes in industry and it is often limited to the implementation of pilot projects, justifying the need for a scaling up roadmap. Making the transition from demonstration activities to a sector wide mainstreamed adoption of RECP in the industry of Tunisia, would be pivotal in helping achieving the SDGs in Tunisia. In this regard, UNIDO together with the Government, the local partners from MED TEST II, and stakeholders from the industry and civil society, have developed a roadmap with propositions on how to guide a sector wide adoption of RECP in Tunisia and what actions are required to do so. The goal of this action plan, which is based on the concept of leverage points and experience gained from the MED TEST II project in Tunisia, is to eventually create a system change around the topic of RECP for industries in Tunisia that will encourage an adoption and change towards RECP. Considering the skills and experience acquired in the field of RECP as the service providers of the MED TEST II project, the sectoral technical centres will be best suited for leading the implementation of the roadmap. They will have a significant role in mobilizing and cooperatively effectively with key stakeholders consisting of policy makers, members of the public administration, funding institutions and target group associations.

The table below lists the priorities that were identified in the development of the roadmap for RECP in Tunisia and the required action, needed to accomplish the roadmap.

<table>
<thead>
<tr>
<th>Priority</th>
<th>Action Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Institutionalization of detailed environmental diagnosis (DEA)</td>
</tr>
<tr>
<td>1.2</td>
<td>Establishment of voluntary agreements (VA)</td>
</tr>
<tr>
<td>1.3</td>
<td>Strengthening the preventive approach through voluntary environmental reporting</td>
</tr>
<tr>
<td>1.4</td>
<td>Requirement for company self-monitoring as a condition for access to Environmental Fund (FODEP)</td>
</tr>
<tr>
<td>1.5</td>
<td>Integrate RECP criteria in the procedure for granting the allowance under the new sustainable development allowance scheme created by the investment law (70-2016)</td>
</tr>
<tr>
<td>1.6</td>
<td>Interest rate subsidies for loans used to finance environmentally sound technologies</td>
</tr>
</tbody>
</table>

1.2 Establishment of voluntary agreements (VA).
1.3 Strengthening the preventive approach through voluntary environmental reporting.
1.4 Requirement for company self-monitoring as a condition for access to Environmental Fund (FODEP).
1.5 Integrate RECP criteria in the procedure for granting the allowance under the new sustainable development allowance scheme created by the investment law (70-2016).
1.6 Interest rate subsidies for loans used to finance environmentally sound technologies.
Building technical capacity and supporting green businesses in order to build a green entrepreneurship ecosystem in the Mediterranean.
At SwitchMed we are building a green entrepreneurship ecosystem in the Mediterranean by supporting green entrepreneurs from southern Mediterranean countries. 10 local partners were selected to follow-up closely the programme on the ground. In parallel, an innovative training methodology was developed to support the creation of green business models and adapted to the context of the Southern Mediterranean. The methodology – comprised of a handbook and workbook on green business models, development and green business plan development & incubation – guides green entrepreneurs through the entire process of growing their green business idea into a full-fledged enterprise. The methodology also provides tools and test the green entrepreneur’s business models, by explaining step by step how to validate the business models’ hypothesis with targeted customers and stakeholders.

Many of these individuals have a sound business idea but may lack the knowledge needed to transform their idea into a viable business. For this reason, the Green Entrepreneurship programme also includes a comprehensive training and incubation programme for individuals on how to launch a green business, led by the Regional Activity Centre for Sustainable Consumption and Production (SCP/RAC). The training programme – a five-day module delivered over three months in each of the SwitchMed beneficiary countries – requires the entrepreneur to reflect on and articulate how their business idea will bring value to the economy, the environment and the community. Through the practical exercises, entrepreneurs must clearly identify the underlying problems and needs they are addressing, map their stakeholders, interview potential customers, document their mission and their environmental and social value proposition, evaluate the resources and energy needed to create their product or service and think about how they will generate revenue streams, amongst other activities. A key component of the training programme is the module dedicated to eco-design, which requires entrepreneurs to take an in-depth look at the entire life cycle of their products and services to evaluate and improve their environmental performance and to challenge them to incorporate innovative solutions in their business models. Circular economy principles form the cornerstone of this module, which gets entrepreneurs thinking about the many dimensions of environmental sustainability that can be incorporated in their product or services. Materials, for example, can be chosen to maximise recycled content, renewability and recyclability to preserve natural resources and give value to other waste streams in the community. The incubation programme includes 55 hours individual follow-up advisory service by a local mentor, a tailor-made technical assistance and support to develop a crowdfunding campaign, as applied, as well as support to access to finance throughout a period of 8 months.

In total, 123 local trainers were trained on-site, and finally, 84 were selected for the implementation of the training programme. Out of the 6,000 applicants who submitted an application to join the training programme, 2,300 green entrepreneurs were selected and trained. In the aftermath of the trainings, 166 entrepreneurs were selected and received a 60 hours individual coaching to improve their green business models. Out of the 157 entrepreneurs who submitted an application for the incubation phase, 49 were selected by an International High Level Jury that operated pro bono and included a group of independent experts from business, technical, institutional and academic sectors.

A national synergy workshop in each SwitchMed country was held to identify challenges and opportunities to promote green entrepreneurship and social eco-innovation initiatives, to identify specific measures and tools to strengthen the regulatory framework as well as to stimulate the market for sustainable products and services. In the end, a white paper was published, to highlight the strengths and weaknesses of the country green entrepreneurship ecosystem, in order to reveal the areas and sectors where the needs for action are greatest and a whole collection of interviews.

Meet our local partners

Our local partners, selected by the Regional Activity Centre for Sustainable Consumption and Production (SCP/RAC), are organisations with extensive experience in delivering training programmes specifically addressed to entrepreneurs and promoting environmental sustainability, as well as identifying and mobilising local trainers who have already trained potential entrepreneurs. The main task of the local partners is to assist the SCP/RAC in identifying and selecting local trainers as well as potential green entrepreneurs to join our training programme. They are also responsible for disseminating information, organising of training workshops, and follow-up and evaluation.

Our local mentors, carefully selected by the SCP/RAC, have drawn up a solid framework of cooperation for carrying out the activities associated with the Incubation programme. As trusted counsellors and guides, the local mentors’ main tasks are to help and advise green entrepreneurs selected by the International High Level Jury to participate in the incubation programme. Over an eight-month period, our local mentors’ specific role is to provide 40 hours of one-to-one coaching as part of the main incubation support, plus some extra administrative hours, to help the green entrepreneur to successfully produce a solid Green Business Plan, among other things. The mentoring framework is implemented according to the work plan and methodology developed by the SCP/RAC, including the principal document “Launch Your Green Business,” and other supporting documents. In addition to support from their local mentor, green entrepreneurs will receive technical expertise based on their specific needs, to help them develop their Green Business Plan and guide them through other activities (e.g. marketing and communication, etc.). Members of the SCP/RAC Green Entrepreneurship team are in constant communication with all stakeholders and regular follow-up is essential to ensure that qualitative and sustainable support is available to green entrepreneurs.

Confederation of Citizen Enterprises of Tunisia (CONECT)

It is an employers’ union organisation that brings together small, medium-sized and large Tunisian and foreign companies operating in different sectors of the economy. Through its many professional structures, CONECT is present in all regions of the country to defend the interests of its members, represent them before public authorities and promote private initiatives to develop the economic and social fabric of the country. CONECT is guided by values of citizenship, solidarity, transparency, responsibility and equity.

Tunis International Centre for Environmental Technologies (CITET)

It is a non-administrative public institution (IFNA) supervised by the Ministry of Local Affairs and Environment. Created in 1996 in response to international recommendations from the Rio Summit (1992) for capacity-building in developing countries and support for the transfer of environmentally sound technologies, CITET is committed to developing Tunisian skills to ensure an environmentally sound technology transfer that is well adapted to the local, national and international context.
How is the green entrepreneurship programme contributing to the environmental, social and economic impact?

Applicants
Entrepreneurs who submitted their green business idea in order to be selected to access the training programme.

Trainees
Entrepreneurs who received a 5-day intensive on-site training session along a period of 3 months in order to develop their green business models and prove their feasibility through the practical tools, exercises and tests provided by the SwitchMed methodology.

Coached
Entrepreneurs who received a 10 hours individual coaching in order to improve their green business models. They submitted their green business model canvas for the incubation phase/follow-up advisory service.

Incubated
Entrepreneurs received support from local mentors and technical experts to develop their Green Business Plan and to launch their product on the market.

25 Applicants
442 Trainees
32 Coached
34 Incubated
8 Green Businesses created

Analysing our Tunisian 442 trainees

By sector:
- 30% Organic Food & Agriculture
- 28% Resource Efficiency & Sustainable Waste Management
- 12% Renewable Energy & Energy Efficiency
- 6% Sustainable Building & Construction
- 24% Other
- 21% Tourism
- 19% Mobility
- 15% Furniture
- 14% Clothing and Textiles
- 11% Communication for Sustainability
- 7% Cleaning Products and Cosmetics

By gender:
- 59% Women
- 41% Men

By age:
- 52% 20-30 years old
- 28% 31-40 years old
- 17% 41-50 years old
- 3% >50 years old
- 0% <20 years old
Meet our Tunisian incubated green entrepreneurs

Ferme Bio Warda
A new revolution in Sidi Bouzid called organic farming

Leilla Horchami founded ‘Ferme Bio Warda’ with the dream of introducing organic farming to her town of Sidi Bouzid, the cradle of Tunisia’s Jasmine Revolution, while reducing the use of pesticides and improving the life of rural women. With organic agriculture, environmental costs tend to be lower and the benefits greater and, as such, Leilla’s ambition is to spark a change in perception regarding agriculture farming systems, while boosting the local economy and preserving natural resources.

Tell us about yourself and how the idea for your business was born
Growing up in Sidi Bouzid, I inherited a love for the land from my family. Every morning, even as a child, I would roll up my sleeves, plough our small vegetable field and tend our cattle. Nothing made me feel as happy and fulfilled as working with my hands in the field and taking care of the animals. After graduating from university with a degree in food hygiene and safety, I returned home with an idea: to improve our agricultural sector by growing organic foods. My work experience in an agricultural research laboratory consolidated my knowledge and ambition even further. Then, after losing two family members as a result of the consequences of pesticide and agrochemical fertilisers, I decided to take up the cause to fight against the use of chemicals and established my project. Initially, I plan to grow organic potatoes and olive and almond trees and organically raise animals, such as sheep, cattle and poultry. Later on, I will diversify to ensure food security for consumers. This method of farming also saves resources and increases the profitability of production. Promoting responsible entrepreneurship in the region is another aspect I would like to address with Ferme Bio Warda.

What is the environmental and social impact of your project?
In Tunisia, over 1700 tonnes of obsolete, non-degradable, highly toxic pesticides are dumped into the environment. Through my project, I hope to reduce this amount by 20% over the next 10 years by expanding my activity and converting more land from conventional to organic farming. At the moment, I am growing organic vegetables on the three-hectare farm belonging to my family and I have applied for a loan to expand across another two hectares. By doing so, I will partially reverse some of the negative environmental effects created by our agricultural system and its associated impact on global warming. Overall, organic farms tend to be more energy efficient. Organic agriculture is also associated with great biodiversity of plants, animals, insects and microbes, as well as genetic diversity. Also, by reducing the exposure of farm workers to pesticides and other chemicals it makes a positive contribution to the health of farmers and the consumers.

Just in my small village, 175 rural women work in unfavourable conditions in the agricultural sector on a daily basis. Despite considerable efforts to improve working conditions in rural areas, very little has changed. Income levels are still very low; investment capacity is practically non-existent and there are many obstacles to economic growth such as lack of access to credit, land, water, means of communication and transport, new technologies and knowledge. My aim is to create positive social and economic impacts and my business will create over 100 jobs for rural women in my region, either directly or indirectly, over the next five years. Ultimately, Ferme Bio Warda is a step towards revolutionising Tunisia’s agricultural industry by supporting sustainable development, empowering local economies and giving autonomy to local farmers. In fact, I believe that organic consumption and production has many advantages, which is why I am working hard to promote it. I would like to set an example for others, especially women, and encourage the development of more and more organic agriculture farming initiatives.

How have you benefited from the SwitchMed programme?
As a result of SwitchMed’s support, I have received training on how to implement my green business concept, as well as coaching during the incubation phase. Among many new concepts, I have acquired valuable knowledge on the legal aspects associated with setting up a business. SwitchMed-assigned experts have also helped identify the best way to develop my business. One provided me with great advice on grants and special incentives offered by the government, such as tax incentives, as my region falls within the regional development support programme. I hope to transfer all this knowledge to my community. Another expert provided support with regard to the international certification process related to the 99/30 ‘Ecocert’ standard for my organic products. Financially, I received valuable training from another expert on all the steps associated with launching a crowdfunding campaign. In my case, SwitchMed has given me the means to make my green dream come true.

Tell us about yourself and how the idea for your business was born
I grew up in the northeastern Tunisian peninsula of Cape Bon, a region well-known for its agriculture. I began working as a mechanical engineer, but always had an entrepreneurial spirit. Working in and around nature, I developed a special passion for upcycling, which is the process of converting waste into usable products. For me, waste was an opportunity to innovate, create products and improve the environment.

The impetus for founding W2V came in 2015, when I noticed employees at a cafeteria throwing coffee grounds in the bin. The next morning, I went back to the cafeteria to collect the fresh grounds. At home I mixed the grounds with other organic supplements to try and produce organic fertiliser. I eventually succeeded in producing a naturally biodegradable soil amendment. The product impressed neighbouring farmers, who confirmed that it was both practical and effective. That was how W2V acquired its first customers and the product is now distributed by many local farmers across Tunisia.

What is the environmental and social impact of your project?
W2V collects and recycles coffee ground waste. Some 20,000 businesses in Tunisia throw away coffee grounds. So far, 1,010 recovery points have been identified in my project area alone. We collect grounds by bike and on foot in order to minimise our carbon impact. After collecting the coffee grounds we add in carefully selected natural additives such as algae and wood chips. The mixture is transformed into an efficient and innovative organic fertiliser that meets farmers’ fertilisation needs while reducing emissions of greenhouse gases. The production process for my product has already been patented with INNORPI. Called Orga Ferti, the product is very rich in available primary nutrients and trace elements. It comes in 25-litre bags and gives the best yield at 5 litres/m² (5 m³/ha).

My research revealed that Tunisia consumes approximately 350,000 tonnes of chemical fertiliser each year, contributing to an annual 2% loss in soil fertility. For this reason, coffee grounds can be considered a natural, climate-friendly substitute. W2V’s organic fertiliser is also climate-friendly. It has proven to be a valuable resource for farmers, who responded positively to it after experimental trials. Orga Ferti helps root development and improves the quality of crops, especially citrus fruits and leafy vegetables. The product reduces the harmful effects associated with chemical fertiliser use and helps to avoid the decomposition of coffee grounds, which would otherwise release carbon dioxide into the atmosphere.

What is the environmental and social impact of your project?
Orga Ferti helps root development and improves the quality of crops, especially citrus fruits and leafy vegetables. The product reduces the harmful effects associated with chemical fertiliser use and helps to avoid the decomposition of coffee grounds, which would otherwise release carbon dioxide into the atmosphere.

How have you benefited from the SwitchMed programme?
My project took off after I embarked on a training programme with SwitchMed, as this provided me with clear objectives and guidance on how to turn my green business idea into a sound green business. The methodology is simple but inspired, as it teaches you how to do your own needs analysis and market study for your product. SwitchMed also offered me the valuable assistance of technical experts, who helped me develop a technical feasibility study and to understand the legal and administrative aspects of business creation. Another major help was my dedicated mentor, who guided me in selecting the right machinery for my production unit and advised me on the best way to adapt my innovative business model to the legal context of the area and country. All this support and my achievements have reinforced my self-confidence and have helped me to move forward and draw up expansion plans.

Waste-to-Value (W2V) aims to recycle used coffee grounds to produce naturally biodegradable fertiliser, fighting global warming while reducing the use of chemical alternatives and their negative impact on soil fertility. Mohamed Khelil is behind the new Tunisian initiative, aimed at reducing the amount of waste we produce, especially coffee grounds. The start-up was founded in 2015 in the northeastern Tunisian peninsula of Cape Bon, a region well-known for its agriculture. Initial experiments showed that coffee grounds could be used as a fertiliser, since they are rich in organic material and balanced nutrients.

The W2V team then went toences of free farming,

How have you benefited from the SwitchMed programme?
As a result of SwitchMed’s support, I have received training on how to implement my green business concept, as well as coaching during the incubation phase. Among many new concepts, I have acquired valuable knowledge on the legal aspects associated with setting up a business. SwitchMed-assigned experts have also helped identify the best way to develop my business. One provided me with great advice on grants and special incentives offered by the government, such as tax incentives, as my region falls within the regional development support programme. I hope to transfer all this knowledge to my community. Another expert provided support with regard to the international certification process related to the 99/30 ‘Ecocert’ standard for my organic products. Financially, I received valuable training from another expert on all the steps associated with launching a crowdfunding campaign. In my case, SwitchMed has given me the means to make my green dream come true.

Tell us about yourself and how the idea for your business was born
I grew up in the northeastern Tunisian peninsula of Cap Bon, a region well-known for its agriculture. I began working as a mechanical engineer, but always had an entrepreneurial spirit. Working in and around nature, I developed a special passion for upcycling, which is the process of converting waste into usable products. For me, waste was an opportunity to innovate, create products and improve the environment.

The impetus for founding W2V came in 2015, when I noticed employees at a cafeteria throwing coffee grounds in the bin. The next morning, I went back to the cafeteria to collect the fresh grounds. At home I mixed the grounds with other organic supplements to try and produce organic fertiliser. I eventually succeeded in producing a naturally biodegradable soil amendment. The product impressed neighbouring farmers, who confirmed that it was both practical and effective. That was how W2V acquired its first customers and the product is now distributed by many local farmers across Tunisia.

What is the environmental and social impact of your project?
W2V collects and recycles coffee ground waste. Some 20,000 businesses in Tunisia throw away coffee grounds. So far, 1,010 recovery points have been identified in my project area alone. We collect grounds by bike and on foot in order to minimise our carbon impact. After collecting the coffee grounds we add in carefully selected natural additives such as algae and wood chips. The mixture is transformed into an efficient and innovative organic fertiliser that meets farmers’ fertilisation needs while reducing emissions of greenhouse gases. The production process for my product has already been patented with INNORPI. Called Orga Ferti, the product is very rich in available primary nutrients and trace elements. It comes in 25-litre bags and gives the best yield at 5 litres/m² (5 m³/ha).

My research revealed that Tunisia consumes approximately 350,000 tonnes of chemical fertiliser each year, contributing to an annual 2% loss in soil fertility. For this reason, coffee grounds can be considered a natural, climate-friendly substitute. W2V’s organic fertiliser is also climate-friendly. It has proven to be a valuable resource for farmers, who responded positively to it after experimental trials. Orga Ferti helps root development and improves the quality of crops, especially citrus fruits and leafy vegetables. The product reduces the harmful effects associated with chemical fertiliser use and helps to avoid the decomposition of coffee grounds, which would otherwise release carbon dioxide into the atmosphere.

What is the environmental and social impact of your project?
Orga Ferti helps root development and improves the quality of crops, especially citrus fruits and leafy vegetables. The product reduces the harmful effects associated with chemical fertiliser use and helps to avoid the decomposition of coffee grounds, which would otherwise release carbon dioxide into the atmosphere.
BioChevre-Lait
The goat sector goes organic

Habib Chakhar radiates enthusiasm for his land, the region he was born in, and the animals he cares for. And he is particularly enthusiastic about Alpine goats, which he has decided to introduce in his region, with one overriding goal: to promote organic livestock raising and give added value to goat products. His project aims to help and mentor farmers in their transition toward green agriculture and livestock raising: the result is better quality milk and meat, whether sold to producers or consumers, and helps create jobs, particularly for women.

Tell us about yourself and how the idea for your business was born
I couldn't conceive my green entrepreneurship project as happening anywhere else than in my home region: Kasserine. Having been born there, I am very fond of this land, with its mountains, its livestock, its traditions and its authenticity. So it was natural that I would want to use my experience and knowledge to contribute to the social and economic development of Kasserine, which, because of its remoteness, is still a deprived area.

It is the goats that have enabled me to return to my origins. And not just any goats. So that my project would address simultaneously the region's environmental, economic and social challenges, I decided to introduce a new breed, with the idea of offering certified 100% organic products. This meant finding a certified pure goat breed, and implementing new husbandry techniques that were compatible with organic husbandry. In the end, I chose Alpine goats, which are perfectly at home in the typical terrain of my region and who differ from the local breeds for their milk output. The quality of the milk lends itself to a certain amount of diversification in the products obtained from the livestock: selling the meat, the milk and the milk products, all certified bio.

This project would have little impact on the region if it was limited to only one herd. That is why I view my activity as a pilot project, whose ultimate purpose is to encourage other livestock raisers to take up organic farming and Alpine goat raising, gradually developing green entrepreneurship and replacing imports with more locally produced goods. My ambition is to share my knowledge and the lessons I have learned with the local people, particularly with the farmers, to help them improve the quality of their milk and meat products.

What is the environmental and social impact of your project?
This project’s impact is seen on three levels: environmental, economic and social. I decided to focus on organic livestock raising because, in the process, it improves husbandry practices. The idea is to rethink how we raise, produce and sell our goat-related products. Product diversification reduces imports and strengthens direct circuits, which in turn reduces carbon dioxide emissions. The improvement in animal nutrition, sustainable manure management and production of an organic compost also help reduce methane and nitrogen emissions. From the economic side, expert forecasts that eight permanent jobs and five indirect jobs will be created within our own company. I also plan to promote employment for the region's women, by creating a livestock charity fund to provide for up to 500 animals and which could provide work for up to 54 women. Direct know-how transfer to livestock raisers will also provide extra income and the possibility of creating more jobs.

Tell us about yourself and how the idea for your business was born
I am a Tunisian biotechnology engineer, a graduate from Marseille’s Institut de recherche pour le développement (IRD), where I specialised in biofertilisers. I was able to present my project to a panel of investors during an event organised by SwitchMed and I had a first meeting with the BFPM (Banque de Financement des Petites et Moyennes Entreprises) in Tunisia. It was a very enriching experience that has given me new communication and marketing skills and which has also helped me broaden my network of contacts. Lastly, the SwitchMed programme’s experts have supported me in launching a crowdfunding campaign whose goal was to generate the necessary financial resources to start my company on a strong base.

What is the environmental and social impact of your project?
I believe that the future lies with our young farmers, who can hopefully perpetuate sustainable agricultural practices for generations to come. BioIntrants Technologie products are inspired by ancient agricultural practices that have almost been lost to us, which can contribute to reducing or mitigating pressures on our environment. Our products are chemical-free solutions that help boost farming productivity, while they protect the soil and crops, promote food security and conserve soil fertility. The use of fewer chemicals also means reducing groundwater contamination, and, consequently, less contaminated food. In the initial phase I will buy compost and use it to make soil-friendly agricultural products. The production units will be implemented in the northwest of Tunisia, a region historically known as the breadbasket of the Roman Empire for its once plentiful fields of grain. My ambition is to make organic and healthy food products available to Tunisian consumers, which has become my mission: to provide farmers with high-performing, soil-friendly agricultural products such as organic amendments, biofertilisers, biostimulants and biopesticides. My company, BioIntrants Technologie, is located in Chorfech, Sidi Thabet, and consists of a laboratory and a 14,000-m² agricultural field. I am developing new formulas based on microorganisms that aim to mitigate the excessive use of chemical pesticides and fertilisers. Organic-mineral fertilisers improve soil tilth and plant quality and so increase production. My biopesticide protects plants from parasites, mycotoxins and other diseases.

How have you benefited from the SwitchMed programme?
I stepped in with just a green business idea. The SwitchMed training programme allowed me to refine and develop my business approach, which matches perfectly with my principles regarding the environment. I also really appreciated the strategic and personalised support from both local and Spanish teams. It was very reassuring that experts and professionals cared about my project and its success. Thanks to the help received from SwitchMed experts, my project took shape rapidly. Together we developed environmental impact and technical feasibility studies for my project. We also shared my production facility, according to national safety standards. But the most valuable skills were most certainly those I learnt during the coaching sessions on access to finance. SwitchMed organised these mentoring sessions, as well as an event where green entrepreneurs met investors. I did not win first place in the competition, but had received very constructive feedback from real investors and was one of the most enriching experiences of my life. Now more than ever, I feel ready to knock on bankers’ doors and confidently ask for funds to launch my business.
Queen Luzerne
A plant with a thousand virtues
revitalising a whole region

Multiply ten-fold the benefits of a unique plant and put them as the service of the community. This was the challenge with which Abdelkrim Bessadok returned to his home region, Gabès. He sees alfalfa as a godsend for this region, a plant with many qualities that could benefit both the ecosystem and the local social and economic context.

Tell us about yourself and how the idea for your business was born.
My beginnings go back to when I started farming the land of my home region, Gabès. From being a farmer, I went on to become an agriculturist specialising in livestock and animal fodder production, before getting my PhD in Animal Biology. I wanted to use the experience I had acquired in agri-business, agricultural production, in both the public and private sectors, to help my region. And I owe this return to my origins to a single plant: alfalfa. A plant with a thousand virtues, it is the ally of any oasis, any farmer and any livestock raiser. Growing alfalfa helps regenerate and detoxify the soil and improve farm sustainability by lengthening production cycles and reducing the use of phytochemicals. After it has been harvested and dried, it offers excellent properties for livestock raisers, with a high nutrient content that covers their animals’ phosphorus, magnesium and potassium requirements, at an affordable, competitive price. All these benefits make it a plant with almost magical powers that is heartening to see flourish in our region.

However, I realised that alfalfa growing was very undeveloped and was sold at ridiculously low prices as a fresh product, that is, without going through any drying process and without being processed into alfalfa pellets. This means that neither the grower nor the livestock raiser gets much benefit from it. This is an enormous lost opportunity for the region’s farmers, who suffer from high unemployment rates and lost revenues, but also for the livestock raisers, who have to import the alfalfa pellets, as dried alfalfa production in the Gabès region does not cover all their needs.

With this realisation, my first idea was to encourage farmers to grow more alfalfa and implement it in the crop rotation system, growing alfalfa instead of letting the land lie fallow. The benefit of this approach is that it enables them to accelerate soil regeneration, preserve oasis ecosystems, and earn extra income from the alfalfa they harvest. This idea was the genesis of the project for a cooperative whose goal is to federate, bring together and provide technical and financial support to the farmers who agree to commit themselves to growing alfalfa.

My project couldn’t be complete if it was limited to just planting and harvesting alfalfa. So I created a sun-drying company that can generate large volumes of alfalfa pellets, which will then be sold to local livestock raisers.

What is the environmental and social impact of your project?
My project, which includes the farmers’ cooperative and the alfalfa drying and processing company, addresses environmental, social and economic challenges.

When you talk about alfalfa growing, you’re also talking about conservation farming: alfalfa is capable of fixing atmospheric nitrogen in the soil to the point that it doesn’t need nitrogen mineral fertilisers, and it also acts as a natural soil cover. This has an amazing impact on soil quality, and it does this in a completely natural way. And after it has been dried, it also offers huge environmental benefits. Livestock fed with alfalfa will produce 10% less methane than conventional grass silage.

Still on the environmental aspect, local production of alfalfa pellets will enable imports to be reduced and will contribute to creating a direct link between farmers and livestock raisers.

This environmental impact is accompanied by an improvement in the social and economic situation of the region as a whole. The development of alfalfa production and its direct sale will generate additional revenues for farmers. I expect 15 direct jobs to be created for the company and about 30 new jobs in the region, with the goal being to reduce unemployment, economic hardship, and rural exodus, due mostly to young people leaving to find work. This project also seeks to bring 100 farmers into the cooperative and provide them with technical and economic support.

How have you benefited from the SwitchMed programme?
The SwitchMed programme’s ‘green entrepreneur’ training has equipped me with a complete kit of tools, knowledge and entrepreneurial practices. I received personalised monitoring during the incubation phase, which empowered me to develop a strong, convincing green business plan. Working on this green business plan with the experts from SwitchMed enabled me to define my main idea so that it would be realistic and achievable. The financial and legal expertise provided by SwitchMed has proved to be invaluable in giving shape to my project. For example, until recently, I had never heard about forecast operating costs and performance indicators. Lastly, SwitchMed has enabled me to find potential investors, particularly thanks to the Elevator Pitch event organised in Tunisia.

Le Carré Traditionnel
Traditional Tunisian handicrafts pave the way for a sustainable future

Le Carré Traditionnel is a sustainable clothing startup that produces unique decorative items such as lamps/bases, painting boards and mirrors made from quality natural raw materials. Asma Zarkouma aims to create a national artisan-artist-designer network in continuous collaboration. She believes that using recycling materials will ultimately raise awareness of industrial pollutants present in furniture from among young generations and currently among the children that participate in workshops organised by Le Carré Traditionnel. Subcontracting and long-term relationships with local Tunisian artisans can create jobs and contribute to reducing regional inequalities.

Elma Eco
A Tunisian entrepreneur’s water recycling system is a valid water-saving solution

Elma Eco is a phyto-purification approach to greywater treatment aimed at providing scalable domestic recycling water systems, with low operating and electricity costs and maintenance requirements. Mona Lamine launched this project in the context of treating waste water in small, mainly coastal Tunisian villages not connected to the sanitation network. Treatment and recycling systems can save drinking water and, at the same time, also reduce marine pollution. Phyto-purification systems currently on the market have the disadvantage of being bulky and requiring significant implementation works and complicated maintenance. Elma Eco’s system is a novel lightweight, flexible filter configuration consisting of two interconnected vertical compartments. The compartment located at the bottom of the filter contains esparto grass (Stipa tenacissima) and the other compartment consists of laterite rock, as a filling material, and aquatic plants. The system is easily installed and deployed. The risk of clogging is minimal as the system is mobile and can be moved at any time of the year.

M2M
Energy efficiency technology is now available in Tunisia

M2M is a startup specialising in smart energy efficiency solutions. With this project, Mohamed Makki Maakj plans to rationalise energy consumption and reduce climate impact while offering an alternative to increasing energy prices in Tunisia. He has developed a real-time monitoring platform for energy management applications called ALL-SAVE, which retrieves and analyses data collected from the electricity network in order to present useful and exploitable information in a customisable web interface. Based on continuous improvements in energy consumption control, the system acts on companies’ environmental impact, strengthening overall performance and ensuring sustainable energy savings. It also reduces the amount of CO2 released into the atmosphere.

In the short term, reducing companies’ environmental impact decreases wastage in materials and energy and, therefore, costs.
“Waste to Value aims to reduce the harmful effects associated with chemical fertiliser use and the decomposition of 240 tons of used coffee grounds in landfills. By producing yearly 240 tonnes of organic fertiliser we are reducing the emissions of CO₂ and restoring the soil fertility.”
Mohamed Khelil, Waste to Value

“My goal is to develop my current craft workshop to continue producing handmade, durable and 100% natural products establishing collaborations with other craft workshops, artisans, artists and designers.”
Assma Zarkouna, founder of Le Carré Traditionnel

“The reuse of wastewater has the major advantage of providing an alternative resource for limiting water deficits, better preserving natural resources and reducing water shortages caused by climate change.”
Mona Lamine, founder of Elma Eco

“An efficient system that rationalises the consumption of our customers will help to reduce not only their bills but also the extreme levels of global warming.”
Mohamed Makki Maalej, CIO & founder of M2M
The Switchers: Discover inspiring changemakers who are switching towards a cleaner Mediterranean

There are 340 Switchers showcased in the Switchers platform. They are all shining examples of how circular economy approaches can lead to business opportunities and also drive innovation that benefits people and the environment. In Tunisia, there are 27 Switchers at the moment in the platform.

The Switchers is a community of inspiring green entrepreneurs and changemakers in the Mediterranean region hosted by SwitchMed and SCP/RAC. Switchers are individuals, enterprises or civil society organisations implementing innovative ecological and social solutions that contribute to a switch to sustainable and fair consumption and production. They are active in a variety of fields, including organic farming, sustainable tourism, waste management, organic textile, recycling of electronic waste, sustainable building, organic cosmetics production, among others. Most importantly, the Switchers is a community with a voice and a meeting place for people in the region who are passionate about shaping their environment towards a more sustainable future.

For the Switchers, circular economy solutions are at the heart of their business models and also inspire them to seek ways to innovate and achieve even higher levels of environmental sustainability in the design of products and services they provide. Together, these important actors are making significant progress towards the goal of the SwitchMed programme and one of the region’s key sustainable development objectives: to accelerate the shift to more sustainable modes of consumption and production. In doing so, they are setting a positive example of how economic growth can also lead to protection of the Mediterranean and its precious, limited natural resources.

To read more on the stories of changemakers at our new online Switchers platform at www.theswitchers.eu.
Tnagm
Crossbreeding and animal welfare while aiding society’s most vulnerable
Tnagm, which means “you can” in Tunisian dialect, is a project created by the Youth Society Association that promotes sustainable artisanal fishing in the archipelago of Kerkennah. The ancestral technique involves fishing using palm leaves cut and arranged into V-shapes to form a path in the water.

Tnagm contributes to the economic development of the island, where the main activity is fishing. The company offers a new source of income to its customers, ensuring complete recovery of coastal inlanders and encouraging traditional fishing practices. It is almost the only way to work towards the conservation of marine biodiversity and represents a reliable alternative to the current coastal tourism. Tnagm aims to revive artisanal fishing techniques that are respectful to the environment, foster the relevant skills within the local fishing community and nurture the archipelago’s cultural traditions.

ChanoUF Farm-Biofire
An agricultural company that produces biomass briquettes
ChanoUF Farm-Biofire is a farm that grows peas and olives, but it is also home to a recycling project that produces high-performance, eco-friendly, low-cost biomass briquettes, which enables the company to expand its sources of income and extend its zone of activity beyond the harvesting seasons.

The ChanoUF Farm-Biofire briquettes are made from agro-forestry waste. Their production is based on exploiting the abundant nature of the organic material biomass, which is found in wood, bark or straw. As a renewable energy source, biomass is harnessed through a combustion process. This is an environmental-friendly alternative to the use of firewood, one of the main contributors to deforestation.
The company has been able to take on ten additional employees since establishing its recycling unit and plans to double that number to meet growing demand.

Dar Zaghouna
Tunisia’s first eco-friendly bed and breakfast
Dar Zaghouna is a sustainable tourism experience that is beneficial both to the environment and the local community. It is the first Tunisian eco-bed & breakfast, where all the activities on offer are focused on the preservation and conservation of the surrounding area.
Dar Zaghouna’s guests are invited to participate in various activities, from climbing and canoe exploring, to horse riding and trekking in the mountains. It also has an on-site restaurant that serves food made using homegrown produce, and residents are able to get involved in the preparation of traditional dishes in order to share the region’s gastronomic heritage with Tunisians, which also empowers women living in this rural region. Preserving the environment is a key part of Dar Zaghouna’s overall mission and, as such, it uses solar energy to run its facilities and solar water heaters to reduce the need for non-renewable energy sources. So far, the bed & breakfast itself has created around 20 jobs and has indeliriously created more than 60 others.

El Menjel
Giving life to old clothes while preserving expertise
El Menjel is a social company that provides support to artisans, helping them to rethink their products and better understand the needs of their customers. Mehdi Raciocchi’s goal is to preserve knowledge and expertise with regard to traditional weaving techniques that have remained unchanged for centuries.
El Menjel breathes new life into second-hand clothing, producing socially and environmentally responsible products made from recycled materials. The raw materials are obtained from second-hand clothing, unravelling the wool to be reused in carpet weaving. This quest for protecting the environment is also reflected in the very essence of the activity, with zero water or energy consumption required for the operation of the looms, which are set up in the homes of the artisan weavers. The social company works with women weavers of Nefta, who were no longer able to make a living from their home products.

SICAP
Bringing nature to Tunisia’s rooftops
SICAP specialises in the creation of green roofs and living walls. Both aesthetic and eco-friendly, green roofs help to improve the living environment of citizens while reintroducing nature into cities. Khalid Fatnassi has been developing innovative solutions to reintroduce fauna and flora into the city since 2010.
SICAP’s green carpets help prevent the phenomenon of urban heat islands by returning a proportion of the rainwater to the atmosphere. Besides reintroducing fauna and flora into the city, these green roofs also offer other significant advantages, particularly in terms of thermal insulation and improved air quality.
In a parallel initiative, the company also works with a group of women from rural areas in the production of handcrafted bags made from recycled second-hand clothing, perpetuating the practice of traditional skills and craftsmanship and further promoting the green walls’ ideals.

Mornag Eco Farm
An environmentally responsible farming model
Mornag Eco Farm is an ecological farm focused on promoting the use of sustainable living techniques. Amine Draoui organises visits for schools, volunteers and tourists throughout the year in order to share his expertise and passion for nature.
Mornag Eco Farm is an eco-friendly site where people come to be inspired, learn and apply alternative techniques in the fields of energy, water, construction, waste management and agriculture, with the aim of preserving a range of traditional skills and trades that are starting to disappear. The farm is a participatory place with workshops where visitors can learn to make olive oil or bread and distill essential oils. The farm’s philosophy is to reinvest all profits back into the project to foster its continued growth and build a strong network throughout Tunisia.

Karhbetna
Tunisia’s first carpooling platform introducing passengers to their environmental footprint
Karhbetna is the first online carpooling platform in Tunisia. Waad Mohamed Boulami aims to connect individuals with drivers making the same journey at the same time. Drivers are thereby able to reduce their costs, while passengers have access to an affordable transport solution that benefits the environment.
Karhbetna is on a mission to raise awareness of environmental issues by offering an alternative long-term solution to the problems of pollution and congestion in Tunisia’s cities. Carpooling not only reduces the use of fuel but also improves city congestion and CO2 emissions. The platform, which is planning to release its mobile application in the near future, also has a ‘Ladies Only’ section to ensure the safety of women interested in carpooling and travelling together.

Green Power Service
A company laying the foundations of renewable energy in Tunisia
Green Power Service is a distribution, installation and consulting company that offers renewable energy solutions. Chassen Slaoui believes photovoltaic systems represent a good alternative to fossil fuel resources for Tunisia. Green Power Service builds a wide range of clean energy products, such as photovoltaic and solar water heaters and solar pumps. These green alternatives can be used instead of fuel-based ones such as oil and gas. The company covers residential, business, industrial and off-grid solutions, as well as solar pumping. Off-grid solutions offer the option of accessing electricity through an autonomous photovoltaic system. Green Power Service believes that Tunisia can really continue this rapid expansion of renewable energy by utilising existing technologies and investing in improvements to its electricity system.

Collectun D3E Recyclage
Electronic waste recycling contributes to the circular economy in Tunisia
Collectun D3E Recyclage has been certified by the Ministry of Environment to create new products and jobs by recovering electronic waste. Ine’Tim’s company collects all sorts of electronic equipment, from computers to fax machines, mobile devices and home IT materials.
Collectun D3E Recyclage recovers valuable materials from electronic waste in an environmentally responsible manner. Choosing clean solutions from transport to recycling prevents the possible release of harmful substances into the environment. Collectun D3E Recyclage employees are trained in the specifics of e-waste disassembly and have also participated in training to calculate their carbon footprint.

Jinen Nefzawa
A new venture is turning palm tree waste into fertilisers
Jinen Nefzawa works to transform palm tree waste into compost to improve soil structure and productivity. Fethi Dhikot’s goal is to tackle the alarming palm waste problem facing being faced in the region coupled with the absence of landfill facilities.
Jinen Nefzawa recycles and treats all palm tree waste in a sustainable manner. Given the lack of availability of manure, the treated waste would then be fortified to produce a fertilising compost to be used by local farmers. The need for organic fertilisers is growing steadily because of the increase in oasis soil, which is poor in organic matter, requires the use of all composted waste for fertilisation. The burning of waste on bonfires in the open leads to toxic chemicals being released into the air in the form of smoke, and into the soil and ground water in the form of ashes, a practice that is largely contested as a result of the health risks and harmful environmental impacts.

Karfenebtar
Tunisia’s first recycling platform introducing manufacturers to their environmental footprint
Karfenebtar is a platform that promotes the recycling of waste into a new product. However, the platform is still in its infancy and is facing challenges in terms of the volume of waste it can process.

Collectun D3E Recyclage
Electronic waste recycling contributes to the circular economy in Tunisia
Collectun D3E Recyclage has been certified by the Ministry of Environment to create new products and jobs by recovering electronic waste. Ine’Tim’s company collects all sorts of electronic equipment, from computers to fax machines, mobile devices and home IT materials.
Collectun D3E Recyclage recovers valuable materials from electronic waste in an environmentally responsible manner. Choosing clean solutions from transport to recycling prevents the possible release of harmful substances into the environment. Collectun D3E Recyclage employees are trained in the specifics of e-waste disassembly and have also participated in training to calculate their carbon footprint.
(1) BioIntrants Technologies, organic food & agriculture  
(2) KF Refuge, making bags from recycled materials  
(3) Green Power Service, renewable energy & energy efficiency  
(4) Queen Luzerne, organic food & agriculture  

(5) TNAGEM, organic food & agriculture  
(6) Mornag Eco Farm, ecological farm  
(7) SICAP, green roofs  
(8) Namnamfood, organic food & agriculture
Over 100 Tunisian leaders identify specific measures and instruments to promote green entrepreneurship and grassroots ecological and social innovation initiatives

As part of SwitchMed’s activities in Tunisia, a meeting was organised between stakeholders involved in the green economy transition as a way to identify the main challenges faced by sustainability actors in Tunisia. The development of new, affordable and more easily accessible financing mechanisms and the simplification of administrative procedures for green entrepreneurs are, among many others, some of the specific recommendations proposed to support the implementation of sustainable development within the country. The key messages provided by these stakeholders have been included in a new White Paper, entitled, ‘The Promotion of Green Entrepreneurship and Grassroots Ecological and Social Innovation Initiatives in Tunisia.’

A workshop on green economy, organised by the SwitchMed programme, with the collaboration of the Ministry of the Environment, the Regional Activity Center for Clean Consumption and Production, the Confederation of Tunisian Citizen Enterprises and International Center for Environmental Technologies in Tunisia took place in Tunis on 23 March 2016. The event provided the 100 attending stakeholders with the opportunity to present key recommendations on the development of a green economy in the country.

The workshop forms part of Tunisia’s commitment to help reverse the effects of climate change and promote the adoption of green and circular economy. The drive to move towards this type of economy in Tunisia has received an increasing amount of support in the past seven years since the political revolution of 2011. Indeed, by 2015, the Tunisian administration had already conducted a study for the development of a national strategy for the green economy in the country. This study was actually timely in the post-revolution context, as solutions needed to be found to address many national issues such as the sharp increase in social and regional inequalities being experienced, which, in turn, was causing numerous economic, financial and environmental crises. Public sector and civil society organisations, both national and international, are now particularly interested in supporting the efforts of those actors of change seeking to develop an innovative ecosystem of sustainable consumption and production patterns in Tunisia. These efforts are focused on sustainable tourism and agriculture, energy conservation and renewable energies, forest preservation and renewal, sustainable transport, clean production and waste management.

“This is the first time that Tunisian public and private actors from many sectors have demonstrated such a clear commitment to working together,” commented General Commission for Regional Development Director, Zeineb Chemkhi.

These sectors were familiar territory for the attendees, all of which were representatives of the interdependent pillars of the green transition. As evidence of the Tunisian government’s keen interest in the matter, the Ministry of Environment and Sustainable Development, the Ministry of Vocational Training and Employment, the Ministry of Development and Technical Cooperation, the Agency for the Promotion of Industry and Innovation and the National Agency for Waste Management were just a few of the public institutions present. Business enterprises such as Bio-chevâ larvae, Collectum D&E Recycling, Tunisia Ecostandard and Tunisia Coop, and civil society organisations such as Pedales, the Associative Network of Sustainable Development of the Oases, and the Tunisian-Mediterranean Association of the Environment, provided crucial hands-on experience towards developing concrete actions to support green activism and entrepreneurship. One of the most valuable contributions to this successful discussion, however, was the presence and involvement of the financial institutions. The Tunisian Solidarity Bank (BTS), one of the main loan providers for young entrepreneurs, as well as the Financing Bank of Small and Medium Enterprises (BPME) and the Industrial Promotion and Decentralization Fund (FOPROD) presented their supporting initiatives and available funds for the promotion of green entrepreneurship. Additional valuable insights were also provided by other supporting initiatives such as, CoopMed, Fikra Program, Afrikwy-Foudny and a number of academics. Each participant brought their own expertise and unique perspective to the table, resulting in a series of comprehensive and informed recommendations being formulated to stimulate the market for sustainable products and services.

“This pilot project responds to the priorities of the country in terms of switching to green economy,” pointed out the Head of the SCP/RAC Green Entrepreneurship and Civil Society programme, Giorgio Mosangini.

The group of participants, which included Nahid Hamdi, from the Ministry of the Environment and Sustainable Development and focal point in Tunisia and Stefano Corrado from the European Union Delegation in Tunisia, were given an overview of the current position in Tunisia with regard to the green economy by environment and sustainable development expert, Samir Meddeb. Giorgio Mosangini highlighted the efforts being made by the European Union to support all key actors in the area of sustainable consumption and production in Tunisia and throughout the Mediterranean through its funding of the SwitchMed programme.

“This programme aims to support the transition towards sustainable consumption and production through the promotion of social and ecological innovations by establishing a ‘green network’ for the benefit of entrepreneurs,” said the Head of the European Union Delegation in Tunisia, Stefano Corrado.

In fact, Tunisian green entrepreneurs and civil society organisations have both benefited from the support and capacity building provided by SwitchMed and its local partners. In the same context, Mosangini announced the publication of a national white paper, which will highlight the recommendations made by the stakeholders during the event and integrate the conclusions of the in-depth interviews conducted with stakeholders prior to the workshop.

After a series of presentations showcasing the experiences of green entrepreneurship and eco-innovation initiatives, setting out a global vision for the Ecosystem of Green Entrepreneurship and Social Eco-Innovation in Tunisia, the participants formed five groups which worked to come up with recommendations to be submitted in the form of advocacy.

Despite the rich diversity of the ecosystem there is a lack of dialogue and cooperation between the different actors, especially between public actors, entrepreneurs and financing professionals,” stressed the founder of the Waste to Value start-up, Mohamed Khelil.

The Working Groups first focused on the challenges faced by the green entrepreneurs and social eco-innovation initiatives that represent a driving force in this transition to a green economy. Access to financing was highlighted as one of those challenges. In fact, some testimonies revealed that the range of financing options currently available do not adequately correspond to the needs of Tunisian green entrepreneurs. Group discussions also concluded that business professionals had a limited understanding of the fundraising possibilities for green SMEs and entrepreneurship.

The working groups then went on to discuss the potential links and synergies between the different actors in the green ecosystem. They were thus able to elaborate on public and private support for a more inclusive and decentralised approach. The moderators subsequently asked the participants to suggest a limited number of recommendations for the priority actions to be considered in order to overcome these difficulties.

At the end of this synergy workshop, each group representative put forward their proposals. Recommendations concerning the alleviation of the conditions for granting tax incentives and public funding and pairing them with professional support, as well as the development of crowd-funding schemes were echoed across all the presentations, underlining the common challenges faced by the participants. Other outputs included the simplification of administrative procedures with less bureaucracy and more transparency, and the creation of a national platform to present an overview of the green ecosystem.

To conclude, SwitchMed’s implementing partner for green entrepreneurship and civil society initiatives, the Regional Activity Centre for Sustainable Consumption and Production, has produced a national report to summarise the common trends identified during the Synergy Workshop, conducted in the eight countries participating in the SwitchMed programme. This regional report provides evidence of the need, identified by country, for sustainable support for capacity building and technical support to encourage environmental and social enterprises in the Mediterranean.
The White Paper on “Promotion of Green Entrepreneurship and Grassroots Ecological and Social Innovations in Tunisia” highlights the strengths and weaknesses of the Tunisian green entrepreneurship ecosystem, in order to reveal the areas and axes where the needs for action are greatest. It summarises the opinions of some forty stakeholders interviewed individually (public institutions, financial institutions, support structures, project sponsors) as well as the results of the Synergies workshop held on 23rd March 2016 in Tunis, which brought together over 100 key actors from nearly 60 different organisations. The document is available only in French for the moment.
Empowerment of civil society organisations and citizens to lead innovative solutions addressing environmental and social challenges.
Supporting eco and social grassroots innovations

At SwitchMed we support community-based social eco-innovation initiatives to maximize their influence and impact, thereby contributing to the emergence of more sustainable models of consumption and production. A training methodology is developed to support eco-social innovations and grassroots initiatives on sustainable consumption and production which included a Handbook that provides basic knowledge and understanding on the fields of SCP and eco and social innovations. Furthermore, this Handbook presents challenges and opportunities for civil society organisations and grassroots initiatives aiming to work within these fields. It also helps to inspire and build a practical way of looking at collective projects or initiatives.

An intensive 4-day national workshop is organised in each of the SwitchMed target countries in coordination with our local partners. The attendees are gathered in an inspiring framework in order to develop different spheres of their projects, get inspired by other initiatives and help one another during the particularly participatory sessions. Specifically, the training aims to provide practical expertise in what concerns community initiatives while giving them the opportunity to learn about social eco-innovation within grassroots initiatives and develop a SWOT analysis. On average, 20 community initiatives were shortlisted in each country, making a total of 180 grassroots initiatives and develop a SWOT analysis. On average, 20 community initiatives of the initiatives are selected in each country. The assessment of the applications is done by a jury composed of the local partners, the local trainers, SCP/RAC and the external experts involved in the development of the training methodology.

The initiatives selected in each country for the support phase benefit from 50 hours of training that includes the development of a “support plan” for their initiative and regular coaching sessions for six months to support the implementation of the initiative. Also external technical or expert support based on the needs identified in the “support plan” is provided and when possible, support for the development of a crowdfunding campaign as well.

In total, 260 change agents and civil society organisations were mapped and, in local trainers selected and 8 local partners were selected and trained on-site for the implementation of the training programme. Out of the 370 candidates who submitted an application to take part in the national workshops to train civil society initiatives, 160 people were selected and trained belonging to 80 different initiatives. In the end, 14 initiatives received further support, as explained earlier. Civil society organisations also participated in the Synergy Workshops organised together with the Green Entrepreneurship programme.

Afterwards, all the trainees have the opportunity to apply for the supporting phase of the programme to receive further coaching and technical support for the development and implementation of their initiatives. Two civil society ecological innovation initiatives are selected in each country. The assessment of the applications is done by a jury composed of the local partners, the local trainers, SCP/RAC and the external experts involved in the development of the training methodology.

The initiatives selected in each country for the support phase benefit from 50 hours of training that includes the development of a “support plan” for their initiative and regular coaching sessions for six months to support the implementation of the initiative. Also external technical or expert support based on the needs identified in the “support plan” is provided and when possible, support for the development of a crowdfunding campaign as well.

In total, 260 change agents and civil society organisations were mapped and, in local trainers selected and 8 local partners were selected and trained on-site for the implementation of the training programme. Out of the 370 candidates who submitted an application to take part in the national workshops to train civil society initiatives, 160 people were selected and trained belonging to 80 different initiatives. In the end, 14 initiatives received further support, as explained earlier. Civil society organisations also participated in the Synergy Workshops organised together with the Green Entrepreneurship programme.

Meet our local partners

Our local partner selected by the SCP/RAC is an organisation with extensive knowledge of the current situation in Algeria in relation to civil society organisations and grass-roots organisations. It also helps to inspire and build a practical way of looking at collective initiatives.

Our local trainers, carefully selected by the SCP/RAC, have extensive experience in initiating, implementing and evaluating environmentally and socially innovative projects, as well as a broad understanding and knowledge of training methodologies based on empowerment, collective learning and the participative approach. At SwitchMed, they actively participate in the regional co-creation workshop alongside other local trainers from all the participating countries. They also support the local partner organisation from their own country and the SCP/RAC in identifying grassroots initiatives and guaranteeing the participation of at least 20 social eco-innovation actors or initiatives in the national workshop. This also includes providing support by disseminating the call through the available channels in order to attract potential actors and initiatives to attend the workshop. They are responsible for facilitating a four-day national workshop with the support and guidance of SwitchMed’s Civil Society Empowerment team. After that, the best two initiatives among those participating in the workshop are selected to receive further technical support. Local trainers therefore participate in the multi-stakeholder selection process of the best two initiatives. In addition, they provide 50 hours of individual “coaching” support to one initiative for the development of a “Support Plan” to identify the technical requirements needed to properly develop and implement the initiative over a six- to twelve-month period.

Laboratory of Social and Solidarity Economy (LAB’ESS)

It is a social innovation space dedicated to the creation and development of self-employment in Tunisia. Focused on the emergence of social entrepreneurs, LAB’ESS defines itself as a collaborative incubator designed to create a favourable space for entrepreneurs to venture, innovate and share. The LAB’ESS project was launched in 2013 and is supported by Development Without Borders, an association of the SOS GROUP, the leading social enterprise in France. LAB’ESS works to strengthen the capacities of Tunisian associations and promoters of social entrepreneurship projects through counselling, training and networking.
Civil society organisations are empowered to act as agents of change and to start community innovations

Promoting craftmanship: Carré traditionnel
Wealth creation
To preserve the crafts of the different regions of Tunisia.
The project aims to promote and sell handicrafts via an e-commerce platform and contribute to fairer trade for artisans.

Raw earth architecture: De terre et d’argile
Sustainable tourism
To introduce raw earth architecture to communities, promoting respect for the environment and rediscovery of ancestral techniques.
The project aims to convey raw earth architecture know-how to communities and demonstrate the benefits of ancient eco-construction techniques through workshops.

Stopover for rural dwellers
Social inclusion
To reduce the isolation of Tunisians from interior regions travelling to Tunis and to improve their reception.
The project aims to provide a multifunctional space in downtown Tunis to accommodate people coming from interior regions during the day.

Sakiet Sidi Youssef goes green: Dar Elmenna
Sustainable agriculture
To contribute to the economic insertion of rural women and youth through small income-generating activities while raising awareness of healthy nutrition.
The project aims to create vegetable gardens and a small unit for the transformation and sale of local agricultural crops in Sakiet Sidi Youssef.

Fair-trade essential oils in Nabeul: Green tourism
Sustainable production
To create income-generating activities for rural women through the sustainable collection and sale of forest plants.
The project aims to promote fair-trade essential oils made by rural woman and support their sales by developing a new distribution channel for their products in Tunisia.

Educating our youth: Debbo 52
Culture
To promote cultural and artistic training in a green space in a popular district in Tunis.
The project aims to develop a creation and co-working space for artistic projects by young people living in underprivileged areas.

Organic dates in Zaafrane oasis: SNAM Bio Dates
Sustainable agriculture
To promote organic farming practices among oasis farmers and preserve biodiversity.
The project aims to support the creation of a small producers’ group for organic dates in Zaafrane oasis and promote and sell their produce.

Bir Salah switches to organic
Sustainable agriculture
To fight climate changes in Bir Salah by promoting environmentally friendly agriculture.
The project aims to train local farmers in Bir Salah in organic farming and to plant specific trees that will produce a material exploitable by local women.

Establishing a permaculture network
Waste management and sustainable agriculture
To promote organic farming practices among oasis farmers and preserve biodiversity.
The project aims to support the creation of a small producers’ group for organic dates in Zaafrane oasis and promote and sell their produce.

For the children of the Medina: Twiza
Education
To reduce problems faced by young entrepreneurs, especially isolation and lack of material and human resources.
The project aims to create a cooperative of entrepreneurs in Tunis, provide them with training in entrepreneurship and equip them with information on legal and financial schemes for start-ups.

Ecotourism in Ain Draham: Dar el ain
Sustainable tourism
To develop ecotourism in Ain Draham that reconciles inclusive economic development of the region and protection of its environmental heritage.
The project aims to promote sustainable tourism and appreciation of the region by creating circuits of accommodation and tours that create job opportunities for locals.

Dive sustainably: Ecomel
Sustainable tourism
To raise awareness of the need to protect the submarine eco-system in the Bay of Melloula-Tabarka.
The project aims to establish underwater educational trails in the Bay of Melloula-Tabarka that make sustainable use of resources in collaboration with local inhabitants.

Gluten-free food is an option: Tunisian Association against Celiac Disease
Sustainable agriculture
To raise awareness of celiac disease, to develop gluten-free cookbooks and inaugurate a gluten-free bakery in Djebba.

Entrepreneurs cooperative: Tunis’Actif
Business diversity and inclusion
To build awareness of and offer training and support to people with celiac disease.
The project aims to raise awareness of celiac disease, to develop gluten-free cookbooks and inaugurate a gluten-free bakery in Djebba.

The project aims to develop ecotourism in Ain Draham that reconciles inclusive economic development of the region and protection of its environmental heritage.
The project aims to promote sustainable tourism and appreciation of the region by creating circuits of accommodation and tours that create job opportunities for locals.

Dive sustainably: Ecomel
Sustainable tourism
To raise awareness of the need to protect the submarine eco-system in the Bay of Melloula-Tabarka.
The project aims to establish underwater educational trails in the Bay of Melloula-Tabarka that make sustainable use of resources in collaboration with local inhabitants.

Gluten-free food is an option: Tunisian Association against Celiac Disease
Sustainable agriculture
To raise awareness of celiac disease, to develop gluten-free cookbooks and inaugurate a gluten-free bakery in Djebba.

Entrepreneurs cooperative: Tunis’Actif
Business diversity and inclusion
To build awareness of and offer training and support to people with celiac disease.
The project aims to raise awareness of celiac disease, to develop gluten-free cookbooks and inaugurate a gluten-free bakery in Djebba.

The project aims to develop ecotourism in Ain Draham that reconciles inclusive economic development of the region and protection of its environmental heritage.
The project aims to promote sustainable tourism and appreciation of the region by creating circuits of accommodation and tours that create job opportunities for locals.
Meet our Tunisian civil society organisations supported

**A bike-delivery company tackling pollution and unemployment**

In Tunisia, opportunities for cyclists interested in combining their passion for cycling with earning a living are non-existent. Traffic and traffic jams do not facilitate business trips during the working day and the existing range of courier services do not promote the development of win-win initiatives. Pedalo has spotted a gap in the market which aims to satisfy the increasing demand for messengers and delivery people in the Tunis area and the need to shift towards more sustainable methods of transport in cities.

With around 1.8 million cars on the roads in Tunisia, it comes as no surprise that all the country’s major cities suffer with traffic problems at all hours of the day and night. The number of cars is estimated to double over the next five years, with the Grand Tunis area set to be particularly affected by the resulting rising levels of pollution. Adnen Ben Haji, founder of Pedalo, saw a business opportunity with the creation of a bicycle delivery network, based on two main principles. "The primary focus is to reduce the impact of pollution in urban areas, but it is also a way for young people to earn an income," explains Adnen.

"My interest in sustainable mobility began in earnest when I was on holiday in Montreal back in 2007. I came across a bicycle courier company called ‘911 Corriers’, and spent a whole day with them, giving me the chance to see how they were operating. Ever since then, I have wanted to create a company like 911 Corriers in Tunis, but I had neither the means nor the knowledge or the support." Since then, Adnen Ben Haji, who studied at the Tunis Business School and has a degree in Management, specialising in marketing, new technologies and global business, started working hard to make Pedalo a reality.

Pedalo combines multiple missions, as it represents a social co-working space and a bike-delivery company that tackles pollution and unemployment. The initiative aims to combat youth unemployment, while encouraging them to lead more sustainable lifestyles. Pedalo also works to raise awareness among its clients. "Whatever the reason a customer is looking to order a pizza or drop off a dress at the dry cleaner’s before it closes, we believe that the bike is the best way to do it, as an ideal delivery method for all sorts of products, and therefore sustainable mobility forms the heart of my business," Adnen stresses, going on to add, "It is important to change our mindsets regarding urban mobility. Our clients are very pleased with this green delivery alternative and therefore the reason a customer is looking to order a pizza or drop off a dress at the dry cleaner’s before it closes, we believe that the bike is the best way to do it, as an ideal delivery method for all sorts of products, and therefore sustainable mobility forms the heart of my business."

Pedalo currently employs five members of staff and is expecting to recruit an extensive community of bike messengers in 2019. Adnen and his team are evaluating the possibility of franchising Pedalo to replicate their experience in other cities, such as Sfax, the economic capital of Tunisia, and Sousse. "Sometimes I also think about changing and moving to another city," he explains. Pedalo is also looking for new collaborations. "There is a new food delivery company launching in Tunis and we are thinking about collaborating with them to capitalise on each company’s strengths in a coordinated manner," explains Adnen.

The need for a technological solution to manage orders, bike messengers and clients is of tremendous importance. "We clearly needed technical support, thus one of the external experts funded by SwitchMed gave us the chance to see how they were operating. Ever since then, I have wanted to create a company like 911 Corriers in Tunis, but I had neither the means nor the knowledge or the support." Since then, Adnen Ben Haji, who studied at the Tunis Business School and has a degree in Management, specialising in marketing, new technologies and global business, started working hard to make Pedalo a reality.

"My interest in sustainable mobility began in earnest when I was on holiday in Montreal back in 2007. I came across a bicycle courier company called ‘911 Corriers’, and spent a whole day with them, giving me the chance to see how they were operating. Ever since then, I have wanted to create a company like 911 Corriers in Tunis, but I had neither the means nor the knowledge or the support." Since then, Adnen Ben Haji, who studied at the Tunis Business School and has a degree in Management, specialising in marketing, new technologies and global business, started working hard to make Pedalo a reality.

Pedalo currently operates in Greater Tunis. In addition to not having any cycle paths, another challenge for couriers who ride 20 kilometres per day is the fact that roads are not tailored to cycling. "The infrastructure doesn’t help as there are almost no bike lanes but it’s better than making the trip by car with traffic," says Adnen. "One aspect of SwitchMed’s support phase that was particularly useful was the help we received with defining our economic model," says Adnen, before adding that Pedalo is currently housed and incubated at El Space, a strategy suggested by his SwitchMed local mentor. "SwitchMed has provided us with support in terms of business planning development, market research, community management and awareness about sustainable transport in Tunisia," stresses Adnen.

"The infrastructure doesn’t help, but it’s better than making the trip by car with traffic."

Adnen Ben Haji, Pedalo
Enabling access to finance for green start-ups and entrepreneurs by mobilising impact investment: The Switchers Fund
Financial instruments for innovative green businesses

At SwitchMed we are supporting the region’s green entrepreneurs by enabling access to finance, providing direct finance to new and established green entrepreneurs and mobilising local investors and enterprise support programmes as well as European resources through the newly created SwitchersFund.

The Switchers Fund’s mission is to support innovative green entrepreneurs in the development of their projects, first through grants to test new ideas and attract new funders, and as these projects grow by introducing adapted financial products such as concessional loans and ultimately through equity participations.

In the current situation where private and public financial institutions have difficulties to channel their investments to Medium and Small Enterprises in our partner countries in Africa and the EU Neighbourhood region, the SwitchersFund core business lays at facilitating international capital flows from investors to entrepreneurs to facilitate, thus contributing to achieve the Sustainable Development Goals. As the first activity of the Switchers Fund, the Call for OSCE GEMS Award, granted a total of 90,000 euros in six South Mediterranean countries, 15,000 euros in each country to the best business idea. The OSCE GEMS Award was the result of the partnership between the Organisation for Security and Cooperation in Europe (OSCE) and the SwitchersFund, and was established thanks to the support of the Italian Government.

In addition to this, the Business Support Services Facility complements the SwitchersFund’s financial instruments by supporting innovative entrepreneurs via capacity building initiatives, and, in general, enhancing their access to finance, which focuses on the following actions: green business model and plan development, mentoring and technical expertise, crowdfunding campaign support a “Green Start-ups Meet Investors”. The latter, that connects start-ups with the right investors during matchmaking events, is a national event held in each beneficiary country. By covering the major issues that an experienced investor will look for (and expect) before they invest and getting to know the upcoming start-ups to the international investors’ community, SwitchMed aims at mobilising investment capital to help with the growth of green business in the Southern Mediterranean. Prior to the pitch, the green entrepreneurs that are selected receive 30 hours of capacity building session to improve their communication skills and to prepare their business to be evaluated by the financial players. The stages of the investment process are also taught during that session. In the aftermath of the events, an individual feedback on the strengths and weaknesses of the project submitted with a monitoring of the contacts made with the investors during the meeting is offered to the green entrepreneurs with the aim of improving their capacity to meet the appropriate financial players. In total, 245 applicants submitted an application to join the Green Start-ups Meet Investor, 67 green entrepreneurs were selected and coached to give their pitch in front of investors. A total of 79 investors attended the events. A total 2,150,000 euros potential investment raised by the entrepreneurs is expected by the end of the programme.

An on-line financial toolkit for the green entrepreneurs, whether they are in ideation phase or already fully operational companies, was also developed to help them to better access to finance in the MENA region. The practical tool allows discovering their finance opportunities and all the necessary instruments and knowledge to approach potential investors, and determining, in 4 easy steps, the right funding strategy for their green business. These activities, carried out by SCP/RAC, are jointly done with the European Federation of Ethical and Alternative Banks (FEBEA) and the Union for the Secretariat of the Mediterranean (UFM).

Meet our service providers

Our local service providers, carefully selected by the SCP/RAC, are organisations with extensive experience in supporting green entrepreneurs in business development and positive impact assessment, as well as providing them with the necessary support in access to finance. These organisations are selected on the basis of their capacity to empower the green entrepreneurs and their knowledge of financial opportunities in each country.

The main task of these organisations is to develop and implement capacity-building sessions on access to finance and improvement of the entrepreneurs’ communications skills. Subsequent to training, the green entrepreneurs have the opportunity to pitch and showcase their innovative solutions to potential investors during a specific national event.

Local providers also supported SwitchMed in the development of the first green regional portfolio. The green portfolio lists the profiles of each entrepreneur and has been disseminated among potential Moroccan investors.

The Agency for the Promotion of Industry and Innovation

It is a public network of services for entrepreneurs and enterprises that identifies the best green initiatives, encourages them and provides them with the necessary support to grow and attain their goals.

The agency’s nationwide network and experience in access to finance enables it to reach out to a large number of green entrepreneurs, potential investors and business support organisations and provide services for the benefit of the green economy sector in Tunisia.
Access to finance capacity building programme for green entrepreneurs

- **40** Candidates who applied to join the capacity-building programme.
- **9** Candidates who applied and attended the capacity-building programme.
- **7** Green entrepreneurs selected to pitch during “Green start-ups meet investors,” 18 January 2018.

- **30h** Capacity-building for green entrepreneurs who are guided through the stages of the investment process, to prepare their businesses for evaluation by financial players and improve their communications skills for more effective promotion of their business idea.
- **71%** Green entrepreneurs were approached by potential investors during and after the “Green start-ups meet investors” event.

- **30** Financial actors identified in Tunisia.
- **14** Representatives of banks, guarantee funds, business angels and venture capital.
- **9** Investors interested in projects.

- **40,000€** The amount of potential investment raised by Tunisian green entrepreneurs.
- **110,000€** Loans granted as result of the meeting.

Discover our 7 green entrepreneurs who pitch during the “Green start-ups meet Investors” event

<table>
<thead>
<tr>
<th>Name of the company</th>
<th>Business stage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passport Bio</td>
<td></td>
</tr>
<tr>
<td>BIO-CHEVRE-LAIT</td>
<td>●</td>
</tr>
<tr>
<td>Eco Explore Ain Drahem</td>
<td>●</td>
</tr>
<tr>
<td>W2V</td>
<td>●</td>
</tr>
<tr>
<td>M2M</td>
<td>●</td>
</tr>
<tr>
<td>BIOFIRE</td>
<td>●</td>
</tr>
<tr>
<td>Biolntrants Technologie</td>
<td>●</td>
</tr>
</tbody>
</table>

Chapter 5 Enabling access to finance
The impact of the SwitchersFund OSCE GEMS Award in Tunisia: Interview with Gian-Luca Gasparini

Gian-Luca Gasparini’s profile:

Gian-Luca Gasparini holds a Bachelor’s in International Relations and a first-level Master’s in Global Economics & Social Affairs. He has worked for the Italian Ministry of Foreign Affairs during the Italian Presidency of the Council of the EU, for the Rabat and Khartoum Processes and the ASEM 2014 Summit. In 2015 he started working for SEFEA Consulting in the Projects Department, providing support to the consultancy services and project management offered by the company, which focuses on supporting ethical finance and the social economy in Europe and beyond.

The European Federation of Ethical and Alternative Banks and Financiers (FEBEA) acts as an economic lever for a sustainable, active and supportive Europe by bringing together financial institutions from 15 European countries. Working in their own countries, these institutions contribute to world solidarity by disseminating the importance and urgency of developing ethical and solidarity-based financial models in the European economic and political area.

Gian-Luca Gasparini holds a degree in International Development and Cooperation, a master’s in International Relations and a first-level Master’s in Global Economics and Social Affairs. He formerly worked for the Italian Ministry of Foreign Affairs during the Italian Presidency of the Council of the EU, for the Rabat and Khartoum Processes and for the 10th Asia-Europe Meeting (ASEM) summit in 2014. Since 2015 he has worked as Secretariat Officer for the European Society for Ethical and Alternative Finance (SEFEA) Consulting, an investment branch of FEBEA, supporting ethical finance and the social economy in Europe and beyond.

As one of The SwitchersFund Award’s partners, could you tell us what made FEBEA decide to collaborate with this initiative?

The SwitchersFund emerged step by step by working with SwitchMed and talking to relevant stakeholders in the MENA, who highlighted the need to provide not only funding but also technical assistance to entrepreneurs and start-ups. They fit very well.

As a SwitchersFund partner, could you tell us why FEBEA decided to collaborate with this initiative?

The SwitchersFund emerged step by step, by working with SwitchMed and talking to relevant MENA region stakeholders, who highlighted the need to provide not only funding but also technical assistance to entrepreneurs and start-ups. They fit very well.

The SwitchersFund OSCE GEMS Award is a way to create opportunities for green entrepreneurs in the MENA region, isn’t it?

Exactly, the OSCE GEMS Award aims to be the first step for green entrepreneurs who need access to finance. It is also helpful to prove that green entrepreneurship can be an economically viable way of dealing with social and environmental challenges in the MENA region.

To be eligible for this Award, what criteria were considered?

We took into account the innovative component of the project, as well as its social and environmental impact and its economic sustainability.

Was it difficult to select the finalists?

It was hard because we received many interesting applications that fulfilled the selection criteria. We decided to first create a shortlist and then contacted those on the shortlist for further more detailed information such as how they would envision spending the grant.

Tunisia was one of the eligible countries for the SwitchersFund OSCE GEMS Award. What kind of eco-innovative sectors do you think need to be boosted in this country?

Tunisia presents several opportunities as it is in the Mediterranean region and has a young and educated workforce. Judging from the applications received from this country, there seemed to be a lot of interest in sustainable agriculture, renewable energy and sustainable tourism.

Which are the main sectors that investors are most interested in?

That is a tough question, as green entrepreneurship is still a new concept for investors in the MENA region. However, there are some urgent problems, for instance, water scarcity. The Mediterranean Basin is one of the world’s regions most vulnerable to climate changes, as well as a region highly impacted by human water demand. I think investors need to direct their attention to green projects that provide solutions for this issue.

Everyone needs water!

Yes, and energy. I would say that water management, sustainable energy and waste management are the three greatest challenges that investors should address when investing in Mediterranean green projects.
Connecting objects, big data and artificial intelligence solutions to rethink energy consumption

Mohamed Makki Maalej's profile:
Mohamed Makki Maalej, Software and Telecommunications Engineer graduated from the Private High School of Engineering and Technology (ESPR) in Tunisia. He has actively participated in several entrepreneurship competitions and has won several awards nationally and internationally, such as Venturewell in March 2016 in Tunisia, the Bigbooster in October 2016 held in France, and Green Africa Booster Innovation Awards, in July 2017 in Morocco. He won as well the first place in the SwitchMed's Green Elevator Pitch in 2018.

M2M is a Tunisian company that developed Allsave, a real-time monitoring platform for energy management applications. This platform retrieves and analyses the data collected from the electrical network and presents it as useful and exploitable information via a customisable web interface. Mohamed Makki, the winner of the SwitchMed Elevator Pitch, asserts that his platform will deliver continuous improvement in terms of consumption control and improved energy rationalisation for companies.

Support eco and social innovations of green entrepreneurs and Switchers through a mix of grants, loans and equity participations. Join now The Switchers Fund and contribute to the first MENA impact investing Fund.

Chapter 5 Enabling access to finance

How did you hear about SwitchMed and the Elevator Pitch?

The SwitchMed adventure began in June 2015 by participating in the Green Entrepreneurs Training Programme in Tunisia, which not only was a success but also helped me with breaking into the social and entrepreneurship field and the development of the Allsave product for my company, M2M.

What did you gain from participating in the Elevator Pitch?

It was helpful on many levels because not only did it give me an opportunity to practice pitching my company's product, but also gave me a better understanding of the steps involved in the investment process. I realised that I didn't know how to convince an investor to put money in my project, so the training offered by SwitchMed before my presentation really helped with improving my communication skills.

Being able to successfully explain your business idea is key.
Yes, and even more importantly, the training programme altered my vision and approach so that now the focus is on selling a concept that will be profitable for my clients rather than on selling a product. I think that was the main lesson I learnt from this experience.

So, would you say that SwitchMed helped you to better understand your business?
Yes. Actually, after my investors meeting, I found I became better at validating my business model, and I understood the need to stress the energy savings provided through M2M's activities.

What kind of customer can benefit from your services?
All the M2M products and services, including Allsave, are intended for industrial companies and tertiary sectors, such as clinics, airports and local authorities.

And how do they benefit?
All those companies improve their environmental performance as a result of controlling their consumption. Thanks to the Allsave platform, customers are able to monitor the energy consumption of each machine and each device they own, which could contribute to strengthening their overall performance. And, in case of a fault, the system alerts the customer thanks to an artificial intelligence system based on the deep learning of the consumption behaviour of each machine.

Do you have specific annual goals regarding environmental impacts, such as the amount of energy saved or number of beneficiaries?
Our overall impact goal is the reduction of the rate of CO₂ release into the atmosphere. Thanks to the recommendations and corrections required by Allsave Artificial Intelligence, our customers have access to an ongoing source of data regarding the performance of their plants. By reducing their energy consumption by more than 30%, the environmental impact is also automatically reduced, which is calculated from the greenhouse gas emissions unit (tonne of oil equivalent). By reducing current consumption by 30% to 50%, a company can also reduce its waste of energy materials and, therefore, costs in the short term, contributing to reducing the environmental impact. During the first pilot phase, M2M plans to sign contracts with five customers that are large energy consumers. Our goal for the next three years is to apply our solution to more than 100 national and international companies.

Finally, could you outline the main strengths of your project?
The Allsave system is based on continuous improvement at our customers' sites, with whom we have five-year contracts, which include close support and advice from the client for maximum profitability. All data is processed and updated at a high frequency of 200 recordings per second and the systems are being enriched through artificial intelligence and deep learning. Our platform is also scalable and follows the latest recommendations and international standards.

“The SwitchMed training programme altered my vision and approach so that now the focus is on selling a concept that will be profitable for my clients rather than on selling a product.”

Support eco and social innovations of green entrepreneurs and Switchers through a mix of grants, loans and equity participations. Join now The Switchers Fund and contribute to the first MENA impact investing Fund.

Chapter 5 Enabling access to finance
Despite the relative abundance of banks in Tunisia, green entrepreneurs do not have many options to finance their start-ups. Nevertheless, in the current process of change in the country, new entrepreneurship programmes, incubators and venture capital funds are emerging, and international actors are likely to be attracted by the opportunities offered by green entrepreneurship in Tunisia.

Despite its large number of banks, Tunisia still offers very few funding opportunities for SMEs and start-ups, and especially for green entrepreneurs. Banks tend to be risk-averse and funding is a slow and bureaucratic process that requires a high level of guarantee. However, it is essential to know what tools exist and to understand the current process of change in Tunisia. New funds, incubators and entrepreneurship support programmes are likely to develop nationally, and the emerging opportunities could attract international actors.

But what interest might financing institutions in Tunisia have in terms of investing in eco-innovative businesses and initiatives created by green entrepreneurs? In order to find out, in June 2016, a delegation from SwitchMed travelled to Tunisia to meet different key actors, including governmental and financing institutions (the Ministry of Environment, the Ministry of Industry and Finance, the World Bank, Carthage Business Angels) as well as many green entrepreneurs from the SwitchMed community.

The mission reported that only a few initiatives developed by non-commercial banking institutions concerning the green economy were identified. Furthermore, entrepreneurs did not seem to be aware of these initiatives. The findings started with an overview of the Tunisian economy, which is quite advanced and diversified compared to other economies in the region, but largely dependent on natural resources, whose depletion and degradation, added to the pressure of production activities, are an obstacle to economic and social development. Nevertheless, and even though the current political climate in Tunisia is relatively unstable, the transition the country is experiencing also opens many new opportunities. Proximity to Europe and the Arab world, location near the Mediterranean coast, are assets that are not negligible and offer many opportunities.

“We suggest using a combination of different types of financing (equity, investment loans, working capital) along the lifetime of a start-up company, to greatly increase their chances of success.”
Fethi Cherni, Product Manager of the Enda Tamweel credit institution

mot the concept, technologies and economic opportunities of green entrepreneurship will be a key factor in attracting financiers to this sector. The report concluded that while this is one of the roles of SwitchMed, it also needs to become a policy priority for the Tunisian government and a vector of innovation for Tunisian entrepreneurs and civil society.

To increase their investment readiness and be more bankable, initiatives with high growth potential can make use of existing mechanisms to support SME growth, such as incubators, and coaching programmes like Besea Entreprendre. Even though the current offer is limited, those who know the expectations of investors, particularly high innovative SMEs, can qualify for early-stage venture capital investment. The existence of some small venture capital funds in Tunisia dedicated to SMEs and small companies (which do not necessarily need to be hi-tech or IT-based) represents an exciting opportunity to be explored by Tunisian green entrepreneurs. Besides, the current legal framework attracts local investors to venture capital, thanks to existing tax breaks for this kind of investment.

Regarding future green entrepreneurs trained and supported by SwitchMed, there are no specific financial solutions readily available in Tunisia that can respond to their needs as new start-up companies with varying degrees of growth potential in a myriad of different sectors. For those who have established companies, as already qualified Switchers with a particular track record, bank loans may be an option. While Tunisian banks are generally said to be very conservative, bureaucratic and slow, some loan products are available for green entrepreneurs; for example, the Solidarity Bank of Tunisia offers loans that seem to be well adapted to start-ups and existing guarantee schemes for SMEs. For green entrepreneurs who have the patience and financial resilience, it is indeed worth trying. Naturally, there may also be green initiatives that, because of their educational or experimental nature, do not initially qualify for private financing.

Future green entrepreneurs need to be aware of the financing options available and the differences and advantages of each tool. Investors and banks represent different opportunities as they look for different things regarding growth, ownership, risk and future obligations. Considering this, the development of a specific and dedicated financing instrument would seem to be the best option to develop green entrepreneurship in the future in Tunisia. Having access to such an instrument would provide the space to grow and to build the track record that would allow an initiative to qualify for regular bank finance. A financial product called Credit Vert, launched by the Solidarity Bank of Tunisia and specifically addressing green businesses, has to date invested 300,000 euros, for an average of 20,000 euros per project. The World Bank is also creating a fifty-million-dollar fund, to be managed by the Tunisian government, to finance local entrepreneurs with a Tunisian quality label.

A number of institutions, including the European Bank for Reconstruction and Development, do not finance start-ups or green businesses unless there is a solid sponsor for the project. Moreover, regarding the Tunisian ecosystem, the EU Delegation has explained that “there are some other problems the country faces such as corruption, lack of transparency of their structures and lack of banks capacity to analyse the risk of small business.” Other problems, such as bureaucracy, regulatory hurdles and overly restrictive microcredit financing brackets, also exist. As Medji Kilani, CEO of Shams Technology, expressed it: “Tunisia enjoys a good geographical position which can provide many opportunities for entrepreneurship. However, it is difficult to find credit, due to a rigid financial system and the collateral that is asked in return for the loan. A heavy bureaucracy does not help the situation. The green economy in Tunisia is potentially a crucial source of jobs for the Tunisian government, to greatly increase their chances of success.”

A heavy bureaucracy does not help the situation.

The green economy in Tunisia is potentially a crucial source of jobs for the Tunisian government, to greatly increase their chances of success. Furthermore, entrepreneurs did not seem to be aware of these initiatives. The findings started with an overview of the Tunisian economy, which is quite advanced and diversified compared to other economies in the region, but largely dependent on natural resources, whose depletion and degradation, added to the pressure of production activities, are an obstacle to economic and social development. Nevertheless, and even though the current political climate in Tunisia is relatively unstable, the transition the country is experiencing also opens many new opportunities. Proximity to Europe and the Arab world, location near the Mediterranean coast, are assets that are not negligible and offer many opportunities.

“It is our goal to establish the overall potential of the green economy in Tunisia is to work on establishing the overall potential of the green economy market in terms of number of projects, total investment required, possible returns and job creation. This would allow a greater number of financial actors and entrepreneurs to be mobilized in this sector.”

Medji Kilani, CEO of Shams Technology

Enabling access to finance
Stepping up internationalisation of SMEs on green business models and resource efficiency in the Southern Mediterranean.
Enabling conducive technologies and frameworks for green businesses

Small and medium-sized enterprises (SMEs) play a key role in national economies around the world and provide a significant contribution in employment generation and added value to the economy. Therefore, increasing the internationalisation of SMEs and helping them to access third markets, and thus, becoming drivers of a green growth, is crucial, not only for the businesses but also for the economy in the Southern Mediterranean.

Chapter 6

Eco-innovative business solutions for the Southern Mediterranean

At SwitchMed, we recognize how important it is to engage with business and intermediaries to promote the uptake of green business models and eco-innovations that can strengthen productivity, deliver a more inclusive growth and assist SMEs in the Southern Mediterranean.

To increase the cooperation between businesses and innovation networks in Europe, UNIDO together with local institutional partners, organized six B2B for eco-innovation events in Egypt, Lebanon, Morocco and Tunisia. If selected eco-innovative business solutions were presented at the B2B events where local businesses could get in touch with the latest eco-innovations for their sector. The eco-innovations had been selected from a pool of relevant and ready for market uptake solutions developed under the framework of EU “Eco Innovation Programme”, “Best Life Environment”, the “European Business Award”, and innovation Seed initiative. All in all, 725 local businesses attended the six B2B events, to have 315 business to business consultations with providers of eco-innovations from the European Union. As a result of these consultations, 16 business partnerships were concluded during the months following the B2B activities resulting in technology cooperation agreements; skill transfer and innovation research collaboration have been enabled across several industrial sectors such as textile, food, waste and wastewater management, wood and furniture, construction, leather, plastic, agriculture. Preliminary investments in eco-innovative technologies concluded to 1.4 million euros and with the potential of totally saving valuable resources, such as 8,432,860 m³ in annual water consumption. The B2B events have displayed the need and potential for eco-innovations in the region and that cooperation between businesses from the EU and the Southern Mediterranean is an attractive bid for the environment as well as for the economy.

Pilot studies for the Product Environmental Footprint framework

Developing the potential of SMEs to participate and reap the benefits of a global and green economy, will also depend to a great degree on enabling framework conditions that can ensure a healthy competition. For instance, the EU single market is one of the most important trading partners for businesses in the Southern Mediterranean region, and every new regulation on this market will eventually also affect businesses ability of producing and exporting goods that are standing in compliance to these market regulations. One example of such a regulation, which might also affect Southern Mediterranean producers, is the EU Single Market for Green Products initiative. This initiative envisages a labelling scheme that will require the provision of meaningful and verified information from producers about the environmental footprint of products to the consumer. Based on the Product Environmental Footprint (PEF) assessment, the EU Single Market for Green Products initiative is currently evaluating how producers of environmentally friendly products, in Europe, and in other regions, are currently performing and what criteria need to be applied for certain product categories in order to label a product “green”.

Starting in 2017, UNIDO invited relevant partners in Egypt, Lebanon, Morocco and Tunisia, such as, industrial associations and export oriented businesses, to take part in local organized PEF workshops. The workshops were organized to present the outcomes of the European pilot studies related to the PEF framework development, to inform industry stakeholders on the methodology, and to find suitable businesses from four sectors which could undertake a pilot PEF study in order to see how this new framework would work in the region and the specific sector. The selected sectors for these studies are related to the product category of wine, intermediate paper products, pasta and olive oil, and were selected based on the basis of an existing PEF category rules and their financial value in the national exports to the EU and consequently the importance of this sector to the national economy. The selection process was done in this way to ensure not only the interest of the export oriented industries but also the potential for replication in the national or regional context later on, based on the capacity built during the project.

A high interest from local companies was noted and nine companies were selected for the implementation of the PEFCRs on a specific product that they export or plan to export in the EU. Their motivation to participate in this activity, even though the PEFCRs were not yet final at that point, was mainly based on the need to understand their products environmental footprint and the potential for improvement. For each company product, one local expert has been assigned to implement the PEFCRs, after receiving an in-depth training from the international PEF experts from Pere Sustainability, a Consultancy based in the Netherlands involved in their development. These experts now form the core which can respond to future demands from the industries that wish to have the PEF Category Rules implemented on their products.

The studies developed demonstrated the need for national Life Cycle Assessment (LCA) databases which can be used by the LCA and PEF experts. Hopefully, this will be addressed in the near future, enabling the companies and experts in the region to optimize the production faster and much more accurately. In addition, national partners in Egypt, Lebanon, Morocco and Tunisia were assisted in raising awareness among national stakeholders about the framework for a Single Market for Green Products initiative, contributing to the adoption of greener standards for the national manufacturing businesses in order to compete on equivalent terms in the EU market.
Applying eco-innovations can become a strategic success factor for denim produced in Tunisia

How a textile producer in Tunisia improved his business and environmental performance by investing in eco-innovative technologies that will save water and costs.

Producing denim requires a lot of water. Throughout the various supply chains one pair of jeans can alone consume up to 10,000 litres of water in the production drawing resources from all over the world. This contributes to the fact that the textile industry has established itself to become the second most polluting industry in the world. But the textile sector is also an important contributor to job creation and growth, especially for emerging economies such as Tunisia, where textile goods make 29% of the country’s total export.

New Amico is a Tunisian producer of jeans – part of the Demco group – and is specialized in washing, dyeing and applying special treatments to denim. Similar to many other Tunisian textile producers, jeans from New Amico are primarily produced for export markets such as the EU. The consumer preferences from these markets have increasingly moved in favour towards more environmentally responsible produced denim, which have stimulated jeans producers to look for more environmentally friendly production techniques.

The company decided to join the SwitchMed MED-TEST II project to identify measures in the production that could improve the economic and environmental performance of the jeans production. It was also in this process that thanks to the SwitchMed B2B networking events for eco-innovation, New Amico got in contact with Jeanologia – a Spanish technology provider, with more than 20 years of experience, focused on the development of sustainable and efficient technologies for fabric and garment finishing. Technology from Jeanologia, had been selected by UNIDO for the SwitchMed series of B2B networking events in Tunisia, Morocco and Egypt, with the objective of promoting business partnership between eco-innovation providers from the EU and industries in the MENA region.

With the support from the EU, Jeanologia has developed the E-flow Nano-bubbles, a new technology for garment finishing processes that can treat garments and apply different chemicals like softeners, resins for wrinkle-free treatments, dyes, etc., without using hundreds of litres of water. The new process is based on transferring chemical properties to fibres using Micro-Nano Bubbles (MNB) that can get directly inside the fibres, reduces the consumption of water by 85%, electricity by 47% and chemicals by 50% and it eliminates the waste and wastewater treatment processes. In combination with the Ozone G2 system and the laser treatment technologies from Jeanologia, the eco-innovative process modifications do not only save resources and emissions making the processing of textiles cleaner, it also can change the processes to become less resource consuming and give textile products a better environmental footprint.

“Our mission at Jeanologia is to offer the denim industry an ecological, eco-sustainable and efficient system at the industrial level. We offer this technology to our clients on a global level. We should thank UNIDO who helped us transfer this new concept to new markets in North Africa like Tunisia and Morocco where UNIDO has organized B2B events between local industries and which has helped further these concepts.” Stefano Tessarolo, Jeanologia

Due to the SwitchMed B2B networking event, New Amico has introduced both the G2 ozone-washer (2 machines) and the E-flow Nano-bubbles technology (3 machines) investing 300,000 euros in total. The economic benefits of these solutions, which allow a quick return on investment while guaranteeing a better quality of end products, would have significant impact if they were adopted throughout Tunisia’s denim industry.

According to Amel Boujnah and Ahlem Jerb, the Water Treatment Manager of the DEMCO Group, the adoption of “E-flow” technology has led to an optimization of the production process as well as significant economic and environmental benefits in relation to traditional systems: in addition to reducing by half the wash cycle, this technology saves huge quantities of water, resin and energy and eliminates the use of chemicals in the different finishing treatments. In the case of G2 ozone-washer, this technology eliminates the water use (80 litres by piece) and replaces bleach and permanganate substances with ozone. In addition to this, the drying process takes 15 minutes instead of 45 minutes of the traditional water-washing process, which increases the productivity of the plant.

The impact of such technologies at national level, would have an important impact in water consumption: considering Tunisia’s production of denim, which is equal to about 26 million pieces per year. It can be estimated that if the Jeanologia eco-innovative solutions would find a wide adoption in the Tunisian textile sector, a total of 2.2 Mio m³ of water savings can be achieved, which equivalent to the annual water consumption of 7,160 Tunisian households.

The meetings during the SwitchMed matchmaking with Jeanologia, made New Amico aware that investing in the eco-innovation would not only give the business valuable saving in energy, water, and raw material costs, but also give the final product a competitive advantage for the export market.

“Thanks to the event organized by UNIDO in 2016 we were introduced to the new technologies and developments by Jeanologia. The different processes that we use today using this new technology gives us different options for reduction like 70% of water savings and 20%-30% energy savings and 80% chemical reduction due to the pulverization process. So we could save more than 135,000 Euros in total and this helps us to become more competitive”. Bouguila Jelloul, Director General – New Amico
Promoting eco-innovative solutions from the EU for Tunisian SMEs

<table>
<thead>
<tr>
<th>EU companies attendees</th>
<th>Number of registered participants (EU and MENA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>257</td>
<td>17</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Projects concluded and under negotiation (April 2018)</th>
<th>Number of face to face meetings between the EU technology providers and the MENA companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>135</td>
<td>17</td>
</tr>
</tbody>
</table>

### Projects Concluded and Under Negotiation

<table>
<thead>
<tr>
<th>EU Partner</th>
<th>MENA Partner</th>
<th>Type of license</th>
<th>Investment</th>
<th>Sector</th>
<th>Environmental savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO AZUL</td>
<td>–</td>
<td>Technology transfer</td>
<td>6500€</td>
<td>Agro-food</td>
<td>2,628 m³/year water, 632 tonnes CO₂</td>
</tr>
<tr>
<td>–</td>
<td>ABCO</td>
<td>Technology transfer</td>
<td>300,000€</td>
<td>Wood and furniture</td>
<td>30,000 m³/year of local wood, 1,700 m³/year water, 5 GWh saved</td>
</tr>
<tr>
<td>–</td>
<td>–</td>
<td>Technology transfer</td>
<td>300,000€</td>
<td>Textile and garments</td>
<td>28,532 m³/year water, 150 Kg/year chemicals, 3,011 GWh/year</td>
</tr>
<tr>
<td>–</td>
<td>–</td>
<td>Technology transfer</td>
<td>300,000€</td>
<td>Wood and furniture</td>
<td>30,000 m³/year of local wood, 1,700 m³/year water, 5 GWh saved</td>
</tr>
<tr>
<td>–</td>
<td>–</td>
<td>Agreement</td>
<td>6500€</td>
<td>Plastic</td>
<td>9.45 Mio kg of plastic to be reused</td>
</tr>
</tbody>
</table>

Chapter 7
Business Networks & Intermediaries
Exchanging, synergising and engaging with business & investment networks to scale-up demo actions.
Supporting the visibility, effectiveness, long-term sustainability and impact of the SwitchMed programme

The SwitchMed Networking Facility, led by SCP/RAC, aims to contribute to the visibility, effectiveness, long-term sustainability and impact of the different activities carried out under the SwitchMed programme. In order to deliver this, the Networking Facility focuses on three main areas of activity:

Firstly, we enable extensive communication and networking and facilitate the exchange of best practices and lessons learnt among SwitchMed partners, connecting them with key external stakeholders. We have been working closely with 12 strategic partners in order to achieve common goals. We have also developed the SwitchMed Action Network, an online platform with a mobile app, to exchange knowledge related to SCP initiatives taking place in the Mediterranean, provide inspiration through disruptive innovations integrating closed-loops and collaborative consumption business models, showcase stories and participate in facilitated in-country stakeholder dialogues. It also functions as a database of experts. Another major activity is the organisation of SwitchMed Connect, a gathering of Mediterranean stakeholders to build synergies, exchange knowledge and scale-up eco and social innovations. Leading start-ups and entrepreneurs, industry agents, initiatives, change agents, policy and financial institutions working on applications related to productive, circular and sharing economies in the Mediterranean come together in Barcelona every year. In total, three events have been held, bringing together more than 1,000 stakeholders from 16 different countries.

Our second area of activity involves encouraging the scaling-up of activities and impact, with a focus on harvesting lessons learnt in order to replicate demonstration pilot projects, thereby contributing to activities’ long-term sustainability and increasing visibility with regard to the impacts effected during the programme. To that end, the Networking Facility has designed a general theoretical framework for scaling-up analysis based on the identification of a specific strategy tailored to the SwitchMed programme. In order to gain traction with regard to sustainable consumption and production and generate greater impact, the scaling-up of the SwitchMed programme has been defined as “expanding, adapting and sustaining demonstration actions in more locations and over time to reach beyond the original target groups, with the ultimate vision of sustainable consumption and production being mainstreamed into everyday economic life across Southern Mediterranean countries”.

The third line of action includes reinforcing the internationalisation of green start-ups and SMEs through closer cooperation between businesses and investment networks in Europe and Southern Mediterranean countries. As such, the Networking Facility has mapped the range of financial instruments available in four selected countries (Egypt, Lebanon, Tunisia and Morocco), as well as in Europe, and has organised seminars with national and international investors to discuss the barriers that restrict access to markets and sources of finance. Despite the results for the relevant countries being collected at national level, it is important to process the results achieved across beneficiary countries and to provide a regional perspective; thus we collect data and facilitate information exchange across all SwitchMed activities, primarily at regional and thematic levels, communicating these to external stakeholders in line with the programme identity, as has been done since the start. Indeed, well-proven methodologies, tools and initiatives that avoid unnecessary efforts are used or carried out on a regular basis.

Meet our strategic partners

We work in strategic partnership with international and national organisations that are very experienced in an active in addressing the shift to sustainable consumption and production in the Mediterranean region. Our strategic partners are like-minded organisations to facilitate the exchange of ideas, build bridges and synergies and foster cooperation among different organisations in different countries with shared goals.

Our strategic partners represent a diverse range of organisations whom we trust to help us execute our mission. Their expertise enables us to do far more than we could alone, and their passion and talent inspire us. Our current strategic partners are:

Our current strategic partners are:
Credits

Concept
SwitchMed

The SwitchMed Programme is implemented by the United Nations Industrial Development Organisation (UNIDO), UN Environment Mediterranean Action Plan (UN Environment/MAP), Regional Activity Centre for Sustainable Consumption and Production (SCP/RAC) and UN Environment’s Economy Division.

This publication has been produced with the assistance of the European Union.

The content of this publication is the sole responsibility of SwitchMed and can in no way be taken to reflect the views of the European Union.

Supervision and coordination
Roser Gasol (SCP/RAC)

Authors:
Ananda Alonso (SCP/RAC), Chang Yan (UN Environment), Claudia Pani (SCP/RAC), Fabiola Martínez (SCP/RAC), Hichem Salem (SCP/RAC), Lucille Guiheneuf (SCP/RAC), Magali Outters (SCP/RAC), Michael Barla (UNIDO) and Roser Gasol (SCP/RAC)

Design: Florencia Cufre Meyer

Translation & Editing: T&S

Contacts:
For more information on the SwitchMed policy-makers Programme please get in touch with us:
• Magali Outters: moutters@scprac.org
• Luc Reuter: luc.reuter@unep.org

For more information on the SwitchMed MED TEST II Programme please get in touch with us:
• Roberta de Palma: r.de-palma@unido.org
• Carolina Gonzalez-Mueller: c.gonzalez-mueller@unido.org

For more information on the SwitchMed Green Entrepreneurship and Civil Society Empowerment Programme please get in touch with us:
• Giorgio Mosangini: gmosangini@scprac.org

For more information on the SwitchMed Networking Facility please get in touch with us:
• Burcu Tunçer: btuncer@unep.org

Join us now at swichmed.eu/en/community/swichmed-action-network

For further information visit us:
• www.switchmed.eu
• www.theswitchersfund.eu
• www.theswitchers.eu
• www.switchmedconnect.com

Follow us on our social media channels at:
• Twitter: @swichmed
• Facebook: www.facebook.com/swichmed
The SwitchMed Networking Facility, is hosted by the Regional Activity Centre for Sustainable Consumption and Production (SCP/RAC).

Sant Pau Art Nouveau Site – Nostra Senyora de la Mercé Pavillon, Sant Antoni Maria Claret, 167. 08025 Barcelona (Catalonia) Spain.

Find us at:
- www.switchmed.eu

For further information:
- The Switchers: www.theswitchers.eu
- SwitchMed Connect: www.switchmedconnect.com
- Switchers Fund: www.theswitchersfund.eu

Our social media channels:
- Facebook
- YouTube
- LinkedIn
- Twitter
- Flickr