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GREEN HELP DESKS FURTHER GREEN TECHNOLOGIES IN THE ARAB REGION

Green Help Desks in six Arab countries supporting technology transfer



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GREEN HELP DESKS

Focal points in 6 countries

Ministry of Local Affairs and Environment, Tunisia

Royal Scientific Society (RSS), Jordan

Public Authority for SME development, Oman

Association for Lebanese Industrialists (ALI), Lebanon

CEDARE, Egypt

The Moroccan Cleaner Production Centre (CMPP), Morocco

GHDs support SMEs to:

- Align with green economy strategies
- Exchange knowledge and experiences
- Increase access to resources and capacity building
- Enhance capacity to formulate green policies
- Promote green entrepreneurship

GHDs promote innovation through:

- Education
- Research
- Investment

GHDs address market problems:

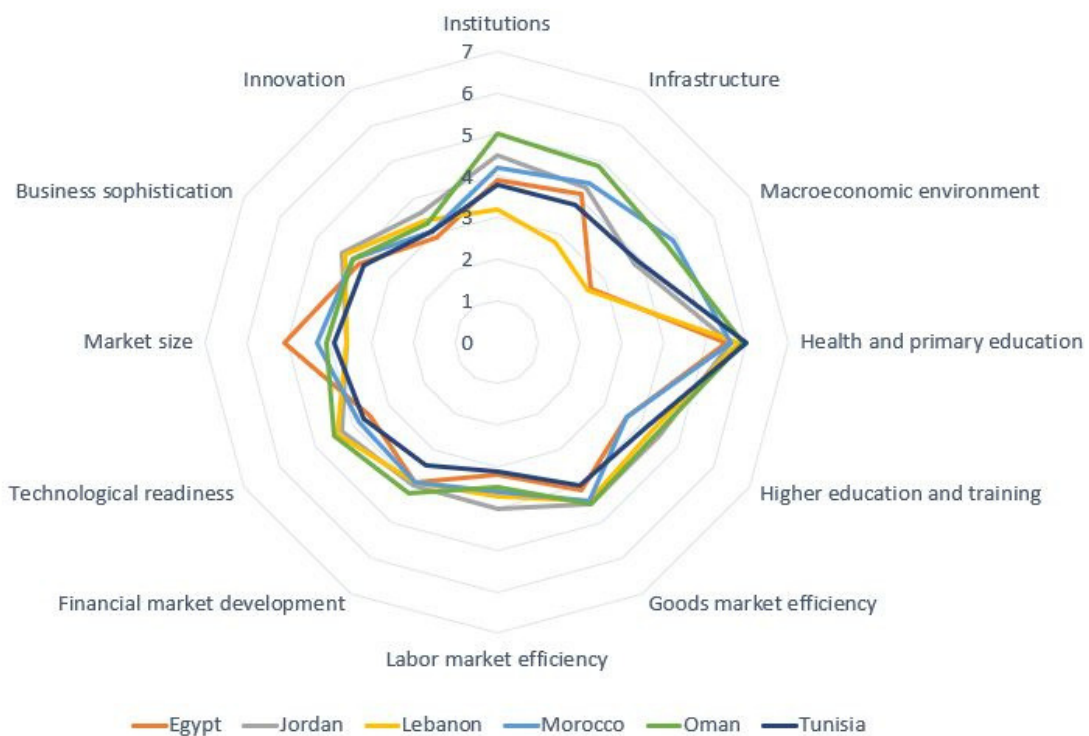
- Limited national directives for green SME development
- Limited funding and economic incentives for SMEs in general and in the green sector

ECONOMIC COMPETITIVENESS

WEF GLOBAL COMPETITIVENESS INDEX 2017-2018

The World Economic Forum yearly measures economic competitiveness, which it defines as “the set of institutions, policies and factors that determine the level of productivity of a country”. The Competitiveness Index is composed of twelve domains relevant to the work of the GHDs, that are interlinked and reinforce and affect each other.

All countries with GHDs have economies performing better than the factor-driven stage, where economies compete based on their factor endowments such as affordable unskilled labor and natural resources. Egypt, Jordan, Morocco and Tunisia are efficiency-driven economies and thus focus on higher education and training, efficient goods and labor markets, developed financial markets and harnessing benefits from existing technologies. Lebanon and Oman are in transition from efficiency-driven economies to innovation-driven, which have higher wages and standard of living, and business sophistication and innovation.



Source: ESCWA Calculations based on World Economic Forum (2017) Competitiveness Report 2017-2018

TECHNOLOGY AND INNOVATION

Investments in technology as well as digital and technological infrastructure have allowed improvements in technological readiness - the agility with which an economy adopts existing technologies to enhance the productivity of its industries. However, they have not yet translated into increased productivity or innovation. Improvements in innovation often fail to achieve wider impact because of lack of skills to take advantage of new technologies. The countries need to focus on enabling the private sector to design and develop cutting-edge products and processes to maintain a competitive edge and move toward even higher value-added activities. This progress requires an environment conducive to innovative activity and supported by the public and private sectors, through investment in research and development (R&D), high-quality scientific research institutions, collaboration in research and technological developments between universities and industry and the protection of intellectual property.

EGYPT

Egypt's National Strategy for Science, Technology and Innovation runs from 2015 until 2030, as part of Egypt's Vision 2030. It is based on previous work as part of National Strategy and Plan for Scientific Research and Innovation, the Technology Innovation and Entrepreneurship Strategy and the National ICT Strategy, which increased investments in science and technology and human resources.

Egypt also developed the National Sustainable Consumption and Production Action Plan, which aims to review existing regulations, market incentives and introduce reform that promotes SCP, sustainable public procurement for goods and services and raise public awareness. It does so by improving coordination between sectoral ministries and increase capacity to monitor implementation.

Egypt has ambitious plans for the green growth of its energy and agricultural sector. The energy sector promotes energy efficiency and aims to reach savings of 18% of final energy consumption from the transport, industry and building sector. Renewable energy is expected to produce 22% of total energy production by 2030. For sustainable agriculture, the government plans solar water pumps, desalination for agriculture and agricultural waste to energy, as well as modernization of storage facilities. The water sector aims to increase wastewater treatment for agricultural purposes and promote sustainable use of ground, surface, rain and wastewater, based on a national wastewater strategy by CEDARE.



The Egypt National Cleaner Production Centre acts as a vehicle for promoting green technology transfer and innovation for the Egyptian industry. ENPC provides technical assistance in the fields of resource efficiency, industrial waste valorization in addition to energy efficiency and renewable energy applications. The ENPC also initiates the implementation of innovative designs and supports companies to carry out product development.

CENTER FOR ENVIRONMENT AND DEVELOPMENT FOR THE ARAB REGION AND EUROPE (CEDARE)

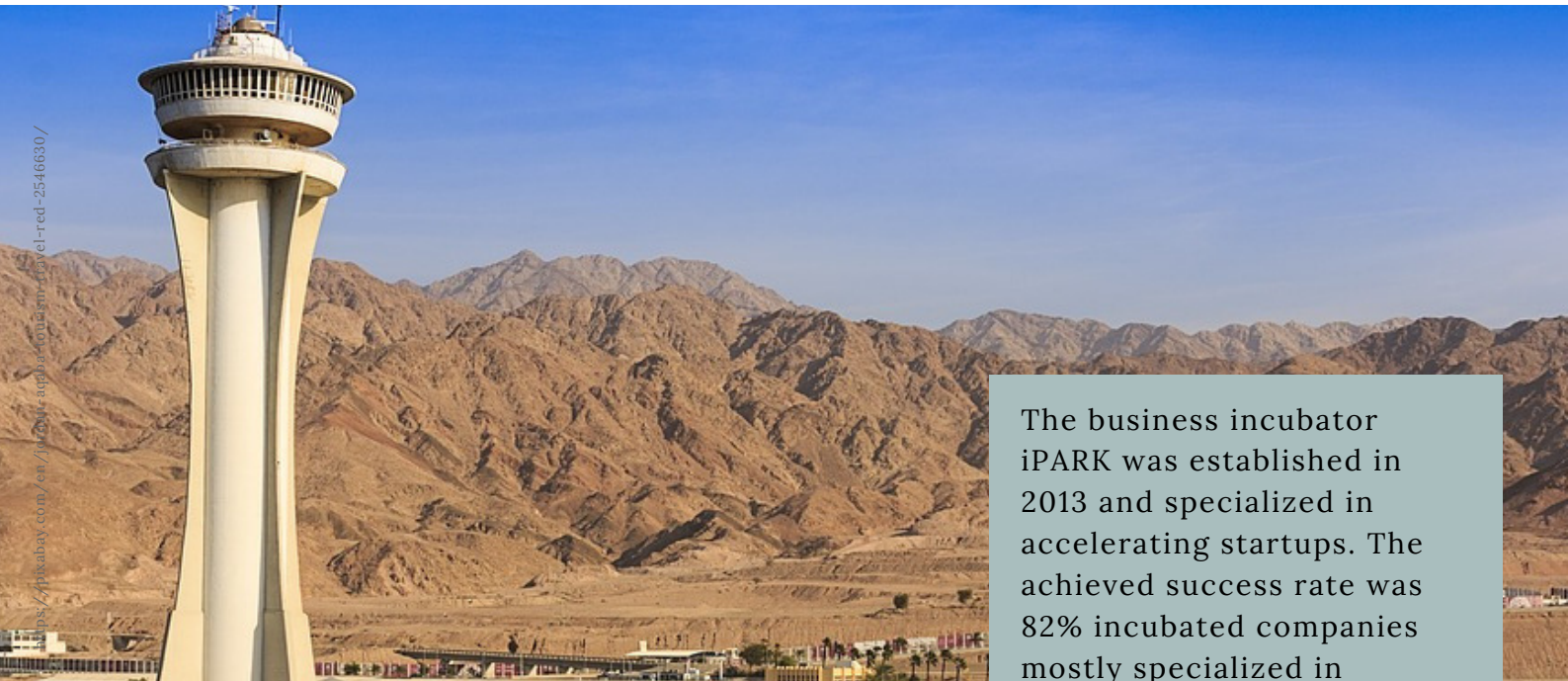
CEDARE is a catalyst, facilitating collaborative action between the Arab Region, Europe and the international community in the fields of environment and development, embedding environmental concerns within countries' development policies, strategies and action plans. CEDARE's Centre of Excellence supports a transition to a resource-efficient future, through working on Sustainable Public Procurement policies, recycling and waste management (plastic bags and e-waste recycling schemes) and water, climate and ecosystem related issues.

JORDAN

Jordan benefits from a stable institutional system and the development of infrastructure, innovation and business sophistication, supported by a high level of political will for a transition to a green economy. Jordan's Green Growth Plan was launched in 2016 and focuses on energy, transport, water, agriculture, waste and tourism and sustainable consumption and production. Jordan also has a National Innovation Strategy.

The Green Growth Plan and Innovation Strategy are based on the Vision 2025, which aims to create an enabling environment for innovation and empowers green and social entrepreneurs through providing stable conditions for investment. Increased coordination and knowledge sharing between green entrepreneurs and with the government and donor communities, the removal of further barriers for the green sector and a revision of the Environmental Protection Law could further support green industries to contribute to a green economy.

The Government reformed the country's fiscal situation which led to higher taxation and increased monitoring of public spending. In 2015, the Central Bank of Jordan introduced a monetary framework encouraging commercial banks to provide green financing to the private sector through medium to long-term funds at low interest rates and loan guarantee facilities, which improve access to finance for clean energy projects.



ROYAL SCIENTIFIC SOCIETY (RSS)

The Royal Scientific Society is the largest applied research institution, consultancy, and technical support service provider in Jordan and a leader in the fields of science and technology. Its Industrial Technology Scientific Cluster aims to support and institutionalize research and development efforts, developing industry related policies, offering technical consultation within different industries and encouraging knowledge transfer. The Energy, Water, & Environment Cluster promotes sustainable development.

The business incubator iPARK was established in 2013 and specialized in accelerating startups. The achieved success rate was 82% incubated companies mostly specialized in technology. iPARK faces challenges to attract startups outside of Amman and thus proposes the establishment of economic free zones in rural remote regions with incentives, tax exemptions, and essential services to provide a supporting environment for investments.

LEBANON

Lebanon's economic performance is relatively stable and has a high level of business sophistication, technological readiness and innovation. Inefficient institutions, a weak infrastructure and economic environment as well as an instable labor market are barriers to reaching its potential.

Green entrepreneurship and ecological and social initiatives are on the rise in Lebanon, mainly in response to a social and environmental crisis and challenges. Incentive funding and technical support in the form of incubators and accelerators is available, as well as a qualified youth and entrepreneurship mentality. Green entrepreneurs and initiatives mainly face challenges related to political will. Limited support for sustainable solutions and implementation of environmental regulations as well as bureaucracy lead to unstable investment and entrepreneurship environments.

Better implementation of environmental regulation and reform are necessary, mainly through promoting CSR, allocating more public funding to research and development, reviewing fossil fuel subsidies, removing customs on highly taxed green products and offering a special status for green enterprises with tax breaks and incentives. Best practices such as BDL's NEEREA programme need to be expanded further.



NEEREA, the national initiative for energy, is a mechanism initiated and supported by the Central Bank of Lebanon for financing green building and energy projects. Commercial banks provide subsidized loans at a maximum of \$20 million dollars with 1% interest. Similarly, the Lebanese Environmental Action initiative covers a wider range of environmentally friendly projects, with most projects focusing on water quality and efficiency and waste treatment.

ASSOCIATION OF LEBANESE INDUSTRIALISTS (ALI)

ALI is the main national association of manufacturing companies operating in Lebanon. It aims to create a favorable environment for industrial investment, job creation, growth and development.

The Environment & Energy Department supports and raises awareness of its members on environmental conservation, cleaner production and energy efficiency, in order to engage them in the emerging green economy by developing their products and production processes to adhere to sustainable development principles.

MOROCCO

Morocco has been implementing several policies to drive innovative technologies, such as the Innovation Initiative, the National Strategy for the Development of Scientific Research (Horizon 2025) and Digital Morocco. In 2014, Morocco developed the National Strategy for Sustainable Development, with green economy as a major target. The goals set aim to increase the use of renewable energies to 42% and decrease the total consumption of electricity 12% by 2020.

Financial support for innovation is available, however, it needs further promotion and awareness campaigns to reach green enterprises. The tax environment of public services is not yet set up to support the implementation of policies and ensure cost-recovery. Incubators and accelerators exist, but are still centralized and remain pilot projects, creating a clear gap in later-stage support, which creates challenges for green entrepreneurs to scale-up their businesses.

Increased government support through funds and dedicated investment, more involvement of the private sector with startups and banks for innovation, as well as better policy harmonization through a strategy are possible options for the way forward.



CENTRE MAROCAIN DE PRODUCTION PROPRE (CMPP)

The CMPP acts as a national centre of excellence on resource efficiency and cleaner production and supports industry and small and medium enterprises to reduce environmental pollution, with the aim to achieve a green economy that dissociates economic growth and environmental risks.

The CMPP promotes the application of effective resource management amongst its supporting private and public institutions, resulting in a higher environmental performance and lower environmental impact of Moroccan industries.

The Moroccan Climate Innovation Center supports clean-tech entrepreneurs in the design, development and launch of their clean-tech projects. Services include:

- The Green Business Incubator supports entrepreneurs through mentoring and coaching on both technical and business matters to turn ideas into new companies or scale up existing business models.
- The Green Business Network is the first social network dedicated to clean technologies, providing access to over 160 Moroccan green businesses
- The Green Business Booster is a business accelerator that provides grants to pilot clean-tech projects.

OMAN

A recent review of the National Innovation Strategy, set the target to shift Oman from a revenue-dependent economy to an innovation-based economy and aims to establish the Sultanate of Oman among the top 20 leaders in the field of innovation by 2040.

Oman's institutions and infrastructure provide a stable basis for the country's macroeconomic environment. Fiscal reforms were introduced to adjust to low oil prices through a cut in fuel subsidies, an increase in corporate tax and the introduction of a GCC-wide VAT system in 2018. Public funding to support agricultural R&D was increased.

Oman ranks very high in the innovation infrastructure and percentage of science and engineering graduates but weak in the innovation output. Therefore, focus needs to be put on bridging academia and industry and bringing technology from the lab to market. Efforts to provide better education and training systems and reform labor markets evidence initial progress, particularly in higher education. As the main body responsible for science, technology and innovation in Oman, The Research Council initiated the Innovation Park Muskat to support research and development.



The Environment Society of Oman (ESO) raises awareness on sustainable practices with a focus on ecological footprint and green schools for 2017. Designed to inspire the next generation to be responsible environmental stewards, the ESO education program, in collaboration with Petroleum Development Oman (PDO), started in 2016. It aims to cover over 100 middle schools in several governorates, empowering thousands of students aged between 11 and 14 years. It covers knowledge of conservation techniques, sustainable practices, climate change and the importance of biodiversity.

PUBLIC AUTHORITY FOR SMALL AND MEDIUM ENTERPRISES

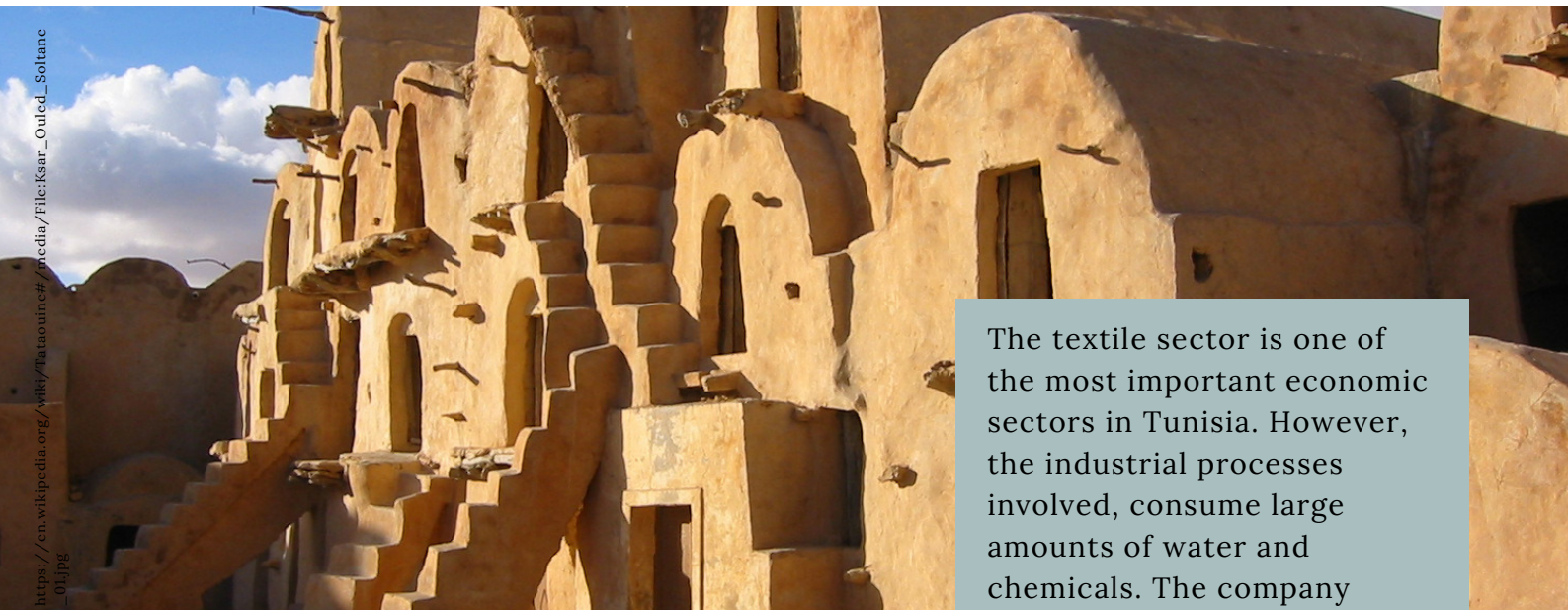
The Public Authority for Small and Medium Enterprise facilitates cooperation between science and industry and encourages innovators, researchers and students to start their own business and environmental initiatives.

The “Upgrade” awards program identifies ICT graduation projects with start-up potential and supports students to realize their ideas. At school level, a competition supported by the Ministry of Education encourages students to enhance their research skills and awareness of renewable energy. The competition calls for solutions for the oil and gas industry to reduce energy consumption and utilize renewable resources.

TUNISIA

Tunisia recently developed a new Investment Act, promoting public private partnerships to encourage green investments. It involves tax exemptions for businesses operating in green and anti-pollution activities, such as waste management, water and sanitation and conservation. In addition, the Ministry of Local Affairs and Environment is simplifying procedures, reducing authorization deadlines related to green activities, and revising their related environmental regulations, such as Environmental Impact Assessments. These measure aim to facilitate the achievement of the National Strategy on Green Economy, including job creation measures for 200,000 persons by 2030.

Green entrepreneurship in Tunisia has successfully advanced green technologies for sustainable agriculture, recycling, eco-tourism, transports and construction, and renewable energies. Financing and support mechanisms, although present, are not always well matched with the needs of entrepreneurs. Tunisian legislation is supportive of technology transfer and the commercialization of public research and developed mechanisms to transfer public research activities to the industrial sector. However, efforts are scattered amongst institutions, not sufficiently coordinated and marked by a lack of specialized staff for efficient technology transfer services.



MINISTRY OF LOCAL AFFAIRS AND ENVIRONMENT

The GHD in Tunisia is hosted within the Ministry of Local Affairs and Environment (General Directorate of Sustainable Development), which eased the move towards sustainable development and green economy thanks to regular coordination with stakeholders and strong relations to initiatives carried out by the Ministry.

The GHD developed guidelines for investors to promote green economy and green job creation in Tunisia in the sectors related to agroforestry, ecotourism, waste management and recycling and renewable energy / energy efficiency and conducted trainings for young entrepreneurs.

The textile sector is one of the most important economic sectors in Tunisia. However, the industrial processes involved, consume large amounts of water and chemicals. The company MEGASTONE is specialized in jeans bleaching and dying. The company is striving to use more environmentally friendly chemicals, and become Oeko-Tex certified. First measures reduced the cost of energy by 30%, water by 10% and chemicals by 12%. Minimization of the waste in the manufacturing process, introducing the best available and clean technologies and methods in the textile sector are beneficial for the business and the environment.