

GREEN economy Egypt

GE initiatives

The Green Economy is increasingly recognized as a tool for achieving sustainable development in Egypt. The government has adopted a variety of sectoral policies and targeted programmes to lower resource intensity, reduce environmental impacts of consumption and production, and improve well-being. In the energy sector, the Long-Term Plan for Wind Energy set the target to meet 20% of electricity needs from renewable energy by 2020, with 12% coming from wind energy. Egypt also established the New and Reliable Energy Authority (NREA) and partners with Regional Renewable Energy and Energy Efficiency Center. In 2000, the Government adopted the "National Strategy for Integrated Municipal Solid Waste Management" in an effort to gradually introduce a nationally integrated solid waste management (ISWM) system.

GE success stories

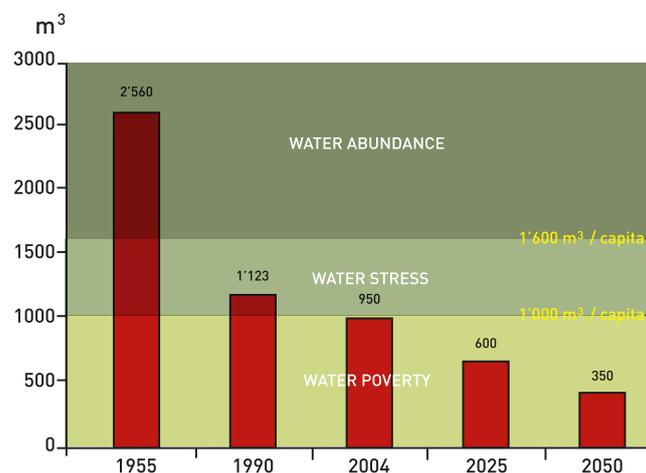
- ▶ There are about 1000 organic farms in Egypt, with a total cultivated area of about 50,000 feddan. An addition close to 50,000 feddan is currently in the process of becoming organic. In order to encourage this type of farming, the Government established the "Central Laboratory of Organic Agriculture" department in every governorate's agricultural directorate. Introducing organic agriculture in Egypt's cotton sector is a case in point: the annual amount of pesticides used was reduced from 30,000 tons in the early 1990s to around 3,000 tons in 2013.
- ▶ The government launched the vehicle scrapping and recycling program in 2009. Within the context of the programme, taxis operational for more than 20 years qualify voluntary replacement with newer models that meet Egyptian environmental law specifications. Tax and custom exemptions on efficient vehicles amount to US\$ 1,300 per taxi. By 2012, 41,000 old vehicles had been replaced, and the average fuel efficiency achieved 9.39 liters/100 km for fuelled cars. As a result of vehicle efficiency improvements, emissions are reduced by 60,000 tons of CO₂ every year.¹
- ▶ There is already a successful track record in the commercial viability of renewable energy projects in Egypt. For example, the Kuraymat solar plant, which was completed in 2011, has a capacity of 140 MW including a solar share of 20 MW. Total cost of the project reached US\$ 340 million. The plant generates net electric energy capacity of 852 GWh annually, of which 34 GWh from solar. Savings in fossil fuel resulting from solar energy production correspond to 1,000 tons of oil equivalent annually.²
- ▶ A tax break for 5 years and custom duty exemptions for solid waste management equipment were introduced to provide an incentive for private sector investments. Furthermore, Law 10/2005 was issued to levy a solid waste collection fee to be included in the electricity bill that is set according to income levels and residential area. However, cost recovery remains an issue, and the waste collection is still highly inefficient due to the lack of implementation and enforcement.

Key messages

UNEP commissioned to the Centre for Environment and Development for the Arab Region and Europe (CEDARE), in partnership with the Egyptian Environmental Affairs Agency (EEAA) and the State Ministry for Environmental Affairs (SMEA), the realization of a Green Economy Scoping Study on Egypt. The report³, titled "Transitioning to a Green Economy in Egypt", aims to promote and communicate the benefits of green investments in four key sectors, namely agriculture, water, energy and waste. Key messages include:

- ▶ By 2025, available freshwater per capita is expected to significantly diminish to 600 m³/year and further decrease to 350 m³/per capita by 2050, well below the 500 m³ stress level. Investing in household water saving devices for domestic use is estimated to result in annual water savings between 10%-20%, while investing in water saving equipment and practices in the agricultural sector is estimated to result in water savings of at least 40% or about 23 billion m³ annually. Other benefits of water efficiency measures include increased agriculture yields estimated at between 20%-30%. Considering that corn is a strategic crop for Egypt, higher yields are projected to increase production by 1.4 million tons annually, corresponding to 2 billion Egyptian pound (LE).
- ▶ On-farm agriculture water losses due to obsolete irrigation systems and practices can reach up to 40%, thereby raising costs of production and, consequently, food prices. Green economy investments in water efficiency, such as replacement of pipelines and introduction of drip irrigation, would contribute to saving water costs, thereby improving the overall sectoral performance.
- ▶ Investments in energy efficiency would result in increased energy independence, and lower marginal costs. Energy efficiency measures in Egypt, such as the installation of efficient lighting equipment, are expected to save 30% of energy consumption, estimated at 33 billion kWh.
- ▶ About 90% of national energy needs come from fossil fuels and natural gas, while the contribution of renewable energy is relatively minor. Investing in renewable energy can restore Egypt's energy security status, while reducing CO₂ emissions and the associated environmental and health impacts. Achieving a renewable energy penetration target of 20% by 2020 would require the installation of 26.5 billion kW of additional capacity. This is estimated to create about 21,000 additional jobs, based on the lower estimate.
- ▶ Annual municipal solid waste generation has increased by more than 36% since 2000 with an increase of an estimated 3.4% per year. Of the 64% that is collected, only 2.5 % is recycled, while 9% is used for composting. Investing in solid waste management would create several economic opportunities in the form of waste to biofuel, waste to compost, refuse-derived fuel (RDF) and business opportunities for big entrepreneurs as well as small and medium size enterprises. It is estimated that about 28 employment opportunities are created for every ton of recycled waste.

Figure 4 - Status of Water Supply per Capita in Egypt (Cubic Meter/ Capita)



Way forward

Given Egypt's current transitional political period and economic slowdown there is urgency for a paradigm shift to effect change and reform that can solve Egypt's chronic poverty, unemployment, water, energy and food shortages. Adopting a green economy could present Egypt with strategies to support its aspirations for long-term prosperity and human welfare. The Green Economy Scoping Study for Egypt provides several possible guiding principles for the development of a green economy policy framework. A more comprehensive quantitative assessment of green economy challenges and opportunities in Egypt can be carried out in order to project environmental, social and economic impacts of specific green economy policy and investment interventions across key national sectors.