INTERSESSIONAL PANEL OF THE UNITED NATIONS COMMISSION ON SCIENCE AND TECHNOLOGY FOR DEVELOPMENT (CSTD)

Geneva, Switzerland
25-26 October 2022

CSTD 2022-2023 priority themes on "Technology and innovation for cleaner and more productive and competitive production" and "Ensuring safe water and sanitation for all: a solution by science, technology and innovation"

Statement submitted by

Egypt

REPORT

on

The Commission on Science and Technology for Development was held during the 2022-2023 inter-sessional panel meeting with physical and remote participation on 25-26 October 2022

- **Theme 1: Technology and innovation for cleaner and more productive and competitive production**

Date 25th of October 2022

The intervention of the ASRT/Egypt representative:

Highlighting some examples from the efforts of the Egyptian republic in supporting green technology and innovation for cleaner and more productive and competitive production

- The government of Egypt began to activate its plans to enhance the use of green technology through several national projects, legislations, and laws, which emerged through the expansion of metro networks, trains and electric cars and the preparation of the necessary infrastructure for this, as well as the establishment of smart and sustainable cities.
- Egypt is implementing projects to rationalize water use, line canals, integrate coastal zone management, and a huge project to reclaim 1.5 million feddans in the Western Desert and other governorates, which will have a significant impact in combating climate change and reducing CO2 emissions. The whole project is using green technology for implementation.
- Egypt owns Benban Solar Park which is a photovoltaic power station with a total capacity of 1650 MW. It is in Benban (Aswan Governorate) in the western desert, approximately 650 km south of Cairo Benban is currently the 4th largest solar power plant in the world.
- Egypt now owns the biggest research, development, and innovation (RDI) and pilot plants facilities in renewable energy in the region belonging to ASRT; such as: MATS station for concentrated solar power and water desalination in Borg El Arab and China-Egypt Joint Lab for PV in Sohag.
- National Green Funds: Ministry of Planning, through ASRT and STDF, and in coordination with the Ministry of Higher Education and Scientific Research, allocated generous fund for

RDI projects to support Egypt's climate change adaptation efforts. Both ASRT and STDF launched targeted calls and new initiatives to materialize these strategic objectives within MHESR action plan: Road to COP27

- Egypt through ASRT is also working on a huge project with farmers for the transformation to carbon farming for a sustainable future of agriculture in Egypt. The project aims to enhance the role of agriculture and carbon farming in facing climate change. The model applies the sustainable agriculture system in Egypt, including all indicators that aim to reduce carbon emissions in agriculture activities, such as sequestering carbon in the soil, the effect of afforestation, the recycling of organic waste for using as a composing and an organic fertilizer, as well as the effect of using renewable energy in irrigation operations.
- ASRT in collaboration with SADCO (company representing the private sector) signed a protocol with the aim to develop the national industry in the production of biodegradable, environmentally friendly plastic, an initiative adopted by the Academy to preserve the environment within the strategy of the Ministry of Higher Education and Scientific Research to confront climate change.
- Another good example is the agreement signed between the ASRT and the Egyptian Reef Company, to establish a model farm in Moghara that depends on the applications of clean and sustainable technologies in agriculture and fish farming.

General local challenges faced by the government in promoting green technology and innovation include:

• Lack of human cadres able to follow up the implementation of green tech for SDGs in all ministries and agencies entrusted with such tasks.

• Lack of a coordination framework among the concerned bodies in a way that allows the implementation of green tech more effectively.

• Lack of data and information necessary to measure progress towards the achievement of green tech for SDGs goals.

- **Theme 2: Ensuring Safe Water and Sanitation for all: a Solution by Science, Technology and Innovation.**

Date 26th of October 2022

The intervention of the ASRT/Egypt representative:

Although we are in an era were using digital tools and we're changing our mindset around technological digitalized solutions, I think that we need to admit that developing countries with low to lower medium income are facing a huge challenge when it comes to the implementation of such kinds of solutions. Before thinking of the technology to be used, we need to upgrade the capacities and capabilities of the population to meet it and make good use of it.

In 2015, Egypt introduced its Sustainable Development Strategy 2030 (Egypt's Vision-2030) that prioritizes providing all Egyptians with safe drinking water and sanitation. Agreement for Climate Change and introduced its Sustainable Development Strategy 2030 (Egypt's vision-2030) that declares Egypt's targets to have a system that respects human rights, citizenships, law application, decentralization, and community participation. Additionally, Egypt vision 2030 changed the definition of Safe Drinking Water and Sanitation (SDW&S) from accessibility to connectivity on national networks. Egypt believes that Investing in SDW&S has major impacts on achieving most of the other sixteen SDGs. However, literatures indicate that SDW&S investments are the least of SDGs investments. Therefore, the question of financial investments for SDW&S is an important issue not only for achieving Goal 6, but also for achieving several other goals.

In Egypt, public investments are the main source of financing SDW&S utilities although this is not the most ideal situation for a developing country. The main role of the government should be to achieve a diverse source of none- state funds such as private sector, local community contributions and other community organizations in addition to the international donor community.

The 2012 UN report stated that globally private sector participation in financing SDW&S is very low and does not exceed 7% of total spending. In 2014, UNCTAD report stated that there is an increased potential for private sector participation in this field to reach about 20% in developing countries financing about USD 9 billion of the total SDW&S investment gap that ranges between USD 42-45 billion.

However, there are many constraints that limit private sector engagements in this sector such as:

1. lack of communication mechanisms between governments and the private sector which make firms are not aware of governments' priorities, plans, policies, and regulations.
2. High- levels statements of intent are not reflected on investments allocated for local governments who implement SDW&S services and would have to deal with private firms.
3. In the current situation, sanitation utilities are not a priority for many poor household categories and hence they are not willing to pay for SDW&S mechanisms and technology. Even well-off households in some communities would not be willing to pay to get appropriate utility.
4. The structure of SDW&S does not allow for the private sector to provide full-services but limits their participation to manufacturing some components, building sanitation units, pit-emptying services, etc.
5. Developing alternative solutions and/or structure is not a priority of the government, particularly since the firms which provide such sanitation services to households are local and small.
6. In Egypt, the role of the private sector has been enlarged since the early nineties due to the implementation of the ERSAP (Economic Reform and Structural Adjustment Program), however, the private sector is engaged in high productive sectors rather than SDW&S. It worth noting that

in 2004, there has been a trend to privatize SDW&S sector but still the share of the private sector in SDW&S is very limited if any.

Full coverage of safe SDW&S cannot be achieved without dedicated political will. Current President addresses SDW&S a human rights issue and has aimed to improve sanitation coverage in the rural areas.

So, the bright side is, the Egyptian government is taking a number of measures to meet SDG6;

- Egypt has 391 plants, only 3 of them are primary treatment plants, 4 are tertiary, and 284 are secondary treatment plants. The current trend is to have all newly built sanitation plants as tertiary treatment plants.
- The Egyptian government is currently supporting a "Hayah Kareema initiative" targeting 58 million Egyptians which is meant to

1. Alleviate the burdens of citizens in the neediest gatherings in the countryside and in slums in urban areas.

2. Comprehensive development of the neediest rural communities with the aim of eliminating multi-dimensional poverty in order to provide a decent and sustainable life for citizens at the level of the Republic.

3. Raising the social, economic, and environmental level of the targeted families.

For such aims to be established, the government is working in the first place to meet SDGS 5& 6 because without guarantying equality and giving people their basic rights in accessing clean and easily

available water sources, there is I think would be no need to further proceed with other issues including education, health system, etc.

On another hand, climate change is expected to significantly affect developing countries due to limited social, technological, and financially resources needed for adaptation. Therefore there is a need to make additional investments in SDW&S to make these services climate resilient. Climate change in Middle East is projected to cause sea-level rise, droughts, floods, and less precipitation – which together will further increase levels of water stress in the region that is already characterized as the world's most water-stressed region. Accordingly, huge investments will be needed for adaptation measures and approaches focusing on R&D, innovative technologies to enhance water-use efficiency, non-conventional sources of water, new infrastructures, institutional reforms, capacity building32 and awareness campaigns. In Egypt, over the last few years there has been considerable recognition of climate change impacts, however, a need to determine the best way to introduce climate change adaptation activities, effective comprehensive planning that takes into consideration all relevant sectors such as agriculture, infrastructure along with the environment.