

# 5th Mediterranean Water Forum

## TUNIS 5-7 February 2024

### Side Event SONEDE: “SONEDE Strategy for Drinking Water Supply under extreme Climate Change events”

The control and management of water resources are universally recognized as essential conditions for ensuring sustainable economic development, securing water resources and ensuring access for all to sustainably managed water supply services as defined in SDGs 6 of the 2030 Agenda (*Goal 6: Ensure access to water and sanitation for all. Access to safe water, sanitation and hygiene is the most basic human need for health and well-being*).

These challenges become increasingly important because Tunisia, a country with a semi-arid climate, has to cope with severe water stress in light of deep uneven geographical distribution of available water resources, in addition to the problem of salinity.

Climate change, as well as the health and economic context, makes the strategic management of water resources more complex and urgent, particularly in a global environment of ecological transition.

Tunisia benefits from a long-standing ancestral tradition of good water management that dates back to the Carthaginian Era (814-146 BC) until the 2<sup>nd</sup> century AD with water transported through Roman aqueducts in Zaghouan. The country has a highly variable annual rainfall with rainfall falling below 100 mm in the extreme south and can exceed 1,500 mm in the north-western region which forms only a narrow fringe of the territory.

Drought in Tunisia, combined with the variability of the Mediterranean climate, makes water a scarce resource that is unevenly distributed in time and space.

The average conventional resources that can be mobilized, estimated at 4.8 billion m<sup>3</sup>/year, are exploited at a rate of 20% for drinking water and 80% for irrigation. These resources have witnessed a significant decline in recent years.

TUNISIA is increasingly affected by climate change, leading to strong negative impacts on the water sector and placing it under a state of absolute water shortage. Tunisia, a less industrially developed country, has little or no responsibility for the devastating consequences caused by climate change.

In 2022, drinking water needs reached 800 Mm<sup>3</sup> of which 50 Mm<sup>3</sup>, or 6%, comes from desalinated water. The current National Desalination Program provides for the construction of new seawater and brackish water desalination plants. The target annual production is 320 Mm<sup>3</sup>/year, representing 30% of drinking water needs by 2050.

Studies and forecasts at both national and international levels agree that the negative impacts of climate change will be more severe in the coming years and force us to adopt a new flexible strategy both for enhancing service and securing drinking water supply.

This strategy is composed of several pillars, including strengthening management capabilities and improving performance with the aim of modernizing the company through optimal management of resources, digital transformation, energy transition, enhancing the service quality provided to its customers, ensuring its financial sustainability, as well as preserving its assets and improving their management.

With regard to water supply, this flexible strategy is reflected in the implementation of major projects to transfer surplus water from the north, water transfer axis projects, water highways in rural areas, and network performance improvement projects, as well as the national water desalination program.

This National Desalination Program is subject to reflection and remains open for review, which will lead to increased use of seawater desalination and an expected schedule for extensions and entry into service of desalination plants.

Water desalination is an energy-intensive technology that has major financial impacts on drinking water production costs. Thus, the National Desalination Program must be based on the virtuous “Water – Energy” Nexus through the use of renewable energies by implementing several photovoltaic power plants for a total capacity of 180 MWp.

The experience that SONEDE has accumulated over several decades is mainly exported to Africa through its subsidiary SONEDE INTERNATIONAL created in 2009.