Towards COP27: Arab Regional Forum on Climate Initiatives to Finance Climate Action and the SDGs

Project Fact Sheet

Excess Water Diversion from the North to Central Tunisia

TUNISIA

Climate finance purpose
Adaptation
Sector
Water
Geographic coverage
National, Sub-National/ Beja, Bizerte, Tunis, Manouba, Ariana, Ben Arous, Zaghouan and Kairouan Governorates.
Description
The project aims at storing and diverting water from the northern to the central regions of Tunisia, and also at the protection from flood damages. It will include several components with the specific objectives of ensuring the provision of drinking water, ensuring optimal water use and reducing water deficit during drought years.
Beneficiaries
Populations of the eight governorates covered by the project. = 5,8 million
Climate rationale
Climate varies in Tunisia from rainy and humid in the far north to semi-arid and dry in the center of the country and south. Since the 1950s, the Ministry of Agriculture, Water Resources and Fisheries has adopted a water diversion strategy to ensure a fair distribution of available water resources to all areas. Increased population density and severe climate change occurrences in the center and the south areas have however shown that the old strategy was no longer sufficient to meet water needs for drinking and irrigation, and thus came the need for a larger water diversion project.
Expected outcomes
• Improved availability of drinking water in the greater Tunis region and the governorates of Zaghouan and Kairouan in the horizon 2030-2050. • Optimal use of surplus water during periods of abundance in the northern areas. • Increased water quantities in storage facilities in central regions. • Availability of water for public irrigated areas. • Restoration of water aquifers. • Completion of the Maleh dam with a storage capacity of 80 million cubic meters. Outcomes contribute to SDG 6 and 13.
GHG reduction target
Due to the energy mix for electricity generation in Tunisia which is highly dependent on the use of fossil fuels, the energy optimization of the transfer system with renewable energies would decrease significantly the greenhouse gas emissions. The table shows the estimate of the CO_2 emissions avoided for each alternative evaluated to reduce the need for pumping with conventional (combustible) resources: (i) gravity transfer, (ii) energy recovery by small hydropower stations (iii) installation by floating PV.

Table1: Estimation of CO_2 emissions avoided for each energy optimization alternative of the transfer.

ALTERNATIVE	ENERGY ECONOMICS OR PRODUCED (GWh/year)	EMISSIONS CO_2 AVOIDED (ton/year)
Gravity transfer: Melah Upstream	23,4	5 850
Energy recovery: MCH	29,4	7 350
FPV to meet total pumping demand	206.6	51 648

Total reduction of CO_2 emission could be in the range of 65 000 t/year

13 September 2022

Project implementation period	
Planned start date: 01/2024 Planned end date: 01/06/2032	
Total Project Cost	
Amount in National Currency (TND): 2529.7 million Amount in US$ equivalent (per 1 August 2022 exchange rate): 789.470 million Governmental Funding in National Currency (TND): 487.6 million Governmental Funding in US$ equivalent: 152.000 million External Loans in National Currency (TND): 1677.2 million External Loans in US$ equivalent: 523.526 million Grants in National Currency (TND): 364.9 million Grants in US$ equivalent: 113.611 million	
Financing requirement	
Amount in National Currency (TND): 1677.2 million Amount in US$ equivalent (per 1 August 2022 exchange rate): 523.526 million	
Expected Tenor / Duration of financing: 8 years	
Project Status: Feasibility/ Financing being arranged	
Contractual Structure: Government Ownership	
Project proponents	
The General Authority for Dams and Large Water Works; The German Bank for Reconstruction and the European Union	
Contact persons	
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Emblem/ Photo, chart or another visual asset	
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