

# Enhancing Water Resource Management - WAMA

## Enhancing conditions for an improved legal, financial, institutional, and organizational framework for wastewater management in Lebanon

### Background

Lebanon has been facing a compounded crisis since 2019. The effects of the crises deeply impacted the water and wastewater sector in Lebanon, leaving the country facing major challenges in its efforts to improve wastewater management.

The country produces nearly no power through its public utility, Electricité du Liban (EDL), which has put unprecedented burden on households, businesses, and public institutions.

The four regional water establishments' (WE) financial and technical resources are at the moment insufficient and inadequate to carry out wastewater management, as they also suffer from unreliable public power supply and cannot afford expensive private alternatives, personnel restraints, and tariffs (both fees and collection rates) that do not meet operating costs by far.

The WEs have therefore been hesitant to take over the operation of wastewater systems which are currently partly operated by the Council for Development and Reconstruction (CDR) or Municipalities although the operation, legally, is under the WE's mandate.

The Lebanese Government, and, in particular, the Ministry of Energy and Water (MoEW) have recognised the challenges posed by inadequate wastewater management and set out to address them in the National Water Sector Strategy (2012, updated in 2022), with a set of governance, management, and infrastructure improvement measures. Furthermore, the MoEW together with supporting partners consisting primarily of donors, lenders, and implementing agencies, have responded to the impending collapse of the (waste-)water sector as outlined in two key strategic documents.

The first of these documents is the "Roadmap to Recovery of the Water Sector in Lebanon", which has a 5-year planning horizon and aims to bridge between emergency measures needed to maintain services and longer-term reforms.

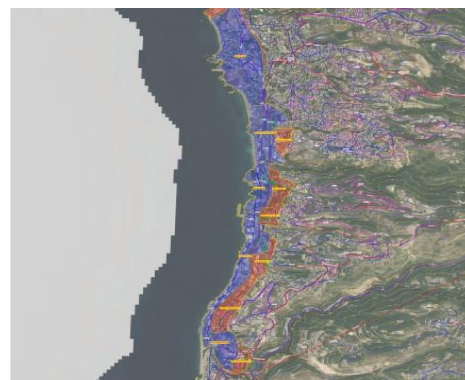
The second document is the "Wastewater Treatment 2 years Support Concept Model" which aims to support wastewater management by water establishments (WEs) amid the compounded crises in the country and its repercussions on the sector.

To support the MoEW in its short to long-term goals GIZ's "Enhancing Water Resource Management" (WAMA) project aims to lay the foundation for improving the legal, financial, institutional, and organizational framework for wastewater management.

Project name	Enhancing Water Resource Management (WAMA)
Commissioned by	German Federal Ministry for Economic Cooperation and Development (BMZ)
Project region	Lebanon
Lead executing agency	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
Governmental Partner	Ministry of Energy and Water (MoEW)
Duration	April 2022 – March 2025



Tebnine Wastewater Treatment Plant



Map showing the water network in the Jbeil coastal area (Nahr Ibrahim, Halat, Fidar, Blat, Jbeil)

## Our Approach

The two aforementioned documents, follow and support a longer-term reform agenda aimed at improving governance in the water and sanitation sector. They lay the foundations for an increase in revenues by the WEs once Lebanon's economic crisis defuses. Both key documents identify the contributions and decisions to be made by the Lebanese Government and the MoEW on the one hand, and the necessary financial and technical support from the international community on the other.

The project, WAMA, fits into the target structure of these key documents, supporting measures defined as necessary in the short as well as the medium/long-term.

The project's components have been defined as follows:

- Pilot energy efficient sludge management in one wastewater treatment plant.
- Support one WE in improving its technical and financial capacities, by implementing measures to monitor water production and supply in one selected area.
- Assistance to the four WEs in their assumption of responsibility for wastewater collection and treatment.
- Support outreach activities as well as a regional exchange on water and wastewater sector topics.

Aiming to improve conditions for the framework of wastewater management in Lebanon, the project is expected to make a direct contribution to attaining the following Sustainable Development Goals (SDGs):

**SDG 6** (Ensure availability and sustainable management of water and sanitation for all), specifically to targets 6.3 and 6.4,

**SDG 7** (Ensure access to affordable, reliable, sustainable, and modern energy for all), specifically to targets 7.2 and 7.a.

**SDG 13** (Take urgent action to combat climate change and its impacts), specifically to target 13.2.

BMZ's Water Strategy which was published in 2017 responds to the challenges of the 2030 Agenda and has defined four objectives with a direct bearing on SDG 6.



By improving access to sanitation and promoting the proper management of wastewater to protect water resources, the project will contribute directly to objectives 1 and 2 of the BMZ strategy. In particular, it will build the capacities of relevant actors for the wastewater sector at MoEW and in selected public water supply and sanitation utilities.

## Expected Results

The project aims at achieving the following results:

**Module Objective:** Conditions have been created for improving the legal, financial, institutional, and organizational; framework for wastewater management.

**Output 1:** An energy-efficient sewage sludge management system has been piloted by a selected WE at a wastewater treatment plant.

**Key envisioned activities:**

- Planning and construction of a sludge management system.
- Providing technical and process advice to MoEW on improving inter-ministerial coordination standards and guidelines for sewage sludge management and re-usage.

**Output 2:** The conditions for increasing the technical and financial capacities of one WE have improved.

**Key envisioned activities:**

- Designing the metering station network required to measure water input, installation of necessary water meters and valves.
- Update available information on customer database.

**Output 3:** Conditions for WEs to assume responsibility for wastewater collection and treatment have improved.

**Key envisioned activities:**

- Performing energy audits in selected wastewater treatment plants.
- Support WEs in the supervision of private operators of wastewater treatment plants.

**Output 4:** Lebanese participation in outreach activities and the sharing of information on water and wastewater sector issues has increased.

**Key envisioned activities:**

- Supporting regional exchange formats on sludge management (e.g., with Egypt and Jordan)

Published by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH  
Registered offices Bonn and Eschborn, Germany  
Water Resource Management (WAMA)  
Dynagraph Building 155 GF St. 702  
Hazmieh, Beirut  
[www.giz.de](http://www.giz.de)

As of February 2023  
Design WAMA, Beirut

Photo credits @GIZ/ Jonathan Jene

Text WAMA

GIZ is responsible for the content of this publication.

On behalf of Federal Ministry for Economic Cooperation and Development (BMZ)

In cooperation with

