

Environmental and Social Data Sheet

Overview

Project Name:	Al Ghadir Wastewater
Project Number:	2010-0281
Country:	Lebanon
Project Description:	Expansion of the existing wastewater preliminary treatment plant, located in Southern Beirut, and its conversion into a primary treatment plant and construction and upgrade of sewer networks in the catchment area.
EIA required:	Yes
Project included in Carbon Footprint Exercise ¹ :	no

Summary of Environmental and Social Assessment, including key issues and overall conclusion and recommendation

The project responds to clear needs to improve the urban living conditions in the Beirut area for about one million inhabitants, a quarter of the Lebanese population. The project was prepared within the scope of the Mediterranean Hot Spot Identification Programme for the Depollution of the Mediterranean Sea (MeHSIP) under the Horizon 2020 Initiative of the European Union.

The project is also expected to improve the quality of coastal waters and reduce pollution in the Al-Ghadir drainage area. The project will therefore be vital to the environmental sustainability of the urbanised areas in Beirut.

The project will have an important development impact, by increasing the access to sanitation in the project area through connection of previously unconnected households and through connecting existing sewers currently discharging into the sea to the waste water treatment plant.

An Environmental and Social Impact Assessment (ESIA) in line with the Bank's Environmental and Social Standards has been prepared under the feasibility study funded by the EU and accepted by the competent authority, the Ministry of Environment. According to the assessment, the project will have no negative impact on nature conservation areas.

The project is therefore acceptable for Bank financing.

The acceptance by the Bank of the Environmental and Social Action Plan and of the updated ESIA (comprising a biodiversity study along future sewer routes) as well as the acceptability of the Stakeholder Engagement Plan are conditions and undertakings, respectively in the Bank's Finance Contract.

¹ Only projects that meet the scope of the Pilot Exercise, as defined in the EIB draft Carbon Footprint Methodologies, are included, provided estimated emissions exceed the methodology thresholds: above 100,000 tons CO₂e/year absolute (gross) or 20,000 tons CO₂e/year relative (net) – both increases and savings.

Environmental and Social Assessment

Environmental Assessment

Legal framework

The national environmental protection law was issued in 1992 (Law No. 444), setting the fundamental principles that govern the management of the environment and the use of natural resources. The national legislative framework comprises laws, decree laws, decrees and resolutions/decisions. International treaties/agreements ratified by Lebanon (such as the Barcelona Convention) have second priority in the Lebanese legislative framework, following the country Constitution.

To date, and relative to the Al Ghadir project and others similar to it, Lebanon lacks legislation and/or standards related to:

- Guidelines for effluent/wastewater reuse;
- Guidelines for the disposal and reuse of sewage sludge;
- Soils and sediments standards; and
- A framework law pertaining to the protection, management, conservation and utilization of the coastal zone.

Guidelines for wastewater reuse and sludge application on land have been prepared in 2010 by the Food and Agriculture Organization (FAO) in collaboration with the Ministry of Energy and Water (MoEW) but not yet adopted.

In accordance with the EIB “Statement of Environmental and Social Principles and Standards” provisions, whenever there is gap in relevant national legislation, EU standards will be referred to, specifically for sludge management (set by the Directive 86/278/EEC on Sewage Sludge Application on Land).

Environmental Quality Standards (EQS) and Emission Limit Values (ELVs)

Environmental quality standards for bathing waters, as well as limits for discharge (ELVs - Emission Limit Values) to sewers and surface waters are in general similar to EU standards, with a few exceptions.

Overview of Environmental and Social Impacts

A full ESIA was conducted and subsequently subjected to public consultation. Two consultation meetings took place in Beirut at different stages of the ESIA process (at the scoping report and ESIA report preparation phase).

The ESIA identified the potential impacts of the project and then evaluated and ranked them according to their likelihood of occurrence (A. High, B. Medium and C. Low) cross-tabulated with their consequence rating criteria reflecting the consequence and significance levels.

A summary of impacts from WWTP's and networks' construction and operation after mitigation is shown in the tables below.

Summary of WWTP Construction and Operation Impacts with Mitigation Measures

Impact/Pathway	Water Resources	Air Quality	Acoustic Environment	Landscape	Land Use	Soil & Sediments	Biodiversity	Socio-Economic Context	Occupational H&S
Construction Phase									
General Construction Activities		1B	2C	1C			1A		2A
Water Consumption	1A								
Oil Spills & Solid Waste Generation	2A					2A			
Excavation and Trenching						2A			
Dredging Works (Phase II)	2B					2B			
Job Creation								6C	
Land Expropriation									
Traffic Generation								2A	
Operation Phase									
General Operation (Phase I)	6B		1A				6B		2B
General Operation (Phase II)			1A	2C			6B		2B
Plant Failure Conditions	2A								
Water Consumption	2B								
Oil Spills	2A								
Wastewater Leakages	2A								
Solid Waste/ Sludge Generation						1A			
Odor Generation		1B							
Power Generation & Sludge Treatment		2B							
Public Health								6C	
Job Creation								6C	

In summary, the WWTP component was evaluated as having a positive impact in terms of water quality (improvement of seawater quality as a result of plant upgrade), biodiversity (especially marine life), and of socio-economic conditions (job creation, enhanced environmental and public health conditions). The main negative impacts remaining, even after mitigation measures, consist of minor risks related to water, soil and sediment contamination (from plant failure conditions, oil spills, and wastewater leakages), air and noise pollution (noise and emissions during construction, odour generation and emissions from power generation during operation), impacts on landscape from land reclamation, and occupational risks and hazards. It was also highlighted that impacts from dredging and offshore land reclamation works would need to be further assessed prior to project implementation, once the detailed geotechnical survey will have been carried out.

Summary of Sewer Networks Construction and Operation Impacts with Mitigation Measures

Impact/Pathway	Water Resources	Air Quality	Acoustic Environment	Landscape	Land Use	Soil & Sediment	Biodiversity	Socio-Economic Context	Occupation at H&S
Construction Phase									
General Construction Activities		1B	2C	1C	2A		2A		2A
Water Consumption	1B								
Oil Spills & Solid Waste Generation	2A								
Excavation and Trenching						2A			
Job Creation								6C	
Land Expropriation								1C	
Traffic Generation								2A	
Operation Phase									
General Operation	6C		1A	1A		6B	6B		2B
Oil Spills	2A								
Wastewater Leakages	2A								
Public Health								6C	
Cultural Heritage								6C	

For the network component of the project, mainly positive impacts were identified. These consisted of enhanced water, soil and sediment quality as well as increased biodiversity from reduced uncontrolled discharges, in addition to better public health conditions and job creation, mainly during the construction phase. The negative impacts identified are mainly related to noise and air emissions during construction, disturbance to soil and to habitats along the defined construction routes, risks of pollution from oil spills and wastewater leakages and potential land losses from land expropriation. It was highlighted that a biodiversity study would need to be conducted over the networks construction area once the routes are finalized.

Compared to the current situation, all current negative impacts from the discharge of wastewater will be reduced through the project.

An Environmental and Social Action plan (ESAP) will be prepared and its acceptance by the Bank shall be a condition for first disbursement.

Social Assessment

In the coming years the project will comprise several construction sites for the plant and around 300 kilometres of sewers south of Beirut. During the construction phase, it will therefore create job opportunities. Neither the new WWTP nor the construction of sewers will require resettlement measures.

During the operation phase the following positive social impacts are mentioned:

- Increased public health as a result of the availability of sewer connections,
- Reduction of nuisance (noise, odour, visual impact) and in general better living conditions for the population currently living close to the discharge points of untreated sewage,

The main negative social impact during the operation phase will be the increase of the water bill as soon as households get connected to sewers and billing waste water services will begin. However, the tariffs will remain within the usual affordability limits for the poorest households, as shown in the affordability analysis.

An Environmental and Social Action Plan (ESAP) shall be drafted. Its acceptance by the Bank shall be a condition for the first disbursement.

Public Consultation and Stakeholder Engagement

Public participation and consultation is foreseen in the relevant EIA legislation (see above) and was carried out for the ESIA study.

A stakeholder engagement plan has yet to be drafted. Its implementation will be included as an undertaking in the finance contract taking into account, among others, the conflict environment in Lebanon.