



Concept Environmental and Social Review Summary

Concept Stage

(ESRS Concept Stage)

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I. BASIC INFORMATION

A. Basic Operation Data

Operation ID	Product	Operation Acronym	Approval Fiscal Year
P504170	Investment Project Financing (IPF)	SGBWSP	2025
Operation Name	Second Greater Beirut Water Supply Project		
Country/Region Code	Beneficiary country/countries (borrower, recipient)	Region	Practice Area (Lead)
Lebanon	Lebanon	MIDDLE EAST AND NORTH AFRICA	Water
Borrower(s)	Implementing Agency(ies)	Estimated Appraisal Date	Estimated Board Date
Lebanese Republic	Council for Development & Reconstruction, Beirut and Mount Lebanon Water Establishment	07-Nov-2024	14-Jan-2025
Estimated Concept Review Date	Total Project Cost		
13-Feb-2024	257,800,000.00		

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Proposed Development Objective

The project development objective is to improve the water supply services in the Greater Beirut and Mount Lebanon area.

B. Is the operation being prepared in a Situation of Urgent Need of Assistance or Capacity Constraints, as per Bank IPF Policy, para. 12?

No

C. Summary Description of Proposed Project Activities

The proposed Project builds on the ongoing water reform agenda and the progress already achieved under the GBWSP, while addressing emerging challenges. The proposed Project (hereinafter “the Project” or “SGBWSP”) will finance the completion of the water supply infrastructure, ensuring the achievement of the objective of bringing additional water supply to extended areas of GBML. In addition, the Project will support the necessary add-ons to the Wardanieh WTP to manage increased levels of pollution expected at different times of the year. The SGBWSP will also support institutional strengthening to improve the operational and commercial performance of the BMLWE in line with the MoEW vision for



the recovery of the sector outlined in the NWSS 2024-2035 and the conclusions of analytics funded by the World Bank and other donors. The project will consist of six components: Component 1: Completing remaining bulk water infrastructure. This component will finance investments to complete the remaining bulk water infrastructure started and significantly advanced under the GBWSP to ensure water is conveyed to the existing water supply distribution network serving the GBML area. It will also finance the required construction supervision services for all the works. The component will have the following subcomponents: (i) completion of the remaining tunnel and ancillary works; (ii) remaining Pipeline Works, which include the completion of the twin transmission pipelines; and (iii) construction of three regional reservoirs to increase the overall resilience and efficiency of the distribution system by allowing the BMLWE to regulate the flow of the stream depending on the fluctuations in water demand. Component 2: Strengthening treatment processes for improved water quality This component will finance adjustments (add-ons) to the Wardanieh WTP treatment processes to enhance the resilience of the Wardanieh WTP to variable raw water quality while maintaining operational costs within the financial capacity of the BMLWE. In addition, this component will finance activities to improve water quality management at the BMWLE, including the rehabilitation and upgrade of BMLWE's laboratory at the Dbayeh through the expansion of existing facilities and the purchase of sufficient equipment, laboratory tools and chemicals, and the reinforcement of chlorination practices to ensure residual chlorine in BMWLE's distribution network. Component 3: Reforms for improved utility operations This component will finance activities aimed at improving the operational, financial and customer orientation performance of the BMLWE, in alignment with the vision for the recovery of the sector in Lebanon. These activities are divided in three sub-components: (i) NRW reduction in four zones in the GBML area, namely Babdaa Suburbs, Coastal Metn, Tallet EL Khayat, and Bourj Abu Hadar (ii) modernization of BMLWE's operational and commercial management systems, such as BMLWE's Information and Communication Technology (ICT) infrastructure, the Supervisory Control and Data Acquisition (SCADA), Enterprise Resource Planning (ERP) software, customer management processes, and entity audits; and (iii) improved communications, which will finance the development and implementation of the BMLWE's Communications Strategy and the implementation of semi-annual public awareness campaigns. Component 4: Land Acquisition and Resettlement Compensation : This component will include land acquisition and resettlement compensation to displaced people for: (i) the reservoirs Hadath 90 and Hazmieh 90 to be constructed under subcomponent 1.3; (ii) a section of the twin transmission pipelines under subcomponent 1.2; (iii) the Joun Regulation Structure (JRS) to control the raw water flow to the WTP under subcomponent 1.1, and (iv) the land for the outflow of the Wardanieh WTP. The implementation of this component will follow the provisions of the resettlement action plan (RAP). Component 5: Project management and capacity building. This component will finance the operation of the Project Management Units (PMU). In addition, this component aims to address gaps in female representation in technical positions through focused training and capacity-building activities for women, enhancing their skills for technical and managerial positions. As such, this component will support an apprenticeship program that will target female participants to facilitate exposure to professional opportunities within BMLWE. The program will not be exclusive to women but will aim to have more than 50 percent of female participation. The BMLWE will benefit from the work of young and well-trained apprentices, while the new graduates will be certified on utility-related technical skills (like NRW reduction, SCADA management, asset management, etc.) and gain on-the-job experience that will enhance their competitiveness on the job market. Component 6: Contingent Emergency Response Component (CERC). This component will have zero funding allocation at the onset and will only be triggered in emergency circumstances.

D. Environmental and Social Overview

D.1 Overview of Environmental and Social Project Settings



The project will finance the 1) the remaining tunnel works and pipeline in Khalde, Hadath and Damour areas which are situated south of Beirut and 2) the remaining works for the WTP in Wardaniyeh, south of Beirut. Since the declaration of effectiveness in December 2012 of the first Greater Beirut Water Supply Project (GBWSP), the country context has evolved significantly due to multiple crises including the Syrian refugee influx of 2012, the economic crisis in October 2019, the COVID19 pandemic in March 2020, the Port of Beirut explosion of August 2020, Ukraine-Russia conflict, and the more current Middle East conflict since October 2023. Poverty rates have increased particularly in the hardest hit areas in the North and South and the Bekaa valley, which are suffering comparatively more due to higher poverty rates as a result of the economic crisis, the effects of the war and the Syrian refugee influx respectively. Thus, social tensions are also high in the project areas which are characterized as generally low-income dense urban areas (Hadath and Khalde) to semi-urban agricultural areas (Wardaniyeh and Damour) with small to medium scale protests erupting frequently nationwide. Moreover, while water in Lebanon is paradoxically abundant, it is scarce due to climate change, unsustainable levels of groundwater exploitation and seawater intrusion in coastal aquifers. The widespread financial strain has caused some citizens to stop paying their water bills altogether, impeding the Water Establishments' functioning and eroding public trust in the Government's ability to carry out its duties.

D.2 Overview of Borrower's Institutional Capacity for Managing Environmental and Social Risks and Impacts

The project will be implemented as per the arrangement made under the first GBWSP. The Ministry of Energy and Water (MoEW) will be the administrative entity responsible for executing the project and will delegate the implementation of Component 1 to CDR, and the implementation of Components 2 & 3 to the PMU at BMLWE. Both PMUs are currently implementing the first GBWSP and have developed the capacity in implementing Bank-financed projects. Both PMUs have each an assigned Environmental and Social (E&S) focal point who are following up on the monitoring and implementation of the E&S requirements of the first GBWSP project which is under the safeguards policies. Under the parent project, OP 4.01 and 4.12 were triggered and the PMUs accordingly prepared an Environmental and Social Impact Assessment (ESIA) and Resettlement Action Plan (RAP) which were cleared and disclosed on the client websites (dated 2010). Recently, the PMU coordinator and E&S focal points have attended the World Bank ESF PIU training in Beirut. Under the new proposed loan, both PMUs will maintain the same E&S focal points and will strengthen the PMUs capacities by hiring external E&S consultants to help in preparation of the ESF joint documents needed at the different stages of the project lifecycle. Each PMU will also hire an Environmental, Social, Health & Safety (ESHS) specialist for monitoring implementation of the ESHS instruments and this provision will be included in the ESCP. Moreover, the E&S focal points and ESHS specialists who will be hired will receive additional capacity building to ensure satisfactory follow up on the implementation of the ESF instruments.

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II. SCREENING OF POTENTIAL ENVIRONMENTAL AND SOCIAL RISKS AND IMPACTS

A. Environmental and Social Risk Classification (ESRC) Substantial

A.1 Environmental Risk Rating Substantial

Proposed environmental risk rating of this new project is substantial as per Annex 1 of the October 2023 E&S Directive. While the first GBWSP was classified as a Category A under the Bank Operation Policies on safeguards with OP4.01 & OP4.12 triggered, the substantial risk for the new project is justified by the fact that a significant percentage of the construction works have been completed under the ongoing GBWSP. The remaining works are associated with typical construction E&S risks for the remaining tunnel works, pipeline works and the Wardaniyeh WTP. These risks



will potentially include air, dust and noise emissions, generation of solid and liquid non-hazardous wastes, pollution of soils, use of chemicals, unsustainable use of construction materials from borrow-pits/quarries and the potential disruption to natural habitats and eco-systems linked to such quarries. In addition, health and safety risks to workers include working at height and in confined spaces, falls, trips, electrocution, slippage, noise, vibration, moving objects, airborne dust and materials, manual handling...etc. For the construction works which will take place nearby existing communities, there is potential high exposure levels to health and safety risks from dust and noise emissions, blocked or reduced mobility, road accidents from construction vehicles, lack of access to services and businesses, etc. These risks though significant in nature yet typical, limited to construction sites, temporary, predictable, reversible and can be avoided or mitigated with technical feasible solutions and proper implementation of E&S mitigation measures following the risk management hierarchy, and with strong E&S site monitoring and supervision, as per the implementation of the first project, taking also into consideration application of ESF requirements proper to this operation. Operational E&S risks are associated with the WTP. It includes aspects e.g. abstraction of large quantities of fresh water from

Moderate

A.2 Social Risk Rating

The social risks and impacts of the project are considered moderate, with minimal significance due to the completion of most works under the first GBWSP. Health and safety impacts at the Wardaniyeh WTP site are expected to be low to moderate, with the site being isolated, surrounded by uninhabited and seasonal housings, fenced, and guarded. Labor influx risks and associated SEA/SH (low) are low as workers are likely to be local, similar to the first GBWSP. Low to moderate risk of ineffective communication and consultation with affected communities may exist. This will be addressed through stakeholder engagement as per ESS10. Temporary traffic disruptions and nuisances are anticipated during remaining tunnel and pipeline works. The project aims to serve vulnerable groups in Greater Beirut areas, which include vulnerable groups in poverty pockets and particularly those in the low-income neighborhoods of Southern Beirut, therefore the risk of exclusion is deemed negligible. Water fees post-project are expected to be affordable, even to vulnerable groups, improving upon the current expensive private water supply (due to lack of public water supply) , with installment payment options remaining available. No new land acquisitions are required for the new loan, as these were completed under the first GBWSP, with compensation nearly finalized. Monitoring and regular reporting of RAP implementation and PAP compensation collections will continue. Any additional mitigation measures will be identified through a gap assessment of the ESIA from the parent project.

B. Relevance of Standards and Policies at Concept Stage

B.1 Relevance of Environmental and Social Standards

ESS1 - Assessment and Management of Environmental and Social Risks and Impacts

Relevant

The initial Greater Beirut Water Supply Project (GBWSP) was classified as Category A, indicating significant environmental and social (E&S) impacts. It triggered the World Bank's E&S safeguard operational policies OP4.01 and OP4.12. To address these impacts, an Environmental and Social Impact Assessment (ESIA) and a Resettlement Action Plan (RAP) were developed, consulted upon with stakeholders, cleared, and disclosed on both the client's and the World Bank's websites. For the upcoming project, a gap assessment of the existing ESIA will be conducted prior to the project's appraisal to identify any new or additional E&S risks that need to be addressed in line with the Environmental and Social Framework (ESF). This assessment will check for changes in salient characteristics that may

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require further mitigation measures and determine any additional ESF requirements, such as water balance considerations. The findings will be incorporated into an addendum to the ESIA, which will be subject.

ESS10 - Stakeholder Engagement and Information Disclosure

Relevant

The project's stakeholders include local communities, women, men, impoverished Lebanese, non-Lebanese, and displaced persons. Institutions like the Ministries of Energy and Water, Environment, Finance, CDR, Water Establishments, academic entities, and NGOs/CSOs are also key. Vulnerable groups, such as the illiterate, disabled, internet-inaccessible, and elderly will receive special focus. The CDR and BMLWE will craft a joint Stakeholder Engagement Plan(SEP), to be consulted, cleared, and disclosed pre-appraisal, detailing stakeholder identification and engagement methods, including a grievance mechanism. Although the current GM is functioning adequately, the new loan will introduce measures to better communicate uptake channels.

ESS2 - Labor and Working Conditions

Relevant

The project will engage: (i) direct workers (consultants from CDR and BMLWE PMUs), (ii) contracted workers for pipeline, tunnel, and Wardaniyeh WTP remaining works, and (iii) primary supply workers providing construction materials regularly. Currently, Wardaniyeh WTP has up to 150 workers, and pipeline works have 60, with OHS/ESHS measures implemented following the respective CESMPs. A joint LMP by CDR and BMLWE PMUs will be prepared, cleared, and disclosed pre-appraisal, identifying worker types/numbers, OHS/labor risks, and detailing labor laws/policies per Lebanese laws and World Bank ESS2, work conditions, non-discrimination, SEA/SH prevention, child/forced labor prohibition, and minimum labor age. A grievance mechanism for project workers will be outlined in the LMP, which also mandates a Code of Conduct prohibiting child and forced labor, to be signed by all workers.

ESS3 - Resource Efficiency and Pollution Prevention and Management

Relevant

The WTP sources water from Joun reservoir, supplied by Awali and Litani Rivers through different existing reservoirs. Despite poor water quality, conventional treatment at Wardanieh WTP ensures compliance with Lebanese and WBG standards. High water demand may pose risks to agricultural users reliant on Joun for irrigation. A water balance, part of the ESF gap assessment and included in the ESIA addendum, will be prepared, maintained, and monitored to mitigate impacts, adhering to the risk management hierarchy. Water conservation awareness campaigns will be part of citizen engagement. The project's construction and operation air emissions, effluent, sludge, and waste management are addressed in the existing ESIA mitigation measures and further assessment will be conducted. Additional measures, if needed to meet ESS3 standards, will be added within the ESIA addendum.

ESS4 - Community Health and Safety

Relevant

Joun reservoir's water quality is currently poor. The Water Treatment Plant (WTP) will employ treatment technologies to ensure that the treated water complies with both Lebanese and international standards for potable water, safeguarding public health. To ensure that water only meeting such standards is distributed, contingency plans will be established during the plant's operation. Remaining construction activities may negatively impact traffic and road safety due to the movement of construction vehicles and equipment. The ESF gap assessment will propose necessary measures to restrict community access to construction sites during active work periods, alongside other safety measures to protect local communities. Contractors will be obligated to prevent community exposure to any



hazardous activities, materials, or substances. Also, an SEA/SH Action Plan will be developed as part of the Labor Management Procedures (LMP) standalone document. Dam safety will be further assessed.

ESS5 - Land Acquisition, Restrictions on Land Use and Involuntary Resettlement Relevant

ESS5 applies. The original RAP from the first GBWSP, disclosed in August 2010, remains valid as no new expropriations are needed under the new loan. All expropriations were completed and most compensations collected. Compensation tracking and PAP notifications are documented, monitored and updated regularly in quarter progress reports prepared by CDR and BMLWE PMUs. Upcoming stakeholder engagement will reiterate ESS5's relevance and the RAP's availability on official websites. Unclaimed compensations by project end will be held in ESCROW account, with OESRC guidance for managing closure and completion of projects which have outstanding E&S issues will be referred to and documented, as needed.

ESS6 - Biodiversity Conservation and Sustainable Management of Living Natural Resources Relevant

The project activities may have adverse impacts on existing aquatic and terrestrial ecosystems and natural habitats. According to the Bank-cleared ESIA (2010) conducted for the parent project, the ecosystems which fall within the project influence are either highly degraded or with no important aquatic or floral biodiversity. The aquatic species in Joun reservoir were determined to be 'very common'. Therefore, based on the existing ESIA, biodiversity management plans are not required however the ESF Gap Assessment will confirm if any additional mitigation and management measures should be developed and incorporated in the addendum to the 2010 ESIA to avoid adverse impact on biodiversity and living Natural Resources, including ecosystem services.

ESS7 - Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities Not Currently Relevant

No indigenous people exist in Lebanon. Therefore ESS7 is not relevant.

ESS8 - Cultural Heritage Not Currently Relevant

According to the parent project ESIA, no significant physical cultural resources exist within the scope of influence of the project. All deep excavations are already completed. The remaining works are for water pipelines which will be laid down in existing streets in populated urban areas. Based on the parent project ISRs, Bank Team site visits, there are no tangible or intangible cultural heritage sites heritage, which may be recognized and valued at a local, regional, national or global level exists in the locations where the remaining works will take place. However, chance-find procedures, including stop of work and reporting to the PMU and relevant authorities will be added as part of the Contractors' contract and C-ESMP. It will also be required in the ESCP, as a precautionary measure if any antiquities are accidentally discovered.

ESS9 - Financial Intermediaries Not Currently Relevant

No FIs are involved in this project. ESS9 is not currently relevant.

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B.2 Legal Operational Policies that Apply

OP 7.50 Operations on International Waterways

No

OP 7.60 Operations in Disputed Areas

No

B.3 Other Salient Features

Use of Borrower Framework

No

This project does not use the Borrower's Framework

Use of Common Approach

No

This project does not use the common approach.

C. Overview of Required Environmental and Social Risk Management Activities

C.1 What Borrower environmental and social analyses, instruments, plans and/or frameworks are planned or required by Appraisal?

E&S instruments preparation: CDR and BMLWE PMUs will conduct ESF Gap Assessment of the existing ESIA under the ongoing first GBWSP and subsequently determine if additional E&S management plans need to be prepared for the new loan, in accordance with the applicable ESSs. Both PMUs will prepare, consult and disclose the determined E&S management plans, Stakeholders Engagement Plan (SEP), Environmental and Social Commitment Plan (ESCP) and Labor Management Procedures (LMP) and seek Bank clearance prior to project appraisal.

Recruitment of E&S specialist: . Currently both CDR and BMLWE have in place E&S focal points. Supervision of ESMP implementation is conducted as part of the supervision contracts. Recently, the PMU coordinator and E&S focal points attended the World Bank ESF PIU training in Beirut (May, 2023). Under the new proposed loan, both PMUs will maintain the same E&S focal points and will strengthen the PMUs capacities by hiring external E&S consultants to help in preparation of the ESF documents during project preparation. During implementation, supervision of E&S mitigation and monitoring measures will be part of the supervision contracts. In the meantime, the capacity of both PMUs will need to be strengthened by hiring ESHS specialists for each PMU to monitor satisfactory implementation of the E&S instruments. Moreover, the E&S focal points will receive additional capacity building to ensure satisfactory implementation of the ESF instrument. These provisions will be included in the ESFP.

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III. CONTACT POINT

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V. APPROVAL

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