

Project Summary Information (PSI)

Project No: 000074

Project Name	Lahore Water and Wastewater Management Project
Country	Islamic Republic of Pakistan
Sector	Water
Project No	000074
Borrower	Islamic Republic of Pakistan
Implementation Agency	Water & Sanitation Agency, Lahore
Environmental and Social Category	Category A
Date of Concept Decision	Approved on April 6, 2018
Estimated Date of Board Consideration	December 2018
Date of PSI prepared or updated	May 2, 2018

I. Introduction

Lahore, the capital of Pakistan's largest province "Punjab", depends entirely on groundwater to meet the water demand of its 11.1 million population. Water is abstracted through 576 tubewells before pumping into the distribution system. Currently, the groundwater abstraction by its responsible agency "Lahore Water and Sanitation Authority, LWASA" is 540 million gallons per day (MGD), or equivalent to 2.45 million cubic meters per day. In addition, about 1.2 million cubic meters per day is abstracted by Private Housing Societies, Cantonment Boards, Railway Colonies and areas under the jurisdiction of Local Government. In view of increasing demand due to ongoing urbanization and increased commercial activities, the number of tube wells are also increasing with every passing day. On the other hand, Lahore receives an average annual rainfall of about 715 mm, which does not contribute much in recharging the aquifer, as groundwater abstraction is much higher than recharge. Consequently, the groundwater table continues to deplete rapidly. The current decline rate is observed at an alarming rate of more than one meter per annum. As a consequence, several existing shallow tube wells have dried up and are no longer operational, and the City has started to face severe water shortages. Thus, the groundwater source alone does not seem to be a dependable/reliable source in future.

As for wastewater, there is currently no wastewater treatment facility in Lahore. All the untreated domestic and industrial wastewater is discharged directly in the nearby River Ravi and thus, heavily polluting the river. It is estimated that River Ravi receives nearly 640 MGD wastewater, as if converting a river into a sewage drain. On the other hand, River Ravi plays a major role in replenishing Lahore's groundwater by up to 82 percent. Due to mass contamination of the river, polluted water seeps down making the groundwater unfit for drinking purpose, and affecting soil fertility. The pollution of groundwater has been causing diseases like diarrhea, typhoid, intestinal worms and hepatitis in several areas of the city. The impact from this practice expands regionally as Lahore is located at the upstream-end of the river; therefore, affecting the domestic and economic activities (especially agriculture in the downstream areas). A blue print and draft feasibility study of the potential WWTPs have already been prepared by LWASA, which envisage construction of six WWTPs at various locations (three of which were proposed to be financed by AIIB and the remaining three by other IFIs).

The dual problems of clean water shortage and untreated waste water overflow become a serious issue that requires the Government of Punjab (GoPb) to urgently find solutions to address them in a synchronized manner. GoPb seeks AIIB financing for (i) constructing infrastructure to divert water from a nearby irrigation channel, the Banbawala Ravi Bedian Depalpur (BRBD) Canal, and (ii) construction of a new state-of-the art surface water treatment plant (SWTP). To comprehensively address the issues, the GoPb also needs financing for reducing the non-revenue water (NRW) from the existing 45 percent to less than 20 percent by (a) plugging all the water leakages through replacing the old pipes, which are not only causing water losses but also allowing ingress of wastewaters through these leakages and causing waterborne diseases; (b) controlling overconsumption of water due to about 90 percent unmetered connections, with 100 percent metered connections; (c) avoiding water theft, through bulk meters installations, and ensuring 100 percent billing and at least 90 percent collection. Finally, to ensure the supply of water with the desired quality

standards, some investment is required in the enhancement of existing laboratories besides strengthening the water quality monitoring systems coupled with specialized staff training.

The GoPb also seeks technical assistance under the project loan to carefully prepare regulatory framework to strengthen partnerships with the private sector for both capital expansions and O&M. LWASA requires targeted actions on its institutional performance improvement with carefully designed training for staff to independently operate and maintain SWTP and WWTPs. Specific trainings on financial management procedures, tariff setting, accounting, billing and collection, and internal audits will also be included under the loan.

II. Project Objective and Expected Results

The project objective is to: (i) ensure sustainable supply of safe water; (ii) reduce deteriorating environmental impacts due to untreated sewage disposal; and (iii) strengthen institutional capacity of LWASA to deliver improved services to the people of Metropolitan Lahore, and to become a financially strong entity.

III. Project Description

The Project consists of the following components:

Component 1: Investment for safe water supply infrastructure, which will comprise the construction of a diversion structure for the surface water from BRBD Canal and associated SWTP, rehabilitation/replacement of leaking pipes and pumping machinery, and installation of bulk and consumer water meters. The total capacity of the SWTP will be 245,000 m³/day or 53.8 MGD. This component will also ensure that 100 percent schools/colleges in Lahore are connected with safe drinking water facility.

Component 2: Investment for safe sanitation infrastructure, will include the construction of three WWTPs at the locations of Mahmood Booti, Shadbagh, and Shahdara; rehabilitation/replacement of inefficient wastewater pumping stations and selected sewer lines; and the construction of main trunk sewers to be connected with the new WWTPs. The proposed WWTPs will treat the wastewater from North and Northwest areas of Lahore. The plants will be fed by disposal stations located at Shadi Pura, Bhogiwala, Khokhar, Shadbagh, Shahdara and Farkhabad; and by drainage stations at Mahmood Booti and Siddique Pura through trunk sewers fed by secondary and tertiary sewerage networks.

Component 3: Technical Support for Institutional Performance Improvement, and Project Construction Supervision. The LWASA will appoint Project Management Consultant (PMC) for the execution of activities relating to (a) institutional performance improvement; and (b) project construction supervision support.

IV. Environmental and Social

The Bank's Environmental and Social Framework (ESF) will be applicable to the proposed project, and the Environment and Social Standards (ESSs) will be applicable for screening, categorization and due diligence with respect to the subprojects. As per the Bank's Environmental and Social Framework (ESF), the Project is proposed to be Category A, considering the nature of the project activities and local environmental and social contexts. Categorization for the Project will be further reviewed and finalized based on the Environmental and Social Impact Assessments (ESIAs), as well as the Bank team's site visits prior to appraisal. As part of project preparation, instruments, such as an ESIA and Environmental and Social Management Plan (ESMP) should be prepared in parallel to other project documents, under the ESF. If some sub-projects are not identified or finalized at the time of project appraisal, instruments, such as an Environmental and Social Management Framework (ESMF), should be prepared to provide the technical guidance and procedural requirement for in environmental and social matters project implementation.

The Borrower has assured that LWASA will use the AIIB's ESF to guide their environmental and social due diligence and preparation of relevant instruments. LWASA has carried out preliminary due diligence including

environmental and social impact studies of the Project, in accordance with national policy and requirement¹. Overall the environmental and social impacts are expected to be positive as the works relate to the augmentation of the water supply systems, minimization of water losses, and reduction of deteriorating environmental impact of untreated sewage disposal in Lahore. An ESMF is under preparation. Guidance on Environmental and Social Assessment followed by preparation of a specific ESIA and Management Plans will be prepared as part of the ESMF. For each specific sub-project identified during the project preparation, the ESIA and the ESMP will be prepared. This will include consultation with relevant stakeholders, with a focus on project affected peoples (PAPs) and enabling women to actively participate, and adequate information disclosure.

V. Estimated Project Cost and Financing Source

The Project cost is estimated to be USD 533.3 million. The financing sources are as follows:

For Loans/Credits/Others	Amount (USD)
AIIB Loan	400.0
Lahore Water and Sanitation Agency	133.3
Total	533.3

VI. Implementation

The Project will be implemented by LWASA.

The Bank's Procurement Policy and Procurement Instruction for Recipients will be applied.

Project implementation period (Start Date - End Date): January 2019 to December 2023 (5 years).

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¹ Pakistan Environmental Protection Act (1997) and Punjab Environmental Protection (Amended) Act, 2012 are basic tools and comprehensive legislations which provide legislative framework for protection, conservation, rehabilitation and improvement of the environment. According to these no proponent of a project shall commence construction or operation unless the EIA or IEE have been submitted for no objection certificate obtained from the provincial Environment Agency.