



Combined Project Information Documents / Integrated Safeguards Datasheet (PID/ISDS)

Appraisal Stage | Date Prepared/Updated: 20-May-2019 | Report No: PIDISDSA25323



BASIC INFORMATION

A. Basic Project Data

Country Pakistan	Project ID P164704	Project Name Karachi Water and Sewerage Services Improvement Project (KWSSIP)	Parent Project ID (if any)
Region SOUTH ASIA	Estimated Appraisal Date 17-May-2019	Estimated Board Date 27-Jun-2019	Practice Area (Lead) Water
Financing Instrument Investment Project Financing	Borrower(s) Islamic Republic of Pakistan - Economic Affairs Division (EAD)	Implementing Agency Karachi Water and Sewerage Board, Government of Sindh - Planning and Development Department	

Proposed Development Objective(s)

The Project Development Objective is to improve access to safe water services in Karachi and to increase KWSB's financial and operational performance.

Components

- Operational & Enabling Environment Reform
- Infrastructure Investments
- Project Management and Studies

PROJECT FINANCING DATA (US\$, Millions)

SUMMARY

Total Project Cost	100.00
Total Financing	100.00
of which IBRD/IDA	40.00
Financing Gap	0.00

DETAILS



World Bank Group Financing

International Bank for Reconstruction and Development (IBRD)	40.00
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Non-World Bank Group Financing

Counterpart Funding	20.00
Borrower/Recipient	20.00
Other Sources	40.00
Asian Infrastructure Investment Bank	40.00

Environmental Assessment Category

B-Partial Assessment

Decision

The review did authorize the team to appraise and negotiate

Other Decision (as needed)

B. Introduction and Context

Country Context

1. **Pakistan, the sixth most populous country in the world, is at a crossroads.** The economy accelerated with GDP growth of 5.8 percent in FY18 but is projected to slow to 3.4 percent in FY19 as fiscal and external imbalances are addressed. Poverty declined from 64.3 percent in 2001 to 24.3 percent in 2015, but inequality persists. The country ranks low on the 2018 Human Capital Index, at 134 out of 157 countries. Gender disparities continue, and female labor force participation was only 20.1 percent in 2018. Natural disasters and unreliable water and power supply constrain progress. After the onset of another boom and bust cycle, a new IMF program is under discussion. Growth is expected to gradually recover as structural reforms take effect and macroeconomic conditions improve. Pakistan will need to protect its poor and those just above the poverty line in the next few years through targeted safety nets. Over the medium to long term, Pakistan needs to invest more and better in human capital, raise more revenue, simplify ease of doing business, expand regional trade and exports, and manage its natural endowments sustainably.

2. **Karachi with an estimated population of approx. 16 million, is Pakistan’s largest city, economic financial hub and main port.** It contributes 15% of national GDP and the largest share of national tax revenues, industrial employment, manufacturing and high-end services¹. The city dominates the economic landscape of Sindh, with nearly all of the province’s industrial and service economy and the majority of its labor force. It has the potential to be the engine of economic growth for the country, given its size, location, and industrial and human capital. In recent decades, however, the city’s livability and competitiveness have declined. It now ranks 137th out of 140 cities globally for livability. In the recent decades access to basic infrastructure and services have declined. Nearly

¹ World Bank, Transforming Karachi into a Livable and Competitive Megacity – A City Diagnostic and Transformation Strategy, Washington DC, 2018; p.2;



half its residents live in informal settlements (*Katchi Abadis*), only half the city's water demands are met; public transport has deteriorated; and pollution is severe. Karachi is also one of the most disaster vulnerable districts in Pakistan. Nonetheless, a substantial reduction in violent crime has been achieved through concerted government efforts.

3. The Karachi City Diagnostic and Transformation Strategy identifies infrastructure gaps of over \$9 billion in public infrastructure. Institutional strengthening and investments aiming to enhance livability, competitiveness and sustainability have emerged as priorities for Karachi. The Karachi Neighborhoods Improvement Project ([KNIP](#)), currently under implementation, aims to upgrade three neighborhoods and to improve ease of doing business in Karachi to strengthen citizen-state confidence and show early wins. Building on this, additional interventions in water supply and sewerage (this project), urban management and competitiveness, and urban mobility and transport are being considered with support from the World Bank Group, Asian Development Bank (ADB) and Asian Infrastructure Investment Bank (AIIB). Maximizing Financing for Development (MFD) approaches will be used to crowd in commercial financing as well.

Sectoral and Institutional Context

4. Karachi's water supply services are falling far short of the expanding city's needs. Nearly three million residents lack access to piped water², and even those formally connected experience inadequate, irregular and inequitable service. Typical service quality is "two hours every two days to four hours per day at very low pressure", with rationing widespread especially in *Katchi Abadis* which face severe shortages of water".³ Brackish groundwater limits the use household wells, so inefficient and expensive private water tankers are major source of domestic water supply. The city's current water demand is estimated at 5.5 million cubic meters per day, and the current supply shortfall is estimated as 2.5 million cubic meters per day.⁴

5. More than 6 million residents lack access to public sanitation services. Those lacking access typically discharge sewage through the stormwater system, natural drains or informal sewers directly into rivers and ultimately the sea. Pit latrines and septic tanks are used by less than 3% of the population.⁵ Even those with nominal access to public sewerage do not receive acceptable services. The city's sewage treatment facilities are dilapidated and dysfunctional because of "complex challenges of inadequate sewer trunk mains, malfunctioning pumping facilities, and a lack of wastewater treatment capacity"⁶. Up to 2.2 million cubic meters per day of raw sewage is discharged into the sea.⁷ Sanitation related challenges are reinforced by poor solid waste removal, which aggravates contamination directly as well as by blocking drainage and sewerage pipes. The Supreme Court has also issued directives aimed at improving services in the sector. Two wastewater treatment plants (TP1 and TP3) are currently being rehabilitated. Improving water and sanitation services in Karachi is a high priority for both the federal and the Sindh governments.

6. The consequences of persistent Karachi WASH service shortfalls are dramatic. As the Supreme Court noted in 2017, "residents as well as all visitors to the city" are exposed "to avoidable water-borne diseases" with "four-fifths of all illnesses caused by water-borne diseases, many of which result in fatalities."⁸ As highlighted in

² Data from PSML 2014-15 combined with 2017 census data.

³ World Bank, Transforming Karachi into a Livable and Competitive Megacity – A City Diagnostic and Transformation Strategy, Washington DC, 2018; p.46;

⁴ Ibid. p.46; Relative to WHO standards. In Imperial Gallons, the equivalent values are 1200 million gallons per day (mgd) in demand, and a shortfall of 550 mgd.

⁵ Pakistan Social and Living Standards measurement Survey, 2015

⁶ World Bank, Transforming Karachi into a Livable and Competitive Megacity – A City Diagnostic and Transformation Strategy, Washington DC, 2018; p.48;

⁷ Equivalent to 475 million gallons per day

⁸ Supreme Court of Pakistan; Order – Constitutional Petition No. 38 of 2016; Full text at: <http://www.supremecourt.gov.pk/web/page.asp?id=2443> [9/23/2018]



a recent study, limited access to and high cost of water, are particularly acute problems for the poor and “for women, who are often the sole caretakers of the household and children” and must frequently “revert to carrying dirty and contaminated water from a well or from a river or canal that ends up endangering the lives of their families” or must “buy water from private tankers, despite unsure availability and the water’s exorbitant cost, which is onerous given meager household incomes.”⁹

7. The risks of drinking water supply and sewerage service shortfalls are aggravated by climate change. The city is particularly vulnerable to more extreme heat, precipitation, flooding and sea level rise which not only increases the flood risk but also causes saltwater intrusion in the coastal aquifers.¹⁰ Improving the water and sewer system will be critical to successfully adapt to these risks. For example, dealing with heat waves, such as the one experienced in 2015, requires sufficient and continuous availability of drinking water; functioning sewer systems and adequate treatment capacity are important to deal with the impact of larger and more frequent urban floods and to prevent contamination of the urban environment through sewer overflows. Likewise, sea level rise is likely to further reduce the quality of groundwater sources through saltwater intrusion and thus increase reliance on the public piped system.

8. The city also faces substantial gender gaps. There is limited involvement of women in planning of municipal services and infrastructure, with the result that these are not responsive to their needs. Mobility and access for women is limited due to a mixture of poorly-planned infrastructure (including at work places), prevailing socio-cultural norms and threats to public safety. At the community level, women are often unable to reach out effectively to public service providers. Working conditions at utilities are also disadvantageous for female employees due to more restricted job- and promotion opportunities as well as inadequate infrastructure (e.g. lack of safe transport to work, of adequate restrooms, or accommodations for mothers etc.).

9. The Karachi Water & Sewerage Board (KWSB) is responsible for WASH services. The current service gaps arise from KWSB’s operational challenges, under-investment, and a weak enabling environment. KWSB has not had significant capital investment for over a decade, even though a 2008 masterplan estimated investment needs of over US\$ 2.5 billion to achieve universal access to safe and affordable drinking water by 2030.

10. KWSB technical challenges are exacerbated by low operational performance. Lack of metering of domestic customers, an inefficient tariff structure, an outdated database to calculate tariffs, and poor billing and collection efficiency, have led to a widening gap between receipts and expenditures. In 2015-16, total receipts covered barely 50% of the operational expenditures.¹¹ Non-revenue water (NRW) from physical and commercial losses is conservatively estimated to be 55%.¹² Outstanding KWSB debts to Karachi Electric alone are US\$ 320 million, and monthly financial losses are estimated at more than US\$ 5 million. Non-payment of water bills is a particular problem. The total outstanding arrears are estimated at US\$ 460 million (US\$ 179 million for retail and US\$ 281 million for bulk) and they continue to increase. Government institutions and utilities are among the largest defaulters, owing the equivalent of US\$ 350 million.¹³ Given these financial pressures, KWSB has been unable to carry out preventative maintenance, focusing only on emergency repairs, thus aggravating the deterioration of the network over time.

⁹ World Bank, Transforming Karachi into a Livable and Competitive Megacity – A City Diagnostic and Transformation Strategy, Washington DC, 2018; p.47;

¹⁰ See Hijioka, Y., et al.; Part B: Regional Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 1327-1370.; and: Hasan, A, Pervaiz, A and Raza, M. 2017. Drivers of climate change vulnerability at different scales in Karachi. IIED Working Paper. IIED, London; and Anwar, F.; Karachi City Climate Change Adaptation Strategy –A Roadmap; April 2012; Shehri-Citizens for a Better Environment;

¹¹ KWSB Financial Reform Roadmap, 2016;

¹² Ibid.

¹³ World Bank, Transforming Karachi into a Livable and Competitive Megacity – A City Diagnostic and Transformation Strategy, Washington DC, 2018; p.49



11. **KWSB's under-performance has been aggravated by a complex, inefficient institutional framework that constrains its operational autonomy and limits direct inputs by stakeholders (e.g. consumers).** Large city utilities are usually either fully aligned with municipal governments or operate as autonomous public entities. The Sindh Environmental Protection Agency (SEPA) is responsible for regulating drinking water quality and wastewater discharges, but Sindh lacks a dedicated water and wastewater regulator and laws governing groundwater use. Women are poorly represented at all levels of KWSB, which also lacks sufficiently women-friendly facilities.¹⁴

12. **KWSB and the Government of Sindh are committed to reforms and have made significant initial steps.** An exemplary step has been the reform of the tanker-truck business that supplies more than 10% of residents.¹⁵ The Government of Sindh empowered KWSB in 2016-7 to close down all illegal water hydrants (more than 100) supplying water to tankers, either from illegal connections to the KWSB water network or from contaminated groundwater. KWSB established six legal water hydrants and outsourced their operations successfully, leading to an increase in hydrant revenues from PKR 79 million in FY15 to PKR 356 million in FY17. KWSB took further steps to improve services by establishing a centralized Tanker Request Center and launching a mobile application (OTS KW&SB) to make it possible to order a tanker by mobile phone.

13. **KWSB has begun reforming financial and customer management, non-revenue water and services to the poor.** As a result, revenue collection has increased significantly from FY 16 to FY 18 without tariff increases, enabling KWSB to increase expenditure on O&M. In February 2019, KWSB created and staffed dedicated units for non-revenue water reduction and for improving services and revenue collection in *Katchi Abadis*. The Government of Sindh is expected to complete two further reform steps shortly: (i) establish a High-Level Reform Steering Committee, and (ii) establish a more representative KWSB Board.

14. **Building on these initial steps, a reform roadmap has been agreed between the Government of Sindh, KWSB and the World Bank.** The roadmap's vision is to transform KWSB by 2030 into a modern, efficient utility, accountable to its customers and capable of providing safely managed water and sanitation services, while recovering costs and raising private finance. The core institutional reform is expected to be an amendment of the KWSB Act, including critical changes such as improvements to service rules, the ability of the MD/CEO to recruit staff independently as well as improvements to tariff rules, with close attention paid to affordability concerns. Other key reform steps aim for improvements of service delivery and financial viability, including with measures such as the development of a strategy for private sector participation; independent financial audits; an increase in female staff, and specific targets for service continuity and non-revenue water reduction. A KWSB Reform Working Group has been appointed by the Ministry of Local Government.¹⁶

15. **The project is conceived as the first in a potential Series of Projects (SOP) and will be instrumental in supporting reforms and enabling complementary infrastructure investments.** As outlined below, the first project (SOP-1) in the proposed series will focus on reforms and rehabilitation, strategically complementing reform measures (e.g. improving metering and billing to reduce commercial revenue losses) with infrastructure investments (e.g. network repairs). SOP-1 will increase resilience against climate change related risks —more specifically, floods, droughts, and saltwater intrusion — by improving water and sanitation service quality, which will be reinforced and deepened in subsequent projects.

¹⁴ A series of Focus Group Discussions with women staff at all levels highlighted the lack of washrooms and other facilities.

¹⁵ Pakistan Social and Living Standards Survey 2014-15;

¹⁶ One approach to operationalize CoC commitments could be through a performance agreement, for example between KWSB Management and Board of Directors.



C. Proposed Development Objective(s)

Development Objective(s) (From PAD)

16. The Project Development Objective is to improve access to safe water services in Karachi and to increase KWSB’s financial and operational performance.

Key Results

17. The Key Results to measure progress toward achievement of the PDO are the following:

Indicator	Baseline	Target	
Persons provided with access to drinking water uncontaminated by fecal coliforms under the project	0	2,000,000	Number of KWSB clients receiving water in compliance with WHO standards on fecal coliform contamination of water (measured prior to private storage).
Coverage of Operation & Maintenance Costs	59	100	Percentage. Total annual collected revenue of KWSB divided by KWSB annual operating costs.
KWSB Act amended to increase KWSB’s financial and operational autonomy	No	Yes	Changes in the KWSB Act as outlined in the Commitment of Cooperation and to be detailed by the appointed Reform Working Group.

18. Intermediate results indicators will include:

Intermediate Results Indicator	Baseline	Target
Piped household water connections benefitting from rehabilitation works undertaken under the project (number)	0	100,000 ¹⁷
Wastewater tariff re-established	No	Yes
Number of in-network chlorination units operational under the project	0	12
Kilometers of sewerage network rehabilitated	0	160
New customer service centers opened that are adequately staffed including a separate desk for women	0	6
Percentage of grievances redressed within stipulated time	25% ¹⁸	75%
Bulk accounts metered	40%	100%
Percentage of women in all newly recruited staff grade 16 and below	1.44% ¹⁹	20%
Percentage of women in all newly recruited staff grade 17 or above	0.86% ^{Error! Bookmark not defined.}	30%
Improvement in Energy Efficiency (kwh/year use in existing KWSB system.)	368,714,889 kwh	To be established
Informal settlements provided with improved water and sewer services by KWSB under the project	0	3
Asset Management Program Implemented	No	Yes
KWSB Master Plan Updated	No	Yes
Non Revenue Water Reduction	0 cubic meters per year	32,000,000 cubic meters per year
Collected revenues of KWSB (PKR million)	8,446	16,500

¹⁷ This assumes 20 people per connection. This depends on the areas selected and needs to be verified during implementation

¹⁸ Estimate to be confirmed through baseline audit of existing grievance system

¹⁹ Estimate of past recruitment rate based on actual percentage of female staff at indicated grade levels



D. Project Description

19. **The first project will invest US\$100 million, of which US\$ 40million from IBRD, in infrastructure rehabilitation, capacity building to raise operational performance and improvements to the enabling environment.** The project activities of SOP-1 will be grouped into three components. Component 1 will finance both capacity building and reform measures to improve the enabling environment, thus contributing to improved utility performance, including more reliable and energy efficient services. Component 2 will undertake selected infrastructure investments, thereby ameliorating water and sewer services in Karachi and increasing the city's resilience to water shortages, floods, and saltwater intrusion. Component 3 will fund project management and associated studies. The approach and activities under these components may be summarized as follows:

- a. Component 1 – Operational & Enabling Environment Reform (US\$7 million of which IBRD US\$2.8 million): To build capacity and raise operational performance, as well as to prepare and implement planned enabling environment reforms, this component will support an array of measures including on:
 - i. *Revenue Management, Customer Care and Communication:* These activities will seek to improve KWSB's revenue streams as well as the utilities relationship with its customers by updating customer data; upgrading its metering and billing systems; carrying out a water tariff study; applying waste water tariff; establishing and operationalizing six (6) new customer service centers; training staff; and developing and implementing grievance redress mechanism and a communications strategy.
 - ii. *Non-revenue Water (NRW) Reduction Program:* Developing a systematic non-revenue water reduction program with district meter areas, measures for leak detection and repair and a program for the maintenance of the meters installed under this Project. Lower technical losses that increase supply to customers will make Karachi's citizens more resilient to extreme, climate-related water events. Reduction in physical losses will also improve energy efficiency and reduce greenhouse gas emissions.
 - iii. *Institutional Reforms and Human Resources:* The project will provide technical assistance and training to improve KWSB's human resources and operations, by: upgrading human resources systems; training staff including on gender aspects; designing and implementing an institutional reform program designed to improve recruitments, as well as cost recovery and tariff setting (involving public consultations).
 - iv. *Social Sector Policy and Katchi Abadi Program:* The project will support the informal settlements unit of KWSB to develop a program of infrastructure investments in three (3) informal settlements (katchi abadi) in close cooperation with the communities and women organizations, as well as carrying out of preparatory works for such infrastructure investments.
 - v. *Other Capacity Building Priorities – Asset Management, Financial Management, Industrial Discharge Monitoring:* The project will finance additional capacity building including for the design and implementation of a climate change measures; a sensitive asset management program and the upgrade of the geographic information system; strengthening of KWSB's capacities in financial management and monitoring of industrial discharges into the sewerage and storm water system; and carrying out an assessment of the priority sewers.
- b. Component 2 – Infrastructure Investments (US\$77 million of which IBRD US\$30.8 million): Priority areas for investments under SOP-1, in compliance with the KWSSIP-RRP, include:



- i. *Water Network Rehabilitation:* To reinforce the non-revenue water and revenue management reforms of Component 1, priority areas of the network will be rehabilitated, focusing on reducing major leaks, installing district and customer meters and developing chlorination facilities. The latter intervention is expected to result in improved access to uncontaminated water for at least 2,000,000 consumers (see results indicators).
- ii. *Sewer Network Rehabilitations:* The project will invest in priority sewerage rehabilitation with a focus on restoring network integrity in critical areas and reducing sewerage leakage and flooding, including by strengthening KWSB's fleet of sewerage suction and jetting trucks.
- iii. *Rehabilitation of Safe Water Supplies in Katchi Abadis:* The project will improve water supply and sanitation in three *Katchi Abadis*. KWSB will rehabilitate and formalize existing infrastructure and test different technical approaches to improving quality of access, including water ATMs, installation of metered house connections, and improved bulk water supply. These efforts will be supported by intensive stakeholder consultations to manage expectations and build political consensus and community support. More reliable WASH services will increase the targeted settlements' resilience to heatwaves, water shortages and floods.
- iv. *Improving Energy Efficiency:* To reinforce the impact of the asset management improvement program, the project will reduce the energy consumption of KWSB pumping stations and water treatment plants, and thus reduce current high energy costs and KWSB's carbon footprint.

The above infrastructure interventions will be selected during implementation according to criteria that ensure relevance to project objectives and compliance with relevant environmental and social operational Bank policies, while flexibly aligning investments to the evolving reform agenda. This will reinforce the impact of capacity building and institutional reforms, and lay the foundation for scaling-up capital investments in subsequent projects. To mitigate risks, particularly related to the ongoing city-wide anti-encroachment drive (AED), and ensure compliance with the Bank's policy on Involuntary Resettlement, each subproject will be selected, designed and implemented based on a set of screening criteria as part of the "KWSSIP Risk Reducing Procedure" (KWSSIP-RRP).

These KWSSIP-RRP exclude AED-affected areas from investments under SOP-1. KWSB will identify priority pipe sections for rehabilitation which are outside of AED areas, and also have no hydraulic constraints to downstream or upstream areas impacted by AED.

- c. Component 3 – Project Management and Studies (US\$16 million of which IBRD US\$6.4 million): This component will support the costs of managing the project and preparing aspects of the proposed subsequent projects, taking into account the expected impacts of climate change in the studies to be conducted. This will include direct project management costs of KWSB, updating of KWSB's Masterplan, Feasibility Studies, Tender Documents, Safeguard Documents and Supervision costs for this project as well as other critical studies such as an energy audit, a review of private participation options and a rapid groundwater protection assessment. In addition, this component will support the institutional strengthening of KWSB including strengthening the social and environmental management capacity of KWSB. This component will also finance the preparation of Feasibility Studies, Tender- and Safeguard Documents for investments in future projects of the proposed series, as long as they are not rated environmental category A under OP4.01 or High under ESS1.

The selection criteria for investments will ensure that investment will not be prepared for or take place in areas which have been impacted by the ongoing AED nor for areas where the standards and conditions of



the Bank's operational policy on involuntary resettlement (OP 4.12), and/or Environmental and Social Standard 5 (ESS5 of the Bank's Environmental and Social Framework (ESF)) on land acquisition, restrictions on land use, and involuntary resettlement cannot be ensured. OP 4.12 and ESS5, among other stipulations, require compensation and (if applicable) rehabilitation of affected people including persons without land title, squatters, vendors, hawkers etc. For infrastructure investments, the ESF will apply to subsequent phases of this SOP, but not to this project.

E. Implementation

Institutional and Implementation Arrangements

20. **The implementation agency of this project will be KWSB and a Project Implementation Unit (PIU) has been established within KWSB to manage SOP-1 and subsequent projects.** To build KWSB's long-term capacity to plan and manage major, externally financed interventions, the PIU is to consist of existing, permanent KWSB staff with the exception of a limited number of specialist roles (e.g. procurement). The PIU may thus become the core of a Planning and Investment Management Department, which the utility currently lacks. The PIU consists of two departments: one dedicated to implementing the reform program and studies (Component 1 and 3), and one in charge of developing and implementing capital investments (Component 2). This arrangement aims to ensure sufficient implementation capacity for the reform components, as pressure in past projects to progress infrastructure components has reduced the attention on reforms, ultimately undermining the value of infrastructure investments. KWSB will recruit individual consultants to the PIU to strengthen project preparation and implementation. A firm will be recruited to provide specialized contract management support. The PIU will report to KWSB management represented by the Managing Director. The PIU and associated consultants are expected to reach 50 percent women's participation over the project life. The PIU is expected to coordinate activities with related projects, in particular the KNIP, which targets complementary measures to improve quality of life in Karachi. It may also draw on a Shared Services Unit to tap into additional expertise as needed.

21. **A Project Steering Committee will be established to provide oversight and high-level coordination.** The Steering Committee shall include high level representatives of all agencies involved in the Project Committee. The Steering Committee shall, *inter alia*, provide planning and strategic guidance and facilitate multi-stakeholder cooperation for the development and implementation of a vision, policy reforms and investment program towards the improvement of the Karachi's sanitation and sewerage services. The ToRs of the Steering Committee will be drafted to clearly define its responsibilities, to minimize overlaps and mitigate potential disagreements with KWSB, and to enable the evolution of its membership after the initial appointment in line with changing needs and circumstances.

F. Project location and Salient physical characteristics relevant to the safeguard analysis (if known)

Karachi, a megacity, is the economic capital of Pakistan, housing a population of at least 16million, covering a total area of 3,600 km² and is Pakistan's main seaport and international trade hub, contributing about 15 percent to the national GDP. Increasing frequency of natural calamities, especially in the interior of Sindh, also puts additional population burden on the city, which attracts economic and environmental migrants. Administratively, Karachi is comprised of 18 towns and several cantonments. Karachi ranks 135 out of 140 in the world's urban livability index (based on stability, healthcare, culture and environment, education, and infrastructure). The severe air, water and solid waste pollution in Karachi increases the health risk to a large proportion of Karachi residents (Karachi - Rapid Environment Diagnostic Report - February 15, 2017 Draft).



According to KWSB, almost 475 MGD (2.2 million cubic meters) of raw municipal sewage is discharged into the sea via 11 drains from Karachi without the required level of treatment . These drains were once storm water channels which are now entirely converted into wastewater channels. Most sewage flows into the drains and rivers which run as open sewers through the urban area, creating highly insanitary conditions with serious health risks and an unpleasant environment for the residents of adjoining neighborhoods. There are competing uses of water from the Indus River system thereby resulting in increasingly erratic water availability trends downstream of Kotri barrage, variability also affected by climate change. Therefore, there is limited possibility of increasing the water supply from Indus system for Karachi. Besides absence of adequate treatment facilities, other issues related to sanitation include outdated infrastructure, causing the system to overflow often, especially in the case of high rainfall periods.

G. Environmental and Social Safeguards Specialists on the Team

James Orehmie Monday, Environmental Specialist
Imran-ul Haq, Social Specialist
Najm-UI-Sahr Ata-Ullah, Social Specialist

SAFEGUARD POLICIES THAT MIGHT APPLY

Safeguard Policies	Triggered?	Explanation (Optional)
Environmental Assessment OP/BP 4.01	Yes	<p>Investments under the project include rehabilitation of the water and sewer networks, and improvement of safe water supply in three informal settlements.</p> <p>Component 2 will finance investments under the project and Component 3 will finance preparatory studies, including for investments in an envisaged second project in the proposed series of projects (SOP).</p> <p>Component 2 investments, particularly the sewer network rehabilitation works, including potentially other investments to identified using the selection criteria in Annex 3 of the PAD, may involve large, intense and widespread impacts during construction and operations stages, due to the management of large volumes of raw sewage and contaminated spoil (solid waste and soil) removed from the sewers.</p>



Similarly, Component 3, will finance preparation of safeguards documents, inter alia, for similar water treatment and supply systems, and sewage treatment systems, that would have environmental risks.

Therefore, consistent with the requirements of OP4.01, the project has been assigned an EA Category B.

Furthermore, since none of these investments in Components 2 and 3 have been identified or selected prior to the Bank's appraisal of SOP1, the KWSB has prepared the required Environmental Management Framework (EMF) and Social Management Framework (SMF) that contains the processes and measures that would ensure that the required Environmental Social Impact Assessments (ESIAs) and/or Environmental and Social Management Plans (ESMPs) for individual investments are prepared when these investments are identified and are being prepared. The EMF also requires that an Environmental Audit of the ongoing rehabilitation works for TP1 and TP3 and an action plan to address any issues the audit identifies.

The SMF framework also includes all required frameworks (including a Resettlement Policy Framework (RPF) as an Annex) and provides guidance on managing social issues such as labor, gender, stakeholder engagement, grievance redress mechanisms etc. EMPs and SMPs covering the risks and impacts (positive and negative) beyond those associated with land acquisition and resettlement and including those related to gender, inclusion of marginalized and vulnerable groups and communities (elderly, disabled persons etc.), informal sector workers and businesses (hawkers, mobile vendors etc.) citizen engagement etc. will be prepared, consulted on, cleared, and publicly disclosed in line with the SMF and EMF, once the area of influence and design of each subproject has been determined.

The SMF and EMF have been consulted upon publicly (involving all stakeholders at the project



level), cleared by the Bank, and disclosed prior to Bank appraisal. The full SMF and EMF in English, and the translation of their executive summary in Urdu, are available on the websites of KWSB and the Bank.

With respect to the preparatory studies being prepared under Component 3 of the project, to be implemented under future projects in the proposed series of projects, sample terms of reference for the safeguards studies consistent with the requirements of the ESF have been prepared and disclosed.

The EMF and the screening measures contained in Annex 3 of the PAD, exclude from financing any investments and preparatory studies for future investments that would be assigned an EA rating of A under OP4.01 or High under ESS1. Finally, the EMF requires that eligible preparatory studies for future investments will be prepared consistent with the Banks new ESSes.

Performance Standards for Private Sector Activities OP/BP 4.03	No	
Natural Habitats OP/BP 4.04	No	The proposed project is not expected to have impacts on natural habitats as defined by the policy. This will be confirmed in the ESIA's to be conducted in compliance with OP4.01
Forests OP/BP 4.36	No	The proposed project will have no impact on forest areas as defined by the policy.
Pest Management OP 4.09	No	The proposed project will neither finance nor use pesticides as defined by the policy.
Physical Cultural Resources OP/BP 4.11	Yes	The EMF and SMF include Chance Find Procedures to address risks to any cultural/archaeological 'chance finds' during the project.
Indigenous Peoples OP/BP 4.10	No	This policy is not triggered as the only recognized Indigenous People of Pakistan, the Kailash, reside in the Chitral Valley which is outside the project's geographical area.
Involuntary Resettlement OP/BP 4.12	Yes	The project does not require any large scale land acquisition or resettlement. However, small scale acquisition of private land may be required (for example, to establish some customer service centres). Interventions such as rehabilitation of the water supply and sewer networks (including laying of water supply lines, and main sewer trunk and subsidiary lines) involve civil works in densely



populated urban areas, of both commercial and residential use. These are likely to have temporary negative livelihood impacts during construction (due to restricted access; temporary relocation) on businesses and individuals including permanent and temporary markets; roadside shops; transporters; mobile vendors and hawkers etc. Rehabilitation works may also lead to limited involuntary resettlement of some temporary markets, vendors etc. Hence, OP 4.12 is triggered.

The project SMF also includes a Resettlement Policy Framework (RPF) as an Annex which provides guidance on management of issues related to land acquisition and resettlement, and impacts on livelihood (temporary and permanent). The RPF has been consulted upon, reviewed and cleared by the Bank, and publicly disclosed in-country and at the Bank's websites.

While the civil works under the project will not have any major and irreversible impacts, the ongoing anti-encroachment drive (AED) in Karachi, ordered by the Supreme Court of Pakistan on October 27, 2018, poses a substantial risk to the project. The project includes a screening mechanism which ensures that areas that have been impacted by AED are excluded from the project. Only subproject sites and their zones of impact which are located in areas that have not been impacted by the AED are eligible for project financing. The RPF includes the screening mechanism and the requirement of compensation in the event that such unforeseen AED-related activities, due to Supreme Court orders, need to take place after the selection of the subproject sites during ongoing construction. In such unforeseen event, AED activities need to be carried out in a manner that ensures that affected people will be compensated in a manner consistent with the Bank's policy on involuntary resettlement and RPF.

The SMF and RPF include a two staged mechanism for social screening of subprojects. In stage 1, the screening will determine the interaction of the subproject with the anti-encroachment drive to determine the eligibility of the sub-project. If found



eligible, the screening mechanism will determine the type of safeguard instruments to be prepared. The RPF will also guide the preparation, if required, of site specific Resettlement Action Plans/Abbreviated Resettlement Action Plans (RAPs/ARAPs). The SMF / RPF (and any subsequent RAPs / ARAPs will) also includes specific reference to squatters, vendors, and hawkers, etc. and how to deal with them in accordance with Bank policy.

Safety of Dams OP/BP 4.37

Yes

Karachi's only reliable water source is Kotri Barrage at the Indus. A safety assessment is being carried out for the barrage under on-going PK-Sindh Barrages Improvement Project (SBIP, P131324) under supervision of the Panel of Expert (PoE) which has overseen similar assessment for Guddu and Sukkur Barrages. The SBIP will also support to prepare an Emergency Preparedness Plan (EPP), operational plan (including instrumentation plan) and training.

Projects on International Waterways
OP/BP 7.50

Yes

The Policy is applicable to this project because the activities will involve the use of water from the Indus River which is shared between the Islamic Republic of Pakistan, the Republic of India and the People's Republic of China. Significant tributaries to the Indus are also located in the Islamic Republic of Afghanistan.

However, the Project Team has received RVP approval of its determination that the exception to the notification requirement under Paragraph 7(a) of the Policy applies, because the project will not adversely affect the quality or quantity of water flows to the other riparians, because Pakistan is the lowest downstream riparian of the Indus River. Moreover the Karachi water supply scheme supplies a total of around 1.0 billion cubic meters per year , which is around 0.5% of the mean annual flow of the Indus River , and most of abstractions from the river are for irrigation within Pakistan. The project will not be adversely affected by the other riparians' possible water use, mainly because the water supply scheme is a minor component of total abstractions from the Indus River in Pakistan. Water use from the Indus is negligible in China, and in India water use from the Indus is already close to the maximum permissible



stipulated in the Indus Waters Treaty. While water use in Afghanistan from the Kabul River (a tributary of the Indus) could well increase, the Kabul contributes only 10% of the mean annual flow in the Indus, and even a significant increase in upstream use would thus not affect the small abstraction for Karachi.

Projects in Disputed Areas OP/BP 7.60

No

The project activities will not be located in disputed areas as defined by the policy.

KEY SAFEGUARD POLICY ISSUES AND THEIR MANAGEMENT

A. Summary of Key Safeguard Issues

1. Describe any safeguard issues and impacts associated with the proposed project. Identify and describe any potential large scale, significant and/or irreversible impacts:

The potential adverse environmental impacts for Project investments under Component 2, will mostly occur during the construction and, operations and maintenance stages..

Construction impacts would be related to the management of the removal and disposal of large volumes of contaminated spoil (solid waste and soil run-off) deposited in the waterways and existing sewers causing blockages to the system, temporary rechanneling and diversion of the black water to create dry spaces for rehabilitation works in the system and potentially occupational health and safety issues for construction workers and nearby communities.

Operational impacts for the rehabilitated sewer networks would be the release of the treated effluent that do not meet the required effluent quality for the receiving bodies (land and water), which may then pose risks of those ecosystems.

Construction impacts for the water network rehabilitation and the water supply to informal settlements, would include dust, noise, OHS and public road/traffic safety concerns for residents of nearby communities.

Operational impacts from the provision of water supply in the informal settlements in the absences of waste water treatment systems will lead to seepage/emissions of untreated waste water (potentially including raw liquid sewage) into the ground with potential public health concerns in these informal settlements.

The project does not require large-scale land acquisition and resettlement. Some small scale acquisition of private land may be required, for example to establish customer service centres. Given that the works will be executed in a dense and congested urban environment, civil works are likely to have temporary negative livelihood impacts during construction (due to restricted access; temporary relocation) on businesses and individuals including permanent and temporary markets; roadside shops; transporters; mobile vendors and hawkers etc. Some civil works may also lead to limited involuntary resettlement of some temporary markets, vendors, hawkers etc. Civil works will also entail the involvement of labor. However, no large-scale influx of labor or establishment of large labor camps is anticipated. Instead, locally available labor will be preferred.



Weak systems and fragmentation of land and service delivery mandates between various tiers have enabled large-scale encroachment of public land in recent decades. Informal settlements and squatters are widespread in Karachi. There are residential and commercial squatters and encroachers of different scale on existing unused land, public spaces, sidewalks, etc. A major anti-encroachment drive was initiated in the city in October 2018 on the order of the Supreme Court of Pakistan and is underway across the city. The Court ordered for the removal of encroachments from public spaces (parks, footpaths, amenity plots, nullahs/drains) across Karachi, to be implemented by Karachi Metropolitan Corporation (KMC), and other civic, local and law enforcement agencies. The order is currently under implementation and involved agencies are required to report periodically to the Court on progress. The focus of the AED is on commercial activities encroaching public spaces. Thousands of businesses, street vendors and hawkers have been affected, primarily in the most commercial districts of the city. The conduct of the AED is not in accordance with the Bank's policy on involuntary resettlement as there are no provisions to compensate or rehabilitate squatters, vendors and hawkers who have been displaced, or provide compensation for loss of livelihood. Acknowledging the adverse impacts of AED on the poor and vulnerable groups, GoS and local agencies like KMC are making efforts to relocate some affected businesses.

The project will only support sub-projects which can meet the standards and conditions of the Bank's policy on involuntary resettlement and the Project Risk Reducing Procedure (PRRP) developed for this project. The KWSSIP RRP includes, amongst other requirements, the following: as a first screening measure, any subproject investment located in a site affected by the AED will be explicitly excluded. Second, in the event that unforeseen AED activities need to take place, due to Supreme Court Orders, on a site after the site has been selected under a sub-project and construction is ongoing, all provisions of the Bank's policy on involuntary resettlement and RPF will apply, including, amongst other requirements, compensation and (if applicable) rehabilitation of affected people including persons without land title, squatters, vendors, hawkers etc. in accordance with the entitlements prescribed in the project RPF and any subsequent RAPs. The SMF (and any subsequent RAPs will) also includes specific reference to squatters, vendors, and hawkers, etc. and how to deal with them in accordance with Bank policy.

2. Describe any potential indirect and/or long term impacts due to anticipated future activities in the project area: The long-term indirect impacts of the proposed project activities are likely to be positive if the short-term adverse impacts are managed sustainably. The positive long term impacts are likely to be associated with the significant reduction of raw sewage emissions into the rivers and other surface water bodies, resulting from the improved and compliant effluents from rehabilitated wastewater treatment plants. Were this to happen, significant land use changes are also possible along these corridors, as the land adjacent to these areas would be more valuable potentially spurring better planned development.

These impacts will be analyzed in the individual investment specific Environmental and Social Impacts Assessments as required by the project level EMF prepared for Phase 1.

3. Describe any project alternatives (if relevant) considered to help avoid or minimize adverse impacts. The actual, specific project investments are not yet known. As part of the selection process and the engineering design stage, the potential environmental impacts of each potential investment will be part of the decision making process to approve a particular investment. This process will ensure alternatives are considered, such as location of investments and potential to alter engineering designs to either first avoid the impact or to reduce them significantly.

4. Describe measures taken by the borrower to address safeguard policy issues. Provide an assessment of borrower



capacity to plan and implement the measures described.

To avoid and mitigate social risks associated with the ongoing AED, a multi-level KWSSIP Project Risk Reducing Procedure (KWSSIP-RRP, or PRRP) has been built into project design, which explicitly excludes any subproject investment located in a site affected by the AED (See SMF and RPF for details). The PRRP includes a set of screening criteria for the selection, design and implementation of subprojects to be financed under Component 2.

Only subprojects located in areas that have not been impacted by the AED will be eligible for project financing. If a proposed subproject is found eligible, the screening mechanism will further determine the types of subproject-specific safeguard instruments to be prepared and implemented, depending on the nature, scale and scope of the proposed subproject. Selection, design and implementation of all subprojects is subject to full compliance with the project's SMF/RPF and EMF. All sub-projects to be financed under the project will require prior review and no objection by the Bank to ensure compliance with defined criteria. Safeguards instruments, including the SMF/RPF and EMF, provide a detailed methodology for the screening criteria and mechanism.

In addition to the screening mechanism, the KWSSIP RRP includes measures to strengthen the capacity of KWSB for management of safeguards issues. An institutional assessment indicates that while KWSB has strong engineering capacity, the capacity to address and manage safeguards issues is low. Well-qualified and experienced Environment, Resettlement, Social Development, and Gender specialists will be engaged in the project PIU to support the environmental and social safeguards, gender, community and stakeholder engagement (including grievance redress), and additional social development needs of the project. The PRRP also includes measures to support monitoring and coordination related to AED, improve public information and communications related to the project, and support strengthening of KWSB's existing complaints management system and the establishing of a project specific multi-tiered GRM mechanism.

To mitigate additional potential social risks associated with the infrastructure subprojects to be financed under Component 2, an SMF, including an RPF to address any issues related to involuntary resettlement was prepared by GoS. A framework instrument was required as the exact locations of project interventions have not been determined and will only be identified during the process of subproject selection. The KWSSIP RRP is described in detail in the SMF and RPF. The SMF also includes: management frameworks for gender, vulnerability, stakeholder engagement and labor impacts during construction (including gender-based violence (GBV) and sexual exploitation and abuse (SEA)) and GRM. The SMF will inform the preparation and implementation of site-specific Social Impact Assessments (SIAs) / Social Management Plans (SMPs) and (if required) Resettlement Action Plans (RAPs) / Abbreviated Resettlement Plans (ARP) for subprojects.

Compliance with the Bank's safeguards policies and the preparation and implementation of safeguards instruments, as per procedure outlined in the project's EMF and SMF/RPF, are also a requirement under the project, as per the General Conditions of the Legal Agreement between the Bank and the Governments of Pakistan and Sindh for this project. To highlight the KWSSIP RRP as a critical part of this project's design and safeguards instruments, the Legal Agreement also explicitly defines and makes reference to the KWSSIP RRP. The Agreement includes covenants related to compliance with safeguards instruments (EMF and SMF/RPF), and in particular, the PRRP screening mechanism related to the AED. It also requires that Bank financing is contingent to the government's compliance with the PRRP

The issue of labor influx will be assessed in detail during the preparation of the safeguard instruments of the sub-projects and management plan for labour will be prepared (if needed). The SMF, and any EMPs and SMPs prepared during project implementation will, also provide measures to avoid and or mitigate the risk of GBV and SEA.

The project will also have a robust monitoring system via third party monitoring, through a local NGO / CSO reporting



to the Bank, to monitor the subproject selection process and implementation. Finally, the project will have in place a communications strategy based on stakeholder engagement, to raise awareness of the scope and impacts of the project; and support a robust multi-level GRM system to address potential grievances of affected population under the project.

5. Identify the key stakeholders and describe the mechanisms for consultation and disclosure on safeguard policies, with an emphasis on potentially affected people.

Karachi is the most diverse and pluralistic city of Pakistan, with a large variety of ethnic, religious and social groups. Since the geographic scope of the project is the entire urban area of the city, all citizen groups living across the city will be directly or indirectly impacted and are to be considered as key stakeholders of the project. Further, there are a number of active NGOs and civil society stakeholders in Karachi which will be keenly interested in the project, especially the implementation of the subprojects. Stakeholders also include KWSB, local governments, and other agencies of the GoS. elected local government councils and representatives and various government agencies such as GoS departments, cantonment boards, SSWMB etc.

The project will also aim to strengthen citizen engagement by enhancing customer service, particularly by creating six new customer service centers, improving training for staff interacting with customers, and developing and implementing a modern communications strategy. The project will also support the dedicated informal settlements unit which will include resources for outreach to local NGOs as well as other aspects relating to vulnerable customer groups.

The project SMF also provides further guidance for citizen engagement (including for consultation and information dissemination) and includes a framework for stakeholder participation and community engagement as well as guidelines for strengthening the GRM for the project. The RPF also provides guidance for consultation and disclosure to ensure that for each sub-project identified as having involuntary resettlement impacts, stakeholders who are directly or indirectly involved in the project (including PAPs, marginalized / vulnerable beneficiary groups, civil society etc.) are meaningfully consulted throughout the project cycle and provided information regarding safeguards plans.

In addition to strengthening the complaints management system, a project-specific multi-tier GRM in line with the Bank’s requirements will be established, as per guidelines included in the SMF and EMF, for civil works executed under this project . This will respond to queries, receive suggestions and address complaints and grievances about any disconnects and irregularities in application of the guidelines of the EMF and SMF

B. Disclosure Requirements

Environmental Assessment/Audit/Management Plan/Other

Date of receipt by the Bank 15-May-2019	Date of submission for disclosure 17-May-2019	For category A projects, date of distributing the Executive Summary of the EA to the Executive Directors
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"In country" Disclosure



Pakistan
20-May-2019

Comments

Resettlement Action Plan/Framework/Policy Process

Date of receipt by the Bank
15-May-2019

Date of submission for disclosure
17-May-2019

"In country" Disclosure

Pakistan
20-May-2019

Comments

C. Compliance Monitoring Indicators at the Corporate Level (to be filled in when the ISDS is finalized by the project decision meeting)

OP/BP/GP 4.01 - Environment Assessment

Does the project require a stand-alone EA (including EMP) report?

Yes

If yes, then did the Regional Environment Unit or Practice Manager (PM) review and approve the EA report?

Yes

Are the cost and the accountabilities for the EMP incorporated in the credit/loan?

Yes

OP/BP 4.11 - Physical Cultural Resources

Does the EA include adequate measures related to cultural property?

Yes

Does the credit/loan incorporate mechanisms to mitigate the potential adverse impacts on cultural property?

Yes

OP/BP 4.12 - Involuntary Resettlement

Has a resettlement plan/abbreviated plan/policy framework/process framework (as appropriate) been prepared?

Yes

If yes, then did the Regional unit responsible for safeguards or Practice Manager review the plan?

Yes



OP/BP 4.37 - Safety of Dams

Have dam safety plans been prepared?

No

Have the TORs as well as composition for the independent Panel of Experts (POE) been reviewed and approved by the Bank?

Yes

Has an Emergency Preparedness Plan (EPP) been prepared and arrangements been made for public awareness and training?

No

OP 7.50 - Projects on International Waterways

Have the other riparians been notified of the project?

No

If the project falls under one of the exceptions to the notification requirement, has this been cleared with the Legal Department, and the memo to the RVP prepared and sent?

Yes

Has the RVP approved such an exception?

Yes

The World Bank Policy on Disclosure of Information

Have relevant safeguard policies documents been sent to the World Bank for disclosure?

Yes

Have relevant documents been disclosed in-country in a public place in a form and language that are understandable and accessible to project-affected groups and local NGOs?

Yes



All Safeguard Policies

Have satisfactory calendar, budget and clear institutional responsibilities been prepared for the implementation of measures related to safeguard policies?

Yes

Have costs related to safeguard policy measures been included in the project cost?

Yes

Does the Monitoring and Evaluation system of the project include the monitoring of safeguard impacts and measures related to safeguard policies?

Yes

Have satisfactory implementation arrangements been agreed with the borrower and the same been adequately reflected in the project legal documents?

No

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APPROVAL

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Approved By

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