

**PROJECT INFORMATION DOCUMENT (PID)
APPRAISAL STAGE**

Report No.: PIDA22698

Project Name	Lusaka Sanitation Project (P149091)
Region	AFRICA
Country	Zambia
Sector(s)	Health (20%), Sanitation (80%)
Theme(s)	Urban services and housing for the poor (40%), Municipal finance (15%), City-wide Infrastructure and Service Delivery (15%), Pollution management and environmental health (30%)
Lending Instrument	Investment Project Financing
Project ID	P149091
Borrower(s)	REPUBLIC OF ZAMBIA
Implementing Agency	Lusaka Water and Sewerage Company
Environmental Category	B-Partial Assessment
Date PID Prepared/Updated	31-Mar-2015
Date PID Approved/Disclosed	31-Mar-2015
Estimated Date of Appraisal Completion	26-Mar-2015
Estimated Date of Board Approval	22-May-2015
Appraisal Review Decision (from Decision Note)	<p>The project team will continue to assess the balance between the three components during appraisal to ensure the project design reflect the poverty reduction and institutional reform objectives of the Project. It will specifically strengthen component 3 during appraisal. The team will build in flexibility to easily reallocate funds between components during implementation by including an unallocated category into the financing table. The Mid-Term Review for the project will be held at the end of Year 2 to see if there is anything more that can be done to bolster Components 2 and 3 and reassess the budget allocation once implementation has started and other IFI financing is confirmed.</p> <p>The review discussed the risk rating of the project and agreed to rate the project substantial, but to reduce the political and governance rating from substantial to moderate.</p> <p>The chair authorized the team to appraise the project and, subject to the issues described above, to proceed with negotiations.</p>

I. Project Context

Country Context

Zambia has recently become a lower middle-income country and has a stable democratic political system. A decade of sustained economic growth—averaging 5.7 percent per year over the past ten years—has positioned Zambia among the top ten fastest growing economies in Sub-Saharan Africa, and allowed it to attain lower-middle income status. Zambia's economy was expected to grow at 5.5 percent per year in 2014. Nominal per capita income is US\$1,810 (2013). Zambia achieved independence in 1964, and after a period of single-party rule until 1991 as successfully held five peaceful national elections. The country recently elected Mr. Edgar Lungu from the Patriotic Front Party as successor to the deceased President Michael Sata through a peaceful national election.

However, many of the development challenges Zambia faces are similar to those of low-income countries. Poverty rates are stubbornly high at 68 percent (using Purchasing Power Parity at US \$1.25 per day), as is inequality (0.52 gini coefficient, over 0.50 is considered high). Key measures of human development are worse than many low-income countries. For example, under 5 mortality of 119 per 1000 live births (compared to low income average of 108), life expectancy of 49 (compared to a low income country average of 59), and malnutrition in children under five of 45 percent (compared to low-income average of 36 percent), which closely tracks poor sanitation. This has resulted in Zambia being ranked 141 out of 187 countries in the UN's Human Development Index in 2014. The economy remains largely undiversified (mainly dependent on copper) and largely concentrated in urban areas. Zambia is lagging on various Millennium Development Goal (MDG) targets, including those for water and sanitation.

Lusaka is Zambia's capital and largest city. The most recent census (2010) estimated the population of Lusaka Province as 2.3 million which represents 17 percent of Zambia's national population of 13 million. Lusaka City was estimated at 1.7 million in 2010. With a population growth rate of 4.5 percent, one of the highest in Sub-Saharan Africa, the city's population is estimated to grow to 2.3 million in 2015 and 5 million by 2035. Lusaka city is located within Lusaka Province, one of Zambia's 10 provinces. The province is divided into 8 districts (Lusaka, Kafue, Chongwe, Luangwa, Rufunsa, Chirundu, Chilanga and Shibuyunji).

Sectoral and institutional Context

Water supply and sanitation is a core development issue for Zambia's economic growth and social development. Lack of adequate water supply and sanitation results in poor public health and environmental conditions and, furthermore, constrains investment. Sixty-three percent of Zambians have access to clean drinking water supply compared to an MDG target of 75 percent by 2015 as defined by the United Nations Children's Program (UNICEF)/World Health Organization (WHO) Joint Monitoring Program (JMP). 43 percent have access to adequate sanitation, 56 percent in urban areas and 34 percent in rural areas, compared to a MDG target of 70 percent. The national long-term vision is to reach: (i) 100 percent access to clean water, (ii) 90 percent access to sanitation; (iii) rehabilitation and reconstruction of sewage facilities in all major towns and cities, and (iv) collection and treatment of 80 percent of all wastewater by 2030.

Lack of adequate sanitation in Zambia significantly impacts human development. Zambia loses 1.3 percent of GDP due to public health impacts of poor sanitation (Water and Sanitation Program, 2012) which results in child malnutrition, illness and premature death. The economic burden of inadequate sanitation falls most heavily on the poor who are most likely to have inadequate sanitation facilities.

The adverse impact of poor sanitation is most acute in Lusaka. Lusaka is suffering from a sanitation crisis that claims lives through annual outbreaks of cholera, typhoid and dysentery and causes severe environmental pollution. An estimated 70 percent of Lusaka's urban residents live in "peri-urban areas", which are relatively high-density, unplanned neighborhoods largely comprised of poor residents. Roughly 90 percent of peri-urban areas rely on pit latrines, most of which are unimproved latrines, i.e., do not comply with the JMP definition of adequate sanitation and the remaining 10 percent use sewers, septic tanks or defecate in the open (estimated at 1 percent). In addition, 57 percent of Lusaka's water supply is derived from fairly shallow groundwater abstracted within the city, which is prone to contamination through fissures in the underlying rock. The most vulnerable areas coincide with low-income neighborhoods situated to the south-west of the city center, making sewerage an attractive sanitation option in these areas, provided it is possible to ensure low leakage rates in operating the system. Poor management of solid waste and storm water drainage, and the generally flat terrain further compound these problems. Despite widespread consensus regarding the need to construct sewers, the city has been reluctant to shoulder investment costs, which may be difficult to recover.

The water sector reforms started in the 1990s need to be completed to increase both the financial viability of commercial utilities and the focus on sanitation. In 1994, the Government of Zambia (GRZ) launched a comprehensive water sector reform program aimed at ensuring quality provision of water supply and sanitation, at affordable costs and on a sustainable basis. The seven principles of this reform program laid out in the 1994 National Water Policy called for: (i) separation of water resources functions from water supply and sanitation; (ii) the separation of regulatory and executive functions; (iii) the devolution of responsibilities to local authorities and private enterprises; (iv) achievement of full cost recovery for water supply and sanitation (WSS) services through user charges in the long run; (v) human resources development for effective institutions; (vi) the adoption of technology in line with local conditions (and ability to pay); and (vii) increased GRZ priority and budget spending for the sector.

Good headway has been made to date particularly on the institutional and regulatory fronts. In terms of the separation of functions, while the Ministry of Energy and Water has overall responsibility for the water sector, water supply and sanitation falls under the auspices of the Ministry of Local Government and Housing (MLGH). Separation of the regulatory and executive functions was achieved through the passage of the Water Supply and Sanitation Act of 1997, which established the independent regulator, the National Water and Sanitation Council (NWASCO). Responsibility for service provision has been devolved to the Local Authorities who have established 11 municipally-owned regional Commercial Utilities to manage water and sanitation throughout the country. These utilities are regulated by NWASCO, and environmental pollution is regulated by the Zambian Environmental Management Agency (ZEMA). Significant progress has been made in terms of the separation of water resources management from water supply and sanitation, the separation of regulatory and executive functions and the devolution of authorities from the central to local governments. However, a second round of reforms is needed to improve the financial viability of these utilities and to build capacity for sanitation services throughout the country, and in Lusaka in particular.

The Lusaka Water and Sewerage Corporation (LWSC) is responsible for water supply and sanitation in Lusaka Province. The Water Supply and Sanitation Act of 1997 provides the option for Local Authorities to delegate responsibility for water and sanitation provision to the

Commercial Utilities. The Lusaka City Council (LCC), through the establishment of LWSC provides LWSC with the mandate to provide water and sanitation services—and to enforce all by-laws enacted by LCC related to water and sanitation services—for the urban residents of Lusaka Province. LWSC was formed in 1988 as a Private Limited Liability Company owned by the city councils of Lusaka (60 percent), Kafue (20 percent), Chongwe (10 percent) and Luangwa (10 percent). Ownership of LWSC has now expanded to include all districts in Lusaka Province. LWSC currently has the mandate to supply services to Lusaka City, Kafue, Luangwa, Chongwe, Chirundu, Rufunsa and Lusitu. LWSC has 91,342 water connections serving 1.4 million people (as of December 2014), and provides sewerage services to 14 percent of residents through about 33,000 sewerage connections. An integrated approach to managing sanitation (wastewater and solid waste) is lacking, as is coordination between the City Council and LWSC for housing development.

LWSC has achieved significant results in water supply with Bank support, but has not yet focused on sanitation. As documented in the ICR for the Water Sector Performance Improvement Project (WSPIP) which closed in June 2013, LWSC has made significant improvements in the financial viability of the company, and in strengthening the institution for future investments. For example, the operating ratio, i.e. revenue/cost, increased from 80 percent at the start of the project to 130 percent at project close, and this positive cash flow has been maintained since the closure of the project. The Bank has a strong partnership with LWSC and has been building up to a large capital expansion project for over a decade (including a strong focus on institutional strengthening through several projects). However, it still faces significant challenges, such as high non-revenue water (45 percent compared to a desired level of less than 25 percent) and inefficient staffing (10 staff/1000 connections compared to a benchmark of 1-3). The Millennium Challenge Account (MCA) grant to Lusaka of US\$335 million—which was based in large part on the WSPIP design, and motivated by the performance improvement achieved under WSPIP—focuses on water supply and drainage. Sanitation services have not improved at the pace of water services and have received little support from Cooperating Partners (CPs). The increased supply of water without the corresponding improvements in sanitation creates an additional public health risk.

The Lusaka Sanitation Master Plan provides a comprehensive strategy for full coverage of sanitation by 2035. With support from the Millennium Challenge Corporation (MCC), the Government of the Republic of Zambia (GRZ) developed the Lusaka Sanitation Investment Master Plan (2011). The Master Plan provides a strategy for 100% coverage of Lusaka Province – in both off-site (sewers) and on-site sanitation – by 2035. Lusaka's sewer network of 480km currently covers approximately 30 percent of the city's area, and connects 14 percent of Lusaka's residents, mostly the better-off. Including on-site sanitation (pit latrines and septic tanks, often shared), sanitation coverage reaches about 69 percent; however, many of these facilities do not meet public health requirements as defined by Government policy, and JMP. Many on-site systems—septic tanks and pit latrines—are not working properly because of rocky conditions and a high water table, and this may lead to users making direct connections or deliberately dumping removed contents into storm water drains and streams. Significant investments and reforms are required to reach the target of 100 percent sanitation coverage (on-site and off-site) cited in the Sanitation Master Plan (2011) by 2035. The Master Plan estimates that \$1.9 billion is needed by 2035 and prioritizes investments into short term (\$370 million), medium term (\$635 million) and long term (\$925 million). Short-term investments include collection system upgrades and expansion, treatment upgrades and expansion and improving on-site sanitation facilities and their management.

The Lusaka Sanitation Program is one of the first steps towards implementing the Lusaka Sanitation

Master Plan. The Government of Zambia is implementing the Lusaka Sanitation Program with the aim of providing adequate sanitation facilities to all urban citizens of Lusaka Province starting with investments in Lusaka City. The Program is being implemented by LWSC and will implement investments consistent with the Lusaka Sanitation Master Plan. Four International Financial Institutions (IFIs) have been requested to support the Lusaka Sanitation Program, the European Investment Bank (EIB), Kreditanstalt für Wiederaufbau (KfW), the African Development Bank (AfDB) and the World Bank. The World Bank's support would be provided through the proposed Lusaka Sanitation Project. Both EIB and KfW will focus their support on sewerage and sludge treatment, whereas AfDB and the World Bank will support sewerage collection, on-site sanitation, and institutional strengthening. Of the five sewersheds in Lusaka City, LWSC has proposed that the World Bank finances investments in Ngwerere and Manchinchi sewersheds, and that the AfDB focus on Matero and Chunga. The Millennium Challenge Corporation, through a grant of \$335 million (of which \$90 million is for sanitation) is already focusing on the Kaunda Square and Chelston sewersheds. While the World Bank's support is included under the Lusaka Sanitation Program, the Project Development Objectives for the World Bank's Project can be achieved independently of the larger Program. The Bank's project is being prepared ahead of the other projects and is expected to be submitted to the Board prior to the other financing being fully defined.

II. Proposed Development Objectives

The Project Development Objective is to increase access to sanitation services in selected areas of Lusaka and strengthen LWSC's capacity to manage sanitation services.

III. Project Description

Component Name

Sewerage Improvements (\$38m)

Comments (optional)

The objective of this component is to upgrade and expand sewerage systems in the Ngwerere and Manchinchi sewersheds. Collection system upgrading and expansion will be based on priority 1 investments as identified in the Lusaka Sanitation Master Plan by LWSC. Year 1 investments will include sewer network expansion in Emmasdale and Chaisa neighborhoods and Kafue Road and upgrade of Ngwerere Western Interceptor. Year 2 to 5 investments will be network expansion in Chawama, Kuomboka and Garden, upgrade of Ngwerere Downstream Collector and upgrade and extension of Ngwerere Sewage Ponds.

Component Name

On-site Sanitation (\$13m)

Comments (optional)

The objective of this component is to develop a comprehensive response to the on-site sanitation challenge facing Lusaka and support on-site sanitation services and systems in priority areas. This component will focus on priority peri-urban areas that will not be seweraged in the medium- to long-term due to technical and financial considerations. Investments will include a support fund for on-site sanitation facilities, support to the development of FSM infrastructure and service providers, construction of a number of DEWATS systems and sanitation and hygiene promotion. The areas to be covered under this component will be selected after the completion of the feasibility study.

Component Name

Institutional Strengthening (\$9m)

Comments (optional)

This component will provide technical assistance (TA) to enhance LWSC's capacity to implement the project, operate and maintain the facilities going forward, and to support the reforms needed to deliver sanitation services effectively and efficiently and to respond better to customer demand. This will include: (i) project management support to LWSC to implement the project, (ii) TA to strengthen the capacity of LWSC to provide sanitation services and preparation funds for future investments and equipment for sewer maintenance and labs, and (iii) building capacity for monitoring program implementation and impacts in LWSC, LCC, MCDMCH and MoH.

Component Name

Unallocated (\$2m)

Comments (optional)**Component Name**

Project Preparation Advance (\$3m)

Comments (optional)**IV. Financing (in USD Million)**

Total Project Cost:	78.90	Total Bank Financing:	65.00
Financing Gap:	0.00		
For Loans/Credits/Others			Amount
BORROWER/RECIPIENT			13.90
International Development Association (IDA)			65.00
Total			78.90

V. Implementation

1. Legal Agreements: The Ministry of Finance (MoF), representing the Government of the Republic of Zambia (GRZ) will sign a Financing Agreement for the IDA credit with the Bank. There will be a Subsidiary Agreement between MoF and LWSC through which the funds and the responsibility to implement the project will be passed on to LWSC. There will be a Project Agreement between LWSC and the Bank to define the eligible activities and the implementation modalities.

2. The project will be implemented by LWSC. All funds will flow through LWSC, and implementation will be coordinated by a Project Implementation Unit. LWSC has to date focused more on sewerage than on-site sanitation. However, under the project, LWSC is committed to expanding their services into on-site sanitation to fulfill their mandate. LWSC will also utilize the Sanitation Fund to support on-site sanitation, a fund created to improve sanitation services for the poor, and managed by LWSC. A sanitation levy, which is a 2.5 percent of the collected water bill, is included in the tariff agreed with NWASCO. LWSC collects this levy as part of the water bill and sets aside this money for improving sanitation services for the poor. On average ZK300 000 is raised per month. LWSC only spends the funds on projects that have been approved by the regulator. LWSC has used the Sanitation Fund to support condominium sewerage improvements in the Kalingalinga peri-urban area, amongst others.

3. On-lending/on-granting terms: The IDA credit will be passed on to LWSC partially as a loan, and partially as a grant, as agreed between MoF and LWSC. Component 1 will be on-lent from MoF to LWSC on the same terms and conditions as the Financing Agreement between MoF and IDA. Components 2 and 3 will be on-granted from MoF to LWSC.

4. Project Implementation Unit: LWSC has formed a Project Implementation Unit (PIU) that will manage the project. The structure of the PIU has been agreed by the Bank and has been judged to have sufficient capacity to implement the project. Key staff of the PIU include: Project Manager, Finance Officer, Procurement Officer, Safeguards Officer, Monitoring and Evaluation Specialist, Sanitary Engineer, On-site Sanitation Specialist and Community Development Specialist. LWSC has recently implemented a Bank-financed project (WSPIP) and is familiar with Bank procedures which will facilitate implementation. The PIU has retained most of the staff that were active in the implementation of WSPIP and intends to second most of these to the PIU.

5. LWSC will implement Component 1. The PIU will work closely with the Sewerage Department to implement Component 1. LWSC operates a network of 480km of sewers with seven wastewater treatment plants (WWTPs). Under the Project an additional 82 km will be constructed, and up to 500km under the Lusaka Sanitation Program. The Project will assist LWSC to strengthen the capacity of the Sewerage Department and the PIU to operate and maintain this larger network.

6. LWSC will implement Component 2. The main subcomponents are the (i) hygiene promotion program, (ii) construction of on-site facilities, (iii) the development of FSM services, and (iv) the construction of DEWATS systems. Each of these will be contracted to a consultant or NGO with the requisite skills and capacity. The hygiene promotion program will be coordinated with the work of other partners working in Lusaka through a formal mechanism involving the partners and the key Zambian institutions to realize synergies and ensure consistency of messaging. The contract for construction of onsite facilities will include the development of arrangements with a micro-finance institution for funding user advance payments, and the training of local builders to deliver the actual facilities. The development of FSM services will include the selection, according to agreed criteria, and training of entities to be developed to deliver the services. The DEWATS systems will be implemented under similar arrangements to Component 1.

7. LWSC will implement Component 3 in collaboration with other institutions. Sub-components 3.1 (Project Management) and 3.2 (TA to LWSC) will be implemented directly by LWSC. Sub-component 3.3 (Program monitoring) will be implemented in collaboration with MCDMCH, MoH and LCC. Funds for this component will be managed by LWSC and all procurement will be the responsibility of LWSC; however, technical oversight on key issues for the LCC and MCDMCH component will be done in collaboration with these institutions. MLGH, NWASCO and ZEMA will be supported by other IFIs supporting the Lusaka Sanitation Program.

8. Steering Committee: The Government will form the Lusaka Sanitation Program Steering Committee to oversee preparation and implementation of the Program, as well as the Project. The Steering Committee will be chaired by MLGH and draw members from the MoH, MCDMCH, LCC, NWASCO, and ZEMA, and others as seen relevant. The World Bank and the Program's other Cooperating Partners will support the Steering Committee as appropriate. The Steering Committee will be charged with providing oversight and guidance on project implementation. The Steering Committee will also facilitate inter-institutional collaboration and will resolve legal and policy

bottlenecks. It will meet at least twice a year and shall inform government (through the MLGH) on progress and challenges confronting the project. The PIU shall provide secretariat services for the Steering Committee and shall be responsible for preparing and disseminating minutes to key stakeholders, including the World Bank.

VI. Safeguard Policies (including public consultation)

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment OP/BP 4.01	x	
Natural Habitats OP/BP 4.04		x
Forests OP/BP 4.36		x
Pest Management OP 4.09		x
Physical Cultural Resources OP/BP 4.11		x
Indigenous Peoples OP/BP 4.10		x
Involuntary Resettlement OP/BP 4.12	x	
Safety of Dams OP/BP 4.37		x
Projects on International Waterways OP/BP 7.50	x	
Projects in Disputed Areas OP/BP 7.60		x

Comments (optional)

VII. Contact point

World Bank

Contact: Michael John Webster
 Title: Sr Water & Sanitation Spec.
 Tel: 5391+3225 /
 Email: mwebster@worldbank.org

Borrower/Client/Recipient

Name: REPUBLIC OF ZAMBIA
 Contact: Felix Nkulukusa
 Title: Permanent Secretary
 Tel:
 Email: ALL_MOFNP@mofnp.gov.zm

Implementing Agencies

Name: Lusaka Water and Sewerage Company
 Contact: Mr. George Ndongwe
 Title: Managing Director
 Tel: 260211251712
 Email: gndongwe@lWSC.com.zm

VIII. For more information contact:

The InfoShop
The World Bank
1818 H Street, NW
Washington, D.C. 20433
Telephone: (202) 458-4500
Fax: (202) 522-1500
Web: <http://www.worldbank.org/infoshop>