Section 7. Terms of Reference

1. BACKGROUND

Water 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, poor environmental conditions, and constrains investments. Sixty percent of Zambians have access to clean drinking water supply, while 49 percent have access to adequate sanitation as defined by UNICEF/WHO (Government figures are lower). The national long term vision for 2030 is to reach 80% access to clean water supply by 2015 and 100% by 2030; 68% sanitation by 2015 and 90% by 2030; rehabilitation and reconstruction of sewage facilities in all major towns and cities; and 80% of waste collected and treated by 2030.

Lack of adequate sanitation in Zambia significantly impacts human development. Zambia loses 1.3% of GDP due to poor sanitation (WSP, 2012), primarily due to illness and premature death from the public health impacts of poor water, sanitation, and hygiene. The economic burden of inadequate sanitation falls most heavily on the poor who are most likely to have inadequate sanitation facilities.

The sanitation crisis is acute in Lusaka, where poor sanitation claims lives through annual outbreaks of cholera, typhoid, and dysentery, and causes severe environmental pollution. Seventy percent of Lusaka’s 2 million residents live in peri-urban areas, most of which have poor sanitation. Open defecation is practiced commonly in some of the densely populated peri-urban areas (high-density neighborhoods) of Lusaka, most self-built latrines are in poor condition. 75% of fecal sludge generated in Lusaka is not properly treated and nearly 48% of all fecal sludge is unsafely discharged in residential areas, posing a direct public health risk. In addition, 60% of Lusaka’s water supply is from groundwater abstracted within the city, and the city has a high groundwater table which is prone to contamination, particularly in peri-urban areas without adequate sanitation, necessitating improved sanitation in many of these low-income communities. However, sewerage investments would be very expensive in the peri-urban areas as re-planning (and consequently resettlements) would be required. And since the current water tariffs do not allow for capital cost recovery, the water and sewerage service provider’s shareholders are reluctant to invest in sewers in these areas.

2. THE LUSAKA WATER AND SEWERAGE COMPANY

The Lusaka Water and Sewerage Company (LWSC) is responsible for water supply and sanitation in Lusaka Province. LWSC has a mandate to provide water and sanitation services to the 2.2 million urban residents of Lusaka Province, which consists of Lusaka city (2 million) and four other districts (Kafue, Chongwe, Luangwa, and Chilanga). LWSC was formed in 1988 as a Private Limited Liability Company owned by the municipal councils of Lusaka (60%), Kafue (20%), Chongwe (10%) and Luangwa (10%). LWSC has 86,000 connections serving 1.7 million people.

LWSC has achieved significant results in water supply, but not on sanitation. LWSC has
made significant improvements in the financial viability of the company, and in strengthening the institution for future investments. However, it still faces significant challenges, such as high non-revenue water (45 percent compared to a desired level of less than 25%) and inefficient staffing (Staff Cost in relation to Billing and Collection. LWSC is at 50% as compared to benchmark of 40%). The Millennium Challenge Corporation (MCC) grant to Lusaka, US$355 million, focuses more on water supply and drainage with little investment in sanitation. However, sanitation services have not improved at the pace of water services and have received very little support from Cooperating Partners (CPs). The increased supply of water without corresponding improvements in sanitation created an additional public health risk.

LWSC, with the support of the Water and Sanitation Program (WSP) has been piloting “condominial sewerage” through the Kalingalinga Pilot Project in a high-density neighborhood of Lusaka called Kalingalinga with an estimated population of 45,000 people. “Condominial sewerage” is the application of simplified sewerage (small bore, low cost) coupled with wide consultations between users and agencies during planning and implementation, popularized in Brazil. The pilot has completed phase 1 (laying of the trunk sewers) and begun connecting households who have constructed toilets. Progress has been slow, arising from a number of issues such as financing the on-plot infrastructure, communication with customers, and linking the pilot project to LWSC’s customer relations management and technical departments.

LWSC now wishes to address the sanitation crisis to reach the targets laid out in the Sanitation Master Plan. Lusaka’s sewer network of 480km covers about 30% of the city’s area, and connects to 10-15% of Lusaka’s residents. Including on-site solutions (pit latrines and septic tanks), sanitation coverage reaches about 69%; however, many of these facilities do not meet public health requirements. Significant investments and reforms are required to reach the target of 100% sanitation coverage (on-site and off-site) cited in the Sanitation Master Plan (2011) by 2035. LWSC has seven wastewater treatment plants (WWTPs), two trickling filter plants—Manchinchi and Chunga—and five waste stabilization ponds. The WWTP discharges are far from compliant with health and environmental standards, representing a serious health hazard to the nearby and downstream populations. LWSC understand that it must urgently remedy this problem, and has sought assistance from its development partners.

The World Bank, the African Development Bank (AfDB), Kreditanstalt fur Wiederaufbau (KfW), and European Investment Bank (EIB) are currently assisting LWSC in preparing the Lusaka Sanitation Program, which will take a comprehensive approach to Lusaka’s sanitation challenge. The program will implement investments consistent with the Lusaka Sanitation Master Plan and develop the LWSC’s capacity to manage all aspects of sanitation, from conventional sewerage, to condominial, to on-site systems and fecal sludge management.

### 3. RATIONALE

Against this background, LWSC has decided to scale-up its efforts in increasing access to improved sanitation. The World Bank is now preparing – in cooperation with KfW, EIB, and
AfDB – the “Lusaka Sanitation Program”, with a total investment of about $282 million. The World Bank’s component – the “Lusaka Sanitation Project”, US$50 million – will focus on increasing access to sustainable sanitation services for the poor and most vulnerable. The LWSC wishes not only to improve the operational management and maintenance of its sewerage systems, but also to develop its capacity to ensure adequate sanitation services for the majority of Lusaka residents who cannot be served by the sewerage systems, aiming to manage sanitation for the metropolitan area in a comprehensive and integrated manner. This will require building new capacity and developing new skills within LWSC, as it moves from a technical focus on managing sewerage infrastructure towards a focus on meeting customer needs and environmental protection. This may entail a certain degree of reorganization as informal and peri-urban settlements become the principal customer base of LWSC. Furthermore it will require better coordination and engagement of the relevant stakeholders.

4. OBJECTIVE

The objectives of the assignment are:

a) Conduct an institutional assessment of LWSC and design technical assistance to improve its performance, build capacity in understanding and meeting its customers’ sanitation needs, improve the operation and maintenance of sanitation services, build appropriate development partnership with private and public sector and enhance the sustainability of the investment under the Lusaka Sanitation Program.

b) Carry out a sector mapping and an assessment of the roles and responsibilities of the key stakeholders in sanitation service provision, and recommend the necessary actions to improve its effectiveness, and work constructively to support drivers of change towards such effectiveness, or mitigate the obstacles to making progress and achieving the changes required.

5. SCOPE OF WORK

The Consultants will undertake the assignment in close consultation with the following key stakeholders:

i. Representatives from the Ministry of Local Government and Housing (MLGH), Ministry of Health (MOH), the Ministry of Finance (MOF), Ministry of Community Development, Mother and Child Health, the National Water and Sanitation Council (NWASCO), the Zambia Environmental Management Agency (ZEMA), Lusaka City Council (LCC), Devolution Trust Fund, NGO Wash Forum

ii. LWSC Board and Management

iii. World Bank, AfDB, EIB, and KfW representatives (relative to the Lusaka Sanitation Program).

iv. The consultants carrying out the feasibility studies, tariff Study and baseline and socio

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\(^7\) EIB, KfW, and AfDB will focus on extending and rehabilitating sewers, rehabilitating wastewater treatment plants, and sludge management. More details are available in the Project Concept Note.
economic study for the Lusaka Sanitation Program.

v. Any other relevant stakeholders including those identified as role players in the draft National Urban Sanitation Strategy (NUSS)

vi. Review relevant policy documents and plans on water, sanitation, and hygiene

The consultant will undertake the following:

1. **Institutional Assessment of LWSC and Design of Technical Assistance**

   i. Review the current organization structure and governance systems (relations with its owners and public agencies with associated responsibilities) of LWSC to ascertain its effectiveness in meeting its mandate to provide sanitation services in Lusaka Province.

   ii. Review performance of LWSC and identify the challenges it has been facing in providing sanitation services, from collection to transport, treatment and final disposal, covering both on-site and reticulated systems and challenges relating to scaling up of sanitation services to Peri-urban areas

   iii. Review the impact of decentralization of operation and maintenance of sanitation infrastructure by LWSC to the branch operations, including peri-urban unit.

   iv. Review the existing capacity in donor/stakeholder coordination and leadership on project implementation.

   v. Review the proposed technical assistance to LWSC in asset management under the Millennium Challenge Corporation (MCC) compact grant.

   vi. Review the current efficiency of the staff and the impact of the LSP for human resources efficiency.

   vii. Propose an organizational structure for LWSC sufficient to meet its expanded sanitation mandate covering all residents of the metropolitan area and key environmental challenges, as well as efficiently managing existing public sanitation infrastructure and new investments to be made under the Lusaka Sanitation Program and the MCC compact, including, but not limited to:

       a. Structure and skills required for the PIU as well as its mainstream to the corporate structure, including coordination with the different operational units.

       b. Capacity for procurement, contract and project management.

       c. Capacity and structure for operation and maintenance of the sewer systems and treatments works, including staffing and equipment required, and the necessary levels of decentralization.

       d. Structure and capacity required to manage financing schemes for toilet construction and connection to the sewer system, with or without subsidies.

       e. Structure and skills required for on-site sanitation implementation, including toilet construction, hygiene and sanitation promotion and fecal sludge management, considering possible delegated management schemes for on-site sanitation service provision, through NGOs, community based enterprises, and
f. The optimum corporate organizational structure to deliver its mandate to provide sanitation services, considering the expansion of services to reticulated systems in peri-urban areas and on-site sanitation.

g. Develop a strategy for human resources development and performance management framework for LWSC in alignment with the current performance contract review.

viii. Propose technical assistance to build capacity and improve the performance of LWSC in delivering on its expanded sanitation mandate. This should include proposals for capacity building to cover all the aspects outlined above and enhance sustainability of all public sanitation infrastructure, including investments under the Lusaka Sanitation Program

2. Stakeholder mapping and assessment of coordination needs

i. Identify all the relevant stakeholders for both off-site and on-site sanitation service provision in Lusaka Province, current roles and responsibilities and institutional relationships, including government institutions, NGOs / CBOs and other social organization covering both hygiene and sanitation promotion, infrastructure and service provision and monitoring, and public health sanitation related aspect.

ii. Review the relevant policy, identify gaps and overlaps with regards to roles and responsibilities of the different stakeholders on sanitation service provision and public health sanitation related activities.

- Review the relevant national and local (bylaws) legislation and the existing capacity to identify and enforce sanitation requirements for both individuals and institutions; And recommend any necessary changes, including policy review and capacity building actions to ensure its effectiveness.

iii. Assess the existing capacity for surveillance for water related diseases, water quality monitoring and corrective actions looking at the different stakeholders involved in sanitation service provision. This analyses should include assessing the existing laboratory and human resource capacity to measure: i) surface, underground and source water quality above and beyond measuring faecal coli to include other water related pathogens and industrial contaminants; ii) soil contamination with faecal matter.

- Assess the accuracy and completeness of the surveillance systems for water related diseases in Lusaka, as well as the response capacity of the MOH at national and local level to take coordinated and immediate primary and secondary prevention, and mitigating measures.

- Identify the institutional barriers to establish a coordinated and harmonized water quality monitoring system across the relevant stakeholders.

iv. Assess on-going capacity building projects regarding public health inspection and enforcement in Lusaka Province
v. Propose relevant policy review and actions required to enhance coordination between different stakeholders and increase sustainability of the LSP and assess the drivers of, and obstacles to, change and how these can be supported or mitigated.

vi. Propose a comprehensive institutional framework for sanitation service development in Lusaka Province, including an information system for surveillance and public health monitoring related to sanitation. This proposal should also look at other important players such as community management structures to assist in water quality monitoring or other relevant tasks.

- Propose capacity required within the Local authority to enforce the public health act to compel landlord to invest in sanitation facilities. Develop a system of scaling up enforcement at community leadership level and for reporting to the public.

6. TEAM EXPERIENCE

The consultant must have and demonstrate the requisite skills and experience necessary to undertake the range of tasks set out in these Terms of Reference.

The consulting team will include, but need not be limited to:

1. **Team Leader** - Master’s Degree in Business Administration, Institutional Development or related field. The Team Leader should have extensive experience in institutional assessments and developing technical assistance for performance improvement with at least 15 years of experience working in the water and sanitation sector in developing countries.

2. **Institutional Development and Performance Management Specialist** – Master’s Degree in Business Administration, Economics, Development Studies or related field. He should have extensive experience in institutional development and performance management for performance improvement with at least 10 years of experience working in the water sector in developing countries.

3. **Technical specialist** – Master’s Degree in Civil/Water/Sanitary engineering or related field. He should have extensive experience in managing water supply and sanitation infrastructure with at least 10 years of experience working in the water and sanitation sector, including on-site sanitation.

4. **Financial Analyst** – Master’s Degree in Economics or Finance or related field with at least 5 years of relevant international experience in water sector planning and evaluation including financial and economic aspects. Excellent knowledge of finance.

5. **Commercial Specialist** – master’s degree in Business Administration, Economics or related field with at least 10 years’ experience in a water supply and sanitation utility, with a bias in commercial services.

6. **Human Resource Analyst** – master’s degree in Human Resources, Social Sciences or related field with at least 5 years’ experience in the field of Human Resources Management. The Human Resources Specialists should have undertaken human


resources strategy development work in a water utility

7. Operation and Maintenance Specialist – Master’s Degree in Engineering or related field. He should have at least 10 years’ experience in asset management with a bias in water supply and sanitation infrastructure operation and maintenance

The team should include both international and national consultants.

The team of consultants should comply with the following requirements:

- Extensive experience and expertise in institutional assessment, including at least two assignments in carrying out institutional assessments of water utility company and design of technical assistance with a view to improve technical efficiency of the firm. References from past assignments will have added advantages,
- Previous involvement in developing a human resources strategy for performance improvement,
- Demonstrated creativity, dedication, and client satisfaction, and an ability to assess and design development approaches for change management – technically and in the political economy
- Demonstrated consistency and experience of key staff having worked together in similar assignments for a period of at least two years,
- Demonstrated ability to manage, coordinate and monitor an integrated project implementation,
- Ability to engage key stakeholders and other parties as necessary in order to carry out the activities proposed under this assignment
- Availability to complete the work as and when required.
- Experience in Zambia, and similar projects the consultant has carried out in Zambia and other countries in Sub-Saharan Africa.

7. OUTPUTS

- Inception Report
  - Proposed detailed technical approach
  - Proposed detailed work plan/timeline
  - Identification of issues crucial to the viability of the consultancy
- An initial Framework report that includes the first year schedule of activities and levels of investments
- Draft Report
- Final Report including detailed ToRs for the proposed technical assistance
8. REPORTING

All correspondence on the project will be addressed to the Managing Director, Lusaka Water and Sewerage Company Limited. The consultant will report to a designated officer in the Project Management Unit (PMU).

9. TIMING

The assignment is expected to take about 13 man months of which at least 10 are in the field based in Lusaka. The assignment is expected to start in May 2015 and have duration of three (03) months. The Consultant shall arrange their work to ensure implementation of the assignment within the agreed timeframe.

10. AVAILABLE BUDGET

The total budget is expected to meet the total costs of the consulting services and will take care of the following:

- All fees, travel and subsistence of the consultant
- All costs associated with the production of documents, reports and presentations,

The consultant will have a fully operational office at LWSC. The consultant shall be responsible for the provision of their communication facilities including computers and internet. The Consultant will provide residential accommodation for their specialists, their local and international transportation for staff. The Consultant will be responsible for all salaries, fees, allowances, insurance, leave pay and taxes for the staff involved in the assignment.

11. CLIENT’S RESPONSIBILITY

The client shall provide all available project information; reports and documents needed by the consultant when undertaking the assignment. The client shall also provide access to facilities and offices where relevant data can be collected about the company’s water and sewerage system from 8 am to 5 pm on normal working days. The consultant should provide 24 hour advance notice of any other special arrangements to the LWSC facilities.

12. COMPLETION OF SERVICES

At the end of the Contract, the Consultant shall submit to the Client, all reports and necessary information and other related documentation on the assignment. All reports shall be submitted in hard copies (minimum 5 reports) as well as in electronic version (i.e. CD in PDF format and clearly labeled).