



African Water Association (AfWA)
Association Africaine de l'Eau (AAE)

RASOP-Africa

Reinforcing African Sanitation Operators Capacity through Peer-to-Peer Learning Partnerships

PARTNERSHIP

LWSC - EWS

(Zambia)

(South Africa)

For a better management of non-sewer sanitation and faecal sludge management in Lusaka



BACKGROUND AND RATIONALE OF THE PROJECT

Access to safe drinking water and adequate sanitation is a daily struggle for many city dwellers in developing countries, particularly in Africa. Moreover, it arises, for populations having adequate sanitation to autonomous type, the problem of the management of drainage sludge generated by these facilities. Armed with these findings, several African countries, with the support of donors, want to reverse the trend by implementing various models of development of autonomous sanitation. It is in this context that the African Water Association (AfWA) with the financial support of the BMGF has implemented a three-year project (2016-2018) entitled "Reinforcing Capacity of African Sanitation Operators on non-sewer and faecal sludge management systems through peer-to-peer learning partnerships (RASOP-Africa)". The project involves peer-to-peer mentorship and learning, whereby, Lusaka Water and Sewerage Company (LWSC), which is the direct beneficiary of this program, is supervised by eThekweni Water & Sanitation (EWS) of the Municipality of Durban (South Africa) whose experience, developed in the area of FSM is proven successful and has resulted in effective improvement of sanitary conditions for the relevant populations. Through this partnership, AfWA intends to promote the establishment of FSM strategies and the identification of on-site sanitation projects for the city of Lusaka.



MAINS CHALLENGES

The challenges in the provision of on-site sanitation facilities as well as in the delivery and improvement of the FSM services include:

(i)- Inadequacies in policy and regulatory frameworks: The policies and Acts that guide provision of sanitation services in urban and peri-urban areas of Zambia do not clearly spell out aspects of FSM but deal with it in the general context of sanitation. There are also lapses and

ineffective implementation of policies and laws on sanitation which inadvertently leave peri-urban areas vulnerable.

(ii)-Inappropriate facilities: Most onsite facilities, are constructed without provision for desludging. In some cases, these facilities are not even accessible making desludging impossible.

(iii)- Lack of capital: Loan facilities from the banks usually come with unsustainable interest rates that discourage private entrepreneurs to get capital through bank loans.

(iv)-Volatility of the currency: Unstable currency has immediate and real impacts on cost of doing business as well as on household incomes and their willingness and ability to pay for improved sanitation, including pit emptying services. For example, in 2015, the country experienced a downturn in the economy. The Kwacha depreciated by almost 300 percent from trading at ZMW4 to the US Dollar in January 2015 to over ZMW13 in September 2015.

(v)- Poverty and low-income levels: The ability by customers to pay for onsite services (e.g. desludging services) is compromised by the low-income levels.

(vi)- Inadequacies in infrastructure: The disposal plant at Manchinchi Wastewater Treatment Plant is not equipped with a weighing bridge forcing operators to pay a fixed discharge based on the size of the truck as opposed to the volume of septage discharged. In addition, the available infrastructure is dilapidated and is also not adequate to treat all the sludge expected from the city.

(vii)- High operational costs: High operational costs result from high fuel costs and the lack of spare parts which must be sourced from other countries (e.g. pumps) and therefore inadequate service provision.



• **SWOT analysis of the non-sewer sanitation and faecal sludge management in in Lusaka**

Strengths

- Management’s willingness to support FSM and OSS
- Availability of start-up funds for OSS and FSM activities
- Availability of operational FSM plants already being implemented
- Availability of vibrant and motivated staff to spearhead OSS and FSM related activities
- Existence of urban sanitation strategy

Weaknesses

- Lack of standards/guidelines for several aspects of OSS and FSM
- Lack of a well-defined strategy for funding OSS and FSM initiatives in low income areas.
- Inadequate capacity for up-scaling of facilities
- Limited skills to meet anticipated Technology changes
- Inadequacies in Sanitation Master plan on OSS and FSM
- Lack of mastery of OSS and FSM processing technologies
- Lack/Low levels of research activities oriented towards OSS
- Lack of business models for both manual pit emptying and vacuum tanker operators
- Inadequacies in the emptying tools (Both for manual emptying and vacuum pumps)
- Inconsistent usage of PPE and issues of ergonomics
- Inadequacies in capacity to treat all generated faecal sludge

Opportunities

- Political will to push the agenda of OSS and FSM forward
- Availability of market for OSS and FSM services
- Availability of various OSS and FSM technologies
- Willingness of other stakeholders to partner with LWSC on OSS and FSM
- Presence of donors highly motivated to support the sector

Threats

- Weak legal and institutional framework for OSS and FSM
- Limited influence on the standard of OSS facilities which affects desludging
- Market models may fail due to inability of customers to pay
- Inadequate financial capacity on the part of the private sector to participate
- Unpredictability of the financial markets and bank rates which may discourage the private to invest in FSM

DESCRIPTION OF THE PARTNERSHIP

The partnership between eThekwni Water and Sanitation (EWS) and the Lusaka Water and Sewerage Company (LWSC) aims at improving the quality of urban faecal sludge management and non-sewer sanitation services and coverage for the city of Kampala through a better strategic sanitation planning, development of sustainable projects, and institutionalisation of sustainable operational and financing framework for sanitation in the city. This partnership includes several actions:

- Assessment of the situation of sanitation in the city of Kampala and other actors to respond to the need for remediation of the populations;
- organization of benchmarking missions to the mentors for a sharing of best practices and knowledge;
- Elaboration of performance improvement plans;
- Capacity building of sanitation stakeholders actors through thematic training sessions;

- Support during the preparation of the strategic urban sanitation plans (SUSAP) centered on onsite sanitation;
- Participatory identification of key bankable sanitation projects for funding by donors.

MAIN ACTIVITIES

DATE	PLACE	ACTIVITIES
25 - 26 January 2016	Dakar	Official launch of the RASOP, in the presence of the Executive Secretary of AMCOW
June 2nd, 2016	Lusaka	RASOP kick-off workshop
11 –13 July 2016	Durban	1st benchmarking visit to eThekwni Municipality Water and Sanitation Unit (EWS)
October 2016	Lusaka	Baseline assessment of the sanitation situation of Lusaka



January 2017	Lusaka	Audit of performance and elaboration of Performance Improvement Plan (PIP)
25-28 September 2017	Lusaka	Training workshop on faecal sludge treatment technologies
26 - 28 September 2017	Lusaka	Training workshop on drainage sludge treatment technology
16-18 October 2017	Dakar	2nd Benchmarking visit at ONAS
23-24 November 2017	Bamako	Training workshop on the use of the African version of FSM toolkit and on the methodology to elaborate a Shit flow diagram
16-17 January 2018	Kampala	Strategic urban sanitation plan (SUSAP) workshop centered on non-sewer and faecal sludge management systems

The objective of this SUSAP is therefore to foster and enhance provision of OSS and FSM activities by addressing some critical areas that have been identified as hindrances to the effective implementations of OSS and FSM activities in the City of Lusaka.

- **Strategic components**

The SUSAP has 3 components, namely:

- ✓ **Component #1:** To improve the general landscape for the implementation of sustainable OSS and FSM initiatives;
- ✓ **Component #2:** To improve OSS and FSM infrastructure in the city for the enhancement of the FSM service chain;
- ✓ **Component #3:** to improve capacity amongst various stakeholders involved with OSS and FSM in the city and also foster research initiatives aimed at addressing identified challenges in the sector

- **Actions' Plan**

This SUSAP identified many interventions to be implemented in order to improve OSS and FSM in Lusaka City over the four years of project (2019-2022). The actions identified encompasses the whole sanitation value chain. The total amount of money needed to finance the SUSAP is Twenty-One Million Seven Hundred and Seven Thousand United States Dollars (USD\$21,707,000).

MAIN RESULTS

The following key results can be highlighted:

1 baseline report of the sanitation status of Lusaka
1 performance evaluation report on FSM services by LWSC
1 OSS Performance Improvement plan (PIP) for LWSC
2 staffs trained on the use of FSM toolkit
34 experts trained on Faecal Sludge treatment technologies
24 experts trained on technology of oil sludge treatment
5 staffs learned best practices through various benchmarking missions in Dakar and Durban.
1 Strategic urban sanitation plan centered on non-sewer and FSM for the city
A request to finance onsite sanitation projects to be submitted to African Water Facility (AWF/AfDB)

One of the key results of this partnership is the development of a strategic urban sanitation plan (SUSAP) centered on non-sewer sanitation and faecal sludge management for the city of Lusaka. This plan describes the strategic objective and three strategic components:

- **Strategic Objective**

General Objective	Specific Objectives
Component 1: To contribute to the creation of a conducive environment for the implementation of OSS and FSM initiatives in the City of Lusaka	To update the Sanitation Master Plan so that OSS and FSM implementation strategies are clearly spelt out
	To carry out city mapping for OSS facilities
	To contribute to speeding up the process of legal reforms on OSS and FSM
	To Create a common Database to avoid zonal restrictions of operators
	To devise and implement a communications strategy on sustainable management of OSS facilities
Component 2: To contribute to improved infrastructure for	To upscale faecal sludge treatment through introduction of an Omni-Processor plant



the containment and treatment of faecal sludge in the city of Lusaka	To improve faecal sludge containment structures in Bauleni Compound To rehabilitate and upgrade existing FS treatment plants
Component 3: To build/strengthen capacity in utilities on aspects of OSS and FSM and also promote research initiatives	To build capacity in OSS and FSM
	To promote research on OSS and FSM aspects
	To initiate and support curricula review/modification initiatives in tertiary institution to include aspects of OSS and FSM

• Human Resources

LWSC, under the LSP has got a team of engineers and other supporting professional staff to handle the affairs of the proposed Plan. Specifically, the RASOP Focal person will be cardinal in the initial stages but moving forward, there will be need for a full-time employee to oversee the implementation of the projects.

• Monitoring and evaluation

A plan for monitoring and evaluation of the plan will have to be developed by the utility. Evaluation will be carried out twice over the lifespan of the project. There will be a mid-term evaluation that will be implemented at the end of 2020. Another evaluation will be at the end of the project. Auditing will be annually from the time of project inception. Monitoring will be continuous. However, this will need to be fine-tuned based on projects that will be approved for funding.

- Streamlining of public utility operations through private Sector involvement and to support private sector operators for sustainability.
- It is important to have a sanitation master plan for ease of prioritizing interventions and sourcing resources.

PROSPECTS

- Elaboration of projects from the performance improvement plan and Submission of the potential donor financing plan;
- Additional training of the actors of the Lusaka ANC planned for the month of August
- final evaluation of the project in Lusaka;
- Organization of a workshop at the end of the project.



LESSONS LEARNED

- When designing facilities for Onsite Sanitation and Faecal Sludge Management, benchmarking is cardinal to avoid repeating mistakes already made by others
- OSS and FSM developments should always to be implemented with consideration of the local context
- OSS and FSM projects involve a number of stakeholders therefore their successful implementation requires adequate stakeholder consultation/involvement



PRESENTATION OF THE MENTEE

Lusaka Water and Sewerage Company Limited is one of the Commercial Utilities in Zambia. It is charged with the responsibility to provide water and sanitation services to towns in Lusaka province including the City of Lusaka. It was registered under the Company's' Act in 1988 but only commenced its operations in 1990. The areas under the jurisdiction of the utility include Lusaka City, Luangwa, Kafue, Chongwe and Chirundu districts and is in the process of establishing operations in Shibuyunji and Rufunsa Districts.

LWSC VISION AND MISSION

- “To be a world class company working together to change lives and bring pride to communities through provision of water and sanitation services”
- “To provide quality water and sanitation services at commercially and environmentally sustainable levels to the delight of our customers and other stakeholders”

PRESENTATION OF THE MENTOR

eThekwini Water and Sanitation (EWS) is a unit of the eThekwini municipality and is responsible for the provision of water and sanitation services to all customers in the municipality. The Unit is continually looking for new and innovative ways to provide services to our customers and has been recognised through many awards and acknowledgements. EWS has been able to use GIS based tools, specifically developed call center, electronic workflow and document management software to further improve service delivery.

EWS VISION AND MISSION

- To provide world class water and sanitation services to the citizens of eThekwini Municipality by 2030
- To provide efficient, effective and sustainable water and sanitation to the people of eThekwini in a customer friendly manner

The Reinforcing Capacity of African Sanitation Operators on non-sewer and faecal sludge management systems through peer-to-peer learning partnerships is funded at USD 2,546,447 by the Bill and Melinda Gates Foundation for a period of three years (2015-2018) and implemented by the African water Association (AfWA). Through this project, AfWA will promote the implementation of strategies for the management of onsite sanitation and faecal sludge management in five African cities: Bamako (Mali), Yamoussoukro (Côte d'Ivoire), Yaoundé (Cameroon), Kampala (Uganda) and Lusaka (Zambia) with the National Office for Sanitation of Senegal (ONAS) and the Municipality of eThekwini in Durban, South Africa as mentors.

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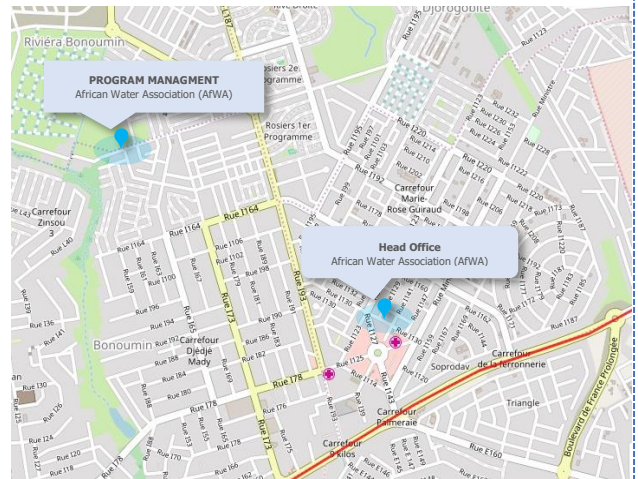
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