



**LVWATSAN – Mwanza Immediate Investment Plan (IIP):
Environmental and Social Management Plan (ESMP) for
Sanitation Facilities in Selected Schools, Dispensaries and
Public Places in Ilemela and Nyamagana Districts – Mwanza
Region**

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LWATSAN – Mwanza

Immediate Investment Plan (IIP)

Environmental and Social Management Plan (ESMP) for Sanitation Facilities in Selected Schools, Dispensaries and Public Places in Ilmela and Nyamagana Districts – Mwanza Region

Mwanza Urban Water and Sanitation Authority (MWAUWASA) /
European Investment Bank (EIB)

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List of Abbreviations

AFD	French Development Agency
DED	Detailed Engineering Design
DoE	Department of Environment
EA	Environmental Assessment
EIA	Environmental Impact Assessment
EIB	European Investment Bank
EIS	Environmental Impact Statement
EMP	Environmental Management Plan
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management/Monitoring Plan
EU	European Union
EUR	Euro
GoT	Government of Tanzania
HIV/AIDS	Human Immunodeficiency Virus / Acquired Immune Deficiency Syndrome
IIP	Immediate Investment Plan (for LVWATSAN)
LS	Lender's Supervisor
LVWATSAN	Lake Victoria Water and Sanitation (Project)
MCC	Mwanza City Council
MDG	Millennium Development Goals
MHM	Menstrual Health Management
MoWI	Ministry of Water and Irrigation
MWAUWASA	Mwanza Urban Water and Sanitation Authority
NEMC	National Environment Management Council
NGO	Non-governmental Organization
PFR	Project Formulation Report (for LVWATSAN)
PMC	Project Management Consultant (for LVWATSAN)
PMU	Project Management Unit (for LVWATSAN)
PPE	Personal Protective Equipment
RPF	Resettlement Policy/Planning Framework (for LVWATSAN)
SEP	Stakeholder Engagement Plan (for LVWATSAN)
SER	Supplementary Engineering Report (for LVWATSAN)
STD	Sexually Transmitted Diseases
STIP	Short-term Investment Plan (for LVWATSAN)
USD	United States Dollar
WSDP	Water Sector Development Project

Acknowledgement

The Mwanza Urban Water and Sewerage Authority (MWAUWASA) would like to acknowledge the assistance and guidance of compiling this Environmental and Social Management Plan (ESMP) for the proposed construction and operation of sanitation facilities in selected schools and public places in Mwanza City.

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Executive Summary

Title and location of the project

Lake Victoria Water and Sanitation (LVWATSAN) – Mwanza: Environmental and Social Management Plan for Sanitation in Selected Schools and Public Places in Mwanza City

Name of the proponent and contact

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Brief outline and justification of the proposed project

The LVWATSAN Project (2014-2019) aims at protecting the Lake Victoria environment and wellbeing of the population in the Lake Basin. The Project has several components, one being the preparation and implementation of an Immediate Investment Plan (IIP) for Mwanza City, that comprises three 'categories' i.e. (i) sanitation in selected schools and public places, (ii) water supply extension and rehabilitation of pipelines, and (iii) simplified sewerage and sewer rehabilitation and extensions. For category (i), and the focus of the present ESMP, 20 primary schools (i.e. in Ilemela: Ziwani; Kitangiri 'A'; Kitangiri 'C'; Bondeni; Kilimahewa; Nundu 'A'; Nundu 'D'; Gedeli; Sima; Bulola; and in Nyamagana: Buhongwa 'B'; Tambukareli; Mkuyuni 'B'; Mkuyuni 'C'; Sokoine; Mlimani 'A'; Mhandu 'A'; Mhandu 'B'; Nyakato 'B'; Nyakato 'C'); and 6 public spaces (i.e. in Ilemela: Nyakato Open Market; Buswelu Market; Nyerere Dispensary; Nyakato Dispensary; and in Nyamagana: Mkolani Dispensary; Igogo-Mchafukoge) have been selected where the Project will build improved sanitation facilities.

Brief description of the project environment

The targeted sanitation interventions are located in two municipalities/districts of Mwanza City: Ilemela and Nyamagana. Mwanza is Tanzania's second largest urban centre supporting a population of more than 700,000, and with major industrial and commercial activities. The area is densely populated in formal and informal settlement on and amidst sloping terrain, rocky outcrops and well-drained sandy loamy soils. The intervention sites are located in predominantly low-cost residential areas. The 20 schools have in total more than 22,000 users (pupils and teachers) whereas the public places are located in busy areas that have so far little or no public sanitation facilities.

Explanation on why some impacts are not addressed

Lack of information on the extent to which effluent from septic tanks and soak away pits in some of the targeted intervention sites limits the assessment of possible impacts on local groundwater resources.

List of developer, consultant, local planning authorities and other people and organisations consulted

The sanitation works have been planned and coordinated by a Sanitation Committee especially created for this Project component and its activities; its composition is provided in a table in Chapter 5.

Results of public consultation

Public consultation activities were conducted by the consultant in the period June-November 2015: all targeted schools and public places were visited and school staff, local residents, local authorities (city and municipality councils, ward leaders) were consulted by providing them with relevant information on the project and the proposed interventions, obtaining their views on possible issues and their involvement in planning and operation of the planned facilities. Also a Sanitation Committee was created comprising representatives of local authorities, relevant institutions and project partners. Issues raised included concern about existing health conditions at the localities, safety arrangements during construction, inappropriate behaviour of workers against pupils, operation of the facilities and the need for flush toilets, disturbance during construction works (noise, dust), involvement of local people as workers to boost employment, spread of disease (HIV/AIDS), and the need of proper insurance for constructor workers. To the extent possible these concerns have been addressed in the design and management plans.

Description of the major significant impacts

Impacts of the proposed interventions will mostly be positive by improved health conditions for the facility users and reduced inflow of raw untreated effluent into Lake Victoria. Negative impacts are mostly of a low to insignificant nature and are mainly caused by disturbance during construction works, noise, injuries, dust, solid and liquid waste generation are mostly associated with the construction works however effluent from septic tanks and soak away pits may affect to some extent groundwater in some of the localities. Biodiversity in the selected intervention sites is low and limited to common urban species that are neither threatened nor endangered. Major significant impacts of the planned interventions are not expected. Tanzanian government legislation, particularly the *EIA and Audit Regulations (2005)* do not require the preparation of a full EIA study for this sort of local, small-scale and low-impact development, reason why the regulatory authority, NEMC, has instructed to prepare the present limited ESMP only. The EIB has indicated that for this sort of local, small-scale development in Europe usually no environmental or social assessment is needed.

Alternative considered

As an alternative to the proposed construction of septic tanks and soak away pits, planned in 15 of the 20 targeted primary schools (i.e. in Ilemela: Nundu 'A'; Nundu 'D'; Gedeli; Sima; Bulola; and in Nyamagana: Buhongwa 'B'; Tambukareli; Mkuyuni 'B'; Mkuyuni 'C'; Sokoine; Mlimani 'A'; Mhandu 'A'; Mhandu 'B'; Nyakato 'B'; Nyakato 'C') and 5 of the 6 public places ; and 6 public spaces (i.e. in Ilemela: Nyakato Open Market; Buswelu Market; Nyerere Dispensary; Nyakato Dispensary; and in Nyamagana: Mkolani Dispensary), it has been considered connecting the sanitation facilities to be constructed to existing sewerage lines. However, as this will require substantial further investigation and detailed design work by the design consultant this will certainly further delay implementation of the IIP, and as there are currently no resources available for such additional activities, it is recommended not to pursue this under LVWATSAN but under future follow-up programs or projects.

Environmental and social management

The core of the present report is the Environmental and Social Management Plan (ESMP), provided in Chapter 7 that outlines for each of the identified Project activities for the planned sanitation works what the expected negative impacts may be, which mitigation measures are recommended, and who is responsible for the implementation of these measures. This has been done for three distinct phases: construction, operation of the facilities, and decommission (closure). Negative impacts are considered to be of a local nature and small-scale, and can be mitigated through proper management and at limited costs.

Proposed monitoring and auditing

By using the ESMP as a base, for each identified Project activity associated with the planned sanitation works a monitoring matrix has been designed, which again for each of the three project phases, indicates who should perform the monitoring, what, and how often. Frequent monitoring of construction, operation

and decommissioning of the sanitation facilities will help the users and authorities to learn from actions taken, and to adapt management of the facilities as may be needed.

Decommissioning

The decommissioning plan, outlined in Chapter 9, is specifically designed for the unlikely event that the construction works will need to be terminated prematurely (i.e. prior to operation of the facilities), and for demolition of the facilities at the end of their lifetime. The latter is not expected within the coming 25 years.

It is essential to include the present signed off and approved ESMP in the invitations to tender and contracts for construction, otherwise it is both difficult and expensive to get the contractor to implement any of the required environmental and social management measures respectively.

1. Introduction

1.1 Lake Victoria Water and Sanitation (LVWATSAN)

The Lake Victoria Water and Sanitation (LVWATSAN) Initiative was launched in 2004 by the ministers responsible for water from Kenya, Tanzania and Uganda with the aim of achieving the Millennium Development Goals (MDG) for water and sanitation in secondary centres within the Lake Victoria Basin.

The Water Sector Development Programme (WSDP; 2005-2023) established under the Ministry of Water and Irrigation (MoWI), under which LVWATSAN resorts, is the main financing mechanism for the water sector in Tanzania. Its past five year programme has foreseen almost USD 1 billion of funding for the WSDP. An Environmental and Social Management Framework (ESMF) and a Resettlement Management Framework (RMF) for the programme were prepared and completed in 2006.

1.2 LVWATSAN – Mwanza Project Preparatory Studies

Following a request from the ministers in 2009, the European Investment Bank (EIB) launched a project formulation study in 2010, with the aim to develop plans to scale up the UN-HABITAT-promoted LVWATSAN Initiative to the major settlements of Kisumu in Kenya, and Mwanza, Musoma and Bukoba in Tanzania together with three smaller satellite towns around Mwanza, i.e. Misungwi, Magu and Lamadi. This study, concluded by Atkins in August 2012, resulted in a Project Formulation Report (PFR) covering the six fore-mentioned Tanzanian shore towns. Volume 3 of the PFR deals with the proposed project interventions in Mwanza City. Supplementary studies were conducted by R-Solve, the findings of which are reflected in the Supplementary Engineering Report (SER, August 2012). Both the PFR and SER include sections on preliminary perceived environmental and social impacts of the interventions, which were regarded as mostly positive.

EIB's Environmental and Social Datasheet, of 5 February 2013, concluded for the LVWATSAN project that "the majority of the investments will need to be subjected to Environmental and Social Impact Assessments (ESIAs) at town level, with development of Resettlement Action Plans at intervention level tailored in accordance with the spatial footprint as ultimately determined".

1.3 LVWATSAN – Mwanza Project Implementation

Implementation of the LVWATSAN – Mwanza Project started in October 2014, with the engagement of a Detailed Engineering Design (DED) consultant, COWI, followed by UN-HABITAT being responsible for community liaison and starting in February 2015, and finally, a Project Management Consultant (PMC), Mott MacDonald, commencing in April 2015. Meanwhile, Halcrow had been contracted by EIB to develop a project-specific Resettlement Policy (Planning) Framework (RPF) in late-2014, whereas UN-HABITAT was entrusted with the task to develop a project-specific Stakeholder Engagement Plan (SEP) – the resulting RPF and SEP, meant to guide Project implementation, were endorsed by the MoWI on 8 January 2016.

Key deliverables of the COWI/DED consultant (October 2014 – mid-2016) include the following:

- 1 **Immediate Investment Plan (IIP)** – i.e. a study report and tender documents for planned interventions in Mwanza City for (i) sanitation in selected schools and public places; (ii) water supply extension and rehabilitation of pipelines; (iii) simplified sewerage and sewer rehabilitation and extensions.

- 2 **Satellites Investment Plan** – study report and tender documents for planned [immediate] water supply, wastewater and sanitation interventions in Misungwi, Magu and Lamadi.
- 3 **Master Plan for Mwanza City** – a water supply, wastewater and sanitation strategy for Mwanza and satellites covering the period 2015-2040 and including the Short-term Investment Plan (STIP) for proposed (i) funded and (ii) unfunded works.

With regard to item 1, 2 and 3 (above) and as part of the DED Consultant's responsibilities, COWI prepared for the planned project interventions in Mwanza City two 'project briefs/registration requests' on environmental and social impact assessment for rehabilitation and expansion works, i.e. on (i) sanitation and (ii) water supply & sewerage respectively, and submitted these to the National Environmental Management Council (NEMC), Dar es Salaam, on 18 February 2015. The rationale behind this submission being that (i) as per NEMC regulations planned interventions of this kind are to be registered and (ii) proposed interventions need NEMC approval prior to implementation.

Subsequently, NEMC responded by letters of 4 March 2015 that both works had been registered (under number **5034** and **5033**, respectively) but that as per the GoT Environmental Impact Assessment and Audit Regulations (2005) further EIA study would be needed.

The DED Consultant then requested, by letter of 9 April 2015, to proceed with so-called "Normal Practice" elements of the works, i.e. mainly maintenance and minor extensions works which could be implemented as soon as design and procurement are completed, in other words the IIP works, and simultaneously to the preparation of EIAs. The rationale for this being that these Normal Practice works are considered as minor works with minimal negative impacts but that will bring significant, immediate health and environmental benefits to the citizens of Mwanza City, and therefore are planned for speedy implementation.

Permission by NEMC to proceed with these IIP works without an EIA study been carried out was not given but following consultation with NEMC resulted in the agreement, concluded in December 2015, that the IIP works would not require full EIA studies but that for the planned IIP works in Mwanza City three (3) simplified Environmental and Social Management Plans (ESMP) would suffice, i.e. for the following categories:

- (i) Schools and public places sanitation (latrines) – the current ESMP
- (ii) Water supply extensions and rehabilitation of pipelines – see separate ESMP
- (iii) Simplified sewerage in informal areas, together with some minor associated sewer extensions, and some sewer rehabilitation works – see separate ESMP.

Minutes of the meeting between NEMC and PMC/UN-HABITAT held in Mwanza on 8 December 2015, as well as the agreed ESMP contents list, are provided in Appendix 1.

1.4 LVWATSAN – Mwanza Project Funding

The Project is financed under the European Union (EU) Africa Infrastructure Trust Fund within the overall context of the EU and Africa Strategic Partnership. The European Investment Bank (EIB) and the Agence Française de Développement (AFD) have signed two loan agreements with the Republic of Tanzania for an amount of EUR 45m each for the financing of 86% of the investment costs associated to the extension and upgrading of water supply and sanitation in Mwanza City and satellite towns (Misungwi, Magu, Lamadi), as well as sewerage systems in the towns of Bukoba and Musoma. The total Project cost is estimated at EUR 104.5m, including EUR 14.5m provided by the Tanzanian government.

Cost for the planned IIP sanitation works in Mwanza City have been estimated in the LVWATSAN Project design at EUR 5.8m for schools and EUR 7.3m for informal and communal sanitation and toilets in public places, respectively however, 150 schools were envisaged and the number of public places was not specified. The investment required for the planned works covered in the present ESMP still needs to be determined, but are expected to be considerably lower than these budgets.

1.5 Scope of the Present ESMP and Methodology

The present ESMP deals *exclusively* with IIP category (i) *schools and public places sanitation for Mwanza City*. Prior to and after submission by COWI of the draft designs (in October 2015) the proposed sites were visited, concerned stakeholders were consulted, and possible impacts were assessed. Reporting took place in November 2015 to January 2016.

2. Project Background and Description

General information on the LVWATSAN Project is provided in Chapter 1; this Chapter 2 exclusively describes the planned project interventions for the ‘schools and public spaces sanitation’ that form Component 1 and 2, respectively, of the Immediate Investment Plan (IIP) for Mwanza City (see Section 1.3).

2.1 Mwanza

Mwanza is in size the second largest town in Tanzania and is the Regional Headquarters for Mwanza Region. Mwanza is the key industrial and commercial centre in north-western Tanzania. In addition to many light and service industries, Mwanza accommodates large water-intensive industries including textile mills, leather tanning factories, bottling industries, vegetable oil factories, fish processing plants, soft drink manufacturers and cosmetic/soap factories. There are numerous institutions including hospitals, dispensaries and health centres as well as many primary and secondary schools and a university.

The Mwanza urban area comprises two districts i.e. Nyamagana and Ilemela. According to the countrywide 2002 census, the area of the two districts including rural and semi-rural areas had a population of 476,000. The census in 2012 stated that the population had reached 706,000. Located on the southern shores of Lake Victoria, some 84% are supplied with water and 8% are using sewerage services from MWAUWASA, the Mwanza Urban Water and Sewerage Authority.

The city is characterised by gently undulating terrain with isolated hill masses and rock inselbergs. It is also characterised by well-drained sandy loamy soil generated from coarse grained cretaceous rock. The vegetation cover is typical savannah with scattered tall trees and tall grass. Administratively, the city is run by councillors under leadership of the Lord Mayor. However, the day-to-day administration of the city is by the City Director, assisted by heads of departments and sections.

Many people in Mwanza live in unplanned settlements. These settlements, apart from lacking basic facilities like roads, schools and water, are located on steep rocky hills where providing basic sanitation is difficult. In recent times housing in Mwanza City has extended further and further up the hills in an uncontrolled manner. This has created numerous problems such as improper wastewater disposal. In such areas conventional sewer systems are difficult to establish and maintain due to the rocky nature, steep slopes, problematic pipe alignments due to uncontrolled house layouts, etc.

2.2 The Proposed IIP Sanitation Works in Mwanza: Schools and Public Places

Guidance for preparing the sanitation works in Mwanza town has been outlined in the DED Consultant's *Sanitation Design Manual* (January 2016) whereas the detailed interventions have been described in the *Tender Documents for Sanitation in Selected Schools and Public Places in Mwanza City* (5 Volumes; January 2016). In total 20 schools are targeted (Component 1) and 6 public places (Component 2); these sites, and the proposed interventions, are presented in Table 2-1. The construction works are expected to start in August 2016 and be completed in August, 2017; then follows a defects period of 12 months.

Figure 2-1 Locations of selected schools

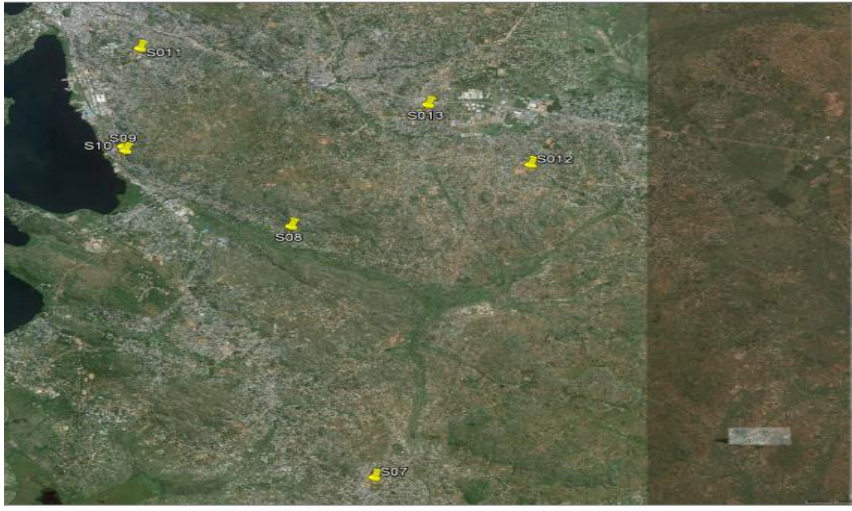


Figure 2-2: Locations of selected schools

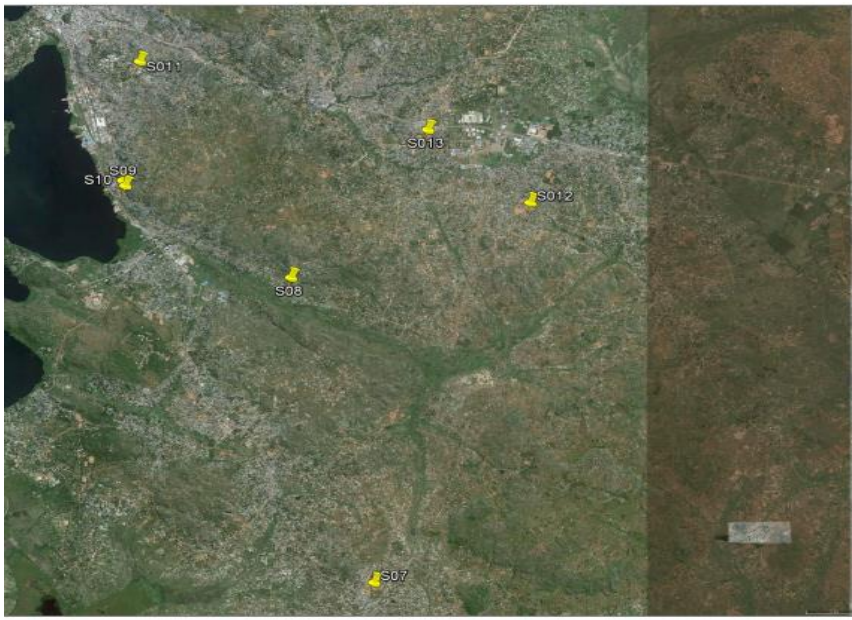


Table 2-1. Targeted schools and public places for sanitation interventions under the Immediate Investment Plan (IIP) for Mwanza City

ID *	Name of school	Municipality	Ward	Nr of pupils / users	Location coordinates		Works to be implemented at each site						
					Latitude	Longt.	School toilet - generic model	School toilet - basic model	Teachers and disabled toilet	Water storage tank & septic tank / soak pit	Incinerator for MHM	Connect to existing sewerage NW (A) / construct septic tank/soak pit (B)	
Component 1: Schools													
S01	Ziwani Primary School	Ilemela	Kirumba	802	-2.5026	32.8936		✓			✓	✓	A
S02	Kitangiri 'A' Primary School	Ilemela	Kitangiri	913	-2.5010	32.8980		✓	✓		✓	✓	A
S02	Kitangiri 'C' Primary School	Ilemela	Nyakato	635	-2.5010	32.8980	✓		✓				A
S03	Bondeni Primary School	Ilemela	Nyamanoro	666	-2.4906	32.9087	✓		✓		✓	✓	A
S03	Kilimahewa Primary School	Ilemela	Nyamanoro	1119	-2.4906	32.9087	✓		✓				A
S04	Nundu 'A' Primary School	Ilemela	Nyakato	1174	-2.5308	32.9454		✓	✓		✓	✓	B
S04	Nundu 'D' Primary School	Ilemela	Nyakato	1290	-2.5308	32.9454		✓	✓				B
S05	Gedeli Primary School	Ilemela	Nyakato	807	-2.5339	32.9571		✓	✓		✓	✓	B
S05	Sima Primary School	Ilemela	Nyakato	980	-2.5339	32.9571	✓		✓				B
S06	Bulola Primary School	Ilemela	Buswelu	1767	-2.5206	32.9640		✓			✓	✓	B
S07	Buhongwa 'B' Primary School	Nyamagana	Buhongwa	1470	-2.6240	32.9470		✓			✓	✓	B
S08	Tambukareli Primary School	Nyamagana	Butimba	1650	-2.8759	32.2385		✓			✓	✓	B

ID *	Component 1 - Schools				Location coordinates		Works to be implemented at each site					
	Name of school	Municipality	Ward	Nr of pupils / users	Latitude	Longit.	School toilet - generic model	School toilet - basic model	Teachers and disabled toilet	Water storage tank & septic tank / soak pit	Incinerator for MHM	Connect to existing sewerage NW (A) / construct septic tank/soak pit (B)
S09	Mkuyuni 'B' Primary School	Nyamagana	Mkuyuni	735	-2.5526	32.9091	✓			✓	✓	B
S10	Mkuyuni 'C' Primary School	Nyamagana	Mkuyuni	815	-2.5517	32.9087		✓		✓	✓	B
S11	Sokoine Primary School	Nyamagana	Pamba	1129	-2.5303	32.9113	✓		✓	✓	✓	B
S11	Mlimani 'A' Primary School	Nyamagana	Pamba	1650	-2.5303	32.9113	✓		✓			B
S12	Mhandu 'A' Primary School	Nyamagana	Mahina	1223	-2.5557	32.9707	✓		✓			B
S12	Mhandu 'B' Primary School	Nyamagana	Mahina	1035	-2.5557	32.9707	✓		✓	✓	✓	B
S13	Nyakato 'B' Primary School	Nyamagana	Mahina	895	-2.5557	32.9707	✓		✓			B
S13	Nyakato 'C' Primary School	Nyamagana	Mahina	1347	-2.5557	32.9707	✓		✓	✓	✓	B
	Total			22,102			11	9	14	13	13	5 (A) / 15 (B)
Component 2: Public Spaces												
1	Nyakato Open Market	Ilemela	Nyakato	n.a.	.....	.....	✓**					B
2	Buswelu Market	Ilemela	Buswelu	n.a.	.....	.....	✓**					B
3	Nyerere Dispensary	Ilemela	Buswelu	n.a.	.....	.....	✓**					B
4	Nyakato Dispensary	Ilemela	Nyakato	n.a.	.....	.....	✓**					B
5	Mkolani Dispensary	Nyamagana	Mkolani	n.a.	.....	.....	✓**					B
6	Igogo-Mchafukoge Open Market	Nyamagana	Igogo	n.a.	.....	.....	✓**					A

LVWATSAN – Mwanza

IIP: ESMP for Sanitation Facilities in Selected Schools, Dispensaries and Public Places in Ilemela and Nyamagana

Districts – Mwanza Region



ID *	Name of school	Municipality	Ward	Nr of pupils / users	Location coordinates		Works to be implemented at each site						
					Latitude	Longit.	School toilet – generic model	School toilet – basic model	Teachers and disabled toilet	Water storage tank & septic tank / soak pit	Incinerator for MHM	Connect to existing sewerage NW (A) / construct septic tank/soak pit (B)	
	Total						6						1 (A) / 5 (B)

* As numbered by the DED Consultant in its Tender Document – Volume 5 (drawings); April, 2016

** See Section 2.4 for variation on the 'generic model'

2.3 IIP-Mwanza Component 1 Interventions: Sanitation in 20 Schools

As can be concluded from Table 2-1, the 20 targeted schools are located at 13 sites as on 8 locations two schools are sited. All proposed interventions can be divided in 6 types as follows.

2.3.1 Construction of School Toilet – Generic Model

The generic model toilet will be constructed in 11 schools. This is an about 16 x 5 m (80 m² ground surface) stone building divided in a separate boys and girls section, each with a separate entrance (Figure 2-2). The boys section consists of a hand wash compartment, 5 toilet compartments with doors, and a urinal trench. The girls section consisting of a hand wash compartment, 10 toilets compartments with doors, and a lockable MHM (Menstrual Health Management) compartment. Floors in both sections are gently sloping towards a drainage point and the toilets and urinal trench connect to sub-surface collection points and ultimately either a septic tank or the existing sewerage network.

Figure 2-3. School toilet – generic model (80 m²)



Source: COWI Survey report 2015

2.3.2 Construction of School Toilet – Basic Model

The basic model toilet will be constructed in 9 schools. This is an about 10 x 5 m (50 m² ground surface) stone building divided in a separate boys and girls section, each with a separate entrance (Figure 2-3). The boys section consists of a hand wash compartment, 3 toilet compartments with doors, and a urinal trench. The girls section consisting of a hand wash compartment, 4 toilets compartments with doors, and a lockable MHM (Menstrual Hygiene Management) compartment. Floors in both sections a gently sloping towards a drainage point and all three connect to sub-surface collection points and ultimately either a septic tank or the existing sewerage network.

The main difference between the generic and the basic model is that the latter is (30 m²) smaller and that it has less toilets for boys (3 instead of 6) and girls (4 instead of 10).

Figure 2-4. School toilet – basic model (50 m²)



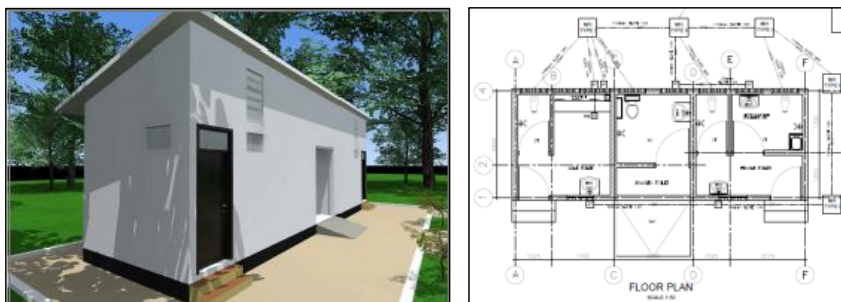
Source: COWI Survey report 2015

2.3.3 Construction of Teacher and Disabled Person Toilet

This toilet block will be constructed in 14 schools. This is an about 8 x 3 m (24 m² ground surface) stone building divided in three sections: male (hand wash, closed toilet, urinal), female (hand wash, closed toilet and lockable MHM), and in between the disabled person section (accessible by a ramp for wheel chairs), and each with a separate entrance (Figure 2-4). Floors in all sections are gently sloping towards a drainage point and the toilets/urinal trench connect to sub-surface collection points and ultimately either a septic tank or the existing sewerage network.

The main difference between this model and the generic and basic models is that each section has capacity for one person at a time only.

Figure 2-5. School toilet – teachers and disabled persons model (24 m²)

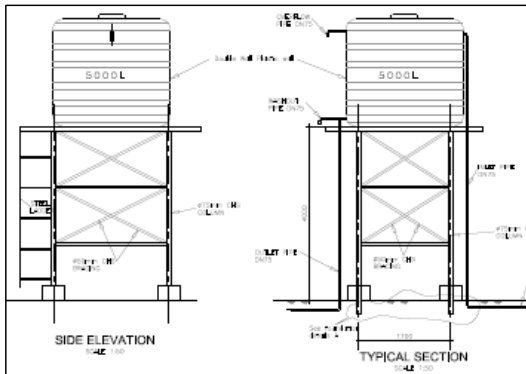


Source: COWI Survey report 2015

2.3.4 Construction of Water Storage Raiser Tank

These facilities will be constructed in 13 locations. The super-surface water tanks (5,000 l) will be placed on a 4 m high steel frame fixed on a concrete foundation, and be accessible by a steel ladder (Figure 2-5).

Figure 2-6. Water storage tank

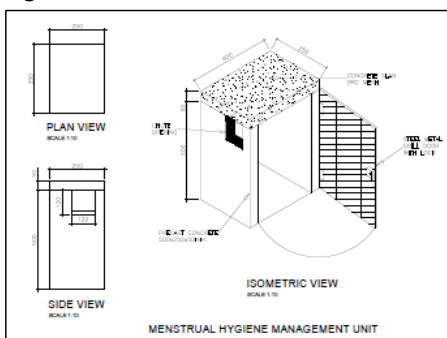


Source: Project Tender document, April 2016

2.3.5 Construction of Incinerator for MHM

The Menstrual Hygiene Management unit will be installed in 13 locations. The unit is a box consisting of concrete slabs (H 0.5 x W 0.4 x D 0.25 m), closed by a metal grill door with lock, and chute opening (12 x 12 cm), and placed within the MHM compartment (Figure 2-6). Actual processing of the accumulated MWH waste through an incinerator is currently being debated.

Figure 2-7. MHM unit

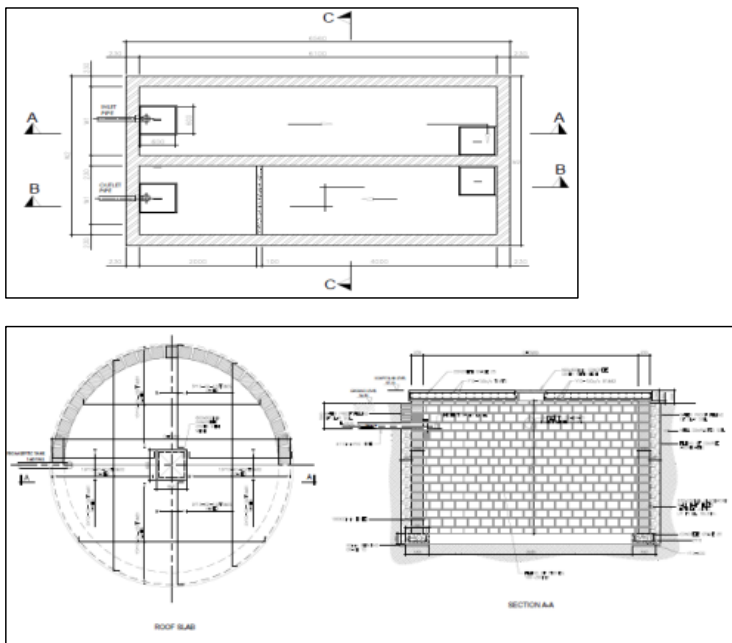


Source: Project Tender document, April 2016

2.3.6 Septic Tank and Soak away Pit

Septic tanks (2 types) consist typically of two side-by-side and interconnected sub-surface concrete containers, each measuring about 5 x 1.5 m and depth of 1.5 m, one with an (10 cm) inlet pipe and the other with an outlet, and in the latter a sedimentation trap (baffle wall), and accessible through manholes covered by 0.75 x 0.75 m concrete slabs. The septic tanks are subsequently connected to sub-surface, circular soak away pits (diameter 3.2 m; depth 2.5 m), constructed of brick masonry, and outside waterproof filling with clay soil, coarse aggregates and compacted, and concrete capping with manhole covered slab (Figure 2-7). The septic tank / soak away pit combination will be constructed at 15 schools.

Figure 2-8. Septic tank and soak away pit



Source: Project Tender document, April 2016

2.4 IIP-Mwanza Component 2 Interventions: Sanitation in 6 Public Spaces

Public sanitation facility blocks will be constructed on 6 locations (Table 2-1). One block typically consists of an about 14.5 x 5.7 m (83 m² ground surface) stone building divided in separated male and female sections, each with a separate entrance in the front of the building, and at the backside of the building, two units for disabled persons, each with a separate entrance and access ramp (Figure 2-8). The male section containing a hand wash compartment, urinal, 2 toilets and one shower. The female section consisting of a hand wash compartment, 4 toilets and one shower. In between the entrances for males and females there is a small unit for a caretaker/cleaner. A porch in front of this unit supports a water tank. Floors in all sections are gently sloping towards a drainage point and the toilets/urinal trench connect to sub-surface collection points and ultimately either a septic tank or the existing sewerage network. Only one of the

public places will be connected to the existing sewerage network (Igogo-Mchafukoge Open Market); for the other 5 toilet blocks at public spaces a septic tank / soak away pit will be constructed.

Figure 2-9. Public space sanitation facility



Source: COWI Survey report 2015

2.5 PROJECT ACTIVITIES

2.5.1 2.5.1. Project Phase

Major project activities are categorised by pre-construction, construction, operation and decommissioning phases as follows:

2.5.2 2.5.1:1 Pre-construction

Activities to be undertaken during pre-construction phase include:

- i. Demarcation of any access/service roads;
- ii. Mobilization of construction materials, equipment and machinery;
- iii. Clearing of the site areas required, levelling, excavation,
- iv. Mass education to the public regarding the project
- v. Identification and movement of the construction materials,
- vi. Collections of construction material etc :

2.5.3 2.5.1.2 Operation

The operation phase refers to the use of the facilities to be constructed such as pipes, waste water treatment plants, etc. During the operation phase the main activities will include but not limited with the following mentioned:

- i. Routine maintenance in order to maintain the efficiency and quality of the facilities, which over time will experience wear and tear.
- ii. General environmental and safety management of the proposed development infrastructures.

Continual monitoring of the facilities to ensure that there is no potential pollution of the environment even after completion of operation period of the project. Monitoring boreholes will be constructed to ensure that possible potential contamination of groundwater is detected well in advance.

2.5.4 2.5.1.3: Operation Phase

The activities that are expected to be executed during operational phase include maintenance and insure that the infrastructures are maintained in hygienically manner by insure proper and healthy occupational health and safety management, maintaining security system, infrastructures repair and maintenance.

3. Policy, Administrative and Legal Framework

3.1 Tanzanian Government

3.1.1 Relevant Policies and Laws

Development and implementation of the LVWATSAN – Mwanza Project is a response to a number of international and national policies adopted by the Government of Tanzania that have been outlined in other project documentation, such as:

- Agenda 21 of the United Nations Conference on Environment and Development (UNCED), held in Rio de Janeiro (1992);
- National Environmental Policy (1997);
- National Water Policy (2002);
- National Land Policy (1997);
- National Human Settlement Development Policy (2000).

These have resulted in a number of laws, relevant for LVWATSAN, including the:

- Local Government (District Authorities) Act Cap 287 (1982);
- Occupation health and Safety Act No. 5 (2003);
- Construction Industry Policy (2003);
- Environmental Management Act Cap 191 (2004);
- Urban Planning Act No. 8 (2007);
- Land Use Planning Act No. 6 (2007);
- Water Resources Management Act No. 11 (2009);
- Public Health Act (2009).

Of particular relevance to preparing the present ESMP for the sanitation works at schools and public places as part of the Immediate Investment Plan for the LVWATSAN are the *Environmental Impact Assessment and Auditing Regulations* (2005). These spell out when and how environmental and social assessment is to be carried out for what sort of development.

3.1.2 Institutions

The institutional arrangement for environmental management in Tanzania is provided in the Environmental Management Act (2004). There are seven (7) institutions mentioned by the act, as well as their responsibilities, of which the Minister Responsible for Environment is the overall in-charge for administration of all matters related to the environment. The legal institutions for environmental management in the country include:

- National Environmental Advisory Committee;
- Minister Responsible for Environment;
- Director of Environment;
- National Environment Management Council (NEMC);
- Sector Ministries;
- Local Government Authorities (Municipal, District, Ward, Village, sub-village "Mtaa / Kitongoji")
- Environmental Management Regulation in Tanzania.

As the Project interventions on which the present ESMP is focusing are of a limited and low-scale nature only, not all of these bodies are relevance in this case; the most relevant are the following.

National Environment Management Council (NEMC) – its purpose and objective is to undertake enforcement, compliance, review and monitoring of EIA's and to facilitate public participation in environmental decision-making. According to the Environmental Management Act (2004) the NEMC has the following responsibility pertaining to EIA in Tanzania:

- Registers experts and firms authorized to conduct EIA;
- Registers projects subject to EIA;
- Determines the scope of the EIA;
- Set-ups cross-sectoral TAC to advise on EIA reviews;
- Requests additional information to complete the EIA review;
- Assesses and comments on EIA, in collaboration with other stakeholders,
- Convenes public hearings to obtain comments on the proposed project;
- Recommends to the Minister to approve, reject, or approve with conditions specific EIS;
- Monitors the effects of activities on the environment;
- Controls the implementation of the Environmental Management Plan (EMP);
- Makes recommendations on whether to revoke EIA Certificates in case of non-compliance;
- Promotes public environmental awareness;
- Conducts Environmental Audits.

Concerning the LVWATSAN Project, NEMC Lake Zone was responsible for registration of this project component (see Section 1.3), it determined the scope of the work to be conducted and recommended the preparation of the present limited ESMP, reviews the ESMP, and rejects or approves it.

Sector Ministries – These are required to establish Sector Environmental Sections headed by the Sector Environmental Coordinator. The Sector Ministries' Environmental Sections responsibilities are:

- Ensure environmental compliance by the Sector Ministry;
- Ensure all environmental matters falling under the sector ministry are implemented and report of their implementation is submitted to the DoE;
- Liaise with the DoE and the NEMC on matters involving the environment and all matters with respect to which cooperation or shared responsibility is desirable or required;
- Ensure that environmental concerns are integrated into the ministry or departmental development planning and project implementation in a way which protects the environment;
- Evaluate existing and proposed policies and legislation and recommend measures to ensure that those policies and legislation take adequate account of effect on the environment;
- Prepare and coordinate the implementation of environmental action plans at national and local levels;
- Promote public awareness of environmental issues through educational programmes and dissemination of information;
- Refer to the NEMC any matter related to the environment;
- Undertake analysis of the environmental impact of sectoral legislation, regulation, policies, plans, strategies and programmes through strategic environmental assessment (SEA);
- Ensure that sectoral standards are environmentally sound;
- Oversee the preparation of and implementation of all EIA's required for investments in the sector;
- Ensure compliance with the various regulations, guidelines and procedures issued by the Minister responsible for the environment and;
- Work closely with the ministry responsible for local government to provide environmental advice and technical support to district level staff working in the sector.

With reference to the LVWATSAN Project, the Environment Department under the Ministry of Water and Irrigation (MoWI) is responsible to ensure MWAUWASA complies with various regulations, guidelines and procedures during construction and operation of the Project.

Local Government Authorities – Under the Local Government Act of 1982 (Urban and District Authorities), Local Government Authorities include the City Councils, Municipal Councils, District Councils, Town Councils, Township, Kitongoji, Ward, Mtaa and Village. The Environmental Management Committee of each jurisdiction shall:

- Initiate inquiries and investigations regarding any allegation related to the environment and implementation of or violation of provisions of the Environmental Management Act;
- Request any person to provide information or explanation about any matter related to the environment;
- Resolve conflicts among individual persons, companies, agencies non-governmental organizations, government departments or institutions about their respective functions, duties, mandates, obligations or activities;
- Inspect and examines any premises, street, vehicle, aircraft or any other place or article which it believes, or has reasonable cause to believe, that pollutant or other articles or substances believed to be pollutant are kept or transported;
- Require any person to remove such pollutants at their own cost without causing harm to health and;
- Initiate proceedings of civil or criminal nature against any person, company, agency, department or institution that fails or refuses to comply with any directive issued by any such Committee.

Since initiation of the LVWATSAN – Mwanza Project, environmental management committees at all levels have been involved in every stage to understand the project's objectives as well as their level of participation during construction and operation phases. Under the Environmental Management Act (2004), the City, Municipal, District and Town Councils are headed by Environmental Inspectors who are responsible for environmental matters. The functions of the inspectors are to:

- Ensure enforcement of the Environmental Management Act in their respective areas;
- Advise the Environmental Management Committee on all environmental matters;
- Promote awareness in their areas on the protection of the environment and conservation of natural resources;
- Collect and manage information on the environment and the utilization of natural resources;
- Prepare periodic reports on the state of the local environment;
- Monitor the preparation, review and approval of EIA's for local investors;
- Review by-laws on environmental management and on sector specific activities related to the environment;
- Report to the DoE and the Director General of the NEMC on the implementation of the Environmental Management Act and;
- Perform other functions as may be assigned by the local government authority from time to time.

Their involvement in the LVWATSAN – Mwanza Project will give an opportunity to schedule their time to advise and monitor the performance of the project especially during operation.

3.2 European Investment Bank

3.2.1 Relevant Policies and Regulations

Environmental protection and improvement, and benefits to people's welfare form key operational priorities for the European Investment Bank, the European Union's long-term lending institution. The EIB's environmental and social safeguard policies are based on the EU approach to environmental sustainability. The principles, practices and standards derived from these policies are highlighted in the Declaration on the European Principles for the Environment (EPE), agreed to by the EIB and four other European multilateral financing institutions in May 2006. The general approach of the Bank is described in a number of public documents (Table 3-1).

Table 3-1. EIB documents presenting the general approach to environmental and social safeguards

Document	Date
Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014 amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment	2014
Environmental and Social Handbook	2013
The EIB Statement of Environmental and Social Principles and Standards	2009
European Principles for the Environment	2006
Environmental Statement	2004
The EIB and its Contribution to Sustainable Development	2002
The EIB Project Cycle	2001

The EIB aims to maximise the environmental benefits and to minimise the environmental costs of the projects that it finances through appropriate screening, mitigation and compensation measures.

Environmental considerations are taken into account at all stages of the project cycle. In the case of co-financing with other institutions, the EIB may agree to apply the environmental standards of the co-financing institution, where these are comparable to EU standards, in the light of local conditions. However, the EIB will always carry out its own independent assessment.

The EIB's environmental safeguard measures include that:

- the Bank's approach to financing projects is based on the precautionary principle, preventative action rather than curative treatment should be taken, environmental damage should be rectified at source and the polluter should pay, according to the Treaty Establishing the European Community;
- all projects financed by the Bank are the subject of an Environmental Assessment (EA), normally carried out by its own staff, but if by others according to the requirements of the Bank.

For this purpose, projects are screened into four categories, based on the guidelines of the EU Environmental Impact Assessment (EIA) Directive:

- Category A** Those for which an EIA is mandatory (Annex 1 of the Directive);
- Category B** Those for which the competent authority determines the need for an EIA according to specified criteria (Annex II of the Directive, with ref. to Annex III);
- Category C** For which a limited environmental assessment, if any, is required according to any likely adverse environmental impacts of the project (projects outside the scope of the Directive);
- Category D** No environmental assessment required.

All projects financed by the EIB are also screened according to their potential impacts on sites of nature conservation. Where the impacts are expected to be significant, a special biodiversity assessment is carried out, according to the principles and practices of the EU Habitats Directive (ref. Art. 6 of the Directive).

The main responsibility for scrutinising the environmental aspects of projects lies with the Bank's Projects Directorate, which has about 80 engineers and economists, all with adequate environmental skills, who undertake the environmental assessment of projects at the EIB. The project teams, made up of engineers, economists, financial experts and lawyers, have front-line responsibility for managing environmental issues. They bring together significant cross-sectoral and cross-regional resources, experience and professional knowledge. However, environmental management is further reinforced by a number of dedicated support units to provide direction and advice on the Bank's environmental policy, ensure a consistently high quality of assessment, improve awareness and create stronger capacity for external dialogue with relevant third parties.

EIB's *Environmental and Social Handbook* (2013) provides generic guidance on performing EIA, and specific information on, among others, involuntary resettlement (in its Chapter 6), stakeholder engagement

(in its Chapter 10 and Annex 6), and objectives and structure of an Environmental and Social Management Plan (ESMP) in its Annex 11. It states that the latter “can follow a decision on scoping or after a full EIA”.

3.3 Comparison between GoT and EIB Standards – and Conclusion

NEMC’s screening decision on the proposed rehabilitation and expansion of sanitation facilities in Mwanza City (of 4 March 2015) was for *all* sanitation works under the LVWATSAN Project (IIP and STIP and unfunded works), and this entails conducting an EIA study. However, for the sanitation works of the IIP in Mwanza City the preparation of the (present) ESMP suffices. Note is taken of the fact that the term “ESMP” does not appear in the GoT legislation, and that the First Schedule under the Regulations (2005) “Projects requiring EIA” *does* include Item 20(c) “municipal sewage” but the descriptions given are understood to refer to new, *large-scale* interventions such as the construction of ‘plants’, ‘facilities’, ‘(transfer, bulk) systems’, while the “list of small-scale activities and enterprises that require registration (may or may not require EIA)” does *not* include any reference to the type of interventions covered by the present ESMP. This could mean that, legally, for implementation of the IIP activities there is no need for an EIA or ESMP.

EIB preparatory studies for the LVWATSAN Project have concluded that there is a need for EIA studies (see for example the LVWATSAN Environmental and Social Datasheet – 2013) but these refer to the *entire* project and not components hereof. Moreover, none of the developments listed in EU Directive, Annex I (requiring EIA) or Annex II (case-by-case examination of meeting threshold criteria) refers to developments of the nature and scale covered by the present ESMP. During the EIB progress mission, held in December 2015, the mission leader informed that in Europe the local and low-impact developments considered under this ESMP normally do not require any environmental or social assessment.

It is therefore concluded here that the purpose of the present ESMP is merely a systematic screening exercise to assess any specific adverse impacts that otherwise may be overlooked and for which adequate mitigation measures would be needed. It is furthermore noted that the present ESMP does include most of the elements of an ESMP as recommended in the Handbook, but that some are not applicable in this case, such as resettlement and compensation plans.

Finally, it is essential to include the signed off and approved ESMP in the invitations to tender and contracts for construction recommended, otherwise it is both difficult and expensive to get the contractor to implement any of the required environmental and social management measures respectively.

4. Baseline / Existing Conditions

4.1 Physical Environment

4.1.1 Climate

Mwanza City lies at an altitude of about 1,100 m above sea level. Mean temperature ranges between 25 and 30°C in the hot season and 15 and 18°C in cooler months. The area experiences between 700 and 1000 mm of rainfall annually, falling in two fairly distinct seasons i.e. between the months of October and December and between February and May.

4.1.2 Geology and Structure

The Municipality in general is characterised by gently undulating granites and granodiorite physiography with isolated hill masses and rock inselbergs. It is also characterised by well-drained sandy loamy soil generated from coarse grained cretaceous.

4.1.3 Topography and Land Use

The locations for the proposed works (schools and public places) are usually on gently sloping terrain, and have sandy loamy soils that are well-drained. All proposed school interventions are located within existing school compounds; these compounds are typically sited in densely populated residential areas, are fenced, and have some trees that provide shade during playing or resting (Figure 4-1).

Figure 2.10. Typical location of an existing school amidst a residential area (Ziwani in Ilemela)



Source: COWI IIP Study Report, 2015

4.1.4 Surface Water Catchments

Lake Victoria is the main nearby surface water body for Mwanza City in which all surface drains discharge. The lake is considered as one of the most important shared natural resources by the East African Community (EAC) partner states and is a major source of water and fisheries in the region. The ecosystem around the lake is comprised of savannah, forests and wetlands.

4.1.5 Groundwater

Groundwater in Mwanza is generally found at varying level beneath the surface, depending on local topography and time of the year (wet/dry season). About 28% of the Mwanza City population depends on groundwater sources including wells and boreholes for their domestic needs.

4.2 Biological Environment

4.2.1 Biodiversity

All proposed school and public intervention sites are intensely used; there is no natural, undisturbed vegetation onsite, however most localities have to a smaller or larger extent shrub or trees. These, as well as the roofs of existing dwellings in compounds and in the surroundings support some birdlife, but all of these are common species that are normally associated with urban settings in Tanzania and none of these is regarded as threatened or endangered.

4.2.2 Air Quality and Noise

Air quality and noise levels are results of normal human activities and are all considered of acceptable levels.

4.3 Socio-economic Environment

4.3.1 Population and Key Stakeholders

The proposed Project sanitation works at selected schools are expected to immediately improve sanitation conditions for more than 22,000 current pupils, teachers and other users, and this number is expected to rise in the years ahead. It is assumed that most of these reside in the immediate surroundings of the existing schools – these areas are generally occupied by low-cost housing. The public spaces are by nature targeting another and wider user group but presumably also mostly of the immediate surroundings.

4.3.2 Water Supply

Mwanza, including the targeted schools, is supplied with water from the public network managed by MWAUWASA. About 72% of the Mwanza City population is connected to public water supply network while 28% obtain water from underground sources including wells and boreholes. The proposed project is expected to add 7.2% to the current water supply to the city population and thus contribute towards increasing the number of people connected to water supply while reducing the number of people depending on underground water sources.

4.3.3 Sewerage System

Only 5 of the 20 targeted primary schools are currently connected to an existing sewerage network (i.e. in Ilmela: Ziwani; Kitangiri 'A'; Kitangiri 'C'; Bondeni; Kilimahewa); all other targeted schools use an on-site septic system. At only one of the six targeted public places there is an existing sewerage system available (i.e. in Nyamagana: Igogo-Mchafukoge).

4.3.4 Solid and Liquid Waste Management

The Municipality is responsible for providing solid waste collection and disposal services within its area of jurisdiction. This includes the periodical emptying of septic tanks.

4.3.5 Economic Activities

In the immediate surroundings of most Project intervention sites (schools and public places) small businesses form a major economic activity such as shops, commuter transportation, food vendors, etc.

4.3.6 Health and Welfare

Good sanitation and hygiene conditions are indicators of community health and welfare. Currently, in most parts of the Municipality there are insufficient and unsanitary water supplies, low standards of communal hygiene, and poor knowledge on basic personal health care.

5. Stakeholder Consultation

5.1 Overview and Legal Requirement

Stakeholders entail those individuals and institutions that have an interest with the proposed project. Further, stakeholders may be defined as all those people and institutions that have an interest in the successful design, implementation and sustainability of the project. This includes those positively and negatively affected by the project (Hewlett and Nagu, 1997). Stakeholder involvement involves processes whereby all those with a stake in the outcome of a project actively participate in decisions on planning and management. They share information and knowledge, and may contribute to the project, so as to enhance the success of the project and hence ultimately their own interests. For effective environmental management of the project, stakeholder involvement is very essential as may have the impacts on the overall sustainability of the project both environmentally, socially and economically.

The process of stakeholder consultation and disclosure of information is an ongoing overarching requirement that applies to the ESIA -and in this case ESMP- process. The consultation was of critical importance in gaining insights into the key environmental and social issues, concerns of communities and other stakeholders, and in aiding the development of potential strategies for addressing these impacts.

Effective consultation with stakeholders is (i) key to understanding the concerns and requirements of affected communities/schools and ensuring their participation in the formulation and refinement of the project design; and (ii) a prerequisite for sustainable development of toilets and water tanks. Effective disclosure through the release of timely accurate and comprehensive information to stakeholders is essential to ensure that the likely impacts (both positive and negative) are understood by stakeholders and allow the stakeholders to provide feedback to the project. It also enables the consultant in:

- Determining the scope of the ESIA / ESMP;
- Deriving specialist knowledge about the site;
- Evaluating relative significance of the likely impacts;
- Improve project design and, thereby, minimize conflicts and delays in implementation;
- Proposing mitigation measures;
- Ensuring that the ESIA / ESMP report is objective, truthful and complete;
- Facilitate the development of appropriate and acceptable entitlement options;
- Increase long term project sustainability and ownership;
- Reduce problems of institutional coordination;
- Make the resettlement process transparent (if any);
- Increase the effectiveness and sustainability of the facility, and improve coping mechanisms;
- Monitoring any conditions of the development agreement.

The Environmental Management Act of 2004 requires that all ESIA Studies undertake public consultation as part of the study. The aim of public consultation and disclosure is to ensure that all stakeholders interested in a proposed project (including project beneficiaries and the general public in the vicinity of the proposed project) be identified and their opinions considered during project planning, design, construction, and operation and decommission phases. In compliance to the requirements of the regulations, the consultant conducted public consultation in the period June-November 2015.

5.2 Objectives and Methodology

The main objective of the public consultation was to:

- Collect opinions of Mwanza Region, Mwanza City Council (MCC), Ilemela Municipal Council (IMC), Ward leaders, school committees and teachers in the selected project areas.
- Inform the local administration, ward leaders, Mtaa leaders, NGOs on the proposed project and collect their views on the project.
- Provide an opportunity to all the stakeholders and communities in the proposed project area to raise issues and concerns pertaining to the project.
- Identify alternatives for the proposed project.

The public consultation for the proposed project was conducted simultaneously with the field work targeting the sampled schools. The information sought included the number of pupils (boys and girls), classrooms, latrines (pit-holes), and location of the school. Key stakeholders (teachers and School Committee members) were interviewed during consultative discussions. Stakeholder consultations were held with the assistance from the Regional Administrative, MCC and IMC staff in respective areas of jurisdiction where the project is proposed. The agenda of the meetings were divided into three main sections namely:

- Project introduction
- Questions and discussion sessions
- Closing of the meeting

The first section was conducted by the consultant who introduced the proposed project stating its aim, components, length and locations as described in the Terms of Reference. After the project introduction phase, the school committee members were given a chance to comment on the proposed project.

Consultation at Municipality levels included discussions with the Sanitation Committee (Table 5-1), specialists and other knowledgeable people through roundtable discussions. Both Municipal Council Authorities in the project area (Mwanza Region) were covered in discussions. The discussions were conducted through direct, personal discussions and interviews where clarification was sought. The agenda included:

- Brief introduction of the Project;
- Presenting the proposed selection criteria;
- Discussing recent experience in the Region/Municipal Councils with similar criteria and impacts to the community;
- Obtaining from the authorities their environmental and socio-economic concerns and perceptions regarding the proposed project;
- Discussing the role of authorities in public information dissemination, monitoring and management.

Table 5-1. The Sanitation Committee that was created for the LVWATSAN Project in Mwanza

SN	Name	Position
1	Kaswalala Benjamin	Economic Dept. RAS Mwanza
2	Degratus Kalimanze	Mwanza City Council- Physical Planning Officer
3	Elius Rwegasira	Water RAS Mwanza
4	Misana Gihomo	Municipal Town Planner – Ilemela Municipal
5	Gabriella Gobba	PM SURBAM
6	Eng. Stanslous William	GIS Exp. MWAUWASA
7	Wilbert Bujiku	Eng. MWAUWASA
8	Joyce Ndesamburo	PM UN Habitat
9	Cecilia Ungele	Community Specialist UN Habitat
10	Rogers David	Team Leader PMC- Mott MacDonald
11	Julieth Siyange	PMC
12	Leonard Msenyele	UWP

Source: UN-HABITAT, 2014

5.3 Responses from the Public Consultations

The following sections present the views of the stakeholders on the proposed project. The views are presented as issues requiring clarification, the anticipated benefits of the project, its negative impacts and proposed recommendations to abate the negative impacts or enhance the project benefits. The views are presented in a tabular form indicating names and title and locations at which the discussions were held and, their views. Table 5-2 below, shows the generalized response of consulted persons (school committee members, teachers, local authorities, residents in the surroundings, etc.) with regard to the proposed interventions.

The Sanitation Committee selected 20 schools and 6 public places for the project as presented in Chapter 2, which also shows the facilities to be constructed in each locality.

Table 5-2. Issues raised by consulted stakeholders and consultant's comments

S/N	Issues/Comment from stakeholders	Remarks by Consultant
1	Poor sanitation and hygiene practices are caused by shortage of water. Construction of a reservoir tank and toilets will improve environmental health in schools.	The project will provide water tanks with the works, this will improve the health situation for pupils at schools.
2	Currently pupils are suffering from water-borne diseases such as UTI, intestinal worms, typhoid and dysentery. Improve of sanitation facilities in schools will eradicate the said diseases.	Sanitation conditions in the targeted locations are expected to improve significantly.
3	Construction of toilets will also improve the quality of environmental health and academic internal performance as many pupils particularly girls who do not come to school during menstruation because of lack of privacy.	This is one of the projects objective to improve the performance of pupils by reducing/eradicating factors influencing truancy and drop out among pupils in the project area.
4	Construction site should be temporarily fenced as safety mechanism.	It is ideal to fence the construction site to enhance security and safety of both pupils and communities.
5	Most of the selected schools have acute shortage of classrooms, toilets, desks, water supply and teaching and learning materials. We request the project and donor to support on the shortage.	This particular project is limited to construction/rehabilitation of toilets and water tanks. Other facilities might be done by other programmes.
6	During construction the construction workers should not use	Contractors will be informed by the School Head teacher who

S/N	Issues/Comment from stakeholders	Remarks by Consultant
	abusive or nasty languages because pupils may imitate and eventually brought immoral practises among the pupils.	to conduct and perform the works at school compounds.
7	Flush toilets may reduce the unpleasant smell (order) in schools	The toilet blocks will be equipped with flush toilets.
8	Sometimes soak pit and other chambers may block and liquid/water waste ooze to the neighbourhood and become hazardous to the neighbours.	Pupils and other user need to be informed by the school teachers on how to use the toilet blocks including on what <i>not</i> to dispose of.
9	During construction dust is likely to affect both human beings and properties in schools and neighbourhood.	Proper precautions are required by the contractors to minimize impact.
10	The area has granite rocks, noise will be high during construction work. Noises may affect level of listening during class sessions.	The contractor will be advised to blast granites during week-ends or after school sessions.
11	Employment opportunities. The contractor should give the priority of employment to the people hailing from the project area. The community may be involved in the some activities as labourers during the construction phase.	Skills acquired during recruitment and construction will remain an asset to community members. However, employment opportunities will only be provided to those people aged 18 years and above. Women are also encouraged to participate in the project activities.
12	Spread of HIV/AIDS and other sexually transmitted infections: in schools the spread may be low but still is significant especially the relationship between teachers and workers as workers have "disposable" money.	The contractor will identify local capacity in dealing with HIV/AIDS and arrange for HIV/AIDS prevention programme targeting both the construction camp and local communities.
13	MWALUWASA must ensure the entire workforce at the construction site is well covered by appropriate insurance policies. First-aid should be provided at wor sites as per requirement of the CRB.	Contractor contracts stipulate minimum insurance the Contractor must affect. The contract also requires the Contractor to follow the Tanzania labour laws without material deviation.
14	Toilets in dispensaries should locate one room to maternal /labour ward for pregnant women. During child delivering pregnant women cannot walk long distances to the toilets outside the ward.	The design will consider this request.
15	Construction of a reservoir tank and toilets will improve environmental health in our dispensaries.	This will be included.

Source: UN HABITAT, 2014

6. Assessment of Impacts and Identification of Alternatives and Mitigation Measures

This chapter describes the expected positive and negative impacts that may arise as a result of the proposed project interventions, i.e. per phase of the Project: pre-construction, construction and operation of the facilities, as well as alternatives for interventions that have or may have significant adverse impacts. Possible impacts of decommissioning of the works are described in Chapter 9.

6.1 General

Based on the public consultations conducted and expert judgement, positive and negative impacts associated with the planned Project sanitation developments in Mwanza City were identified. Positive impacts are first and foremost improved sanitation conditions at selected schools and public places and reduced inflow of nutrients into Lake Victoria. Other positive impacts relate to providing teaching subjects on sanitation, some employment to local labour and improved construction skills, and revenue for communal service providers (Table 6-1). Some negative impacts are resulting from several project activities but these are mostly of a local, low-significant and temporary nature that all can be mitigated through proper and adequate management.

Table 6-1. Project activity / impact matrix for the planned sanitation works in Mwanza City

Potential impact on	Project activity	Pre-C	Construction					Operation		
		Site selection	Excavation / soil removal	Transportation	Building & structures	Finishing works	Landscaping	Water supply & maintenance	Effluent discharge	Desludging
Surface water (not applicable)										
Groundwater								--		
Soil								--		
Air (dust, fumes, noise)			--	--	--	--	--			--
Biodiversity (flora / fauna)			--		--					
Population			--					--		+
Economy				+	+	+		+		
Traffic				--	--					
Land use										
Health			--						+	+
Education			--						+	

+ = positive impact; -- = negative impact

Table 6-2: Environmental Impact Matrix for the Sanitation in selected Schools and Public Places in Mwanza City

ITEMS FOR IMPACTS	TIME FRAME																		
	Construction Phase									Operation Phase					Decommission Phase				
ACTIVITIES	Recruitment of staff and casual labourers	Staff and labourers retrenchment	Delivery of construction equipments	Excavation and delivery of construction materials	Demolition of buildings and infrastructures	Digging of trenches	Movement of heavy machineries and trucks	Solid and liquid waste management	Mixing and compaction of soils and gravels	Site maintenance and repair.	Traffic movement	Leveling and measuring	Fencing of the sites	Transportation of materials	Management of solid and liquid waste	Staff and labour retrenchment	Management of debris and all sort of site waste	Management of spoil materials	Demolition of temporary built structures/camps
	IMPACTS																		
PHYSICAL ENVIRONMENT																			
1.Land degradation	0	0	-1	-2	-3	-2	-1	-1	-3	0	-1	0	0	-1	-1	0	0	+2	0
2.Soil erosion	0	0	-1	-3	-1	-2	-1	-2	-3	0	-1	0	0	-1	-1	-2	-1	-1	-1
3.Noise	0	0	-2	-2	-3	-2	-3	-1	-3	-1	-3	-2	-1	0	0	0	0	-2	0
4. Land use change	0	0	-1	-1	-2	-3	-1	-3	-3	-1	-1	-1	-1	0	-1	-1	0	-2	-1
5. Ground water quality	0	0	0	-2	0	-3	0	-3	-1	0	0	-1	0	0	-2	0	0	-1	-2
6. Air quality/air pollution	0	0	-1	-1	-2	-2	-3	-3	-1	-2	-2	-1	-2	-2	0	0	0	-2	-2
7.Increased surface water runoff	0	0	-1	-2	-3	-3	-1	-2	3	0	-1	-2	-1	0	-1	-1	0	-2	-1
NATURAL ENVIRONMENT																			
8. Loss of vegetation and organisms (fauna and flora)	0	0	-1	-2	-3	-3	-1	-3	-3	0	-1	-2	-1	-1	-2	-1	0	-2	-3
SOCIO-ECONOMIC ENVIRONMENT																			
9. Increased revenue for MWAUWASA and municipalities	+3	-3	+1	+1	-2	+2	0	+1	-2	0	-2	+2	+2	+2	+2	0	-3	+2	+2
10.Employment opportunities	+3	-3	+2	+2	-2	+3	+2	+2	+1	+2	-2	+1	+3	+2	+2	0	-3	+2	+1
11. Enhanced education skills	+3	-3	+1	+2	-3	-2	+1	+3	-2	-2	-2	+2	+2	+2	+2	0	-3	+2	+1
HUMAN HEALTH																			
12.Hazards of HIV/AIDS	-3	-3	-1	-1	-3	-3	-2	-3	-1	0	-1	-2	-3	0	-1	0	-2	-1	-2
13. Dust and Air pollution	0	0	-1	-2	-3	-2	-2	-3	-1	-2	-2	-1	-2	-2	-1	0	0	-1	-3

Key:

+3 <i>Very high positive impact</i>	0 <i>No impact</i>	-3 <i>Very high negative impact</i>
+2 <i>High positive impact</i>		-2 <i>High negative impact</i>
+1 <i>Minor positive impact</i>		-1 <i>Minor negative impact</i>

6.2 Impacts Evaluation Criteria

To determine the significance of impact of the proposed sanitation in selected schools and public places in Mwanza project, the criteria below stipulates the impacts basing on specified criteria shown in the impact evaluation matrix. The criteria for evaluation of impacts were based on the following factors:

- *Type of impact-whether positive of negative*
- *Its effects-whether direct, indirect or cumulative*
- *Intensity – whether low, intermediate or high*
- *Magnitude- whether site specific, local or regional*
- *Duration-whether permanent, or temporary; short term or long term;*
- *Reversibility – reversible or irreversible.*
- *Significance-whether low intermediate or high.*

The frequency of occurrence of each factor for a given impact has been used to obtain the characteristics of impacts as shown in the matrix (Table 6.2) above. The results indicate that most of the impacts are:

- *Negative.*
- *Indirect.*
- *Have low intensity;*
- *Site specific;*
- *Temporary (Short term)*
- *Reversible.*
- *Have no significance, low, medium, high or very high.*

The most important output in this analysis is the significance of impacts, which is determined by considering intensity, magnitude and duration.

6.3 Positive Impacts

6.3.1 Improved Sanitation Conditions at Schools and Public Places

First and foremost the planned sanitary facilities in schools and public places will substantially improve the health conditions of pupils and teachers at schools and the general public in and around public places. This is due to the installation of flushing toilets and hand wash facilities, both fed by overhead water tanks, provision of separate MHM units for girls and female teachers that will furthermore reduce absenteeism, and reducing the incidence of disease. It is furthermore expected that the provision of overhead water tanks and connection to either existing sewerage systems or septic tanks/soak away pits will reduce the smells currently associated with existing sanitation facilities in schools and help keep clean public places.

6.3.2 Reduced Effluent and Nutrient Loading to Lake Victoria

Connection of the sanitation facilities to sewerage systems and subsequently water treatment facilities – that will or may be provided through other components of the LVWATSAN Project or follow-up programmes in the future – or to septic tanks and soak away pits, will help reduce the nutrient loading of Lake Victoria, and therewith help reducing eutrophication and unfavourable environmental conditions in the lakeshore zone (smell, disease, eyesore).

6.3.3 Enhanced Health Education

Once in operation, the sanitation facilities are expected to provide teaching science with a subject on hygiene and sanitation. Pupils will gain knowledge and this will be trickle into their community. The impact on hygiene and sanitation education shall spread not only within the school compound but also around the project area and is considered as of medium significance.

6.3.4 Employment Creation to the Local Community

It is expected that most of the unskilled labour and some of the skilled workforce will be hired from the local community. This will increase their income and to some extent their living conditions. It is also expected that the utilization of local skilled labour will somehow cause diffusion of knowledge from the skilled workers and hence open the door to the possibility of acquiring employment elsewhere. In addition, local people will be selling food and other merchandise to the construction workforce and hence raise -although temporarily- their income. A family with sufficient and regular income is more likely to afford paying the cost of education and health services for its members apart from getting enough to eat. On average some 10 local labourers are expected to be involved in the construction activities per location which could mean that in total, for all 26 localities some 260 workers (and their families) could benefit.

6.3.5 Increased Revenue for Municipalities and MWAUWASA

Toilets in public areas will increase revenues to the municipality during operation (being outsourced to a private operator who eventually payback to the respective municipality) and on the other hand part of the revenue is to go to MWAUWASA as tariffs for water supplied to the toilet blocks and disposal of waste.

6.4 Negative Impacts

Pre-Construction Phase

6.4.1 Land use change due to site selection

It is understood that the selection of the locations where the proposed sanitation construction will be built at schools and public places has been mutually agreed between the Project promoter on the one side, and the school management and local authority on the other side, and in such a way as to minimize any unnecessary impact on current site users. This includes local vendors at public places (that would require finding another business location), and at schools valuable (fruit/shade) trees or shrub that would be lost. It is understood that no land acquisition is required: all selected schools and public places are on government land. See also Section 6.3.9.

The sites selected for the proposed facilities at schools are currently used by pupils as part of the playground available. These spaces will not be part of the playing ground after construction of the facilities. As the space occupied by the facility at each school is in the order of less than 100 m² only (toilet building, overhead water tank, septic tank/soak away pit), whereas the size of school compounds is typically a 50-100 times larger, it is concluded that the change of land use will have insignificant impacts to the pupils' playground. Likewise, the proposed sanitation facility (83 m²) in the public domain is generally assumed to be minimal as compared to the space available, and therefore space loss is of no significance.

Mitigation measure:

- *Promote for vertical development of buildings including schools and public spaces so as to have more space for new development projects in the areas.*
- *The location of the facilities at schools and public spaces should be chosen such as to minimize the need for clearing vegetation (particularly full grown trees).*

Construction Phase**6.4.2 Excavation and Soil Removal**

Construction will imply excavation and removal of soil -and as applicable rock- at the construction sites. This includes the excavation for construction of septic tanks and soak away pits. Given the limited area that the proposed building occupies and the volume that subsurface septic tanks and soak away pits occupy, the quantity of material to be excavated is expected to be limited to a few tens of cubic metre per site only. This material will either be redistributed on the school compounds or on the public places concerned (e.g. to fill eroded spots) or transported elsewhere on a mutually (Municipality, school management, contractor) agreed location. Given the limited quantity and nature of the (unpolluted) material, the impact of these excavations and transportation and material redistribution is expected to be local, and low to insignificant.

Mitigation measure:

- *Excavated material (soil and rock) can either be re-distributed onsite (e.g. to fill eroded localities) or be transported elsewhere but in that case in a way (preventing dust, spillage en route) and at a public or private location that has been agreed with the local authorities or owner, respectively, and in an environmentally sound way.*
- *Soil erosion and unintended washing away at excavation and disposal sites will need to be avoided.*

6.4.3 Air and Noise Pollution

Air quality may be affected by fumes and dust generated by (i) the movement of vehicles transporting equipment and materials to and from the site, (ii) excavation of soil and rock e.g. for foundations and pits for septic tanks and soak away pits, and (iii) welding, e.g. the iron frame supporting water tanks. These activities may increase fumes and dust at project sites or along roads during materials' transportation. The use of heavy duty vehicles – if at all needed – is expected to be limited to short periods of time and therefore will not lead to substantial vehicular emissions during the construction phase. Therefore the impact is expected to be of low significance, site-specific in extent and short-term in duration. Noise can be expected to result from excavations and other construction works, notably pressurised hammering at rocks, if on-site. However, during construction, use of equipment such as diesel generators and vehicle movement will increase noise levels in the project area. The impact is expected to be moderately significant, site-specific, and short-term.

Mitigation measure:

- *Air and noise pollution shall be minimized and planned in such a way that this occurs outside school hours as not to disturb lessons.*
- *Construction equipment with minimal noise emission shall be used.*
- *Vehicles carrying construction materials shall be restricted as much as possible during the day / school hours.*
- *Water sprinkling shall be applied to open earth construction faces to reduce dust emission.*
- *Operators of equipment emitting significant noise shall be equipped with ear masks.*

6.4.4 Soil and Groundwater Pollution

Pollution of the soil and groundwater at the proposed construction sites may occur from (i) fuel spills from leaking vehicle tanks, (ii) accidental spills of oil, diesel or petrol during machinery operations, and (iii) onsite refuelling. The impact is highly site- and contractor specific, and depends on the quality and professionalism of the contractor, particularly with regard to its safeguards standards. Therefore, the likelihood of occurrence of such events will vary anywhere between high and low probability.

Mitigation measure:

- *The contractor will adequately prevent the pollution of soil and water by applying proper waste management and disposal means.*

6.4.5 Water Use by Contractor

Construction of the sanitation facilities will use water from the public water supply system operated by MWAUWASA. Volumes required for the works are expected to be mostly for cement making and workers' sustenance and is therefore expected to be small, and of insignificant impact.

Mitigation measure:

- *The contractor will avoid spilling water as not to create local pools with stagnant water (which will give rise to water-borne diseases) and waste MWAUWASA water resources that can be used elsewhere.*

6.4.6 Solid and Liquid Waste Generated by the Contractor

The construction works will generate limited volumes of solid (e.g. pipe material) and solid waste. Although solid and liquid waste collection and disposal is managed by the Municipality through trucks and registered waste collection and disposal contractors, it is questionable at this stage to what extent these waste collection contractors are willing and able to collect and dispose of the generated construction spoils.

Mitigation measure:

- *Contractors shall agree with local authorities on how to dispose of construction wastes (i.e. either by the regular waste collectors or by the Contractor). If the Contractor is responsible for disposal of their construction solid and liquid wastes (spills, leftover stone, planks, cement, etc.), the way in which this is to be conducted, as well as an agreed location, shall be agreed with the municipality authorities.*

6.4.7 Intensification of HIV/AIDS and other STD

The menace of HIV/AIDS in Tanzania is well recognized. The construction phase will gather and cause interaction of workers and the local community. Such interaction and integration can give cause increase in HIV/AIDS and other Sexually Transmitted Diseases (STD).

The construction of toilets and water tanks may be accompanied by immigration of job seekers and opportunistic businesses and speculators. Considering the current HIV-AIDS level in Tanzania, increased population in both municipalities due to immigration may result in increased HIV-AIDS victims in the municipalities. Another effect can be felt on the available resources where by the increased population may result into increased pressure on existing resources and social services in the project area. This may cause social disturbance. However, this project population influx may be minimal.

Mitigation measure:

- *Since the construction area will attract job seekers, the contractor shall enforce a code of conduct in the camp/work place to encourage respect for the local community.*
- *The contractor shall deploy locally available labour to reduce risk of spreading of communicable diseases (especially STD).*

- *The contractor is advised to deploy locally available labour during construction.*

6.4.8 Safety and Health Risks

Construction of toilet buildings, water and septic tanks and soak away pits may expose labourers and public including pupils to safety risks (e.g. falling in pits, from heights) and bronchial and other respiratory tract diseases. Also poor use (or not using at all) of Personal Protective Equipment (PPE) during construction may result in injuries or even loss of lives. The incidence rate of waterborne diseases such as cholera and diarrhoea will increase if there will be no proper sanitation practices at the construction sites.

Mitigation measure:

- *All construction sites shall be properly signposted, fenced and guarded, as required, to minimize safety risks for pupils and the general public.*
- *Appropriate working gear (such as nose-, ear mask and clothing) and good construction site management shall be provided. During construction the contractor shall ensure that the construction site is fenced and hygienically kept with adequate provision of facilities including waste disposal receptacles, sewerage or onsite disposal, fire-fighting and clean and safe water supply.*
- *A well-stocked First Aid Kit (administered by medical personnel) shall be maintained at the construction site. The medical personnel shall also be responsible for primary treatment of ailments and other minor medical cases as well as providing some health education to the workforce.*

6.4.9 Threats to Flora and Fauna

Construction works and/or workers themselves may disturb, threaten or damage onsite trees, shrub or wildlife (birds, reptiles, insects – that are all considered as common urban species). Given the intensely used sites under consideration (school compounds and public areas) the presence of onsite flora and fauna is limited and impacts are therefore considered as small or insignificant. See also Section 6.3.1.

Mitigation measure:

- *Construction workers shall respect flora and fauna onsite and perform works in such a way as to avoid unnecessary disturbance, damage or harm.*

Operation Phase

6.4.10 Groundwater Pollution

By design, septic tanks and soak away pits collect raw sewage that overtime loses a significant portion of its biological activity before its effluent drains into the soil. Since it is a primary treatment, it will not fully remove bacteria and faecal coli. Filtered sewage water from soak away pits may pollute downstream aquifers and/or affect downstream users. Impact may be substantial and of long-term significance. On the other hand, currently it is not known to what extent nearby or downstream residents rely for their daily needs on groundwater resources, and from where this is being extracted.

Mitigation measure:

- *At present the alternative to using septic tank/soak away pits units is to either not constructing the sanitation facilities on sites where there is no nearby existing sewerage system in place, or to construct and connect to such system as soon as the resources for this are available (see Section 6.4.2, below).*

6.5 Project Alternatives

As stated earlier, the main objective of the sanitation component of the IIP is to provide immediate proper sanitation facilities and services to teachers, boys and girls and sexually maturing girls in selected schools,

and to the general public in public places. There seem to be little alternatives in achieving this objective other than constructing the proposed development. The following alternatives may be considered.

6.5.1 Do Nothing or Delay Implementation

Clearly it is in nobody's interest not to construct the planned development or to delay its implementation. There is a great need for improvement of sanitation conditions in schools and public places, and funds are available through the GoT and EIB. Failure to complete the works within the relatively limited project duration may result in no improvement being realized for considerable time to come.

6.5.2 Connect to Existing Sewerage Systems

Fifteen of the 20 currently selected schools and 5 of the 6 public spaces will be equipped with septic tank/soak away pit units which – as outlined above – may impose risks to pollution of groundwater resources for nearby and downstream water users. An alternative to be considered is to connect these schools and public places to existing sewerage systems, even if this would require additional survey and design work, and at considerable additional cost. It is understood however, that in selecting the sites this aspect has been considered elaborately, and that it was concluded that the sites are priorities, and moreover that project funds are not sufficient to accommodate these concerns. Connections to existing sewerage systems for these schools and public places have to be materialized through future programmes or projects, or be financed through other means.

7. Environmental and Social Management Plan

This chapter provides a description of recommended measures to mitigate the identified negative impacts during construction, operation and closure (decommissioning) of the interventions in a matrix for environmental management, as well as an indication of responsibilities for organisations, institutions or individuals for implementation. The Plan comprises section of impacts, mitigation and enhancement measures, time to take action, institutional responsibilities as well as the relative costs to be used. The proposed costs are only indicative and the developer will have to work out actual costs and include them in the overall cost of the project. With reference to EMA Act (URT, 2004), the National Environmental Management Council (NEMC) will be responsible to ensure compliance of all the agreed conditions as stated in the Environmental and Social Management Plan (ESMP) for authorization.

7.1 Objectives of Environmental and Social Management Plan

The objective of environmental and social management plan is to set out explicitly the key components of environmental and socio-economic management for the Project and thereby ensure that the following concepts are realized throughout the project phases i.e. construction, operation and decommissioning phases of the proposed Project (i.e. Sanitation in selected Schools and Public places in Mwanza City).

That;

- negative impacts on the physical, biological and socio-economic environments are mitigated;
- information flow between the project supervisory team and contractor is optimized to ensure all are aware of their particular responsibilities;
- benefits that will arise from the development of the Project are enhanced;
- good will and good relations with communities, organizations and governments at local and national levels are maintained
- precautions against damage or claims arising from damage are taken timely;
- affected communities are better off after implementation of the project; and
- accurate records of progress on site are kept in the event of claims against the client
- enhance the environmental and social benefits of a proposed development;
- avoid, minimize or remediate adverse impacts; and
- ensure that residual adverse impacts are kept within acceptable levels.

In general, environmental and social impacts that will occur through implementation of the proposed sanitation facilities at schools and public places include both positive and negative impacts that may emerge in the short, medium and/or long term. The various impacts have been presented in the previous chapter.

Responsibility for most of the mitigation measures during construction and decommission is with the respective constructor and costs involved are expected to be part of and be included in the contractor's contracts. Likewise, some operational measures are the responsibility of the school management, municipality and/or MWAUWASA and any costs for implementation of these are considered to be part of their respective regular operational expenses.

Table 7-1. Environmental and Social Management Plan (ESMP)

Nr	Impact	Project Phase	Mitigation/Enhancement Measures	Responsible Institution (s)	Mitigation cost
1	Excavation and soil removal	Construction	<ul style="list-style-type: none"> Minimize the area of disturbance by limiting excavation works. Use excavated stockpiles for rehabilitation around the pits after construction to reduce volume of earth remaining in stockpiles or transport to other areas. Re-vegetate as soon as possible to encourage reestablishment or organic topsoil layer and to overcome soil erosion around the facility. 	Construction contractor	2000
		Operation	N.a.		
		Closure	<ul style="list-style-type: none"> Disturbed areas to be filled with earth materials, contoured and re-vegetated as soon as possible to encourage natural tillage through root development. 	Decommission contractor	2000
2	Air and noise pollution	Construction	<ul style="list-style-type: none"> Disturbed area to be kept to a minimum. Number of trips required for construction materials, especially sand and aggregate. Movement from collection points to the site to be minimized to the extent possible. Regular water spraying around construction sites. All activities to be carried out in accordance with the OSHA Act to minimize health and safety effects. All machinery operators be provided by appropriate PPE. Provide site holding around the construction area. Provide ventilation pipes covered with wire gauze on septic tank and silt chamber. 	Construction contractor	4000
		Operation	N.a.		
		Closure	<ul style="list-style-type: none"> Water spraying around the demolished area/structures. All demolition activities to be carried out in accordance with the OSHA Act to minimize health and safety effects. Appropriate PPE to be provided to all workers. 	Decommission contractor	3000
3	Soil and groundwater pollution	Construction	<ul style="list-style-type: none"> Proper handling of soil excavation and rock demolition, i.e. redistribution on site or transport to agreed disposal areas. Proper collection and disposal of spoils and wastes at designated disposal sites. Restrict refuelling of trucks and machines on site. Provide water proofing cement layer on all surfaces of septic tanks. 	Construction contractor	4000
		Operation	<ul style="list-style-type: none"> Provide waste bins and proper collection of disposal of generated waste at 	School Management	2000

Nr	Impact	Project Phase	Mitigation/Enhancement Measures	Responsible Institution (s)	Mitigation cost
			designated disposal sites. • Prevent and or provide immediate maintenance of leaking sewage pipes.		
		Closure	• Proper collection of and disposal of spoils and wastes at designated disposal sites. • Empty all sewage from septic tanks and soak pits before demolition and filling with earth material.	Decommission contractor	2000
4	Water supply	Construction	• Use water efficiently.	Construction contractor	-
		Operation	• Use water efficiently.	School Management	-
		Closure	• Use water efficiently.	Decommission contractor	500
5	Solid and liquid waste	Construction	• Reduce the generation of unnecessary solid waste by reusing the construction materials where necessary.	Construction contractor	500
		Operation	• Training on unnecessary water consumption to limit the volume of wastewater generated.	School Management	500
		Closure	• Provide in advance arrangements for solid and liquid waste management.	Municipality	500
6	Improvement in hygiene and health at schools	Construction	N.a.		
		Operation	• Ensure water is available for a minimum of 8 hours every day during school time.	MWAUWASA	500
		Closure	N.a.		
7	Injury to school children and the public due to falling into pits and trenches	Construction	• Construct / install and backfill trenches & pits immediately.	Construction contractor	1000
		Operation	N.a.		
		Closure	• Demolish / uproot and backfill trenches and pits immediately.	Decommission contractor	1500
8	Injuries from work related activities	Construction	• Provide adequate PPE and awareness.	Construction contractor	2000
		Operation	N.a.		
		Closure	• Provide adequate PPE and awareness.	Decommission contractor	2000
9	Employment creation	Construction	• Employ local labour • Training shall be given to the local people • People shall be paid a salary which satisfy their daily life • Every employee shall working under contract • Workers shall be registered with Social Security fund and their contributions shall be sent accordingly	Construction contractor	1000
		Operation	• Local people shall highly employed for this project • The client shall insure pre work training shall be given to their workers	MWAUWASA	1000

Nr	Impact	Project Phase	Mitigation/Enhancement Measures	Responsible Institution (s)	Mitigation cost
			<ul style="list-style-type: none"> Workers shall be registered in Social – security fund 		
		Closure	<ul style="list-style-type: none"> Employ local labour 	Decommission contractor	2000
10	Increased revenues for Municipalities and MWAUWASA	Construction	<ul style="list-style-type: none"> Na 	MWAUWASA	-
		Operation	<ul style="list-style-type: none"> People will be using public places for their need on payment basis 		-
		Closure	<ul style="list-style-type: none"> N..a 		-
11	Improved sanitation conditions at schools and public places	Construction	<ul style="list-style-type: none"> Na 	MWAUWASA, School Management and Local leaders	-
		Operation	<ul style="list-style-type: none"> Hygiene condition in schools and public places will be much improved because of the built infrastructures 		-
		Closure	<ul style="list-style-type: none"> Na 		-
12	Reduced effluent and nutrient loading	Construction	<ul style="list-style-type: none"> Na 	MWAUWASA	-
		Operation	<ul style="list-style-type: none"> Built infrastructures will help to reduce effluent and nutrient loading into Lake Victoria 		-
		Closure	<ul style="list-style-type: none"> Na 		-
13	Enhanced health education	Construction	<ul style="list-style-type: none"> Na 	Municipalities, Local leaders, school management	-
		Operation	<ul style="list-style-type: none"> Improved hygienic condition for the schools and public places 		-
		Closure	<ul style="list-style-type: none"> Na 		-

8. Environmental and Social Monitoring Plan

This chapter provides a description of recommended monitoring activities for implementation of the Environmental and Social Management Plan (ESMP – see Chapter 7). i.e. during construction, operation and closure (decommissioning), as well as an indication of responsibilities for organisations, institutions or individuals. The chapter describes the mitigation and monitoring measures that will be carried out throughout the Project to mitigate the impacts and enhance the benefits discussed in the previous chapter. The Environmental Management Act. No. 20 of 2004 and EIA Audit and Regulations No. 349 of 2005 set a clear link between mitigation and monitoring of outcomes in the EIA process. In this regard, therefore, NEMC is mandated by the law to undertake monitoring of such the project activities in collaboration with relevant sectors and other stakeholders.

Implementation of the E&S Monitoring Plan is the responsibility of the developer / end-user on site to ensure compliance and implementation of the ESMP.

The objective of monitoring is of two-fold:

- To alert Project authorities by providing timely information about the success, or otherwise, of the environmental management process outlined in this ESMP in such a manner that changes can be made as required to ensure continuous improvement to the Project's environmental management process (even beyond the project's life).
- To make a final evaluation in order to determine whether the mitigation measures incorporated in the technical design and the ESMP have been successful in such a way that the pre-project environmental and social condition has been restored, improved upon or is worse than before and to determine what further mitigation measures may be required.

Implementation of monitoring of the interventions, whether during construction, operation or decommission of the facilities, are primarily regular or periodical onsite visual checks and are considered to be part of the regular operational practices of either the project supervisor, the school management, MWAUWASA, municipality, etc. and therefore these inspections are not expected to add significant cost to the regular monitoring activities of these bodies.

Table 8-1. Environmental and Social Monitoring Plan

Nr	Impact	Project Phase	Monitoring location	Frequency	Parameters	Responsibility	Monitoring cost
1	Excavation and soil removal	Construction	Project site	Weekly	Soil erosion	Supervising consultant School Management Municipality	2000
		Operation	Project site	Rain season	Soil erosion	School Management Municipality	2000
		Closure	Project site	Rain season	Soil erosion	School Management Municipality	3000
2	Air and noise pollution	Construction	Project site	Weekly	Dust (PM ₁₀) Noise (dB)	Supervising contractor Municipality	3000
		Operation	N.a.	N.a.	N.a.	N.a.	
		Closure	Project site / area	During demolition	Dust (PM ₁₀) Noise (dB)	School Management Municipality	2000
3	Soil and groundwater pollution	Construction	Project site	Weekly	Oil and fuel leakage	Supervising consultant Municipality	3000
		Operation	Project site	Monthly Bi-annually	Sewage leaks Groundwater quality	School Management MWAUWASA Municipality	4000
		Closure	Project site	During demolition	Oil and fuel leaks Groundwater quality	MWAUWASA Municipality	3000
4	Water supply	Construction	N.a.	N.a.	N.a.	N.a.	-
		Operation	Project area	Monthly	Peak Water Demand (m ³ /hr)	MWAUWASA	1000
		Closure	N.a.	N.a.	N.a.	N.a.	-
5	Solid and liquid waste	Construction	N.a.	N.a.	N.a.	N.a.	-
		Operation	Project site	Weekly	Facility's waste collection	School Management Municipality	2000
		Closure	N.a.	N.a.	N.a.	N.a.	
6	Improvement in hygiene and health at schools	Construction	N.a.	N.a.	N.a.	N.a.	-
		Operation	Project site	Monthly	Water supply against	School Management	2000

Nr	Impact	Project Phase	Monitoring location	Frequency	Parameters	Responsibility	Monitoring cost
					demand Incidence of diseases	Municipality MWAUWASA	
		Closure	Project site	Monthly	Incidence of diseases	School Management Municipality MWAUWASA	3000
7	Injury to school children and the public due to falling into pits and trenches	Construction	Project site	During construction	Immediate backfilling; fencing or safety tape	Supervising consultant School Management Municipality	3000
		Operation	N.a.	N.a.	N.a.	N.a.	-
		Closure	Project site	During demolition	Immediate backfilling; fencing or safety tape	School Management Municipality	2000
8	Injuries from work related activities	Construction	Project site	During construction	PPE to workers	School Management	1000
		Operation	N.a.	N.a.	N.a.	N.a.	
		Closure	Project site	During demolition	PPE to workers	School Management	1000
9	Employment creation	Construction	Project area	During construction	Number of people employed as labourer	Municipality	-
		Operation	N.a.	N.a.	N.a.	N.a.	-
		Closure	Project area	During demolition	Number of people employed as labourer	Municipality	2000

9. Decommissioning

This chapter provides guidance to unlikely event that the construction works need to be terminated prematurely, or dismantled at the end of the lifetime of the constructions. The constructions are expected to have a minimal operational lifespan of 25 years. According to the Tanzania's EIA Guidelines and Procedures (2005), the proponent will be required to prepare a decommissioning report that will be submitted to NEMC for review and approval. All the costs pertaining to site rehabilitation and ecosystem restoration before the winding up the construction work will be borne by the proponent. The decommissioning procedures should always be undertaken within established guidelines and limits of the appropriate regulatory agencies. The decommissioning plan will remain a "living document," and revisions will be made throughout the operating life of the project. MWAUWASA (developer) and the selected contractor shall be responsible to monitor environmental impacts during and after project removal. The contractor shall remove the project components and ancillary structures safely and in a manner that minimizes environmental impacts, satisfy the proponent obligation to various policies and legal requirements and restore the site to a condition suitable for the other uses, pay all dues (workers, government, suppliers etc).

Decommissioning During Construction

In the event that construction activities and associated work cease prior to facility completion and commissioning (with no expectation of construction re-start) the constructions would need to be decommissioned in a manner as described below. Mitigation measures will also be implemented where appropriate (e.g. to stabilization of exposed soils).

Decommissioning after Ceasing Operation

Decommissioning activities will occur in the following sequence:

- Disconnection of water supply line and uprooting of pipes
- Emptying of septic tank and soak pit
- Uprooting of domestic water and sanitation facilities
- Removal of roofing materials
- Dismantling of walls
- Dismantling of cover slabs for septic tank and soak away pit
- Filling of pits
- Collection of excess solid waste materials and disposal
- Landscaping and re-vegetation.

Table 9-1. Summary of decommissioning plan

Nr	Activity	Impact	Mitigation measure	Timing	Costs
1	Excavation of water supply line for rooting of pipes	Injury to school children and community members	<ul style="list-style-type: none"> • Prior informing school management , community / municipality on decommission works • Provide warning tape around activity area 	tbd	5000
2	Emptying septic tank and soak away pit	Smell nuisance to school area / neighbouring community	<ul style="list-style-type: none"> • Arrange for sufficient trucks to collect and dispose of sewage within a short period of time 	tbd	7000
3	Removal of roofing materials, water supply and sanitation fittings	Dust, noise, injuries, solid waste generation	<ul style="list-style-type: none"> • Provide PPE to workers according to the use, i.e. nose & ear masks, safety goggles • Provide site holding fence • Sell fittings for reuse if in good condition 	tbd	5000
4	Demolition of walls and cover slabs	Dust and noise generation, injuries to workers	<ul style="list-style-type: none"> • Provide PPE to workers according to the use, i.e. nose & ear masks, safety goggles • Provide site holding fence 	tbd	10000
5	Filling of pits	Dust and noise generation, injuries to workers	<ul style="list-style-type: none"> • Provide PPE to workers according to the use, i.e. nose & ear masks, safety goggles 	tbd	15000
6	Landscaping	Dust and noise generation, injuries to workers	<ul style="list-style-type: none"> • Provide PPE to workers according to the use, i.e. nose & ear masks, safety goggles 	tbd	20000

10. Summary and Conclusions

In a joint effort, the Government of Tanzania and the European Investment Bank are implementing the Lake Victoria Water and Sanitation Project – Mwanza (2014-2019) with the main overarching aim to achieve the Millennium Development Goals (MDG) for water and sanitation in secondary centres within the Lake Victoria Basin, i.e. in Mwanza City, its three satellite towns of Misungwi, Magu and Lamadi, as well as the towns of Bukoba and Musoma.

One of the components of the Project is developing and implementing the Immediate Investment Plan for Mwanza City, consisting of three 'categories', of which 'sanitation improvement in selected schools and public areas', i.e. on 20 and 6 locations respectively, is the focus of the present report.

The planned sanitation improvements basically consist of constructing toilet buildings, each divided in separate sections for boys/girls, male/female teachers, MHM (Menstrual Health Management) units, and toilets for disabled persons at schools, and super-surface water tanks and connections to either underground septic tanks and soak away pits or existing sewerage lines. Similar constructions will be built at the selected public places but in these also include shower units for males and females.

Although Tanzanian legislation and EIB regulations do not require a full Environmental (and Social) Impact Assessment for this sort of local, small-scale, and low-impact development, the Tanzanian National Environment Management Council (NEMC) informed that for these interventions an Environmental and Social Management Plan (ESMP) is required, the present report has been prepared in accordance with the required scope and contents for such report.

The targeted developments will all be built in an urban environment that is characterised by densely populated low-cost residential areas or sites that serve a more public function. In these areas there is generally no surface water. Biologically, flora and fauna at these localities is typically limited to some shade trees and some common urban birdlife at school compounds.

Public consultations on the planned interventions were conducted in the period June-November 2015. General agreement was achieved among a wide group of consultees on the selected sites where the facilities will be built. Concerns expressed during these consultations included a range of suggestions that to the extent possible have been incorporated in the design.

A systematic assessment of expected impacts of the interventions learns that the planned development is expected to lead to a number positive impacts notably improved sanitation at schools and in public places, reduced inflow of nutrients into Lake Victoria, some employment, and revenue from water supply provided to the facilities. Some negative impacts of the interventions are associated with the construction, operation and (whenever applicable) decommissioning phases of the constructions, that all can be management and mitigated to acceptable levels by the various parties for which responsibility has been indicated in the report. One aspect that could not be fully assessed is the extent to which effluent from septic tank/soak away pit units and draining into to ground impacts on the groundwater quality – of potential concern as in the neighbourhood of the facilities people may be using water from boreholes. As there are no real alternatives on this point (priorities have been assigned, project duration and fund are limited) it is recommended to connect those facilities to sewerage lines as soon as this is possible in the future.

11. References

- Atkins, August 2012
Project Formulation Report (PFR) for LVWATSAN – Volume 3: Mwanza
- COWI, 18 February 2015
Project Brief on environmental and social impact assessment for rehabilitation and expansion works on sanitation in selected schools and public areas in Mwanza City
- COWI, 11 December 2015
Study Report for Immediate Investment Plan for LVWATSAN – Mwanza City
- COWI, 11 January 2016
IIP Tender Documents for sanitation in selected schools and public places in Mwanza City
- COWI, 8 April 2016
IIP Tender Documents for sanitation in selected schools and public places in Mwanza City
- COWI, 12 January 2016
Sanitation Design Manual for LVWATSAN
- EIB, February 2013
Environmental and Social Datasheet for LVWATSAN
- EIB, 2013
Environmental and Social Handbook
- EIB, 2014
Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014 amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment
- EIB/Halcrow, December 2015
Resettlement Planning Framework for LVWATSAN
- EIB/UN-HABITAT, December 2015
Stakeholder Engagement Plan for LVWATSAN
- Howett, D.J.B. and Nagu, J. (1997). Agriculture Project Planning in Tanzania. Institute of Development Management Mzumbe, Tanzania and Development Project Planning Centre, University of Bradford, United Kingdom.
- R-Solve, August 2012
Supplementary Engineering Report for LVWATSAN
- Tanzania Ministry of Water, 2006
Environmental and Social Management Framework (ESMF) for Water Sector Development Programme

LWATSAN - Mwanza

IIP: ESMP for Sanitation Facilities in Selected Schools, Dispensaries and Public Places in Ilemela and Nyamagana Districts - Mwanza Region



Tanzania Ministry of Water, 2006

Resettlement Management Framework (RMF) for Water Sector Development Programme

Appendix 1. Meeting Minutes NEMC-PMC

Record of meeting/discussion



Project title:	Lake Victoria Water & Sanitation – Mwanza	Division:	IDD
Subject:	Meeting with NEMC to discuss MWAUWASA ESMPs	Project No.:	350199
Location:	NEMC Office Mwanza	Date of Meeting:	8 December 2015
Present:			
	Anna Masasi	NEMC	(AM)
	Boniphace Paul Guni	NEMC	(BG)
	David Rogers	PMC/ Mott MacDonald	(DR)
	Joyce Ndesamburo	UN-HABITAT	(JN)
Absentees with Apologies:			
Recorded by	Distribution		
DR			

Item	Text	Action on
1	<p>Purpose of the Meeting</p> <p>The meeting was held at the request of the PMC in order to clarify the requirements for the ESMPs currently being prepared for the MWAUWASA IIP (Immediate Investment Plan) project works.</p> <p>2 Contents of the ESMP documents(s)</p> <p>Mr Wandert Benthem, the PMC's International E&S expert, had sent a suggested draft contents list which he had also suggested could be one document covering all the components/sub-projects being considered.</p> <p>However AM said that the contents list in the EIA regulations was similar but the sequence differs, therefore the list in the EIA regulations should be used. AM noted that the purpose of the current exercise was only to provide environmental screening and mitigation measures so the contents of the documents(s) could be simplified with elaborate ESMP. It was confirmed that the document(s) to be prepared should be called "Environmental and Social Management Plans" or ESMPs as they were not required to be full ESIA's. (Copy of the required contents list attached).</p> <p>After discussion it was agreed that a total of three ESMP documents are to be prepared and submitted to NEMC, each covering a different category of the IIP project interventions. It was noted that all the works under IIP are in Mwanza only.</p>	

**Record of meeting/discussion
Continuation sheet**



Project No. 350199

Date of Meeting: 21st July 2015

Item	Text	Action on
	<p>The agreed three ESMP categories are:</p> <ul style="list-style-type: none"> (i) Schools and public places Latrines (ii) Water supply extensions and rehabilitation of pipelines (iii) Simplified Sewerage in Informal areas, together with some minor associated sewer extensions, and some sewer rehabilitation works. <p>For each of the 3 ESMPs, individual locations (for example for the different schools latrine sites) will be dealt with in the relevant ESMP report using tables and where necessary short sections to deal with specific environmental impacts or other relevant location-specific features.</p> <p>In addition to the ESMPs, Project registration documents are also to be provided for each of the three categories, following the template already provided. These should be submitted before submitting the ESMPs. It was confirmed that separate "Project Briefs" are NOT required, this information to be included in the ESMPs.</p> <p>There was a discussion about the use of soakaways associated with septic tanks where these are necessary at certain schools. Justification for these will be provided based on the basis of the unacceptable cost to the community of total reliance on tankers to empty the septic tanks. Information on local water supplies to be included.</p> <p>DR asked about the use of steps (infrastructure to support construction of sewer pipes) in the informal areas, AM replied that this would be a good idea but only provided that it has been confirmed that the informal areas are being considered legalised settlements.</p> <p>DR and JN thanked AM and BG for taking the time to make all the clarifications made as above.</p>	

NEMC's recommended ESMP outline

From Page 12 of the regulations:

Without prejudice to the generality of sub-regulation (1), the environmental impact statement shall closely be styled and contain the following information:

(a) Format of the environmental impact statement: (for our project, "Environmental and Social Management Plan – ESMP – as understood before)

- (i) executive summary;
- (ii) acknowledgement;
- (iii) acronyms;
- (iv) introduction;
- (v) project background and description;
- (vi) policy, administrative and legal framework;
- (vii) baseline or existing conditions;

- (viii) assessment of impacts and identification of alternatives;
- (ix) impacts management or environmental mitigation measures;
- (x) environmental and social management plan;
- (xi) environmental and social monitoring plan;
- (xii) resource evaluation or cost benefit analysis;
- (xiii) decommissioning;
- (xiv) summary and conclusions
- (xv) references;
- (xvi) appendices;

(b) Cover page of the environmental impact statement: **(ESMP)**

- (i) title of the proposed project;
- (ii) location of proposed development;
- (iii) developer;
- (iv) lead consultants;
- (v) contact address and phone;
- (vi) date of submission.

(3) Executive summary shall contain the following:

- (a) title and location of the project or undertaking;
- (b) name of the proponent and contact;
- (c) names and addresses of experts or firms of experts conducting EIA;
- (d) A brief outline and justification of the proposed project or undertaking showing-
 - (i) a brief description of the project environment;
 - (ii) project stakeholders and their involvement in the EIA process;
 - (iii) explanation on why some impacts are not addressed;
 - (iv) list of developer, consultant, local planning authorities and other people and organisations consulted;
 - (v) results of public consultation;
 - (vi) description of the major significant impacts;
 - (vii) alternative considered;
 - (viii) recommendations and plan for mitigation of the impacts;
 - (ix) environmental and social management;
 - (x) proposed monitoring and auditing;
 - (xi) resource evaluation or cost benefit analysis; and
 - (xii) decommissioning.

Appendix 2. NEMC's Letters





NATIONAL ENVIRONMENT MANAGEMENT COUNCIL (NEMC)
BARAZA LA TAIFA LA HIFADHI NA USIMAMIZI WA MAZINGIRA

Telephone: + 255-28-2541679

Facsimile: + 255-28-2541679

E-mail: nemcmza@gmail.com

Location: Lake Victoria Basin Water Board, Igogo.

Mwanza Zonal Office,

P.O. Box 11045,

MWANZA,

TANZANIA

In reply please quote:

Ref. No.NEMC/EA/01/Vol.1/16

Managing Director,

MWAUWASA,

P.O.Box 317,

MWANZA.

Date: 28/04/ 2016

RE: ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP) FOR ESTABLISHMENT OF WATER SUPPLY (EXTENSION AND REHABILITATION OF PIPELINES IN MWANZA CITY)

Kindly refer the heading above.

National Environment Management Council (NEMC) Mwanza Zonal Office has reviewed the submitted ESMPs for afore mentioned project.

Following the review of your document the Council has noted that the ESMP is insufficient in that it cannot stand as a comprehensive tool to safe guard the environment during construction and operation phases.

Now therefore, to make it comprehensive you are directed the following:

1. Ensure that the project Background and all project activities are well addressed and associated impacts are identified.
2. For each identified impact ensure that feasible and practical mitigation measures are proposed.
3. Attach the documents indicating the legal ownership of the areas to be installed water storage tanks;
4. Ensure that the title of the project appears as Environmental and Social Management Plan for Establishment of Water Supply Extension and Rehabilitation of Pipelines in Ilemela and Nyamagana Districts - Mwanza Region
5. Ensure that all relevant stakeholders are consulted and their views/concerns are documented and addressed in the final document.

Having incorporated all the directives, you will re submit the improved ESMP for approval.

Yours Sincerely,














Jamil Baruti

ZONAL COORDINATOR

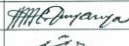
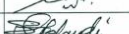

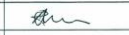

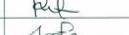

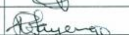
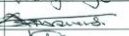



Cc: Ally Salim
P.O. Box 175,
Sengerema - Mwanza

Appendix 3. Consulted Stakeholders









EIB- AFD LVWATSAN MWANZA PROJECT - SANITATION COMPONENT, REGISTRATION FORM
FOR MEETING WITH MKUYUNI 'B' PRIMARY SCHOOL, 21st OCT, 2015 MWANZA

SN	Name	Organisation/Title	E-mail/mobile Tel No.	Signature
1.	SALOME S. MUSHIMBA	H. TEACHER.	0754-075007	
2.	CHRISTINA F. EMMANUEL	Teacher	0684274338	
3.	MARIAM S. MGRANT	Teacher	0756 802 853	
4.	LETIGA RICHARD	M/M/KITI	0755 501670	
5.	MARY JOSHUA	M. J.	0755 988299	
6.	KISSA J. MBLWA	Teacher	0753663890	
7.	ABDUL JC MAWANDA	SLO JCI	0753-294508	
8.	LEONARD MSENJELE	UNPT/PMC - WATSAN ENGINEER	0754 580 692	
9.	WILBERT BUKU	MWAUWASA - Env Eng	0759076937	
10.	Cecilia Ungele	UN-Habitat	0754 258512	
11.	Joyce Mlesamburo	- II -	0754 815 404	
12.				
13.				
14.				
15.				
16.				
17.				

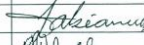
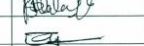
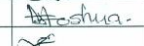
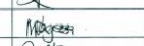








EIB- AFD LVWATSAN MWANZA PROJECT - SANITATION COMPONENT, REGISTRATION FORM
FOR MEETING WITH TAMBUKA RELI PRIMARY SCHOOL, 21st OCT, 2015 MWANZA

SN	Name	Organisation/Title	E-mail/mobile Tel No.	Signature
1.	CHARLES A. BANYA	MKUU WA SHULE	0753462444	
2.	EMMANUEL SHOKA	M/KITI WA SHULE	0752295370	
3.	SYLVESTER DAUBI	M/KITI WA SHULE	0755 717624	
4.	LEONARD MSENJELE	UNPT/PMC - WATSAN ENGINEER	0754 580 692	
5.	ANALISE BOAZ	MUALIMU	0754-767623	
6.	JANE LAURENT	M JUMBE - SHULE	0756809226	
7.	ROBERT LAMBO	HABITAT	0755-838181	
8.	WILBERT BUKU	MWAUWASA - PMU	0759076937	
9.	Cecilia Ungele	UN-Habitat	0754 258512	
10.	Petronela Maysaga	Njunge Kishule	0783739806	
11.	Abdul JC Mawanda	SLO - Mwanza	0753 294 508	
12.	Joyce Mlesamburo	UN-Habitat	0754 815 404	
13.				
14.				
15.				
16.				

MAHUBHURIO. 22.10.2015

JINA	SAHIMI	CHED	NAMBA YA SIMU
1. STEPHEN M. NAAMAN		AE/UF IMC	0765320427
2. ROSE J. MAKALA		SHO INC	0750-365936
3. LUBERT BUIKU		Env Eng	0755016937
4. LEONARD MSENZELE		WATSAN ENGINEER	0754580692
5. AINISS M. JACKSON		MJUMBE	0765938489
6. JULIANA S. PROSPER		MJUMBE	0756028953
7. SAMUEL OPIYO		MJUMBE	0753117256
8. SILIMYAKE J. SWILA		MWENYEKITI	0753420709

**EIB- AFD LWATSAN MWANZA PROJECT - SANITATION COMPONENT,
REGISTRATION FORM FOR MEETING WITH ZIWANI PRIMARY SCHOOL, 19th OCT, 2015 MWANZA**

SN	Name	Organisation/Title	E-mail/mobile Tel No.	Signature
1.	FABIAN M. TILWANK	MW/ WSI	0754-242704	
2.	BRAO B. KALYO	MJUMBE	0688-885555	
3.	EVENES E. KIZIMA	KATIBU	0754 428866	
4.	MARY JOSHUA	Mjumbwe	0754 015387	
5.	FATUMA LUGOME	Mjumbwe	0754-830361/0789-253969	
6.	PILI MAGESA	Mjumbwe	0756738910	
7.	ANASTASIE Q. MUMBE	CHW-MSA CTS Council	0762-400110	
8.	STEPHEN M. NAAMAN	ILEMELA MUNICIPAL C. ZO OFF	0765320427	
9.	LEONARD MSENZELE	UNPT/PMC/MWANZA-WATSAN ENGINEER	mosenzele@schm.in/074580692	
10.	Cecilia Ingele	UN/Habitat	0754 258512	
11.	Joyce Ndesambano	- II -	joyce.ndesambano@unhabitat.org	
12.	Solly Musa	Mjumbwe	0767-547484	
13.				
14.				
15.				
16.				

FIELD UNIT AT MLIMANI PRIMARY SCHOOL ATTENDANCE LIST

N	NAME	RESIGNATION & CELL PHONE NO	Signature
1.	CECILIA UNGELE	UN-HABITAT - 0754 288512	
2.	FELISTER LYAMUYA	Mlimani-Mlimani - 0754-770057	
3.	KAMBANDA B. MKWALA	M/Mkwala - Mongela 0756373061	
4.	Eng MUBERT BUSIKU	MWAUWASA - 0755016937	
5.	E. J. Stanley Lillian	MWAUWASA - 0754-925810	
6.	MASELO E. ANDREA	MWAUWASA MWAUWASA - 0754830830	
7.	JAVAH H. EMILI	MUSALIMU MZINGIRA S - 077705555	
8.	OSMAO S. MADETA	M/MKWALA MORINGA 0757267775	
9.	THOMAS M. RABA	MUL MZINGIRA 0758775112	
10.	MARLEISINTA J. HEBURBA	MW NA AFA 0766602260	
11.	SOPHIA S. HASSAN	Mlimani - MONGELA } 0767-363738	
12.	FAUSTINE M. FRANCIS	ENVIRONMENT DEPARTMENT -	
13.	STEPHEN M. NAYMAN	MONGELA P/S - 0757023474	
14.	JACKSON B. RWANGU	ILEMELA MARGINAL ROAD 076324477	
15.	Isaiah P. Faustine	M/Kwala Mlimani MLIMANI	
16.	Abdul Mallambo	M/Kwala Mlimani 0756240174	
17.	Joyce Ndarambwa	AP/MLIMANI MIMANI 075724458	
		UN-Habitat	

EIB- AFD LWATSAN MWANZA PROJECT - SANITATION COMPONENT, REGISTRATION FORM FOR MEETING WITH NUNDU 'A' PRIMARY SCHOOL, 20th OCT, 2015 MWANZA

SN	Name	Organisation/Title	E-mail/mobile Tel No.	Signature
1.	SUDI IBD SUDI	M/Kwala WASHULE	0683666796/0754210831	
2.	GRACE M. GEORGE	KATIBU	0754443855	
3.	STEPHEN M. Ndarambwa	TECH. ED. OFFICER. IMC	0765320427/0787205308	
4.	MARTHA S. JONATHAN	MJUMBE KANATI YA SHULE	0754-889967	
5.	LEONARD MSENJELE	UNPT/PMC - WATSAN ENGINEER	0754 580692	
6.	WILBERT BUSIKU	MWAUWASA	0755016937/0777856132	
7.	ROBERT LAZARO	HABITAT.	0755-838181	
8.	UNESMO MNZAVA	MJUMBE KANATI / SHULE	068781366/076941065	
9.	Joyce Ndarambwa	UN-Habitat	0754 215400	
10.				
11.				
12.				
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14.				



EIB- AFD LVWATSAN MWANZA PROJECT - SANITATION COMPONENT, REGISTRATION FORM FOR MEETING WITH GEDELI PRIMARY SCHOOL, 20th OCT, 2015 MWANZA

SN	Name	Organisation/Title	E-mail/mobile Tel No.	Signature
1.	JULIUS MASULILI	MWENYEKUJI WA SHULE	0756354976	<i>[Signature]</i>
2.	ELLY JOHN	KATIBU WA KAMATI YA SHULE	0754-978523/0784-978523	<i>[Signature]</i>
3.	LEONARD MSENJELE	UWPT/PMC - WAZAN ENGINEER	mseyele@yahoo.com (0754580692)	<i>[Signature]</i>
4.	WILBERT BUGIKU	MWAWAZI - Env Eng	wilybugiku@yahoo.com	<i>[Signature]</i>
5.	VERONICA RASHA	MWL MUMBE K. SHULE	evr@nyamaganda@gmail.com (0785411446)	<i>[Signature]</i>
6.	ISAAC ARISIDISI	MWL MUMBE	isaacarisidisi@yahoo.com (0757728162)	<i>[Signature]</i>
7.	GOODLUCK CHAUSY	MWL. MUMBE	0767676590	<i>[Signature]</i>
8.	STEPHEN M. NAAMAN	TECH. ED. OFFICER JMG.	046532927/0787205308	<i>[Signature]</i>
9.	MONICA LUSANSE	MUMBE KAMATI SHULE	0755676835	<i>[Signature]</i>
10.	Joyce Ndesamburo	urHabitat	0754 815 404	<i>[Signature]</i>
11.				
12.				
13.				

EIB-AFD LVWATSAN MWANZA PROJECT- SANITATION COMPONENT, REGISTRATION FORM FOR MEETING WITH

S/N	NAME	ORGANISATION/TITLE	CONTACT/ EMAIL	SIGNATURE
01	SARAH MTUNDU	Mkiki Msaidizi	0754-443235	<i>[Signature]</i>
02	MATHEW SHADIRACK	KATIBU	-	<i>[Signature]</i>
03	HUSEIN - NYAMANYI	M KATIBU	-0787-071229	<i>[Signature]</i>
04	LULIAS BYOBA	Mw. Gide	07671666865	<i>[Signature]</i>



EIB-AFD LVWATSAN MWANZA PROJECT- SANITATION COMPONENT, REGISTRATION FORM FOR MEETING WITH

S/N	NAME	ORGANISATION/TITLE	CONTACT/ EMAIL	SIGNATURE
1	Samuel Yaloma	SCO	075759011	<i>[Signature]</i>
2	Lilian Chuguma	RN	0757300175	<i>[Signature]</i>
3	Adamu Kumpaka	EP	0765491945	<i>[Signature]</i>
4	Beatrice Adhiambo	EN	0757455488	<i>[Signature]</i>

IFAWIDHI I YA NYAKATO MWANZA



NUNDU'S PRIMARY SCHOOL.

EIB-AFD LVWATSAN MWANZA PROJECT- SANITATION COMPONENT, REGISTRATION FORM FOR MEETING WITH

S/N	NAME	ORGANISATION/TITLE	CONTACT/ EMAIL	SIGNATURE
1	LUCAS H. ROBERT	HEAD TEACHER	0753271420	Robert
2	HAPPINESS KIRUA	TEACHER	0762-880734	Hilwa
3	PRISCA MSAIKA	TEACHER	0753-979100	Msaika
4	BASADI ELIAS	TEACHER	0768-217013	Basadi
5	JOHANITA BONAFACE	TEACHER	0768-542258	Bonaface
6	MARY MAMASE	-II-	0765-517440	Mamase
7	KARASIA UKIO	-II-	0754913736	Ukio
8	DENIS RUPATHWA	-II-	0782-609723	Rupathwa
9	ELICE MASHINGI	TEACHER	0752-864708	Mashingi
10	JOYCE F. MAFANZI	-II-	0784-249339	Mafanzi
11	VICTORIA M. MUNTU	-II-	0767141696	Muntu
12	JACQUELINE WILLIAM	-II-	0754-982810	William
13	ABIA C. SIMBILA	-II-	0752-480392	Simbila
14	SANDOLIAN F. MSHAMBA	-II-	0755097147	Mshamba

MWALIMU MKUU
SHULE YA MSHINGI NUNDU'S
NYAMATA ILEMELA
09-11-2015

EIB-AFD LVWATSAN MWANZA PROJECT- SANITATION COMPONENT, REGISTRATION FORM FOR MEETING WITH

S/N	NAME	ORGANISATION/TITLE	CONTACT/ EMAIL	SIGNATURE
1	BAWILI S. BALINGO	ACADEMIC	0754-394872	Balingo
2	ROSEMARY P. HAMAD		0767-638960	Hamad
3	MARI M. AIGI		0787-634264	Aigi
4	JULIANA S. PROSPER		0756-028953	Prosper
5	JANG G. MAFWERE		0752-832006	Mafwere
6	ELIZABETH MATHIU		0756-301265	Mathiu
7	STEPHANIA B. ELIA		0756-849506	Elia
8	AMANI PREST		0752-737399	Prest

SHULE YA MSHINGI NUNDU'S
SLP NYAMATA
MWANZA

EIB-AFD LVWATSAN MWANZA PROJECT- SANITATION COMPONENT, REGISTRATION FORM FOR MEETING WITH

S/N	NAME	ORGANISATION/TITLE	CONTACT/ EMAIL	SIGNATURE
01	KEITHA MALLAH	NYERERE RISP	0755281049	Mallah
02	SEUGRA DONALD	NYERERE RISP	0755281049	Donald
03	ESTHER D. PESTO	NYERERE RISP	0789101157	Pesto
04	DANIEL G. GUMA	NYERERE RISP	0788006374	Guma
05	CHRIS CHACHA	NYERERE RISP	0762669270	Chacha





EIB-AFD LWATSAN MWANZA PROJECT- SANITATION COMPONENT, REGISTRATION FORM FOR MEETING WITH

S/N	NAME	ORGANISATION/TITLE	CONTACT/ EMAIL	SIGNATURE
1	ALAM M. KUANDIKA	H/TEACHER	0769930462/0784930462	[Signature]
2	BERTHA N. MOLLEL	A/H TEACHER	0787310677	[Signature]
3	TABITHA M. NAMBA	MWALIMU	0752907732	[Signature]
4	FRANCISCA G. FRANCIS	MWALIMU	0762344748	[Signature]
5	LUCY K JOSEPH	MWALIMU	0756-824058	[Signature]
6	CHARLES V. JACONIA	MWALIMU	0765730492	C. Jaconi
7	SABINA N. JUMA	MWALIMU	0756209748	[Signature]
8	FLORENCE S. RUTA	MWALIMU	0762-345612	[Signature]
9	PHINEAS P. MWOGWI	MWALIMU	0756355078	[Signature]
10	MTHANUSI DORICE S.	Mwalimu	0767588388	[Signature]
11	LILIAN G. MWIZA	Mwalimu	0757435347	[Signature]
12	SARA J. TUJU	Mwalimu	0757553082	[Signature]
13	ELIZABETH B. DOTTO	Mwalimu	076462882	[Signature]
14	FOIBE P. SAMUEL	Mwalimu	0754854538	[Signature]
15	MONICA P. MUNDU	Mwalimu (talimu)	0755078556	[Signature]
16	JOSEPHINE B. JOSEPH	Mwalimu	0767620208	[Signature]



EIB-AFD LWATSAN MWANZA PROJECT- SANITATION COMPONENT, REGISTRATION FORM FOR MEETING WITH

S/N	NAME	ORGANISATION/TITLE	CONTACT/ EMAIL	SIGNATURE
1	MUALLI HUSSEIN	NURSE-ASSISTANT	0763303086	[Signature]
2	ARODIA ISHENGOMA	REGISTERED NURSE	0762530746	[Signature]
3	LUCY B. JOSEPH	MWALIMU WAAFIAMKOHU	0763-498691	[Signature]
4	ELBENORA T. MASOY	ENROLLED NURSE	0757-886704	[Signature]

EIB-AFD LWATSAN MWANZA PROJECT- SANITATION COMPONENT, REGISTRATION FORM FOR MEETING WITH

S/N	NAME	ORGANISATION/TITLE	CONTACT/ EMAIL	SIGNATURE
1	MUALLI HUSSEIN	NURSE-ASSISTANT	0763303086	[Signature]
2	ARODIA ISHENGOMA	REGISTERED NURSE	0762530746	[Signature]
3	LUCY B. JOSEPH	MWALIMU WAAFIAMKOHU	0763-498691	[Signature]
4	ELBENORA T. MASOY	ENROLLED NURSE	0757-886704	[Signature]



EIB- AFD LWATSAN MWANZA PROJECT - SANITATION COMPONENT, REGISTRATION FORM FOR MEETING WITH BULOLA (BUSWELU 'B') PRIMARY SCHOOL, 22nd OCT, 2015 MWANZA

SN	Name	Organisation/Title	E-mail/mobile Tel No.	Signature
1.	SILIMYAKE J. SWILA	HEAD TEACHER	0753420709	[Signature]
2.	STEPHEN M. NDIAMATI	TECH. ED. OFFICER I/MC	0765820423/0797205802	[Signature]
3.	WILBERT BUSIKU	MWAWAZIA-PMU	0755016937	[Signature]
4.	ROSE J. MANGALA	HTO - I/MC	075826936 rose.makulla@yohanes.com	[Signature]
5.	LEONARD MSENJELE	UNDP/PMC - WATAN ENGE	0754580692	[Signature]
6.	AINES M. JACKSON	MJUMBE - KAMATI	ainesjacksy@gmail.com/0769308	[Signature]
7.	AGNES A. NUNDAIBANDI	MJUMBE KAMATI	0766917368	[Signature]
8.	JULIANA S. PROSPER	MJUMBE - KAMATI	0756028953	[Signature]
9.	SAMWEL DPRO	MJUMBE KAMATI	0753117256	[Signature]
10.	Joyce Ndesamburo	UM-Habitat	0784815404	[Signature]
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EIB- AFD LWATSAN MWANZA PROJECT - SANITATION COMPONENT, REGISTRATION FORM FOR MEETING WITH BUHONGWA 'B' PRIMARY SCHOOL, 22nd OCT, 2015 MWANZA

SN	Name	Organisation/Title	E-mail/mobile Tel No.	Signature
1.	MENGTI D. MHEZA	MWAZIRU MKUU	0754493419	[Signature]
2.	MARIAMU H. FAZAL	MJUMBE	0755454383	[Signature]
3.	MARIHA N. CHARLES	MJUMBE	0767352480	[Signature]
4.	IRASINHA G. RUIA	MJUMBE	0757369092	[Signature]
5.	Abdul JE MALINDA	ELIMU JJI	0753294508	[Signature]
6.	TUMANI ANDREA	M/KIII "B"	0762-928920	[Signature]
7.	WILBERT BUSIKU	MWAWAZIA-PMU	0755016937	[Signature]
8.	LEONARD MSENJELE	UNDP/PMC - WATAN ENG.	0754580692	[Signature]
9.	Joyce Ndesamburo			
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EIB- AFD LWATSAN MWANZA PROJECT - SANITATION COMPONENT, REGISTRATION FORM FOR MEETING WITH KITANGIRI 'A' PRIMARY SCHOOL, 19th OCT, 2015 MWANZA

SN	Name	Organisation/Title	E-mail/mobile Tel No.	Signature
1.	LUSATO LWOGA	MWENYEKITI KIT 'A'	0759242397	
2.	RAMADHANI GADHILI WZ	MWENYEKITI/KI/C	0753933382	
3.	ZENTA KASANDA	KATIBU- KITANGIRI C	0767808342	
4.	VEDASTUS BITURO	KATIBU- KITANGIRI A.	0759212304/0713065713	
5.	Joyce Ndesaruwano	UIN- Habitat	joyce.uinhabitat.org	
6.	LEONARD MSENJELE	UNEP/PWC/MWANZA- WASH-ENGINEER	mjenjele@pwc.com/0754580692	
7.	STEPHEN M. NAMAN	Tech. Ed. officer IMC	0765320497/0787205388	
8.	Cocilia Ungile	UIN- Habitat	0754 258512	
9.	Suzia Michael	Mjumba	0765 082 016	
10.	PAULINE T. MAMANI	Mjumba	0753-787569/0784-509929	
11.	MATILDA CHRISTOPHER	-11-	0764-521782/0787-609925	
12.	MARIAM MASSAKA	-11-	0787 259381/0713259381	
13.	MARY J. NYAGAWA	-11-	0755-370570	
14.	EMMANUEL ISSACK	- 11 -	0754-766610	
15.	HONORATHA PAUL	-11-	0754622762	
16.	PETER MWAJIBO LYAMBA	MWAZI PAULI KATA KITANGIRI	0784396869/0764545158	
17.	ANASTASIA M. MUMBE	CAVEDO - LUZA CITY Council	0762-400110	

MWALIMU MKUU
SHULE YA MSINGI KITANGIRI
19/10/2015

KIKAO

22-10-2015

AGENDA

- i) Kupungua kikao
- ii) Utarubusho
- iii) Ujumbe toka kwa wageni (MWAUWASA)

Mwenyekiti alifungua kikao mnamo saa 4:00 asubuhi na kutarubusha wageni wa kamati Baada ya hapo Apis alichukua nafasi alitambua wageni alioaribabana nao toka MWAUWASA.

Baada ya utarubusho, kiongozi wa usafiri ndugu Joyce Ndesaruburo alieleza lengo la uito wa kamati ni kuangalia hali halisi ya mazingira ya shule kwa ajili ya kuboresha mazingira kwa vyoo.

Alisema kamati ya shule iwasiliane na jamii kuhusu stana na suala la maji ili yapatikane hapa shuleni maana mazingira bora ya vyoo yana wezeshwa na uwepo wa maji ya kutosha. Vyoo vha jenewa vya hawulana na wachama, vya wabuni na wabuni pia kuna wapo wataengeneza mazingira ya vyoo ya kuwafaa.

Pia utendeshaji wa vyoo hivi utagharimu maji mengi hivyo bili itabungwa kubwa na itapasa shule na jamii itapange kukabiliana na gharama hizo.

Baada ya maelezo hayo kutolewa wageni na weni eji walwendelea kuangalia eneo ambalo utafaa kwa utenzi wa vyoo. Pia walwagalia vyoo vilivyopo na walipendekeza kama vifanywe marekebishi na vipimo vilichukuliwa.

Mwenyekiti aliwashukuru wageni kwa uito wao na kwa ujumbe walioleta na alifunga kikao mnamo saa 5:30 asubuhi

MWANJANI MKUU
SILIMYAKE J. SWIKA
SILIMYAKE J. SWIKA

AGENDA

1. KUFUNGUWA KIKAO

Milkiti alifungua kikao saa 10:30 asubuhi, kisha alimtanda sha Afisa Elimu Ufundi ili atambuliste watu alisamba tambana nzo. Mwezeshaji alitoa ufafanuzi juu ya lengo la ziara to yao, kuwa ni kuimarisha mazingira ya wazingira ya jami inayotuzunguka na mazingira ya ziwa Victoria. Kisha aliruhusu majadaliano ya mni kifanyike.

2. MAJADILIANO

Mkungenzi wa madi alieleza kuwa Kitangiri watabo reshowa choo na kutengeneza mfumo wa maji taka. Lakiini Kitangiri 'C' wenyewe watakata madi mzima kwa kujengewa choo. Wajumbe waliomba wakati madi ukiwa bado hayaa nza kutekelezua waliomba kuboreshewa walau vifaa kwa gili ya kuwekea uchafu vyooni di walau vyo visizibe, pia walieleza kuwa wakati wa ujenzi wataweka eneo la choo kwa gili ya watoto wenye ulemavu pia walimu ambao watakuwa na ulemavu. Wajumbe waliomba kujengewa tanuru kwa gili ya kuchora taka. Wajumbe waliomba kujengewa uzio kama kunauweze kana.

Suala la uzio mkungenzi alilitolea ufafanuzi kuwa hali uszekani kwa sababu ya gharama na kwa kuwa shute zinazohudumiwa ni nyingi.

Ujenzi wa tanuru la kuchomea uchafu mkungenzi amekubali kulifanyia kazi.

Watajenga choo cha matundu kumi matano ya wakike na matano ya wakiume.

Madi wa choo cha wakimu utajengwa pembeni na choo cha zamani.

KUFUNGUWA KIKAO

Milkiti aliwashukuru wageni kwa uwepo wao alifungua kikao saa 6:00 mchana.


 MWALIMU MKUU
 SHULE YA MSINGI KITANGIRI

WIZARA YA ELIMU NA MAFUNZO YA UFUNDI
HALMASHAURI YA MANISPAA YA ILEMELA
SHULE YA MSINGI ZIWANI
TAREHE 19/10/2015

MUHTASARI WA KIKAO CHA KAMATI YA SHULE.

MAHUDHURIO

REJEA FOMU YA MAHUDHURIO ILIYOAMBATANISHWA NYUMA

WASIOHUDHURIA:

1. DANIEL GONDWE – KWA TAARIFA.
2. ABRAHAM KAPAMA – MRATIBU KWA TAARIFA.

AGENDA.

1. Kufungua kikao
2. mradi wa mpango wa uboreshaji wa matumizi ya vyoo.
3. Mengineyo
4. Kufunga kikao

UFAFANUZI WA AGENDA.

1. AGENDA NO. 1 KUFUNGUA KIKAO.

Mwalimu mkuu aliwakaribisha na kuwatambulisha wageni waliofika kwenye kikao, kuwa ni wageni kutoka MWAUWASA, wamekuja kwa ajili ya maandalizi ya mpango wa kuboresha matumizi ya vyoo katika shule ya msingi ziwani, kisha mwalimu mkuu aliwaomba wageni wajitambulisho mmoja mmoja kwa majina walifanya hivyo.

Baada ya wageni kujitambulisha katibu wa kikao alimkaribisha mwenyekiti atambulisho wanakamati na kufungua kikao.

Mwenyekiti alifanya kama alivyoambiwa na alifungua kikao kwa kuwashukuru, wageni kutoka MWAUWASA kwa kufika katika shule ya msingi ziwani, Kikao kilifunguliwa saa 6: 15 mchana. Mwenyekiti aliendelea kwa kuwapongeza wadau wa mazingira.

Mwenyekiti aliendelea kuwapongeza wadau wa mazingira kwa kuboresha mazingira ya ziwa Victoria. Pia aliwaomba wajumbe wote washiriki katika mjadala wa maandalizi ya mpango ya kuboresha matumizi ya vyoo katika shule ya msingi ziwani.

2. AGENDA NO.2. MRADI WA MPANGO WA KUBOresha VYOO

Mwenyekiti alimkaribisha mgeni mkuu wa msafara. Mkuu wa msafara alianza kwa kuatambulisha mradi wa mpango wa kuboresha matumizi ya vyoo katika shule hii, na akaongea kuhusu ujenzi wa vyoo katika shule hii kupitia Benki ya Dunia ikisaidiana na MWAUWASA.

Mkuu wa msafara awali ya yote alitaka kufahamu kama shule inaeneo la kujenga choo cha wanafunzi na walimu kutoka kwenye uongozi wa shule pamoja na wanakamati .

Mwenyekiti wa kamati ya shule alisema kuwa eneo la kujenga choo cha wanafunzi na walimu lipo la kutosha.

Mkuu wa msafara aliendelea kudodosa kuwa je kulingana na hali ya mazingira ya choo cha shule kuwa mbaya kama walivyoona hapo awali je kamati ya shule na uongozi wa shule uko tayari kujenga choo?

Wajumbe wote kwa pamoja kwa kauli moja walikubali na kulipokea jambo hilo kwa mikono miwili na walifurahi na kushukuru kwa nguvu zote.

Baada ya wajumbe wa kamati ya shule kuipokea ujumbe huu kwa furaha na shauku kubwa, mkuu wa msafara alikieleza kikao kwamba watajenga vyoo kwa ajili ya wanafunzi matundu matano kwa ajili ya wavulana, matundu matano kwa ajili ya wasichana, pia watajenga matundu mawili ya choo kwa ajili ya walimu na tundu moja kwa ajili ya wanafunzi wenye ulemavu.

Pia watakarabati choo cha zamani ambacho hali yake kimanzingira na kiuhalisia ni mbaya sana ili shule iweze kukidhi mahitaji ya wanafunzi na walimu. Mpango huu wa ukarabati utakuwepo hapo baada ya tathimini kufanyika na kuona ni gharama kiasi gani zitahitajika ukarabati huu utafanyika sambamba na ujenzi wa vyoo vipya.

Vilevile katika vyoo vya wasichana kutakuwa na chumba kwa ajili ya kujihafadhi pia kutajengwa kitalu kwa ajili ya kuteketezea taka za wasichana waliopevuka.

Baada ya mjadala wa muda wajumbe wote kwa pamoja walikubaliana kuwa vyoo vya wavulana matundu matano, wasichana matundu matano na vyoo vya walimu matundu mawili sanjali na choo cha walemavu vijengwe pamoja na kukarabati vyoo vya zamani vya wanafunzi na walimu.


Baada ya hapo wadau walielekea kuona vyoo vinavyohitaji kukarabatiwa na mabomba ya kuunganisha kwenye maji taka na kuangalia eneo la ujenzi wa vyoo vipya.


3. AGENDA NO 3 MENGINEYO

Mjumbe wa kamati ya shule aliwashukuru sana wageni wa mpango wa MWAUWASA kwa kuwaletea mpango mzima wa kuboresha afya za wanafunzi kwenye shule ya msingi ziwani ambayo kwa kweli hali ya vyoo vya shule hii ilikuwa mbaya sana.

4. AGENDA NO 4 KUFUNGA KIKAO

Mwenyekiti wa kamati ya shule aliwashukuru wageni wote pamoja na wanakamati kwa michango yao mizuri na kuwambia wazidishe ushirikiano zaidi ili kuboresha afya za wanafunzi na afya za ziwa Victoria, kikao kilihirishwa mnamo saa 7:30 mchana.

 MTKT
KAMATI YA SHULE
Mwenyekiti S/M ZIWANI Tarehe
MWANZA


Katibu

11

SHULE YA MSINGI NUNDU 'A'

MUHTASARI WA KIKAO CHA KAMATI YA SHULE NA WAJUMBE TOKA MWALIWASA - TAREHE 20-10-2015

INAALIOHUDHURIA	WADHIFA	NAMBA YA SIMU.
1. SUDI IDD SUDI	M/KITI WA SHULE	0754214831
2. GRACE M. GEORGE	KATIIBU	0754-443855.
3. STEPHEN M. NAMWAN	TECH ED. OFFICER/MLC	0765 320427
4. MARTHA S. JONATHAN	MJUMBE KAMATI	0754-889967.
5. LEONARD MSENYELE	UNPT/REM-WASAN ENGINEER	0754580692
6. WILBERT BLIJKU	MWALIWASA	0755016937
7. ROBERT LAZARO	HABITAT	0755-838181
8. GIBEMO MNZAVA	MJUMBE-KATI-SHULE	0769141015
9. JOYCE NDESBURO	UN-HABITAT	0754815400.

AGENDA

1. KUFUNGA KIKAO
2. LIAMBILISHO
3. UTEKELEZAJI WA UBOROHAJI AFYA YA ZIWA VICTORIA.
4. KUAHIRISHA KIKAO

1. KUFUNGA KIKAO

Mkiti alifunga kikao mnamo saa 9:20 asubuhi kwa kuwakaribisha wajumbe wote.

2. LIAMBILISHO

Wajumbe walijitambulisha kwa majina yao na wakulifi.

3. UTEKELEZAJI WA UBOROHAJI AFYA YA ZIWA VICTORIA

Mjumbe toka mwaliwasa alieleza kuwa katika mradi huo wa uborohaji afya taanda ya ziwa victoria, shule ya NUNDU ni miongoni mwa shule ambazo zitaleta mradi huo wa kujengwa chao.

Mradi huo umefadhiliwa na Benti ya uwekezaji ya Ulaya (EIB) na Shirika la maendeleo la Ufaransa (AFD)

Lengo hasa la mradi huo ni kuboresha usafi wa mazingira na afya za watoto mashuleni.

Hivyo wajumbe hao wamefika kuona sehemu ambayo wanaweza kujenga chao cha shule, ili wakaandae mkoro husika.

Pia wameona chao kilichopo cha weza koboreshwa, pindi mradi utakapo kamiliki, Chao hicho kina matundu 10 ya wavulana S. na wasichana S, vilevile kina vyoo 2: kya walimu wa Herume na Kwakwe.

Mjumbe alisema kuwa, kwipo mradi utakapo kamilikwa watajenge Choo kipiya chenge matundu 10 yaa ni wavulana 5 wasichana S, Walimu ke 2, Me 1 na watana vi 1. yote yakina katiba hali ya ubora zaidi.

Vilevile, kutakua na sehemu ya kuwawa mkozi, kumpo na tuki la maji, pindi maji yakikatia kumbani maji ya tuki yaweze kutunika ili kuweka hali ya usafi zaidi wa Choo.

Ujenzi utakapo - Anza, kamati ya shule ikishiri kawe na kamati ya ujenzi ya mwanas kuonesha ushirikiano wa hali ya juu. kyo kamati ya shule otio halitayibika kasimama shughuli nzima.

Kutokana na kubavsha usafi wa vyoo, itabaki jamii velenishwa, kwani Bill ya maji itaongozeka.

KUAMIRISHA KIKAO - saa 5:10 asubuhi

Mkiki alishukuru uongozi mzima uluofika kwani ajili ya kuleza mradi huo wa ujenzi wa vyoo, katika shule ya msingi Mundi, kisha akawatalaia afya njema badi hapo tutakapo kutana tena.

KATIIBU

MWENYEKUU

KIKAO CHA KAMATI YA SHULE NA WAGENI
TOKA MWAWASA/UN-HABITAT JUMANNE 20/10/2015

MAHUDHURU:

- JULIUS MASURURI - MAKAMU MWENYEKATI KAMATI YA SHULE - *[Signature]*
- ELLY JOHN - KATIBU KAMATI YA SHULE - *[Signature]*
- VERONICA RASHA - MJUMBE KAMATI YA SHULE - *[Signature]*
- ISACK ARISTIDES - " - *[Signature]*
- LEONARD MSENYELE - UWPT/PMC/MWAWASA - *[Signature]*
- WILBERT BUSIKU - MWAWASA - *[Signature]*
- SABCE ARISTIDES - MJUMBE KAMATI YA SHULE - *[Signature]*
- GOODLUCK CHAUSY - MJUMBE KAMATI YA SHULE - *[Signature]*
- Stephen Naaman - ELIMU/MANISPA 12M - *[Signature]*
- Joyce Ndesambano - UN-Habitat - *[Signature]*
- MOMICA LUGANGE - MJUMBE KAMATI YA SHULE - *[Signature]*

AGENDA:

- KUFUNGUUA KIKAO
- KUFATHAMIANA
- TAARIFA YA MRADI TOKA MWAWASA/UN-HABITAT.
- KUATHIRISHA KIKAO

UFAPANURI WA AGENDA:

1: KUFUNGUUA KIKAO.

- Makamu mwenyeketi wa kamati ya shule alikifungua kikao kwa kuwakaibisha wageni na wajembe wa kamati ya shule ilikuwa saa 6:38 mchana.

2: KUFATHAMIANA

- Mikiiti wa kamati ya shule alioongoza utambulisho kwa kuanza na wajembe wa kamati ya shule na kisha wageni toka MWAWASA/UN-HABITAT.

3. TAARIFA YA MRADI TOKA MWANWASA (UN-HABITAT),

- Kiungozi wa msafiri wa wageni hawa mama Joyce Ndesamburo alianza kwa kusema kuwa kutokana na ziara mbalimbali walizo zifanya shuleni hapa na pia vijeeo mbalimbali vilivyofanyika katika kuhakikisha mradi huu unaamilikwa, Basi shule ya Msingi Geddi imechaguliwa kuwa miongozi kwa shule cheche toka halmashauri ya Marispa ya Ilemela zitaanza pato msasde wa kujengewa choo.

- Pia kiungozi huyu alionba msafiri wa kamao na kamati ruzins ya shule walekee eneo husika ili kuangalia eneo rasmi litakalatumika kujenga vyoo hivi. Baada ya kuangalia eneo na kushauriana wote kwa kamao walipendekeza na kuchagua eneo la mradi.

Baada ya kikao kilianelea na kiungozi wetu toka UN HABITAT mama Joyce Ndesamburo alieleza kamati ya shule kuwa UN HABITAT wakishirikiana na MWANWASA watafanya shughuli zifuatazo katika shule hii:-

- (i) Watajenga matundu 5 ya vyoo kwa ajili ya Wasichana
- (ii) Watajenga matundu 5 ya vyoo kwa ajili ya Wavulana ikiwa matundu mswali (2) yatakuwa maalumu kwa ajili ya hapa ndogo (kushirikisha mkojo na matundu 3 kwa ajili ya hapa kubwa).
- (iii) Watajenga matundu 2 ya vyoo kwa ajili ya walimu yasin walimu wa kike tundu 1 na wa kiume tundu 1. Pia tundu moja la wazee kutumika kwa ajili ya watoto walomewa
- (iv) Watajenga tundu 1 kwa ajili ya watoto wa kike walio pevule ili waweze kubadililingu/kurekebisha mambo yao pale wzingiapo katika siku zao.
- (v) Watajenga Tenki 1 kubwa kwa ajili ya utunzaji wa maji pale yanapokuwa yamekatika bombani

Mlevile alisema kuwa wanangalia uwezekano wa kutikwapoti choo kilichopo sana chenye matundu 10 kwa baadaye baada ya kukamilisha mradi wa ujenzi wa choo kipa.

Pia mama Ndesamburo alisisitiza matumizi mizuri ya vyoo, utunzaji wake na pia matumizi mizuri na sahihi ya maji kwani usipokuwepo udhibiti na usimamizi mizuri wa maji kwa wanafunzi yawezekana bili ya maji ikawa kubwa kiasi cha kushiridwa kumudu gharama hali inayoweza kupoleka vyoo kuharibika na pia munda mbiru.

Militi wa kamati ya shule kwa riadhi ya walimu na kamati ruzins ya shule alishukuru sana kwa msasde huo na aligeppa

KIKAO CHA VIONGOZI WA SOKO NA WAGENT KUTOKA MWAHUSA
TAR 11/07/2015.

Mukt alipungua kikao kuzi kuwaka bisha wageni
na baada ya hapo alianza kumwambia wageni kuji
tambulisha baada ya ulombunisha wageni kutoka
Mwanasa alieleza sababu ya uso kuji, kumwambia
kumekaji chini ya mpango wa serikali kwa ajili
ya kuboreshe usaji wa mazingira hese choo.

Nakusababu hizi kumekaji kupita maoni
yema mambo gani yanayowasiba hape sokoni
jum ya usaji wa mazingira.

Kaba ya hapo viongozi walicamba wamemwji
jum ya usaji wa hape sokoni - Mwakinishi kutoka
harimashauri alizema mpango wa kuhamishwa
hampo - na baada ya hapo badaw walitilalasi ha
jum ya choo - kwamba hiki kiki chopo ni kichapo
na hakikizi hapa.

Wageni walipenda kujua jum ya msaadi huu mpye
wa choo - na viongozi walipendekeza kwamba choo hiki
sisi pia sio tumu wadamu, dhambi mlaofi huu tumu
kwa ajili ya wendeshaji - iki pia hime chanzo cha
kipato.

Pia viongozi walipendekeza kwamba ni vizuri kumati ipate
ipatiwe mafunzo iki mji umu wahumvisishaji - na usimuzi
wa Mwa di huu, na kuhusu utekezaji waki tumalaji e
Mwa di huu utanza Januari 2016.

Baada ya Maelezo hayo Mukt alitambua kikao
Majira yasa - 6:00 Mchama



14

SHULE YA MSINGI MUKUNYUNI 'B'
KIKAO CHA KISHULE NA WAJUMBE WA KAMATI
YA AFYA KUTOKA UN 21/10/2015

MAHUDHURIO:

AJENDA-

1. KUFUNGUWA KIKAO
2. TATHIMINI YA VYOO.
3. UJENZI WA MATUNDU 10 YA VYOO WIV. 5 WIS. 5.
4. CHOO CHA WAOTO WENYE ULEMAVU WA VIUNGO.
5. CHOO CHA WALIMU MATUNDU 2.

1. KUFUNGUWA KIKAO:

Mkati amefungua kikao saa 3:30, na kumua mbo ofisa kutoka jiji atambulishe kageni ali'ofuatana nao. Baada ya utambulisho huo, pia katibu ali'atambuli kishule.

2. TATHIMINI YA VYOO

Mkuu wa msafara alieleza kama kifupi kusu ali'la kuya shulemi hapa. Atoha ali'taka kuya hata hali'si ya vyoo na idadi ya klang funzi. Katibu alitoa taarifa ya vyoo. kuma shule ina matundu 5 ya vyoo. kaulana wako 408 kutumia matundu msuli (2). kaulana 426. kutumia matundu 3. kaulana ni 17 wakume 4 na wakike 13. Hama na choo, kuchangia na klang funzi. kaulana wali'omba kuenda kuopa vyoo mahali vilipo. kaulana na kubaini kuma vira hitaji markebisho kama ifustavyo:
 (i) kuweka sehemu ya kung'ua.
 (ii) kuingia bomba la maji kwenye vyoo
 (iii) kuweka sakafu ya vigae.

UJENZI WA MATUNAU IO YA VYOO WA S.W.S
Baada ya kuona hali halisi ya vyoo vilivyo po shuleni, kuti wanaishi na hali ya kinafuni. Hali ina wema kuyenga matundu mengine ya vyoo ili kupunguza kusoga manau wa kinafuni. Hali angaliwa pia eneo la kumaza kuyenga wa kinyo vyoo, kitalizika nalo.

4. CHOO CHA WATOZI WENYE ULEMARU WA VIUNGO
Kuna kuma shule hali na miundo mbaya kwa watoto wenye ulemaru wa viungo wa kipeleleza kuyenga choo kitakacho wa uezesha kinafuni. Wenye ulemaru kukitumia bila shida choo ikiwa kama kuyenga jengo kitalojengwa kwa ajili ya choo cha kitalimu.

5. CHOO CHA WALIMU MATUNAU MAWILI
Baada ya kutamua fathimu ya vipovi vyoo, hionekana kitalimu hawana maji pa kuyehifadhi. Huyo kigumba kitalipendekeza, kujengama kitalimu matundu mawili moja na kitalimu wa kama na jingine kitalimu wa kike.

6. KUFUNGA KIKAO
Mkazi aliaminsha kikao saa 4:15 naku wa shule yaageni kama upo waq, naku sema wa kashirikiana na kama hali na mali ili kuhakikisha miundombinu ya vyoo imepatikana.

Katibu
S.M. WAKIDONDO
S.L.P. 1704
MWANZA

Mkazi
S.M. WAKIDONDO
S.L.P. 1704
MWANZA

REPORT ON FIELD VISIT TO MLIMANI PRIMARY SCHOOL BY TH STF TEAM

DATE: 23/03/2015

AREA VISITED: MLIMANI PRIMARY SCHOOLS- BUGARIKA

PARTICIPANTS: Mr._Abdul Mallambo (Education Officer- MCC), Mr. Stephen Nemaan (Education Officer –Ilemela), Eng._Willybert Bujiku (MWAUWASA) Eng. Stanley William (MWAUWASA) Eng. Joyce Ndesamburo (UN-Habitat), Cecilia Ungele and Head Masters and Environment and Sanitations teachers of the four Schools. (see attendance list)

Purpose of the visit: To see if the school fits the criteria set for school qualification for SWaSH pilot project.

Eng. Joyce started by giving a brief background of the project to the teachers. She said the EIB-Mwanza Sanitation project is aimed at protecting the environment of Lake Victoria and the health of the people that lives around its shores. She further said that in its efforts to improve the sanitation conditions of the lake the project has two components one being software component that involves capacity building and the second part is that of hardware involving construction of a simplified sewer system in the informal settlements, construct of demonstration toilets in public places and SWaSH programe in schools. For this pilot, the SWaSH program will be conducted in prioritized schools with worse sanitation conditions. Further she told the teachers that the visit by the STF team to their school was to inspect on the sanitation situation of the school since it was among the schools listed with worse conditions in Mwanza City. It should not be construed as already selected for the pilot project.

Later the head master of Mlimani primary school gave a brief background about the school. He said in the past -Mlimani primary schools were one school. But in the recent years there has been an increase of the number of pupils as a result of enforcement of enrolment stimulated by the Government's policy of universal education and also the raised awareness on the importance of education by parents. Thus the government decided to partition the school into four primary schools namely [Mlimani (A), Mongele (D), Moringe (B) and Sokoine (C)] for effective management. But in doing so the government did not build new infrastructures to meet the increasing number of pupils and teaching staff.

Below is the gender segregated community of Mlimani primary schools:

Pupils' population by school

SCHOOL	Boys	Girls	TOTAL
Mlimani	898	752	1650
Mongela	525	498	1023
Moringe	553	555	1108
Sokoine	511	618	1129
Grand Total	2487	2423	4910

Source: Schools administration

Population of teaching staff

SCHOOL	MALES	FEMALE	TOTAL
Mlimani	7	15	22
Mongela	6	11	17
Moringe	5	10	15
Sokoine	3	16	19
Grand Total	21	52	73

Source: Schools Administration

People living with disabilities:

It was learnt from the teachers that there is no critical disability in the four schools, but the following are the pupils and teachers with weak limbs and poor hearing capacity:

Mongela: 1 girl with poor vision; 1 boy with weak leg and 1 teacher with weak limb

Sokoine: 1 boy with weak hearing capacity; 1 girl with epilepsy;

Moringe: 1 girl with weak limbs; 1 boy - weak limbs and 1 teacher - weak limbs

Sanitation Infrastructures

Infrastructure	Name of school							
	Mlimani		Mongela		Moringe		Sokoine	
Toilet holes	Boys DH	Girls DH	boys	girls	boys	girls	boys	girls
	5	5	-	-	-	-	-	-
	<p>The four primary schools are in the same compound and the total number of 4910 pupils (Girls – 2450 and Boys – 2460) shares the 10 toilet drop holes available (5 for Girls and 5 for Boys).</p> <p>The teaching staff of Mlimani and Sokoine primary schools share the 4 drop holes in a separate block (2DH each school).. While Mongela and Moringe share another 4 drop holes in a separate block. The toilet cubicles have no doors hence no privacy for the users.</p>							
Source of water	In each school there is one stand pipe that is used for all water uses							
Hand wash facility	There are no hand washing facilities visible in both schools							
Solid waste management system	Both schools use the open air burning method as mechanism for managing all sorts of solid waste produced in the school.							

Source: Team observations

Based on the observation and information given during discussion with the school teachers the current pupil drop hole ratio for these four schools taking the government standard they lie at 1:117 girls; 1:99 boys vs Unicef DH ration that goes at 1:62 girls and 1:50 boys.

Suggestions by teachers:-

- Requested for a water storage tanks in the school to serve at times of water shortage
- Increase the size of urinal rooms to save more pupils at a time, since many pupils go to urinate during breaks
- Consider to adopt the 1:40 for girls and 1:50 for boys ratio per hole as suggested by UNICEF and other International NGO implementing SWaSH

Pictures taken during the visit:-

Appendix 5. Comments Received on Draft ESMP and PMC Response

This Appendix provides the comments received from NEMC (of 28 April 2016) and the Lender's Supervisor (of 23 February 2016), *in italics*, on the Draft ESMP of 4 February 2016, as well as PMC's responses, in normal font, on how these comments have been addressed in the current ESMP.

Comments of NEMC received on 28 April 2016

Nr	NEMC Comment	PMC's response
1	<i>Ensure that the project background and all project activities are well addressed and associated impacts are identified.</i>	Project background and planned project activities are already described in Chapter 2; impacts in Chapter 6. See PMC's response on LS's comments on how these sections have been amended.
2	<i>For each identified impact insure that feasible and practical mitigation measures are proposed.</i>	See PMC's response on LS's comments on how these sections have been amended.
3	<i>Ensure that the title of the project appears as Environmental and Social Management Plan for Sanitation facilities in Selected Schools, Dispensaries and Public Places in Ilmela and Nyamagana Districts – Mwanza Region;</i>	Amended.
4	<i>Attach the documents confirming the acceptance of residents at the areas where interventions are</i>	Documents attached
5	<i>Ensure that all relevant stakeholders are consulted and their view/concerns are documented and addressed in the final document.</i>	Stakeholders consulted

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Comments of Lender's Supervisor received on 23 February 2016

	General Comment	PMC's response
	<i>The report is well written and covers most of the aspects required for this kind of report - ESMP. However, there are some substantial issues which still need to be addressed by the Consultant to further upgrade the quality of the report/ ESMP. In most sections, guidance has been provided on how to address the observed issues.</i>	Noted, see below.
	Specific Comments	
1	<i>The abbreviation for Sexually Transmitted Diseases is not STP.</i>	Amended.
2	<i>There is an urgent need to consult the National Environment Management Council (NEMC) Lake Zone Office and HQ in Dar es Salaam (where the broader project(s) were screened and registered in March 2015) on the following:</i>	
2a	<i>To obtain a written confirmation that full EIA study was not required for the project but ESMP suffices. The letter should be appended to the report.</i>	See NEMC letter of "04/104/2016" as provided in Appendix 2
2b	<i>If the ESMP suffices, is it required to be submitted to NEMC for review and approval for issuance of EIA certificate or not?</i>	Consultation with NEMC has been made and accepted that upon submission of the ESMPs, they will approve and issue certificates for the projects.
2c	<i>Subject to a & b, the ESMP will have to be revised in some sections to reflect the required changes as especially in (i) Executive Summary (Description of the major significant impacts) – pg vi; (ii) Section 1.3 (all</i>	See present ESMP.

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	General Comment	PMC's response
	<i>paragraphs talking about NEMC) – pg 2; (iii) Section 3.3 – pg 15; and (iv) Section 10 – pg 35.</i>	
3	<i>A map showing locations of selected schools and public places, relative to Lake Victoria, would add some value – Section 2, pg 4-10.</i>	Map showing locations inserted.
4	<i>In Section 2.3.5 – pg 8, change concrete slaps to concrete slabs.</i>	Amended.
5	<i>In section 2.4 – pg 10, the figure referred to is 2-7 and not 2-8.</i>	Amended.
6	<i>Indicate source under all the figures and tables presented in the report.</i>	Sources provided.
7	<i>In Section 3.1.1 – pg 11, add the following policies and laws: Construction Industry Policy (2003); Urban Planning Act No. 8 (2007); and Water Resources Management Act No. 11 (2009).</i>	Added.
8	<i>In Section 4.1.5 – pg 17, you could ask MWAUWASA to provide you with an estimated percentage of the Mwanza City population that depends on groundwater sources (wells, boreholes etc) for their domestic needs.</i>	Amended
9	<i>In Section 4.3.2 – pg 17, find out from MWAUWASA, what percentage of the city population is connected to public water supply network – by virtue of this data and that from the previous comment on groundwater, you could ostensibly, assess the likely impact on groundwater resources – refer to your explanation on why some impacts are not addressed in the Executive Summary – pg v.</i>	Amended
10	<i>In bullet 6 under Section 5.1 – pg 18, the word “competes” should be changed to “complete”.</i>	Amended.
11	<i>Table 5-2 – pg 20, do not include all the details mentioned under Section 5.3 – pg 19. So revise the text under Section 5.3 to remain only with what is included in the table, otherwise the text is misleading.</i>	Revised
12	<i>From the explanation given under section 5.3 – pg 19, create an appendix for the consulted people/ stakeholders indicating date, name, position, institution, and contacts. The appendix should be appended to the report/ ESMP. If minutes of the consultative meetings were recorded, the minutes should also be appended to the report.</i>	Minutes of stakeholders meeting appended
13	<i>In Table 5-2 – pg 20, in addition to Consultant's remarks given as responses to issues/ comments raised by stakeholders, the Consultant should use the same column to indicate in what sections of the report stakeholders' issues and comments are addressed.</i>	Amended
14	<i>In Table 5-2 – pg 20, correct the word “hazarders” to hazardous.</i>	Amended.
15	<i>In Section 6.2 and 6.3 –pg 22-25, consider making a clear characterization of all the identified positive and negative impacts in terms of their nature (positive or negative), their duration (long-term or short-term) and their area of influence (site specific, local or general area of influence); impact significance as “major impact”, “moderate impact”, “minor impact”, and “no impact”; etc.</i>	Table added
16	<i>In Section 6.2 – pg 22, suggest possible enhancement measures for the identified positive impacts and include the same in the ESMP, Table 7-1 – pg 28.</i>	Added
17	<i>In Section 6.2 – pg 22, add “Income Gain among Local Suppliers” as another positive impact. The contractor(s) will source most of the construction materials locally in Mwanza City.</i>	Included
18	<i>In section 6.2.2 – pg 22, literature review could be a good attempt to establish the current nutrient loading of Lake Victoria from sanitation facilities unconnected to sewerage systems and wastewater treatment facilities.</i>	Amended
19	<i>In Section 6.2.5 – pg 22, consultations with Municipalities and</i>	-

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	General Comment	PMC's response
	<i>MWAUWASA could help to provide estimated revenue increase from public toilets charges and water tariffs. Such figures provide some economic justification of the project.</i>	
20	<i>In Section 6.3.5 – pg 24, water supply is wrongly mentioned as a negative impact; and the suggested mitigation measure is not related to the impact. The explanation given suggests that the impact is actually "Increased demand for and pressure on water supply."</i>	Sub-Section heading amended.
21	<i>The suggested mitigation measure for the impact described under Section 6.3.5 – pg 24, is actually appropriate for an impact that is partly described in the last sentence of Section 6.3.8 – pg 25 .i.e. potential for eruption of water-borne diseases.</i>	Noted; see response 20.
22	<i>In Section 6.3.6 – pg 24, the impact is inadequately described – expected solid and liquid materials are only mentioned in the proposed mitigation measures. So description should be more elaborate as appropriate.</i>	Amended.
23	<i>In section 6.3.7 – pg 24, the description given sounds overrating the chances for intensification of HIV/AIDs and other STD (or exposure to HIV/AIDs and other STD transmission). Given the size of the project, it is very unlikely that the construction phase will attract influx of job seekers from outside – very few locals will be employed on short-term at particular sites; and most likely the contractor won't establish a construction camp.</i>	Noted.
24	<i>From the previous comment, the Consultant may consider combining intensification of HIV/AIDs and other STD (Section 6.3.7 – pg 24) and population influx (Section 6.3.9 – pg 25) as one impact.</i>	Accepted, amended.
25	<i>Provide more appropriate mitigation measures for all of the identified negative impacts. For instance, (i) referral to nearby health facilities in case of major accidents or injuries is an important mitigation measure for safety and health risks (Section 6.3.8 – pg 24) and; (ii) where appropriate, septic tanks and soak-away pits should be located far away from known groundwater sources like wells and boreholes used for domestic purposes (Section 6.3.11 – pg 25).</i>	Amended
26	<i>For consistency, correlate the description given under Section 6.3.10 – pg 25 with that given under Section 6.3.1 – pg 22.</i>	Reference to both Sub-Sections included.
27	<i>Stakeholders' comment 4 and 10 in Table 5-2 – pg 20, partly suggests that disturbance to or disruption of school sessions is another negative impact to be considered and mitigation measures provided for in the report/ ESMP.</i>	Noise reducing measures are provided for in Section 6.3.3. Safety measures have been elaborated in Section 6.3.8.
28	<i>In section 6.3.11 – pg 25, as suggested earlier in comment 8 and 9 above, the possible impact on nearby or downstream residents who rely on groundwater sources could be partly assessed by consulting local authorities and MWAUWASA i.e. the % of people in the city and project localities who rely on groundwater sources. I wonder if this information is not included in the project documents/ study reports described in Section 1.3 – pg 1.</i>	Amended
29	<i>Impacts associated with Decommissioning/ Closure Phase are not described/ mentioned in Section 6 but they appear in the ESMP (Table 7-1 – pg 28-29). It's probably worthwhile making a highlight of it in Section 6 as it is separately covered in detail in Section 9 – pg 33.</i>	The reason why decommissioning is not part of Chapter 6 (impact assessment) lays in the structure recommended by NEMC for the ESMP – see Appendix 1. Reference to Chapter 9 is now made in Chapter 6.
30	<i>Relative/ estimated cost for implementation of mitigation measures is not given or said any how in Section 7 – pg 27-29.</i>	Added .

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	General Comment	PMC's response
31	<i>For some impacts, there are few mitigation measures included in Table 7-1 (pg 28-29) than mentioned in Section 6. Alongside this, add the mitigation measures suggested in Section 6 i.e. revisit the whole of Table 7-1 to incorporate the suggestions given in Section 6 as appropriate.</i>	Amended
32	<i>Consider including all identified positive impacts and their enhancement measures in Table 7-1.</i>	Amended
33	<i>Relative/ estimated cost for implementation of monitoring plan (Table 8-1) is not given or said any how in Section 8 – pg 30-32.</i>	Added
34	<i>Consider revisiting the monitoring plan in line with the suggestions given in Section 6 and 7.</i>	Amended
35	<i>In the first paragraph of Section 10 – pg 35, change Misungwe to Misungwi.</i>	Amended.
36	<i>In the last paragraph of Section 10 – pg 35, revise all to do with impact on groundwater quality subject to the input that will be obtained from MWAUWASA and local authorities as suggested in comment 28 above.</i>	Amended
37	<i>In Section 11 – pg 36, add other relevant policies and laws as suggested in Section 3.1.1 – pg 11.</i>	Amended
38	<i>Consider adding the following Appendices:</i>	
38a	<i>Appendix 2: NEMC letter (refer to comment 2a);</i>	Appended
38b	<i>Appendix 3: List of Consulted Stakeholders (refer to comment 12); and</i>	Appended
38c	<i>Appendix 4: Minutes of Consultative Meetings.</i>	Appended

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