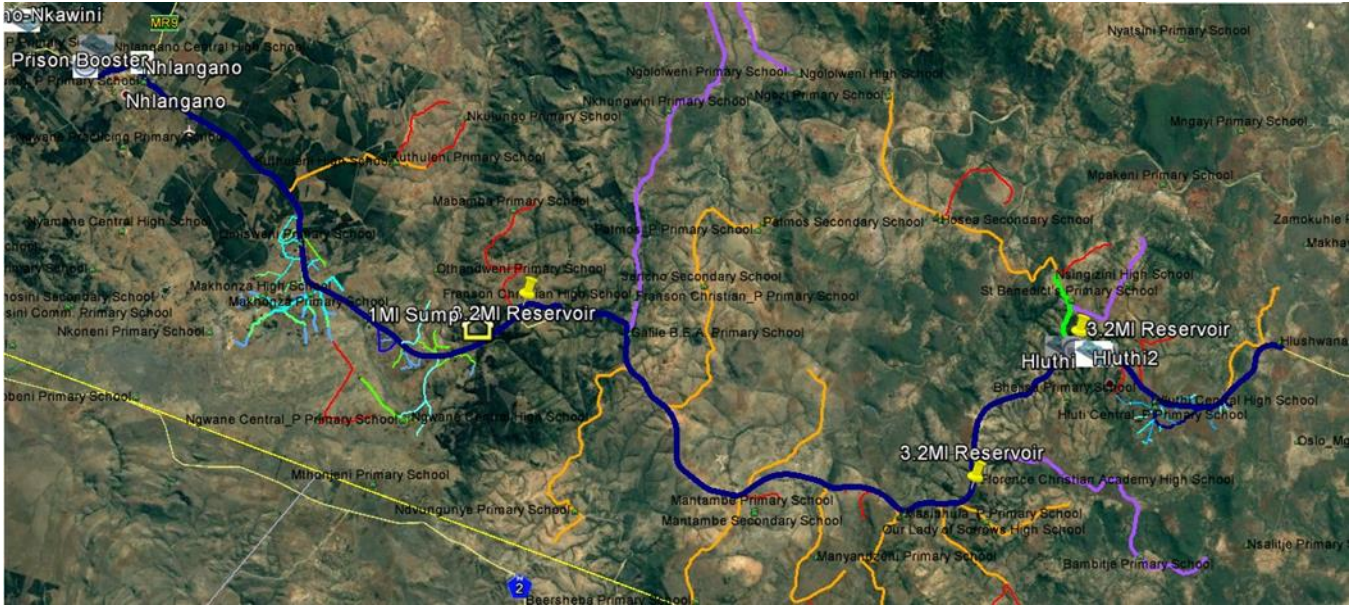




ESWATINI WATER SERVICES CORPORATION



ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT STUDY FOR THE NHLANGANO - SIPHAMBANWENI WATER AND SANITATION PROJECT SCOPING REPORT

Proponent



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LIST OF ACRONYMS

ABBREVIATION	ACRONYM
CSO	Central Statistics Office
DWA	Department of Water Affairs
ECC	Environmental Compliance Certificate
ECO	Environmental Compliance Officer
EEA	Eswatini Environment Authority
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESS	Environmental and Social Standards
EWSC	Eswatini Water Services Corporation
ENL	Eswatini Nation Land
IAPs	Interested and Affected Parties
NGOs	Non-governmental Organizations
PCR	Project Compliance Report
PPE	Personal Protective Equipment
PRSAP	Poverty Reduction Strategy and Action Plan
SISOMA	Siphofaneni, Somntongo and Matsanjeni
TDL	Title Deed Land
WB	World Bank



1. INTRODUCTION

1.1 Context and Background

Eswatini Water Services Corporation (EWSC) is proposing to establish an integrated water supply and sanitation project from Nhlanguano to Siphambanweni in the Shiselweni region of Eswatini. The project entails installation of 61 km of gravity mains and 3 km of pumping mains at various stages; connected to 244 km of laterals supplying homesteads, offices, clinics, schools. The project also will consider sanitation options for communities in the project area. A small solar power plant will be constructed to provide the power required for pumping. The project also includes the construction of 24 kiosks.

EWSC was established in by the Water Services Act, 1992. The objectives of the Corporation is to abstract, store, transport, purify and collect water, convey, treat and dispose sewage in areas specified in the schedule of the Water Services Act. The Corporation is mandated to:

- Prepare schemes for the development of water resources and for the supply of water and construct, maintain and operate such schemes.
- Keep under constant review the quality, reliability and availability of water supplies.
- Control and regulate the production, treatment, storage, transmission, distribution and use of water for public purposes.
- Design, construct, acquire, operate and maintain water works for the purpose of supplying water for public purposes and
- Inspect and advise on the management, collection, production, transmission, treatment, storage, supply and distribution of water.

The water supply and sanitation infrastructure in Eswatini is fully developed in the urban areas especially in cities in the Manzini and Hhohho regions. This has left a gap in water supply and sanitation for peri-urban and rural areas. In some cases, there are growth nodes or business areas that have not been declared towns but have a lot of economic activity. The Shiselweni region is one of the regions where portable water supply has been lagging behind. In 2015, the EWSC embarked on a project, in partnership with the European Union, to supply portable water for the Shiselweni region covering three Tinkhundla centres: Siphofaneni, Somntongo and Matsanjeni (SISOMA project). The water supply was from the Jozini dam, which is shared with the Republic of South Africa. This included a pipeline that runs along the MR 11 from Lavumisa to Siphambanweni.

In a bid to increase the capacity to supply water to Nhlanguano town, the EWSC constructed a water treatment plant at Masibini, Nhlanguano (on the way to Mahamba) in 2015. The production capacity of this treatment plant may be upgraded to 30ML per day. To date, the water treatment plant produces only 3.5ML a day to cater for Nhlanguano and Mahamba areas. This caters for a population of 16'500



residents with the current number of connections being 3'300. The EWSC is now planning to integrate the SISOMA project network (which ends at Siphambanweni) to the Nhlango Water supply (which is running under capacity).



1.2 Objective and Need for the Proposed Project

This project is in line with the United Nations Sustainable Development Goal 6 (SDG 6) which is a goal aimed at ensuring availability and sustainable management of water and sanitation for all. In the progress report on this SDG in 2018, it was indicated that too many people still lack access to safely managed water supplies and sanitation facilities. In addition, water scarcity, flooding and lack of proper wastewater management also hinder social and economic development. Increasing water efficiency and improving water management are critical to balancing the competing and growing water demands from various sectors and users. It is also indicated, within the same report, that in the year 2017–2018, 157 countries reported average implementation of integrated water resources management of 48 per cent. According to the latest Eswatini household income and expenditure survey (central Statistics Office, 2016), 41.75% of the population has access to clean water, while 53.68 people have access to proper sanitation. The Shiselweni region has the lowest access to improved sources to drinking water and lowest access to proper sanitation. The Nhlango Siphambanweni project will contribute positively on this indicator. The Environmental Health Growth and Development pillars of the poverty reduction strategy and action plan PRSAP (2006-2022) have realized that there is a need to improve the quality of life access to portable water and sanitation services in some areas of Eswatini.

This project is aimed at increasing the access of the Swazi population to clean water and sanitation, meeting PRSAP (Poverty Reduction Strategy and Action Plan) Goals for 2022. The objectives are as follows:

- Maximize use of Nhlango Water Treatment Plant
- Improve Water Supply Service 20'000 people along Nhlango Siphambanweni corridor
- Integration of water supply systems (Nhlango water supply system and Somtongo Matsanjeni water supply system) - provide an Alternate Water Supply for Somtongo Matsanjeni
- Improve Sanitation facilities including training awareness on hygiene
- Provide renewable energy for use by the project



1.3 Legality and Environmental Impact Assessment Process

According to the Environmental Audit Assessment and Review Regulations (EAARR) of 2000 promulgated under the Environmental Management Act (EMA) of 2002, the construction of the integrated water supply and sanitation project may have a significant detrimental impact on the environment. Thus, an Environmental and Social Impact Assessment must be conducted prior to the issuing of the Environmental Compliance Certificate (ECC) by Eswatini Environment Authority (EEA) for project implementation. Section 32 of the Environmental Management Act, 2002 emphasizes that no person shall undertake any project that may have a detrimental effect on the environment without the written approval of the EEA. MTK Sustainable Technologies was appointed by the EWSC in March 2019 to undertake the ESIA process for the proposed project and obtain the Environmental Compliance Certificate (ECC) required prior to the implementation of the project.

The ESIA process includes the development of an Environment and Social Management Plan (ESMP) which provides mitigation and management measures for the construction and operation of the proposed project based on the findings of the Environmental and Social Impact Assessment study. Requirements of the Eswatini Regulatory Framework and World Bank Standards have been adopted for the proposed project. The World Bank sustainability framework articulates the importance of environmental and social sustainability as well as access to information.

A project brief was prepared and submitted to the EEA and the project was given Category 3 (see Appendix 1), which required EWSC to undertake a full Environmental and Social Impact Assessment (ESIA), before commencement of the project. The main purpose of the ESIA is to determine whether it is environmentally, socially, technically and economically feasible to implement the project. This is done with the objective of identifying potential positive and negative impacts of the project and proposing measures to minimize negative impacts and enhance positive ones.

1.4 Scope of the ESIA

The Environmental Impact Assessment (ESIA) will focus on the pre-construction, construction and operational phases of the project.



1.5 Project Location

The project is located in the Southern part of Eswatini, in the Shiselweni region. The larger project area is found in the area between Nhlanguano and Siphambaweni, along the MR11, Nhlanguano-Lavumisa Road. Figure 1 the locality map of the project and Figure 2 shows the location of the project area within the country.

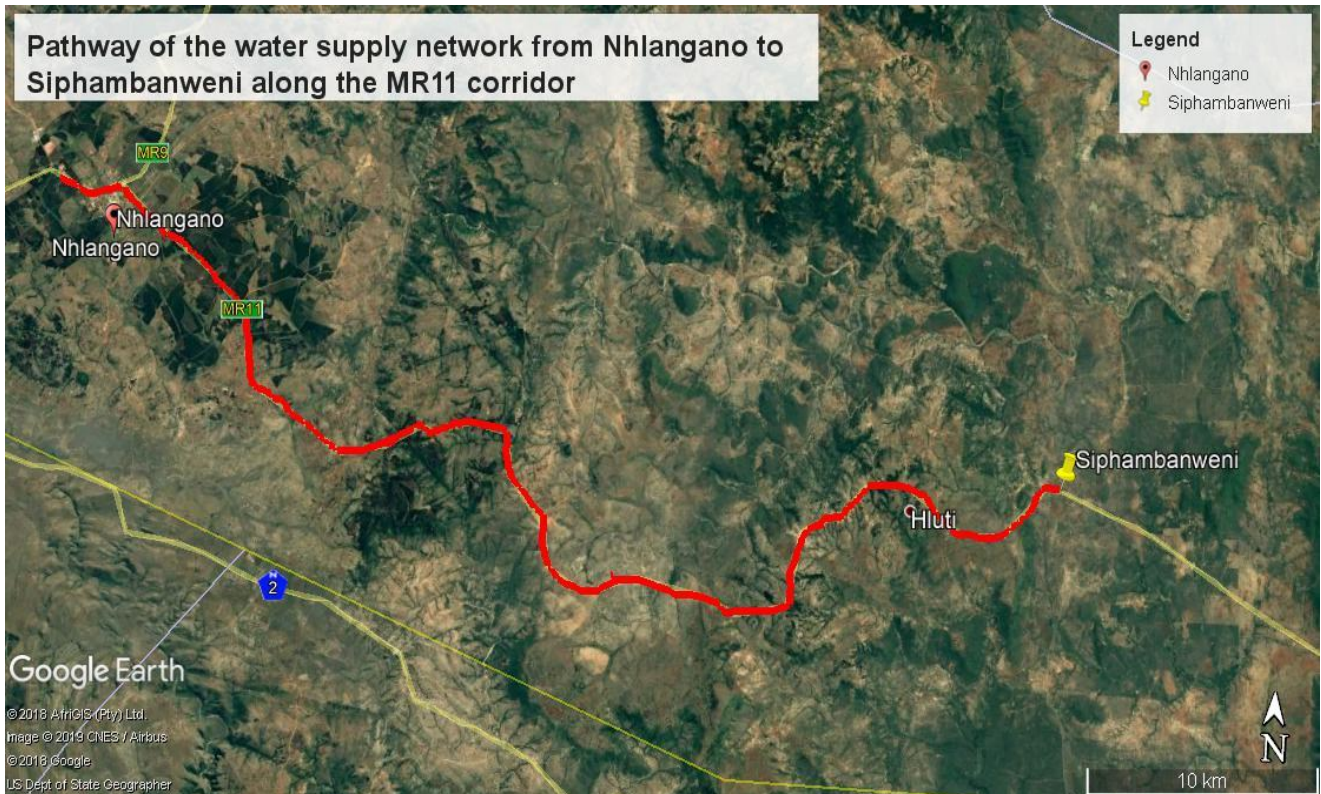


Figure 1: Locality Map of the Project Area

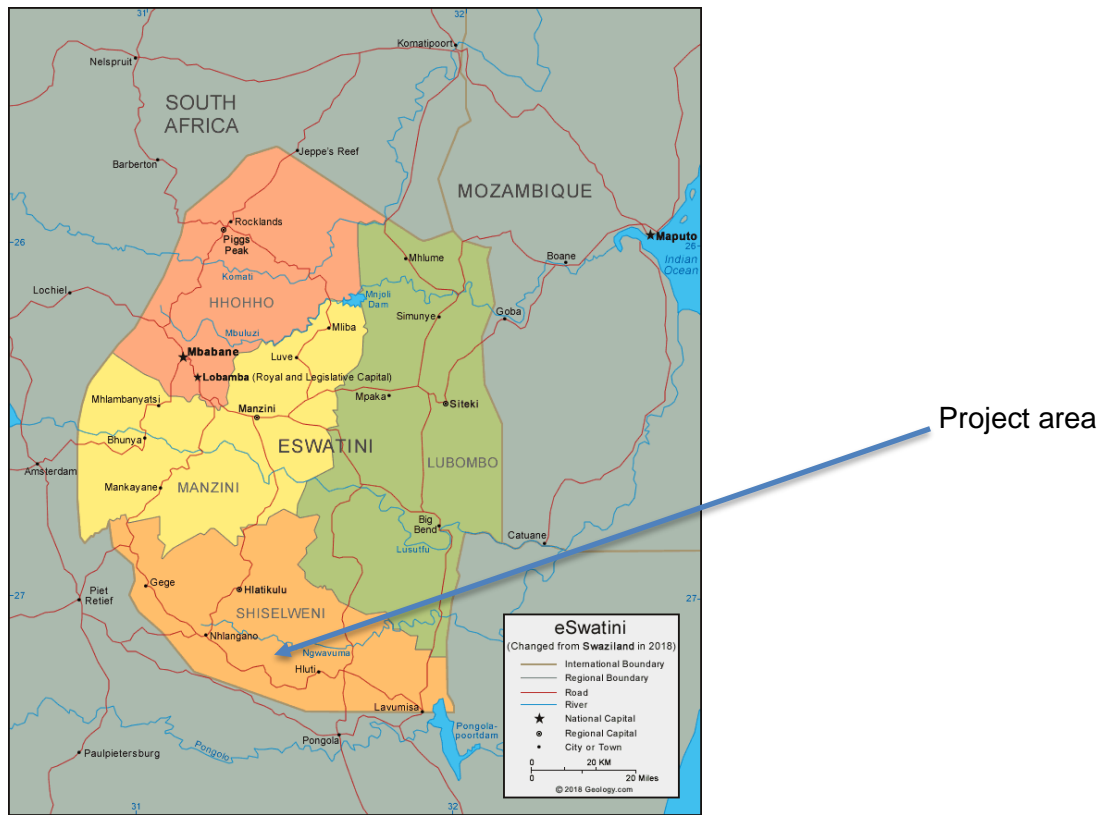


Figure 2: Map of Eswatini showing location of project area

1.6 Project Outline

The project entails the installation of 3 reservoirs along the 64 km main pipeline at Mhlosheni, Florence Christian Academy and Hluthi, each with 3.2 ML capacity. The proposed main pipeline will be connected at 1100m MSL near Nhlanguano Correctional at CH 0+000. The other main connection will be at the other end of the pipeline to the existing 200mm pipe at 415m MSL Siphambanweni. A pump and 1 ML Sump at Zombodze at CH20 + 700, 1103 MSL. Figure 3 shows the proposed profile of the pipeline.

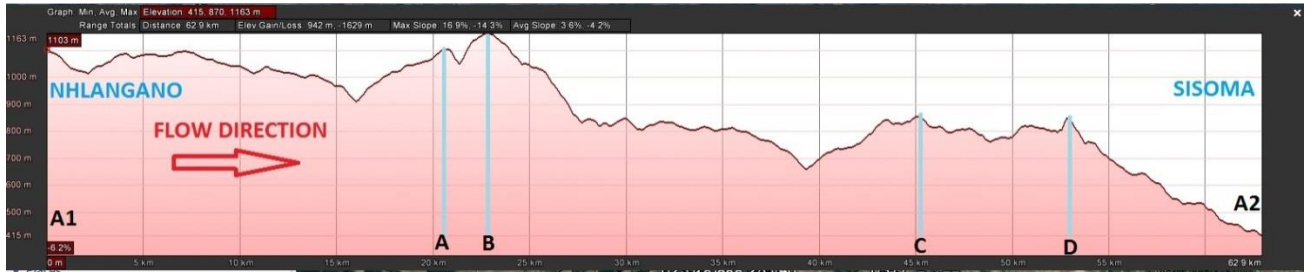


Figure 3: Pipeline profile

1.6.1 Proposed Main Laterals

Many of the areas along the main pipeline route have laterals in various sizes that terminate at schools and villages. The proposed network is 243km but there is room for expansion under other community or government led projects. The following areas are the proposed distribution points from the main pipeline:

- Ekuthuleni Primary School junction
- Makhonza
- Ecinisweni
- Mhlosheni
- Galile
- Mantambe
- Bhejisa

Distribution will be done on both the left and right hand side in the proposed areas. In these proposed areas, there are establishments including schools, multiple homesteads, commercial establishments and health facilities. Noteworthy is that a sump, pump station and solar plant will be erected at Mhlosheni.

Figure 4 shows the project layout.

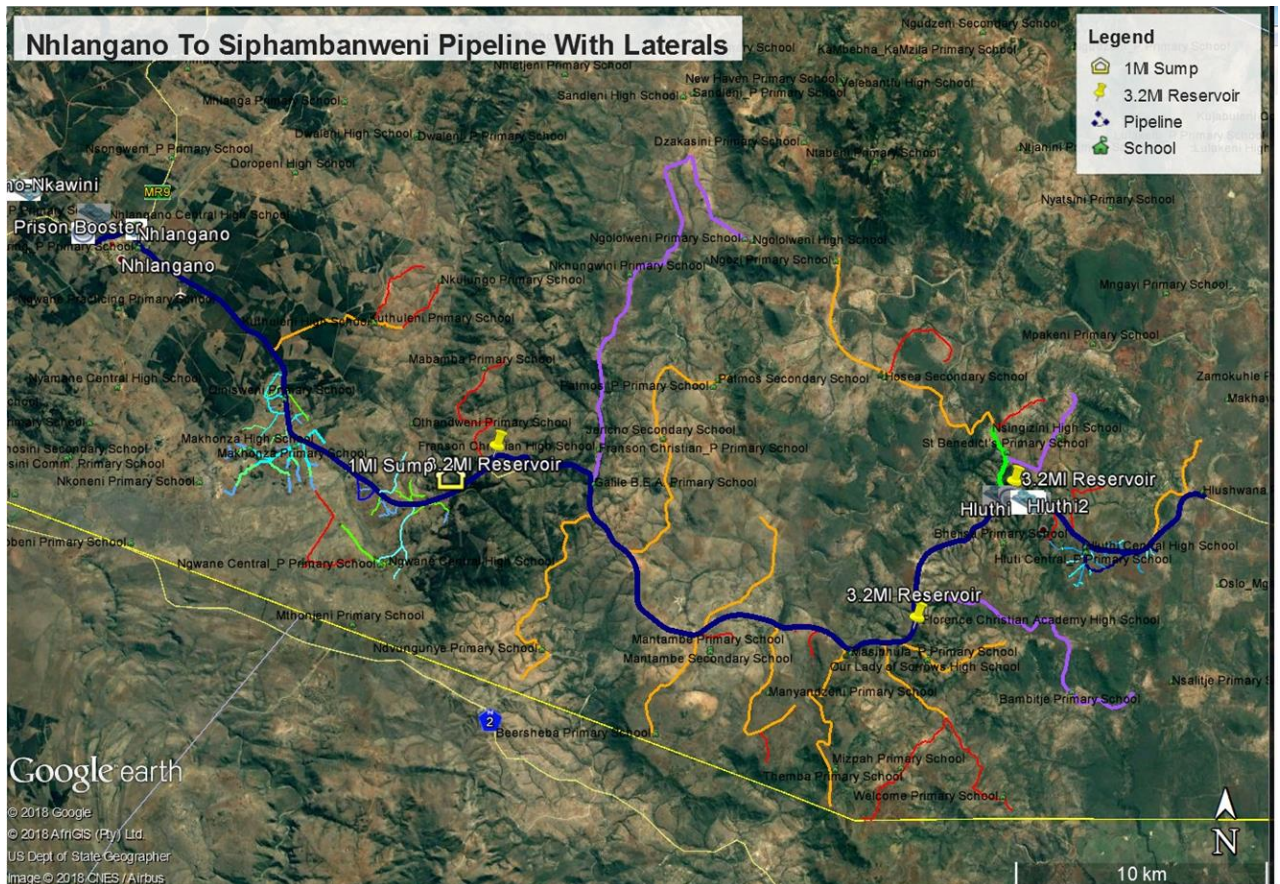


Figure 4: Project Layout

1.7 Kiosks

At the end of every lateral, a kiosk will be constructed. This is a structure where water is sold to people who may not be connected to the water supply. It helps increase the reach of the water supply so that even those segments of society with no house connections can still have affordable potable water distribution point (public stand pipe). The principle of water kiosks also helps empower community members since each kiosk is run as a business by a local person. In addition, the kiosk operators will be allowed to display and sell other items like fruits, vegetables to maximize their income from this operation. A total of 24 kiosks will be set up in this project. The kiosks operators will be trained by EWSC on the operation of the kiosk. In as much as this is not based on a cost recovery model given the low cost of the water tariffs, it greatly improves the access to potable water as people find it more affordable. These kiosks can be added incrementally depending on water needs in the various areas.



Figure 5: Water kiosk in operation

Photoplate 1:

1.8 Sanitation and Hygiene

In the project area, the only place with a sewerage treatment plant is Nhlangano and it is limited mainly to the confines of the Nhlangano urban area. The rest of the proposed project area makes use of localized sanitation systems, mainly pit latrines for areas with no household domestic water connections. Those with water connection or water tanks also make use of localized sanitation systems and small septic tanks.

1.8.1 Sanitation Options

The following options for sanitation were considered in the project.



Table 1: Sanitation options in Eswatini

Sanitation System	Description	Advantages	Disadvantages
VIP Toilets	Pit toilet with an external ventilation pipe	<ul style="list-style-type: none"> Local material can be used for construction Low construction cost Easy to maintain 	<ul style="list-style-type: none"> Homestead should have considerably large vacant area to allow for re-location of toilet Unlined pit may collapse Excreta is visible to user System cannot be installed inside a house
Reusable VIP Toilet Superstructures	VIP latrine superstructure made of precast concrete	<ul style="list-style-type: none"> It can be moved to a new site once the pit is full Easily assembled Made of light panels and can be replaced Supplied with a seat and hand washing facility 	<ul style="list-style-type: none"> Sourced outside the country
Urine Diversion Toilets	Urine is diverted at source by a specially designed pedestal and may simply be led to a shallow soak pit. Faeces are deposited in a shallow vault and covered with a sprinkling of ash or dry soil	<ul style="list-style-type: none"> Can be used in areas where there are unfavorable geotechnical or hydrological conditions Can be favourable for high density settlements May be installed inside the house Urine can be collected into a container and re-used as fertilizer Absence of odours or flies 	<ul style="list-style-type: none"> There are slightly more operational requirements of this toilets, but are minimal Negative attitudes for handling and using excreta Cannot stand abuse
Septic Tanks	The solid portion of the excreta is retained on site in septic tank while the liquid portion of the waste is drained from the site in a small diameter sewer	<ul style="list-style-type: none"> System is hygienic and free of flies Toilet may be placed indoors System can be used in high density areas 	<ul style="list-style-type: none"> High operation and maintenance requirements High O&M costs



Sanitation System	Description	Advantages	Disadvantages
Water Borne Sewerage Systems	Sewer collection system that involves collection of sewer in pipes and disposal as well as treatment at a common treatment plant	<ul style="list-style-type: none">• System is hygienic and free of flies• Toilet may be placed indoors• System can be used in high density areas	<ul style="list-style-type: none">• Very high capital and O&M costs

EWSC will work with the Ministry of Health in considering the options for sanitation for homes and institutions. The most practical system used in homes in the rural areas is the VIP toilets. For homes that have running water, flushable toilets with septic tanks are practical. Training will be done to the communities on building the VIP toilets, with some materials provided.

1.9 Solar Plant

A 35 MW solar plant production and storage plant will be established to provide power required to pump the water through the pipeline. Figure shows the location of the proposed solar plant.



Figure 6: Proposed Solar Plant, Pump House and Reservoir Site



2. LEGAL REQUIREMENTS

This Section presents the national legal framework and regulations for environmental and social protection in Eswatini as well as international guidelines of the World Bank. Where national legal standards are not as stringent as international requirements, the Project will be required to defer to the most stringent requirement except in cases where that would contravene national law or where this is found to be unusually onerous. The ESIA for the Nhlango-Siphambanweni Integrated water supply was carried out according to the following legislation: The Constitution, Environmental Laws, International Standards, Normative Acts, and Regulations as well as applicable guidelines and procedures. Along with the national regulations, Eswatini is signatory to a number of international conventions, including those related to environmental protection. These conditions and requirements are described in this chapter.

2.1 International Laws

The project is targeted to meet the international guidelines; specifically, the World Bank Group Environmental and Social Standards (ESS). The international environmental and social safeguard policies of these organizations are outlined below, as are the main international conventions that Eswatini is a signatory to.

2.1.1 World Bank Safeguards

The main applicable international standards for the Nhlango - Siphambanweni Integrated Water Supply Project ESIA are the Safeguards (ESS) of the WB. These standards are listed along with comments on whether or not they are applicable in the proposed project. Eswatini is a signatory to the Convention on Biological Diversity, and is thereby obligated to develop a national strategy for the conservation of biodiversity. Several other international conventions (UN Convention, Helsinki Rules of the International Law Association and revised SADC Protocols) specify criteria for equitable and reasonable utilisation of Trans boundary Rivers, such as:

- Natural factors as (hydrology, climate etc.)
- Social and economic needs
- Population dependent on watercourse
- Effects on uses in other watercourse states
- Existing and potential uses
- Conservation, protection, development and economy of use and the costs of measures
- Availability of alternatives of comparable value.



The key International/regional legislation relevant to the project is the SADC Shared Watercourse Systems Protocol (an Intergovernmental Water Agreement). The main thrust of the protocol, which is a legally binding document, is to ensure efficient conservation of the scarce resources and equitable sharing of water. The Mkhondvo River, which passes through the project area is a shared river basin between South Africa, Eswatini and Mozambique, therefore the project requires compliance with the Interim Inco Maputo Agreement (2002).

2.1.2 UN (Rio) Convention on Biological Diversity

Eswatini is a signatory to this convention since 5 June 1992 and ratified the convention on 26 July 1994. The Convention has three main objectives which are the conservation of biological diversity, the sustainable use of the components of biological diversity and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources. Since the project will involve vegetation removal for construction purposes, compliance to this Convention is important.

2.1.3 Kyoto Protocol

The Kyoto protocol was signed by Eswatini in 2005. The convention pertains to the United Nations framework on Climate Change. The 3rd Conference of the Parties (CoP3) to the Framework Convention on Climate Change (FCCC) in Kyoto in December 1997 introduced the Clean Development Mechanism (CDM) as a new concept for voluntary greenhouse-gas emission reduction agreements between industrialized and developing countries on the project level.

2.1.4 World Bank Environmental and Social Standards

Eswatini Water and Services Corporation seeks to partner with the World Bank in the development and implementation of this project. The proposed project will therefore have to comply with WB Standards. Projects supported by the Bank through Investment Project Financing are required to meet the following Environmental and Social Standards:

- **Environmental and Social Standard 1: Assessment and Management of Environmental and Social Risks and Impacts-** This establishes the importance of integrated assessment to identify the social and environmental impacts, risks, and opportunities in the project's area of influence. This standard requires that social and environmental assessment and management systems are in place for managing social and environmental performance throughout the project life cycle. Its main elements include: (i) social and environmental assessment; (ii) management program; (iii) organizational capacity; (iv) training; (v) community engagement; (vi) monitoring; and (vii) reporting.



- **Environmental and Social Standard 2: Labor and Working Conditions-** It requires that the worker-management relationship is established and maintained, compliance with national labour and employment laws and safe and healthy working conditions are ensured for the workers. This standard is very important as the project will employ workers to execute the project.
- **Environmental and Social Standard 3: Resource Efficiency and Pollution Prevention and Management-** This gives an approach to pollution prevention and abatement in line with Internationally accepted technologies and practices with objectives to a) avoid or minimize adverse impacts on human health and the environment by avoiding or minimizing pollution from activities; and b) promote the reduction of emissions that contribute to climate change. Under this standard, a project is required to avoid, minimize, or reduce adverse impacts on human health and the environment by avoiding or minimizing pollution from project activities. This standard is relevant in that there is a possibility of pollution into the water resources as well as air quality.
- **Environmental and Social Standard 4: Community Health and Safety –** It outlines the responsibility to be undertaken by the client to avoid or minimize the risks and impacts to the community's health, safety and security that may arise from project activities. The project activities for the Nhlango - Siphambanweni Integrated Water Supply Project are likely to cause health and security risks if not managed properly.
- **Environmental and Social Standard 5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement -** This standard requires that project does not result in involuntary resettlement or at least if unavoidable it is minimized by exploring alternative project designs. It also requires that the project ensures that social and economic impacts from land acquisition or restrictions on affected persons' use of land are mitigated. The Nhlango - Siphambanweni Integrated Water Supply Project may involve the acquisition of land.
- **Environmental and Social Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources –** This standard aims to protect and conserve biodiversity, the variety of life in all its forms, including genera, species and ecosystem diversity and its ability to change and evolve, which is fundamental to sustainable development. The Nhlango - Siphambanweni Integrated Water Supply Project will try to avoid or mitigate threats to biodiversity arising from project activities and where this cannot be avoided relevant mitigation measures will be in place.
- **Environmental and Social Standard 7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities-** It recognizes the possibility of vulnerability of indigenous people owing to their culture, beliefs, institutions and living standards and that it may further get compromised by one or other project activity throughout the life cycle of the project. This standard underlines the requirement of minimizing adverse impacts on indigenous people in the project area, respecting the local culture and customs, fostering good relationship and ensuring that development benefits are provided to improve their standard of living and livelihoods. The country does not have undeserved traditional local communities, and as such the application of this standard is limited.



- **Environmental and Social Standard 8: Cultural Heritage-** It aims to protect the irreplaceable cultural heritage and to guide project proponents on protecting cultural heritage in the course of project operations. In cases where the project finds items of cultural importance, notification procedures will have to be followed to ensure protection of cultural heritage of the area and the country.
- **Environmental and Social Standard 9: Financial Intermediaries (FIs) -** This ESS identifies that strong domestic capital and financial markets and access to finance are important for economic development, growth and poverty reduction. FIs are required to monitor and manage the environmental and social risks and impacts of their portfolio and FIs subprojects. They also develop and maintain, in the form of an Environmental and Social Management System (ESMS), effective environmental and social systems, procedures and capacity for assessing, managing, and monitoring risks and impacts of subprojects, as well as managing overall portfolio risk in a responsible manner. There are no FIs identified for this project, therefore its relevance is limited.
- **Environmental and Social Standard 10: Stakeholder Engagement and Information Disclosure:** This ESS recognizes the importance of open and transparent engagement between the Borrower and project stakeholders as an essential element of good international practice. Effective stakeholder engagement can improve the environmental and social sustainability of projects, enhance project acceptance, and make a significant contribution to successful project design and implementation. The proposed Nhlangano – Siphambanweni Integrated Water Supply project will require extensive stakeholder engagement because its success will depend on how it is received by the communities. In addition, its design will have to be informed by the involvement of the affected communities and other stakeholders.



2.2 Eswatini Legal Framework

In order to protect the environment and ensure that the proposed development operates in an environmentally responsible manner, there are a number of significant pieces of environmental legislation that need to be taken into account during this study. The Constitution and the Environmental Management Act, 2002 is the framework environmental law in the country. The Eswatini Environment Authority (EEA), a parastatal under the Ministry of Tourism and Environmental Affairs, is an institution that has the mandate to ensure that environmental legislation is adhered to. The EWSC is governed by the three enabling legislations namely: Water Services Corporation Act No.12 of 1992, The Water Act No. 7 of 2003, as well as the Public Enterprises Unit (Control and Monitoring) Act, 1989 (which establishes Eswatini Water Services Corporation as a category A parastatal). There are various other laws that deal with specific sectors of the environment such as water, flora, and land management, enforced by different government departments. The following Table shows an overview of the different laws governing environmental legislation in the country.



Table 2: Relevant National Legislation

LEGISLATION	SUMMARY PROVISIONS	ENFORCING ORGANIZATION	RELEVANCE TO THE PROJECT
Environmental Management Act, No. 5 of 2002	This is the framework law for environmental management in the country. It outlines the principles that govern environmental Management and Institutional framework for national environmental management. It outlines the tools and processes to be used for environmental management, pollution and waste management mechanisms and public participation. It also outlines provisions for compliance and enforcement of the Act.	Eswatini Environment Authority (EEA)	All projects established in the country need to adhere to the provisions of the Act, as it is a framework environmental law.
Waste Regulations, 2000	Regulate the management of all types of waste in Eswatini. It outlines the functions of the Eswatini Environment Authority and local authorities. It outlines provisions for the storage, collection and disposal of waste in urban areas as well as in waste control areas (in non-urban areas). Outlines requirements for carriage, and general management of waste as well as obligation for different types of wastes.	EEA	The project will generate solid waste, especially during the construction phase, which should be managed in accordance with these regulations.
Environmental Audit, Assessment and Review Regulations, 2000	Outlines processes and criteria for project screening, categorization and public participation for new projects. Spells out the requirement for environmental audits for operations that are cause for concern for the EEA. The process and formats for compilation of environmental audits, Environmental Impact Assessments, Initial Environmental Evaluation and Comprehensive Mitigation Plan.	EEA	The process for the preparation of this report, including the structure of the ESIA is guided by these regulations.
Water Pollution Control Regulations, 2010	These regulations control discharges made into water bodies. They outline responsibilities for operators, water authorities and the Eswatini	EEA	During the construction and operational phases of the project, wastewater will be



LEGISLATION	SUMMARY PROVISIONS	ENFORCING ORGANIZATION	RELEVANCE TO THE PROJECT
	Environment Authority in water pollution control. They provide water quality objectives as well as effluent standards.		generated, whose management should be in accordance with these regulations. In addition, due to the fact that the project is located in close proximity to the Mkhondvo River, these regulations would need to be complied with.
Air Pollution Control Regulations, 2010	These regulations are aimed at controlling emissions into the atmosphere. They outline responsibilities for operators, the meteorology department and the Eswatini Environment Authority in air pollution control. They provide air quality standards for the most common air pollutants.	EEA	During the construction phase, air pollutants like airborne dust will be generated. The control of adverse impacts from air pollution is by means of these regulations.
Flora Protection Act, No. 10 of 2001	The Flora Protection Act No.10/2001 is an Act that aims to protect indigenous flora and to provide for matters incidental thereto. It prohibits any person from plucking, gathering, cutting, uprooting, injuring, breaking or destroying a plant of any species that is listed in the Schedule to the Act. This Act repealed the Flora Protection Act of 1952.	Ministry of Tourism and Environmental Affairs	Any flora species found on site should be managed in compliance with this act.
Factories, Machinery and Construction Works Act, 1972	Safety and health of workers. Especially noise limit of 65dBA and dust limit of 150µg/m ³ .	Ministry of Commerce, Industry and Trade	During the construction phase workers will be exposed to a number of safety and health risks. In the process of ensuring workers safety, this act needs to be adhered to.



LEGISLATION	SUMMARY PROVISIONS	ENFORCING ORGANIZATION	RELEVANCE TO THE PROJECT
The Water Act, No. 7 of 2003	This Act seeks to harmonize the management of water resources in the country. Its provisions include the establishment of a National Water Authority and of a Water Resources Master Plan. This plan will contain an inventory of the total water resources of Eswatini, and a comprehensive programme of action in which the maximum value can be obtained from this resource for the benefit of the people of Eswatini.	Ministry of Natural Resources Energy	The project, by its nature is a water dependent project. As such, issues of water availability and water allocation will be very important, especially during the operational phase of phase of the project.
The Eswatini Administration Order No. 6/1998	This is an Order-in Council to provide for the administration of Eswatini Affairs. Section 25 of the Order provides for the iNgwenyama to issue, inter alia orders regulating the following - as long as they do not conflict with any other law in force in Eswatini:- preventing the pollution of any water resources, and the obstruction of any water course; prohibiting, restricting or regulating the cutting of trees; controlling the sale, supply, use, possession or cultivation of noxious plants; regulate the burning of grass or bush; preventing soil erosion and for the protection and construction of anti-soil erosion works; and providing for the protection and preservation of game and the destruction of vermin.	King's Office	During the construction and operational phase of the project, there is a potential for soil erosion and pollution of water resources, which makes this administrative order relevant to the project.
The Kingdom of Eswatini Constitution Act No.1/2005	This is the supreme law in Eswatini. Section 210 (2) provides that the state shall protect and make rational use of its land, mineral, water resources as well as its fauna and flora, and shall take appropriate measures to conserve and improve the environment for the present and future generations.	Eswatini Government	The constitution is binding on all Eswatini citizens including implementation of projects in the country as it is the supreme law of the country.



LEGISLATION	SUMMARY PROVISIONS	ENFORCING ORGANIZATION	RELEVANCE TO THE PROJECT
The Eswatini National Trust Commission Act No.9 / 1972.	It established the Eswatini National Trust Commission (ENTC) is a body corporate established by the ENTC Act of 1972. The ENTC's key objectives are both to preserve the cultural heritage and to conserve the natural heritage of the Kingdom of Eswatini. It emphasizes the irreplaceable value of the national heritage. The Commission is charged with the general supervision and control of the Eswatini Centre and other declared institutions, national parks, nature reserves, monuments, relics and antiques.	Eswatini National Trust Commission	If during project implementation, items of cultural significance are discovered, the Eswatini National Trust Commission needs to be involved.
Occupational Health and Safety Act, 2001	Outlines the responsibilities of employer, employee and the government in occupational health and safety issues. It establishes a tripartite advisory committee to advise the ministry of Labour on these issues. Occupational health and safety is not the sole responsibility of the employer. The employees through the health and safety committee should also contribute toward application of the occupational health and safety standards.	Ministry of Labour and Social Services	Having site workers during the construction phase means that all precautions outlined in the act for the protection of their health and safety needs to be adhered to.
Public Health Act, 1969	This Act makes provisions for public health and for incidental or connected matters. It lists communicable diseases and outlines procedures for their management.	Ministry of Health	During the implementation of this project, there may be incidences of communicable diseases, including some waterborne diseases. The procedures outlined in this act may then be used.
The Water Services Act,1992	This Act established the Eswatini Water Services Corporation as the sole provider of water services in the urban areas (water supply, and sewage treatment and disposal) and to control the abstraction of raw water from boreholes in those areas for which it is responsible.	Eswatini Water Services Corporation	The project is being developed and implemented by the Eswatini Water Services Corporation, whose mandate is outlined in this Act.



LEGISLATION	SUMMARY PROVISIONS	ENFORCING ORGANIZATION	RELEVANCE TO THE PROJECT
Construction Industry Council Act, 2013	Regulates the construction industry in Eswatini. It requires all companies in this industry that are operating in the country to register with the Construction Industry Council.	Construction Industry Council	EWSC will be required to use contractors and other service providers that are registered with the council.
Standard Building Act and Regulations of 1969	This legislation provides for the promotion of uniformity in the law, and building standards relating to the erection of buildings, water supply and connection, drainage and sewer etc. in the areas of jurisdiction of local authorities. The local authority shall issue the necessary permits and authorisations for any excavation or building work to be conducted in any area under its control. Relevant regulations are those pertaining to building lines – to allow for services, zoning of areas, siting of areas, access etc.	Ministry of Public Works and Transport	The project involves the development of water supply infrastructure, and therefore its activities will have to comply with this act and its regulations.



2.3 Relevant National Policies

Table 3 below outlines the policies relevant to project.

Table 3: Relevant Policies

POLICY/STRATEGY/PLAN	OBJECTIVES	RESPONSIBLE ORGANIZATION	RELEVANCE TO THE PROJECT
National Development Strategy, 1997	<p>By the year 2022, the Kingdom of Eswatini will be in the top 10% of the medium human development group of countries founded on sustainable economic development, social justice and political stability.</p> <ol style="list-style-type: none"> 1. Economic development for the country. 2. Reduce poverty levels in the country by empowering the poor to generate income and reduce inequalities. 3. Harmonization of programmes undertaken in the country in order to achieve first world status. 	Ministry of Economic Planning and Development	This project contributes to the economic development of the country because it addresses water supply and sanitation for Eswatini.
Poverty Reduction Strategy and action Plan, 2006	<p>To the incidence of absolute poverty from 69% in 2001 to 30% in 2015 and to totally eradicate it by 2022.</p> <ol style="list-style-type: none"> 1. Creation of an environment that will empower the poor to participate actively in development initiatives. 2. Empowering the poor to generate income and reduce inequalities. 3. Fair distribution of benefits through the fiscal policy. 4. Human capital development. 5. Improving governance and strengthening of institutions 	Ministry of Economic Planning and Development	The availability of more potable water will impact positively on the livelihood of the Eswatini population.



POLICY/STRATEGY/PLAN	OBJECTIVES	RESPONSIBLE ORGANIZATION	RELEVANCE TO THE PROJECT
Draft National Climate Change Strategy and Action Plan, 2014	To enhance the adaptive capacity of Eswatini to climate change in order to achieve sustainable development and contribute to the better quality of life for the Eswatini nation.	Ministry of Tourism and Environmental Affairs	Since this is a water supply related project, it will be affected by weather patterns.
National Water Policy (draft) 2011	To achieve sustainable development and management of water resources in the country through integrated planning.	Department of Water Affairs (Ministry of Natural Resources and Energy)	The integrated water supply project will involve the abstraction of water activities of which are addressed by the policy.
Fresh Water Fisheries and Aquaculture Policy in Eswatini, 2011	To ensure sustainable and regulated access to fish resources in order to achieve an equitable balance between socio economic needs and ecosystems health.	Ministry of Agriculture	The project may affect fish species in the Mkhondvo River and some tributaries.
Resettlement Policy, 2003	The guiding vision of the National Rural Resettlement Policy (NRRP), which has been approved in 2003, is to establish a durable, practical and participatory framework for the planning and sustainable management of land, and the appropriate application of resettlement strategies in rural Eswatini, in order to increase agricultural production, promote the sustainable utilization of natural resources and improve livelihoods.	Ministry of Agriculture	The project may involve the acquisition of land for some structures like the reservoirs, solar power plant and some servitude for the pipeline and laterals. Compensation should be guided by this policy.



3. ENVIRONMENTAL REQUIREMENTS

The project has been categorized by EEA as Category 3, which required the EWSC to undertake a full Environmental and Social Impact Assessment (ESIA), before actual commencement of the project. This approach will be aligned with WB requirements. The main purpose of the ESIA is to determine whether it is environmentally, socially, technically and economically feasible to develop the site as proposed. The main objective is to identify and minimize/prevent negative potential environmental impacts whilst enhancing positive ones at planning stages to sustainable development. On the basis of this category, the ESIA is to be undertaken in various stages as follows:

Stage 1: Scoping

This is a stage where an environmental scan of potential issues is evaluated through a consultative exercise. This is where the public is informed about the project. The exercise helps to get the public's comments/concerns and also assist to identify people likely to be affected by the development. The public consultation informs the ESIA process of environmental social issues and other environmental concerns which may arise over and above those that environmental assessment professionals may occur. It is of paramount importance to obtain contributions from the public or interested parties which will ensure that all impacts that may arise from the project, be they negative or positive, are adequately addressed.

Stage 2: ESIA/ESMP

The second stage of the process includes conducting surveys and compiling an ESIA report. Various surveys are conducted such as socio-economic surveys which is a continuation of consultations with the community through questionnaires, interviews etc. It also involves specialist studies like ecological, water quality and social assessments. All the information collected is then used to compile an ESIA report. The ESIA report identifies positive and adverse impacts that the project is likely to have on the environment. An ESMP is then developed to propose measures to enhance positive impacts and minimize or prevent adverse impacts. The ESIA and ESMP reports are submitted to the Eswatini Environmental Authority (EEA) for review. Once the EEA is satisfied that the reports adequately addresses all impacts of the project, the reports are taken for public review.

Stage 3: Public Review

This involves review of the prepared ESIA/ESMP document to ensure that all public comments and environmental issues have been addressed. After review by the EEA, documents are circulated in strategic places for review by interested and affected (IAPs). This helps to ensure that concerns that were raised during stage 1 are adequately addressed in the ESIA. When the EEA is satisfied that all



public concerns about the project have been adequately addressed in the ESIA, an Environmental Compliance Certificate (ECC) is issued.

The process outlined by the local legislation is aligned with the WB requirements. Further Consultations will be carried out as outlined in the Environmental and Social Commitment Plan (ESCP) developed for this project.

3.1 Objectives of the Scoping Phase

This report is the Scoping Report undertaken as the first step in the ESIA process and may be considered as the 'scouting' part of the ESIA. Scoping allows for all role players to gain a greater understanding of the project through a public consultation process. Scoping is also critical in that it allows for the early identification of important natural and social issues that will need to be considered. The Scoping phase has four key objectives, namely:

- To introduce the project to the public.
- To provide for the involvement of Interested and Affected Parties (IAPs) in a forum that allows them to voice their opinions and concerns.
- To identify key biophysical and socio-economic issues.
- Provide a Plan of Study (POS) for the ESIA phase.

3.2 The Scoping Process

3.1.1 Initial Engagement of Stakeholders to Raise Awareness of the Project

At the inception of the ESIA process, the Development Teams from each benefiting community were engaged. Meetings were also held with the Ministry of health, which is driving the sanitation part of the project. Consultations were conducted at Regional level (Shiselweni Region Development Team) and further condensed to Constituency level (Zombodze Emuva Inkhundla Development Team, Hosea Inkhundla Development Team and Shiselweni 1 Development Team).

All IAP information; including details on who was consulted, consultation dates, what was consulted on and general feedback on consultation process, responses, has been included and acts as a record of the communication/public involvement process. Minutes have been attached as Appendix 2 of this report and attendance registers are encompassed as Appendix 3 consultative meetings with the project team were held on various days at EWSC. Minutes to these meetings have been attached as Appendix 4.



A total of five consultative meetings were held on the following dates, the last meeting was the scoping meeting.

Table 4: Dates of consultative meetings

Meeting	Date
Shiselweni Regional Development Team	14 March 2019
Zombodze Emuva Constituency	16 March 2019
Hosea Constituency	23 March 2019
Shiselweni 1 Constituency	30 March 2019
Hluthi Police Station - Conference Room (Scoping Meeting)	04 April 2019

During these consultations, a PowerPoint presentation was presented by the EWSC's Project Manager; Mr Bongani Mdluli and the Corporation's Public Affairs Manager Ms Nomahlubi Matiwane explained the aim of the meeting which was to;

- Provide background information about the proposed water project (project brief)
- Gather feedback and identify stakeholders interests
- Address social, technical and environmental issues

Stakeholders were given an opportunity to ask questions and the following concerns were raised and addressed. This has been recorded in Table 5 below.



Table 5: Summary of Concerns and Responses

Project Related Issues	
Concern Raised	Response
Rural Water is in the process of implementing some water projects (Bethel, Paradise) within the proposed project area. What will happen to the existing water projects?	Assessment of existing water schemes to be done to evaluate their effectiveness and sustainability. For ease of sustainability, water supply from EWSC should not be supplementary to other water supply projects.
There are areas that are not covered in the proposed development, are there any future plans to include those areas ?	EWSC will consider new areas as time progresses
Are aspiring customers supposed to bear the costs of buying laterals (pipes) that connects them from water main?	No, EWSC provides all-inclusive service once payment by client has been made.
Water kiosks owners are supposed to sell water and collect money, will that not expose them to danger as they might be robbed ?	The security concerns are noted. The Kiosk operators will be trained on cash management to avoid possible risks and as well security options will be considered with the community.
Why is EWSC not providing water through prepaid meter (card)	The company is always considering options of making their service better. These options will be considered.
During the implementation of the SISOMA Water Project , there are areas that are at close proximity to proposed water project (Bambitje) can those areas be accommodated ?	It has been included in the scope of the project.
Social Issues	
Concern Raised	Response
When it comes to issues of employment, can there be transparency to avoid conflict ?	The comment is noted. the contractor will be given guidelines to work under, which will include collaboration with the community leaders to avoid unnecessary conflict.
General Issues	
Concern Raised	Response
In relation to the Maseyisini Water Project, does EWSC has a monitoring mechanism to ensure that roads are rehabilitated and the environment is left in a better state because during the implementation of the above mentioned project, roads not rehabilitated.	EWSC embraces an environmentally friendly approach in executing its projects to minimize environmental degradation .
Why does EWSC conduct numerous projects concurrently instead of completing one project and moving on to the next one. This is in reference to the Maseyisini Water Project.	EWSC works at delivering their services efficiently. Therefore, working at several projects helps increase the reach of water supply to more people within a short space of time.



The quality of water in Somntongo is terrible can EWSC investigate that and ensure that the water is clean	The comment is noted, and the matter will be addressed by EWSC as quality is one of the key aspects for the company.
During the implementation of the SISOMA Water Project, existing water schemes pipelines were destroyed and never rehabilitated. Why is that so?	EWSC made sure to fix any infrastructure that was destroyed during the SISOMA project. Any further outstanding issues will be investigated and attended to.

3.1.2 Advertising of Scoping Meeting

Site Notices

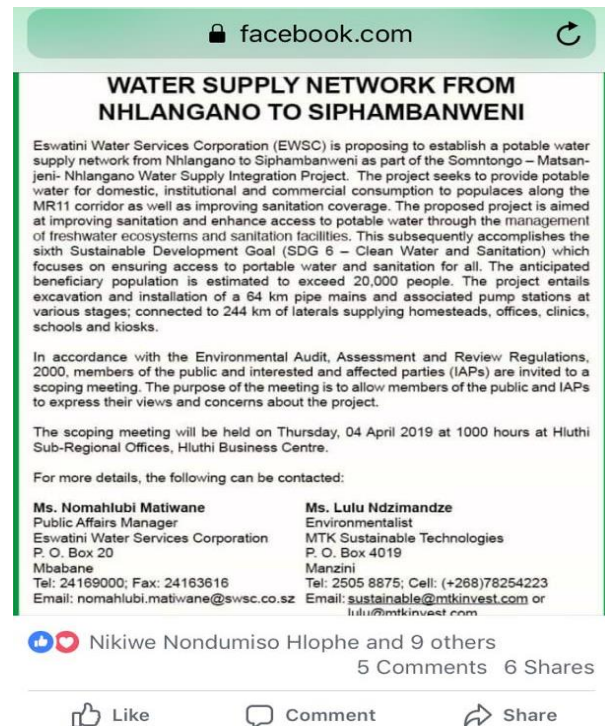
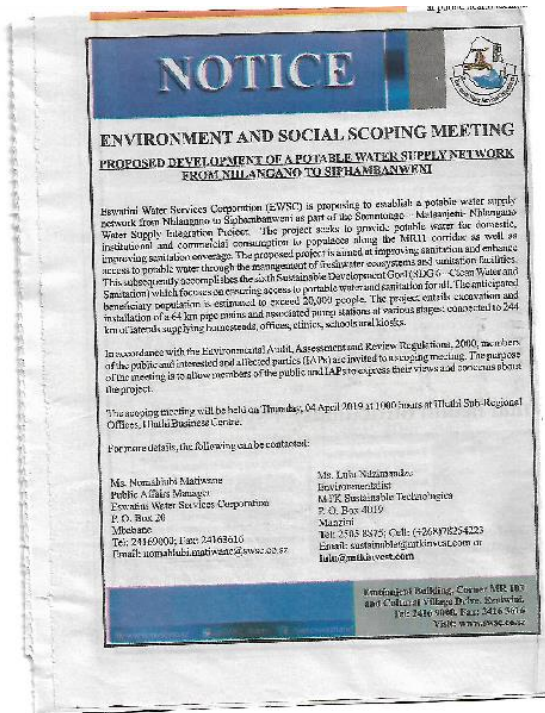
Site notices were erected at various noticeable locations along the MR11 corridor (Nhlango - Siphambanweni). A3 size site notices in both English and Siswati were placed at the boundaries of the site and surrounding population concentrated areas (Hluthi Police Station, Siphambanweni Water Kiosk, Market Stalls and multiple Bus Stop Shelters along the aforementioned road amongst others), inviting interested and affected members of the public to a scoping meeting as part of the ESIA compilation process. The notices were displayed in both siSwati and English.



Photoplate 1: Scoping meeting notices displayed at different places

3.2.1 Publication of Adverts in Print Media

Scoping meeting adverts were placed in local print media. This was to provide for the involvement of Interested and Affected Parties (IAPs) in a forum that allows them to voice their opinions and concerns. This advert was run in the local newspaper for two consecutive weeks on the following dates; 23rd March 2019, 30th March 2019, 31st March 2019 and 3 April 2019. To reach a wider audience, members of the public and IAPs were also invited to the meeting on various social media platforms including Facebook, through the EWSC's pages.



Photoplate 2: Scoping advert published in the local newspapers and posted on EWSC's Facebook Page. A more eligible advert has been attached at Appendix 7.

3.1.3 Conducting Scoping Meeting

The scoping meeting was held at Hluthi Police Station (Conference Room) on Thursday, 04 April 2019 in order to solicit concerns from Interested and Affected Parties (IAP's) for the development. The public was notified about the proposed development. The ESIA process was explained to them in detail outlining all the phases within the process and what it consists of along with the possible environmental and impacts associated with the proposed project. During a presentation of the project brief, a locality map displaying the pathway of the network along the MR11 road and associated laterals was presented to give all attendees a clearer presentation of the scope of the proposed project. Attendees were asked to present their concerns/comments/recommendations. An outline of anticipated environmental impacts was presented to the attendees. Minutes of the scoping meeting



are attached with this report as Appendix 5. The attendance register of this meeting has been included as Appendix 6.

3.3 Issues Arising from Scoping Meeting

This section provides a synthesis of all the issues and concerns identified during the scoping process. During the scoping meeting, whose minutes are appended, the issues raised have been categorized and are seen in the table below.



Table 6: Summary of issues raised

Category	Question
Project Timelines	<ol style="list-style-type: none"> 1. When will the World Bank approve the project for implementation 2. How long after approval will implementation commence? 3. After receipt of approval from the Bank, may EWSC work speedily to complete this project?
Resettlement & Compensation	<ol style="list-style-type: none"> 1. Will there be compensation due to movement of water network through privately owned land?
Employment	<ol style="list-style-type: none"> 1. What benefits will the community receive e.g. job opportunities? 2. Are there any laws that address payment of unskilled labour?
Movement of Laterals	<ol style="list-style-type: none"> 1. How will the pipe laterals move from the Left Hand Side (LHS) to the Right Hand Side (RHS)?
Water Abstraction	<ol style="list-style-type: none"> 1. Has a water abstraction permit been obtained? 2. How does EWSC plan to continuously provide water in cases where Mkhondvo River levels are significantly low?
ESIA Process	Once Environmental Compliance Certificate (ECC) has been issued out by the EEA, can EEA evoke the Certificate due to concerns from the public?
Socio-economic Issues	<ol style="list-style-type: none"> 1. Can child-headed families who cannot afford meter installation fee be given a discount? 2. Do water charges differ in the rural areas compared to the urban areas?
Water Kiosks	<ol style="list-style-type: none"> 1. Will multiple Water Kiosks be placed in densely populated areas?
Pipeline Coverage	<ol style="list-style-type: none"> 1. What is the estimated number of people to be provided with potable water in this project? 2. How will the water reach homesteads away from the MR 11 corridor? 3. Are there any pump stations along the network? 4. Is an individual allowed to buy a similar pipe grade for movement of meter within his/her home instead of those provided by EWSC to avoid high installation costs? 5. Will the network cover Bambitje area? It has been previously left out and is in desperate need for potable water.
Appointment of Contractor	<ol style="list-style-type: none"> 1. Contractor appointed in a similar project in Lavumisa did an exceptional job. Can he be appointed for this project?



Category	Question
Existing Water Committees and Schemes	<ol style="list-style-type: none">1. Will existing multiple water committees and community water schemes be dissolved for the formation of new committees to assist in implementation?2. Some people have already paid in water schemes, what is the way forward?
General	<ol style="list-style-type: none">1. Request for EWSC to open a branch in Hluthi2. Who digs and buys the pipes for supply in homes?

The following photo plates shows some pictures taken in the consultative meetings.



Photo plate 3: presentations and discussions during the scoping meeting



4. TERMS OF REFERENCE FOR THE STUDY

The overall objective of the assignment is to undertake an Environmental and Social Impact Assessment (ESIA) study for submission to the Eswatini Environment Authority and World Bank. The impacts identified should be adequate for the scope of the project

The consultant should additionally develop an Environmental and Social Mitigation Plan (ESMP) for the project impacts that will be acceptable to the Eswatini Environment Authority and World Bank.

The mitigations proposed should be adequate to the identified impacts. The Specific objectives of the study are;

- To Produce a project inception report outlining how the assignment will be carried out
- To conduct a Public Scoping Meeting and produce a report thereof;
- To undertake a full Environmental and Social Impact Assessment (ESIA);
- Preparing an Environmental and Social Mitigation Plan (ESMP) and any other related mitigation or management plan as highlighted in the scope of services or as required by the Environment and Social Commitment Plan (ESCP)
- To monitor compliance to the ESMP during project implementation and producing relevant project compliance reports on the agreed formats and timelines

The scope and level of work involved in the preparation of the ESIA shall be proportional to the project's potential impacts.

As the project is being financed by the World Bank (WB), the Environmental and Social Impact Assessment (ESIA) and Environmental and Social Mitigation Plan (ESMP) should meet the requirements of both the World Bank and the Eswatini Environment Authority and also at a minimum take due cognizance of the following legislative requirements;

- The Environmental Management Act No. 5 of 2002
- The Environmental Audit, Assessment and Review Regulations, 2000
- The Forest Preservation Act No. 14 of 1910
- The Waste Regulations, 2000
- The Natural Resources Regulations, No. 25 of 1967
- The Water Act, No. 7 of 2003
- The Public Health Act No. 5 of 1969



4.1 Scope of Consultant's Services

The consultant shall prepare his work plan and proposal to meet the requirements of the assignment objectives. Major tasks that shall be highlighted because of their importance in the preparation of the ESIA / ESMP shall include but not be limited to the following:

- Describing the proposed project by providing a synthetic description of the project relevant components and presenting plans, maps, figures and tables.
- Identifying the policy, legal and administrative framework relevant to the project.
- Defining and justifying the project study area for the assessment of environmental and social impacts.
- Describing and analysing the physical, biological and human environment conditions in the study area before project implementation. This analysis shall include the interrelations between environmental and social components and the importance that the society and local populations attach to these components, in order to identify the environmental and social components of high value or presenting a particular interest.
- Presenting and analysing alternatives to the proposed project, including the “without project” option, by identifying and comparing the alternatives on the basis of technical, economic, environmental and social criteria.
- For the selected alternative, identifying and assessing potential importance of beneficial and adverse environmental and social, direct and indirect, short and long-term, temporary and permanent impacts, on the basis of a rigorous method.
- Defining appropriate mitigation/enhancement measures to prevent, minimise, mitigate, or compensate for adverse impacts or to enhance the project environmental and social benefits, including responsibilities and associated costs.
- Addressing potential cumulative effects taking into account other initiatives planned in the study area.
- Developing an environmental and social monitoring program, including indicators, institutional responsibilities and associated costs.
- As appropriate, preparing an environmental hazard plan including an analysis of the risk of accident, the identification of appropriate security measures and the development of a preliminary contingency plan.
- Preparing a resettlement plan, if necessary.



- Identifying institutional responsibilities and needs for capacity building if necessary to implement the recommendations of the environmental and social assessment.
- Carrying out consultations with primary and secondary stakeholders in order to obtain their views on and preoccupations about the project. These consultations shall occur during the preparation of the ESIA Report to identify key environmental and social issues and impacts, and after completion of the draft ESIA Report to obtain comments from stakeholders on the proposed mitigation/enhancement measures.
- Preparing the ESIA Report according to the generic contents presented in Part B hereafter.
- Preparing an Environmental and Social Management Plan (ESMP). This management plan shall be presented as a distinct document from the ESIA Report.
- Integrating the requirements of the World Bank's Environmental and Social Standards (ESS) in the ESIA/ESMP and production of associated management plans. These ESS articulates the Bank's Environment and Social Framework and corresponding Operational Safeguards (OS) requirements with particular emphasis to ESS 1
- The consultant shall prepare the report to be in line with the World Bank requirements for preparing ESIA / ESMP as outlined on the provided document Guidance on ESIA / ESMP for WB funded Projects
- The consultant will refer to the provided document; Sector Key Sheets which provides sector specific guidance materials, including water supply and sanitation projects
- Costing of the ESMP report so that mitigation costs are factored into the overall project cost.



5. STUDY METHODOLOGY

5.1 Initial Visit

An initial orientation visit involved a tour of the study area conducted by the consultants, with Eswatini Water Services Corporation Team to understand the geographic scope and context of the project. This also provided basic scan of the environment to identify areas potentially or directly affected by the proposed project as well as tentative impact areas requiring further investigation.

5.2 Desktop study

A desktop study was done for the legislative review, as well as other literature on the site and its surroundings. This review also included reports from the Central Statistics Office (CSO). The desk study also included collection of secondary data (weather information, traffic flow data, crime statistics from the Hluthi police station, and water quality data from the Department of Water Affairs). Reports and information already collected and compiled by Eswatini Water Services Corporation and the World Bank was also reviewed and used to form part of the report.

5.3 Consultations

During the process of the ESIA, consultations were made with Interested and Affected Parties (IAPs), a majority of these being the residents of the affected communities. When the ESIA process was started, EWSC had already started conducting public meetings. These meetings were held at Zombodze Emuva Inkhundla, Hosea Inkhundla and Shiselweni 1 Inkhundla. The minutes of these meetings were reviewed and they informed the understanding of the community view of the project. Issues raised in the meetings were used as part of the scoping phase of the ESIA.

Further consultations will be done with traditional authorities in and around the project area and other stakeholders like government departments and relevant parastatals and NGOs that are active in the project area. Consultations will not be limited to this initial stage of the ESIA process but will be continued with throughout the life cycle of the project.

5.4 Field surveys

The consultant will conduct physical survey of the site and make observations that informed the assessment. Detailed surveys are still to be done as the ESIA process advances.



5.5 Specialist studies

4.5.1 Socio-Economic Impact Study

Desktop Study

This involves the review of secondary data from past reports from accredited sources like the Central statistics Office. These reports include the latest household income and expenditure survey and population and housing census.

4.5.2 Primary Data Collection

Qualitative Data

The main approach will be that of **'appreciative enquiry'** which helps people recall their situation before implementation of the initiative; their current situation as well as anticipating their future given certain changes which will enhance the positive impacts and mitigate against negative impacts. These groups will include:

- Women
- Youth
- Girls
- Local leaders
- Church leaders

The discussions will focus on:

- Community health and safety in particular reference to access to water and sanitation
- Identifying disadvantaged and vulnerable groups or individuals in the community
- Current land use and possible restrictions resulting from project activities
- Cultural heritage
- Recommendations for labour and working conditions for project
- Sustainable management strategies for water; sanitation and natural resources



4.5.3 Key Informant Interviews

Additional information will be collected through a series of key informant interviews which will concurrently with quantitative data collection on social facilities available including catchment areas and numbers accessing facilities where possible. This information will be summarized in a tabulated form covering:

- Traditional Leaders (at Umphakatsi)
- Local government representatives (at Inkhundla)
- Health workers (at Clinic)
- Educationalists (at schools)
- Emergency services (at Police station)
- NGOs active in the area (if any)

4.5.4 Quantitative Data

Survey Methodology and Coverage

The affected communities (at chiefdom level) were identified and a list was compiled. A questionnaire is being designed for conducting socio-economic survey of the project area. This questionnaire will be administered by use of face to face interviews of household members, especially the head of the household by field enumerators. The following topics will be covered in the standard questionnaire:

- Demographics (household listing covering, health, employment, parental status and education for children less than 17 years of age and households deaths).
 - Household characteristics (housing structure and type, household assets and amenities owned and used by households)
 - Water and sanitation (drinking water source, distance to and from the water source, toilets used)
 - Food Consumption and Nutrition, which will look into issues of food consumed by households using a seven-day recall, their main source, meals consumed per day by households.
 - Inputs to households livelihoods
 - Households expenditure
- MTK Sustainable Technologies



Data Processing and Analysis

The data from the field will be entered into a computer using a data entry application developed using CSpPro software. SPSS will be used for data cleaning, tabulation and analysis. Most tables will use the basic variables namely as, community, sex, and age categories.

This data will culminate in a 'snap-shot' of the affected communities to predict impacts of the project and generate recommended mitigation measures to be put in place.

Ecological Assessment

The main objective of the ecological assessment was to determine the plant, bird and mammal species richness within the project area for the proposed development. It also ensures the identification of any threatened and endemic species with the project area, identifies potential threats to the vegetation. Overall the study assesses the extent of ecological impact and prescribe appropriate mitigation measures to eliminate or limit the negative impacts that have been identified and where possible enhance beneficial impacts.

Traffic Assessment

Traffic data used will only be secondary data, which will be obtained from the Ministry of Public Works and Transport. This data will be used to determine the traffic flows at peak and non-peak hours, especially in major junctions like Siphambanweni.

Aesthetic/ Visual Assessment

The overall aim of Aesthetic /Visual Impact Assessment was to determine the aesthetic impact and current landscape quality (scenic views, visual sensitivity) of the proposed development. Visual Observations of the project area was used to determine the physical state of the area. Pictures were also taken so that a record of the area before the start of the project is determined. Noise levels have been measured using a noise meter shown in photoplate 2.



Photoplate 3: Noise meter used



The points used in measuring the noise was mainly where sensitive receptors like schools, clinics and churches that are in close proximity.

Water Quality Assessment

The area has a few seasonal streams. Water samples will be collected (where there is water) and sent to the laboratory for analysis. It should be noted, however, that the some are inaccessible. The parameters that will be measured will include total suspended solids, nitrates, phosphates, COD, BOD, turbidity, pH, TDS and coliforms. This data will be analyzed, and the results compared with Schedule 1 (Water Quality Standards) outlined in the Water Pollution Control Regulations, 2010.

5.6 Institutional and Capacity Assessment

The key success of the development will be the design of an appropriate institutional structure for all stakeholders. This is to boost confidence to all concerned that the methods of communication, delivery of all related activities and identifiable key players' roles and responsibilities will ensure successful implementation of the project. Key issues that will need to be assessed in the ESIA will include:

- Review existing organizational structures for the development and make recommendations.
- Identify and recommend roles and duties of relevant stakeholders including community participation.
- Identifications of recommendations needed for implementation and enforcement of improved standards and better practices.



5.7 The Project Team, Communication and Work Schedule

The project team will comprise of the following.

Table 6: Project Team

Name	Position	Key Responsibilities
Ms. Thobile Khumalo	Team Leader	<ul style="list-style-type: none"> Responsible for review of all project documentation to ensure consistency, quality control and a production of technical and scientific excellence. Part of ESIA, ESMP and ESMF compilation team Mobilising and management of the professional project team. Review and consolidation of specialist reports
Ms. Sindisiwe Nxumalo, Ms. Nelile Lukhele, Ms. Lulu Ndzimandze	Public Participation	<ul style="list-style-type: none"> Compilation of all public participation documentation IAP consultation. Compilation, publication, and placement of all documents for public notification and review. Management of the public participation process Part of ESIA, ESMP and ESMF compilation team
Ms. Nelile Lukhele	Ecologist	<ul style="list-style-type: none"> Describing and analysing the biological/ecological environment in the proposed study area. This analysis will include a checklist of the flora and fauna found in the proposed project area and habitats in the study area. Identifying both negative and positive impacts that the proposed project may bring to the ecological environment. Propose measures to mitigate negative ecological impacts and enhancing positive ones. Prepare an ecological assessment report, which should include a monitoring
Ms. Sindisiwe Nxumalo, Bongile Dlamini and Mr Jabulani Thwala	Social Assessment Team	<ul style="list-style-type: none"> Assessment of the sociological environment of the proposed study area Compilation of all public participation documentation



		<ul style="list-style-type: none"> • IAP consultation • Describing and analysing the socio-economic environment of the study area. • Identify socio-economic impacts of the project. • Compile a socio-economic impact assessment report with mitigation measures
Ms. Nelile Lukhele	Water quality	<ul style="list-style-type: none"> • Determination of baseline water quality • Identification of possible water quality impacts • Compilation of water quality assessment report with proposals of mitigation plan

Oversight and guidance on the study and report compilation will be done by the World Bank team, since the project is considered for funding by the World Bank.

5.8 Proposed Work Schedule

The following summary is a proposed schedule of the tasks that need to be completed in order to satisfy requirements of the Terms of Reference.

Table 7: Proposed Work Schedule

Reports	Date/Schedule for Submission
Public Scoping Report	4 weeks from signing of contract
ESIA and ESMP/ESMF Report Draft Report	12 weeks from signing of contract
ESIA and ESMP/ESMF Report Final Report	15 weeks from signing of contract
Monthly Project Compliance Report	Monthly from commencement of construction activities
Quarterly Project Compliance Report	Quarterly from commencement of construction activities
Final Project Compliance Report	24 Months from commencement of construction activities



5.9 Form and Content of ESIA/ESMP

The form and content of the ESIA Report and its associated ESMP will be in accordance with the guidelines cited (Eswatini Environment Authority's Environmental Audit, Assessment and Review Regulations, 2000). The report will also take into consideration requirements of the World Bank. The ESMP will be a stand-alone document describing each impact, outlining a plan for whom and how it will be mitigated, stating who and how the monitoring of this plan will be implemented, as well as costs and suggestions on how frequent compliance reports will have to be submitted to the EEA for approval.

5.10 Compliance Certificate and Monitoring

Upon approval of the reports, the EEA will issue an Environmental Compliance Certificate to the Proponent. The Certificate will require periodic preparation and submission of monitoring reports for the development. MTK Sustainable Technologies will officially prepare these reports on behalf of the EWSC.



References

1. Eswatini Government, Environmental Management Act, Government Publisher, 2002.
2. Eswatini Government, Environmental Audit, Assessment and Review Regulations, Government Publisher, 2000.
3. Eswatini Environment Authority, Compendium of Environmental laws of Eswatini, Eswatini Government Publisher, 2005.
4. <http://www.swsc.co.sz/publications/reports/2018.pdf>, accessed 22 March 2019
5. <http://www.swsc.co.sz/publications/reports/2017.pdf>, accessed 22 March 2019
6. <http://www.swsc.co.sz/publications/reports/2016.pdf>, accessed 22 March 2019
7. <http://www.swsc.co.sz/publications/reports/2015.pdf>, accessed 22 March 2019
8. <https://www.worldbank.org/en/projects-operations/environmental-and-social-framework/brief/environmental-and-social-standards>, accessed 21 March 2019



LIST OF APPENDICES

Appendix 1: EEA Categorization Letter

Appendix 2: Consultative Meetings with Key Stakeholders Minutes

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EEA Categorization Letter





Stakeholder Consultation Minutes



Attendance Register for Stakeholder Consultations



Consultative Meetings with Project Team Minutes



Scoping Meeting Minutes



Attendance Register for Scoping Meeting



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ATTENDANCE REGISTER

DATE: 04TH April 2019

VENUE: Huthi

SUBJECT: Nhangano-Siphambanweni Proposed Water Supply Project (Scoping Meeting)

Facilitator:

	Name	Designation	Signature
1	Bonber Mawutsa	Member of Parliament	<i>[Signature]</i>
2	Justice M. Nxumano	Business MAN - HUTHI	<i>[Signature]</i>
3	Mpendulo M. Nxumano	Business man - HUTHI	<i>[Signature]</i>
4	Noziyiba Alantini	Water scheme Member - Dimeke	<i>[Signature]</i>
5	Nomathouba Ntjalintyal	Mabulane ka WAST	<i>[Signature]</i>
6	Khetsive Istshewase	Vice chairperson WAST	<i>[Signature]</i>
7	MSESI Mkhubi	Living-Ge-ke-midini	<i>[Signature]</i>
8	Dueli dukhale	Ngilungu kementi	<i>[Signature]</i>
9	ITRIBI MAMBA	RESURPER - ZIBASHI COMMUNITY	<i>[Signature]</i>
10	MAMUZI SONYASE	MAMONANE 3 DIVISION	<i>[Signature]</i>
11	SINAGA KHELE	Freecople - Zomboge	<i>[Signature]</i>
12	Maudla Lucky Mubhebele	Bucopho - Bulehevi	<i>[Signature]</i>
13	ZAKHELE Jheemel Thwala	Asikela Luma-hubi	<i>[Signature]</i>
14	NKUESHINI R. SIKHATHE	COMMUNITY MEMBER	<i>[Signature]</i>



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15	Ezau v. Nkumalo	Bandawane		
16	Jebulani G. Mthembu	Nkamini		
17	Jack T. Maziyi	Collide Chapters		
18	Sipho Nkonyani	Chair P. w/ 2006		
19	Sbraem Simelane	Chair P. water Res.		
20	Abasalom Ndlangamandla	Induna Katharine		
21	ENQWENI			
22	Amela Nabele			
23	Zedoo Nkomo			
24	Mpendle Muli	Water Chemist		
25	Selby Amab	Baccho		
26	LEHLEH VILANE	JAYINA		
27	Dawid Mashinga			
28	Phumi Mabasa			
29	THEMREKIE Dlamini	Sithalo wemanti		
30	Ntoko VIKANI	PEPS		
31	Meshek Dlamini	Environment / Engineer		
32	BHEKISING SIMELANE	INDUNA NSINGIZINI		
33	Mason Dlamini	Chair of the Quality Project		
34	SIMISO Dlamini	Buccho		
35	Bafana-bafana Sithole	Buccho		



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36	ELVIS SIKHAKHANE	Technician (BWR)			
37	Nomsile Sibonkwa	Human Resources Environmentalist			
38	Mkongwa Makhela	Environmentalist			
39	MUSA GIJIDDA	PROJ. SECRETARY			
40	MALIBO Ndiragandwa	C-101			
41	Ndumiso Maseko	RSCOPRO			
42	Ngwenyane Gumbe	YOUTH			
43	Christopher Mabeleza	Operations Superintendent			
44	Nelle Lubuk	Environmental consultant			
45	Lulu Ndirandze	Environmental consultant			
46	Ntuli Ntuli	EMSC			
47	Tsobie Khumalo	Environmental consultant			
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