REPUBLIC OF NAMIBIA

Auditor-General NAMIBIA
Enhancing Transparent Accountability

PERFORMANCE AUDIT REPORT OF THE AUDITOR-GENERAL ON WATER SUPPLY AND DEMAND MANAGEMENT IN NAMIBIA WITHIN THE MINISTRY OF AGRICULTURE, WATER AND LAND REFORM AND OTHER KEY STAKEHOLDERS

FOR THE FINANCIAL YEARS 2017/2018, 2018/2019, AND 2019/2020

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TO THE HONOURABLE SPEAKER OF THE NATIONAL ASSEMBLY

I have the honour to submit herewith my Performance audit report on Water Supply and Demand Management in Namibia within the Ministry of Agriculture, Water and Land Reform for the financial years ended 2017/2018, 2018/2019 and 2019/2020 in terms of Article 127(2) of the Namibian Constitution. The report is transmitted to the Honourable Minister of Finance in terms of Section 27(1) of the State Finance Act, 1991(Act 31 of 1991) to be laid upon the Table of the National Assembly in terms of Section 27(4) of the Act.

WINDHOEK, MARCH 2022

JUNIAS ETUNA KANDJEKE
AUDITOR-GENERAL

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DEFINITION OF TERMS

Water Demand according to the International Journal of Water Resource Development volume 22, 2006, Issue 4 refers to the measure of the total amount of water used by the customers within the water system. There are several things that can influence the amount of water demanded of your system. One of the most important jobs of a water system is to continually meet this demand without interruption, rain or shine.

Water Distribution according to the Agricultural, Environmental Data Archive (2013) refers to part of water supply network with components that carry potable water from a centralized treatment plant or wells to water consumers in order to adequately deliver water to satisfy residential, commercial, and industrial and firefighting requirements.

Water storage according to the Agricultural, Environmental Data Archive (2013) refers to storage of both potable water for consumption, and non-potable water for use in agriculture. In both developing countries and some developed countries found in tropical climates, there is a need to store potable drinking water during the dry season.

Water Supply according to the Agricultural, Environmental Data Archive (2013) refers to a source, means, or process of supplying water (as for a community) usually including reservoirs, tunnels, and pipelines.

Water Treatment according to the Agricultural, Environmental Data Archive (2013) refers to the act or process of making water more potable or useful, as by purifying, clarifying, softening, or deodorizing it.

The audit report was conducted by:
Mr. Lorenzo Bock, Chief Auditor
Mr. Victor Augustunus, Auditor
Ms. Rhauna Ngwaamwa, Auditor
Ms. Genovefa Shilongo, Auditor

Executive Summary

The Office of the Auditor-General is authorized to carry out performance audits in terms of Section 26(1)(b)(iv) of the State Finance Act, 1991 (Act 31 of 1991) which reads as follows: (The Auditor-General) *"may investigate whether any moneys in question have been expended in an efficient, effective and economic manner".*

Furthermore, Section 26(3) of the State Finance Act, 1991 (Act 31 of 1991) authorised the Office of the Auditor-General to carry out special audits of which environmental audit is one. Therefore, this audit report is a performance audit with an environmental element which is water.

The purpose of the audit report:

To assess whether the Ministry of Agriculture, Water and Land Reform (MAWLR) and key stakeholders have put economic, efficient and effective measures in place for the management of water supply and demand in Namibia.

The major findings, conclusions and recommendations identified during the audit are as follows:

FINDINGS

a) Water Supply Management

i) Water Storage

- During the time of the audit it was found that the Directorate of Water Supply and Sanitation Coordination (DWSSC) under the Ministry of Agriculture, Water and Land Reform (MAWLR) did not implement the Community Based Management Strategy (CBM) over a period of 10 years as required to ensure the rural water supply is managed and owned by water associations.

- At the time of the audit, the DWSSC did not fully implement the operation and maintenance phase of the Community Based Management Strategy. This was because the DWSSC did not develop and implement a need assessment with regards to the parts for repairs and maintenance of water infrastructures and motor vehicle required to visit the water point committees. No documentary evidence of a needs assessment could be provided during the time of the audit by the DWSSC.

- During the time of the audit all visited Local Authorities LA's could not provide guidelines as measurable criteria for the timely maintenance and replacement of water infrastructures and the extend water infrastructures that was replaced resulted into cost savings. Therefore the audit could not determine whether the LAs economically, efficiently and effectively put water infrastructures in place.

- Furthermore, the audit observed during the period under review that the Ministry of Urban and Rural Development (MURD) funded 78 capital projects at a total cost of N$ 849 553 810.54 that include the provision of fresh water by local authorities. However, the MURD could not provide evidence that they inspected the projects or received monitoring reports from the consultants' upon releasing of project funds. As a result the audit could not determine whether the funding was utilized for the intended purposes.

their constitutions legally with the Ministry of Industrialisation, Trade and SME Development (MIT) and the Ministry of Finance (MOF).

- Furthermore, documentary reviews revealed that NAMWATER is unable to fully collect tariffs on a full-cost recovery basis for water supplied. Documentary evidence indicate that NAMWATER related party debtors increased from N$ 372 million to N$ 402 million during the 2018/19 and 2019/20 financial years respectively, whilst the related party debtors was N$ 840 million during the 2017/18 financial years.

- The audit also observed that customer's debt was written off as bad debts amounting to N$ 56 million, N$ 90 million and N$ 75 million during the2017/18, 2018/19 and 2019/20 financial years respectively,

- During the time of the audit all visited LAs could not provide documentary evidence on whether the measures put in place by them will effectively reduce or detect illegal water meters and connections.

- All visited LAs could not provide documentary evidence during the time of the audit as to how they planned and implemented water demand in their areas of jurisdiction except the Municipality of Windhoek.

- During the time of the audit all visited LAs could not provide evidence whether they put measures in place that reduced outstanding water customer debts or to collect all water consumption levies within 30 days during the period under review. The visited LAs could also not provide documentary evidence isolating balances relating to water consumption only, as a result the audit could not determine the correct outstanding water debts or the increase in outstanding water accounts based on consumption specifically.

CONCLUSIONS

a) Water Supply Management

i) Water Storage

- The Directorate of Water Supply and Sanitation Coordination (DWSSC) under the Ministry of Agriculture, Water and Land Reform (MAWLR) did not implement the Community Based Management Strategy (CBM) over a period of 10 years as required to ensure the rural water supply is managed and owned by water associations.

- The DWSSC under MAWLR did not develop and implement a need assessments with regards to the parts for repairs and maintenance of water infrastructures and motor vehicle required to visit the water point committees to avoid the un-utilization of water infrastructures which damages, risking costly repairs and maintenance by DWSSC.

- All visited Local Authorities LA's could not provide guidelines as measurable criteria for the timely maintenance and replacement of water infrastructures and the extend water infrastructures that was replaced resulted into cost savings. Therefore the audit could not determine whether the LAs economically, efficiently and effectively put water infrastructures in place.

whilst the related party debtors was N$ 840 million during the 2017/18 financial years. The audit is therefore not convinced that there is not a continuous risk of higher tariffs for bulk water customers, i.e. LAs which as a result charges higher tariffs for the residents of towns.

- All the visited LAs did not provide evidence on whether they put measures in place that will economically, efficiently and effectively reduce or detect illegal water meters and connections. As a result the audit could not determine whether the LAs provide water sustainably to its consumers.

- All visited LAs could not provide evidence as to how they planned and implemented water demand in their areas of jurisdiction. As a result the audit could not determine whether water demand was economically, efficiently and effectively managed.

RECOMMENDATIONS

a) Water Supply Management

i) Water Storage

- The Directorate of Water Supply and Sanitation Coordination (DWSSC) under the Ministry of Agriculture, Water and Land Reform (MAWL) should implement the Community Based Management Strategy (CBM) in an economic, efficient and effective manner to ensure the rural water supply is managed and owned by water associations.

- The DWSSC under MAWL should develop and implement an economic, efficient and effective need assessments with regards to the parts for repairs and maintenance of water infrastructures and motor vehicle required to visit the water point committees to avoid the un-utilization of water infrastructures which damages, risking costly repairs and maintenance by DWSSC.

- All visited Local Authorities (LAs) should develop and implement guidelines as measurable criteria for the timely maintenance and replacement of water infrastructures to indicate when they have to respond to the repair of a pipe break or by when they planned to upgrade water infrastructures. This guideline should ensure that maintenance and replacement of water infrastructure is economic, efficient and effective.

- MURD should put economic, efficient and effective measures in place that will enable them to conduct inspections when water projects are completed to ensure funding provided by them was used for the intended purposes and also request monitoring reports from the contractors upon releasing of project funds to avoid the risk that contractors install substandard water infrastructures which might result into water shortages for town residents and costly repairs and maintenance for LAs.

- MAWLR should ensure that NAMWATER develop and implement a disaster recovery management system for all the regions to avoid the risk of insufficient water availability to Local Authorities (LAs) and town residents in the vicinity of LAs should a disaster of water shortage occur.

Chapter 1 Introduction

1.1 Background

According to the Namibia's Integrated Water Resource Management Plan (IWRM) "... Namibia is the most arid African country south of the Sahara with low and varied precipitation, from a maximum rainfall of ±650mm in the north east to less than 50mm per year along the coast. It is estimated that only 2% of the rainfall ends up as surface run-off and a mere 1% becomes available to recharge groundwater. The balance of 97% is lost through evaporation."

According to the National Development Plan 5, there is a need to make significant improvement in water demand management and promote water savings measures that influence changes in customer behaviour. There is also room to minimise water losses in pipelines, treatment facilities and distribution networks. Therefore, Namibia's aging and inadequate water infrastructure need to be addressed urgently.

Furthermore, pollution of water causes and underground aquifers is a challenge that needs to be prevented to avoid contamination of potable water resources.

The Government therefore strategize to upgrade existing water infrastructure from 2017-2022, to construct a new bulk water supply infrastructure and improve the management of existing water resources to improve rural water access to save drinking water by 95% and 100% in urban areas.

The Ministry of Agriculture, Water and Land Reform and key stakeholders are responsible to manage water supply and demand in Namibia. They should put in place effective measures to manage water supply and demand through collection, storage, treatment and distribution of water to the general public and businesses in Namibia. However, the collection part of the process was not audited during the main study because it was concluded during the Pre-Study stage of the audit and will be conducted as an audit on its own.

1.2 Motivation

The audit was motivated by problem indicators identified during the preliminary (planning) audit in terms of the following:

- High water losses with available water infrastructure;
- Directorate of Water Supply and Sanitation Coordination (DWSSC) did not maintain and replace old water infrastructures at rural areas timely;
- Local Authorities did not adequately maintain and replace old water infrastructures timely;
- NAMWATER did not adequately maintain and replace old water infrastructures timely;

Chapter 2 Audit Design

The audit was conducted in accordance with the performance auditing standards and guidelines issued by the International Organization of Supreme Audit Institutions (INTOSAI). The Guidelines and policies conform to International Standards of Supreme Audit Institutions (ISSAIs) and provide a guide on the execution and reporting of audit findings. The audit also used the Working Group on Environmental Audits (WGEA) guideline on the auditing of water issues as reference. The audit was based on the *combined approach* where aspects of *problems*, *systems* and *results* were considered.

2.1 Audit Objective

To assess whether the Ministry of Agriculture, Water and Land Reform (MAWLR) and key stakeholders have put economic, efficient and effective measures in place for the management of water supply and demand in Namibia.

2.2 Audit scope

2.2.1 Audit object

The main study focused on the programs, policies and measures that the MAWLR and key stakeholders have put in place to economically, efficiently and effectively manage water supply and demand in Namibia.

2.2.2 Time Limit

The main study covered three financial years, 2017/18, 2018/19 and 2019/20 in order to establish a trend or developments and ensure the relevancy of the audit.

2.2.3 Geographical Coverage

The geographical coverage for the MAWLR cover all 14 regions which are divided in four clusters. However, due to the vastness of the regions the audit sampled six regions from the five clusters to conduct fieldwork namely Khomas, Hardarp, Kunene, //Kharas, Ohangwena and Kavango West, whereas the Erongo, Oshana, Omusati and Oshikoto regions were covered during the Pre-study stage.

2.3 Methodology of the Audit

Interviews, documentary reviews, and physical observations were carried out to collect information and to corroborate evidence in order to conclude on audit objectives and questions. The aforementioned evidence was gathered to answer the audit criteria and questions as indicated in **Appendix II.**

2.3.6 Physical Observations

Stratified random sampling was also applied to select places for physical observation to have an equal representation of the different water management approaches by MAWLR and key stakeholders.

2.3.7 Documentary Reviews

The audit applied simple random and stratified sampling to select documentation for audit, because the information is not homogenous.

2.4 Limitations

The main study experienced limitations which resulted in auditors to be unable to conduct a thorough analysis on the root causes in respect of the following:

1. Hardap region regarding maintenance and repairs of water points;
2. NAMWATER regarding how operations are conducted;
3. Nkurenkuru, Helao Nafindi Town Councils; Mariental, Keetmanshoop and Windhoek Municipalities regarding the water infrastructure inventory management; and
4. Department of Environmental Affairs under Ministry of Environment, Forestry and Tourism and Directorate of Housing, Habitat, Planning and Technical Service Coordination under the Ministry of Urban and Rural Development.

This is explained as follows:

- DWSSC did not provide all documentary evidence requested for maintenance and repairs of water points and for samplings purposes to select water points for physical observations and interviews. The audit could therefore not conduct physical observations at the water points in the Hardap region;
- NAMWATER regional offices referred the audit to the head office to obtain information and clarification regarding how specific operations are conducted. However, despite countless emails and letters send to NAMWATER, they did not provide all the documents for audit purposes;
- Nkurenkuru, Helao Nafindi Town Councils; Mariental, Keetmanshoop and Windhoek Municipalities did not provide all documentary evidence to establish the water infrastructure inventory management and corroborate with interviews and physical observations;
- The Ministry of Health and Social Services did not provide documentary evidence with regards to the monitoring and testing of water quality at Local Authority level; and
- Department of Environmental Affairs under Ministry of Environment, Forestry and Tourism and Directorate of Housing, Habitat, Planning and Technical Service Coordination under the Ministry of Urban and Rural Development did not provide all the documentary evidence for audit purposes.

Chapter 3 Description of the Audit Area

3.1. Audit Area

3.1.1 Mandate

The Ministry of Agriculture, Water and Land Reform (MAWLR) is mandated by the Water Act, 1956 (Act No.54 of 1956) "to consolidate and amend the laws relating to the control, conservation and use of water for domestic, agricultural, urban and industrial purposes; to make provision for the control, in certain respects, of the use of sea water for certain purposes; for the control of certain activities on or in water in certain areas; for the control of activities which may alter the natural occurrence of certain types of atmospheric precipitation; for the control, in certain respects, of the establishment or the extension of townships in certain areas; and for incidental matters."

3.1.2 Vision

"To be recognized as the leading contributor to food security, agro product competitiveness and increase and equitable access to our natural resources for improved livelihood, wellbeing and wealth for all."

3.1.3 Mission Statement

"To promote and manage the sustainable utilization and development of water resources for a prosperous Namibia."

3.1.4 Objectives

- "To promote sustainable socio-economic development through effective management, control and use of water resources and securing equitable access of water resources and securing equitable access of water to all sectors of the Namibian population;
- To act as guardian over the water resources of Namibia, administrating water legislation, controlling water abstraction and facilitating the equitable allocation of water resources to all users;
- To assume the responsibility for determining the potential of water resources of Namibia and to implement measures to ensure the protection and sustainable utilization of the water resources of the country; and
- To execute strategic water resource development planning as regulating and controlling of activities in the water sector."

3.1.5 Organizational Structure

The Ministry is headed by the Minister. The Executive Director (ED) reports to the Minister and there are three Departments which are, Department of Planning, Marketing & Administration; Department of Water Affairs and Forestry; and Department of Agricultural

3.1.8.2 Ministry of Health and Social Services

The Ministry is mandated by the Public and Environmental Health Act, 2015 (Act No.1 of 2015) "… to provide a framework for a structured uniform public and environmental health system in Namibia; and to provide for incidental matters."

3.1.8.3 Ministry of Urban and Rural Development

The Ministry is mandated by the Local Authorities Act, 1992 (Act No.23 of 1992), "…to provide the determination, for purposes of local government, of local authority councils; and to define the powers, duties and functions of local authority councils; and to provide for incidental matters.

3.1.8.4 Local Authorities

Local Authorities are mandated by the Local Authorities Act, 1992 (Act No.23 of 1992), "…to provide the determination, for purposes of local government, of local authority councils; and to define the powers, duties and functions of local authority councils; and to provide for incidental matters."

3.1.8.5 Namibia Water Corporation (NAMWATER

NAMWATER is mandated by the Namibia Water Corporation Act, 1997 (Act No.12 of 1997), "… to provide for a more efficient use and control of water resources; and to provide for incidental matters."

The Ministry of Agriculture, Water and Land Reform (MAWLR) and key stakeholders are currently applying a fragmented approach to manage water supply and demand in Namibia. This means that the sub-system within the main system headings water storage, treatment and distribution is mutually exclusive because of the different functions of stakeholders and will not follow a strict logical flow. This is explained as follows:

3.2.1 Water Supply Management

3.2.1.1 Water Storage

From water collection points at water resources, the water is stored in pipes, ground dams and reservoirs. NAMWATER (Bulk Water Supply), Local Authorities (Provision of water in their Jurisdiction) and the Ministry of Agriculture, Water and Land Reform (Rural Water Supply) have the responsibility to put in place and maintain water infrastructures to ensure water is safely stored, whilst the Ministry of Urban and Rural Development at their own discretion provides funding to Local Authorities to construct water infrastructure and ensure that the funding is spend on the intended purposes (Water Infrastructures) by Local Authorities.

Moreover, the Ministry of Environment, Tourism and Forestry must ensure that the water infrastructures put in place operates with valid Environmental Management Plans and Environmental Clearance Certificates. This is done to ensure that the water infrastructures do not cause damage to the environment.

The process of the abovementioned stakeholders in terms of constructing and maintaining water infrastructures for storage are explained as follows:

1) Community Based Management Strategy for Rural Water Supply

The Ministry of Agriculture, Water and Land Reform (MAWLR) through its Department of Water Supply and Sanitation Coordination developed the Community Based Management Strategy as a practical guideline for the implementation of Community Based Management in Rural Water Supply. Community based Management is about the way in which communities and the MAWLR will manage rural water supply in communal areas of Namibia. This is clarified as follows:

According to Section 1.3.2.2 of the National Water Policy of 2000 "...in 1997, in keeping with the government policy of decentralizing management functions to regional and community level, approval was given to implement a policy of Community-Based Management (CBM) of rural water supplies in accordance with Water Supply and Sanitation Sector Policy (WASP) over a period of 10 years, responsibility for managing and paying for water services will be progressively devolved to Water Associations and Water Point Committees based on discrete installations. Water Point Committees will be recognized in law and will be able to control consumers' access to water points and organise payment for water use."

According to the CBM guideline, "... the CBM strategy is implemented over a period of 10 years, starting on August 1, 1997 and ending on July 31, 2007 by which date Rural Water Supply (RWS) is managed and owned by water associations. Implementation of the strategy

5) Funding Urban Water Infrastructure

- **Ministry of Urban and Rural Development**

Section 3 (a) & (b) of the Trust Fund for Regional Development and Equity Provisons Act, 2000 (Act No.22 of 2000) states that, " the objects and purposes of the Fund are -
(a) to financially assist with -
(i) the development of regions and local authorities; and
(ii) the implementation, through the active participation of the local people and in accordance with the Decentralization Enabling Act, 2000, of the decentralization programmes at regional and local authority levels in Namibia."

"(b) to provide, either at its own initiative or when so requested by a regional council or a local authority council, and on the terms and conditions to be determined by the Board, funding for –

(i) technical assistance, guidance and training in the identification, planning, preparation, appraisal, monitoring, evaluation, financing, implementation or management of developmental projects; and
(ii) the formulation of specific projects, needs or proposals in regions or local authorities

6) Maintenance & Replacement of Bulk Water Infrastructure

- **NAMWATER**

Subsection (1) (b) & (d) of Section 6 of the Namibia Water Corporation Act, 1997 (Act No.12 of 1997) states that, NAMWATER should "...acquire, plan, design, construct, extend, alter, maintain, repair, operate, control and dispose of waterworks. ... investigate, research and study matters relating to water resources, waterworks and the environment."

Furthermore, Section 30 (i) of the Namibia Water Corporation Act, 1997 (Act No.12 of 1997) states that, "the Corporation shall be entitled to capitalise such portion of its profits as the Board may deem necessary for the financing of future capital works, and any amounts so capitalised and not immediately required to be expended shall be deposited in a reserve account.

Furthermore, according to subsection (2) the Corporation may establish and operate such reserve funds as the Board may deem necessary, and may invest therein such moneys as the Board may from time to time determine."

Section 33 of the Namibia Water Corporation Act, 1997 (Act No.12 of 1997) states that,
(1) The Board shall within six months after the end of each financial year of the Corporation cause to be prepared and submit to the Minister a report of the Corporation's operations and activities during the relevant financial year, including –
(a) a copy of its audited financial statements;
(b) a copy of the auditor's report;
(c) a statement of the measures, if any, taken by the Corporation in respect of the duties imposed on the Corporation under section 12."

N$100 000 or to imprisonment for a period not exceeding 10 years, or to both such fine and such imprisonment."

b) NAMWATER

Section 5 (a) of the Namibia Water Corporation Act, 1997 (Act No.12 of 1997) states that, "...the objects of the Corporation shall be to carry out efficiently, and in the best interests of the Republic of Namibia –

(a) the primary business of bulk water supply to customers, in sufficient quantities, *of a quality suitable for the customers' purposes*"

c) Local Authorities

Section 45 of the Public and Environmental Health Act, 2015 (Act No. 1 of 2015) states that, "...duty of local authority to furnish potable water supplies: A local authority must provide and maintain or cause to be provided and maintained, as far as may be reasonably possible, a sufficient supply of potable water for drinking and domestic purposes, whether the supplies be derived from sources within or beyond the local authority area."

3.2.2 Water Demand Management

3.2.2.1 Water Distribution

A water distribution system is a part of water supply network with components that carry potable water from a centralized treatment plant or wells to water consumers in order to adequately deliver water to satisfy residential, commercial, industrial and firefighting requirements.

The Ministry of Agriculture, Water and Land Reform must ensure that water is distributed to rural areas, NAMWATER must ensure that water is distributed to Local Authorities and other bulk water customers such as mines and Local Authorities must ensure that potable water is supplied to water consumers in their areas of jurisdiction. This is explained as follows:

1. Distributing Water to Rural Areas

a) Ministry of Agriculture, Water and Land Reform

According to the Water supply and Sanitation Policy of 2008, "...overall water resource inventory, monitoring, control and management issues are to remain the responsibility of the Ministry of Agriculture, Water and Land Reform.

- **Water Point Committee Functionality**

According to paragraph 5.1 of the Constitution of the Water Point Associations, "The Local Water Committee shall consist of at least ten (10) registered water users and be administered by a management committee of not less than five (5) people and no more than seven (7) including ex officio members whom must be at least be 21 years of age. Members of the

- **Formalization of Water Point Committees**

According to Section 1.3.2.2 of the National Water Policy of 2000 "...in 1997, in keeping with the government policy of decentralizing management functions to regional and community level, approval was given to implement a policy of Community-Based Management (CBM) of rural water supplies in accordance with WASP. Over a period of 10 years, responsibility for managing and paying for water services will be progressively devolved to Water Associations and Water Point Committees based on discrete installations. Water Point Committees will be recognized in law and will be able to control consumers' access to water points and organise payment for water use."

2) Distributing Water to Bulk Water Customers

a) NAMWATER

Subsection 1-3 of Section 9 of the Namibia Water Corporation Act, 1997 (Act No.12 of 1997) States that, (1) It is the duty of the Corporation to consider each application for bulk water supply by any potential customer and, subject to the availability of water of the required quantity and quality, to offer to accept the applicant as a customer.
(2) Bulk water supply to the Corporation's customers shall take place in terms of a written agreement between the Corporation and each customer.
(3) The Corporation shall negotiate with its major relevant customers prior to establishing new waterworks which will affect the cost of water supply to those customers."

- **Cost Recovery from Bulk Water Customers**

Furthermore, Subsection (1) of section 7 of the Namibia Water Corporation Act, 1997 (Act No.12 of 1997) states that, " in addition to the powers conferred by the Companies Act, as may be qualified by this Act, the Corporation shall have power to do all such acts as are necessary, expedient or incidental to the achievement of its objects and the performance of its functions under this Act, and in particular shall have power to -
(a) determine and levy, in consultation with the Minister, tariffs on a full cost-recovery basis for water supplied;
(b) determine and levy charges for services rendered, facilities provided or rights leased by the Corporation."

3) Distributing Water to Town Households
a) Local Authorities

Section 34 of the Local Authorities Act, 1992 (Act No. 23 of 1992) states that, "(1) For purposes of the provisions of section 30 (1) (a), a local authority council may -
"... (c) provide water meters for purposes of determining the quantity of water supplied out of any waterworks to residents in its area or other persons and any accessories in relation to such water meters, and require any such resident or other person by notice in writing to provide an appropriate place on his or her immovable property where such water meters and

Chapter 4: Findings

4.1 Water Supply Management

4.1.1 Water Storage

a) Community Based Management Strategy for Rural Water

During the time of the audit it was found that the Directorate of Water Supply and Sanitation Coordination (DWSSC) under the Ministry of Agriculture, Water and Land Reform (MAWLR) did not implement the Community Based Management Strategy (CBM) over a period of 10 years to ensure the rural water supply is managed and owned by water associations. The following shortcomings were found:

i. Maintenance & Replacement of Rural Water Infrastructure

- **The Ministry of Agriculture, Water and Land Reform**

Interviews conducted revealed that the DWSSC within the MAWLR repaired and replaced water infrastructure at the water points on a first come first serve basis but no documentary evidence was provided to the auditors to support the statement.

However, interviews conducted at the visited regions with DWSSC and water point committees during the time of the audit revealed that, the DWSSC did not repair and replace infrastructure at water points when breakdowns are reported by the Water Point Committees.

DWSSC officials and visited community members further stated that these breakdowns placed a huge financial burden on the Water Point Committees as they have to cover the cost of repairs and maintenance that was the responsibility of the DWSSC. No documentary evidence was provided to the auditors on the financial expenditure incurred.

The data analyzed by the audit from some of the documents received from DWSSC during the time of the audit revealed that regional offices in Kavango West and Ohangwena regions takes on average five months to attend to community callouts at visited water points.

However, DWSSC Kunene regional office could not provide documentary evidence to the auditors to verify how long it takes to attend to community callouts at all the 19 visited water points in the Kunene region. Interviews with DWSSC and water point committees further revealed that it took in some instances between 10-15 years to attend to community callouts.

Comments by the Ministry of Agriculture, Water and Land Reform (MAWLR)

The MAWLR reported the following challenges for the respective regions:

1. Budget
Insufficient budget allocation to water and sanitation to perform operational activities such as maintenance activities.
2. Transport

At the time of the audit, 18 out of 68 (26 %) visited water points in Ohangwena, Okavango West and Kunene regions were without water. This is indicated in the table 3 below.

Table 3: Water points without water due to lack of maintenance and repair

Water Point	Region	Date they last had water
1.Oshandi	Ohangwena Region	2014 (Non-Payment)
2. Shigedha		2006 (Non-Payment)
3.Uushate		January 2021 (Water Pressure)
4. Ohenghono		2020 (Water Pressure)
5. Elundu		January 2021 (Water Pressure)
6. Uupili		2017
7. Oshuuli		-
8. Ombwa		2019
9. Ohamukoka		2020
10. Onebungu		November 2020
11. Omupanda		2017
12. Omutwewondjamba		2018
13. Belmond	Kunene Region	Salty water since beginning
14. Bloukrans		-
15. Ohongajokatjo		(Dried up)
16. Okatumba South		(Hand pump pressure not building up)
17. Tjitunganana		(Destroyed by elephants in August 2020)
18. Ovikange		(Hand pump pressure not building up)

Source: OAG
- Information not provided

This resulted in community members in the Kunene region to travel long distances to collect water and community members in the Ohangwena and Kavango West collects water from wells and rivers for drinking and cooking which is not fit for human consumption and can pose risk to human health. See Picture 1 below.

The DWSSC did not develop and implement a need assessments with regards to the parts for repairs and maintenance of water infrastructures and motor vehicles required to visit the water point committees. No documentary evidence of a needs assessment could be provided during the time of the audit by the DWSSC.

Table 4: Water Losses in CM³

Local Authority	Region	Water Loses in CM ³
Oranjemund Town Council	//Kharas	1 250 922 (2018/19) 1 414 772.50 (2019/20)
Nkuruenkuru Town Council	Kavango West	Evidence not provided
Helao Nafidi Town Council	Ohangwena	Documentary reviews revealed that, the Town Council could not determine the accuracy in water losses because water meters are incorrectly positioned and are excluded by NAMWATER in their meter readings.
Opuwo Town Council	Kunene	Evidence not provided.
Municipality of Keetmanshoop	//Kharas	641 873 (2017/18) 453 008 (2018/19) 342 541 (2019/20)
Municipality of Windhoek	Khomas	Evidence not provided.
Municipality of Mariental	Hardap	79 978.18 (2017/18) 89 613.18 (2018/19) 224 990.00 (2019/20)

Source: Documents from LAS

Interviews further revealed the following:

- Municipality of Windhoek indicated that they did not budget for water capital expenditure during the period under review, therefore, capital replacement program is behind schedule;
- Municipality of Keetmanshoop indicated that they only close valves to stop water while there is a pipe break, however, they do not have an early warning system to conduct timely repairs and maintenance of water infrastructures;
- Municipality of Mariental indicated that they cannot fully upgrade their water system with U-PVC pipes, because funds were spend on other activities. They have asbestos pipes which are more than 25 years old;
- Oranjemund Town Council stated that they still have asbestos pipes that need to be replaced, the asbestos pipes breaks down regularly;
- Opuwo Town Council stated that they are failing to balance water losses;
- Helao Nafidi Town Council stated that they do not have an age inventory on infrastructure, no documents guiding them on maintenance and no maintenance plan in place; and
- Nkurenkuru Town Council indicated that their water infrastructure is relatively new, and they are not experiencing any break-downs. They have a yearly budget for the maintenance and replacement of water infrastructure.

how NAMWATER respond to the maintenance and replacement of bulk water infrastructure for the period under review.

Comments provided by NAMWATER:

"Disaster Recovery Planning is an important area currently under consideration by NAMWATER. In the event of water outages, sensitive supply points such as hospitals and schools are catered for through alternative measures. In some areas disaster recovery management measures have been put in place to be able to respond to power supply interruptions which also affect water supply in most cases. It is important to point out that disaster recovery for water supply does not only relate to areas under the control of the bulk water supplier."

Document review of the 5-Year Capital Development Plan for 2022-2026 (5YP) indicated that it describes the proposed acquisition and/or establishment of infrastructure and non-infrastructure assets (i.e. Property, Plant and Equipment and Intangible Assets), however auditors could not analyse the information as it falls outside the scope of the audit.

NAMWATER is not complying with Section 33 of the Namibia Water Corporation Act, 1997 (Act No.12 of 1997) in terms of creating an asset replacement reserve for existing water infrastructure in the financial statements and timely ensuring that cash is available to fund the asset replacement reserve to reduce the risk that NAMWATER will rely on the government for additional funds, increase tariffs for bulk water customers and rely on additional external borrowing.

Comments by NAMWATER:

"The asset replacement reserve has been used to demonstrate assets taken over on historical costs. In line with Section 30(1) the capitalization of the reserve fund from profits for future capital projects is done through the revaluation reserve as this is consistent with IFRS accounting policy as the tariff models applied are based on replacement costs of infrastructure. That is why annually transfers occurs between revaluation reserve and retained income. Total reserves of N$ 2 047 109 770 plus retained income N$ 2 170 824 095 should be compared against the asset base N$ 5 418 549 450 to ascertain the funding level. Funding gap of the corporation is there given the records of debtors, limited government contribution towards infrastructure roll out.

Documentary evidence provided by NAMWATER indicate that they did no evaluate water infrastructures on market valuation/created adjustments in the revaluation reserve account to determine the true value of the replacement of existing water infrastructures.

Furthermore, tariffs of bulk water customers were initially based on historical costs figures of water infrastructures and not on market valuation which resulted in a funding gap to replace existing water infrastructures. The audit further found that NAMWATER have insufficient cash flows to fund existing water infrastructures that are deemed as work in progress. See table 5 below:

4.1.2 Water Treatment

- **The Ministry of Health and Social Services**

Interviews with the Directorate of Primary Health Care (DPHC) under the Ministry of Health and Social Services (MOHSS) revealed that they do not request Local Authorities to provide evidence in terms of Section 46 of the Public and Environmental Health Act, 2015 (Act No.1 of 2015) on water quality and treatment. The interview at the time of the audit could not provide a specific reason why the MOHSS have not requested the information.

As a result, MOHSS is unaware on the extent Local Authorities provide clean water to water consumers.

The DPHC could not provide documentary evidence on whether a chief health officer or a person authorized in writing, inspected and examined Local Authorities sources of water supply or water works and took the sample of water when considered necessary to do so as required by Subsection 1&2 of Section 47 of the Public and Environmental Health Act, 2015 (Act No.1 of 2015). This risks the untimely detection of pollutions in water resources which is a health risk to the general public.

vii) NamWater

According to a Chemical Water Analysis single report NamWater do conduct water quality tests on LAs however the auditors were not provided with evidence whether the water quality results have been communicated to the LAs. The audit was not provided with documents for request by the Las for testing by NamWater and result the audit could not determine whether NamWater conducted water quality tests timely or whether they are ready to respond to emergencies when the water is polluted.

<u>Comments by NamWater</u>

NamWater must ensure that the drinking water that is supplied to all the Local Authorities (LA) meets and complies with the Namibian Drinking Water Quality Standards and Guidelines as stipulated in the Water Resources Management Act, 2013 (No.11 of 2013). NamWater's current obligation to ensure that water is tested and is of drinking water standard stops at the sales meter of every customer, and thereafter the responsibility to further safeguard the quality of the water rest with individual customers. The current water quality testing protocols between NamWater and individual customers works as follows:

- *All samples from Local Authorities in Namibia are done on an own request basis.*
- *For example the Municipality of Omarura/Otjiwarongo will contact the NamWater (NW) laboratory, whereby a correspondence email/telephonic enquiry is conducted for a quotation like for any private customer.*
- *NamWater will explain the Standard Water Quality Testing & Operating Procedures (SWQT&OP) to them and LA will send the samples via courier to the NW laboratory.*
- *The LA will receive an invoice for the services rendered and the results are released via email. Note: An example is attached in this regard.*

a) Water Point Committee Functionality

The DWSSC could not provide evidence that they planned or conducted inspections at the water points in Ohangwena, Okavango West and Kunene regions during the period under review. The lack of inspections by DWSSC resulted in water point committees to function ineffectively as indicated in the paragraphs below.

During the time of the audit it was found that 27 out of 68 (40%) of all the visited water points in the Kunene, Ohangwena and Kavango West regions had less than five management committee members contrary to the required ten as per their constitutions. The DWSSC could also not provide documentary evidence whether they ensured that water point committees are continuously operating with at least 10 registered water users during the period under review. Interviews revealed that the members of the management committees at all 68 visited water points in the Kavango West, Ohangwena and Kunene regions did not provide evidence that they conduct Annual General Meetings (AGMs) and general meetings as required. As a result, this impact the management and operation of the water points as the management committees do not assess the performance and plans of the water points.

Physical observation revealed that 40 out of 68 (59%) visited water infrastructure were damaged. The audit could not determine the duration water infrastructures were damaged, due to a lack of information. The following pictures below illustrate some of the damaged water point infrastructure.

Picture 2: A broken tap handle and leaking water tanks in Ohangwena Region

Source: OAG Own Picture

Picture 4: Diesel spillage on the ground

Source: OAG Own Picture

The audit also found that the DWSSC within MAWLR did not fully ensure that rural communities were supplied with water within the prescribed maximum walking distance of 2.5 km. At the time of the audit physical observations revealed that, 32 of the 68 (47 %) visited water points communities were walking more than 2.5 km to the nearest water points.

Data analyzed revealed that community members in the Okavango West and Ohangwena regions walk a distance of more than 5 km on average to the nearest water point to collect water. The audit further found that some rural communities within the said regions do not have water points in their respective villages and walk about 7 km on average to the nearest villages' water point within the said regions.

As a result, communities resolve to consume water from the wells and earth dams that are not fit for human consumption and may pose health hazard. This is indicated in picture 5.

Picture 5: A well where community members draw water for consumption.

Source: OAG Own Picture

The audit also found that the DWSSC did not ensure that Water Point Committees were legally protected. As a result, Water Points Committees visited were faced with the following challenges in terms of managing the water points:

- They are not able to ensure that community members contribute financially for the maintenance and repairs of water points infrastructures, since not all members are contributing;

x) Cost Recovery from Bulk Water Customers

Documentary reviews revealed that NAMWATER is unable to collect tariffs on a full-cost recovery basis for water supplied. Documentary evidence indicate that NAMWATER related party debtors increased from N$ 372 million to N$ 402 million during the 2018/19 and 2019/20 financial years respectively, whilst the related party debtors was N$ 840 million during the 2017/18 financial years.

The audit also observed that customer's debt was written off as bad debts amounting to N$ 56 million, N$ 90 million and N$ 75 million during the2017/18, 2018/19 and 2019/20 financial years respectively,

Lack of full cost recovery of water infrastructures expenditures risk higher tariffs for bulk water customers which charges higher tariffs for the residents of towns. NAMWATER could not provide evidence whether its debt collection policy is properly executed.

Comments by NAMWATER:

"Unable to collect tariffs due to inability and unwillingness to pay by local authorities. Hence some debtors increased. Customers not written as bad debts but rather provided for as provision for impairments due to high risks of recoverability due to ageing debt. The amount written off was interest charged on debts that are overdue that have not been paid. The capital portion of the debt has been provided for.

Collection of tariffs

- *Implementation of prepaid metering systems;*
- *Disconnection and connection process to collect debt;*
- *Engagement with Government on local authority outstanding debt; and*
- *Technical cooperative assistance to local authorities on the debt management."*

4.1.2.3 Distributing Water to Town Households

xi) Local Authorities

During the time of the audit all visited LAs could not provide documentary evidence on whether the measures put in place will effectively reduce or detect illegal water meters and connections. As a result the audit could not determine whether the LAs provide water sustainably to its consumers. The audit could therefore not corroborate the following interviews:

- Municipality of Windhoek indicated that water meter readers are employed to read water consumption on monthly basis and should water meter readers report any illegal tampering with Municipal water meters, it is attended to and perpetrators normally receive a fine;
- Municipality of Keetmanshoop indicated that they use the Finstel accounting system to verify if illegal water meters exists through water meter readers;

xiii) The Municipality of Keetmanshoop indicated that private boreholes are not registered with the Municipality. They conducted a study for their own boreholes;
xiv) The Municipality of Mariental indicated that they do not have any boreholes;
xv) Oranjemund Town Council indicated that they have a scada system in place to monitor the water levels and the overflow of reservoirs;
xvi) Opuwo and Helao Nafidi Town Councils indicated that they have no boreholes; and
xvii) Nkurenkuru Town Council indicated that they have no service plan for boreholes.

Collection of Outstanding Water Accounts from Town Households

During the time of the audit all visited LAs could not provide evidence whether there are measures in place that reduce outstanding water customer debts or collect all water consumption levies within 30 days during the period under review. The visited LAs could also not provide documentary evidence isolating balances relating to water consumption only, as a result the audit could not determine the correct outstanding water debts or the increase in outstanding water accounts based on consumption. Interviews and documentary reviews with visited LAs further indicated the following:

- Municipality of Windhoek indicated that they disconnect water supply to premises to entice payment or make arrangements for settling debt. In extreme cases the Municipality block electricity accounts and restore it after settlement of water debt. Pensioners and vulnerable customers remain a concern and hence the Municipality has embarked on a journey to start installing pre-paid water meters. Documentary reviews revealed that water related outstanding accounts increased from N$ 50 674 461 (2017/18 financial year) to N$ 61 751 026.77 (2018/19 financial year) to N$ 77 800 480.06 (2019/20 financial year);
- Municipality of Keetmanshoop indicated they conduct disconnection of water. However, political reasons of councillors deter disconnections. Further, their credit policy is outdated and can therefore not be enforced. Documentary reviews revealed that water related outstanding accounts increased from N$ 94 808 771.02 (2017/18 financial year) to N$ 102 842 520.50 (2018/19 financial year) to N$ 132 679 627.52 (2019/20 financial year);
- Municipality of Mariental indicated that they have a credit control policy in place but it is not implemented as they do not disconnect water. No evidence was provided regarding outstanding water related accounts;
- Oranjemund Town Council indicated that they have a credit and debit control policy, however, the involvement of politicians hinders the effective collection of water debts. No evidence was provided regarding outstanding water related accounts;
- Opuwo Town Council indicated the following
  - ➢ Their bad debts are very high even though they have signed agreements with customers;
  - ➢ They conduct water disconnections of customers who owes N$ 1000.00 and above;
  - ➢ They have a credit control policy, but do not enforce it, because it is not recognized by law; and

Chapter 5: Conclusions

Water Supply Management

Water Storage

a) The Directorate of Water Supply and Sanitation Coordination (DWSSC) under the Ministry of Agriculture, Water and Land Reform (MAWLR) is ineffective and inefficient as they did not implement the Community Based Management Strategy (CBM) over a period of 10 years as required, to ensure the rural water supply is managed and owned by water associations.

b) There is inefficient conduct and implementation of need assessments and uneconomical utilisation of funds with regards to the parts for repairs and maintenance of water infrastructures and motor vehicles to carry out the required duties and responsibilities by DWSSC.

c) The lack of a guideline within all visited Local Authorities results ineffective and inefficient maintenance and replacement of water infrastructures and extend to when they are replaced.

d) There is ineffective training to enhance technical skills and assistance to LAs by the MURD.

e) Inefficient inspection and monitoring the allocation and spending on capital projects for the provision of fresh water by the LAs.

f) NAMWATER did not convince the audit that a sufficient disaster recovery management system for water is in place to avoid the risk of insufficient water availability to Local Authorities (LAs) and town residents in the vicinity of LAs.

<u>Comments by NAMWATER</u>

Disaster Recovery Planning is an important area currently under consideration by NAMWATER. In the event of water outages, sensitive supply points such as hospitals and schools are catered for through alternative measures. In some areas disaster recovery management measures have been put in place to be able to respond to power supply interruptions which also affect water supply in most cases. It is important to point out that disaster recovery for water supply does not only relate to areas under the control of the bulk water supplier."

g) Inefficient and ineffective oversight and regulation of operations by the MAWLR.

h) NAMWATER did not develop an asset replacement reserve based on market values timely and as a result experience funding gaps to replace water infrastructures and as a result might require additional funds from the government, increase tariffs, rely on external borrowing and experience regular pipe breakdowns.

customers which will determine the water tariffs on a full cost recovery basis for water supplied.

- NAMWATER is unable to collect tariffs on a full-cost recovery basis for water supplied because related party debtors increased from N$ 372 million to N$ 402 million during the 2018/19 and 2019/20 financial years respectively. The audit is therefore not convinced that there is not a continuous risk of higher tariffs for bulk water customers, i.e. LAs which as a result charges higher tariffs for the residents of towns.

- All the visited LAs did not provide evidence on whether they put measures in place that will economically, efficiently and effectively reduce or detect illegal water meters and connections. As a result the audit could not determine whether the LAs provide water sustainably to its consumers.

- All visited LAs could not provide evidence as to how they planned and implemented water demand in their areas of jurisdiction. As a result the audit could not determine whether water demand was economically, efficiently and effectively managed.

- The visited LAs (4 out of 6) did not provide evidence as to how they controlled the sustainable use of boreholes in their areas of jurisdiction.

- All the visited LAs could not provide evidence whether they put measures in place that reduced outstanding water customer debts or to collect water consumption levies within 30 days during the period under review.

government, increase tariffs, rely on external borrowing and experience regular water infrastructure breakdowns.

The Department of Environmental Affairs (DEA) under the Ministry of Environment, Forestry and Tourism (MEFT) should put in place economic, efficient an effective measures that will enable them to conduct inspections to ensure that listed activities as per Environmental Management Act, 2007 (Act No.7 of 2007) are not under taken without a valid Environmental Clearance Certificates (ECCs) and Environmental Management Plans (EMPs) to timely mitigate the negative impacts of these projects on the environment.

The DEA should economically, efficiently and effectively coordinate with MURD in terms of sharing information on water projects to ensure all water related projects operates with ECCs.

Water Treatment

a. The Directorate of Primary Health Care (DPHC) under the Ministry of Health and Social Services (MOHSS) must ensure proper coordination and efficient reporting regarding water quality and treatment to provide clean water for consumers.

b. The DPHC should put measures in place that will enable a chief health officer or a person authorized in writing to inspect and examine LAs sources of water supply or water works and take the sample of water when considered necessary to do so timely to avoid the risk of pollutions to water resources which is a health risk to the general public.

c. LAs should also conduct their own water quality tests to avoid the risk that water pollutions might not be timely detected by them and might not be ready to respond should a case of a major pollution occur.

d. NamWater should finalise formulating the Water Quality Reporting framework for all its Bulk Water Customers, as well as Retail Customers in view of the Bulk Water Supply Agreements and Service Level Agreements that are being revised or reviewed.

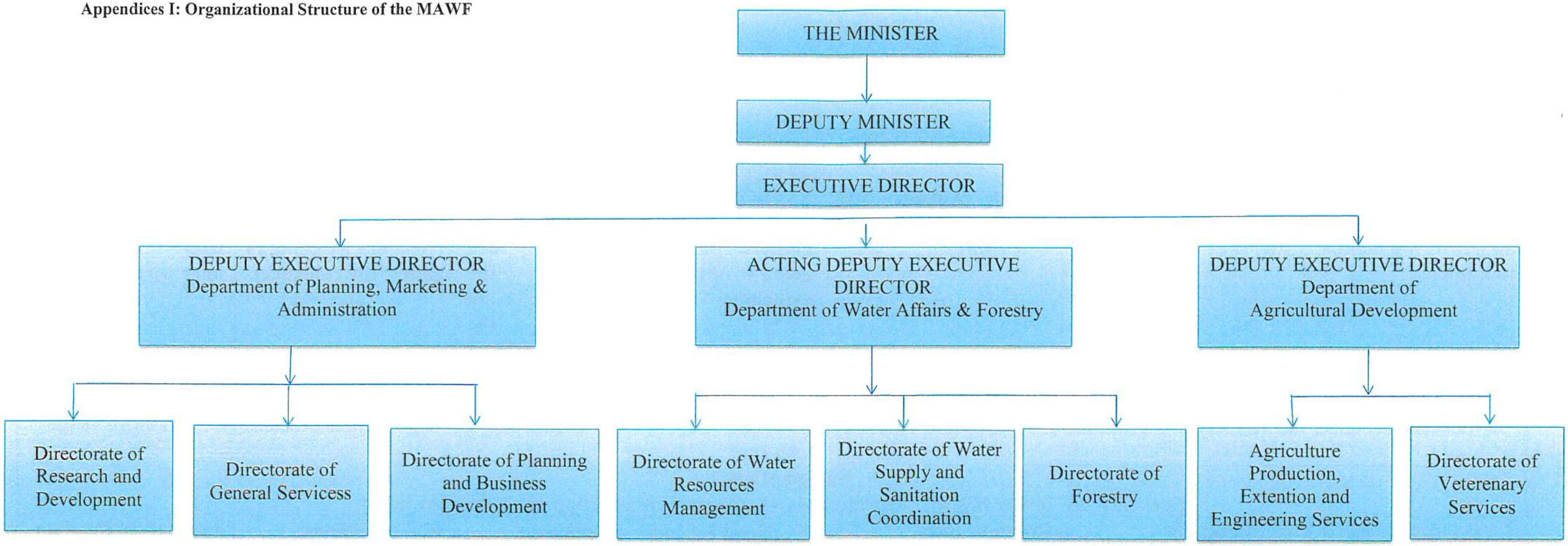
Water Demand Management: Distribution

- The DWSSC should plan and economically, efficiently and effectively conduct inspections at the water points to ensure water points function effectively.

- DWSSC also ensure that the water point committees constitution are recognized by the law to avoid loopholes for water points not to function effectively.

- MAWLR should ensure that NAMWATER provide sufficient evidence on how they considered applications of potential customers based on the availability of water, of the required quantity and quality. This will enable the audit to determine whether NAMWATER took into consideration the affordability potential of water customers when they approved an application to avoid the risk their consumers will be not be able to pay tariffs.

Appendices I: Organizational Structure of the MAWF



OBJECTIVE OF THE AUDIT QUESTION **(What do we want to know)**	**CRITERIA** **(What standard do we measure it against)**	**AUDIT EVIDENCE** **(What evidence will answer the Audit Question)**	**SOURCES OF AUDIT EVIDENCE** **(Where are we going to obtain the evidence)**	**RISKS TO THE EXECUTION** **(What will limit the auditor to answer the audit question)**	**METHODS FOR DATA COLLECTION** **(How are we going to gather the evidence)**	**METHODS FOR ANALYSES** **(What will we do with information once we obtained it)**
	"…overall water resource inventory, monitoring, control and management issues are to remain the responsibility of the Ministry of Agriculture, Water and Forestry." According to the Water supply and Sanitation Policy of 2008, "…in all instances it will be essential to recover the full financial cost or, in low income rural and urban areas, at least the operational and maintenance costs with support from government subsidies or cross-subsidies amongst consumers."	• Inspections reports; • Best practices applied by other countries.				• But for and proximity test to determine root causes and underlying conditions not in the control of government which hampers performance; • Cost benefit analysis. This is conducted to determine where government can save money and could have saved money if they acted proactively; and Stress test analysis to determine if the auditees continue on this trend in

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	1992 (Act No. 23 of 1992) Section 34 of states that, “ for purposes of the provisions of Section 30 (1) (a), a local authority council may - (a) establish, acquire or construct, and maintain and carry on, any waterworks or watermain whether within or outside its area; (b) subject to the provisions of the Expropriation Ordinance, 1978 (Ordinance 13 of 1978), or on such terms and conditions as may otherwise be determined by mutual agreement between the local	replacement plans; • Preventative maintenance reports of water infrastructure, • Statistics of water infrastructure replaced; • Breakdown and repairs and maintenance records of water infrastructure; • Budget and actual expenditures on water infrastructure; • Number of water reservoirs and repairs and maintenance records;				determine root causes and underlying conditions not in the control of government which hampers performance; Cost benefit analysis. This is conducted to determine where government can save money and could have saved money if they acted proactively; and Stress test analysis to determine if the auditees continue on this trend in terms of water supply and demand management, how this will impact the money in question

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	(i) the development of regions and local authorities; and (ii) the implementation, through the active participation of the local people and in accordance with the Decentralisation Enabling Act, 2000, of the decentralisation programmes at regional and local authority levels in Namibia." "(b) to provide, either at its own initiative or when so requested by a regional council or a local authority council, and on the terms and conditions to be determined by the Board, funding for – (i) technical assistance, guidance and training in	• Technical Assistance provided to Local Authorities • Inspections reportsWater projects needs assessments and implementation reports; and • Total funding provided to Local Authorities Water Infrastructure.				But for and proximity test to determine root causes and underlying conditions not in the control of government which hampers performance; Cost benefit analysis. This is conducted to determine where government can save money and could have saved money if they acted proactively; and Stress test analysis to determine if the auditees continue on this trend in terms of water supply and demand management, how

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	and dispose of waterworks. … investigate, research and study matters relating to water resources, waterworks and the environment	• Water infrastructure research reports; • Cost benefit analysis conducted on the replacement of existing water infrastructure vs continuous repairs and maintenance; • Number of reservoirs in the country and the repairs and maintenance thereof; • Budgeted and actual expenditures on water infrastructure; and Water infrastructure age and replacement thereof.				in the process description themes; But for and proximity test to determine root causes and underlying conditions not in the control of government which hampers performance; Cost benefit analysis. This is conducted to determine where government can save money and could have saved money if they acted proactively; and Stress test analysis to determine if the auditees continue on this trend in

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	and not immediately required to be expended shall be deposited in a reserve account. Furthermore, Subsection 2 of Section 30 of the Namibia Water Corporation Act, 1997 (Act No.12 of 1997) states that, the Corporation may establish and operate such reserve funds as the Board may deem necessary, and may invest therein such moneys as the Board may from time to time determine."	future water infrastructure, • Money availability vs reserve account amount for future water infrastructure; and • Board minutes of meeting regarding the usage of water infrastructure reserve fund.				ABC analysis inventory technique on the acquiring water infrastructure; But for and proximity test to determine root causes and underlying conditions not in the control of government which hampers performance; Cost benefit analysis on the continual repairs and maintenance of existing water infrastructure compared to acquiring new water infrastructures. This is conducted to

<u>OBJECTIVE OF THE AUDIT QUESTION</u> **(What do we want to know)**	**<u>CRITERIA</u>** **(What standard do we measure it against)**	**<u>AUDIT EVIDENCE</u>** **(What evidence will answer the Audit Question)**	**<u>SOURCES OF AUDIT EVIDENCE</u>** **(Where are we going to obtain the evidence)**	**<u>RISKS TO THE EXECUTION</u>** **(What will limit the auditor to answer the audit question)**	**<u>METHODS FOR DATA COLLECTION</u>** **(How are we going to gather the evidence)**	**<u>METHODS FOR ANALYSES</u>** **(What will we do with information once we obtained it)**
<u>Sub-questions 1.5</u> • **How does the DEA under MEFT ensure that the environment is legally protected from water infrastructures that could damage the environment?** **How does DEA under MEFT ensure water infrastructures of bulk waters supplier have valid Environmental Clearance Certificates?**						
To determine the extent to which the DEA under MEFT ensured that the environment is legally protected from water infrastructures that could damage the environment. To determine the extent to which the DEA under MEFT ensure water infrastructures of bulk waters	Subsection 1 of Section 31 of the Environmental Management Act, 2007 (Act No.7 of 2007) states that,"…despite any other law to the contrary, a competent authority may not issue an authorisation unless the proponent has obtained an environmental clearance certificate in terms of this Act." Subsection 2 of Section 31 of the Environmental Management Act, 2007 (Act No.7 of 2007)	• Inspection reports ensuring compliance to Environmental Management Plans of Water Infrastructures which received Environmental Clearance Certificates; • List of Water Infrastructures which received Environmental Clearance Certificates; and • Environmental Impact	• Head Offices of respective audited government institutions; and regional offices.	Delays in provision of audit documents	• Interviews • Physical Observations at sampled water infrastructures; and • Documentary Reviews.	To analyse the data, the audit will apply a combination of data analysis techniques such as: • What if analysis, activity based costing analysis (ABC) on the activities identified in the process description themes; • ABC analysis inventory technique on the acquiring

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						where government can save money and could have saved money if they acted proactively; and Stress test analysis to determine if the auditees continue on this trend in terms of water supply and demand management, how this will impact the money in question in terms of the performance audit principles of economy, efficiency and effectiveness.

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	(i) water samples taken; and (ii) water quality for irrigation purposes in the local authority area. (2) Sewage water, liquid waste, night soil or reclaimed products originating from residential, industrial or commercial premises or other premises must be disposed of or used in accordance with applicable legislation of the water or reclaimed products." Subsection 1&2 of Section 47 of the Public and Environmental Health Act, 2015 (Act No. 1 of 2015) further states that, "…(1) the chief health officer or a					conditions not in the control of government which hampers performance; Cost benefit analysis. This is conducted to determine where government can save money and could have saved money if they acted proactively; and Stress test analysis to determine if the auditees continue on this trend in terms of water supply and demand management, how this will impact the money in question in terms of the performance audit principles of

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	Section 5 (a) of the Namibia Water Corporation Act, 1997 (Act No.12 of 1997) states that, "…the objects of the Corporation shall be to carry out efficiently, and in the best interests of the Republic of Namibia - (a) the primary business of bulk water supply to customers, in sufficient quantities, *of a quality suitable for the customers' purposes*……………… Section 45 of the Public and Environmental Health Act, 2015 (Act No. 1 of 2015) states that, "…duty of local authority to furnish potable water supplies:					

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measures in place to repair and maintain water infrastructure.	with the government policy of decentralizing management functions to regional and community level, approval was given to implement a policy of Community-Based Management (CBM) of rural water supplies in accordance with WASP. Over a period of 10 years, responsibility for managing and paying for water services will be progressively devolved to Water Associations and Water Point Committees based on discrete installations. Water Point Committees will be recognised in law and will be able to control consumers' access to water points and	Water Infrastructure Maintenance Reports; and Budgeted and Actual Expenditure on water infrastructure.	institutions; and regional offices.	audit documents	• Documentary Reviews.	data analysis techniques such as: What if analysis, activity based costing analysis (ABC) on the activities identified in the process description themes; But for and proximity test to determine root causes and underlying conditions not in the control of government which hampers performance; Cost benefit analysis. This is conducted to determine where government can save money and could have saved

OBJECTIVE OF THE AUDIT QUESTION **(What do we want to know)**	**CRITERIA** **(What standard do we measure it against)**	**AUDIT EVIDENCE** **(What evidence will answer the Audit Question)**	**SOURCES OF AUDIT EVIDENCE** **(Where are we going to obtain the evidence)**	**RISKS TO THE EXECUTION** **(What will limit the auditor to answer the audit question)**	**METHODS FOR DATA COLLECTION** **(How are we going to gather the evidence)**	**METHODS FOR ANALYSES** **(What will we do with information once we obtained it)**
To determine the extent NAMWATER ensured having enough money to reinvest in water infrastructures.	Subsection 1-3 of Section 9 of the Namibia Water Corporation Act, 1997 (Act No.12 of 1997) States that, (1) It is the duty of the Corporation to consider each application for bulk water supply by any potential customer and, subject to the availability of water of the required quantity and quality, to offer to accept the applicant as a customer. (2) Bulk water supply to the Corporation's customers shall take place in terms of a written agreement between the Corporation and each customer.	• Debt collection policy and proof of implementation thereof; • Water availability assessments reports; • Bulk water demand assessment reports; • Bulk water customer water usage contracts; • Bulk water customer water usage contracts compliance inspection reports; • Compliance orders issued; • Inspection guidelines;	• Head Offices of respective audited government institutions; and regional offices.	Delays in provision of audit documents	• Interviews • Physical Observations at sampled water infrastructures; and • Documentary Reviews.	To analyse the data, the audit will apply a combination of data analysis techniques such as: • What if analysis, activity based costing analysis (ABC) on the activities identified in the process description themes; • ABC analysis inventory technique on the acquiring water infrastructure; • But for and proximity test to determine root causes and underlying

OBJECTIVE OF THE AUDIT QUESTION (What do we want to know)	**CRITERIA** (What standard do we measure it against)	**AUDIT EVIDENCE** (What evidence will answer the Audit Question)	**SOURCES OF AUDIT EVIDENCE** (Where are we going to obtain the evidence)	**RISKS TO THE EXECUTION** (What will limit the auditor to answer the audit question)	**METHODS FOR DATA COLLECTION** (How are we going to gather the evidence)	**METHODS FOR ANALYSES** (What will we do with information once we obtained it)
	performance of its functions under this Act, and in particular shall have power to - (a) determine and levy, in consultation with the Minister, tariffs on a full cost-recovery basis for water supplied; (b) determine and levy charges for services rendered, facilities provided or rights leased by the Corporation."					Stress test analysis to determine if the auditees continue on this trend in terms of water supply and demand management, how this will impact the money in question in terms of the performance audit principles of economy, efficiency and effectiveness.

OBJECTIVE OF THE AUDIT QUESTION **(What do we want to know)**	**CRITERIA** **(What standard do we measure it against)**	**AUDIT EVIDENCE** **(What evidence will answer the Audit Question)**	**SOURCES OF AUDIT EVIDENCE** **(Where are we going to obtain the evidence)**	**RISKS TO THE EXECUTION** **(What will limit the auditor to answer the audit question)**	**METHODS FOR DATA COLLECTION** **(How are we going to gather the evidence)**	**METHODS FOR ANALYSES** **(What will we do with information once we obtained it)**
	such water meters, and require any such resident or other person by notice in writing to provide an appropriate place on his or her immovable property where such water meters and accessories may be installed and to maintain such water meter and accessories to the satisfaction of the local authority council;; (f) generally perform or carry out any other function, including the prohibition, restriction, regulation and control of the sinking, maintenance or use of boreholes or wells, which is necessary for, or conducive to, the power of supplying	households and implementation thereof; • Debt collection policy and implementation thereof; • Outstanding Customer Accounts Age Analysis; • Percentage of Outstanding funds collected from customers per year; • Compliance orders issued to customers; and Borehole inspection reports				• ABC analysis inventory technique on the acquiring water infrastructure; • But for and proximity test to determine root causes and underlying conditions not in the control of government which hampers performance; • Cost benefit analysis This is conducted to determine where government can save money and could have saved money if

Appendices III: Interviews & Physical Observations Conducted.

Interviews and Physical Observation conducted at the time of the audit

Interviews Conducted		Physical Observations Conducted
Khomas Region		
1. Windhoek Municipality	Yes (Technical & Financial Managers, and Environmental Officer)	No
Kavango Region		
2. Ministry of Agriculture, Water and Land Reform (Rundu)	Yes (The Director of Rural Water Supply)	No
3. Nkurenkru Town Council	Yes (Technical & Financial Managers, and Environmental Officer)	Yes
4. Ministry of Agriculture, Water and Land Reform (Rundu)	Yes (Chief Regional Head and Chief Extension Officers)	No
5. Ncaute North	Yes (Water point Committee)	Yes
6. Ncaute Central	Yes (Water point Committee)	Yes
7. Shapirama	Yes (Water point Committee)	Yes
8. Sitenda	Yes (Water point Committee)	Yes
9. Kayirayira	Yes (Water point Committee)	Yes
10. Nkutu	Yes (Water point Committee)	Yes
11. Mambungu	Yes (Water point Committee)	Yes
12. Sinzorogo	Yes (Water point Committee)	Yes
13. Kahukuru	Yes (Water point Committee)	Yes
14. Ntara	Yes (Water point Committee)	Yes
15. Nautcova	Yes (Water point Committee)	Yes
16. Kayara	Yes (Water point Committee)	Yes
17. Zingizi	Yes (Water point Committee)	Yes
18. Muparara	Yes (Water point Committee)	Yes
19. Gava	Yes (Water point Committee)	Yes
20. Murere	Yes (Water point Committee)	Yes
21. Toyota	Yes (Water point Committee)	Yes
22. Tcanctana	Yes (Water point Committee)	Yes
Ohangwena Region		
23. Helao Nafindi Town Council	Yes (Technical & Financial Managers, and Environmental Officer)	Yes
24. Ministry of Agriculture, Water and Land Reform (Enhana)	Yes (The Chief Regional Head)	No
25. Uupili	Yes (Water point Committee)	Yes
26. Omulonga wa Ndevahoma	Yes (Water point Committee)	Yes
27. Oshuuli	Yes (Water point Committee)	Yes
28. Ombwa	Yes (Water point Committee)	Yes
29. Ohamikoka	Yes (Water point Committee)	Yes
30. Oukala	Yes (Water point Committee)	Yes

Interviews Conducted		Physical Observations Conducted
74. Post 66	Yes (Water point Committee)	Yes
75. Witrand	Yes (Water point Committee)	Yes
76. Bammpost	Yes (Water point Committee)	Yes
77. Morrison	Yes (Water point Committee)	Yes
	//Karas Region	
78. Oranjemund Town Council	Yes (Technical & Financial Managers, and Environmental Officer)	Yes
79. Keetmanshoop Municipality	Yes (Technical & Financial Managers, and Environmental Officer)	Yes
80. Neckartal Dam	No	Yes
81. Naute Dam	No	Yes
	Hardap Region	
82. Mariental Municipality	Yes (Technical & Financial Managers, and Environmental Officer)	Yes
Totals	**72**	**74**