ISO 9001:2015 Certified

# THE UNITED REPUBLIC OF TANZANIA
# NATIONAL AUDIT OFFICE

## PERFORMANCE AUDIT REPORT ON THE MANAGEMENT OF FERRY OPERATIONS





**CONTROLLER AND AUDITOR GENERAL**
**MARCH 2025**

## About the National Audit Office

**Mandate**

The statutory mandate and responsibilities of the Controller and Auditor-General are provided for under Article 143 of the Constitution of the United Republic of Tanzania of 1977 and in Section 10 (1) of the Public Audit Act, Cap 418.

## NAOT Vision, Mission & Motto

**Vision**

A credible and modern Supreme Audit Institution with high-quality audit services for enhancing public confidence.

**mission**

To provide high-quality audit services through modernization of functions that enhances accountability and transparency in the management of public resources.

**Motto**

Modernizing External Audit for Stronger Public Confidence

## Core Values

**Independence and Objectivity:** We are an impartial public institution, independently offering high-quality audit services to our clients in an unbiased manner.

**Professional competence:** We deliver high quality audit services based on appropriate professional knowledge, skills, and best practices.

**Integrity:** We observe and maintain high ethical standards and rules of law in the delivery of audit services.

**Creativity and Innovation:** We encourage, create and innovate value-adding ideas for the improvement of audit services.

**Results-Oriented:** We focus on achievements of reliable, timely, accurate, useful, and clear performance targets.

**Team Work Spirit:** We value and work together with internal and external stakeholders.

## PREFACE

Pursuant to Section 28 of the Public Audit Act, CAP 418. I am mandated to conduct a Performance Audit (Value-for-Money Audit) to establish the economy, efficiency and effectiveness of any expenditure or use of resources in the Ministries, Departments and Agencies (MDAs), Local Government Authorities (LGAs) and Public Authorities and Other Bodies which involves enquiring, examining, investigating and reporting, as deemed necessary under the circumstances.

I have the honour to submit to Her Excellency, the President of the United Republic of Tanzania, Hon. Dr. Samia Suluhu Hassan, and through her to the National Assembly of the United Republic of Tanzania, the Performance Audit Report on the Management of Ferry Operations in Tanzania.

The report contains findings, conclusions, and recommendations for the Ministry of Works and the Tanzania Electrical, Mechanical and Electronics Services Agency (TEMESA). The Ministry of Works and TEMESA had the opportunity to scrutinize the factual contents of the report, and comment on it. I wish to acknowledge that discussions with them have been useful and constructive.

ISO 9001:2015 Certified

My Office will carry out a follow-up audit at an appropriate time regarding actions taken to implement the recommendations given in this report.

I would like to thank my staff for their commitment to the preparation of this report. I also acknowledge the audited entities for their cooperation with my Office, which facilitated the timely completion of the audit.

Charles E. Kichere
**Controller and Auditor General**
**United Republic of Tanzania**
**March 2025**

# TABLE OF CONTENTS



ISO 9001:2015 Certified

NATIONAL AUDIT OFFICE
NAOT
ISO 9001:2015 Certified

## LIST OF TABLES

NATIONAL AUDIT OFFICE
NAOT
ISO 9001:2015 Certified

## LIST OF FIGURES



NATIONAL AUDIT OFFICE
NAOT
ISO 9001:2015 Certified

## LIST OF PHOTOS



NATIONAL AUDIT OFFICE
NAOT
ISO 9001:2015 Certified

## LIST OF ABBREVIATIONS AND ACRONYMS

| | |
|---|---|
| DFOC | Directorate of Ferry Operation and Construction |
| DMSE | Directorate of Maritime Safety, Security and Environment |
| ETS | Electronic Ticketing System |
| FOSM | Ferries Operation, Safety and Maintenance Unit |
| GoT | Government of Tanzania |
| IMO | International Maritime Organization |
| KPIs | Key Performance Indicators |
| MARPOL | Marine Pollution |
| M&E | Monitoring and Evaluation |
| MTEF | Medium-Term Expenditure Framework |
| MoW | Ministry of Works |
| MP | Member of Parliament |
| MV | Motor Vessel |
| NAOT | National Audit Office of Tanzania |
| POs | Point of Sales |
| SOLAS | Safety of Life at Sea |
| SOP | Standard Operating Procedures |
| STCW | Standards of Training, Certification and Watchkeeping for Seafarers |
| TASAC | Tanzania Shipping Agencies Corporation |
| TEMESA | Tanzania Electrical, Mechanical and Electronics Services Agency |
| TV | Television |
| TZS | Tanzania Shillings |
| VAT | Value Added Tax |

ISO 9001:2015 Certified

## DEFINITION OF TERMS

| | |
|---|---|
| **Dockyard** | The place where ferries are built and repaired |
| **Drills** | Methods of practising how a team or individuals should behave in case of an emergency on board a ferry |
| **Hull** | The watertight body of a ferry |
| **Manning levels** | The minimum number of personnel needed to operate a ferry safely according to the technical, managerial and legal requirements |
| **Mooring** | Permanent structure to which a ferry is secured |
| **Muster List** | A list of the functions each member of a ship crew is required to perform in case of emergency. |
| **Seaworthiness** | A state that a ship is in a good enough condition to travel safely |

NATIONAL AUDIT OFFICE
NAOT
ISO 9001:2015 Certified

## EXECUTIVE SUMMARY

### Background of the Audit

Ferries are watercraft designed for regular service, transporting passengers, vehicles, and cargo across bodies of water. They fill transportation gaps where bridges are impractical, linking points across rivers, lakes, or narrow sea channels. Ferries vary in size and capacity, accommodating few to large numbers of passengers and vehicles. They are vital for enhancing connectivity and mobility in diverse urban and rural settings.

Despite the Tanzania Electrical, Mechanical and Electronics Services Agency (TEMESA) having the role of ensuring the safe operation and maintenance of all Government-Owned Ferry Services, there are reported incidents of frequent ferry breakdowns and operation failures while passengers are onboard. Such incidents endanger the lives of more than 60,000 people each year, especially in the Dar es Salaam region. The breakdown results from the failure to adhere to timely maintenance as required by the set standards.

The main objective of the audit was to determine whether the Ministry of Works (MoW) and Tanzania Electrical, Mechanical and Electronics Services Agency (TEMESA) have adequately managed ferry operations to ensure reliable and assured ferry services in the country. The audit covered a period of four (4) financial years, starting from 2020/21 to 2023/24.

### Main Audit Findings

#### Inadequate Availability of Reliable and Assured Ferry Services in the Country

The Audit noted the presence of non-operational ferries due to increased ferry breakdowns. According to the analyzed ferry status, eleven (11) out of thirty-two (32) Ferries in the country were not in operation, which is equal to 34 per cent of the available ferries. Seven (7) of the eleven (11) non-operational Ferries underwent major rehabilitation. These non-operational ferries that underwent major rehabilitation are MV Ruhuhu, MV Magogoni, MV Old Ruvuvu, MV Ukara I, MV Majita Ex(Nyerere), MV Chato I and MV Kilombero II. Moreover, the Audit noted that there was inadequate availability of ferry services as a result of the non-provision of ferry services to the newly

identified routes. Seven (7) identified routes in the Eastern and Southern Zone and six (6) routes in the Lake and Western Zone were not provided with ferry services, and they were still using the local wooden vessels.

Furthermore, The audit noted that TEMESA did not establish an effective system for collecting customers' feedback. There were no established periodic surveys for gathering feedback on the ferry services. The customer feedback survey was conducted on the workshop only. It was further noted that there were no toll-free numbers at the Zonal Offices and ferry stations. Instead, the ferry station managers were directed to share their numbers with the community.

**Ineffective Management of Ferry Schedules, Utilization Rates, Passenger Flow and Data Base**

The audit noted that TEMESA ferries have significant deficiencies in scheduling, passenger tracking, and operational efficiency. Ferries were scheduled based on passenger availability rather than pre-assessed demand patterns, leading to inconsistent service levels. Ferry stations such as Magogoni increased hours based on traffic, while Nyamisati minimized routes during off-peak times.

TEMESA did not have a system in place to track all passengers; only those who paid fares were recorded while these excluded exempt groups. Unfortunately, this tendency compromises safety concerns. Furthermore, there was no passenger database or comprehensive route utilization assessment which actually resulted in a lack of insight into underutilized routes.

The absence of scheduling software and real-time tracking meant operations relied on manual logbooks, which do not account for passenger numbers. Disembarking processes were inefficient, contributing to overcrowding and safety risks. The audit highlighted the urgent need for improved operational standards and better data management to enhance ferry services.

**Inefficient Implemented Measures for Ensuring Financial Stability**

The Audit noted that the funding sources for the ferry operations were not effectively managed, as TEMESA was not able to cover all the expenditures on the ferry services. TEMESA depends on the revenue collected from the tickets,

advertisements, and renting of the buildings located at the ferry stations. The Audit also noted that the N-CARD system had challenges, as it did not accurately reflect the number of passengers who purchased tickets or the total revenue collected. Additionally, TEMESA could not directly access the data; it only received information about the amount collected for the day from the vendor. The collected amount was then deposited into TEMESA's account, leaving the organization reliant on the reported figures without real-time ticket sales and revenue transparency.

**Inadequate Adherence to National and International Safety Regulations and Operational Standards**

The audit noted that TEMESA and MoW did not comprehensively comply with international guidelines on safety, fire and environmental issues. It was revealed that drills were not undertaken for safety preparation and that sewage wastes were discharged to water bodies without being treated. Also, the audit noted that none of the ferries had the safety protocol documented and maintained in burners or any other display on the ferry. Inspection revealed that three (3) of the seven (7) sampled operating ferries were supplied and installed with a TV set, but safety protocols were not displayed.

Moreover, the audit revealed that all thirty-two (32) ferries owned by the government did not possess a certificate of seaworthiness due to inadequate management of fire protection, malfunctioning navigational system and equipment, inadequacy management of life-saving appliances, and unavailability of insurance cover to ferries. Also, the audit noted that TEMESA has a low response to the recommendation issued by Tanzania Shipping Agencies Corporation (TASAC), as out of twenty-five (25) ferries detained by TASAC due to various deficiencies, only eight (8) ferries TEMESA stopped their operations and were taken for maintenance while the remaining 17 Ferries continued to operate despite having the noted deficiencies.

**Ineffective Maintenance Procedures**

The audit noted that TEMESA’s plan and documentation for ferry maintenance was inadequate. The preventive maintenance schedule covered only the main engine but omitted other critical systems, such as the auxiliary machinery, electricity generator, propulsion system, steering system, ramps, hydraulic system, water systems, vessel hull structures, and lifesaving equipment. No

maintenance schedule was prepared for these components. Additionally, TEMESA did not have documentation for both corrective and preventive maintenance procedures. Important details were missing, such as safety considerations during maintenance, required tools, step-by-step maintenance procedures, and testing protocols for standby systems.

Inadequate inspections of the ferries led to unresolved maintenance issues, including oil leakage on engines, as seen in MV Kazi, MV Mafanikio and MV Ukara II, and unaddressed corrosion on hull structures. Furthermore, TEMESA had insufficient tools and workshops for ferry maintenance. Only one (1) out of six (6) sampled ferry stations, the Magogoni ferry station, had a maintenance workshop. Although Kigongo Busisi had a workshop, it was recently repurposed as the zonal office. Other ferry stations did not have workshops. The available tools were also not sufficient, due to the lack of a comprehensive needs assessment for maintenance tool requirements.

Moreover, the audit identified gaps in response and maintenance actions for mechanical failures. Maintenance registers and logbooks showed prolonged downtimes due to delayed maintenance responses. Frequent mechanical failures were observed in engines, windlass machines, and ramps. TEMESA lacked documentation of these recurring failures, hindering trend analysis and limiting corrective actions and recommendations for management decisions.

ISO 9001:2015 Certified

**Inadequate Monitoring and Evaluation of the Operation of the Ferry by MoW and TEMESA**

The audit noted inadequate monitoring by TEMESA and MoW on the operations of ferries. This was attributed to the absence of planning, implementation, monitoring, and evaluation of the operations by TEMESA and MoW. The Audit noted that MoW did not plan to monitor and evaluate the operations of TEMESA but planned to monitor and evaluate the construction activities in the specified year. Furthermore, the audit noted that no key performance indicators were defined to measure the operation of ferries. Further, the ferry station's sampled ferry managers were also unaware of the key performance indicators.

**Audit Conclusion**

Despite significant efforts to ensure the availability of ferry operations, the Ministry of Works (MoW) and Tanzania Electrical, Mechanical and Electronics

Services Agency (TEMESA) have not ensured reliable and assured ferry services as the result of inadequate management of ferry operations in the country. In general, the Audit noted ineffective management of ferry schedules, utilization rates, passenger flows, and database, inefficiently implemented measures for financial stability, and inadequate adherence to national and international safety regulations and operational standards. In addition, there were ineffective operation and maintenance plans for the ferries in place, as well as unsatisfactory monitoring and evaluation of the operation of the ferry by MoW and TEMESA.

**Audit Recommendations**

**Recommendations to the Ministry of Works**

The Ministry of Works is urged to:

(i) Establish a comprehensive Monitoring and Evaluation framework covering key areas of ferry operations with clearly defined Key Performance Indicators (KPIs). These KPIs should cover service reliability, passenger safety, maintenance schedules, fuel efficiency and financial performance; and

(ii) Review the operational regulations and guidelines to align with the international best practices, standards, and guidelines and ensure all safety aspects are included

ISO 9001:2015 Certified

**Recommendations to Tanzania Electrical, Mechanical, and Electronics Services Agency (TEMESA)**

TEMESA is urged to

(i) Improve the availability of ferry services, conduct regular needs assessments, and update service demand analyses to ensure ferry deployment aligns with community requirements;

(ii) Establish a clear complaint-resolving system and ensure the ferry schedules resolutions that reflect passenger demand; and

(iii) Ensure adequate management of funding sources, budgetary controls, feasibility study, and economic viability analysis of the contracts in place before entering into investment agreements.

# CHAPTER ONE

# INTRODUCTION

## 1.1 Background Information

Ferries are watercraft designed for regular service, transporting passengers, vehicles, and cargo across bodies of water. They fill transportation gaps where bridges are impractical, linking points across rivers, lakes, or narrow sea channels. Ferries vary in size and capacity, accommodating small groups to large crowds and vehicles. They are vital for enhancing connectivity and mobility in diverse urban and rural settings.

In Tanzania, there are twenty-two (22) ferry stations and thirty-two (32) ferries that vary in size and capacity and cater to different routes and passenger demands. These ferries provide services to 42.62 million passengers, 1.55 million vehicles, and 557,220 tons of cargo per year[1].

The Government of Tanzania oversees ferry operations and maintenance through the Tanzania Electrical, Mechanical and Electronics Services Agency (TEMESA) under the Ministry of Works (MoW). The Tanzania Shipping Agencies Corporation (TASAC) regulates the operation of ferries through regular surveys and inspections.

Despite TEMESA having the role for ensuring safe operation of all Government-Owned Ferry Services, there were reported incidents of frequent ferry breakdowns and operation failures while passengers were onboard. Such incidents endangered the lives of more than 60,000 people each year, especially in the Dar es Salaam region[2].The breakdown results from failure to adhere to timely maintenance as required by the set standards. The International Convention for the Safety of Life at Sea (SOLAS) of 1974 requires that major maintenance of ferries on the high seas should not exceed five years.

[1] Speech by the Minister of Works and Transportation, Prof.Makame Mnyaa Mbarawa (MP), when presenting to the National Assembly the Plan and Budget Estimates of Revenue and Expenditure for the Financial Year 2023/24
[2] TASAC Inspection Report 2023/24

## 1.2 Motivation for the Audit

The Audit was motivated by an indication of performance problem factors, as detailed below:

### (a) Increased Frequency of Breakdown on the Ferries in Kigamboni Magogoni Ferry

Tanzania Shipping Agencies Corporation (TASAC) suspended the MV Kigamboni ferry service from continuing operations to undertake major repairs. Because of this, Kigamboni residents raised complaints following the suspension of MV Kigamboni services. Before undergoing major repair, there were frequent ferry breakdowns, which created a risk to safety since many passengers depended on this single-operating ferry for their movements from Kigamboni to Magogoni side.

TASAC Inspections Reports dated 25 January 2023, 18 September 2023, and 22 December 2023, indicated that the MV Kigamboni ferry had several breakdowns. According to TASAC Inspection Reports on the mentioned incidents, MV Kigamboni Ferry had a lot of deficiencies on the main Engines where the main Engines' Revolutions per Minute (RPM) and pump jet position were stacked and brought difficulty to manoeuvrability. The vessel was operated by an operator who did not have a certificate of competence. The failure of ferries during operation impacts commuter safety reliability and raises fear among commuters about any possible breakdowns during operation. The incidents that occurred left passengers stranded. Furthermore, it was reported that the deteriorating condition of ferries was caused by neglected major repairs required by law, schedule, and professional standards.

Also, it was noted that MV Magogoni was under major repair in Kenya as of February 2023, which was expected to be completed by August 2023, however, it was delayed for 15 months until October 2024. Furthermore, it was reported that MV Kazi was the only working ferry. MV Kazi underwent major repairs in the year 2022 after its engine had been working for 24000

hours without undergoing its routine maintenance; this is twice more than the professional requirement[3].

**(b) Increased Number of Non-Operational Ferries**

The Controller and Auditor General Annual General Report on the Central Government Audit for the financial year 2022/23 highlighted that nine (9) out of thirty-five (35) ferries (equivalent to 26%) were identified as non-operational ferries for over six months. These ferries include MV Pangani II, MV Sabasaba, MV Kuchele, MV Tangazo, MV Lindi, MV SAR II, MV Ilagala, MV Mwanza and MV Kilombero. Among these inoperative ferries, six (6) were awaiting inspection for repair, while three (3) were deemed dilapidated and economically unfeasible.

Due to the increased breakdown of ferries by June 2024, eighteen (18) out of thirty-two (32) (equivalent to 56%) were non-operational ferries, an increase of nine (9) ferries that were not in operation.[4].

The main reasons behind these non-operational ferry vessels included delays in repair processes and the deteriorated condition of certain vessels resulting from insufficient funding for repair and rehabilitation. Consequently, this has led to disruptions in transportation services, potential revenue losses due to the reduced number of ferries, economic losses and adverse effects on the overall efficiency and effectiveness of TEMESA.

**(c) Inadequate Management of Ferry Operations by TEMESA**

According to the Controller and Auditor General Annual General Report on the Central Government Audit for the financial year 2022/23, TEMESA did not address all recommendations and observed issues from the TASAC report in relation to the operation of MV Pangani. As a result, the operation of MV Pangani was done with high safety risk. It was noted that after a survey on the operation of MV Pangani on 19 August 2021, several issues were identified, including the vessel operating without a Seaworthiness certificate and the incompetence of the crew manning it, as the seafarers operating the vessel could not show their certificates.

[3]TEMESA Implementation Reports (2021/22-2023/24)
[4] TEMESA Implementation Report 2023/24

Additionally, two (2) generators were not producing sufficient electricity to run the Azimuth propeller motors, making it difficult to manoeuvre or navigate as intended. The ramps were operated manually, making it difficult to raise and lower them at the appropriate angle. This condition led to the ramp being kept in a fixed position and lowered below the main deck. These operational challenges noted on MV Pangani posed a safety risk for the cabin crew and passengers.

Further, there were notable weaknesses in the point of sales (POS) management in the TZS 4.11 billion Revenue collection. This was evidenced through the Controller and Auditor General Report on Central Government (March 2023), which reported that in the financial statements for the year ending 30 June 2022, TEMESA collected TZS 4.11 billion using POS machines. It showed that 42 POS machines were not maintained at TEMESA headquarters and Kigongo – Busisi Ferry Station; POS machines at TEMESA revenue collection centres were not connected to a central server. The weakness noted has created a loophole for loss of revenue.

**(d) Reliance on the Leased Sea Taxis from Azam Marine Co. Ltd due to the Overwhelming Burden of Ferry Operations**

NAOT ISO 9001:2015 Certified

According to the Citizen Newspaper, dated 28 May 2024, TEMESA faced challenges in the operation of ferry services. It showed that TEMESA experienced funding deficits and outdated fare structures, which hindered their regular operations, leading to delays, frequent breakdowns, and safety risks for daily commuters[5]. This situation has been intensified by technical faults in the MV Kigamboni ferry, which caused a deterioration in ferry services between Kigamboni and Magogoni and sparked a public outcry in the area[6].

To mitigate the burden of ferry operations, TEMESA entered into an agreement with Azam Marine Co. Ltd on 13 June 2022. This interim arrangement allowed Azam Marine Co. Ltd (Marine ferries) to reduce

[5] https://www.thecitizen.co.tz/tanzania/news/national/tanzania-ferry-fiasco-temesa-struggles-under-the-weight-of-operational-burden-4638478

[6] https://www.mwananchi.co.tz/mw/habari/kitaifa/sintofahamu-kusitishwa-huduma-za-kivuko-kigamboni-4505430

transport inconvenience for Kigamboni residents in Dar es Salaam during ferry repairs[7]. TEMESA was required to pay Azam Marine Co. Ltd TZS 5,000,000/= per day, including VAT and a 5% withholding tax on the total amount. However, based on the provided vessels, this arrangement did not meet the demands of the citizens due to the high number of passengers and vehicles crossing each day.

Moreover, the Controller and Auditor General Annual General Report on Central Government Audit (March 2024) reported that TEMESA's financial capacity was insufficient to run the ferry operations efficiently. From 1 July 2022 to 30 June 2023, at Magogoni and Kigamboni Ferry Stations, TEMESA collected TZS 5.76 billion in revenue on ferry operations, whereas TZS 1.83 billion was paid to Azam Marine Co. Ltd, remaining with TZS 3.93 billion. It was further noted that the remaining funds were not enough to cover ferry operations such as vessel fuel, labour costs, repair and maintenance, and other overheads. This shortfall necessitated using other sources to subsidise the operating costs, increasing financial imbalance and reliance on government subsidies to maintain operations.

Consequently, this hinders TEMESA's ability to become self-sufficient and financially independent on the ferry services. The ferry service remains dependent on external support since it did not generate enough revenue to cover its expenditures.

NAOT
ISO 9001:2015 Certified

## 1.3 Design of the Audit

### 1.3.1 Audit Objective

The main objective of the audit was to determine whether the Ministry of Works (MoW) and Tanzania Electrical, Mechanical and Electronics Services Agency (TEMESA) adequately managed Ferry operations to ensure reliable and assured ferry services in the country.

7 https://www.temesa.go.tz/index.php/news/temesa-enters-into-an-agreement-with-Azam Marine Co.Ltd-marine

**Specific Objectives of the Audit**

Five specific audit objectives were used to address the main audit objective. The specific objectives of the audit assessed whether;

i) Ferry scheduling, utilisation rates, passenger flow and database are effectively managed;
ii) Measures put in place to ensure financial stability through effective revenue generation and expenditures control;
iii) Ferry operations comply with National and International Safety Regulations and Operational Standards;
iv) The existing ferry operations and maintenance plan in place are effective and guarantee reliability; and
v) The Ministry of Works (MoW) and TEMESA adequately monitor and evaluate the operations of the ferry.

To address these specific audit objectives, audit questions and sub-audit questions were developed, as presented in **Appendix 2.**

### 1.3.2 Audit Scope

The main audited entity was the Tanzania Electrical, Mechanical and Electronics Services Agency (TEMESA), which is an entity under the Ministry of Works. TEMESA was established to provide efficient, effective, and safe ferry services and is responsible for managing the operation of ferries.

The Ministry of Works, through the Directorate of Technical and Electrical Services, is mandated to formulate and review Policies, Plans, and Strategies towards the development and Provision of ferry services. Tanzania Shipping Agencies Corporation (TASAC) was also involved since it regulates operation of ferries in the country.

The focus of the audit was on assessing the availability of adequate ferry services, ferry schedules, utilisation rates, passenger flow, and database, measures in place to ensure financial stability, adherence to National and International Safety regulations and operational standards, operation and maintenance plan in place, and monitoring and evaluation.

On the availability of adequate ferry services, the audit focused on the available operational ferries, the extent to which the ferry services in the country are provided, customer feedback, complaint resolution, and tracking of the service quality metrics.

On the ferry schedule, utilisation rates, passenger flow, and database, the audit focused on alignment of the passenger demand with ferry scheduling; utilisation rates of different ferry routes and their sufficiency; effective procedures for managing passenger flow during ticketing, boarding and disembarking.

On the measures in place to ensure financial stability, the audit focused on managing funding sources and budgetary controls in ferry operation, monitoring variance from the budget through expenditures tracking processes, and mechanisms employed for revenue generation in ferry operation, including ticket pricing strategies.

With regards to the adherence to national and international safety regulations and operational standards, the audit assessed whether national and international regulations governing safety, operation, and environmental standards applicable to ferry operations are integrated into operational practices. It also covered aspects of maintaining documentation of safety protocols and processes for effective implementation and training of crew and staff regarding these protocols. Furthermore, the audit checked whether regulatory bodies conducted safety audits and inspections and the outcomes of these audits in terms of compliance, identified areas for improvement, identified trends from past incidents or accidents related to ferry operations and implemented corrective measures to prevent recurrence and enhance safety.

With regards to the guarantee of ferry reliability through effective operations and maintenance plan, the focus was on the operations and maintenance manuals, inspections conducted on the ferries and the alignment with schedules and regulatory requirements; the timely response of the maintenance teams, availability of tools and facilities for maintenance, the extent to which the corrective, routine and preventive maintenance was timely and efficiently carried out and documentation of the mechanical failure for taking the corrective action.

On the monitoring and evaluation, the audit focused on the availability of plans for monitoring and evaluation, the extent to which they were implemented, and the availability of key performance indicators (KPIs) and monitoring reports.

The audit covered the period of four financial years, starting from 2020/21 to 2023/24. This period was selected because it allowed the audit to establish performance trends in the country's ferry operations.

### 1.3.3 Assessment Criteria

To assess the management of ferry operations by the Tanzanian Electrical, Mechanical and Electronics Services Agency (TEMESA), assessment criteria were drawn from legislation, standards, good practices, program documents and Strategic Plans from the Ministry of Works and TEMESA. The following are the broader assessment criteria for each of the specific audit objectives:

***Availability of Adequate Ferry Services***

According to TEMESA Strategic Plan (2021/22-2025/26), one of the targets of objective D is to install a new crossing by June 2026; this indicates that ferry operations will be extended to all the needed areas.

ISO 9001:2015 Certified

According to the Executive Agencies (The Tanzania Electrical, Mechanical and Electronics Services Agency) Establishment Order, 2005, the objective of transforming the functions of the current Electrical and Mechanical Division into the Tanzania Electrical, Mechanical and Electronics Services Agency is to improve the delivery of public services and the quality of services provided by the previous Division.

According to TEMESA Strategic Plan (2021/22-2025/26), Strategic objective E: TEMESA Business Processes and Support Services Improved; one strategy is to increase the customer base by conducting a customer satisfaction survey every year.

According to the TEMESA Strategic Plan (2021/22-2025/26), Strategic Objective C: Mobilization, management, and accountability of TEMESA financial resources improved among the strategies to enhance the functions

of established integrity agencies by formalising mechanisms for complaint handling.

According to the Executive Agencies Act of 1997, section 4(2) describes the functions of Executive Agencies and operational principles. An Executive Agency shall observe operations designed to provide the best service to its customers and maintain a high degree of responsiveness to their needs.

***Effective Management of Ferry Scheduling, Utilization Rates, Passengers Flow and Data Base***

According to the Executive Agencies Act, 1997, section 4(2), the functions of Executive Agencies and operational principles are:

(a) To provide its services to its customers and the public most efficiently and effectively;
(b) To manage its affairs in a business-like and cost-effective manner and by modern management practices and techniques and, in particular, to apply to its operations the best standards of financial management and accounting; and
(c) To ensure that its operations are designed to provide the best service to its customers and maintain a high degree of responsiveness to their needs.

ISO 9001:2015 Certified

According to the Executive Agencies (The Tanzania Electrical, Mechanical and Electronics Services Agency) Establishment Order, 2005, the objective of transforming the functions of the current Electrical and Mechanical Division into the Tanzania Electrical, Mechanical and Electronics Services Agency is to improve the delivery of public services and the quality of services.

According to Para 1.4.2 of the Guideline of the Agency in the Implementation of the Duties of Operation and Construction of Ferries, 2024 requires the head of the ferry to consider the boarding and disembarking procedures on the ferry to avoid congestion of passengers, cars, bicycles, and other vessels that use ferry transportation.

***Measures to Ensure Financial Stability Through Effective Revenue Generation and Expenditures Control***

According to the TEMESA Strategic Plan for 2021/22-2025/26 Strategic Objective C: Mobilization, management, and accountability of TEMESA financial resources have improved. One of its strategies is to increase the revenue base and enhance the efficient utilisation of financial resources by reducing agency expenditure by an average of 5% annually and strengthening ferry revenue collection at all ferry stations.

Para 1.4.5 of Guideline of the Agency in the Implementation of the Duties of Operation and Construction of Ferries, 2024, titled "Ferry Revenue Management", states that, for the ferry to be operated efficiently, revenue collection is necessary and should be strengthened to be able to meet basic expenses of operations such as the purchase of fuel, payment of salaries and allowances of employees, security payments, payment of water and electricity as well as ferry maintenance and infrastructure by:

(i) Ensuring that the ferry station has one of the revenue collection systems, between cashless systems (N-Card), electronic ticketing system (tickets), or point of sale (POS), that works efficiently at all times;
(ii) Ensuring all ferry users (passengers, vehicles, and other means of transport) have paid the eligible fare and are given a valid ticket for the money they paid;
(iii) Ensure all money collected at each ferry station is recorded in a special notebook of the station and delivered to the bank every other day;
(iv) Ensuring that the facility has a safe for storage of the collections of the day before the money is delivered to the bank;
(v) Compare collections once every week between collection system information, records of collections in the ledger, and the amount deposited in the bank;
(vi) To report immediately to the Regional Ferry Manager if this procedure is violated so that actions can be taken; and
(vii) It is a legal offence to use collections funds in advance if they have not been deposited in the bank, keep the collection funds without depositing them in the bank for more than two days, or remain silent while this procedure has been violated.

Para 1.4.6 of TEMESA Guideline on the Implementation of the Duties of Operation and Construction of Ferries, 2024, titled “Fuel Control”, states it is the responsibility of the Regional Ferry Manager to ensure all the ferries in his region get enough fuel and on time. So, he will consider the Public Procurement Act to get a few bidders who will supply the service and guarantee they are paid on time so that they can provide better service.

***Ferry Operations Adhere to National and International Safety Regulations and Operational Standards***

Objective C of the Ministry of Work Strategic Plan (2021/22 – 2025/26) elaborates on the targets for developing and disseminating safety and environmental standards in ferry services.

According to TEMESA Strategic Plan (2020/21 – 2025/26) Objective D, TEMESA Engineering service and infrastructure improved. Thus, the strategies to improve security and safety in ferry services, whereby among the targets, there is a target to ensure all vessels are equipped with safety, security, and communication equipment every year up to June 2026

According to Regulation 16 of The Merchant Shipping (Small Ships, Local Cargo Ship Safety, Small Ship Safety, Surveys and Inspections for Vessels Engaged on Local and Coastal Voyages, Inland waters) Regulations, 2004, all Vessels operating on the waterways shall carry a Certificate of Seaworthiness attesting to compliance with the technical requirements of these Regulations. Regulations 125 and 126 of the Merchant Shipping (Small Ships, Local Cargo Ship Safety, Small Ship Safety, Surveys and Inspections for Vessels Engaged on Local and Coastal Voyages, Inland Waters) Regulations, 2004 provide for the minimum requirements for ferry crew on particular types, size and capacity of the vessel/ferry.

According to Para 3.2.1 of the TEMESA Approved Functions and Organization Structure, 2018, it is required to establish and supervise the implementation of ferry safety standards and procedures; evaluate the effectiveness of ferry services and safety standard procedures; and organise and coordinate training of ferry employees on matters relating to ferry operations and safety.

Regulation 14 of The Merchant Shipping (Musters, Training, and Decision Support Systems) Regulations, 2019 requires the master to record the

following regarding the abandon ship drill, fire drill, drill of other life-saving appliances or on-board training on the official logbook.

According to TEMESA Strategic Plan (2020/21 – 2025/26), Objective F: TEMESA operations and efficiency are continuously monitored, and strategies to ferry operations comply with TASAC requirements every year. The Key Performance Indicator (KPI) was the number of vessels awarded seaworthiness certificates and registration certificates.

Section 207 (1) of the Merchant Shipping Act, 2003 requires where a ship has sustained or caused any accident occasioning loss of life or any serious injury to any person or has sustained any material damage affecting her seaworthiness or her efficiency, either in her hull or in any part of her machinery; that the owner or master of the ship within 24 hours after the occurrence of the accident or causing of the damage or as soon as possible thereafter, transmit to a proper officer if the ship is in a foreign port; or otherwise to the registrar of ships, a report of the accident or damage.

According to section 207(2) of the Merchant Shipping Act, 2003, every report of accident or damage to a ship should be signed by the owner or master of the ship and state the name of the ship, the port to which the ship belongs, the official number, and the place where the ship located, the circumstance in which the accident or damage occurred, and the probable cause of the accident or damage.

Regulation 16 of the Merchant Shipping (Small Ships, Local Cargo Ship Safety, Small Ship Safety, Surveys and Inspections for Vessels Engaged on Local and Coastal Voyages, Inland waters) Regulations, 2006 requires all Vessels operating on the waterways to carry a Certificate of Seaworthiness attesting to compliance with the technical requirements of these Regulations.

***Operations and Maintenance Plan in Place is Effective and Guarantee Ferry Reliability***

Para 2.4.1 of the Ministry of Work's Management Guide for Government Ferries managed by TEMESA, 2022 states that the agency should ensure that preventive maintenance of ferries is conducted according to the manufacturer's guidelines and prepared schedules, taking into account best

practices. Preventive maintenance should be performed on machinery, electronic, water, and hydraulic systems, as well as the vessel's structure.

According to Para 1.5.3 of TEMESA Guideline on the Implementation of the Duties on Operational and Constructions of Ferries, 2024 requires that the regional manager ensure that an annual maintenance report for each ferry in the region is prepared with details on the type of maintenance performed each month, the spare parts used, the cost of maintenance, the amount of costs paid, and any remaining debts. The report should be submitted to the Chief Executive Officer by 31st January of each year.

Para 2.5 of the Ministry of Work's Management Guide for Government Ferries, managed by TEMESA, 2022 states that the agency should establish workshops and provide the appropriate tools at all ferry stations for the maintenance of its ferries. These workshops should have enough skilled and professional technicians who are further developed through training both domestically and abroad. These workshops are in the following categories: Workshops for the construction and major repair of ferries (dockyard); this is a long-term plan where one workshop will be built in the Indian Ocean area and another on Lake Victoria. And Workshops for routine maintenance of ferries at each station.

***The Ministry of Works and TEMESA Adequately Monitor and Evaluate the Operations of Ferry***

Target XI and XX of Objective D of the Ministry of Works Strategic Plan (2021/22 – 2025/26) highlight preparing annual safety and environmental monitoring and audit reports for ferries and improving and operationalising a quality management system for ferry operations.

Para 3.3 of TEMESA Guidelines on the Implementation of Human Resource Management and Administration Duties, Planning, Monitoring, and Evaluation, and Accounting and Finance requires that the Plan and Budget be monitored, evaluated, and reported on as per the Monitoring and Evaluation Strategy and the implementation of the TEMESA's Work Plan.

The government's Monitoring and Evaluation Framework requires that whenever M&E is planned, Key Performance Indicators should be established. This component includes outcome and output indicators.

According to Para 3.3.2 of TEMESA Guidelines on the Implementation of Human Resource Management and Administration Duties; Planning, Monitoring, and Evaluation; and Accounting and Finance required Quarterly and annual implementation reports should be submitted to the Office of the Treasury Registrar and the parent Ministry after being reviewed by the Management and the Agency's Advisory Board (MAB). Additionally, implementation reports will be prepared and submitted in both hard and soft copy, following the format specified in Chapter Two, Section Two of the Guidelines for Preparing Government Plans and Budgets.

### 1.4 Methods for Sampling Data Collection and Analysis

Methods for sampling, data collection, and analysis used by the audit team are presented below:

#### 1.4.1 Sampling Methods

A purposive sampling method was used to select ferries and ferry stations in the country.

Tanzania has two zones responsible for ferry operations: the Eastern Southern and Lake. The Eastern Southern Zone consists of six regions: Dar es Salaam, Morogoro, Pwani, Tanga, Lindi, and Mtwara. The Lake Zone has five Regions: Mwanza, Geita, Kagera, Kigoma, and Mara.

Both zones were sampled for the audit. Both zones have ferries, which have long and short routes. The long routes are all those in which a ferry takes more than two hours to travel. The short routes are all those in which a ferry takes less than two hours to travel. These zones present an equal presentation of all the criteria that have been adhered to. Regions were chosen from the selected zones as described below.

**Sampling of the Covered Regions**

The sampling of regions was based on the availability of the zonal office, the number of ferry stations and ferries, and the availability of equal presentation of the long and short routes of the ferries. In each zone, regions were chosen,

and both were presented, with the highest number of ferry stations and ferries and the one with the lowest number of ferry stations and ferries.

**Table 1.1: Selection of Regions**

| NS | Zones | Regions with ferries | Ferries Station | Ferries | Length of Route | Zonal Office | Sample Selected |
|---|---|---|---|---|---|---|---|
| 1 | Eastern and Southern | Dar-es-Salaam | 1 | 3 | SR | ✓ | ✓ |
| | | Pwani | 2 | 2 | LR | x | ✓ |
| | | Morogoro | 1 | 1 | N/O | x | x |
| | | Tanga | 1 | 2 | SR | x | x |
| | | Mtwara | 2 | 2 | SR and LR | x | ✓ |
| | | Lindi | 1 | 1 | SR | x | x |
| 2 | Lake Zone | Mara | 2 | 2 | LR | x | x |
| | | Mwanza | 7 | 13 | SR and LR | ✓ | ✓ |
| | | Geita | 1 | 1 | LR | x | x |
| | | Kigoma | 1 | 2 | LR | x | x |
| | | Kagera | 2 | 3 | SR | x | x |

***Source*:** Auditors' Analysis of the Selected Regions, Ferry Stations and Ferries, 2024

***Key***

| | |
|---|---|
| *N/O* | *Not operating* |
| *SR* | *Short route* |
| *LR* | *Long route* |
| ✓ | *Selected* |
| *X* | *Not selected* |

NATIONAL AUDIT OFFICE NAOT ISO 9001:2015 Certified

**Table 1.1** shows that four regions were chosen based on the availability of zonal offices with ferry stations and ferries. The ferries were presented equally along both long and short routes. In each region, the audit visited the ferry station and its ferries. The four selected regions were Mwanza, Dar es Salaam, Mtwara, and Pwani.

### Sampling of the Visited Ferries

Purposive sampling techniques were used to select the ferries that were visited based on the ferry status and the length of route. The result of this sampling is presented in **Table 1.2.**

**Table 1. 2: Selection of Visited Ferries**

| Regions | Ferry Station | Ferry | Status | Length of Route | Selected Ferries |
|---|---|---|---|---|---|
| Dar es Salaam | Magogoni | MV Kazi | Operational | SR | ✓ |
| | | MV Kigamboni | Non-Operational | SR | ✓ |
| | | MV Magogoni | Maintenance | SR | ✓ |
| Pwani | Nyamisati | MV Kilindoni | Operational | LR | ✓ |
| Mtwara | Msanga Mkuu | MV Mafanikio | Operational | SR | ✓ |
| | Kilambo | MV Kilambo | Operational | LR | x |
| Mwanza | Kigongo Busisi | MV Misungwi | Maintenance | SR | x |
| | | MV Sengerema | Operational | SR | ✓ |
| | | MV Mwanza | Operational | SR | ✓ |
| | | MV Sabasaba | Maintenance | SR | x |
| | IlundaLuchelele | MV Temesa[8] | Maintenance | LR | ✓ |
| | Nyakaliro Kome | MV Kome II | Operational | LR | x |
| | Kahunda Mwaisome | MV Tegemeo | Operational | LR | x |
| | Kisorya Rugezi | MV Ujenzi | Maintenance | LR | x |
| | Bugolora - Ukara | MV Ukara II | Operational | LR | ✓ |
| | | MV Majita Ex (Nyerere) | Maintenance | LR | x |
| | | MV Ukara | Not in operational | LR | ✓ |
| | Kayenze - bezi | MV Ilemela | Maintenance | LR | x |

***Source***: Auditors' Analysis of Ferry Stations and their Respective Ferries,2024

**Table 1.2** shows that eight Ferry Stations were selected: Magogoni, Nyamisati, Msanga Mkuu, Kigongo Busisi, Ilunda-Luchelele and Bugolora-Ukara. A total of ten (10) Ferries were selected. Two (2) were non-operational and covered short and long distances; two (2) were under maintenance and

[8] During the Audit MV Temesa started operating

covered short and long distances; and six (6) were operational, out of which four (4) covered short distances and two (2) covered long distances.

The selected ferries were MV Kazi, MV Kigamboni, MV Magogoni, MV Kilindoni, MV Mafanikio, MV Sengerema, MV Mwanza, MV Temesa, MV Ukara II and MV Ukara.

### 1.4.2 Methods for Data Collection

Both qualitative and quantitative data were collected to provide strong and convincing evidence of the performance by TEMESA, MoW and TASAC in terms of the operation of ferries in the country. The audit team used various methods to collect information from the audited entities and other stakeholders. These methods were interviews, document review, physical verification and observation, as elaborated below:

**(a) Documents Review**

The Audit team reviewed documents from MoW, TEMESA, TASAC and selected TEMESA Zonal Offices and Ferry Stations to obtain comprehensive, relevant, and reliable information on ferry operations.

NATIONAL AUDIT OFFICE NAOT ISO 9001:2015 Certified

Various documents were reviewed to obtain information on the operations of ferry services, including adherence to national, international, and operational standards, adequacy of financial stability, maintenance, and monitoring and evaluation. Moreover, the reviewed documents from the audited entities were those falling within the period under audit, i.e., from July 2020 to June 2024. These documents included Strategic Plans, Action Plans, Maintenance Reports, Inspection Reports, Performance and Progress Reports, Medium-term Expenditures, and Monitoring and Evaluation Reports.

A list of documents reviewed and the reasons for reviewing them is attached as **Appendix 3**.

**(b) Interviews**

Officials from MoW, TEMESA, and TASAC were interviewed. Officials from the selected TEMESA Zonal Offices, Ferry Stations, and Ferries were also interviewed for data verification. Furthermore, interviews validated

information from the reviewed documents. The list of officials who were interviewed is attached as **Appendix 4**.

### (c) Physical Verification and Observation

The audit observed the adherence to national and international safety and operational standards during ferry operations, how the flow of passengers was managed in ferry stations, the status of the selected ferries, and whether routine and preventive maintenance was done adequately. The audit also verified the number of crew members on board and their competency.

### 1.4.3 Methods for Data Analysis

The collected information was analysed using qualitative and quantitative methods to obtain facts and sufficient details on ferry operations.


## 1.5 Data Validation Process

The Ministry of Works (MoW), Tanzania Electrical, Mechanical and Electronics Services Agency (TEMESA) and Tanzania Shipping Agencies Corporation

(TASAC) were given the opportunity to go through the draft Performance Audit Report and comment on the figures and information presented. They confirmed the accuracy of the figures and information presented in the audit report. The responses of MoW and TEMESA on the issued recommendations are presented in ***Appendix 1***.

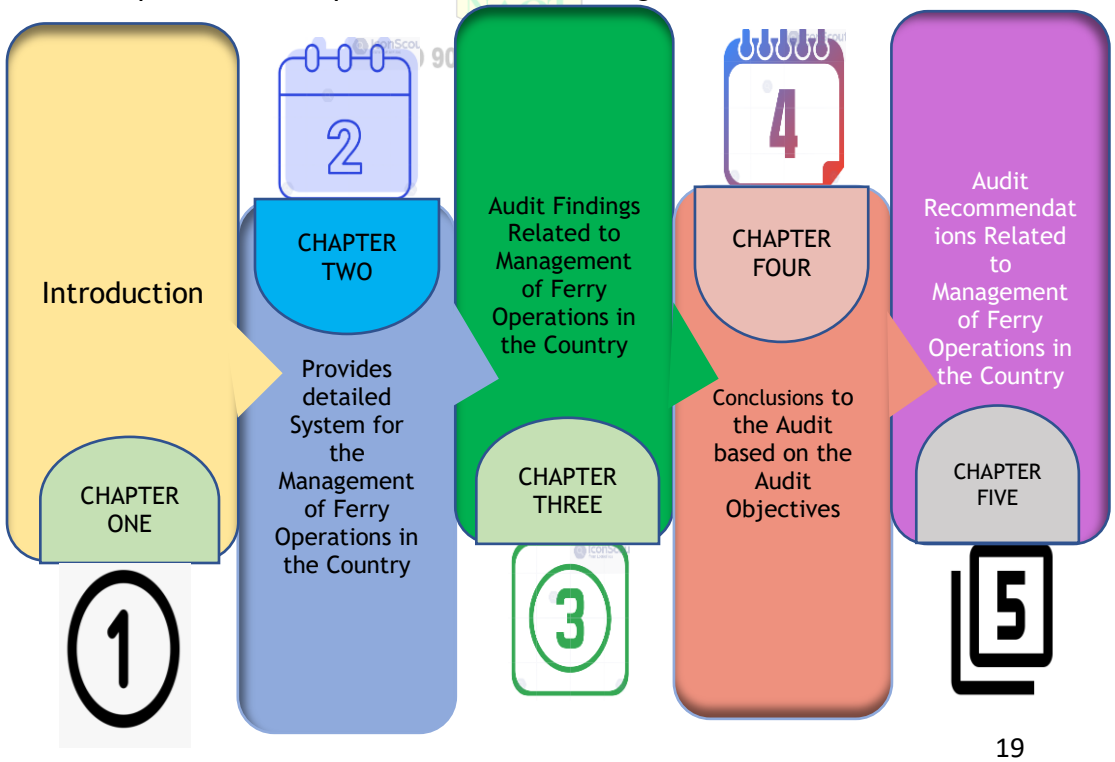
Furthermore, the information on the management of ferry operations in the country was cross-checked and discussed with experts to ensure validation of the information obtained and presented.

### 1.6 Standard Used for the Audit

The audit was done in accordance with the International Standards for Supreme Audit Institutions (ISSAIs) on performance audits issued by the International Organization of Supreme Audit Institutions (INTOSAI). These standards require the audit to be planned and performed to obtain sufficient and appropriate evidence in order to provide a reasonable basis for the audit findings and conclusions based on the audit objectives.

### 1.7 Structure of the Report

The main parts of this report cover the following:



# CHAPTER TWO

# SYSTEM FOR THE MANAGEMENT OF THE OPERATIONS OF FERRY IN THE COUNTRY

## 2.1 Introduction

This chapter describes the system for the management of ferry services in the country. It provides details of the governing legal framework and the government's goals and strategies for the operations of ferries in Tanzania. It also details key players, their legal mandates and responsibilities to undertake their responsibilities regarding the management of the operations of the ferry.

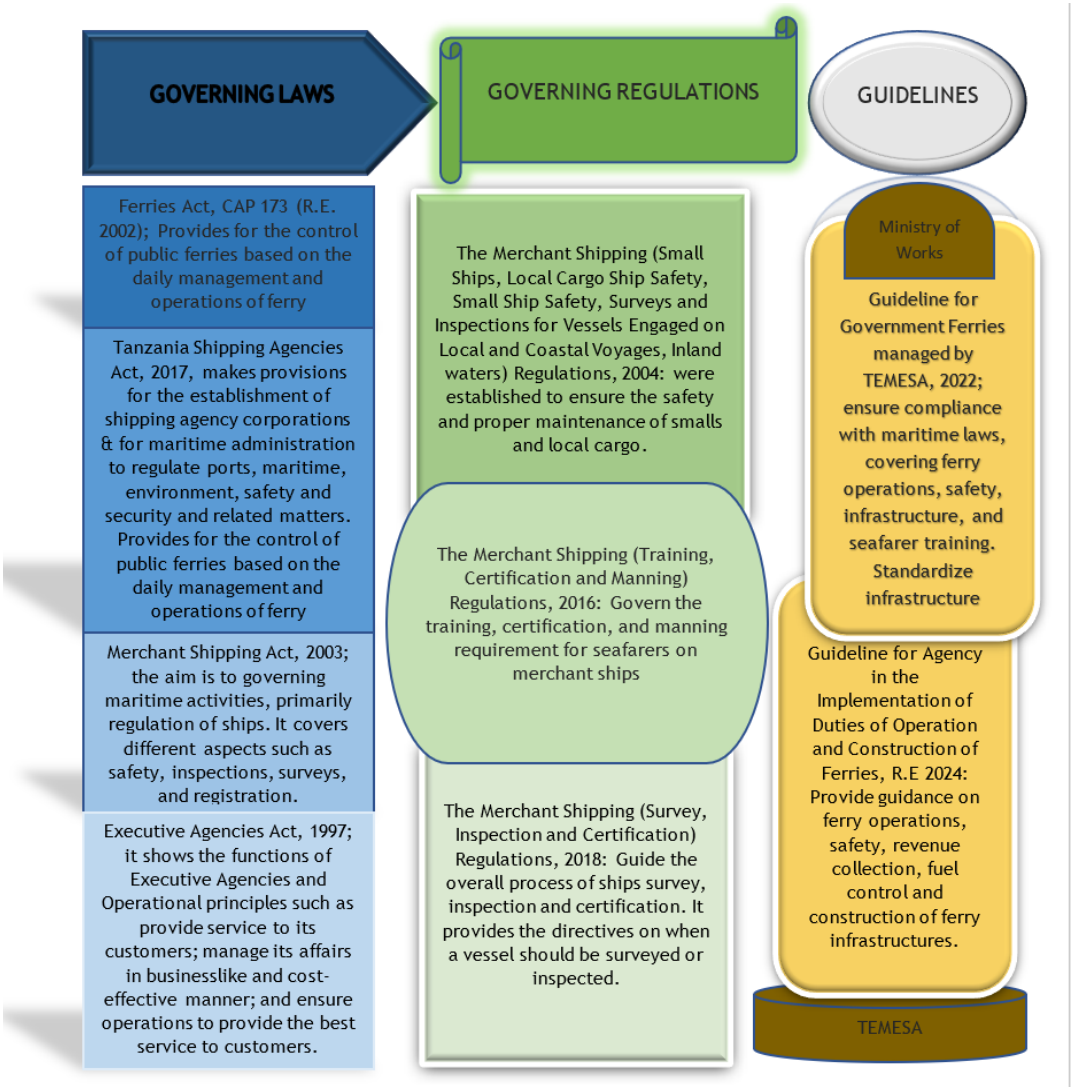
The chapter also describes how the systems, processes, and activities are supposed to function to ensure reliable and safe transport services in the country.

## 2.2 Legal Framework Governing the Management of Ferry Operations in the Country

The operations of ferry in the country are guided by various policies, Acts, guidelines, and strategies. This section outlines the laws and regulations that govern these activities, as shown in **Figure 2.1**.

NATIONAL AUDIT OFFICE
ISO 9001:2015 Certified

**Figure 2.1: Laws, Regulations and Guidelines Governing Operations of Ferry**

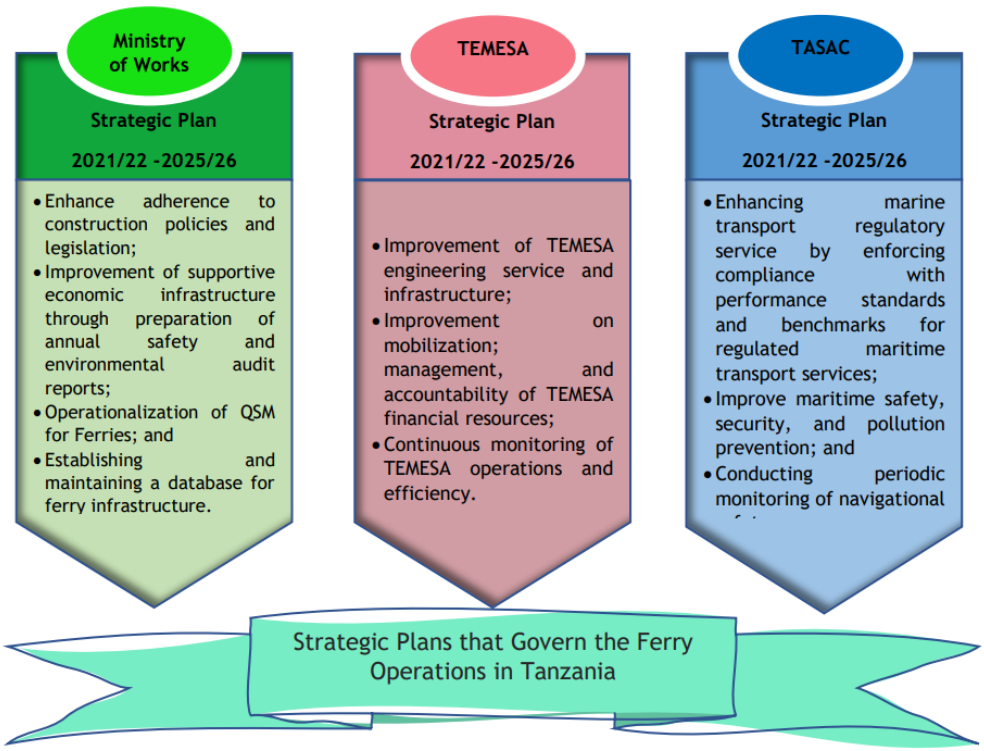



***Source***: Auditors' Analysis of Legal and Policy Frameworks Governing Operations of Ferry in Tanzania, 2024

## 2.3 Strategies and Guidelines on the Management of Ferry Operations in the Country

The operations of ferries are guided by Strategic Plans as detailed in **Figure 2.2**.

**Figure 2.2: Strategies on the Operations of Ferry**

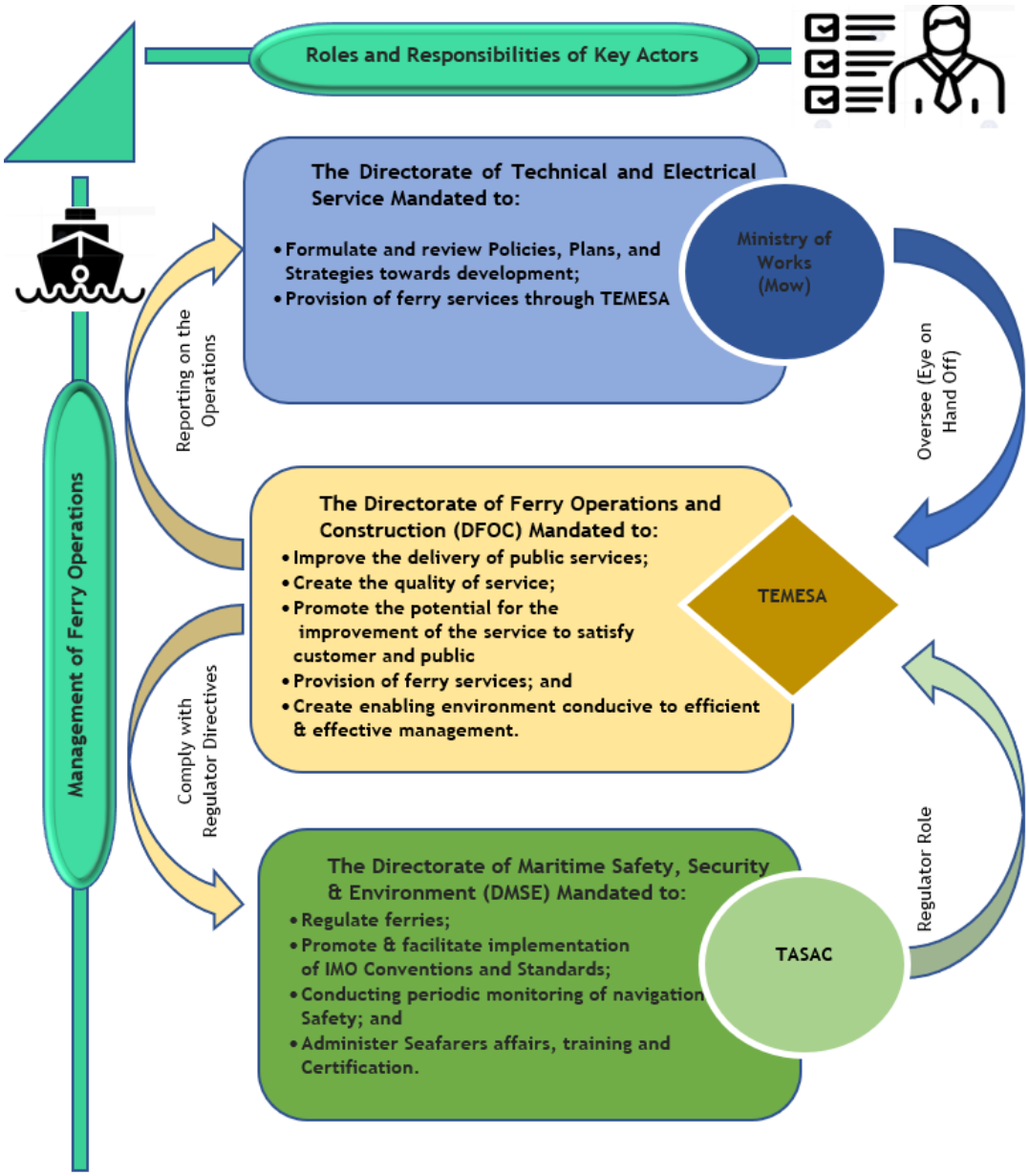



***Source***: Auditors' Analysis of MoW, TEMESA and TASAC Strategic Plans 2021/22 – 2025 (2024)

## 2.4 Roles and Responsibilities of Key Actors

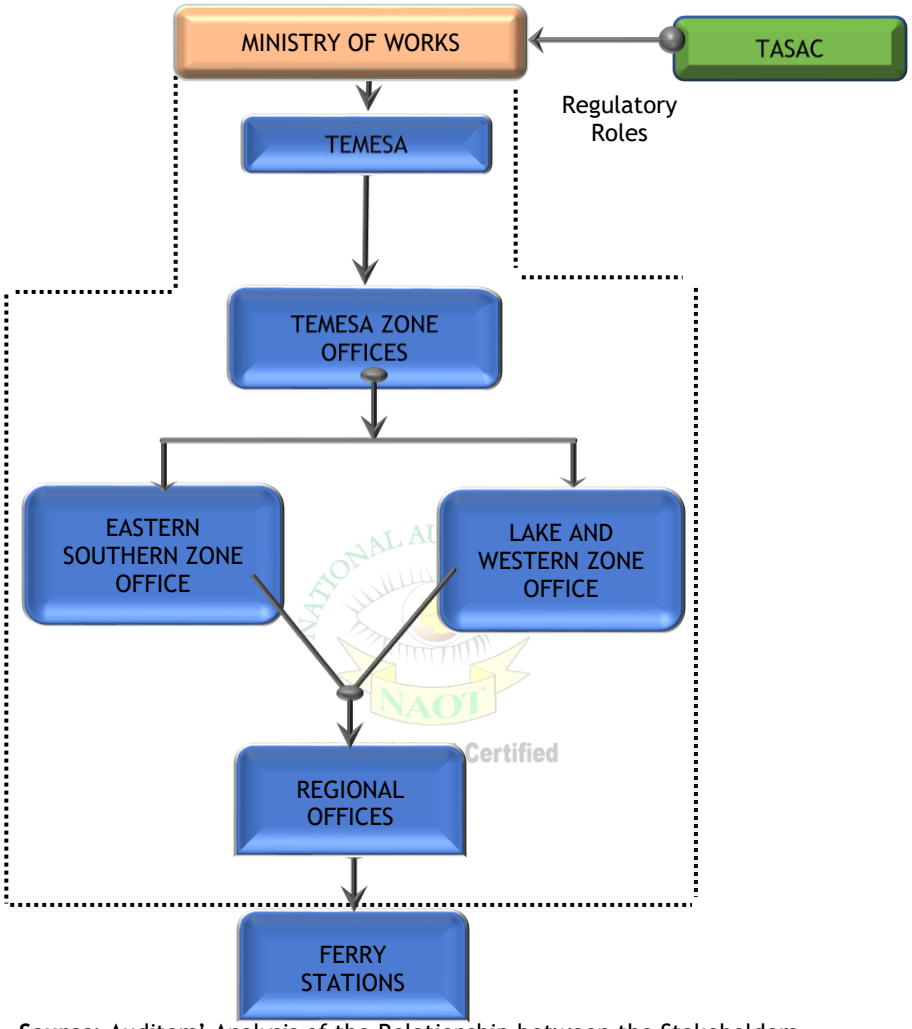
Several stakeholders are involved in the ferry operations. The key stakeholders involved in the ferry operations were the Ministry of Works (MoW), TEMESA, and TASAC. The roles and responsibilities of the key stakeholders are explained in **Figure 2.3.**

**Figure 2.3: Roles and Responsibilities of Key Actors**




***Source***: Auditors' Analysis of the Roles and Responsibilities of Key Actors in the Ferry Operations Tanzania, 2024

**Figure 2.4: Relationship Between Key Stakeholders Responsible for Operations of Ferry**

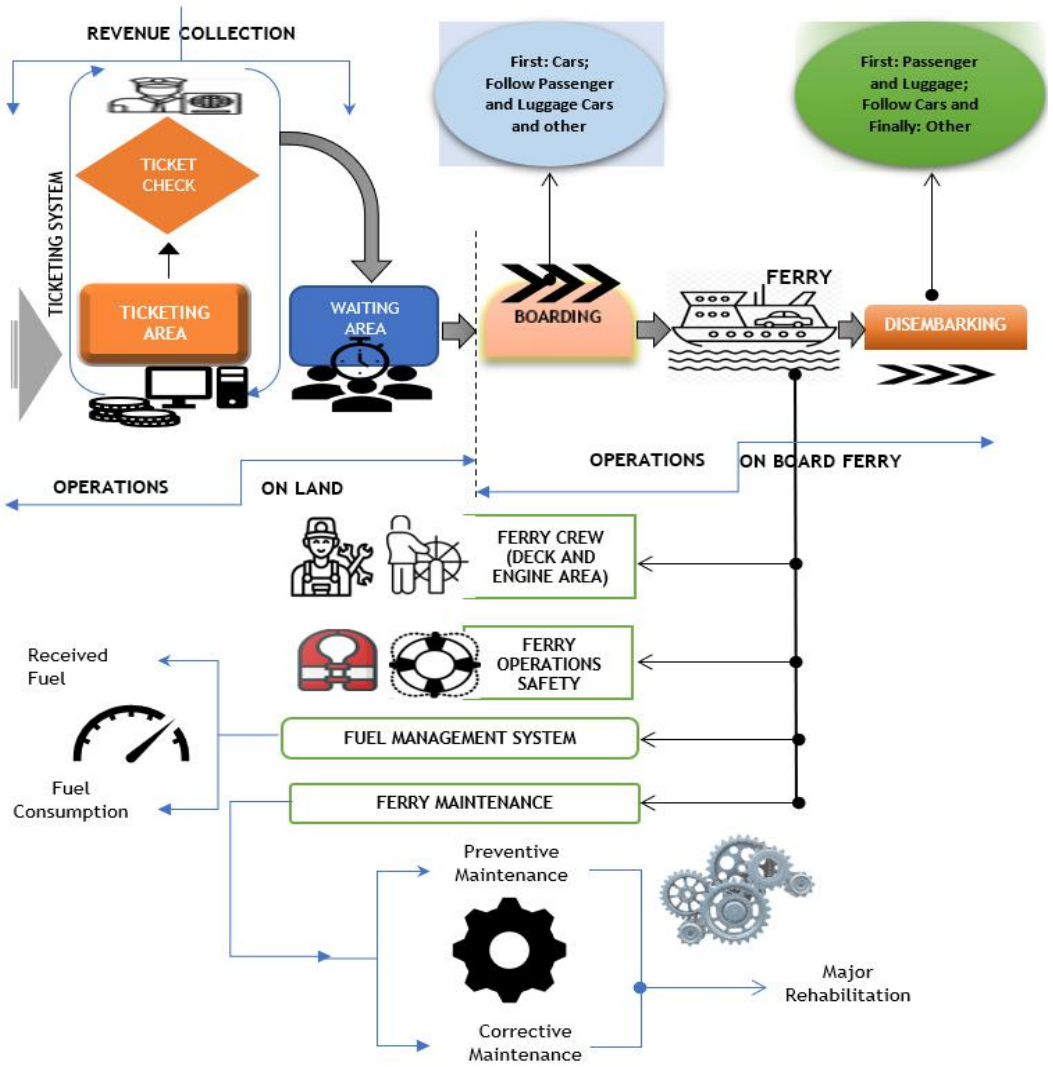



***Source***: Auditors' Analysis of the Relationship between the Stakeholders Responsible for the Operations of Ferry, 2024

## 2.4 System and Process Description for the Operations of Ferry

The operations process of the ferry, as managed by TEMESA is summarised in **Figure 2.5.**

**Figure 2.5: Process of Operations of Ferry**




***Source:*** Auditors' Analysis of TEMESA Guideline on the Implementation of the Duties on Operations and Constructions of Ferries, 2024 and Ministry of Work's Management Guide for Government Ferries Managed by TEMESA, 2022 (2024)

The description of each stage in the process shown in **Figure 2.5** is presented hereunder:

**a) Ticketing System**

Paragraph 1.4.5 of the Agency's Guideline for Implementing the Duties on Operations and Constructions of Ferries (2024) specifies that the ticketing system is where revenue is collected. Each ferry station should have a cashless system (N-Card), an Electronic Ticketing System, or a Point of Sale (POS) system. Ferry users (passengers, cars, and other means of transport) must pay the appropriate fare and be issued valid tickets. Additionally, a ticket-checking process ensures all ferry users have valid tickets, preventing fare evasion. For the ferry that travels long routes, TEMESA records the passengers' full name, age, gender, origin, and destination. However, for journeys under 32 kilometres, only the passenger count is required.

This aspect of ferry operation is crucial for efficiency as it ensures essential operational costs are met, including fuel purchases, employee salaries and allowances, security payments, water and electricity bills, and the maintenance of the ferry and its infrastructure.

NATIONAL AUDIT OFFICE NAOT ISO 9001:2015 Certified

**b) Waiting Area**

Once tickets are checked, passengers, their luggage, vehicles, and other means of transport move to the waiting area. This area is designated for organising and preparing the boarding process.

**c) Boarding to the Ferry**

When the ferry is ready, the vehicles board first, followed by passengers with their luggage and other means of transport (such as motorcycles, motorised rickshaws, carts, bicycles, etc.). Ferry users on the ferry should remain calm until the ferry reaches the other side and docks at the respective point for the disembarking process to begin. The crew members on the deck should ensure the safety of the ferry users when boarding and during the ferry travel period.

**d) Disembarking from the Ferry**

During landing, passengers and their luggage will start, followed by vehicles and other means of transport.

**e) Ferry**

A ferry is a marine vessel (a boat or ship) for conveying passengers and goods, especially over a relatively short distance (i.e. rivers, sea arms, lakes) to reach another location. Paragraph 2.2 of the Ministry of Works' Management Guide for Government Ferries managed by TEMESA highlights that, regarding the requirements of the Merchant Shipping Act, 2003 and its Regulations, as well as the Ferries Act Cap 173, ferries are required to have certifications as per directives from the regulator before starting operations. Any ferry must provide service only after obtaining compliance documents, including the registration certificate, seaworthiness certificate, equipment and vessel information records, and manning certificates.

Furthermore, the ferry is the key component in the ferry operation process, which encompasses the following key elements to ensure the provision of the required service:

- **Ferry Crew**

Each ferry must have crew members with the appropriate qualifications, numbers, and skills to enable efficient and effective service. The ferry crew is divided into ferry deck crew and engine room crew. All should be qualified according to the regulator's requirements. The qualifications and the number of crew members needed depend on the size of the ferry.

- **Ferry Safety**

Ferries operated by TEMESA must meet the safety requirements specified in the country's laws, regulations, and procedures to protect the safety of ferry users and their property. Proper ferry safety operations require knowledge and skills regarding the safe operations of ferry. Ferries should be equipped with appropriate and sufficient safety equipment and regularly inspected and maintained.

- **Fuel Management System**

The ferry station manager is responsible for ensuring that the correct amount of fuel, as ordered, is received and used as intended without any loss. Every three months, a report on the actual amount of fuel purchased for ferry use

should be submitted to the Director of the section with relevant evidence for the payment matched with the funds allocated for each distribution.

Moreover, for proper management of fuel, the ferry station manager is required to ensure the inspection and reception committee at the station, verify the amount of fuel received, and collaborate with ferry managers (in charge) to ensure their ferries use digital fuel management systems; each ferry to have a special logbook to record fuel consumption; to measure the amount of fuel in ferry main tank every morning and record in the logbook, and evaluate the fuel usage for their ferries once a week.

- **Maintenance of Ferries**

Maintenance of ferries should be carried out on time so that the ferries remain safe and last longer. The following are the types of Maintenance carried out by TEMESA:

**i) Routine Maintenance**

Routine maintenance is a regular maintenance activity in which tasks are performed daily, weekly, monthly, or annually. The primary goal is to identify problems on an ongoing basis before they result in equipment failure. Its programs consist of small tasks that do not require specialised skills. Routine maintenance is a broader term that encompasses all regular maintenance activities. At the same time, Preventative Maintenance is a specific type of Routine Maintenance performed proactively to prevent equipment failures and extend its life span.

**ii) Preventive Maintenance**

The preventive maintenance of ferries follows the manufacturer's guidelines and service manuals while considering best practices. It is conducted on machinery, electronic systems, water and hydraulic systems, and hull structures. Preventive maintenance activities include cleanliness, inspection, changing of oil and filters, tightening of loose parts on machinery, conducting required tests for systems, painting, welding, and scraping out rust and barnacles from the hull structures.

During preventive maintenance, lubricant oils are changed as directed in the service manual. Also, oil, filters, water separators, and air cleaners are replaced in the service manual, and grease should be applied to all necessary parts as directed in the service manual. Preventive Maintenance also includes conducting a general inspection of the ferry and all its systems. Moreover, an annual maintenance report for each ferry is supposed to be prepared with the details of the types of maintenance performed, the spare parts used, maintenance costs, the amount paid, and any remaining debt.

**iii) Corrective Maintenance**

Corrective maintenance, often referred to as breakdown maintenance, involves repairing a vessel only when a component or system has failed[9]. The corrective maintenance is carried out after inspections to identify the root cause of the faults, thereby avoiding ineffective repairs. If the cost of corrective maintenance of the ferry is greater or equal to 75% of the cost of procuring a new ferry, TEMESA prepares the technical report and submits it to the responsible ministry for further evaluation and required decisions.

**iv) Major Rehabilitations**

Major rehabilitations, including dry-docking, hull inspection, hull repair and extensive system overhauls, are carried out following the manufacturer's instructions and best practices. To ensure the safety of the ferry, they also comply with the Merchant Shipping Act, 2003 and its Regulations. The major rehabilitation plan for ferries is prepared every three to five years for each ferry, depending on its age and operating conditions.

## 2.5 Resources for the Operations of Ferry

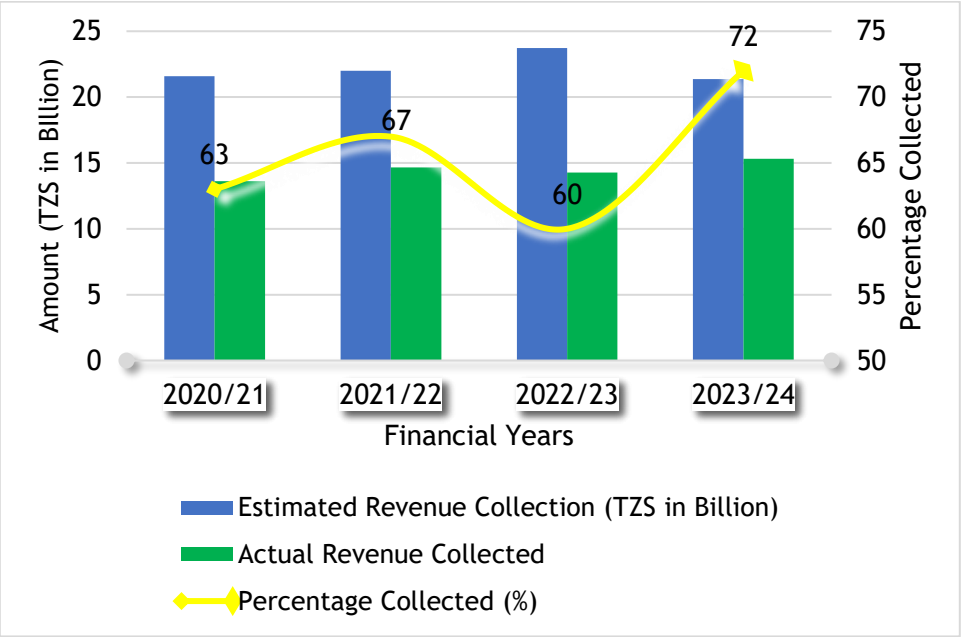
TEMESA is responsible for the operations of ferry in the country. Below are sources, the budgeted and allocated financial resources:

[9] https://mr-marinegroup.com/vessel-maintainace/

### (a) Sources of Finance

TEMESA's revenue depends on its own sources and government subventions. It is generated from the maintenance of vehicles, plants, equipment hire, electricals, refrigeration and air conditioning work consultancy service, and the operation of ferry. **Figure 2.6** shows the projected and actual revenue collected from ferry services**.**

**Figure 2.6: Estimated Revenue and Actual Collected Revenue from Ferry Services**



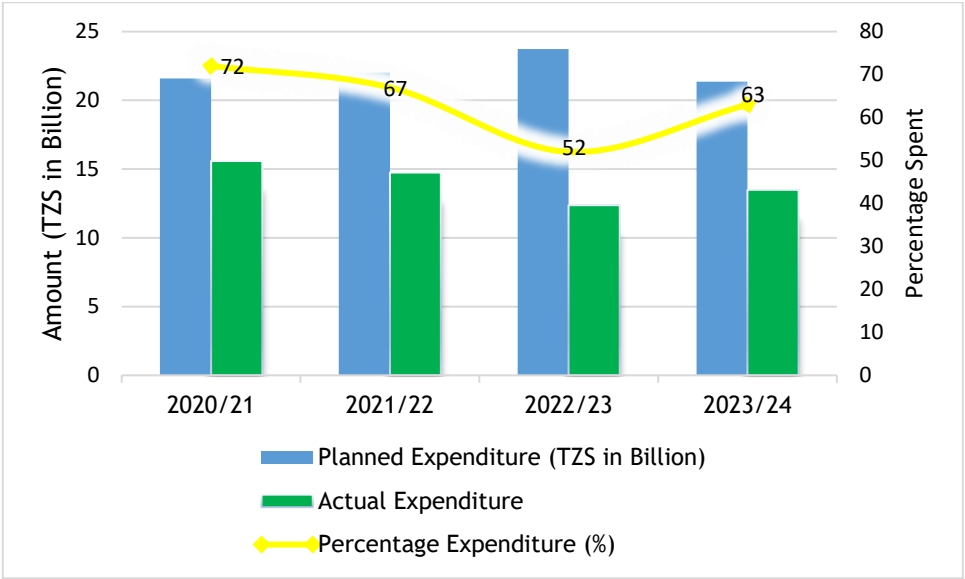

***Source***: Auditors' Analysis on the *TEMESA's MTEF and TEMESA Annual Performance Report for Financial Years 2020/21 to 2023/24 (2024)*

**Figure 2.6** demonstrates that for the consecutive selected financial year, TEMESA did not meet the targeted revenue expected to be collected as per the estimated revenue. On this, the audit revealed that the actual collected revenue declined in the financial year 2022/23 compared to the actual revenue collected in Financial Year 2021/22.

**Financial Resources Allocation for the Operations of Ferry**

This part presents the funding arrangement for the operations of ferry at TEMESA. **Figure 2.7** shows the Planned Expenditures and actual expenditures from the Financial Year 2020/21 to 2023/24.

**Figure 2.7: Planned and Actual Expenditure for Ferry Services**




***Source***: Auditors' Analysis on the TEMESA's MTEF and TEMESA Annual Performance Report for Financial Years 2020/21 to 2023/24 (2024)

**Figure 2.7** shows that for the past five financial years, TEMESA's expenditures were less than 70 per cent, however, it was noted that the planned expenditures were based on the planned revenue and not the collected revenue.

**(b) Human Resources**

To ensure the operations of ferries in the country are carried out effectively, as the availability of adequate human resources is inevitable. **Table 2.1** indicates the required and available numbers of staff, as detailed below;

**Table 2.1: Analysis of Needed Human Resources at TEMESA**

| Human Resources | Required No of Staff | Available | | Shortage |
|---|---|---|---|---|
| | | Permanent | Contractual | |
| Engineers | 13 | 12 | - | 1 |
| Ferry In charge (Who are not Engineers) | 14 | - | - | 14 |
| Technician & Artisan | 73 | 16 | 51 | 6 |
| Ferry Captain | 64 | 21 | 38 | 5 |
| Ferry Deck Assistant | 80 | - | 62 | 18 |
| Diver | 12 | - | 2 | 10 |
| Inspector/Collector | 125 | - | 110 | 15 |
| **Total** | 381 | 49 | 263 | 69 |

***Source:*** TEMESA's Employee Status Information, 2024

**Table 2.1** shows that TEMESA has 263 contractual staff compared to 49 permanent staff. Despite this, a deficit of 69 staff was noted.

The data highlights a significant staffing deficit within TEMESA across various roles such as Engineers with a shortage of one (1) staff, Ferry In charge with a gap of fourteen (14) staff, Technicians & Artisans with a gap of six (6) staff, Ferry Captains with a shortage of five (5) staff, Ferry Deck Assistants with a shortage of eighteen (18) staff, Divers with a gap of ten (10) staff and Inspectors with a gap of fifteen (15) staffs. Notably, critical shortages were observed in ferry deck assistants, with a staffing gap of eighteen (18).

NATIONAL AUDIT OFFICE ISO 9001:2015 Certified

## CHAPTER THREE

## AUDIT FINDINGS

### 3.1 Introduction

This chapter presents the audit findings on the management of ferry operations. The findings focus on the management of ferry schedules, utilisation rates, passenger flows, and database management; measures to ensure financial stability through effective revenue generation and expenditure control; compliance with national and international regulations and operational standards; the reliability of ferry maintenance; and the monitoring and evaluation of ferry operations.

### 3.2 Unreliable and Unassured Ferry Services in the Country

The audit noted that ferry operations were inadequate in ensuring reliable and assured ferry services, as detailed below:

#### 3.2.1 Non-availability of Ferry Operations in all the Needed Areas

The audit noted insufficient ferry services in all the needed areas, as detailed in **Table 3.1**.

ISO 9001:2015 Certified

**Table 3.1: Analysis of the Required versus Available Ferry Stations**

| Operational Zonal | Required Ferry Stations | Available Ferry Stations |
|---|---|---|
| Eastern Southern Zone | 14 | 7 |
| Lake and Western Zone | 18 | 13 |
| **Total** | **32** | **20** |

***Source***: Auditors' Analysis on the Need Analysis of the Ferry Services, 2024

**Table 3.1** shows that ferry services were available by 63%. Furthermore, the need analysis was done in 2021, however, the Ministry of Works (MoW) and TEMESA did not establish the timelines for updating the need analysis of the ferry services. As a result, the planning of the activities to be implemented was informed with outdated information. The audit also noted that the documented report for the need analysis on the Lake and Western Zone was not in place. On the other hand, the information on the needed routes was collected from the Zonal Offices, thus revealing inadequate supervision and monitoring of the activities to be implemented. **Table 3.2** shows details of the needed routes in the Eastern and Southern Zone.

**Table 3.2: Identified Needed Routes in Eastern and Southern Zone**

| Name of the Region | Identified Route | Available Means of Transportation |
|---|---|---|
| Pwani | Kisiji-Kwale -Koma | Local wooden vessels |
| | Muhoro-Delta (Kiongoloni) | Local wooden vessels and long-route land transportation during summer |
| Tanga | Tongoni-Mwarongo | Local wooden vessels and long-route land transportation |
| | Mseko -Kigurusimba | One locally made wooden vessel |
| Mtwara | Mgao-sudi | Not specified |
| Lindi | Kilwa Kivinje-Songosongo | Small Boats |
| | Kilwa Masoko-Pande | Wooden boat registered by TASAC |

***Source***: Auditors' Analysis on the Need Analysis of the Ferry Services, 2024

**Table 3.2** shows that in the identified areas, the available means of transport were not safe and convenient for the transportation of many people. **Table 3.3** shows the identified needed routes in the Lake and Western Zone.

**Table 3.3:Identified Needed Routes in Lake and Western Zone**

| Name of the Region | Identified Route | Available Means of Transportation |
|---|---|---|
| Mwanza | Kakukuru Ghana | Local wooden vessels |
| | Irugwa Murutanga | |
| Kigoma | Not Identified | - |
| Mara | Musoma Kinesi | - |
| Geita | Lushamba Kanyala | Local wooden vessels |
| Kagera | Kayenze Kanyinyi | Wooden Boat |

***Source***: *Auditors' Analysis of the Need Analysis on the Ferry Services (2021), CCM Manifesto (2020-2025)*

A review of the submitted letter with reference number EA.320/476/01A/47 from the Lake and Western Zonal Office revealed the need for ferry infrastructure, such as landing ramps, in the areas along the Lake Zone named Murutanga /Kitale, Kakukuru/Murutilima, Ghana, and Irugwa Islands.

The audit noted that TEMESA's strategic plan did not have details on the ferry services needed or an estimate of the available passengers on the respective routes. The strategic plan highlighted the rehabilitation of six (6) ferries and reallocating them to the newly identified crossings. The Audit noted that the strategic plan did not incorporate the needs assessment results. The strategic plan highlighted the needed ferries, as detailed in **Table 3.4**.

**Table 3.4: Planned Acquired Ferries**

| Financial Year | Required Ferry | Available ferries | Percentage of Availability |
|---|---|---|---|
| 2020/21 | 34 | 34 | 100 |
| 2021/22 | 36 | 34 | 94 |
| 2022/23 | 38 | 34 | 89 |
| 2023/24 | 40 | 32 | 80 |

***Source:*** Strategic Plan 2021/22 – 2025/26; Commissioning and Delivery reports/Asset Register for the Financial year 2020/21 – 2022/23

**Table 3.4** shows that the number of ferries declined from 2021/22 due to uncompleted projects in the construction of ferries, as detailed in **Table 3.5**.

**Table 3.5: New Ferry Construction Projects**

| Project Name | Delay in Project Commencement (Months) | Delay during Project Implementation (Months) | Cumulative Delay from Project Start to Completion (Months) |
|---|---|---|---|
| Kisorya-Rugezi Ukerewe-Mwanza | 7 | 30 | 37 |
| Ijinga-Kahangala | 4 | 21 | 25 |
| Bwiro-Bukondo | 6 | 21 | 27 |
| Nyakarilo-Kome | 4 | 21 | 25 |
| Nyamisati-Mafia | 5 | 25 | 30 |
| Buyagu-Mbalika | 0 | 24 | 24 |

***Source***: Auditors' Analysis of TEMESA Project Implementation Tracker, 2024

**Table 3.5** shows that from 2020/21 to 2022/23, TEMESA initiated the construction of six new ferries, achieving the target set, although the construction started in different years, extending beyond the planned timeline. All six (6) projects had delays, with a maximum delay noted on the project named Kisorya-Rugezi Ukerewe-Mwanza. Also, until the audit, all ferries were not completed. As a result, transportation services to the lake zone were insufficient to cover the demands for ferry services.

### 3.3.1 Insufficient Number of Operating Ferries

According to the Executive Agencies (The Tanzania Electrical, Mechanical and Electronics Services Agency) Establishment Order, 2005, the objective of transforming the functions of the current Electrical and Mechanical Division into the Tanzania Electrical, Mechanical and Electronics Services Agency is to

improve the delivery of public services and the quality of services provided by the previous Division.

The audit noted insufficient availability of the required ferries in the operational areas. This was against the TEMESA Establishment Order, 2005, with the objective of improving the delivery of public services and the quality of services provided by the previous Electrical and Mechanical Division which was under the Ministry of Works. **Table 3.6** shows the required ferries with the available ferries in the respective ferry stations.

**Table 3.6: Analysis of the Required Ferries against Available Ferries in the Respective Ferry Stations**

| Operational Zonal | Required Ferries | Available Ferries | Traffic Count (Daily) | The Ratio of Ferry Traffic Count Per Day |
|---|---|---|---|---|
| **Eastern Southern Zone** | | | | |
| Magogoni Ferry Stations | 4 | 3 | 38,503 | 1:12835 |
| Nyamisati Ferry Stations | 2 | 1 | 442 | 1:442 |
| Msanga Mkuu Msemo | 2 | 1 | 833 | 1:883 |
| | | | | |
| **Lake Zone** | | | | |
| Kigingo Busisi | 3 | 3 | 6,597 | 1:2199 |
| Bugolora- Ukara | 2 | 1 | 715 | 1:715 |
| Ilunda Luchelele | 1 | 1 | 1,533 | 1:1533 |

***Source***: Auditors' Analysis on the Required versus Available Ferries in TEMESA, 2024

**Table 3.6** revealed that the highest ratio was noted at Magogoni Ferry Station, followed by Kigongo Busisi and Ilunda Luchelele. However, according to the need analysis, the Ilunda Luchelele does not need an additional ferry, which reveals inadequate need analysis on the required ferries.

The insufficiency of availability of the ferries in the area of the operations was attributed to:

**a) Presence of Non-operational Ferries**

The Audit noted the presence of non-operational ferries due to increased ferry breakdowns and delays in ferry maintenance and construction. **Table 3.7**

shows the summary of the status of ferries, and the detailed status is in **Appendix 5**.

**Table 3.7: Status of Ferry Operations**

| Status of Ferries | Number of Vessels | Reasons |
|---|---|---|
| In Operation | 21 | Ok |
| Out of Operation | 4 | • Procurement proceedings for rehabilitation (MV Kigamboni, MV Pangani and MV Sabasaba)<br>• Ferry station safety issues (MV Kilambo) |
| Under Maintenance | 7 | • Timely Docking<br>• Ferry Accidents |

***Source***: Auditors' Analysis of Status of Ferry Operations by TEMESA & TASAC, 2024

**Table 3.7** shows that eleven (11) out of thirty-two (32) ferries in the country were not in operation, representing 34% of the available ferries. And seven (7) of the eleven (11) non-operational ferries were undergoing major rehabilitation.

Additionally, a site visit to Magogoni Ferry Station in August 2024 revealed inadequacies in the ferry services. The Magogoni Ferry Station was originally equipped with three ferries operating between Magogoni and Kigamboni. However, at the time of the visit, only one ferry, the MV Kazi, was in service, while the other two MV Magogoni and MV Kigamboni were out of operation. In response to this shortfall, TEMESA had agreed with Azam Marine Co.Ltd to assist in the provision of transportation services at Magogoni Ferry Station.

As a result of the non-operation of two ferries at Magogoni Ferry Station, the government agreed and signed a Memorandum of Understanding (MoU) with Azam Marine Co.Ltd, a private ferry service provider, an agreement dated 14 June, 2022, hiring and operating marine vessels (sea taxis) between Magogoni and Kigamboni ferry stations. Clause 5 of the MoU reveals that TEMESA hired Azam Marine Co.Ltd to provide ferry services at Magogoni Ferry Station.

It was noted that the engagement of Azam Marine Co.Ltd for the provision of ferry services contributed to the loss of revenue for TEMESA by taking TZS 5,000,000/= per day on the total amount of the collected revenue. From the MoU's signing date up to June 2024, TEMESA paid **TZS 2,842,875,000/=** to

Azam Marine Co.Ltd, almost equivalent to the incurred cost of purchasing the SEA-TAXI used by Azam Marine Co.Ltd.

The MoU stipulated that Azam Marine Co.Ltd's vessels, SEA TAXI 1 and SEA TAXI 2, each with a capacity of 250 passengers, were to operate for a minimum of eight hours per day, focusing on peak hours (6:00 a.m. to 9:00 a.m. and 3:00 p.m. to 8:00 p.m.). The vessels were expected to make at least 48 trips per day. TEMESA was to pay Azam Marine Co.Ltd a fixed daily fee of **TZS 5,000,000** for the duration of the agreement.

However, the audit found that TEMESA did not consistently track the number of trips made by Azam Marine Co.Ltd until July 2024, indicating weak oversight of the contract. As a result, there was no documentation on the completed trips by Azam Marine Co.Ltd. **Table 3.8** indicates the revenue collected and the amount paid to Azam Marine Co.Ltd for the three years.

**Table 3.8: Analysis of the Collected Revenue versus Amount Paid to Azam Marine Co. Ltd**

| Fiscal Year | Revenue Collected (TZS) | Total Amount Paid to Azam Marine Co. Ltd (TZS) | Percentage Paid (%) |
|---|---|---|---|
| 2021/22 | 6,100,000,000 | 157,500,000 | 3 |
| 2022/23 | 5,694,099,365 | 1,596,000,000 | 28 |
| 2023/24 | 5,000,567,266 | 1,089,375,000 | 22 |
| Total | 16,794,666,631 | 2,842,875,000 | 17 |

***Source***: TEMESA's Annual Implementation and the Payments done to Azam Marine Co.Ltd Reports (2021/22 – 2023/24)

A one-year delay in the major rehabilitation of the Magogoni ferry resulted in a revenue loss for the government of TZS 2,842,875,000 that was paid to Azam Marine Co.Ltd from 2023 to 2024. During that period the ferry was docked at the contractor's site for almost one year without rehabilitation. On the other hand, the MV Kigamboni also had irregular maintenance due to a total breakdown that needed major rehabilitation.

**b) Delays in the Rehabilitations of Ferries**

The audit observed significant delays in the commencement and execution of the ferries rehabilitation projects, resulting in prolonged downtime for the ferries under rehabilitation. These delays not only extended the overall

project timelines but also reduced ferries availability, affecting transportation services. The extent of the delays is detailed in **Table 3.9.**

**Table 3.9: Delays in the Implementation of the Rehabilitation Project**

| Project Name | Delay in Starting the Project- (Month) (a) | Delay of the Implementations of the Project (Month) (b) | Total Delayed (Months) (a) + (b) |
|---|---|---|---|
| MV Kazi[10] | 2 | 25 | 27 |
| MV Magogoni | 11 | 5 | 16 |
| MV Musoma | 6 | 13 | 19 |
| MV Mara | 6 | 20 | 26 |
| MV Ujenzi | 3 | 22 | 25 |
| MV Nyerere | 10 | 31 | 41 |
| MV Kyanyabasa | 9 | 4 | 13 |
| MV Tanga | 3 | 3 | 6 |
| MV Ruhuhu | 3 | 27 | 30 |
| MV Old Ruvuvu[11] | 13 | 23 | 36 |
| MV Kitunda | 7 | 12 | 19 |
| MV Kilombero- II | 4 | 38 | 42 |
| MV Kilindoni | 0 | 22 | 22 |
| MV Sabasaba | 0 | 10 | 10 |

***Source***: Auditors' Analysis of the Project Contract Files, 2024

NATIONAL AUDIT OFFICE NAOT ISO 9001:2015 Certified

**Table 3.9** shows that the delays in both project commencement and implementation of the rehabilitation project significantly extended the downtime of ferries, with total delays ranging from 2 to 42 months. The most affected project was MV Kilombero II, with a total delay of 42 months, while MV Sabasaba experienced a 10-month delay despite a timely start.

In terms of reduced ferry availability, the audit noted disrupted passengers and goods movement, especially in areas relying upon ferry services. Also, reduced ferry services hindered economic activities, limited regional connectivity, and increased operational costs, such as paying TZS 5,000,000 per day to Azam Marine Co.Ltd to supplement limited-operated TEMESA's available ferries.

[10] *The practical completion certificate was not issued to the contractor up to the time of the audit*

[11] *Contract Terminated & No plan for the execution of the remained works was prepared*

### 3.3 Ineffective Maintenance Procedures

The Audit noted that there were ineffective maintenance procedures that guaranteed the reliability of the ferries, as evidenced herein below:

#### 3.3.1 Inadequate Establishment of the Maintenance Plan and Documentation

A review of the Ministry of Works' Management Guide for Government Ferries managed by TEMESA, 2022 and the Guideline of the Agency on the Implementation of the Duties on Operational and Construction of Ferries, 2024 revealed the following:

**(a) The Preventive Maintenance Schedule did not Account for All Components of the Ferries.**

The audit noted that preventive maintenance schedules for the ferries were not detailed enough to include all components of the ferry for maintenance, despite paragraph 2.4.1 of MoW's Management Guide for Government Ferries Managed by TEMESA, 2022, which requires TEMESA to ensure that preventive maintenance of ferries is conducted according to the manufacturer's guidelines and prepared schedules, taking into account best practices.

ISO 9001:2015 Certified

Maintenance schedules were prepared only for the maintenance of the main engine and a few ferries for electricity generators. Other systems and components had no maintenance plan, as detailed in **Table 3.10**.

**Table 3.10: The Components of Ferries with Maintenance Plan and without Maintenance Plans**

| Ferry | Component with Maintenance Plan | Components without Maintenance Plan |
|---|---|---|
| MV Kazi, MV Kigamboni, MV Mafanikio, MV TEMESA and MV Ukara II | Main Engine | Steering System, propulsion system, Generator, Electrical system, Hydraulic system, Hull structure, Superstructure, navigation equipment, Communication equipment, Equipment (anchors and windlass), Lifesaving Equipment, water systems (bilge system, fire system, and sewerage systems), and firefighting system. |

| Ferry | Component with Maintenance Plan | Components without Maintenance Plan |
|---|---|---|
| | | Not forgetting ferry allied components, i.e., mooring system, ticketing system, waiting area and landing approaches, |
| MV Mwanza and MV Sengerema | Main Engine and Generator | Steering System, Propulsion System, Electrical System, Hydraulic System, Hull Structure, Superstructure, Navigation Equipment, Communication Equipment, Equipment (anchors and windlass), Lifesaving Equipment, Water Systems (bilge system and sewerage systems), and Firefighting System. Not forgetting Ferry Allied Components, i.e., Mooring System, Ticketing System, Waiting Area and Landing Approaches, |

***Source***: Auditors' Analysis on the TEMESA Ferries Maintenance Schedules,2024

**Table 3.10** shows that the propulsion system, steering system, ferry equipment such as ramps, water and hydraulic system, vessel structures, and life-saving equipment for all ferries had no maintenance plans.

However, it was noted that as of June 2024, TEMESA had prepared a comprehensive maintenance plan for the ferry. During the interviews, officials declared that the plan was in the initial stages of its implementation. Moreover, during site verification, it was revealed that the maintenance plan had not yet been implemented.

**(b) Inconsistencies in the Preparation and Absence of Annual Preventive Maintenance Schedules**

The audit noted that for the sampled operational ferries, four (4) ferries (MV Temesa, MV Ukara II, MV Mwanza, and MV Sengerema) had prepared the annual preventive maintenance schedule for the year 2023/24. However, MV Kazi, MV Kigamboni, and MV Mafanikio did not prepare the annual preventive maintenance schedule, instead they relied on the ferries' planned maintenance charts as the reporting system for conducting maintenance and planning for the next maintenance contrary to Para 1.1 (a), (b) and (c) of the Agency's Guideline on the Implementation of the Duties on Operational and Constructions of Ferries, 2024. The Guideline required that each ferry must

have an annual preventive maintenance schedule that is strictly adhered to and documented for reference and inspection (**refer to Table 3.11).**

**Table 3.11: Preventive Maintenance Schedule for the Ferries**

| Ferry Stations | Ferries | Maintenance Schedule | | | |
|---|---|---|---|---|---|
| | | 2020/21 | 2021/22 | 2022/23 | 2023/24 |
| Magogoni | MV Magogoni | x | x | Rehabilitation | |
| | MV Kazi | x | x | x | x |
| | MV Kigamboni | x | x | x | x |
| Nyamisati | MV Kilindoni | x | x | x | x |
| Msanga Mkuu | MV Mafanikio | x | x | x | x |
| Kigongo Busisi | MV Sengerema | x | x | x | v |
| | MV Mwanza | x | x | x | v |
| Mwanza | MV Temesa | x | x | x | v |
| Bugolora - Ukara | MV Ukara II | x | x | x | v |
| | MV Ukara | Major Rehabilitation | | | |

***Source:*** Auditors' Analysis of Ferries Planned Maintenance Charts &Schedule of Sampled Ferries, 2024

*Key*

*x Absence of Annual preventive schedule*

*v Presence of Annual Preventive Schedule*

ISO 9001:2015 Certified

**Table 3.11** shows that MV Sengerema, MV Mwanza, MV Temesa and MV Ukara II prepared maintenance schedules for the financial year 2023/24. For other ferries, from the financial years 2020/21 to 2022/23, no annual preventive maintenance plan was prepared, raising concerns about how maintenance was conducted. This also highlights inconsistency in preparing preventive maintenance schedules for the ferries.

**(c) Inadequate Documentation of the Preventive and Corrective Maintenance Procedures**

The Audit noted that maintenance procedures were presented in the Agency's Guideline for Implementing the Duties on Operational and Constructions of Ferries, 2024. However, the emergency (corrective) maintenance and preventive maintenance procedures had gaps despite Code 10 of the International Safety Management (ISM) Code with Guideline for its Implementation, 2018, requiring the company to establish procedures to

ensure that ships are maintained and comply with applicable regulations, as detailed in **Table 3.12.**

**Table 3.12: Gaps in the Procedures for Preventive and Corrective Maintenance**

| SN | Issue noted | Preventive Maintenance | Corrective Maintenance | Remark |
|---|---|---|---|---|
| 1 | Work orders (Step-by-step procedures) | Provided per Agency Guidelines [12] , but there was no quality procedure provided | Provided as the General statement but not clearly stated for the issues related to corrective maintenance[13] | Unclear for Corrective Maintenance (was not properly established from the identification of the problem, organising, assigning of tasks, tracking on the progress of the work (Quality Control and Assurance), completion and documentation (reporting). |
| 2 | Assigning responsibilities | The Ferry technician was responsible | Not described | Responsibility for corrective maintenance not defined |
| 3 | Boundaries and limitations of maintenance procedures (scope and timelines) | Not described | Not described | Absence of documented procedures |
| 4 | Safety considerations | Not described | Not described | Absence of safety guidelines and precautions |
| 5 | Tools | Not described | Not described | No tool/equipment is needed for the maintenance |

NATIONAL AUDIT OFFICE
ISO 9001:2015 Certified

[12] *Para 1.5.2 of the Guideline of the Agency in the Implementation of the Duties on Operational and Constructions of Ferries, 2024*
[13] *Para 1.5.1 of the Guideline of the Agency in the Implementation of the Duties on Operational and Constructions of Ferries, 2024*

| SN | Issue noted | Preventive Maintenance | Corrective Maintenance | Remark |
|---|---|---|---|---|
| 6 | Recording of the maintenance records | Not described | Not described | There was a difference in the record filing between the Eastern-Southern and Lake-Western Zones. Instructions such as the maintenance plans, reporting of the preventive and corrective maintenance |
| 7 | Testing and maintenance of the standby arrangement[14] | Not described | Not described | Increase the presence of defective life-saving equipment and malfunctioning communication systems. |

***Source:*** Auditors' Analysis of the Ministry of Work's Management Guide for Government Ferries Managed by TEMESA, 2022 and the Agency's Guideline for the Implementation of the Duties on Operational and Constructions of Ferries, 2024

**Table 3.12** shows that 71% of the preventive maintenance components and 86% of the corrective maintenance aspects have not been described in the procedures. Corrective maintenance work orders were not clearly defined. Inadequate maintenance procedures and documentation were due to the following:

**(a) Absence of Maintenance Manuals for Ferries**

Despite the presence of guidelines from the Ministry of Works (MoW) and TEMESA related to the operations of ferry, the procedures for ferry maintenance were not detailed. This was evidenced by a review of maintenance schedules, reporting, and documentation for the sampled ferries, which revealed the absence of standardization. Ferry zonal areas under TEMESA used different procedures and documentation for the same tasks.

*[14] These are Equipment in the ships that were not in continuous use during operations, such as life-saving equipment, rescue boats, firefighting equipment, navigation lights, and distress marine VHF radios*

**(b) Absence of a Structured System for Monitoring and Evaluating Maintenance Performance**

Through the interview, the audit revealed that maintenance records were not submitted to the headquarters for monitoring and evaluation, indicating inadequate supervision. **Table 3.13** provides details on the ferries and their respective status on preparing maintenance records.

**Table 3.13: Analysis of the Preparation of the Maintenance Records**

| Ferry Stations | Ferries | Maintenance Records | | | |
|---|---|---|---|---|---|
| | | 2020/21 | 2021/22 | 2022/23 | 2023/24 |
| Magogoni | MV Magogoni | ✓ | ✓ | ✓ | ✓ |
| | MV Kazi | ✓ | ✓ | ✓ | ✓ |
| | MV Kigamboni | ✓ | ✓ | ✓ | ✓ |
| Nyamisati | MV Kilindoni | x | x | x | x |
| Msanga Mkuu | MV Mafanikio | ✓ | ✓ | ✓ | ✓ |
| Kigongo Busisi | MV Sengerema | x | x | x | x |
| | MV Mwanza | x | x | x | x |
| Mwanza | MV Temesa | x | x | x | x |
| Bugolora - ukara | MV Ukara II | x | x | x | x |
| | MV Ukara | x | x | x | x |

***Source:*** Auditors' Analysis of the Repair and Maintenance Registry and Ferries Breakdown/Maintenance Logbook, 2024

**Key**

x Absence of maintenance records

✓ The presence of maintenance records

**Table 3.13** shows that four (4) out of ten (10) sampled ferries kept maintenance records, i.e. MV Kazi, MV Kigamboni, MV Magogoni, and MV Mafanikio. The maintenance records sheet with details on the equipment failed, maintenance procedures, materials/spare replaced, downtime duration, working time duration, and names of personnel who participated. However, the remaining six (6) ferries, i.e. MV Ukara II, MV Temesa, MV Ukara, MV Mwanza, MV Sengerema, and MV Kilindoni, had no details on the stated parameters that were recorded. This shows the inconsistency of recording the maintenance records.

Additionally, a review of the repair and maintenance registry sheet for ferries (spare parts used, cost of maintenance, cost paid, and remaining debt)

revealed that it was not adequately documented as required. The registry sheet recorded the equipment failure, maintenance procedures, replacement of materials/spare, downtime duration, working time duration, and names of personnel who participated. Other parameters, such as total costs of maintenance, costs paid, and remaining debt, were not presented.

Consequently, the inadequate establishment of maintenance procedures had significant implications on ferry operations. The absence of standardized procedures led to inconsistencies in planning maintenance schedules and documenting maintenance reports. Furthermore, it hindered the tracking of maintenance history and the identification of recurring issues, making it difficult to establish effective preventive maintenance strategies.

### 3.3.2 Inadequate Inspections of the Ferries that Align with the Established Maintenance Schedule

Through a review of the ferry's in-charge framework for submitting performance reports of ferries in the country and Ferries Operation, Safety, and Maintenance Unit (FOSM) Inspection reports, the audit noted the following deficiencies:

ISO 9001:2015 Certified

#### (a) Inconsistency of Reporting and Recording of the Regular Inspection

Based on the reviewed progress report, it was observed that within the audit scope for the period 2020/21 to 2023/24, there was an inconsistency in the reporting and recording of regular ferry inspections. Such inconsistency violated Para 1.2 (a) of the Agency's Guideline for the Implementation of Duties on the Operation and Construction of Ferries, 2024. This guideline mandates that the ferry in charge conduct daily inspections of all infrastructure to ensure readiness. Additionally, Para 1.1 (e) requires the ferry in charge to review, sign, and file the daily technical status reports from technicians.

For the Eastern and Southern Zone, the audit review of the inspection and maintenance report for MV Mafanikio, covering the period from 11 March, 2023 to 14 April, 2023, conducted by the Ferry Operations, Safety and Maintenance (FOSM) team revealed that the inspection was conducted on a weekly basis by ferry technicians, and reports were developed weekly, signed by ferry in charge and submitted to the ferry manager.

However, the audit noted inconsistencies in the timing of the submission of inspection reports, which did not align with the approved framework for submitting performance reports for ferries managed by TEMESA. An analysis of the reports prepared for the MV Mafanikio during the 2023/24 financial year revealed that only 12 weekly reports were submitted, with no reports prepared for the other financial years. For the MV Kazi, only one report was submitted for the 2022/23 financial year, and no reports were prepared for the other years. Similarly, no weekly inspection reports were prepared for the MV Kilindoni.

In the Lake and Western Zone, it was noted that the inspection approach differed from that of the Eastern and Southern Zone. In this zone, weekly reports were directly prepared by FOSM, and the audit observed that there were no clearly defined regular intervals for the inspections.

For instance, it was observed that for MV Mwanza and MV Sengerema, only one inspection report was conducted by FOSM II on 26 October 2024, and no other inspection reports were documented throughout the period covered by this audit. For MV Ukara II, one inspection report was available, conducted by FOSM II between 17 and 19 January 2024; similarly, no other inspection reports were prepared for this ferry during the entire audit period. Additionally, no inspection reports were prepared for MV TEMESA over the past four years. The presence of such inconsistent reporting affects decision-making, particularly in terms of planning and the sustainable management of the ferries.

Additionally, the inspection coverage in both zones differed in terms of the components inspected and the templates used (as detailed in **Table 3.14**). This was contrary to Para 2.4(i) of the Ministry of Works' Management Guide for Government Ferries Managed by TEMESA, 2022, which emphasizes the periodic inspection of ferries, equipment, and spare parts in accordance with structural, mechanical, and safety standards, and provides a checklist template to ensure consistency.

**Table 3.14: The Coverage of the Component to be Inspected**

| Component Inspected | Lake and Western Zone | Eastern and Southern Zone |
|---|---|---|
| Main engine | v | v |
| Cooling system | v | x |
| Lubrication system | v | x |

| Component Inspected | Lake and Western Zone | Eastern and Southern Zone |
|---|---|---|
| Fuel system | v | x |
| Fresh air and exhaust | v | x |
| Generator set marine | v | x |
| Starting system | v | x |
| stopping system | v | x |
| Charging system | v | x |
| bridge parameters | v | x |
| engineer room parameters | v | x |
| transmission gearbox | v | v |
| Propulsion unit | v | v |
| Bottom, hull, decks and superstructure | v | v |
| Lighting | v | x |
| Mandatory equipment's wheelhouse | v | v |
| Other deck machinery | v | x |

***Source:*** Auditors' Analysis on the Ferry In-charge Reports and FOSM Inspection Reports, 2024

Key:

v The component was inspected and outlined in the ferry.

x The component was not inspected and not outlined in the ferry.

ISO 9001:2015 Certified

The deficiencies in ferry inspections presented in this section were influenced by the following factors:

**(i) Insufficient Number of Technicians for the Inspection Compared to The Number of Ferries Available**

Based on the reviewed staff list to assess the available crews for FOSM I and FOSM II in each zone, it was noted that there was an insufficient number of technicians to effectively conduct inspections, given the number of ferries available as detailed in **Table 3.15**.

**Table 3.15: FOSM Staffing and Ferry Allocation Analysis**

| Zone | FOSM | Required Number of Staff | Available Staffs | Available Number of Ferries | Number of Ferries/Persons |
|---|---|---|---|---|---|
| Eastern and Southern Zone | FOSM I | 2 | 1 | 10 | 1:10 |

| Zone | FOSM | Required Number of Staff | Available Staffs | Available Number of Ferries | Number of Ferries/Persons |
|---|---|---|---|---|---|
| Lake and Western Zone | FOSM II | 2 | 3 | 22 | 1:7 |

***Source***: Auditors' Analysis of the List of Ferries and the Number of Available FOSM I and II, 2024

**Table 3.15** shows the staff-to-ferry ratio required for inspections. In the Eastern and Southern Zone, only one staff member conducted inspections for ten ferries, whereas two staff members were required. The Eastern and Southern Zone covers the regions of Mtwara, Lindi, Pwani, Dar es Salaam, and Tanga, with ten (10) operating ferries. It is highly inefficient to have just one inspector stationed in Dar es Salaam to cover such a large area. A similar situation was observed in the Lake and Western Zone. This zone covers the regions of Mwanza, Kagera, Musoma, and Kigoma, with twenty-two (22) ferries operating across them. The calculated workload shows that only one staff member conducted inspections for seven (7) ferries. It was also noted that all these staff members are centrally stationed in Mwanza, with regular visits to other regions. Based on interviews with TEMESA officials, the placement of inspectors and the over-centralization of FOSM I and FOSM II, despite the wide distribution of ferry stations, have contributed to the inefficiency in conducting ferry inspections.

ISO 9001:2015 Certified

The observed inadequate inspection of the ferries has affected even the timing of handling minor maintenance issues. This was evidenced by the fact that during the site visits, the audit team noted leakage of oil on the engines of the MV Mafanikio, MV Ukara II, and MV Mwanza (see **Photo 3.1**). Additionally, the TASAC inspection report for MV Sengerema dated 14 May 2023 and 9 January 2024 reported that main engines and gearboxes were observed with lube oil leakage, with the remark of maintenance to be conducted according to the maintenance plan and manufacturer instruction manual. Also, the generator was observed to have fuel leakage. Generally, TASAC observed that there was no maintenance routine or related records.

All of these conditions indicate operational inefficiency. Another example is the presence of malfunctioning navigational communication systems in all the sampled operating ferries (Refer **Table 3.39**), suggesting that the inspections conducted were not thorough enough to address even basic tools. The

presence of worn communication equipment impacts the crew's coordination during critical situations or daily operations.



**Photo 3. 1: Leakage of the Oil on the Engines**

Furthermore, during a site visit, the corrosion on the hull structure was noted in all seven (7) sampled operating ferries, and only MV Mafaniko reported the condition of the ferry in the daily report, referred to in **Photo 3.2.**

**Photo 3. 2: Corrosion on the Hull Structure and Ramps**

### (ii) Insufficient Available Qualified Staff Compared to the Required Qualification

Apart from the observed high workload for inspectors, the audit noted that there was an insufficient number of qualified staff to carry out the inspection activities. In a review of the ferry's maintenance crews (FOSM) for the Eastern and Southern Zone (FOSM I) and Lake and Western Zone (FOSM II), it was noted that there was insufficient qualification of the available crews for FOSM I and II for each zone as explained in **Table 3.16**.

**Table 3.16: Number of Available Staff Qualifications Compared to the Required Qualification**

| Qualification | Required | Available | |
|---|---|---|---|
| | | FOSM I | FOSM II |
| Engineer | 1 | 0 | 0 |
| Technician | 1 | 1 | 1 |
| Driver | 1 | 1 | 0 |
| Total | 3 | 2 | 1 |

***Source***: Auditors' Analysis of the Number of Available FOSM I and II, 2024

**Table 3.16** shows that there was insufficient number of staff with the required qualifications. For the FOSM I and II, there was no engineer as per the required qualification. FOSM II had one technician with the required qualification (Mechanic Technician II), but two artisans (Mechanic Artisan II and Electrical Artisan II) whose requirements were not specified in the FOSM composition.

### (iii) Inadequate Supervision and Follow-up of the Inspection

Based on the reviewed progress report, it was noted that there was inadequate supervision and follow-up to ensure that the engine details and mileage in the logbook were properly recorded, as well as the collection of daily progress reports on the activities of the captain and technician watch over. For example, based on the reviewed engine logbooks for MV Mwanza and MV Sengerema, it was noted that the engine room logbooks were not filled for about three months, from June 2024 to September 2024. Furthermore, apart from MV Kazi, the remaining six (6) operating ferries that were visited had no daily captain and technician watch over reports.

### 3.3.3 Inefficient Implementation of the Preventive Maintenance

#### (a) Untimely Conduct of the Preventive Maintenance

The audit assessed compliance with the timelines for conducting preventive maintenance in accordance with the maintenance schedule and operation manuals. The reviewed ferries' maintenance charts showed that the preventive maintenance was not conducted as scheduled. This is contrary to Para 2.4 of the Ministry of Works' Management Guide for Government Ferries managed by TEMESA, 2022, which requires that each ferry station prepare and follow a maintenance schedule every quarter, depending on the type of maintenance needed. It further states that the schedule should be posted inside the ferry, in the office of the Ferry Zonal Managers, and with the Ferry Station Managers.

The audit noted that MV Kazi and MV Mafanikio ferries-maintained documents showing service hours and planned services for ferry engine maintenance, while the other eight (8) did not. **Table 3.17** provides details of those ferries which maintained records and those which did not regarding the service hours for engine maintenance.

**Table 3.17: Status of Ferries on the Recorded Maintenance Hours of Service**

| Ferry Stations | Ferries | Availability of Records | Possible Reason(s) |
|---|---|---|---|
| Magogoni | MV Kazi | Recorded (Hours of service attended and next service hrs.) | Complied |
| | MV Kigamboni | Not recorded | Weak control of the data entry process for the maintenance chart, which records the planned and actual maintenance dates |
| | MV Magogoni | Not recorded | |
| Msanga Mkuu | MV Mafanikio | Recorded (Hours of service attended and next service hours) | Complied |
| Nyamisati Mafia | MV Kilindoni | Not recorded | Inadequate quality control of the recording of the serviced hour on the Ferries maintenance logbooks |
| Kigongo Busisi | MV Mwanza | Not recorded | |
| | MV Sengerema | Not recorded | |

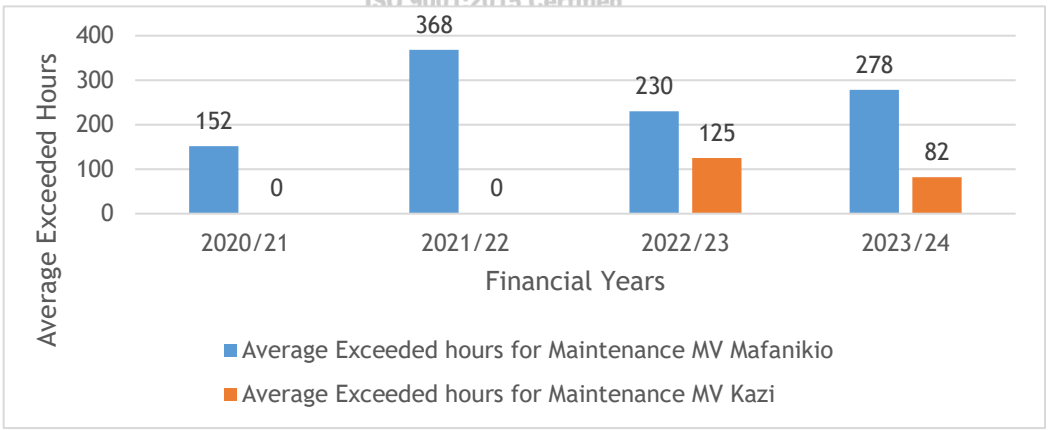
| Ferry Stations | Ferries | Availability of Records | Possible Reason(s) |
|---|---|---|---|
| Luchelele Ilunda | MV TEMESA | Not recorded | |
| Bugolora Ukara | MV Ukara | Not recorded | |
| | MV Ukara II | Not recorded | |

**Source:** Engine Service Schedules, Planned Maintenance Charts and Lake and West Ferries Breakdown/Maintenance Logbook, 2024.

From **Table 3.17**, the records show that two (2) out of ten (10) sampled ferries maintained a log of service hours and the required hours for the next service, and the other eight (8) ferries did not record maintenance hours. Instead, they just estimated the date for the next service. The audit found it challenging to determine the exact number of hours the ferry operated, as the ferry sometimes stopped or operated for longer hours based on demand. This made it difficult to verify whether maintenance was performed within the designated operating hours, as the Standard Operating Procedures require maintenance to be scheduled according to the actual operating hours.

Further analysis of those ferry stations' maintenance hours of service records is presented in **Figure 3.1.**

**Figure 3.1: Analysis of the Exceeded Hours for Conducted Maintenance**



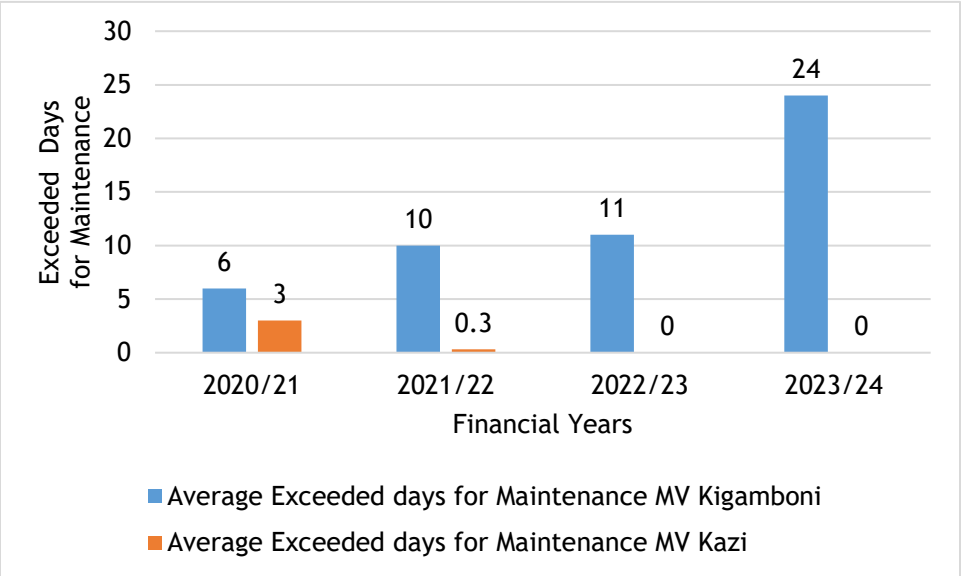

***Source***: Auditors' Analysis of Ferries Planned Maintenance Charts for MV Mafanikio and MV Kazi, (2018-2024),2024

**Figure 3.1** shows the average hours exceeded for maintenance of MV Mafanikio and MV Kazi over four financial years. For MV Mafanikio, maintenance performance fluctuated, with exceeded hours increasing from

152 hours in 2020/21 to a peak of 368 hours in 2021/22, the highest in all years. In contrast, for MV Kazi, maintenance hours were not documented for the years 2020/21 and 2021/22; only the dates were recorded (**see Figure 3.2**). However, in 2022/23, exceeded hours were recorded at 125 hours, followed by a reduction to 82 hours in 2023/24.

Additionally, maintenance hours were not documented for MV Kigamboni; instead, the planned and actual maintenance dates were recorded. There were noted delays in the maintenance dates, leading to exceeding the required maintenance days **(see Figure 3.2).**

**Figure 3.2: Analysis of the Exceeded Days for Conducted Maintenance**




***Source:*** Auditors' Analysis of Ferries Planned Maintenance Charts for MV Kigamboni and MV Kazi (2020-2024), 2024

**Figure 3.2** shows that MV Kigamboni's maintenance exceeding days increased over the years, starting at six (6) days in 2020/21, rising to ten (10) days in 2021/22, slightly increasing to eleven (11) days in 2022/23, and peaking at twenty-four (24) days in 2023/24. This consistent upward trend indicates a challenge in maintaining scheduled timelines for MV Kigamboni. In contrast, MV Kazi experienced minimal delays in the initial years, with three (3) exceeding days in 2020/21 and a few hours in 2021/22.

In addition to assessing compliance with the timelines for conducting preventive maintenance, the audit team also reviewed adherence to the manufacturer's guidelines (operational manual). It was noted that none of the sampled ferries followed the manufacturer's recommendation to conduct preventive maintenance after every 250 hours of operation.

However, MV Mafanikio's maintenance schedule was posted in the ferry manager's office and not displayed on the vessel itself. MV Ukara II, on the other hand, had its schedule posted inside the ferry but did not meet the criteria for displaying the schedule in all required locations. As a result, none of the ferries fully complied with the posting requirements.

The presented observations showing untimely implementation of preventive maintenance were attributed to the following:

**(i) Delay of the Procured Spare Parts for the Preventive Maintenance**

Reviewing the inspection and maintenance report for MV Mafanikio covering the period from 11 March 2023, to 14 April 2023, it was noted that TEMESA delayed in delivering service parts to Zonal Ferry Stations. These delays affected the maintenance process. Based on the interview with TEMESA officials in all visited TEMESA Zonal Offices, it was noted that the required spare parts were often unavailable when maintenance was required to be conducted. Furthermore, it was noted that the procurement procedure was centralized at the Headquarters, leading to delays in the timely delivery of materials. Even for minor-value procurements, the process was bureaucratic and had to be managed from the Headquarters. The audit has a view that based on Section 165 and Seventh Schedule of the Public Procurement Regulations (2013), which outlines the threshold for minor value items, TEMESA was expected to establish a delegated tender board which would facilitate the procurement of spare parts at the zonal level.

**(ii) Inadequate Supervision, Monitoring and Evaluation for Preventive Maintenance (Quality Control and Quality assurance)**

Interviewed officials from the Ministry of Works revealed that TEMESA did not adequately supervise the implementation of maintenance, monitoring, and evaluation. As a result, there was no plan for monitoring and evaluation developed by TEMESA, particularly to follow up on the performance of

maintenance activities in relation to established key performance indicators. Furthermore, from the reviewed progress reports, it was noted that all maintenance was conducted in response to breakdowns. This indicated inadequate commitment to ensure better ferry services were offered. This poses a high risk to passengers and crew due to the frequent breakdowns of ferries, as shown in **Table 3.18.**

**Table 3.18: Frequency of the Breakdown of the Ferries**

| Ferry | Frequency Breakdowns Per Annum | | | |
|---|---|---|---|---|
| | 2020/21 | 2021/22 | 2022/23 | 2023/24 |
| MV Kazi | 8 | 10 | Major Maintenance | 1 |
| MV Magogoni | 7 | 12 | 4 | Stop for rehabilitation |
| MV Kigamboni | 2 | 4 | 20 | Stopped to operate |
| MV Mafanikio | No records | No records | No records | No records |
| MV Kilindoni | No records | No records | No records | No records |
| MV Mwanza | No records | No records | No records | No records |
| MV Sengerema | No records | No records | No records | No records |
| MV Temesa | No records | No records | No records | No records |
| MV Ukara II | No records | No records | No records | No records |
| MV Ukara | Major Rehabilitation | | | |

***Source***: Auditors' Analysis of the Repair and Maintenance Registry and Ferries Breakdown/Maintenance Logbook, 2024

**Table 3.18** shows the analysis of frequent ferry breakdowns, indicating that six (6) ferries did not document instances when they were stopped due to breakdowns. However, based on the available records, MV Kigamboni experienced twenty (20) breakdowns in the year 2022/23. Due to the frequency of these breakdowns, service delivery was disrupted, affecting the regular economic activities of people who relied on the ferry for commuting.

### 3.3.4 Untimely Response of the Maintenance Teams to Mechanical Failures

The Audit noted that the FOSM responded untimely to the mechanical failures. The FOSM investigated mechanical failures and produced reports for the Eastern and Southern Zones. A review of the maintenance and repair registry, along with the ferries' maintenance/breakdown logbooks, revealed that delayed response on the mechanical failures affected ferry operations by

reducing the number of trips on days when maintenance was conducted (downtime), as shown in **Table 3.19.**

**Table 3.19: Response of the Maintenance Team due to Mechanical Failures**

| Ferry Name | Date the Mechanical Failure occurred | Maintenance Date | Downtime (Days) |
|---|---|---|---|
| MV TEMESA | 26/05/2023 | Not reported | - |
| | 30/05/2023 | Not reported | - |
| | 03/07/2023 | Not reported | - |
| | 07/11/2023 | Not reported | - |
| | 26/12/2023 | Not reported | - |
| MV UKARA II | 30/06/2023 | 26/07/2023 | 26 |
| | 07/07/2023 | 02/08/2023 | 25 |
| | 07/07/2023 | Not reported | - |
| | 04/09/2023 | 21/10/2023 | 46 |
| | 23/10/2023 | Not reported | - |
| | 27/12/2023 | 18/01/2024 | 22 |
| | 23/01/2024 | Not reported | - |
| | 28/02/2024 | 27/03/2024 | 28 |
| MV Mwanza | 28/02/2023 | Not reported | - |
| | Not Reported | 06/07/2023 | - |
| | Not Reported | 07/07/2023 | - |
| MV Sengerema | 05/09/2022 | Not reported | - |
| | 10/01/2024 | 14/01/2024 | 4 |
| MV Mafanikio | Not Reported | 06/01/2020 | 3[15] |
| | Not Reported | 30/05/2020 | 2 |
| | 25-26/6/2020 | Not Reported | - |
| | 18/07/2020 | Not Reported | |
| MV Magogoni | Not Reported | 29.07.2020 | 14 |
| | Not Reported | 27.11.2020 | 5 |
| | Not Reported | 23-24.12.2020 | 2 |
| | Not Reported | 09.01.2021 | 6 |
| | Not Reported | 07.07.2021 | 5 |
| | Not Reported | 23.07.2021 | 10 |
| | Not Reported | 23.08.2021 | 4 |
| | Not Reported | 22.09.2021 | 3 |
| | Not Reported | 06.11.2021 | 3 |
| | Not Reported | 20.11.2021 | 4 |
| | Not Reported | 18.12.2021 | 1 |
| | Not Reported | 03.01.2022 | 2 |
| | Not Reported | 11.02.2022 | 5 |
| | Not Reported | 24.03.2022 | 3 |
| | Not Reported | 02.04.2022 | 4 |

[15] *Date for the Mechanical Failure was not reported but downtime was directly reported in the Repair and Maintenance Register sheet.*

| Ferry Name | Date the Mechanical Failure occurred | Maintenance Date | Downtime (Days) |
|---|---|---|---|
| | Not Reported | 6.04.2022 | 2 |
| | Not Reported | 8.07.2022 | 5 |

***Source*:** Auditors' Analysis of the Repair and Maintenance Registry and Ferries Breakdown/Maintenance Logbook, 2024

**Table 3.19** highlighted missing information in the maintenance team's reporting of activities, particularly the failure to link the date of mechanical failure with the actual maintenance date. This gap made it difficult to estimate the actual downtime and assess the effectiveness of the response to the faults. For example, the audit noted an untimely response to a mechanical failure at Kigongo Busisi, where one of MV Sengerema's ramp doors was reported as faulty but not documented in writing. The issue took a long time to resolve, leading to cars being unloaded in reverse, posing a safety risk to the crew and passengers.

### 3.3.5 Inadequate Tools and Workshops for the Maintenance of Ferries

The audit noted the following:

NATIONAL AUDIT OFFICE NAOT ISO 9001:2015 Certified

#### (a) Inadequate Workshop Facilities and Maintenance Tools at Ferry Stations

During the verification of the sampled ferries and their stations, it was noted that only one of the six (6) sampled ferry stations, Magogoni Ferry Station, had a workshop. Kigongo Busisi had a workshop, but it was recently repurposed as the zonal office. Meanwhile, Ilunda Luchelele, Msanga Mkuu, Nyamisati, and Bugolora Ukara Ferry Stations lacked workshops, as these areas were not designed to accommodate workshops or other facilities such as offices and waiting areas. Therefore, the absence of office facilities also hindered the establishment of workshops, as observed during site visits to Nyamisati, Ilunda Luchelele, and Bugolora Ukara ferry stations.

The lack of workshop facilities at these stations was contrary to Para 2.5 of the Ministry of Works' Management Guide for Government Ferries (TEMESA, 2022), which required the agency to establish workshops and provide the appropriate tools at all ferry stations for the maintenance of its ferries.

The audit team analysed the tools available at the workshops at Magogoni and Kigongo Busisi Ferry Stations and noted that important tools were missing from

each of these workshops. The missing tools included a complete electrical toolbox, grinding machine, drill machine with a set of bits, portable welding machine, 30-ton hydraulic jack, piston ring squeezer, heavy-duty box spanner set, ring spanner set, gear/bearing puller, torque wrench set, and digital vernier calliper.

Additionally, Kigongo Busisi also did not have a complete set of combination spanners, box spanners, and cutting pliers. All these were basic tools for daily inspection, preventive maintenance, and corrective maintenance. **Appendix 7** provides the status of missing tools for each entity.

The audit noted that the missing tools resulted from the absence of planning and the lack of needs assessment during the planning phase. The reason was that this was not included in the plan, it was also not reflected in the entity's budget for acquiring tools and establishing workshops.

**(b) Insufficient Maintenance Tools for Ferries**

In addition to the lack of tools at the workshops and ferry stations, the audit found that two (2) out of the seven (7) operating ferries, MV Kazi and MV Mwanza, did not have toolboxes at the time of this audit on October 2024. Moreover, three (3) of the five (5) ferries equipped with toolboxes were MV Mafanikio, MV Ukara II, and MV TEMESA, however they had toolboxes with insufficient tools for maintenance. The missing or inadequate tools included incomplete combination spanners, broken spanners, and insufficient box spanners and screwdrivers, as depicted in **Photo 3.3.**

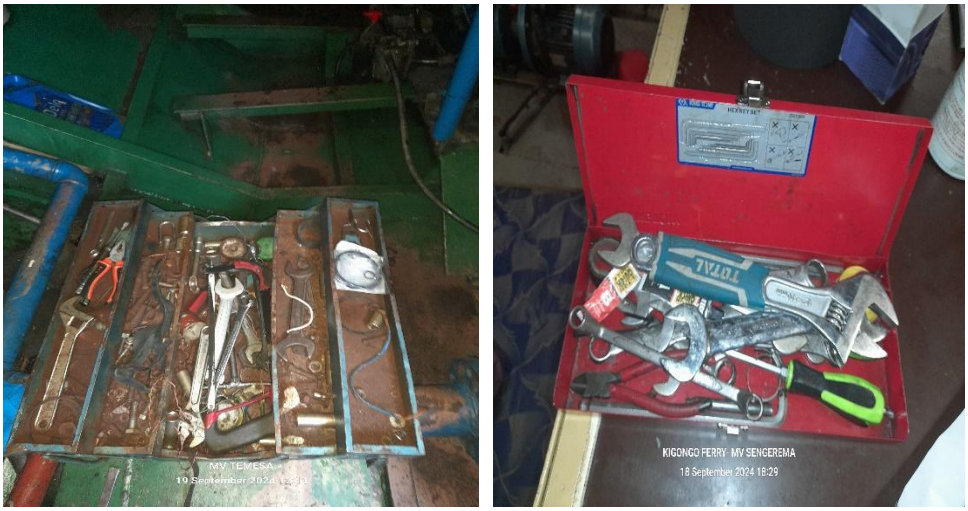



**Photo 3.3: Mechanical Toolbox with Insufficient Maintenance Tools (September 2024)**

Furthermore, the audit noted that the inadequacy of ferries maintenance tool was due to the fact that in contracts for the rehabilitation and construction of ferries, TEMESA did not include detailed specifications requirements for the toolboxes (such as size and contents) relative to the capacity of the ferries, leaving the contractor to decide on the specifications. The absence of workshops for ferry maintenance, coupled with limited tools, lowers the effectiveness and efficiency of maintenance tasks.

### 3.3.6 Non-identification and Documentation of Historical Trends Regarding Major Occurrences of Mechanical Failures in the Ferries by TEMESA

Unlike the observation presented in **Tables 3.18** and **3.19**, which show the frequency of the breakdown of the ferries and some minor faults, the audit also noted that documentation of historical major occurrences of mechanical failures was not in place.

A review of the ferries' repair and maintenance registry, maintenance logbook, and corresponding files revealed that TEMESA did not document the historical trends of major mechanical failures. This is contrary to Para 1.5.3 of TEMESA Guidelines for the Implementation of Duties on Operations and Constructions of Ferries, 2024, which requires the regional manager to ensure that an annual maintenance report for each ferry is prepared. The report was

to include details on the type of maintenance performed each month, spare parts used, maintenance costs, amounts paid, and any outstanding debts. The report was to be submitted to the Chief Executive Officer by 31 January of each year.

There were no such documented inspection reports for each ferry; however, the audit consolidated information from the Repair and Maintenance Registry for several ferries and the Ferries Breakdown/Maintenance Logbook and the results are presented in **Table 3.20.**

**Table 3.20: The Frequency of the Ferries Mechanical Failure**

| Ferry | Mechanical Failures | Occurrences | Years | Downtime |
|---|---|---|---|---|
| MV TEMESA | Engine Maintenance (Engine 1 & Engine 2) | 4 | 2023 (May, July, November, December) | N/A |
| | Water Pump Leaking | 1 | 2023 (November) | N/A |
| | Coupling Maintenance | 1 | 2023 (December) | N/A |
| MV UKARA II | Battery Low Power/Unable to Start | 4 | 2023 (June, July, September, October) | N/A |
| | Windlass Machine Breakdown | 3 | 2023 (December), 2024 (January, February) | N/A |
| | Impeller Blades Broken | 1 | 2023 (September) | N/A |
| MV Mwanza | Ramp System Failures | 2 | 2023 (February, June) | N/A |
| | Engine & Gearbox Faults (Overhauls) | 3 | 2023 (July, August, September) | 1 to 4 days |
| | Hydraulic Steering Pump V-Belt | 1 | 2023 (September) | 1 day |
| | Water Sealing Issues in Engine Room | 2 | 2023 (July, August) | 1 day |

NATIONAL AUDIT OFFICE NAOT ISO 9001:2015 Certified

| Ferry | Mechanical Failures | Occurrences | Years | Downtime |
|---|---|---|---|---|
| MV Sengerema | Ramp System Failure Due to Hydraulic Pump | 4 | 2022 (September), 2023 (April, May, July) | 1-10 hours |
| | Engine Communication Failure | 1 | 2023 (April) | 3 hours |
| | Gearbox Fault | 3 | 2023 (November), 2024 (January, February) | 1-2 days |
| | Steering Malfunction | 1 | 2023 (July) | 1 day |
| MV Mafanikio | Steering Gear Teeth Break | 2 | 2020 (January, May) | 2-3 days |
| | Ramp Issues | 2 | 2020 (June, July) | N/A |
| MV Magogoni | Genset Failures (CUMMINS GENSET, CAT D4.4) | 6 | 2020, 2021, 2022 | 1-14 days |
| | Engine Failures (Engine No. 1, 2, 3, 4) | 5 | 2021, 2022 | 1-5 days |
| | Gearbox Issues | 5 | 2021, 2022 | 1-3 days |
| | Hydraulic Motor Issues | 3 | 2021 | 1 day |
| | Turbocharger/Exhaust System | 1 | 2020 (November) | 5 days |

***Source***: Auditors' Analysis of the Repair and Maintenance Registry for MV Kazi, MV Kigamboni, MV Magogoni, MV Mafanikio (2020/21-2023/24), Ferries Breakdown/Maintenance Logbook for MV Ukara II, MV Temesa, MV Mwanza and MV Sengerema 2022/23-2023/24)

**Table 3.20** shows frequent mechanical failure in engines, windlass machines, and ramps. Specifically, MV Sengerema and MV Mafanikio experienced problems with hydraulic and ramp issues, while MV Magogoni experienced multiple other engine problems.

Due to the absence of specific reports, there was no detailed analysis of the trends, frequency, corrective actions, or recommendations to prevent recurring mechanical failures. As a result, faults may be repeated due to the lack of a proper inventory of issues for each ferry.

### 3.4 Inadequate Management of Ferry Operations

The audit noted that there was inadequate management of ferry operations, as detailed below:

#### 3.4.1 Ineffective Management of Ferry Schedules, Utilization Rate, Passenger Flow and Database

The Audit noted that there was ineffective management of ferry schedules, utilization rates, passenger flow and database, as detailed below:

**a) Ferry Scheduling Practices did not Align with Passengers' Demand Patterns**

The audit noted that ferry schedules were not aligned with passenger demands, despite the provisions of Section 4(2) of the Executive Agencies Act, 1997, which emphasizes the need for Executive Agencies to operate efficiently, effectively, and in a manner responsive to the customer, as shown in **Table 3.21**.

**Table 3.21: Ferry Scheduling with Passenger's Demands**

| Ferry Stations | Ferries | Alignment to Passenger's Demands | Ferry Scheduling | Voyage Duration per Trip |
|---|---|---|---|---|
| Magogoni | MV Magogoni | Aligned | - | n/a |
| | MV Kazi | Aligned | 24 hours, morning until 00:00 and after 1 hour from 00:00 | n/a |
| | MV Kigamboni | Aligned | - | n/a |
| Nyamisati | MV Kilindoni | Not Aligned | 4 hours, 4 days per week | 5 hours |
| Msanga Mkuu | MV Mafanikio | Aligned | 06:30 am to 08:00 pm, after every 1hour | 10 Minutes |
| Kigongo- Busisi | MV Sengerema | Aligned | 24 hours, after every 45 minutes | n/a |

| Ferry Stations | Ferries | Alignment to Passenger's Demands | Ferry Scheduling | Voyage Duration per Trip |
|---|---|---|---|---|
| | MV Mwanza | Aligned | 24 hours, after every 45 minutes | n/a |
| Ilunda-Luchelele | MV Temesa | Not Aligned | After every 3 hours,3 times per day | 45 Minutes |
| Bugolora -Ukara | MV Ukara II | Aligned | After every 2 hours, | 55 Minutes |
| | MV Ukara | n/a | After every 2 hours | n/a |

***Source***: Auditors' Analysis of Ferry Scheduling with Passengers Demand, 2024

Key:

n/a for ferries that were under maintenance and those operating in 24 hours; hence, no observation was made.

Based on **Table 3.21**, ferry scheduling performance in relation to passenger demand varies across ferry stations. Out of ten (10) ferries, seven (7) were aligned with passenger demand. The exceptions were MV Kilindoni and MV Temesa, which did not align well with the passenger demands, and there was no information for MV Ukara. Further, the Audit noted that no specific criteria were defined for guiding the ferry schedules. Before the operations, TEMESA proposed ferry schedules based on the nature of the people in the specified location.

During operations, the schedules were adjusted based on the availability of passengers at a ferry station. Based on the availability of many passengers, the ferry operated more frequently to meet the demand, as evidenced in Magogoni Ferry Station, where the ferry schedules increased from operating 14 hours to 24 hours. On the other hand, the availability of fewer passengers on some days and hours, as seen in Nyamisati Ferry Station, would adjust to minimize the routes during off-peak hours. Thus, each ferry station adjusts its schedule based on the traffic demands in the area.

This was due to failure to assess the demand patterns of the place before operations, so TEMESA proposed the schedules based on the society's demand patterns. As a result, society's needs were not met in enhancing the provision of adequate transportation in the specified areas in need of ferry services.

**b) Ineffective Utilization of Ferries Routes**

The Audit noted that TEMESA did not effectively assess the utilization rates of different ferry routes despite the requirement of the Executive Agencies Establishment Order 2005, objectives A and C, where TEMESA was required to improve the delivery of public services and the quality of services provided by the previous Division which was under the Ministry of Works.

As a result, TEMESA was not aware of the underutilized ferry routes, and there were no recommendations for optimizing service on the routes. **Table 3.22** provides details on the utilization rates.

**Table 3.22: Analysis of the Utilization Rates**

| Ferry Station | Ferries | Required Number of Routes (per day) | Available Number of Routes (per day) | Percentage Utilization Rate |
|---|---|---|---|---|
| Magogoni | MV Magogoni | 28 | Under Major Rehabilitation | N/A |
| | MV Kazi | 36 | 23 (21 hours after 55 Minutes each trip) | 64 |
| | MV Kigamboni | 36 | Under Major Rehabilitation | N/A |
| Nyamisati | MV Kilindoni | 2 (Four days) | 2 (Four days Monday, Tuesday, Thursday and Saturday) | 100 |
| Msanga Mkuu | MV Mafanikio | 16 | 16 (From 6.30 am to 8:00 pm | 100 |
| Kigongo Busisi | MV Sengerema | 27 | 26 (After every 45 minutes from 9.00 am to 2300Hours) | 96 |
| | MV Mwanza | 27 | 26 (After every 45 minutes from 5.00 am to 0100Hours) | 96 |
| Ilunda-Luchelele | MV Temesa | 4 | 4 (From 0900Hours to 1800 Hours, two round trips per day) | 100 |
| Bugolora - Ukara | MV Ukara II | 6 | 6 (From 0600 Hours to 1900 Hours, three round trips per day) | 100 |
| | MV Ukara | Standby | Standby | 0 |

***Source***: Auditors' Analysis of the Utilization Rates, 2024

**Table 3.22** shows that out of seven (7) sampled operating ferries, four (4) of them had routes that were effectively utilized. These data extracted from TEMESA were contradicting since they revealed an underestimation of the routes since the same routes with full utilisation rates still demanded more ferries. As revealed in Nyamisati Ferry Station, one more ferry was under construction, revealing that the route was not effectively utilized as the result of existing demand and the availability of additional routes and ferries.

**c) Ineffective Management of Passengers' Base and Adherence to the Procedures for Managing Passengers' Flow during Ticketing, Boarding, and Disembarkation**

The Audit noted that TEMESA did not track the number of all passengers who boarded the ferries.TEMESA kept a record of the number of passengers who paid for the ferry fares, but the ones who were excluded, such as soldiers, were not tracked contrary to Regulation 4 (1) of Merchant Shipping (Counting and Registration of Persons on Board Passenger Ships) Regulations, 2011, which requires the owner of a Tanzania passengers ship to establish a system of counting persons on board before leaving any landing.

During a site visit to the seven (7) sampled ferry stations, the audit team noted the absence of the system for counting the passengers, revealing that TEMESA did not have the number of passengers who boarded the ferry, thus threatening the safety of the ferries in case of overloading.

Also, counting the number of passengers would assist TEMESA in confirming their revenue since the revenue is collected with another entity that uses the N-Card system. Also, knowing the number of passengers who boarded the ferry was to assure the captain that the vessel was not overloaded, especially during peak hours.

Furthermore, the audit noted that one out of four (4) visited ferries that travelled long routes, i.e. Nyamisati, kept data of the travelled passengers and before the ferry left the port, the register was left at the ferry station contrary to para 4.7.1 (iv) of the Ministry of Works' Management Guide for Government Ferries, 2022 read together with the Merchant Shipping Regulations, 2011 requiring records to include passengers' full name, age, gender, origin, and destination. However, for journeys under 32 kilometres, only the passenger count is required.

TEMESA had no passenger database for all other routes despite three (3) of the sampled ferries travelling longer routes, i.e. MV Ukara II, MV Ukara, and MV TEMESA, as detailed in **Table 3.23**.

**Table 3.23: Documentation of Passengers Data Base**

| Ferries | Number of Passengers and Cars | Details of the Names, Age and Sex |
|---|---|---|
| MV Kilindoni | Documented | Documented |
| MV Temesa | Not documented | Not documented |
| MV Ukara II | Not documented | Not documented |

***Source:*** Auditors' Analysis of the Documentation of Passengers Data Base,2024

**Table 3.23** shows two (2) out of three (3) ferries that travel long routes did not record the details of the passengers, such as name, age, and sex, contrary to the required standards. The Audit noted that there was no defined system for recording the details of the passengers. The passengers were recorded in the register, and the hard copies were stored at the respective ferry stations. Also, there was no system for tracking the number of passengers and cars.

According to para 1.4.2, 1.4.3 and 1.4.4 of the Agency's Guidelines for the Implementation of Duties on Operational and Construction of Ferries, 2024, Passengers were required to pay for the service, proceed to the waiting area, and present tickets if necessary. Vehicles would board the ferry first, followed by passengers and other forms of transport, such as motorcycles and bicycles. All onboard should remain calm until the ferry docks, at which point disembarkation would begin. During disembarkation, passengers and their luggage will exit first, followed by vehicles, and finally, other forms of transport. Additionally, drivers must open windows for safety and turn off engines once parked to protect the environment and the health of other ferry users.

However, during the site visits to the sampled seven (7) Ferry stations, the audit noted that there was no adherence to the procedures for managing passenger flows, as detailed in **Table 3.24.**

**Table 3.24: Analysis of the Adherence of the Procedures for Managing Passengers' Flow**

| Ferry Station | Ferries | Ticketing | Boarding | Disembarking |
|---|---|---|---|---|
| Magogoni | MV Magogoni | n/a | n/a | n/a |
| | MV Kazi | ✓ | ✓ | x |
| | MV Kigamboni | n/a | n/a | n/a |
| Nyamisati | MV Kilindoni | ✓ | ✓ | x |
| Msanga Mkuu | MV Mafanikio | x | x | x |
| Kigongo Busisi | MV Sengerema | x | x | x |
| | MV Mwanza | x | x | x |
| Mwanza | MV Temesa | x | x | x |
| Bugolora - Ukara | MV Ukara II | x | x | x |
| | MV Ukara | n/a | n/a | n/a |

***Source:*** Auditors' Observation Made on Ticketing, Boarding and Disembarking During Site Visit, 2024

**Key**

n/a Ferries that were under maintenance (non-operating ferries)
x Not adhered to Procedures
✓ Adhered to Procedures

**Table 3.24** shows the status of compliance in managing passenger flows. It was observed that disembarking was a challenge to all the visited ferry stations as there was a lack of an efficient ticketing system, and the processes for boarding and disembarking often failed to follow established guidelines at Msanga Mkuu and the sampled Lake and Western Zone Ferry Stations.

This led to overcrowding, safety risks, and delays, underscoring the need for improved operational standards and enforcement of regulations. The images below illustrate how various ferry stations managed the disembarking process.

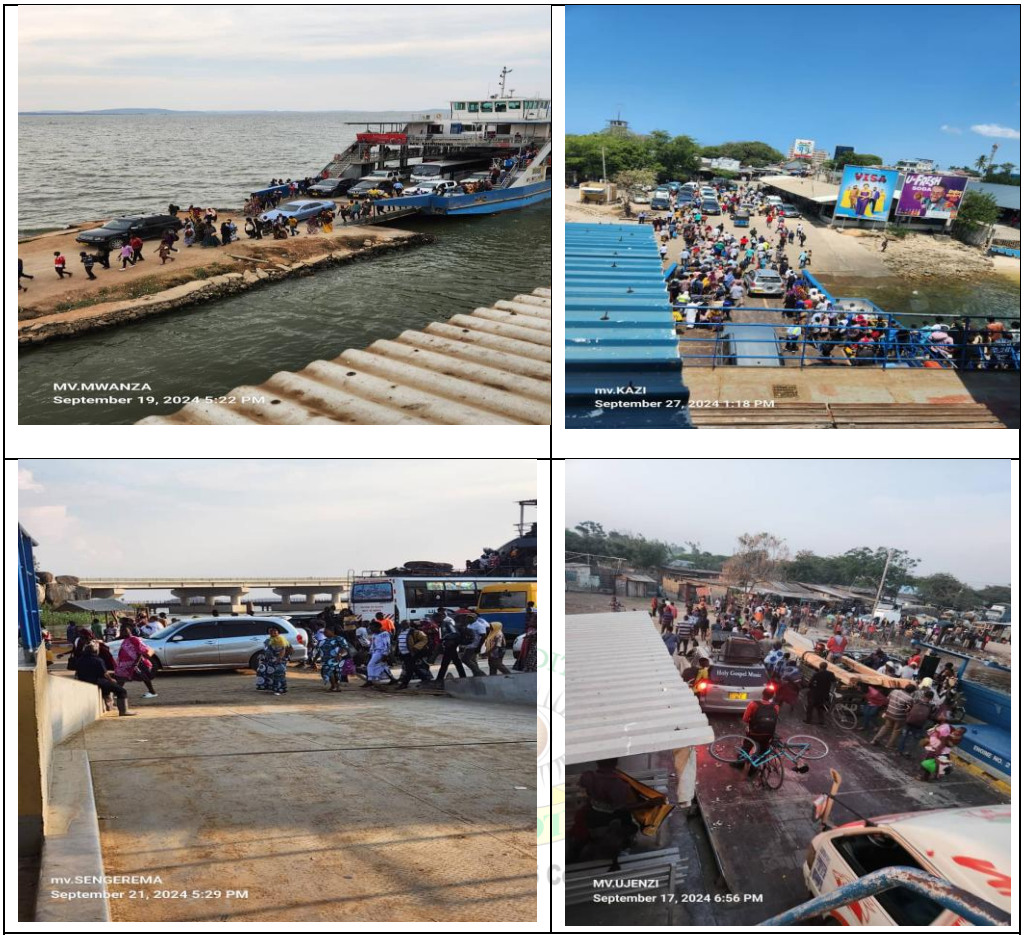



**Photo 3.4: Passengers Flow during Disembarking from the Ferry**

***Source***: Picture taken by Auditors on the Mentioned Location Date and Time in the Respective Pictures during a Site Visit, 2024

**d) Absence of the System for Ferry Database with Information Including its Rehabilitation and Deficiency**

The audit noted that TEMESA lacked a comprehensive ferry database containing essential details and historical records, such as ferry names, manufacturing years, capacities, deficiencies, maintenance schedules, rehabilitation history, and operational status.

Additionally, the audit team noted that TEMESA did not maintain a ferry database containing all ferry details and historical records of significant deficiencies and rehabilitations as the result of the absence of a comprehensive database/system that included critical details about their

ferries, such as the ferries' name, year of manufacture, ferries' capacity, deficiency, scheduled maintenance and rehabilitations done (both minor and major), and the operational status of each ferry during a given period.

Furthermore, the audit noted that TEMESA kept hard files on the details of the ferries that contained correspondence of the letters with issues on the respective ferries. Also, TEMESA kept separate files for the major rehabilitations done on the ferries. The absence of detailed records of the ferries hindered effective monitoring and management of the ferries' performance and maintenance needs. This system poses risks of data loss, inaccessibility, and inefficiency in managing crucial information.

### 3.4.2 Inefficient Implemented Measures for Ensuring Financial Stability

The Audit noted that the implemented measures to ensure financial stability through effective revenue generation and expenditures control were not efficient, as detailed below:

#### a) Inadequate Management of Funding Sources and Budgetary Controls

The Audit noted that the funding sources for the ferry operations were not effectively managed, as evidenced by an irregular decrease in revenue without sufficient reasons, contrary to the agency's target of increasing the revenue base and enhancing the efficient utilisation of financial resources by reducing the Agency expenditures by an average of 5% annually and strengthening ferry revenue collection to all ferry stations.

TEMESA depends on the revenue collected from the tickets, advertisements, and renting of the buildings located at the ferry stations, as detailed in **Table 3.25**.

**Table 3.25: Revenue from Ferry Operations (Amount TZS. Millions)**

| Type of Revenue | 2020/21 | 2021/22 | 2022/23 | 2023/24 |
|---|---|---|---|---|
| Ticketing | 13,605 | 14,648 | 14,283 | 15,324 |
| Advertisement | 2.5 | 36.5 | 60 | 74 |
| Canteen | 4.8 | 6.0 | 12.6 | 12.6 |
| Total Revenue | 13,612.3 | 14,690.5 | 14,355.6 | 15,410.6 |

***Source***: TEMESA's Annual Performance Reports, 2020/21 -2023/24

Despite the highlighted sources in **Table 3.25**, there was a decrease in revenue from the year 2021/22 to 2022/23 as the result of TEMESA not fully utilising its revenue sources due to inadequate strategies for using canteens and the areas around the ferry stations. Also, TEMESA did not design a mechanism for controlling revenue loss through ticketing. The audit team noted that at Luchelele Ferry Station, passengers had free access to the ferry while boarding, which posed a risk of revenue loss as it was difficult to control the flow of passengers during boarding and embarkation. The available system for ticketing is detailed in **Table 3.26**.

**Table 3.26: Available System for Ticketing**

| Ferry Stations | Ferries | Ticketing System |
|---|---|---|
| Magogoni | MV Magogoni | N- CARD |
| | MV Kazi | N- CARD |
| | MV Kigamboni | N- CARD |
| Nyamisati | MV Kilindoni | POS |
| Msanga Mkuu | MV Mafanikio | POS |
| Kigongo Busisi | MV Sengerema | ETS |
| | MV Mwanza | ETS |
| Ilunda-Luchelele | MV Temesa | POS |
| Bugolora - Ukara | MV Ukara II | POS |
| | MV Ukara | POS |

***Source:*** Auditors' Analysis of the Available Ticketing System in each Ferry Station, 2024

ISO 9001:2015 Certified

**Table 3.26** shows that different ferry stations use various ticketing systems, such as N-Card, Point of Sale and Electronic Ticketing System, and the major challenge across these systems is the disruption and ticket validation when the network goes down. System failures or outages can interrupt revenue collection, leading to financial losses and transaction delays. This affected the efficiency of operations, caused inconveniences to the passengers, and reduced trust in the system.

Moreover, the N-CARD system also had challenges, as it does not accurately reflect the actual number of passengers who purchased tickets or the total revenue collected. Additionally, TEMESA could not directly access the data; it only received information about the amount collected for the day from the vendor. The collected amount was deposited into TEMESA's account, leaving the organization reliant on reported figures without real-time ticket sales and revenue transparency.

The audit team noted that TEMESA was unable to control expenditures as they were always beyond what they had collected, except for the financial years 2020/21 and 2022/23, as detailed in **Table 3.27**.

**Table 3.27: Percentage Utilization of the Revenue**

| Financial Yeara | Revenue Collection (TZS in Billion) | Expenditures (TZS in Billion) | Percentage Utilization (%) |
|---|---|---|---|
| 2020/21 | 15.93 | 15.57 | 98 |
| 2021/22 | 14.65 | 14.73 | 101 |
| 2022/23 | 14.28 | 12.38 | 87 |
| 2023/24 | 15.32 | 14.39 | 94 |

**Source**: TEMESA's Annual Implementation Report (2020/21-2023/24)

**Table 3.27** shows that in the financial year 2021/22, the ferry operation expenditures exceeded the collected revenue, revealing the government incurred a financial burden from other sources to save the ferry operations. This shows low expenditure controls, as revealed more in **Table 3.28,** where ferries expenditures were high at Nyamisati, Bugolora Ukara, Ilunda Luchelele and Msanga Mkuu Ferries Stations.

**Table 3.28: Fuel and Wages Expenditures**

| Ferry Stations (Number of Ferries) | Fuel (TZS) | Wages (TZS) | Total Expenditure for Fuel and Wages (TZS) | Total Ferry Station Expenditure (TZS) | Percentage (%) |
|---|---|---|---|---|---|
| Magogoni (2) | 1,648,427,391 | 507,180,000 | 2,155,607,391 | 5,189,406,116 | 42 |
| Nyamisati (1) | 780,694,942 | 98,118,000 | 878,812,942 | 941,212,942 | 93 |
| Msanga Mkuu (1) | 76,475,520 | 39,816,000 | 116,291,520 | 141,491,520 | 82 |
| Kigongo Busisi (3) | 2,210,667,214 | 347,520,000 | 2,558,187,214 | 4,443,552,707 | 58 |
| Ilunda Luchelele (1) | 225,016,668 | 32,400,000 | 257,416,668 | 288,151,514 | 89 |
| Bugolora Ukara (1) | 399,635,133 | 38,918,000 | 438,553,133 | 475,445,324 | 92 |

***Source:*** Auditors' Analysis of the Total Expenditure Versus Total Fuel and Wages Expenditures for Financial Year 2023/2024, 2024

**Table 3.28** illustrates the proportion of expenditure on fuel and wages to total expenditure for the financial year 2023/2024, which revealed

inadequate expenditure controls in four (4) out of six (6) ferry stations that were visited.

***Inadequate Revenue Analysis Before Leasing the Operation for the Alternative Ferry Services***

Based on a review of the contract terms between TEMESA and Azam Marine Co. Ltd, the audit noted that on 24 August 2024, TEMESA reached an agreement with Azam Marine Company Limited to provide alternative ferry services to the Magogoni Ferry Station. Based on the terms of the agreement, Azam Marine Company Limited was paying TEMESA a sum of TZS 2,100,000, based on a charge of TZS 75 per passenger for an estimated 28,000 passengers per day. **Table 3.29** reveals the analysis of the payments made to TEMESA and Azam Marine Company Limited per passenger.

**Table 3.29: Analysis of the Contract Terms on Ferry Services between TEMESA and Azam Marine Company Limited.**

| Contract | Total Passengers | No. of operating Vessels | Operating Hours | Payments of Services (TZS) |
|---|---|---|---|---|
| First | 24,000 | 2 | 8 | 5,000,000 |
| Second | 28,000 | 3 | Not specified | 2,100,000 |

***Source:*** Auditors' Analysis of the Contract Terms between TEMESA and Azam Marine Company Limited, 2024

**Table 3.29** shows that in the first contract, TEMESA paid Azam Marine Company Limited a sum of 5,000,000 for the two (2) vessels operating for 8 hours with the expectation of carrying 24,000 passengers. However, when TEMESA leased Azam Marine Company Limited the operations of ferries for unspecified operating hours, Azam Marine Company Limited would operate three (3) vessels for unspecified operating hours with expectations of carrying 28,000 passengers and pay TEMESA a sum of TZS 2,100,000. The audit noted that despite extended hours and a greater number of vessels, the increase in passengers was only 4,000, and TEMESA paid less than it would have to Azam Marine Company Limited for 8 hours of service. **Table 3.30** analyses the passenger's fee paid to Azam Marine Company Limited and TEMESA.

**Table 3.30: Analysis of the Contract Terms on Ferry Services between TEMESA and AZAM Marine Company Limited.**

| Contract | Amount Payable (TZS) | Number of Passengers | Cost Per Passenger (TZS) | Passenger Fee (TZS) |
|---|---|---|---|---|
| First | 5,000,000 | 24,000 | 208 | 200 |
| Second | 2,100,000 | 28,000 | 75 | 500 |

***Source:*** Auditors' Analysis of the Contract Terms between TEMESA and Azam Marine Company Limited, 2024

**Table 3.30** shows that on the first contract, in which TEMESA paid Azam Marine Company Limited, the cost of passengers paid to AZAM Marine Company Limited was 208 while the fee was 200 and in the second contract, Azam Marine Company Limited paid TZS 75 to TEMESA while the passenger fee was TZS 500.

Furthermore, The Audit noted that Azam Marine Company Limited claimed to invest initially a sum of TZS 5,981,824,955.50 that the lease was expected to return within 8 years; then, after the payback period, they would review the agreement on the amount to be paid to TEMESA.

While the Azam Marine Company Limited proposed to charge a higher sum of TZS 500, contrary to what TEMESA was charging a sum of TZS 200, the revenue to be received by the TEMESA was still less. Furthermore, the Audit noted that there was no feasibility study done on the proposed leasing agreement, and no economic viability was done to form the basis for the payback period and adequate analysis on the amount that would have been profitable for TEMESA to be paid by Azam Marine Company Limited.

**b) Ineffective Revenue-generating Mechanisms Employed for Ferry Operations**

The audit noted that TEMESA had ineffective revenue-generating mechanisms employed for ferry operations that did not help TEMESA achieve its financial targets on the ferry operations. This was contrary to section 1.4.5 of the TEMESA Guideline for the implementation of operation duties and construction of ferries, 2024 that requires strengthening the revenue collection to be able to meet basic expenses of operations such as the purchase of fuel, payment of salaries and allowances of employees, security payments, payment of water and electricity as well as ferry maintenance and

infrastructure. The comparison of estimated and actual collected revenue is detailed in **Table 3.31.**

**Table 3.31: Estimated Revenue and Actual Collected Revenue from Ferry Services**

| Financial Year | Estimated Revenue Collection (TZS in Billion) | Actual Revenue Collected (TZS in Billion) | Percentage Collected (%) |
|---|---|---|---|
| 2020/21 | 21.59 | 13.61 | 63 |
| 2021/22 | 22.00 | 14.65 | 67 |
| 2022/23 | 23.73 | 14.28 | 60 |
| 2023/24 | 21.36 | 15.32 | 72 |

***Source:*** TEMESA MTEF and Annual Performance Report from Financial Year, 2019/20 – 2023/24

**Table 3.31** shows that the set target was not achieved, which can be attributed to setting higher estimations without strategies for more revenue sources. Thus, the lowest percentage of attainability was 60 in the financial year 2022/23, and the highest attainability of revenue collection was 72 % in the financial year 2023/24.

Ticket pricing strategies that were never implemented in ferry stations and other additional services were implemented without ensuring that the revenue was collected with TEMESA, as detailed in **Table 3.32.**

**Table 3.32: Ticket Pricing Strategy Not Implemented (Adult)**

| Ferry Stations | Ferries | Current Ferry Toll (TZS) | Proposed Ticket Price (TZS) |
|---|---|---|---|
| Magogoni | MV Magogoni | 200 | 400 |
| | MV Kazi | 200 | 400 |
| | MV Kigamboni | 200 | 400 |
| Nyamisati | MV Kilindoni | 16000 | 20000 |
| Msanga Mkuu | MV Mafanikio | 300 | 500 |
| Kigongo Busisi[16] | MV Sengerema | 400 | 500 |
| | MV Mwanza | 400 | 500 |
| Ilunda -Luchelele | MV Temesa | 400 | 500 |
| Bugolora -Ukara | MV Ukara II | 800 | 1000 |

[16] Revenue decreased from toilet services were not collected by TEMESA but were collected by TEMESA's workers' organisation.

| Ferry Stations | Ferries | Current Ferry Toll (TZS) | Proposed Ticket Price (TZS) |
|---|---|---|---|
| | MV Ukara | 800 | 1000 |

***Source*:** TEMESA's Report on the Proposed Prices for Ferry Services, 2024

**Table 3.32** shows that TEMESA never implemented the proposed prices despite fuel inflation and increased production costs. There was no provision for subsidies despite the non-implementation of the proposed prices.

**Absence of Revenue Collection Strategy on the Alternative Source**

The Audit noted that, at Kigongo Busisi, the revenue collected from the use of the toilet was not banked to the TEMESA revenue account, the Management of the Toilet revenue was under the TEMESA Association of Disaster and Comfort, and there was no contract for the toilet operation despite customers being charged a toilet fee.

The audit noted that in October 2024, the Manager for Planning and Monitoring sent a letter (Reference No. BA.188/338/13/44) to the Lake and Western Zonal Manager, expressing the intention to initiate the procurement process for a vendor to operate the toilet facilities. While the procurement process was ongoing, it was decided that the current TEMESA Association would continue paying a sum of TZS 800,000 per month for the use of the two toilets until the procurement contract was finalized.

A review of the response letter from the Chairman of the TEMESA Association for Disaster and Comfort to the Lake and Western Zonal Manager revealed that the monthly revenue collected amounted to TZS 2,400,000. However, due to various expenditures, they could only contribute TZS 510,000. As of December 2024, there was no evidence of the revenue being deposited into the TEMESA account. The audit further revealed that TEMESA did not adequately identify or operationalize additional revenue sources to diversify its revenue base, resulting in potential revenue losses.

**c) Lack of Sustainability Measures for Fuel Efficiency and Environmental Improvement**

The audit revealed inefficiencies in fuel usage across ferries while reviewing fuel reports. It was found that there was a lack of systematic monitoring and controls to track and optimize fuel consumption. Additionally, the audit

highlighted weaknesses in fuel management, as fuel tended to deplete quickly, indicating potential issues such as fuel wastage, overconsumption, or improper fuel usage tracking.

It was also noted that fuel tended to run out quickly, as shown in **Table 3.33** on sampled dates of weekly assessment of fuel usage received and consumed.

**Table 3.33: Total Annual Expenditure on Fuel for Eastern and Southern Zone Sampled Ferries (Amount in TZS)**

| Ferry Station | 2022/2023 | 2023/2024 |
|---|---|---|
| Magogoni Ferry | 1,738,428,454 | 1,648,427,391 |
| Nyamisati | 865,002,942 | 780,694,942 |
| Msanga Mkuu | 211,451,208 | 76,475,520 |
| Bugolora Ukara | - | 363,414,700 |
| Kigongo Busisi | 1,539,813,652 | 2,210,667,214 |
| Luchelele Ilunda | 189,005,177 | 225,016,668 |

**Source**: TEMESA Expenditure Report Eastern and Lake Zone 2022/23-2023/24, Expenditure Kigongo Busisi 2022/23, Expenditure MV Ukara 2023/24, and MV Temesa Expenditure 2022/23.

Despite the inefficiency in fuel management, TEMESA was in the process of installing flow meters on its vessels to control fuel intake and monitor consumption. Fuel Management System would accurately measure the amount of fuel used each day, providing precise data on the number of litres consumed. By implementing flow meters, TEMESA aimed at improving fuel management, reducing wastage and ensuring more efficient and transparent tracking of daily fuel usage, ultimately leading to cost savings and enhanced operational efficiency.

### 3.4.3 Inadequate Adherence to National and International Safety Regulations and Operational Standards.

The audit noted that National and International Safety Regulations and Operational Standards were not adequate, as detailed below:

### a) Inadequate Integration of National and International Regulations Governing Safety, Operations, and Environmental Standards Applicable to Ferry Operations into Operational Practices

The Audit noted that in December 2022, MoW provided a Guideline for Government Ferries managed by TEMESA and in February 2024, TEMESA provided a Guideline for the Implementation of Duties of Operation and Construction of Ferries. The review of the guidelines revealed that these guidelines did not adequately cover all aspects of ferry safety and environment aspects, contrary to object D of the TEMESA Strategic Plan of 2020/21 -2025/26, in which the target is to ensure all vessels equipped with safety, security, and communication equipment every year up to June 2026. Also, it was contrary to MoW's Strategic Plan for the financial year 2021/22-2025/26 objective C with the target to develop and disseminate guidelines for safety and environmental standards in ferry services, as described below.

#### i. Inadequate Integration of Safety Aspects to the Operations of Ferry

The audit noted that the guidelines provided by MoW and TEMESA did not adequately integrate all necessary safety aspects as directed by the International and National Guidelines, as shown in **Table 3.34.**

**Table 3.34: Integration of Safety to the Operations of Ferry in TEMESA and MoW Guidelines**

| Safety Aspect | Integrated in MoW Guideline | Integrated in TEMESA Guideline | Operational Status |
|---|---|---|---|
| Abandon ship drills | Yes | No | Not conducted |
| Fire Drill | Yes | No | Not conducted |
| Man, overboard drill | Yes | No | Not conducted |
| Shipboard security drill | No | No | Not conducted |
| Safety training session | No | No | Conducted |
| Communication Equipment | No | No | Provided |
| Provisional for Life-saving Equipment | Yes | No | Provided |
| Provisional for Fire Detection and Fighting Equipment. | No | No | Provided |

***Source:*** Auditors' Analysis of Integration of International Standard and Best Practices into National Guideline, 2024

**Table 3.34** shows that TEMESA provided guidelines for ferry operations in 2024 without covering key safety aspects. Also, the guidelines for ferry operations issued by MoW provided the provisions that instruct TEMESA to

provide guidelines on abandoning ships, fire and Man overboard drills, and Provisional for life-saving equipment and ensure its implementation.

Additionally, the review of sampled correspondence ferry files and interviews with officials from sampled ferries revealed that drills were not undertaken for the safety preparation as directed by Regulation 9(1) of the Merchant Shipping (Musters, Training and Decision Support Systems) Regulations, 2018 merchant ship which requires each member of the crew to participate in at least one abandoned ship drill and one fire drill in every month.

**ii. Inadequate Integration of Environmental Aspects to the Operations of Ferry.**

The audit noted that the guideline issued by MoW integrated three (3) aspects out of five (5), as evidenced under sections 5.1, 5.2, and 5.3, which directed TEMESA to prepare a guideline covering sewage management, waste and garbage management and planting and maintenance of trees at the ferry stations respectively.

Also, TEMESA did not adequately integrate aspects of environment management as directed by the International and National Guidelines, as shown in **Table 3.35.**

NAOT
ISO 9001:2015 Certified

**Table 3.35:Integration of Environment Aspect in TEMESA and MoW Guidelines**

| Safety Aspect | Integrated in MoW Guideline | Integrated in TEMESA Guideline | Operational Status |
|---|---|---|---|
| Spillage of Hazardous Materials on board | No | No | There is spillage of hazardous materials on board |
| Sewage Management | Yes | No | Sewage wastes are discharged to water Bodies. |
| Waste/Garbage Management | Yes | No | Waste containers are available within the vessels. |
| Planting and maintenance of trees at the ferry stations | Yes | No | No evidence of implementation |

| Safety Aspect | Integrated in MoW Guideline | Integrated in TEMESA Guideline | Operational Status |
|---|---|---|---|
| Oily Bilge Water Management | No | No | The systems have been installed but are not working sufficiently well. |

*Source:* Auditors' Analysis of International Standard, Best Practices, National Guidelines and Physical Verification, 2024

**Table 3.35** shows that TEMESA did not produce any guidelines covering the aspects of spillage of hazardous materials onboard, sewage management, planting and maintenance of trees at ferry stations and oily bilge water management as directed by MoW Ferries Guideline despite that the five aspects covered in the environment were still a challenge in the operations of ferries.

**b) Inadequate Documentation of Safety Protocols and Procedures for Effective Implementation**

The audit noted that none of the ferries had the safety protocol documented and maintained in burners or any other display on the ferry. The record for training and drills conducted was not maintained and documented. Also, documentation of safety protocols was not maintained in the documentary created by the Communication Department, which was to be displayed on TV in the ferries.

However, para 3.2.1 of the TEMESA Functions and Organisation Structure of 2018 requires the establishment and supervision of the implementation of ferry safety standards and procedures. Further, Regulation 14 of the Merchant Shipping (Musters, Training, and Decision Support Systems) Regulations, 2018, requires the master to record abandoned ship drills, fire drills, drills of other life-saving appliances, or onboard training in the official logbook.

The verification conducted by the audit noted that out of seven (7) operating ferries, three (3) were supplied and installed with a TV set, but safety protocols were not displayed. Also, two (2) ferry stations had a microphone advert and stationed persons to advertise and instruct on safety issues for the passengers during boarding and embarkation, as detailed in **Table 3.36**.

**Table 3.36: Implementation of Safety Procedures in the Sampled Ferries**

| Ferry Stations | Ferries | Availability of Functioning TV in Ferries | Display of Safety Protocols | Microphone Advert |
|---|---|---|---|---|
| Magogoni | MV Magogoni | n/a | n/a | n/a |
| | MV Kazi | ✓ | x | ✓ |
| | MV Kigamboni | n/a | n/a | n/a |
| Nyamisati | MV Kilindoni | ✓ | x | x |
| Msanga Mkuu | MV Mafanikio | x | x | x |
| Kigongo Busisi | MV Sengerema | x | x | ✓ |
| | MV Mwanza | X (only at the restaurant) | x | ✓ |
| Ilunda - Luchelele | MV Temesa | X (not installed) | x | x |
| Bugolora - Ukara | MV Ukara II | ✓ | x | x |
| | MV Ukara | n/a | n/a | n/a |

***Source:*** Auditors' Analysis of the Observation Made on Safety Protocols, 2024

**Key:**

n/a for ferries that were under maintenance, no observation was made

**Table 3.36** revealed that out of seven (7) sampled operating ferries, only three (3) had TVs installed; however, those installed were not programmed to display safety issues to passengers and crews. Also, the microphone adverts were available only at Magogoni station.

This was due to inadequate prioritisation of the safety aspect, as the interview with the safety official confirmed that the safety protocol for safety was recorded but was not distributed to various ferries for its utilisation.

Failure to display safety protocols posed a risk to passenger safety. In case of an accident, it would be difficult for the passengers to survive due to the absence of knowledge of safety protocols. Also, it was difficult for the sailors to handle passengers in daily operations in case of safe boarding and from the embankment.

### c) Non-compliance to National and International Regulations Governing Safety, Operations, and Environmental Standards

During the review of the Ferry inspection files at TASAC, it was noted that all TEMESA ferries operated without a Seaworthiness certificate, a certificate issued by TASAC to confirm that the ferry is safe to carry passengers and has complied with safety requirements. It was noted that for the ferry to obtain a seaworthiness certificate, it must meet the requirements contained in the certificate as shown in the regulations. This is contrary to Regulation 16 of the Merchant Shipping (Small Ships, Local Cargo Ship Safety, Small Ship Safety, Surveys and Inspections for Vessels Engaged on Local and Coastal Voyages, Inland waters) Regulations of 2004 that requires all vessels operating on the waterways to carry a certificate of Seaworthiness attesting to compliance with the technical requirements.

The lack of a Seaworthiness certificate for TEMESA ferries was due to the following deficiency in the ferries.

#### i. Inadequate Management of Fire Protection

During the site visit, the audit noted that three (3) ferries out of seven (7) sampled operating ferries did not have a fire safety plan on board. Also, the ferries were not equipped with sufficient fire preventives and protective equipment, despite Part VII of the Merchant Shipping (Small Ships, Local Cargo Ship Safety, Small Ship Safety, Surveys and Inspections for Vessels Engaged on Local and Coastal Voyages, Inland waters) Regulations, 2004 requires all vessels to be fitted with fire extinguishing systems as detailed in **Table 3.37.**

**Table 3.37: Percentage Availability of Fire Protection and Preventive Equipment**

| Fire Protection & Fighting | Visited Ferries | | | | | | |
|---|---|---|---|---|---|---|---|
| | MV Mwanza | MV Sengerema | MV TEMESA | MV Mafanikio | MV Kilindoni | MV Kazi | MV Ukara II |
| Portable Fire extinguisher | 100* | 90* | 83* | 83** | 100 | 100 | 100* |
| Fire Detector | 0 | 0 | 0 | 0 | 100$ | 0 | 100 |
| Horse Fire Extinguisher | 33 | 100 | 100 | 0 | 100 | 100 | 50 |
| Sand Box/Bucket | 50£ | 0 | 100 | 0 | 43£ | 100 | 100 |
| Fire Pump Mechanical | 50 | 100 | 100 | 100 | 100 | 100 | 100 |

| Fire Protection & Fighting | Visited Ferries | | | | | | |
|---|---|---|---|---|---|---|---|
| | MV Mwanza | MV Sengerema | MV TEMESA | MV Mafanikio | MV Kilindoni | MV Kazi | MV Ukara II |
| Fire Hand pump | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Fire Axe | 0 | 0 | 0 | 0 | 100 | 0 | 0 |

***Source***: Auditors' Analysis on the Ferries' Fire Plans and Physical Verification, 2024

Key:

| | |
|---|---|
| * | Expired Extinguisher |
| ** | Undefined expiration status |
| $ | Non-operational detectors |
| £ | Empty sand Bucket |

**Table 3. 37** shows that the least provided equipment was the fire hand pump, which was unavailable in all the ferries, followed by the Fire Axe, which was available in MV Kilindoni only. Also, MV Kilindoni was found with the detection that it was not functioning, and expired fire extinguishers were found at MV Sengerema, MV TEMESA, MV Mwanza, and MV Ukara. Also, MV Mafanikio was installed with an unlabelled portable extinguisher.

Moreover, the audit found an empty fire bucket at MV Mwanza and MV Kilindoni. As indicated in **Photo 3.5**, the firefighting conditions were not conducive to meeting its functionality during the fire incident. **Photo 3.5 (a), (b), (c)** and **(d)** show challenges with the firefighting system in the respective ferries.

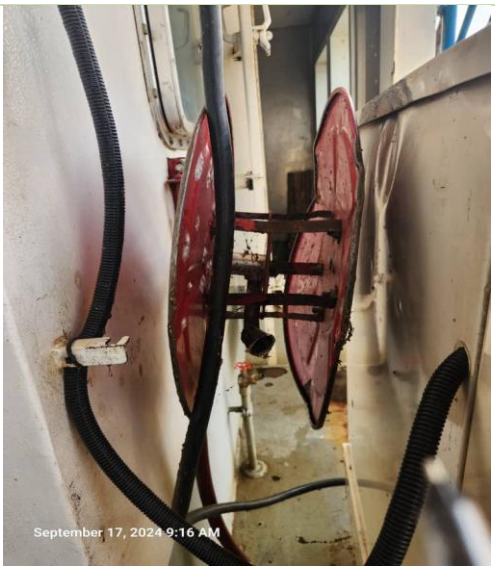



**Photo 3.5(a):** Horse rail fitting without horse pipe and nozzle at MV Ukara II


**Photo 3.5(b):** Expired Portable fire extinguisher as observed in MV Mwanza


**Photo 3.5(c):** Fire bucket without dry sand as observed in MV Kilindoni on 17 September 2024.

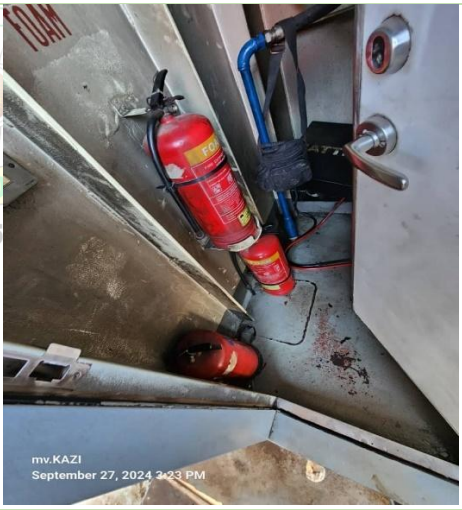



**Photo3.5(d):** Portable fire extinguisher placed in an inappropriate location at MV Kazi

### ii. Inadequacy of Life-Saving Appliances

The verification conducted by Audit revealed that ferries did not furnish sufficient and working life-saving appliances as directed under Part VIII of the Merchant Shipping (Small Ships, Local Cargo Ship Safety, Small Ship Safety, Surveys and Inspections for Vessels Engaged on Local and Coastal Voyages,

Inland waters) Regulations, 2004, that all new and existing vessels to provide the requirements of life-saving appliances as shown in **Table 3.38.**

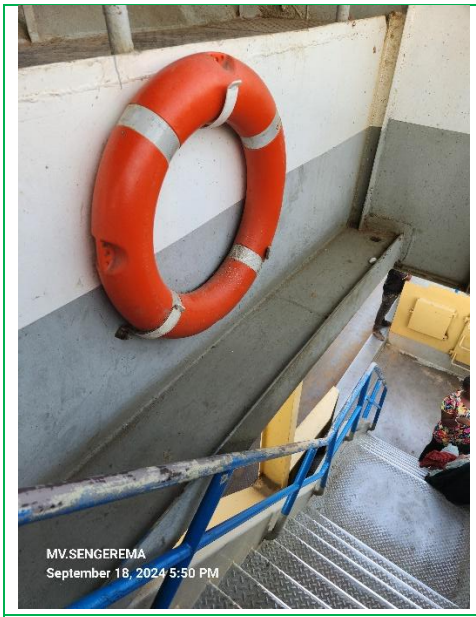
**Table 3.38: Percentage of Availability and Reliability of Life-saving Appliances to Ferries**

| Name of The Ferry | Safety Appliance | | | | |
|---|---|---|---|---|---|
| | Life Jacket | Life Buoy | Rescue Boat | Life Raft | First Aid Kit |
| MV Mwanza | 40 | 63 | 100 | 98 | 0 |
| MV Sengerema | 73 | 100 | 100 | 100 | 0 |
| MV Temesa | 92 | 100 | 0 | 100 | 0 |
| MV Mafanikio | 100 | 100 | 100 | 100 | 0 |
| MV Kilindoni | 100 | 100 | 0 | 100 | 10 |
| MV Kazi | 100 | 100 | 100 | 99 | 0 |
| MV Ukara II | 100 | 100 | 0 | 96 | 0 |

***Source***: Auditors' Analysis of the Safety Plan and Physical Verification, 2024

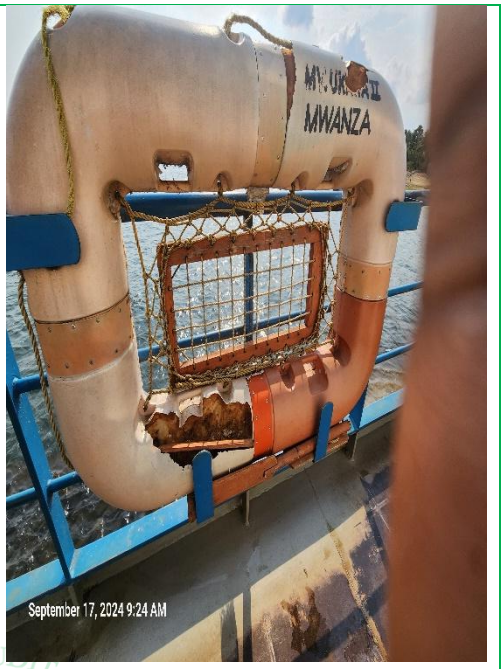
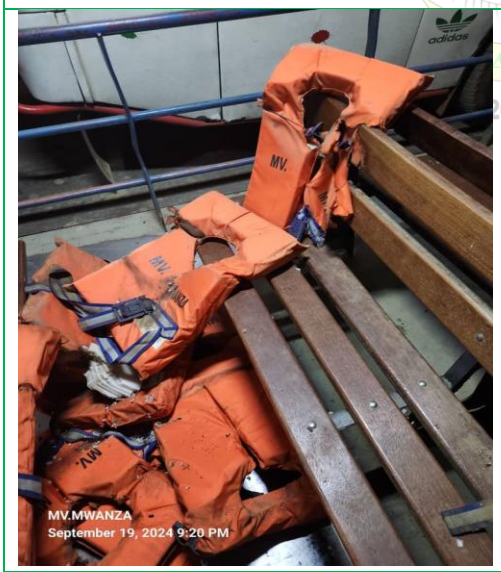
**Table 3. 38** shows that six (6) out of seven (7) sampled operating ferries had no first aid, and for MV Kilindoni, that had first aid with very few medicines found in place. Also, three (3) out of seven (7) sampled operating ferries had no rescue boat, and MV Mwanza was observed to have the least compliance with the life jacket onboard, which was 40% of the total requirement.

Moreover, apart from the compliance indicated in **Table 3.36**, the audit revealed that all visited ferries' safety appliances were not kept in proper operational state and were not being checked up for their operational state. These were evidenced by the observed life buoy without lifelines to all visited ferries. **Photo 3. 5**(a) and (b) show problems with the installed buoy.

| | |
|---|---|
|  |  |
| **Photo 3.6** (a) Life bouy without grap rope and lifeline | **Photo 3.6 (**b) Life bouy with grab rope and lifeline |

Additionally, the audit observed the presence of rescue boats and life rafts without propelled engines or pedals as observed at MV Mwanza, MV Mafanikio, MV Kazi and MV Ukara II as indicated in **Photos 3.7** (**a) and (b)**.

ISO 9001:2015 Certified

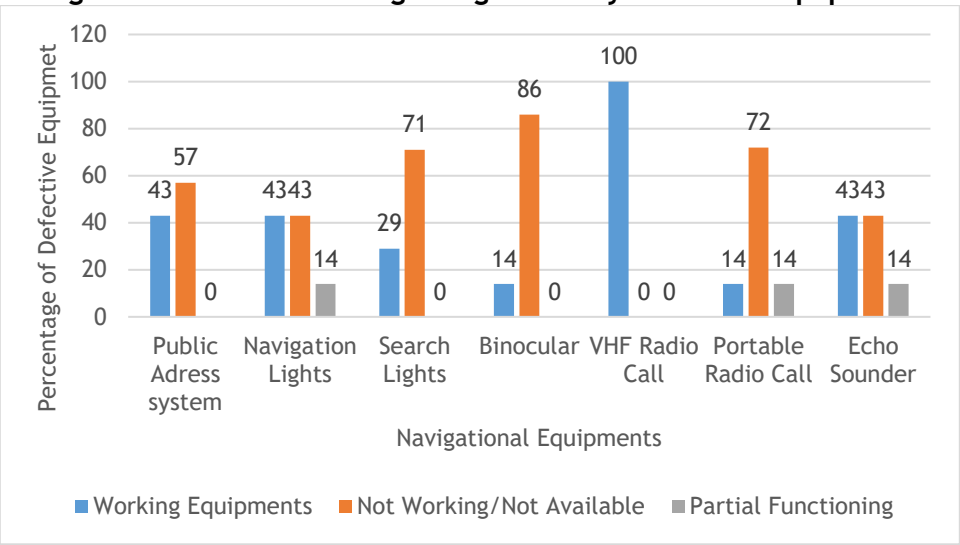
| | |
|---|---|
|  |  |
| **Photo 3.7** (a) Hulted Rescue boat at Luchele Ferries station Mtwara. | **Photo 3.7** (b) Defective Life raft with rotten peddles at MV Mwanza. |
|  |  |
| **Photo 3.7**(c) Defective Life jacket equipped on MV Mwanza. | **Photo 3.7**(d), Fuel system obscured life jacket cage on MV Kazi |

***Source:*** Physical Observation on the Visited Ferries Station, 2024

### iii. Defective Navigational Systems and Equipment.

Verification done on the sampled ferries revealed that they were operated with malfunctioning navigational systems and equipment. Specifically, navigational lights, searchlights, binoculars and communication systems, despite being indicated by the Merchant Shipping (Safety of Navigation) Regulations, 2023, as the carriage requirements for shipborne navigational systems and equipment, as shown in **Figure 3.3.**

**Figure 3.3: Malfunctioning Navigational Systems and Equipment**




***Source:*** Auditors' Analysis of Physical Verification on Navigational Systems and Equipment for the Operating Sampled Ferries, 2024

**Table 3.39: Analysis of the Navigation Equipment per Ferries**

| Name of Ferries | Public Address | Navigation Lights | Search Lights | Binocular | VHF Radio Call | Portable Radio Call | Echo Sounder | Percentage complied |
|---|---|---|---|---|---|---|---|---|
| MV Kilindoni | W | W | W | N | W | PW | PW | 71 |
| MV Kazi | W | PW | N | N | W | W | N | 50 |
| MV TEMESA | N | N | N | N | W | N | N | 14 |
| MV Mwanza | N | N | N | N | W | N | N | 14 |
| MV Mafanikio | W | W | N | W | W | N | W | 71 |
| MV Ukara | N | W | W | N | W | N | W | 57 |
| MV Sengerema | N | N | N | N | W | N | W | 29 |

***Source:*** Auditors' Analysis of Physical Verification on Navigational Systems and Equipment for the Operating Sampled Ferries, 2024

**Key:**

| | |
|---|---|
| W | Functioning Equipment |
| N | Non-Functioning Equipment |
| PW | Partially Working |

**Table 3.39** shows that MV Mwanza and MV Temesa had the lowest percentage of compliance with the functioning navigation equipment from the sampled operating ferries. Also, the navigational lights were partially working, as MV Kazi was found to have one working light out of the two required. Moreover, for MV Kilindoni, the Echo sound did not function well when the vessel was on a voyage.

### iv. Ferries Operate under Manning

Regulations 125 and 126 of the Merchant Shipping (small ships, local cargo ship safety, small ship safety, surveys and inspections for vessels engaged on local and coastal voyages, inland waters) Regulations, 2004 provide for the minimum requirements for ferry crew on particular types, size and capacity of the vessel/ferry.

Reviewing the TASAC's sampled ferries files and inspection reports, it was noted that ferries operated with crews who did not meet minimum requirements as per the International Convention and Regulation, which led to the non-attainment of the requirement for Seaworthiness. All ferries had no certificate of safe manning from the TASAC as the regulator.

The review of the staff files revealed that TEMESA's ferries did not have any engine officials with class four, and there were no deck officials in class four as directed in Regulation 126(2) of the Merchant Shipping (Small Ships, Local Cargo Ship Safety, Small Ship Safety, Surveys and Inspections for Vessels Engaged on Local and Coastal Voyages, Inland Waters) Regulations, 2004 guide on the number and grade of certified persons to serve as Masters and Chief Engineers on the vessels.

Moreover, TEMESA's owned ferries have an overall length of vessels ranging from 10m to 50m, where per Regulation 126 (2), Table nine mentioned therein requires the vessel to be operated with the deck officer with class 4. Also, Table 10 of the same regulation indicates the qualifications of the engineers for all vessels, which requires the minimum qualification of engineer class 4.

Furthermore, the audit noted that TEMESA failed to secure a certificate of safe manning from TASAC due to the availability of staff with expired mandatory certificates and crew with no mandatory rating qualification. **Table 3.40** shows the list of ferry stations, the number of ferries, and their manning status.

**Table 3.40:Analysis of Ferries Crew Qualification**

| Name of ferry/Station | Total staff | Mandatory | | | | Rating | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Valid | Expired | Non | Eligible rate (%) | Active | Inactive | Non | Eligible rate (%) |
| Kigongo Busisi | 21 | 7 | 7 | 7 | 33 | 9 | 2 | 10 | 43 |
| MV Mafanikio | 6 | 1 | 5 | 0 | 17 | 2 | 1 | 3 | 33 |
| MV Kilindoni | 10 | 8 | 2 | 0 | 80 | 9 | 1 | 0 | 90 |
| MV Ukara II | 4 | 1 | 2 | 1 | 25 | 2 | 1 | 1 | 50 |
| MV Temesa | 4 | 1 | 3 | 0 | 25 | 3 | 1 | 0 | 75 |
| Magogoni | 62 | 27 | 25 | 10 | 44 | 37 | 7 | 18 | 60 |

***Source:*** Auditors' Analysis of Ferry Crew Qualifications, 2024

**Table 3.40** shows that MV Kilindoni had the highest rate of qualified staff, which was 80% for mandatory staff and 90% for rating staff—also, MV Mafanikio had the lowest qualification rate, 17% for mandatory qualifications and 33% for rating qualifications.

ISO 9001:2015 Certified

Moreover, it was noted that the TEMESA's ferries operate under manning as the result of the insufficient scheme of services that excludes the cadre expected to operate the ferry, such as Ferry Captains and Marine Engineers who are internationally recognised. This has limited TEMESA's ability to recruit qualified human resources to operate the ferry, and as a result, the ferries are operated by low-qualified officers. The insufficient scheme of service led to TEMESA's inability to offer competitive salaries and career development opportunities that would attract qualified professionals. This resulted in over-reliance on less experienced or underqualified personnel and compromised operational standards and safety protocols.

### v. Ferries Operate Without Insurance Cover

The review of safety analysis for the safety compliance of the TASAC inspections, 2024, and review of the ferry files at TEMESA revealed that all 32

government-owned ferries were operating without mandatory insurance cover for the vessel and third parties, which is essential for the issuance of a Seaworthiness certificate, despite Regulation 4 (1) of the Merchant Shipping (Compulsory Insurance for Third Party Liabilities) Regulations, 2011, requires every owner or master of a ship to ensure that there is a valid insurance contract for third party liabilities in respect of his ship while in service, however Government-owned ships are exempted from mandatory insurance coverage. As per the Merchant Shipping Act Cap 165 and the *Compulsory Insurance for Third Party Liabilities* Regulations, 2011, the requirements for insurance apply to all Tanzanian-registered ships and licensed foreign vessels engaged in local trade within Tanzanian waters. However, the regulations explicitly exempt government-owned ships from this obligation.

The Audit noted that despite the existence of the regulation that excluded the Government ships, TASAC still had highlighted the missing insurance cover on their inspection reports, and until the time of the Audit in December 2024, there was no evidence of the meeting between TASAC and TEMESA for the agreement on how they would recover for the loss or damage to third parties in accordance with the Marine Regulations since the Government Ferries provide services to the community. This poses a risk to the ferries that travel long routes, such as MV Kilindoni and MV Ukara II, where the vessels do not have any insurance cover, and no arrangements were defined for the coverage of loss or damage.

ISO 9001:2015 Certified

Non-compliance with National and International Regulations Governing Safety, Operations, and Environmental Standards increases the risk of accidents and injuries to ferry users and reduces customers' trust in using ferry services. It also poses the risk of environmental pollution, which can have a health impact on local communities and result in biodiversity loss.

**d) TASAC's Inspections Enhanced TEMESA's Ability to Improve its Ferry Service Delivery**

The Audit noted several improvements in the deficiencies as a response to the TASAC inspection of the Ferries. The inspection was conducted based on Regulation 7(1) of the Merchant Shipping (Survey, Inspection, and Certification) Regulations, 2014, which requires a survey of ships to be carried out by a surveyor appointed by the Minister. Details of the TEMESA's response to TASAC's Inspection are shown in **Table 3.41.**

**Table 3.41: TEMESA's Response to TASAC's Inspection**

| TASAC Recommendation | TEMESA Response | Number of Ferries | Complied | Percentage Complied |
|---|---|---|---|---|
| Detain Ferries | Ferries operation continued | 25 | 8 | 32 |
| TEMESA to notify TASAC of the reason for halting the operation | Ferries halted operations | 6 | 0 | 0 |
| TEMESA to notify TASAC of the procedure to scrap the ferries | Ferry to be scrapped | 1 | 1 | 100 |

***Source:*** Auditors' Analysis on the Enhancement of Safety Compliance Strategies for TEMESA Owned Ferries, 2024

**Table 3. 41** shows the responses of the TEMESA to the recommendation issued by the TASAC were still low as in the detained, they complied less than 50 per cent, and in providing the reason for halting, they failed to provide to the six (6) ferries, which were MV Ruvuvu, MV Old Ruvuvu, MV Ukara I, MV Majita, MV Kilombero II and MV Ruhuhu. Eight (8) Ferries detained were taken to maintenance except for MV Kigamboni, which awaits the procurement process. Further, they planned to scrap one ferry due to TASAC's inspection.

The Audit noted that the non-responsiveness of TASAC's recommendation was contrary to objective F of TEMESA's Strategic Plan 2020/21-2025/26 with the strategies to ensure ferry operations comply with TASAC requirements every year. This was caused by overloaded traffic of passengers at the stations, which made it too difficult to detain the ferries for rehabilitation and docking.

Reluctance to follow the recommendations issued by TASAC led to the indirect cost of major repairs and the risk of accidents to specific vessels. Further, the stoppage of the ferry's operations was due to mechanical failure. For instance, TASAC issued a recommendation for the rectification of MV Mwanza on 09 October 2020, but TEMESA denied the recommendation, and on 02 December 2020, the ferry stopped operation due to mechanical failure. Also, on 11 May 2023, TASAC detained MV Mwanza due to defective engine No. 2 and exceeded the time for an overhaul, but TEMESA did not respond to the recommendation up to the time of the audit; this act posed the highest risk of accident and uncomfortable ferrying operation.

**e) Absence of Records on the Trends Identified from Past Accidents Related to Ferry Operations and Corrective Measures in Implemented**

The audit team noted that TEMESA has no records on the accident records and the corrective measures implemented to the ferries that were involved in the accident for the period between 2020/21 and 2023/24. Despite that, section 207, subsections (1) and (2) of the Merchant Shipping Act, 2003, requires the owner to report to the registrar of ships a report of the accident or damage within 24 hours of the occurrence, as detailed in **Table 3.42.**

**Table 3.42: Incidents and Accidents Reported at TEMESA and TASAC**

| Financial Year | Number of Reported Ferries (TEMESA) | Number of Ferries Involved in Accident (TASAC) | Gap on Reporting |
|---|---|---|---|
| 2020/21 | 0 | 1 | 100 |
| 2021/22 | 0 | 2 | 100 |
| 2022/23 | 0 | 0 | 100 |
| 2023/24 | 0 | 1 | 100 |
| Total | 0 | 4 | 100 |

***Source***: Auditors' Analysis of Incidents and Accidents Reported at Maritime Rescue Coordination Centre from 2009 to 2024, (2024)

**Table 3.42** revealed inadequate reporting of the accidents and incidents at the Maritime Rescue Coordination Centre, as all of the incidents found in the correspondence files, as detailed in **Table 3.43,** were not reported at the Maritime Rescue Coordination Centre.

**Table 3.43: Ferries Accidents Re-Occurred Same Accident to Different Ferries**

| Ferry Stations | Ferries | Incident Occurrence |
|---|---|---|
| Magogoni | MV Magogoni | - |
| | MV Kazi | - |
| | MV Kigamboni | The vehicle sank into the sea from the ferry in December 2023 |
| Nyamisati | MV Kilindoni | - |
| Msanga Mkuu | MV Mafanikio | - |
| Kigongo Busisi | MV Sengerema | The vehicle sank into the lake from the ferry on 28/02/2024. |
| | MV Mwanza | The steering system fails before landing: 05/09/2022. |

| Ferry Stations | Ferries | Incident Occurrence |
|---|---|---|
| Luchelele Ilunda | MV TEMESA | Man overboard; 07/08/2024. |
| Bugolora -Ukara | MV Ukara II | None Occurrence |
| | MV Ukara | Major Rehabilitation |

***Source:*** Auditors' Analysis on Ferries Operation Files, 2024

**Table 3.43** revealed inadequate implementation of the corrective measures in the daily operations of the ferry to avoid the recurrence of the same accidents on different ferries, as vehicles sinking into the sea and lake were repeated more than once.

### 3.5 Inadequate System for Receiving and Handling Complaints.

The audit noted that the system for receiving and handling complaints was not adequately functioning, as detailed below:

#### 3.5.1 Absence of System for Gathering Customer Feedback

The audit found that TEMESA did not have an effective system for gathering customer feedback, particularly regarding ferry services, contrary to their Strategic Plan 2021/22-2025/26 Objective E, which emphasises conducting an annual customer satisfaction survey to increase its customer base.

Additionally, the audit noted that TEMESA did not establish an effective system for collecting customer feedback. There were no established periodic surveys for gathering feedback on the ferries.TEMESA conducted a customer feedback survey on the workshop only. Further, there were no toll-free numbers at the Zonal Offices and Ferry Stations. Instead, the ferry station managers were directed to share their numbers with the community.

It was noted that TEMESA had a toll-free number for receiving complaints, but it was only located at the Headquarters, and the complaints were not effectively recorded in the log book. There was no database recording the complaints and how they were addressed. There was no evidence of how the complaints were transferred to the respective department and if feedback was given after addressing the complaints.

Further, it was noted that at the Ferry Stations, there was no toll-free number for receiving complaints; hence, immediate solutions and responses to the reported matters were not possible due to the practice of receiving

complaints from Headquarters. Furthermore, the information in the recorded logbook shows who addressed the complaint and the timeline for returning the feedback.

A review of reports from the TEMESA's Communication Department revealed that no analysis of the information collected from the customers was used to inform the decision-making.

### 3.5.2 Ineffective Complaints Resolution Process

Complaints were addressed through informal phone communications, with no formal system for tracking, managing, or resolving these issues. Additionally, feedback was not consistently provided to complainants, and in many cases, no action was taken to address the concerns raised. This was contrary to Objective C of TEMESA's Strategic Plan 2021/222-2025/26, which targeted strengthening the agency's functions by formalizing mechanisms for handling complaints effectively.

This ineffectiveness was attributed to the absence of a structured complaints-handling system and a lack of documentation and follow-up procedures. The lack of a formalised process poses a risk of unresolved complaints and a failure to address key service issues, undermining accountability and customer satisfaction.

ISO 9001:2015 Certified

Until the time of the audit in December 2024, complaints registered at TEMESA were resolved informally through arbitrary directions and discussions via phone calls or face-to-face meetings. Since these were not documented, it became difficult for TEMESA to assess the effectiveness of complaint management. As a result, determining their efficiency in terms of the percentage of performance or ratio of complaints received versus unresolved claims was a challenge. The complaints received at TEMESA were related to poor services at the ferry stations.

### 3.5.3 Inadequate Tracking on the Quality of Services Criteria

During the site visit, the audit noted that quality metrics were not consistently adhered to in the ferries' daily operations. Key performance indicators, such as punctuality, were found irrelevant or not applied in some cases due to the specific nature of ferry operations and instances of non-operation. In particular, ferries operating in unpredictable conditions or servicing irregular

routes struggled to meet punctuality standards, leading to inconsistent performance reporting, despite section 4(2) of the Executive Agencies Act, 1997 that requires observe operations designed to provide the best services to its customers and maintain a high degree of responsiveness to their needs.

**Table 3.44** indicates the results of the observations made by Auditors on the sampled ferries based on the criteria for quality services.

**Table 3.44: Analysis of the Quality of Services on the Sampled Operating Ferries**

| Criteria | Metrics | Magogoni | Nyamisati | Msanga mkuu | Kigongo Busisi | | Luchelele Ilunda | Bugolora Ukara |
|---|---|---|---|---|---|---|---|---|
| | | MV Kazi | MV Kilindoni | MV Mafanikio | MV Sengerema | MV Mwanza | MV Temesa | MV Ukara II |
| Punctuality | Departure | n/a | ✓ | ✓ | n/a | n/a | X | x |
| | Landing | n/a | x | ✓ | n/a | n/a | X | x |
| Cleanliness | Availability of cleaning vendor | ✓ | x | x | ✓ | ✓ | X | ✓ |
| | Cleanness of the vessel | x | x | x | x | x | X | x |
| | Waste management | x | x | x | x | x | X | x |
| Availability of Passengers' Facilities | Waiting area | ✓ | x | x | ✓ | ✓ | X | x |
| | Ticketing area | ✓ | ✓ | ✓ | ✓ | ✓ | X | ✓ |
| | Ticket checking area | ✓ | ✓ | x | ✓ | ✓ | X | x |
| | Toilet (outside) | ✓ | x | ✓ | ✓ | ✓ | X | ✓ |

***Source:*** Auditors' Analysis on the Sampled Ferry Stations and Operating Ferries, 2024

**Key**

| | |
|---|---|
| n/a | Ferries that operate for 24 hours; hence, no observation was made since it was not applicable |
| x | Metric not adhered |
| ✓ | Metric Adhered |

**Table 3.44** shows how quality metrics were not adhered to in the ferry operations, with cleanliness emerging as the most neglected area. Across all the visited ferries, cleanliness standards were found to be particularly poor. The worst-case scenario of non-observance of all criteria was evidenced at Nyamisati Ferry Station. Other metrics, such as punctuality and customer service, also showed inconsistencies, but cleanliness was consistently identified as the most critical issue. Lack of regular cleaning schedules, poor waste management, and poor hygiene practices were common problems observed across ferries, as shown in the pictures below.

**Photo 3.5 shows the Status of Cleanliness inside MV Kilindoni Ferry.**

***Source:*** The Photo was taken by Auditors during a Site Visit at MV Kilindoni on 17 September 2024

The Audit noted that no contractor was in place to ensure cleanliness at MV Kilindoni. The contract had been terminated in January 2023, and no contractor had been secured until October 2024. The absence of permanent employees or contractors for cleanliness resulted in the poor cleanliness of the ferry. The ferry managers employed temporary staff who did not have scheduled time to clean the ferries.

Furthermore, it was noted that four (4) out of six (6) ferry stations had no waiting lounges, so passengers had to wait to board the ferry while under the trees, as revealed in **Photo 3.6** below.


**Photo 3. 6 shows the Status of the Waiting Lounges at Luchelele and Msanga Mkuu Ferry Stations.**

| | |
|---|---|
| ***Source**: Photo taken by Auditors during a site visit at Ilunda Luchelele Ferry Station on September 2024* | ***Source**: Photo taken by Auditors during a site visit at Msanga Mkuu Ferry Station on 13 September 2024* |

**Photo 3.6** illustrates the undesirable condition of the waiting lounges at the Msanga Mkuu and Luchelele Ferry Stations, showing their deteriorating state.

### 3.5.4 Non-utilisation of Scheduling Software and Real-time Tracking Systems

The Audit noted that no existing scheduling software and real-time tracking systems were utilized in ferry' operations, as evidenced during the site visits in the sampled ferry stations, where the tracking of the ferry schedules was done by manually filling the log book. Despite that, the agency aimed to improve the delivery of public services and the quality of services.

The audit found that the crew on board, particularly the sailors, were responsible for filling the logbook, including the record log sheets for the vessels. These log sheets recorded the departure and arrival times at each terminal and the number of vehicles on the vessel but did not include the number of passengers, as detailed in **Table 3.45.**

**Table 3.45: Presence of Information Recorded Manually**

| Ferry Stations | Ferries | Log Book | Manning |
|---|---|---|---|
| Magogoni | MV Magogoni | n/a | n/a |
| | MV Kazi | ✓ | x |
| | MV Kigamboni | n/a | n/a |
| Nyamisati | MV Kilindoni | ✓ | x |

| Ferry Stations | Ferries | Log Book | Manning |
|---|---|---|---|
| Msanga Mkuu | MV Mafanikio | ✓ | ✓ |
| Kigongo Busisi | MV Sengerema | ✓ | x |
| | MV Mwanza | ✓ | x |
| Ilunda-Luchelele | MV Temesa | ✓ | x |
| Bugolora - Ukara | MV Ukara II | ✓ | x |
| | MV Ukara | n/a | n/a |

***Source***: Auditors' Analysis of the Information Recorded in the Hard Copies, 2024

**Key**

n/a Ferries that were under maintenance (non-operating ferries)
x Presence
✓ Absence

**Table 3.45** revealed that important information was filed in the log book, and the manning level was still recorded manually, yet six (6) out of seven (7) operating ferries did not keep records of the manning.

Also, it was noted that there was no system for recording the details of the inspections and the real-time condition of the machinery that would assist in forming the basis of the maintenance to be done. This was the result of the absence of innovation on the needed system that would improve the operations of the ferry. As a result, it was hard to monitor all the maintenance as a result of the performed inspections, and the absence of real-time data impacts frequent supervision and monitoring of the operations of the ferry.

## 3.6 Inadequate Monitoring and Evaluation of the Operations of the Ferry by MoW and TEMESA

The audit noted that TEMESA and MoW did not monitor the operations of ferry. This was attributed to the following shortfalls:

### 3.6.1 Inadequate Planning and Implementation of Monitoring and Evaluation by TEMESA and MoW

Through the review of the MoW Medium Term Expenditure Framework, the audit noted that MoW did not plan to monitor and evaluate TEMESA's operations but planned to monitor and evaluate the construction activities in the specified year, which was against paragraph 3.3 of TEMESA's Guidelines, the monitoring, evaluation, and reporting of the Plan and Budget must align

with the Agency's Monitoring, Evaluation Strategy, and Work Plan. The Ministry of Works was required to conduct quarterly assessments of ferry stations, supported by the Integrated Management Information System (IMIS).

Key reports for monitoring that included daily performance reports weekly, monthly, and quarterly reports were not in place. The Monitoring and Evaluation plans at the Ministry of Works are detailed in **Table 3.46**.

**Table 3.46: Planned Monitoring at MoW (Amount in TZS)**

| Aspect | 2021/22 | 2022/23 | 2023/24 |
|---|---|---|---|
| To conduct monitoring and evaluation of ferries by June 2023 | 0 | 204,150,000 | 0 |
| To conduct monitoring and evaluation of ferry ramp activities by June 2024 | 0 | 0 | 66,120,000 |

***Source:*** MoW Medium Term Expenditure Framework (2022-2024)

**Table 3.46** shows that the Ministry of Works (MoW) planned to monitor the projects on the construction of ferry and ferry ramps. It was noted that TEMESA neither monitored nor evaluated the key operations done in providing ferry services. The monitoring report focused on the construction and rehabilitation projects conducted and not on the operations of ferries. This was due to the absence of monitoring plans for ferry operations, as indicated in **Table 3.46**. As a result, the decisions were not informed of the challenges prevailing in the ferry operations.

### 3.6.2 Absence of Key Performance Indicators for Monitoring and Evaluating the Operation of Ferries

A review of the TEMESA Monitoring and Evaluation Report for the financial year 2022/23 revealed that no key performance indicators were defined for measuring the operation of ferries as required by Paragraph 7 of the Ministry of Works' Management Guide for Government Ferries managed by TEMESA, 2022. The monitoring and evaluation will be based on the Agency's key performance indicators, which are in line with its short—and mid-term strategic plan. Key focus areas will include the construction, maintenance, and repair of ferries and their infrastructure, revenue collection management, human resources and equipment, and service quality.

Further, no key performance indicators were communicated to the respective sections for monitoring at TEMESA and the MoW. Also, no implementation reports on the maintenance carried out were provided at TEMESA from the regional offices and ferry stations.

### 3.6.3 Information for Monitoring and Evaluation (M&E) was not Shared among the Stakeholders for Informed Decision Making

The audit noted that, in the absence of an M&E report, no other documented information related to the monitoring and evaluation of ferries was shared with key stakeholders for informed decision-making, as no monitoring and evaluation had been conducted on ferry operations.

The lack of such information was also connected to the absence of defined guidelines or procedures for sharing monitoring and evaluation reports among stakeholders. This gap hinders informed decision-making. Establishing a structured approach for sharing M&E reports or information in any form could enhance effective collaboration among stakeholders. For instance, if guidelines were in place, stakeholders could regularly review performance data and progress and adjust strategies accordingly.

NAOT
ISO 9001:2015 Certified

# CHAPTER FOUR

# AUDIT CONCLUSION

## 4.1 Introduction

This chapter draws the audit conclusion based on the findings presented in the previous chapter. The conclusion is made to the audit's overall objective and specific objectives, as presented in Chapter One of this report.

## 4.2 General Conclusion

Despite significant efforts to ensure the availability of ferry operations, the Ministry of Works and the Tanzania Electrical, Mechanical and Electronics Services Agency (TEMESA) have not ensured reliable and assured ferry services due to inadequate management of ferry operations in the country. In general, the Audit noted ineffective management of ferry schedules, utilization rates, passenger flows, and database, inefficiently implemented measures for financial stability, and inadequate adherence to National and International Safety Regulations and Operational Standards. In addition, there were ineffective maintenance procedures for the ferries in place and inadequate monitoring and evaluation of the operations of the ferry by MoW and TEMESA.

ISO 9001:2015 Certified

## 4.3 Specific Audit Conclusions

The following are specific conclusions:

### 4.3.1 Inadequate Availability of Reliable and Assured Ferry Services in the Country

The audit concluded that TEMESA did not ensure adequate availability of the ferry services in areas where they were needed. TEMESA failed to establish timelines for updating the needs analysis of the ferry services. As a result, planning was often performed based on outdated information. Additionally, operational ferries were unavailable as a result of delays in starting and completing rehabilitation projects, leading to extended downtime for ferries under repair. Also, delays in the completion of newly constructed ferries led to inadequate availability of ferry services. Furthermore, it was noted that ferry stations lacked a toll-free number for receiving complaints, making it

difficult to provide immediate responses. Complaints were instead handled centrally at the headquarters, which delayed the resolution of the reported issues. The Ministry of Works and TEMESA did not track the quality of the services provided. As a result, all ferries were not clean, and 67 per cent of the sampled ferry stations had no waiting lounge.

### 4.3.2 Ineffective Management of Ferry Schedules, Utilization Rates, and Passengers Flow and Data Base

The Audit concluded that ferry scheduling did not align with passengers' demand, and no specific criteria guided the scheduling process. TEMESA did not assess utilisation rates across different routes, leaving them unaware of the areas where services needed to be improved. Additionally, there was no formal system for counting the number of passengers and recording passengers' details. Furthermore, passengers' records were kept manually in registers and stored as hard copies in the areas with long routes.

### 4.3.3 Inefficient Implemented Measures for Ensuring Financial Stability

The Audit concluded that TEMESA's management of ferry funding sources was ineffective. TEMESA relied on revenue from ticket sales, advertisements, and building rentals at ferry stations. However, the Audit noted there were revenue losses that occurred at the ferry stations due to passengers bypassing fare payments. Additionally, the N-CARD system had issues, failing to accurately reflect passenger numbers or revenue, with TEMESA unable to access real-time ticket sales data and relying solely on the daily reports from the vendors.

Additionally, the Audit noted weak revenue-generating mechanisms at TEMESA that hindered the achievement of financial targets. Furthermore, fuel usage reports showed inefficiencies, with no systematic monitoring or controls in place to track and optimise fuel consumption, leading to potential wastage, overconsumption, or poor fuel management tracking.

### 4.3.4 Inadequate Adherence to National and International Safety Regulations and Operational Standards

The Audit concluded that TEMESA did not adhere to National and International Safety Regulations and Operations. There were inadequate integrations of National and International Regulations governing safety, operations and

environmental standards, inadequate documentation of safety protocols and inadequate compliance with National and International Regulations for safety, operation and environmental. Also, all TEMESA's ferries operate without seaworthiness certificates due to deficiencies in the management of fire protection, life-saving appliances, functioning navigational systems, and ferries operating under the manning level. Moreover, TEMESA did not adequately respond to the recommendations issued after the TASAC inspection and failed to record accidents and incidents that occurred in the ferry's operations appropriately.

### 4.3.5 Ineffective Maintenance Procedures of Ferries

The audit concluded that TEMESA has inadequately established maintenance plans and documentation for its ferries, resulting in incomplete preventive maintenance schedules focusing only on engines and other ferries' components not included. Furthermore, the audit revealed critical deficiencies in the inspections of TEMESA's ferries, with daily checks required by the prepared schedule not being consistently performed or documented. Key components, such as coolant levels and hull structures, were not properly inspected, as evidenced by unfilled logbooks in different months. Significant issues, including oil leaks in multiple ferries and hull corrosion, were noted during site visits, highlighting the lack of effective maintenance routines.

The audit revealed inefficiencies in implementing preventive maintenance for the ferries managed by TEMESA, primarily due to untimely adherence to the maintenance schedule. In addition, the absence of essential tools and adequate workshop facilities further compounded the challenges faced by the maintenance teams. Ferry stations lacked proper workshops, and the available tools were insufficient, hindering the efficiency of maintenance tasks and ferry downtimes. The unallocated budget for acquiring necessary tools and establishing workshops reflects a systemic issue that TEMESA and the Ministry of Work (MoW) have not addressed. Moreover, the time taken to respond to ferries' mechanical failures were found to be inadequate, with instances of delayed reporting and ineffective maintenance follow-up.

### 3.4.6 Inadequate Monitoring and Evaluation of the Operations of Ferry by MoW and TEMESA

The Audit concluded that the Ministry of Works (MoW) did not plan for the monitoring and evaluation (M&E) of TEMESA's ferry operations, focusing only

on construction activities. Additionally, TEMESA failed to monitor key ferry services operations, as there were no M&E plans or defined key performance indicators (KPIs) for ferry operations. Additionally, TEMESA was unaware of any KPIs that had not been communicated to relevant sections for monitoring. Furthermore, Regional Offices or Ferry Stations provided no reports on ferry maintenance or operations. The lack of M&E and reporting mechanisms resulted in uninformed decision-making and the non-sharing of monitoring and evaluation reports among stakeholders.

# CHAPTER FIVE

# AUDIT RECOMMENDATIONS

## 5.1 Introduction

This chapter presents recommendations derived from the audit findings outlined in Chapter Three of this report. These recommendations are directed towards the Ministry of Works (MoW) and the Tanzania Electrical, Mechanical, and Electronics Services Agency (TEMESA). Their implementation is expected to significantly enhance the performance of the MoW and TEMESA, leading to improved efficiency, service delivery, and management of ferry operations across the country.

The National Audit Office believes that if fully implemented, these recommendations will improve the performance of the Ministry of Works (MoW) and the Tanzania Electrical, Mechanical, and Electronics Services Agency (TEMESA) in managing ferry operation services.

## 5.2 Recommendations

### Recommendations to the Ministry of Works

The Ministry of Works (MoW) is urged to:

a) Establish a comprehensive monitoring and evaluation framework covering key areas of ferry operations with clearly defined Key Performance Indicators (KPIs). These KPIs should cover service reliability, passengers' safety, maintenance schedules, fuel efficiency and financial performance;

b) Prepare a comprehensive reporting system requiring TEMESA to submit regular maintenance and operational reports from all regional offices; and

c) Review the operational regulations and guidelines to align with the international best practices, standards, and guidelines and ensure all safety aspects are included.

**Recommendations to the Tanzania Electrical, Mechanical, and Electronics Services Agency (TEMESA)**

TEMESA is urged to:

a) Improve availability of ferry services, conduct regular needs assessments and update services demands analysis to ensure ferry deployment aligns with community requirements;

b) Establish a clear complaint-resolving system and ensure the ferry schedule reflects passengers' demands;

c) Ensure adequate management of funding sources, budgetary controls, feasibility study, and economic viability analysis of the contracts in place before entering into investment agreements;

d) Ensure adequate adherence to National and International Safety Regulations and Operational Standards;

e) Ensure adequate documentation on all important areas of ferry operations, including the record of all accidents, maintenance reports and breakdown of ferries; and

f) Ensure effective implementation of the maintenance plan for the government ferries by developing and implementing the comprehensive operations and maintenance manuals, which will include all components in the process of operation and maintenance of ferries and improving the documentation to ensure capturing of the recurring mechanical failures in order to have strategies and measures to mitigate them.

## REFERENCES


1) President's Office - Public Service Management and Good Governance (October 2018), *"The approved functions and organization structure for TEMESA" (Approved by President on 1st October 2018), Tanzania*

2) Tanzania Electrical, Mechanical and Electronics Services Agency (2020) The Five Years Corporate Strategic Plan from 2021/22 to 2025/26)

3) TEMESA (2005); *TEMESA Establishment Order:* Tanzania

4) The United Republic of Tanzania. Ministry of Works (2024): *Speech by the Minister of Work, Honourable Innocent Lugha Bashungwa (MP), Presenting to Parliament the Plan and Budget Estimates of Revenue and Expenditure for the Financial Year 2024/2025:* Tanzania

5) The United Republic of Tanzania. Ministry of Works and Transportation (2023): *Speech by the Minister of Works and Transportation, Honourable Prof. Makame Mnyaa Mbarawa (MP), Presenting to Parliament the Plan and Budget Estimates of Revenue and Expenditure for the Financial Year 2023/2024:* Tanzania

6) The United Republic of Tanzania. NAOT (2023); *Annual General Report for Central Government for Financial Year 2021/22:* Tanzania

7) The United Republic of Tanzania. NAOT (2024); *Annual General Report for Central Government for Financial Year 2022/23:* Tanzania

8) The United Republic of Tanzania. TEMESA (2018); *Approved Functions and Organization Structure for TEMESA:* Tanzania

# APPENDICES

## Appendix 1: Responses from the Audited Entities

This appendix depicts the Responses from the Audited Entities.

### Appendix 1(a): Responses from the Tanzania Electrical, Mechanical and Electronic Service Agency

**General Comment**

| |
|---|
| The Agency (TEMESA) will ensure that all deficiencies observed are implemented and rectified. |

**Specific Comments**

| S/N | Recommendation | Comments from TEMESA | Planned Action(s) | Implementation Timeline(s) |
|---|---|---|---|---|
| 1 | Improve availability of ferry service, conduct regular needs assessments and update service demand analysis to ensure ferry deployment aligns with community requirements | TEMESA recognizes the need to align the ferry deployment with community needs by assessing demand and ensuring optimal resource utilization. | (i) To carry out Routine Preventive Maintenance of ferries.<br><br>(ii) To carry out Minor and Major Rehabilitation of ferries.<br><br>(iii) To carry out comprehensive needs assessments for new ferries construction, existing and new ferry stations to be established in semi-annual basis.<br><br>(iv) To reallocate ferry resources to align with community requirements, e.g. Ferries at Kigongo – Busisi will be re | 2025-2030 |

| S/N | Recommendation | Comments from TEMESA | Planned Action(s) | Implementation Timeline(s) |
|---|---|---|---|---|
| | | | allocated to new stations according to demand) where ferry stations will be closed for whatever reason.<br><br>The re-allocation of ferry resources will be done | |
| 2 | Establish a clear complaint-resolving system and ensure the ferry schedules reflect passengers demands | TEMESA acknowledges the importance of a responsive complaint resolution system mechanism and demand-driven scheduling | (i) Develop and implement a centralized complaint management system within the Ferry Management Information System that includes POS and Fuel Management System.<br><br>(ii) Establish customer complaints-resolving system at station levels (*Desk la Malalamiko*)<br><br>(iii) Adjust ferry schedules based on passenger demand analysis. | 2025-2030 |
| 3 | Ensure adequate management of funding sources and implementation of budgetary controls. Conduct | TEMESA agrees with the need for effective funding and budgetary management to sustain ferry operations on: - | (i) To strengthen Management of Funding resources through the deployment of an Electronic Revenue Collection System for ferries, i.e. | 2025-2030 |

| S/N | Recommendation | Comments from TEMESA | Planned Action(s) | Implementation Timeline(s) |
|---|---|---|---|---|
| | comprehensive feasibility studies and economic viability analyses of the existing contracts before entering into any new investment agreements | • Existing Contracts and new Investment<br>• Ferry Ticket sales<br>• Rent of Canteen and Toilets<br>• Advertisement | POS, PROXIMA and N-CARD<br><br>(ii) To Conduct comprehensive feasibility studies, economic viability studies and economic viability analyses of the existing contracts before entering into any new investment agreement<br><br>(iii) For the canteen and toilets, NeST will be used to get service provider (s) with comprehensive contracts.<br><br>(iv) Advertisement: Use of contracts as per available guidelines. | |
| 4 | Ensure adequate adherence to National and International Safety Regulations and Operational Standards | TEMESA is committed to achieving full compliance with all relevant safety regulations and standards | (i) To carry regular safety audits through FOSM (Ferry Operation and Safety Manager) using a tool to be established in the Ferry Management Information System | 2025-2030 |

| S/N | Recommendation | Comments from TEMESA | Planned Action(s) | Implementation Timeline(s) |
|---|---|---|---|---|
| | | | (ii) Train ferry staff on maritime laws | |
| 5 | Ensure adequate documentation on all important areas of ferry operations, including the record of all accidents, maintenance reports and breakdown of ferries | TEMESA acknowledges the importance of maintaining adequate and comprehensive operational documentation for future reference and compliance by improving the current documentation (Log Books and Maintenance Manuals) | (i) To make sure that all ferry documentation reports are kept for future use<br><br>(ii) To Develop a centralized digital documentation system to record accidents, maintenance, and breakdowns, ensuring consistent and accessible records through Ferry Management Information System Project. | 2025-2030 |
| 6 | Ensure effective implementation of the maintenance plan for the government ferries by developing and implementing the comprehensive operation and maintenance manuals, which will | TEMESA recognizes the importance of a adequate operation and maintenance framework/Log Books to address recurring failures | (i) Currently we have in place Maintenance Plan of all vessels which will be digitalized for future and friendly usage.<br><br>(ii) To improve supervision on timely key information on log books through | 2025-2030 |

| S/N | Recommendation | Comments from TEMESA | Planned Action(s) | Implementation Timeline(s) |
|---|---|---|---|---|
| | include all components in process of operation and maintenance of ferries and improving the documentation to ensure capturing of the recurring mechanical failures in order to have strategies and measures to mitigate them. | | digitalization and sharing | |

## Appendix 1(b): Responses from the Ministry of Works

### Specific Comments

| S/N | Recommendation | Comments from MoW | Planned Action(s) | Implementation Timeline(s) |
|---|---|---|---|---|
| 1. | Establish a comprehensive monitoring and evaluation framework covering key areas of ferry operations with clearly defined Key Performance Indicators (KPIs). These KPIs should cover service reliability, passenger safety, maintenance schedules, fuel efficiency and financial performance. | The auditor's recommendation was noted. Before the establishment of the Monitoring and Evaluation (M&E) Unit, the Ministry of Works implemented its M&E issues through the Ministry's Annual Action Plan. After the establishment of the M&E Unit, M&E Framework is the main requisite for implementation of Monitoring and Evaluations (M&E) activities as stipulated in the Roles and Functions of the Unit. Currently, the Ministry is in the process of developing the Monitoring and Evaluations (M&E) Framework for Programs and Projects. The development of the same was delayed due to the finalization of an Online Monitoring and Evaluation | Development of the Monitoring and Evaluation Framework is in progress. | 2024/2025 |

| S/N | Recommendation | Comments from MoW | Planned Action(s) | Implementation Timeline(s) |
|---|---|---|---|---|
| | | System, which is part of the Monitoring and Evaluation Framework. | | |
| 2. | Prepare a comprehensive reporting system requiring TEMESA to submit regular maintenance and operational reports from all regional offices. | The Ministry of Works has developed an Online Monitoring and Evaluation System with the domain me.mow.go.tz, which includes the programs and development projects implemented by its Institutions, including TEMESA. The system generates reports on maintenance and operational issues for TEMESA. The TEMESA reports generated by the system are as follows;<br><br>(i) Agency summary Production Centre;<br>(ii) Equipment hiring services revenue generation per pool;<br>(iii) Expenditure Per Cost Centre;<br>(iv) Ferry Preventive Maintenance;<br>(v) Ferry Services Revenue per ferry station<br>(vi) Ferry Traffic Counts; | Completed | |

| S/N | Recommendation | Comments from MoW | Planned Action(s) | Implementation Timeline(s) |
|---|---|---|---|---|
| | | (vii) Daily Source Revenue Performance;<br>(viii) Status of fund release for development projects;<br>(ix) Mainstreaming employment creation;<br>(x) Monitoring and Evaluation for development projects;<br>(xi) Revenue collection per production centre;<br>(xii) Station Revenue Collected vs Generated;<br>(xiii) MTEF target monitoring for recurrent and development projects;<br>(xiv) Outcome indicator monitoring and evaluation; and<br>(xv) The workshop works on revenue generation per production centre. | | |
| 3. | Review the operational regulations and guidelines to align with the international best practices, standards, and guidelines and | The Ministry of Works concurs with the recommendation. The review of the mentioned regulations and guidelines will be conducted | To review the operational regulations and guidelines to align with the internationa | 2025/2026 |

| S/N | Recommendation | Comments from MoW | Planned Action(s) | Implementation Timeline(s) |
|---|---|---|---|---|
| | ensure all safety aspects are included. | accordingly in the next final year | l best practices, standards, and guidelines | |

## Appendix 2: Detailed Main Audit Questions with Sub-audit Questions

| **Audit Question 1** | **To what extent have the Ministry of Works and TEMESA ensured that the available ferries are adequate and suitable for providing reliable and assured ferry services in the country?** |
|---|---|
| Sub-question 1.1 | To what extent are there adequate operational ferries? |
| Sub-question 1.2 | To what extent are the ferry operations extended to all the needed areas?? |
| Sub-question 1.3 | Has TEMESA established an effective system for collecting customers' feedback? |
| Sub-question 1.4 | Are the existing complaint resolution processes effective in addressing consumers' feedback? |
| Sub-question 1.5 | Does TEMESA track specific service quality metrics for the provided services, such as punctuality, cleanliness, and onboard facilities, and are they within the industry standards or passenger expectations? |
| **Audit Question 2** | **Are ferry schedules, utilisation rates, passenger flow, and database effectively managed?** |
| *Sub-question 2.1* | Does TEMESA ensure that ferry scheduling practices align with passenger demand patterns and are the defined criteria used to determine scheduling decisions? |
| *Sub-question 2.2* | Does TEMESA assess the utilization rates of different ferry routes and times sufficiently, and which routes have been identified as underutilised, along with recommendations for optimizing services on these routes? |
| *Sub-question 2.3* | Are the procedures for managing passengers' flow during ticketing, boarding, and disembarkation been effectively and adequately performed, and have the specific challenges that impact the overall efficiency been identified? |
| *Sub-question 2.4* | Are the existing scheduling software and real-time tracking systems utilised in ferry operations effectively and impact operational efficiency and customer experience? |
| *Sub-question 2.5* | Does TEMESA maintain a system for a ferry database containing all ferry details and historical records of major deficiencies and rehabilitations? |
| ***Audit Question 3*** | ***What Measures are implemented to ensure financial stability through effective revenue generation and expenditures control?*** |
| *Sub-question 3.1* | Does TEMESA effectively manage funding sources and budgetary controls for ferry operations? |

| | |
|---|---|
| *Sub-question 3.2* | Do the revenue-generating mechanisms employed for ferry operations, such as ticket pricing strategies and other additional services, adequately help TEMESA achieve its financial targets? |
| *Sub-question 3.3* | Does TEMESA implement any sustainability measures to improve fuel efficiency and reduce environmental impacts? Are these measures evaluated for effectiveness? |
| ***Audit Question 4*** | ***To what extent does Ferry's operations adhere to National and International Safety Regulations and Operational Standards?*** |
| *Sub-question 4.1* | Has TEMESA integrated national and international regulations governing safety, operations, and environmental standards applicable to ferry operations into its operational practices? |
| *Sub-question 4.2* | Is the documentation of safety protocols adequately maintained, and what are the processes in place to ensure the effective implementation and training of crew and staff regarding these protocols? |
| *Sub-question 4.3* | Does TASAC's safety audits and inspections enhance TEMESA's ability to improve its ferry service delivery? |
| *Sub-question 4.4* | Does TEMESA keep records on the trends identified from past incidents or accidents related to ferry operations, and what corrective measures have been implemented to prevent recurrence and enhance safety? |
| ***Audit Question 5*** | Are the existing ***maintenance procedures effective in guaranteeing ferry reliability?*** |
| *Sub-question 5.1* | Are maintenance procedures, including routine maintenance schedules, emergency procedures, and repair records, established and documented effectively? |
| *Sub-question 5.2* | Do inspections conducted on ferries align with established maintenance schedules and regulatory requirements? |
| *Sub-question 5.3* | Are the routine and preventive maintenance carried out in a timely, efficient manner and adequately reported? |
| *Sub-question 5.4* | Do maintenance teams respond to mechanical failures in a timely and effective manner and analyse downtime and incident response times? |
| *Sub-question 5.5* | Does TEMESA ensure and commit to acquiring all required workshop sand tools for maintenance? |
| *Sub-question 5.6* | Have historical trends identified regarding mechanical failures in the ferries been documented, and have effective corrective actions been taken to address these issues and prevent recurrence? |

| *Audit Question 6* | ***Does the Ministry of Works and TEMESA adequately monitor and evaluate the operation of the ferry?*** |
|---|---|
| *Sub-question 6.1* | Have MoW and TEMESA developed plans for monitoring and evaluating the operation of ferries? |
| *Sub-question 6.2* | Are the plans for monitoring and evaluating the operation of ferries effectively implemented? |
| *Sub-question 6.3* | Are there key performance indicators for monitoring and evaluating the operation of ferries? |
| *Sub-question 6.4* | Are the reports for M&E prepared and shared with the stakeholders for informed decision-making? |

**Appendix 3: Different Reviewed Documents and Reasons for the Review**

This part provides the documents the Audit Team reviewed to obtain appropriate and sufficient information for developing the audit findings that are supported by sufficient evidence.

| Category | Name of Document | Reason |
|---|---|---|
| Policy and Legislation (Laws, Acts, and Regulations | Different legislations on the operations and maintenance of ferries. | To understand the mandate and responsibilities of the actors involved in the operations and maintenance of ferries. |
| Guidelines | Guidelines related to the operations and maintenance of ferries. | To understand the principles and standards that guide the operations and maintenance of ferries. |
| Strategic Plans | Strategic plans of:<br>▪ Ministry of Works<br>▪ TEMESA<br>▪ TASAC | To obtain information on the strategies and interventions for the operation and maintenance of ferries. |
| Annual Plans (2019/20-2023/24) | Annual plans of:<br>▪ Ministry of Work<br>▪ TEMESA<br>▪ TASAC | To obtain information on the plans for the operation and maintenance of ferries. |
| Annual Implementation Reports (2019/20-2023/24) | Annual implementation reports of:<br>▪ Ministry of Works<br>▪ TEMESA<br>▪ TASAC | To evaluate the progress of implemented planned activities relating to the operation and maintenance of ferries |
| Annual budgets and budget implementation reports | Medium-Term Expenditure Framework of the:<br>▪ Ministry of Works<br>▪ TEMESA<br>▪ TASAC | To understand the allocation, distribution and trend of expenditures of the allocated funds for operations and maintenance of ferries. |
| Inspection reports | Inspection reports of the:<br>▪ Ministry of Works<br>▪ TASAC | To obtain information on the results of regular inspections regarding operations and maintenance of ferries. |
| Monitoring and Evaluation Reports | Monitoring and evaluating reports from<br>▪ Ministry of Works<br>▪ TEMESA<br>▪ TASAC | To evaluate the progress made on the implementation of the planned activities regarding the operations and maintenance of ferries |

***Source***: Auditors' Analysis on the List of Reviewed Documents, 2024

**Appendix 4: List of Interviewed Officials**

The following part presents the list of the interviewed officials in the selected and visited entities, ferry stations, and ferries.

| Public Entity | Person to be Interviewed | Reason(s) for the interview |
|---|---|---|
| Ministry of Works | • Director of Technical and Electrical Services<br>• Assistant Director of Mechanical and Electrical<br>• Marine Engineer<br>• Director of Policy and Planning. | • Assess the extent to which the Ministry of Works ensures the effective provision of ferry services.<br>• Assess to what extent the Ministry of Works ensures adequate monitoring and evaluation of the operations of ferries. |
| Tanzania Electrical, Mechanical and Electronic Services Agency (TEMESA) | • Chief Executive Officer (CEO)<br>• Director of ferry operations and construction<br>• Manager of the ferry operations and safety section<br>• Manager of ferry construction and maintenance section<br>• Manager of Human resources management and administration<br>• Manager of finance and accounts section<br>• Manager of Planning, Monitoring and Evaluation section<br>• Principal Officer of Marketing and Public Relations | • To assess monitoring and evaluation done on the operations of ferries<br>• To assess the extent to which they ensure the management of data, passenger flow and adequate utilization rates<br>• To assess the extent of financial stability<br>• To assess the maintenance procedures in place |

| Public Entity | Person to be Interviewed | Reason(s) for the interview |
|---|---|---|
| Zonal Offices TEMESA | • Zonal Manager<br>• Procurement Officer<br>• Accountant | • To assess the extent of monitoring and evaluation in their zones<br>• To assess the storage of the fast-moving items used in preventive maintenance<br>• To assess the financial stability through effective expenditure control and adequate revenue generation |
| Ferry Station | • Manager Ferry Station<br>• Technician<br>• IT Officer<br>• Accountant | • To assess to what extent there is adherence to national, international and operational standards.<br>• To assess the extent of implementation of corrective, routine and preventive maintenance<br>• To assess the financial stability through effective expenditure control and adequate revenue generation |
| Ferries | • Captain<br>• Sailors<br>• Technician | • To assess to what extent there is adherence to national, international and operational standards.<br>• To assess the extent of implementation of corrective, routine and preventive maintenance<br>• To assess the financial stability through effective expenditure control and adequate revenue generation |
| TASAC | • Director of Marine Safety, Security and Environment. | • To assess to what extent there is adherence to |

| Public Entity | Person to be Interviewed | Reason(s) for the interview |
|---|---|---|
| | • Manager of Ship Registration, Survey and Inspection.<br>• Manager Sea Fearers, Training and Certification. | national, international and operational standards.<br>• To assess the extent to which TASAC has conducted adequate inspection. |

***Source:*** Auditors' Analysis of the List of Interviewed Officials, 2024

## Appendix 5: List of Ferries and their Status

The following part presents a list of the ferries including their location, certifications and operational status.

| Vessel's Name | Flag / Port of Registry | Safety Certificates Status/ | Operational Status | Reason | Registration Status |
|---|---|---|---|---|---|
| MV Malagarasi | Kigoma | No seaworthiness certificate | In Operation | Ok | REGISTERED 01.11.2023 |
| MV Sengerema | Mwanza | No seaworthiness certificate | In Operation | Ok | REGISTERED 01.11.2023 |
| MV Mwanza | Mwanza | No seaworthiness certificate | In Operation | Ok | REGISTERED 01.11.2023 |
| MV Ukara II | Mwanza | No seaworthiness certificate | In Operation | Ok | REGISTERED 01.11.2023 |
| MV Kome II | Mwanza | No seaworthiness certificate | In Operation | Ok | REGISTERED 01.11.2023 |
| MV Tegemeo | Mwanza | No seaworthiness certificate | In Operation | Ok | REGISTERED 01.11.2023 |
| MV Ruvuvu | Bukoba | No seaworthiness certificate | In Operation | Ok | REGISTERED 01.11.2023 |
| MV Kyanyabasa | Bukoba | No seaworthiness certificate | In Operation | Ok | REGISTERED 01.11.2023 |
| MV.Musoma | Mara | No seaworthiness certificate | In operation | Ok | REGISTERED 01.11.2023 |
| MV.Mara | Mara | No seaworthiness certificate | In operation | Ok | REGISTERED 01.11.2023 |
| MV Kazi | Dar es salaam | No seaworthiness certificate | In Operation | Ok | REGISTERED 01.11.2023 |

| Vessel's Name | Flag / Port of Registry | Safety Certificates Status/ | Operational Status | Reason | Registration Status |
|---|---|---|---|---|---|
| MV KILINDONI | Pwani | No seaworthiness certificate | In Operation | Ok | REGISTERED 01.11.2023 |
| MV Chato II | Geita | No seaworthiness certificate | In Operation | Ok | REGISTERED 01.11.2023 |
| MV Tanga | Tanga | No seaworthiness certificate | In Operation | Ok | REGISTERED 01.11.2023 |
| MV Mkongo | Mtwara | No seaworthiness certificate | In operation | Ok | NOT REGISTERED |
| MV Ilemela | Mwanza | No seaworthiness certificate | In operation | Ok | NOT REGISTERED |
| MV Mafanikio | Mtwara | No seaworthiness certificate | In operation | Ok | REGISTERED 01.11.2023 |
| MV Kitunda | Lindi | No seaworthiness certificate | In operation | Ok | REGISTERED 01.11.2023 |
| MV Misungwi | Mwanza | No seaworthiness certificate | In operation | ok | REGISTERED 01.11.2023 |
| MV TEMESA | Mwanza | No seaworthiness certificate | In operation | ok | REGISTERED 01.11.2023 |
| MV Ujenzi | Mwanza | No seaworthiness certificate | In operation | ok | REGISTERED 01.11.2023 |
| MV Kilambo | Mtwara | No seaworthiness certificate | Out of Operation | Station safety Issues. | REGISTERED 01.11.2023 |
| MV Pangani II | Tanga | No seaworthiness certificate | Out of Operation | Procurement (Contracted for Major | REGISTERED 01.11.2023 |

| Vessel's Name | Flag / Port of Registry | Safety Certificates Status/ | Operational Status | Reason | Registration Status |
|---|---|---|---|---|---|
| | | | | Rehabilitation) | |
| MV Sabasaba | Mwanza | No seaworthiness certificate | Out of Operation | To be sent for Maintenance (Under Procurement) | REGISTERED 01.11.2023 |
| MV Kigamboni | Dar es Salaam | No seaworthiness certificate | Out of Operation | Halted (Has contract, Awaiting for the Advance Payment) | REGISTERED 01.11.2023 |
| MV Old Ruvuvu | Bukoba | No seaworthiness certificate | Under maintenance | Transformation of ferries station & Docking | Not Registered |
| MV RUHUHU | Mbeya | No seaworthiness certificate | Under maintenance | Major rehabilitation (Docking)- Transferred to another station | Not Registered |

| Vessel's Name | Flag / Port of Registry | Safety Certificates Status/ | Operational Status | Reason | Registration Status |
|---|---|---|---|---|---|
| MV Nyerere | Mwanza | No seaworthiness certificate | Under maintenance | Accident | NOT REGISTERED |
| MV Kilombero II | Unknown | No seaworthiness certificate | Under maintenance | Major rehabilitation (Docking) | NOT REGISTERED |
| MV Ukara -I | Mwanza | No seaworthiness certificate | Under maintenance | Docking (Has contract) | NOT REGISTERED |
| MV Chato I | Geita | No seaworthiness certificate | Under maintenance | Wearing of Shafts | REGISTERED 01.11.2023 |
| MV Magogoni | Dar es salaam | No seaworthiness certificate | Under maintenance | Docking | REGISTERED 01.11.2023 |

**Source**: Auditors' Analysis on List of Ferries with their Respective Status from TASAC and TEMESA, 2024

## Appendix 6: The Directorate of Operation and Construction (DFOC) Functions and Sections

### Directorate of Ferry Operations and Construction and Construction

The Directorate is responsible for providing ferry services to the public and maintaining public ferries and related infrastructure through the following functions:

(a) Formulate short- and long-term work programs and supervise their implementation;
(b) Formulate an appropriate program for acquiring new pontoons, disposing of the uneconomical ones, and proposing the establishment of new crossings/routes;
(c) Formulate capacity-building programs to strengthen technical and operational capacity on ferry services operations and safety; and
(d) Ensure all ferry services are provided per safety standards and procedures.

The directorate has two sections: Ferry Operations and Safety and Ferry Construction and Maintenance.

- **Ferry Operations and Safety**

This section performs the following roles:

(a) Implement short- and long-term work programs to ensure the operations and safety of ferries;
(b) Establish and supervise the implementation of ferry safety standards and procedures;
(c) Supervise and liaise with regional managers on effective and efficient ferry operation and safety;
(d) Monitor and supervise daily revenue collection in all ferry stations;
(e) Inspect the condition of safety equipment and ferry crew on board vessels and ashore to ensure they all meet safety requirements;
(f) Evaluate the effectiveness of ferry services and safety standards procedures; and
(g) Organize and coordinate training to ferry employees on ferry operations and safety matters.

- **Ferry Construction and Maintenance Section**

This section performs the following roles:

(a) Design strategies and programs for improving offshore ferry services and facilities;
(b) Establish ferry and ramp requirements for construction and maintenance;
(c) Prepare ferry construction and maintenance annual budget, quarter, mid-year and annual year reports;
(d) Analyse, supervise, monitor and evaluate the daily performance of ferries;
(e) Establish preventive maintenance schedules in all ferry stations; and
(f) Establish procedures and norms for cleanness, maintenance, and tools management at all ferry stations.

- **TEMESA Zonal Offices**

Under the ferry section, TEMESA has divided the regions into two zonal offices, the Southern Eastern Zone and Lake Zone, which serve the regions under each zone. The Southern Eastern Zone serves Dar es Salaam, Pwani, Tanga, Lindi, Mtwara, and Morogoro. Lake Zone serves Mwanza, Kagera, Kigoma, Geita and Mara Regions. These zones are not found in the organisational structure but are in operation.

- **TEMESA Regional Offices**

The Regional Offices are responsible for undertaking all mandated functions of the Agency in the respective regions, such as;
(a) Manage and supervise all TEMESA Activities;
(b) Maximise efforts on matters that add value to the production, maintenance, ferry services, and creative activities of the agency;
(c) Coordinate and supervise all matters about human resources, accounts and procurement; and
(d) Coordinate and supervise the implementation of the Agency's activities according to the approved budget.

- **Ferry Stations**

These are places alongside navigable water with facilities for ferry loading and unloading. They are also where all ferry operation activities are carried out.

**Appendix 7: Analysis of the Tools for the Maintenance of the Ferries at the Available Workshop of the Ferry Station**

| SN | Tool Name | Kigongo Busisi | | Magogoni | |
|---|---|---|---|---|---|
| | | Required No | Available | Required No | Available |
| 1 | Combination Spanner | | | | |
| | No.10 | N/E | 3 | N/E | 1 |
| | No.13 | N/E | 3 | N/E | 1 |
| | No.14 | N/E | 2 | N/E | 1 |
| | No.15 | N/E | 3 | N/E | 1 |
| | No.16 | N/E | 2 | N/E | 1 |
| | No.17 | N/E | N/A | N/E | 1 |
| | No.18 | N/E | N/A | N/E | 1 |
| | No.19 | N/E | 2 | N/E | 1 |
| | No.22 | N/E | 2 | N/E | 1 |
| | No.24 | N/E | 1 | N/E | 1 |
| | No.27 | N/E | N/A | N/E | 1 |
| | No.32 | N/E | 1 | N/E | 1 |
| 2 | Ratchet 4130N Hans | N/E | 1 | N/E | 1 |
| 3 | Adjustable Spanner Wrench | N/E | 2 | N/E | 1 |
| 4 | Short Extension | N/E | 2 | N/E | 1 |
| 5 | Long Extension | N/E | 1 | N/E | 1 |
| 6 | Box Spanners | | | | |
| | No. 13 | N/E | 2 | N/E | 1 |
| | No. 17 | N/E | 2 | N/E | 1 |
| | No. 19 | N/E | N/A | N/E | 1 |
| | No. 22 | N/E | N/A | N/E | 1 |
| | No. 24 | N/E | 2 | N/E | 1 |
| 7 | Screw Driver Flat | N/E | 2 | N/E | 1 |
| 8 | Screw Driver Star | N/E | 3 | N/E | 1 |
| 9 | Cutting Plier | N/E | N/A | N/E | 1 |
| 10 | Long Nose Plier | N/E | 1 | N/E | 1 |
| 11 | Allen Key Set | N/E | 1 | N/E | 1 |
| 12 | Fluke Multimeter | N/E | 1 | N/E | N/A |
| 13 | Battery Charger | N/E | 1 | N/E | N/A |

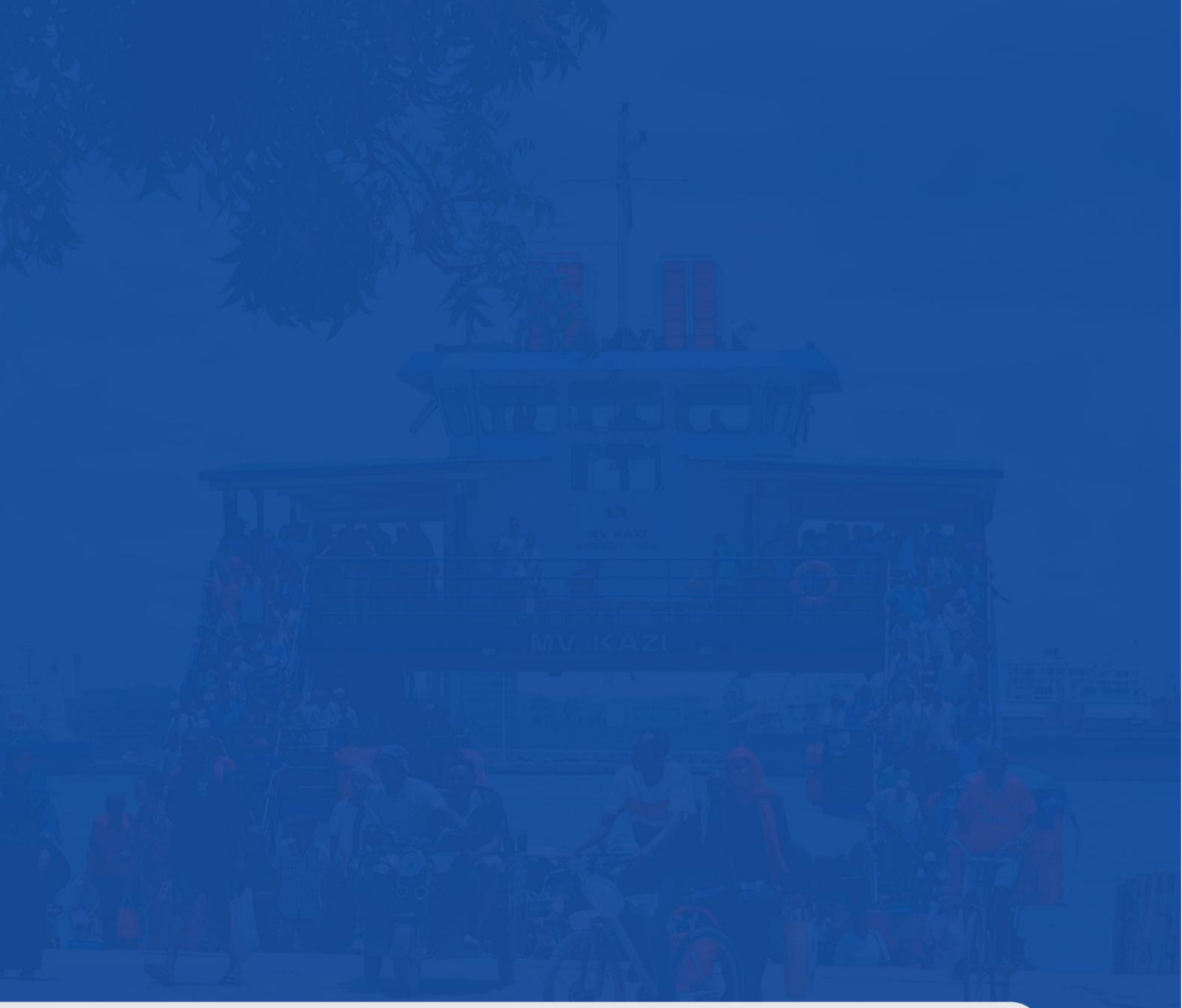
| SN | Tool Name | Kigongo Busisi | | Magogoni | |
|---|---|---|---|---|---|
| | | Required No | Available | Required No | Available |
| 14 | Filter Strap Wrench | N/E | 1 | N/E | N/A |
| 15 | Feeler Gauge Set | N/E | 1 | N/E | N/A |
| 16 | Grease Pump | N/E | 1 | N/E | N/A |
| 17 | Chain block | N/E | 3 | N/E | N/A |

***Source***: Auditors' Analysis of the Tools Needed in the Respective Ferry Stations, 2024

Key:

N/E - Not Established

N/A- Not Available



**National Audit Office of Tanzania (NAOT)**
**4 Mahakama Road, Tambukareli**
**P. O. Box 950, 41104 Dodoma**
**Tel: +255 (026) 2161200**
**Fax: +255 (026) 2321245**
**Email: ocag@nao.go.tz**

ISO 9001:2015 Certified