



REPUBLIC OF NAMIBIA



**FOLLOW-UP PERFORMANCE AUDIT ON THE MANAGEMENT AND
CONTROL OF MARINE AND INLAND FISHERIES RESOURCES
WITHIN THE MINISTRY OF FISHERIES AND MARINE
RESOURCES FOR THE FINANCIAL YEARS
2020/2021, 2021/2022 AND 2022/2023**

Republic of Namibia



TO THE HONOURABLE SPEAKER OF THE NATIONAL ASSEMBLY

I have the honour to submit herewith my Follow-up Performance audit report on the management and control of Marine and Inland Fisheries Resources within the Ministry of Fisheries and Marine Resources for the years 2020/2021, 2021/2022 and 2022/2023 in terms of Article 127(2) of the Namibian Constitution. The report is transmitted to the Honourable Minister of Finance in terms of Section 27(1) of the State Finance Act, 1991, (Act 31 of 1991) to be laid upon the Table of the National Assembly in terms of Section 27(4) of the Act.

WINDHOEK, May 2025

A handwritten signature in black ink, appearing to read 'Junias Etuna Kandjeke'.

**JUNIAS ETUNA KANDJEKE
AUDITOR-GENERAL**

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ABBREVIATIONS

MFMR	Ministry of Fisheries and Marine Resources
MRF	Marine Resource Fund
DRM	Directorate of Resource Management
DOPS	Directorate of Operations and Surveillance
TAC	Total Allowable Catch
MRAC	Marine Resource Advisory Council
FOA	Fisheries Observer Agency
KPI	Key Performance Indicators
ALC	Automatic Location Communication
VMS	Vessel Monitoring System
MCS	Monitoring, Control and Surveillance
NAMFI	Namibia Maritime and Fisheries Institute
IUU	Illegal, Unregulated and Unreported
VHF	Very High Frequency
HF	High Frequency

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AUTHORS

Mr. Jonatan Hamulungu

Mr. Cicero Links

Mrs. Elisabeth Mario

COMMENTS RECEIVED FROM THE AUDITEE

The Ministry of Fisheries and Marine Resources submitted comments on the findings in the draft report. These comments are incorporated in chapter two (2) of this report.

EXECUTIVE SUMMARY

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

Furthermore, ISSAI 300:42 and 3000:136, states that the Office of the Auditor-General should follow up previous audit findings and recommendations, wherever possible.

Follow-up is an independent activity that increases the value of the audit process by strengthening the impact of the audit and laying the basis for improvements to future audit work. It also encourages the audited entities and other users of reports to take the latter seriously, and provides the auditors with useful lessons and performance indicators.

This follow-up report focused on the implementation of recommendations in the Auditor-General’s report on the Management of Fisheries and Marine Resources in Namibia under the Ministry of Fisheries and Marine Resources which were tabled in May 2016.

Major findings and conclusions revealed by the audit were as follows:

Findings on:

Recommendation 1: The Ministry of Fisheries and Marine Resources (MFMR) should conduct research and develop measures to re-build the sardine stock.

The audit found that MFMR did conduct research, developed measures to re-build the sardine stock and set the target of stock growth level at 1 million metric tons by or before 2030.

Recommendation 2: The Marine Resource Advisory Council recommendation to the Minister should place more emphasis on scientific evidence.

The audit found through documentary review and interviews that the Marine Resource Advisory Council’s (MRAC) ¹recommendations to the Minister placed more emphasis on socio-economic analysis which is the socio-economic conditions as was recommended. The audit noticed that the state of the Hake, Horse Mackerel, and Crab stocks and adverse effects of lower TAC’s would have on sub-sector industries influenced the MRAC recommendations to the Minister’s TAC decisions for the period under review.

Recommendation 3: The Ministry should ensure proper planning and prioritization of activities to ensure efficient and effective sea patrols.

¹Minutes of the Marine Advisory Council Meeting: Total Allowable Catch For Horse Mackerel And Crab: 10 November 2022 Venue: NATMIRC Auditorium Swakopmond.

According to the MFMR's strategic plan for 2017/18-2021/22 there was strategic planning to ensure efficient and effective sea patrol activities. However, the MFMR did not conduct strategic planning for the 2022/23 financial year, as the very next strategic plan was for the period of 2023/24-2027/28.

Documents reviewed show that in 2021/22 and 2022/23, there was no plan for sea patrols with the vessel Nathanael Maxuilili. This was because there was maintenance being done on the vessel. Lastly, Patrolling Vessel Nathaniel Maxuilili continuous repairs certainly hampered the sea patrolling capabilities further for MFMR, as it has been docked for 2 consecutive financial years. Hence, IUU (Illegal, Unreported and Unregulated) fishing still happens in Namibian waters.

Recommendation 5: The Fisheries Observers Agency should deploy fisheries observers on all required vessels.

This recommendation was not implemented as the MFMR decided to adopt a policy of natural attrition which refers to zero recruitment. When observers exit the FOA, positions were not filled unless it is for critical positions such as those at the management level. Correspondence from the MFMR revealed that this was done to contain the growing wage bill of the FOA until its funding model has been reviewed or any second source of revenue is introduced.

Recommendation 6: The Ministry should ensure that there is proper communication between the radio center and pilots during air patrols.

The Fisheries Monitoring Centre is operational for sea and air patrols. However, communication between the radio centre and the pilot is affected by either technical problems or bad weather.

Recommendation 7: The Ministry should ensure that suitable vehicles are available and develop measures to reduce the delays in maintaining vehicles.

Documents reviewed revealed that the MFMR head office has issued maintenance contracts to some duty stations (such as Rundu) as a measure to reduce the delays in maintaining vehicles in the 2021/22 financial year. Furthermore, documents revealed that contracts for vehicle maintenance for the 2022/23 financial year will only be advertised and offered once the annual procurement plan is advertised, and the MFMR plans to develop a transport maintenance plan based on vehicle status by the 2023/2024 financial year as a measure to reduce delays in vehicle maintenance. Furthermore, documents revealed that procurement has become challenging as bidders challenge bids and more time needs to be invested in preparing bidding documents and conducting evaluations.

Recommendation 8: The Ministry should strengthen the control measures to ensure that proper fishing methods are used and protect the ecosystem.

Inland Fisheries

According to documents reviewed, this recommendation is still in ongoing status as the MFMR is busy consulting and reviewing the Marine Resources and Inland Fisheries Act to address issues faced by inspectors when enforcing the law.

Furthermore, documents reviewed by the audit found that there were still cases reported or opened for illegal fishing in inland fisheries visited. The audit further found through observations and interviews that fishermen still used the above mentioned illegal and destructive fishing methods to enable them to catch more fish. The use of destructive methods destroys the breeding and living organisms on the riverbed.

Additionally, there was a case opened against a fishermen for threatening and intimidating a Fisheries Inspector in one of the region's visited. Moreover, the grounded river patrol boat deters river patrols to inhibit more illegal fishing activities.

Marine Fisheries

Illegal fishing activities and methods still persist. For instance, some of the by catches are attributed to deliberate fishing activities of targeting sardines by vessels/fishermen. This is due to low-priced fines which are incomparable to the returns they obtain from the sale of these by catches.

Additionally, fishermen challenge the effectiveness of the prescription of mesh sizes and lengths, by combining the prescribed nets to exceed the allowable total length. Thus, the auditee lacks strengthening measures to discourage such destructive methods.

Recommendation 9: The MFMR should specify and consider the sustainable fishing gillnet to be used.

According to Government Gazetted Notice No. 296 of 15 December 2016, monofilament nets were banned from being used as regulated fishing gear in inland fisheries. Furthermore, there was a prohibition on the issuing of licenses for the use of such nets as regulated fishing gear. However, documents reviewed revealed that there were still cases of reported illegal fishing using monofilament nets. Interviews conducted further revealed that the use of monofilament nets persist because they are cheaper, are readily available in neighbouring Zambia and give good yields as compared to multifilament nets.

Recommendation 10: Fisheries reserves, closed seasons and furnishing of catch report should be enforced on the Inland fisheries.

Fisheries Reserves:

According to the Government Gazette Notice No. 206, 297, and 298 of 15 December 2016, the MFMR gazetted 10 community small-scale fisheries management areas in the Kavango and Zambezi regions. This is in comparison with the time of the main audit where there was no Gazetted fisheries reserves in Zambezi and Kavango river systems.

Closed Seasons:

According to the government Gazette Notice No. 206, 297, and 298 of 15 December 2016, the MFMR has succeeded in the gazetting of 10 community small-scale fisheries management areas in the Kavango and Zambezi regions. A closed fishing season starting from 01 December to 28 February every year was also introduced in 2016 in the Zambezi river system.

Interviews conducted revealed that, the MFMR experiences illegal fishing during closed seasons. These illegal fishing activities occur mostly at night. This follows when the foreign counterpart (e.g. Zambia) does not enforce measures of inspection on their side. Another factor contributing to illegal fishing during closed seasons is increased demand for fish by Zambezi natives working outside the region. The natives return to the region during closed seasons for holidays, and hire fishermen to catch fish for them.

Catch Landings:

The main audit report dated 2016 indicated that that there was no landing areas established in inland fisheries. No landing areas were established by the MFMR at the time of the audit. The fishermen enter and leave the river at any point, there is no requirement to declare the amount of fish harvested. As a result, the Ministry cannot enforce the catch report.

Recommendation 11: The MFMR should establish the Inland Fisheries Council and the Inland Fisheries Committee as required by the Act.

The audit noted that the MFMR have not established the Inland Fisheries Council and the Inland Fisheries Committee as required by the Inland Fisheries Resources Act, 2003 (Act 1 of 2003) since the initial audit. The Inland Fisheries Resources Act, 2003 (Act 1 of 2003) under Section 10 requires the Council to be compensated and the MFMR does not have an Inland Fishery Fund to cater for the remuneration.

Conclusions:

1. The MFMR did conduct research, developed measures to re-build the sardine stock and set the target of stock growth level at 1 million metric tons by or before 2030. However, the sardine stock is in deficient state as measures developed and surveys are affected by procumbent process, lower penalties charged on by-catch landings and natural factors.

2. The audit found that the use of calendar and financial years increases the catch landings that is used by biologists and economists respectively, which states the Total Allowable Catch (TAC) for specific fisheries resources. In addition, Marine Resource Advisory Council's (MRAC) recommendations to the Minister placed more emphasis on the socio-economic analysis which is the socio-economic conditions in the country.
3. Sea patrol activities were planned and conducted, however, the efficiency and effectiveness of the patrols were lacking due to continuous repairs of patrolling vessels. Hence, IUU (Illegal, Unreported and Unregulated) fishing still happens in Namibian waters.
5. The Fisheries Observer Agency (FOA) reduced the deployment of observers to contain the growing wage bill of the agency. FAO only achieved 53% percent coverage rate for all the fishing vessels due to the shortage of observers.
6. The Fisheries Monitoring Centre is operational for sea and air patrols. However, communication between the radio centre and the pilot is affected by either technical problems or bad weather.
7. The audit found through documentary evidence that MFMR did in fact had designated contactors (e.g. Rundu) to maintain vehicles for patrolling. However, delays in the maintenance of patrolling vehicles is chronically experienced as transport maintenance plans is developed late, seeking approval for maintenance is cumbersome, procurement has become challenging as bidders challenge bids and bidding documents and conducting evaluations needs more time.
8. Despite having control measures in place to prevent illegal fishing activities, illegal fishing still being recorded in inland fisheries because of inconsistencies/ineffectiveness in the implementation of control measures and timing of the fishing which is at night.
9. The MFMR did gazette Notice No. 296 of 15 December 2016 regulating that monofilament nets are banned from being used as regulated fishing gear in inland fisheries. However, illegal fishing with monofilament nets is still persistent as the nets are easily obtainable in the market. This making the gazette not effective. Furthermore, gill nets are not allowed in Marine fisheries. However, the MFMR still experiences illegal fishing due to fishermen that do not apply for permits and non-adherence to regulations and laws.
10. The MFMR has gazetted 10 community fisheries management areas in the Kavango-East and Zambezi regions river system. However, the control measures that MFMR has implemented e.g. closed season has not been effective, as illegal fishing is still being recorded during closed seasons. This is caused by the understaffing and relaxed enforcement by Angolan and Zambian counterparts. In addition, MFMR did not establish landing areas at inland fisheries as a result it is impossible to enforce the catch reports.

11. The MFMR has not established the Inland Fisheries Council and the Inland Fisheries Committee as required by the Inland Fisheries Resources Act, 2003 (Act 1 of 2003) due to a lack of money to compensate the Council members.

CHAPTER 1 – INTRODUCTION

The purpose of this follow-up audit is to provide Parliament with timely feedback about the audited entity's progress towards implementing the recommendations made in the Auditor General's report of May 2016 on the Management and Control of Marine and Inland Fisheries Resources (MFMR), whether these corrective actions remedy the underlying conditions, or if they were not implemented, determine the reason/s and the impact thereof.

According to the National Statistics Agency (NSA) in a report of 2022, the sector's contribution to the Gross Domestic Product (GDP) was 4.5% and accounted for over 14% of export earnings that were sourced from fish and fisheries products valued at N\$10 billion. It further ties into Chapters 4 and 5 of Vision 2030. Chapter 4 addresses people's quality of life, specifically pertaining to implementing wealth, livelihood and the economy as well as employment and unemployment. Whereas Chapter 5 aims for a sustainable resource base in terms of freshwater and associated resources as well as fisheries and marine resources. Furthermore, Harambee Prosperity Plan 2 states that, Economic Advancement Goal 1: Optimizing Stewardship of Natural Resources: Activity 3: Review the existing regime for the allocation of fishing rights and quotas during HPPI, with a view to replace the existing applications regime with a transparent bidding process which would strengthen the national anticorruption mechanisms and capacity. The introduction of a transparent bidding process for allocation of fishing rights and quotas, will require amendment of the Marine Resources Act.

The MFMR strives to contribute towards the National Development Plan (NDP 5) to build a sustainable and economically inclusive fisheries sector, which contributes to the national goal of poverty eradication in Namibia. Although the fisheries sector is mainly dominated by marine fisheries, inland fisheries equally drive food security, nutrition, employment, economic growth, social advancement, and environmental recovery². These are in line with the Sustainable Developmental Goals (SDGs)³.

1.1 The historical background of the audit object/auditee

The main audit report on the Management and Control of Inland and Marine Fisheries Resources (MFMR) covered the financial years of 2009/2010 to 2013/2014. The initial audit focused on assessing the adequacy of monitoring fishing activities, both at sea and in rivers, and setting the Total Allowable Catch (TAC) by the Directorates of Operations, Policy, Planning, Economics, and Resources Management.

² Food and Agriculture Organization (FAO) of the United Nations, 2024

³ SDG 2, 3, 8, 14 and 16

1.2 Audit design

1.2.1 Audit Methodology

According to International Standards of Supreme Audit Institutions (ISSAIs) 3000:136, “the auditor shall follow-up, as appropriate, on previous audit findings and recommendations and the Supreme Audit Institution shall report to the legislature, if possible, on the conclusions and impacts of all relevant corrective actions.” Furthermore, according to ISSAI 3000:139, “the auditor shall focus the follow-up on whether the audited entity has adequately addressed the problems and remedied the underlying situation after a reasonable period.”

The audit was conducted in accordance with International Standards for Supreme Audit Institutions (ISSAIs), performance auditing guidelines issued by the International Organization of Supreme Audit Institutions (INTOSAI) and audit policies and procedures established by the Office of the Auditor-General. The guidelines and policies conform to ISSAIs and provide a guide on execution and reporting of audit findings.

The audit used the results and problem orientated approach to examine and analyze the causes of deviations from the criteria.

1.2.2 Audit scope

1.2.2.1 Audit object

The follow-up audit focused on the following directorates within the MFMR:

- Directorate of Resources Management;
- Directorate of Operations;
- Directorate of Aquaculture and Inland Fisheries; and
- Directorate of Policy, Planning and Economics.

1.2.2.2 Time and geographical coverage

The follow-up audit covered three financial years namely 2020/21, 2021/22 & 2022/23 in order to establish a trend in performance over the period covered.

The follow-up covered 4 regions, which was Khomas, Kavango-East, Zambezi and Erongo regions. The regions were selected based on the main audit report and the availability of fisheries resources.

1.3 Methods of data collection

The following methods of data collection were used to carry out the follow-up audit in order to determine whether or not the recommendations were implemented:

I. Interviews were conducted with relevant management and operational staff within the MFMR as well as officials from the FOA. The following officials were interviewed:

- Directors;
- Deputy Directors;
- Economists;
- Chief Development Planner;
- Chief Biologists;
- Biologists;
- Control Fisheries Inspectors;
- Fisheries Inspectors;
- Fisheries Observers;
- Fishermen; and
- Fishing Vessel Captain.

II. Documentary evidence was gathered through analysis of relevant documents to support the findings of the audit. See Annexure I.

III. Physical observations were conducted at the MFMR regional offices in the Zambezi, Kavango-East, and Erongo regions. The audit team carried out physical observations at various patrol and fishing vessel inspection sites, the Fisheries Monitoring Centre, store rooms of confiscated fishing gear and patrol vehicles at the respective offices. The purpose of the physical observations was to ascertain that the operations and fishing activities being carried out are related to implementing the recommendations of the main audit report.

1.4 Sampling method

The auditors used a Non-Probability Sampling technique, namely Judgmental Sampling in which the sample is chosen on the basis of the audit team's knowledge and judgment. In terms of interviews, the auditors used judgmental sampling to select relevant staff working directly with Management and Control of Marine and Inland Fisheries Resources. In addition, the auditors used judgmental sampling to determine the places to be visited. Further, all relevant documents were requested related to the focus areas. Consequently, the regions were selected based on the main audit report findings, recommendations, geographical area and the actions taken by the auditee.

1.6 Staffing: Organogram of the Ministry of Fisheries and Marine Resources

At the time of the follow-up audit, the MFMR was headed by the Minister, the Deputy Minister and an Executive Director. Within the Ministry, there are six Directorates, each of which is led by a Director who reports to the Executive Director. However, for purposes of this audit, the focus is on the three coordinated Directorates, namely the Resource Management, Operations and Surveillance as well as Aquaculture and Inland Fisheries. All Directors are based at head office, Khomas region.

1.7 Financing and Budget implications

Table 1: Budget and actual expenditure of the Directorate of Resource Management

Financial Year	2020/21 NS	2021/22 NS	2022/23 NS
Budgeted Directorate Expenditure	46 318 006.00	37 165 324.00	36 598 546.11.00
Actual Directorate Expenditure	45 119 622.82	36 433 190.74	35 475 176.85
Variance	1 198 383.18	732 133.26	1 123 369.26

Source: Office of the Auditor-General financial audit reports for 2020/21 - 2022/23 financial years.

Table 2: Budget and actual expenditure of the Directorate of Operations and Surveillance

Financial Year	2020/21 NS	2021/22 NS	2022/23 NS
Budgeted Directorate Expenditure	61 262 022.00	63 616 100.00	62 493 019.30
Actual Directorate Expenditure	57 783 201.31	59 076 838.29	60 105 366.07
Variance	3 478 201.31	4 539 261.71	2 387 653.23

Source: Office of the Auditor-General financial audit reports for 2020/21 - 2021/23 financial years.

The under expenditure across the three financial years is attributed to reasons inclusive of the slow recruitment of key positions affecting remunerations, the payments made from the Marine Resources Fund (MRF) such as insurance of research vessels and port, unutilized construction money of the Kavango East regional office, reduced amounts paid out for leave gratuity, unutilized travel and subsistence allowance, reduced expenditure on materials and supplies following a decreased number of trips and surveys, less maintenance done on research and patrol vessels due to reduced sea voyages, fewer monitoring and control missions due to reprioritization of activities.

1.8 Mandate, Vision and Mission Statement of the Ministry of Fisheries and Marine Resources

Mandate

“To sustainably managed the living aquatic resources and promote the aquaculture sector.”

Vision

“Namibia to be a leading fishing nation with a well-developed aquaculture.”

Mission statement

“To responsibly manage living aquatic resources to continuously ensure a conducive environment for the Fishing and Aquaculture Sector to prosper.”

Mandate of the Directorate of Resources Management

The Directorate is mandated to conduct research to determine the status of the stocks and providing scientific advice on the sustainable management of Namibia's marine resources and ecosystem and promoting public awareness.

Mandate of the Directorate of Operations and Surveillance

The Directorate is mandated to protect the living aquatic resources and regulating fishing activities within the Exclusive Economic Zone (EEZ) and public inland water bodies.

1.9 Roles and responsibilities of key stakeholders

Directorate of Resource Management	<ul style="list-style-type: none">• Collect and analyse data on the living marine resources continuously;• Recommend appropriate annual harvest levels to management and the Marine Resources Advisory Council for all the commercially important living marine resources;• Participate and provide necessary information at relevant regional and international fora annually; and• Provide marine resources related data within a month from the date of receipt of request.
Directorate of Operations and Surveillance	<ul style="list-style-type: none">• Ensure compliance with fisheries legislations within EEZ, along the coast and inland water bodies;• Deploy fisheries inspectors on board patrol craft to conduct sea and aerial surveillance;• Ensure that sea patrol, inspections and catch control are conducted periodically in line with annual plan;

	<ul style="list-style-type: none"> • Ensure that FOA Agreement on Port State Measures, and National Plan of Action against Illegal, Unreported and Unregulated Fishing (NPOF-IUU) are implemented and enforced; • Monitoring and enforcement of fisheries legislations at all landing sites and fish factories; • Ensure that coastal and rivers patrols are conducted; • Provide Vessel Monitoring System (VMS) data of a specific fishing vessel to the right holder; • Collect and provide accurate landing data on a monthly basis to the Directorate PPE; • Issue recreational fishing permits within fifteen days in accordance with fisheries legislations; • Erect sign board, distribute pamphlets, and publish information through electronic and printed media to create awareness on fisheries legislations; and • Ensure training of fisheries inspectors in fisheries management and fisheries legislation.
<p>Fisheries Observer Agency</p>	<ul style="list-style-type: none"> • Undertake independent observations of the harvesting of marine biological resources in and outside Namibian waters to provide catch, by-catch, and biological data necessary to support in-season monitoring and stock assessment, as required by the Ministry; • Complement the Ministry’s monitoring, control, surveillance and scientific activities through the provision of prompt and accurate information; • Provide information necessary to support management of marine mammals and other protected species; and • Provide information necessary to support other specified science and management programs.

CHAPTER 2 – FINDINGS

Recommendation 1: The Ministry of Fisheries and Marine Resources (MFMR) should conduct research and develop measures to re-build the sardine stock.

1.1 Planning

The audit found through documentary evidence that MFMR did plan for research and developed recommendations for commercially exploited fishery resources. However, only the Annual Report for the 2020/21 financial year provided to the audit did not mention any recommendations and neither did the Operations Quarterly Reports for the period under review.

1.1.1 Expenditure in relation to the key performance strategic outputs

The Marine Resources Fund (MRF) Budgets for the 2020/21 to 2022/23 financial years revealed that the Directorate of Resource Management spent N\$ 107 547 557.00 on the environmental research activities of various fishery resources for the duration of the period under review. (See table 3 below)

Table 3: MRF Budgeted and actual Expenditure for the Directorate of Resource Management

Financial Years	Actual Budget for Directorate of Resource Management N\$	Actual Expenditure for the Directorate of Resource Management N\$	Difference in NS NS
2020/21	26 588 003.00	18 727 745.00	7 860 258.00
2021/22	60 932 758.00	35 209 489.89	25 723 268.11
2022/23	73 842 000.00	53 610 322.11	20 231 677.89
Total	161 365 761.00	107 547 557.00	53 815 204.00

Source: Marine Resources Fund Budget 2021/22-2023/24 financial years

The MFMR Key Performance Indicator (KPI) addressing the number of sea surveys to be conducted in the financial period was set at fourteen (14) biomass surveys on fish stocks, inclusive of sardines. These sea surveys were planned and budgeted for the financial period. There was no indication of how many surveys were conducted. However, the reviewed budget expenditure summary of the Directorate of Resource Management revealed that there were significant amounts of underspending in 2021/22 (N\$ 25 723 268.11) and N\$ 20 231 677.89 for the 2022/23 financial years. Therefore, the funds spent were not used as planned. This could lead to the ineffective

achievement of the Directorate's mandate and give advice on the sustainable management of Namibia's marine ecosystem.

The interviews and reports also maintained that the under expenditure was due to the following reasons:

- Breakage of vessels, which led to the suspension of work, which in turn hindered research expenditure increments; and
- A cumbersome procurement process, while vessel equipment is unavailable in Namibia and takes a long time to acquire.

1.2 Stock survey

A review of the State of the Stock survey and the Cruise reports revealed that the MFMR conducted a survey on the state of the stock of the sardine in the northern Benguela ecosystem during the 2021/22 financial year. This was confirmed by the Ministry of Finance Accountability report of October 2022, which revealed that the MFMR conducted scientific surveys and research amounting to N\$35 209 489.89 in the aforementioned financial year. Although sardine survey programmes were provided for the periods 2020/21 and 2022/23, no evidence was availed to ascertain that these two surveys were conducted. According to interviews conducted, these annual surveys were not conducted due to technical and maintenance constraints.

Reviewed documentation further revealed that the sardine stock is in a depleted state as it is below the target growth level of 1 million metric tons by or before 2030, and the biomass fish encountered are composed of smaller fish, young adults and bigger mature adult fish with a length range of 11 to 25 cm total length (TL). This further buttresses the depletion state of the stock, given the absence of sardines larger than 25cm. In addition, the sardine survey dated 07-23 October 2021 could not determine the biomass and the distribution of the sardine because no valid areas were found during the survey. Additionally, the audit could not determine the trend of the sardine stock recovery rate and the biomass stock size over the period under review as no evidence was provided for the 2020/21 and 2022/23 financial years.

As a result, delays in the maintenance of the vessels impact the efficient and effective use of financial resources and vessels in the implementation of strategic priorities to rebuild the sardine stock.

1.3 Moratorium on sardine stock

Reviewed documentation revealed that the MFMR imposed a three-year moratorium on the sardine fisheries for the period 1st January 2018 to 31st December 2020. However, based on a review of the state of the stock report for the period 07 October to 23 October 2021 on the sardine fishery, revealed that the biomass state of the sardine stock was in a depleted state as the measures enforced were not successful in rebuilding the sardine stock. Therefore, the following resolutions were taken:

- The MFMR extended the moratorium for an additional three years beyond the aforementioned period;
- The MFMR imposed an absolute minimum of zero by-catch restrictions of the sardine stock by all fisheries as a management measure to control and rebuild the sardine stock; and
- The MFMR issued a directive to the fishing vessels to move out of the area of sardine aggregate by at least 2 nautical miles (nm) and inform nearby vessels to do the same should sardine by-catches be caught in any fishery until the stock recovers.

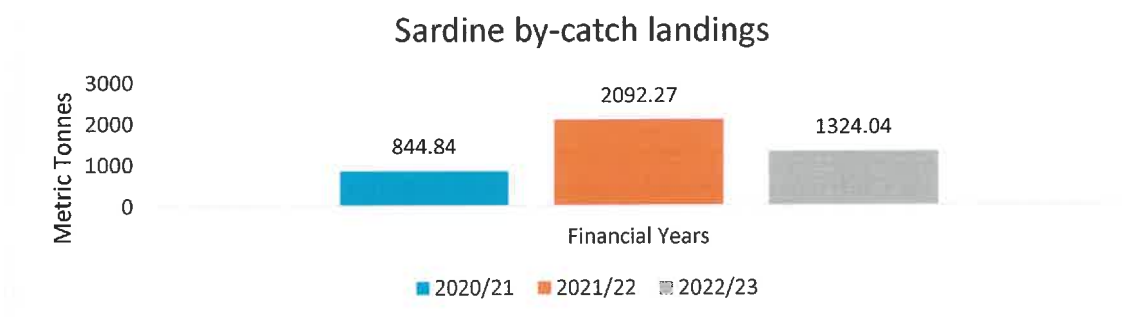
However, interviews conducted maintained that these measures were not effective because sardines are targeted by predators. This follows sardines abundant oil content, which undermines their recovery. The interviews further stated that beyond the human environment in terms of deliberate fishing activities by vessels, the MFMR is limited in controlling the effects of the sea environment to protect the sardine stock.

As a result, a lack of adequate sardine biomass has negatively impacted the country’s economy as the fishery sector becomes less productive and the ecosystem because many marine mammals, fish, and seabirds mainly feed on sardines.

1.4 By-catch landings

The reviewed by-catch landing statistical data summary sheet revealed a fluctuation in the statistical data landings of the sardine fish by-catch for the period under review as follows:

Figure 1: Summary of Statistical Data Landings: Sardine fish by-catch



Source: MFMR Summary of statistical data landings of sardine fish by-catch

Figure 1 shows a 148% increase in the number of sardine by-catch landings between the 2020/2021 and 2021/2022 financial years and a decrease of 37% between the 2021/2022 and 2022/2023 financial years. As per the interviews conducted, fluctuations are subject to:

- The existence of large or few sardine by-catch landings;

- Deliberate actions from fishermen to target sardines given the low-priced fines imposed while they benefit from selling the sardine by-catches at much higher prices than the fines charged; and
- The presence of sardines in the area of fishing (sardine aggregation). That is, in seasons of abundance, more sardine is caught, while the opposite holds for seasons in which the sardine population is lower.

These occur despite the directive that vessels must evacuate from areas where sardine catches are prevalent and inform other vessels to avoid those areas as well, as per document analysis. This may be an indicator of the ineffectiveness of the measures put in place by the MFMR to rebuild the sardine stock.

As a result, the MFMR might not achieve its strategic objectives to rebuild the sardine stock to the target level of 1 million metric tons by or before the year 2030 as stated by Vision 2030.

Conclusion

The MFMR did conduct research, develop measures to re-build the sardine stock and set the target of stock growth level at 1 million metric tons by or before 2030. However, the sardine stock is in a deficient state as measures developed and surveys are affected by procumbent process, lower penalties charged on by-catch landings and natural factors.

Recommendation

The audit recommends that the Executive Director of Ministry of Fisheries and Marine Resources (MFMR) should continue to conduct research and strengthen the measures to re-build the sardine stock to a target growth level of 1 million metric tons by or before 2030.

Comments by the MFMR

The Ministry would like to confirm that we have now added the 2020 landings as they were not included in the previous submission. Also, note that the landings for Sardinellas and Pilchard in the previous submission have been lumped together which is not supposed to be the case.

OAG response to comments

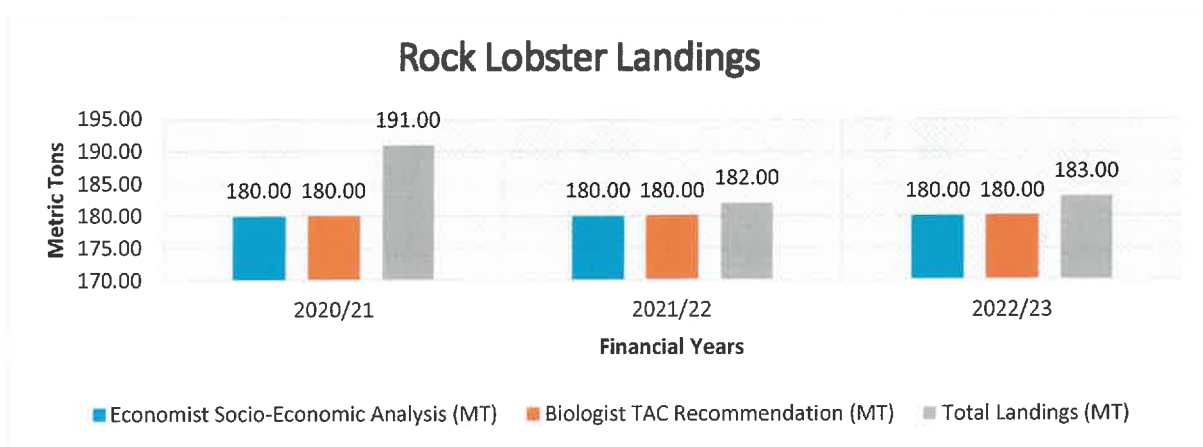
MFMR provided landings for Pilchards whilst the audit finding refers to Sardine by-catch landings. The finding therefore remains the same.

Recommendation 2: The Marine Resource Advisory Council recommendation to the Minister should place more emphasis on scientific evidence.

The audit found through documentary reviews and interviews that the Marine Resource Advisory Council's (MRAC) recommendations to the Minister placed more emphasis on socio-economic analysis which is the socio-economic conditions as was recommended. The audit noticed that the

state of the Hake, Horse Mackerel, and Crab stocks and adverse effects of lower TAC's would have on sub-sector industries influenced the MRAC recommendations to the Minister's TAC decisions for the period under review. Furthermore, interviews conducted informed the audit that the MRAC considers the socioeconomic status in the country more.

Figure 2: Summary of the Rock Lobster TAC and Landings

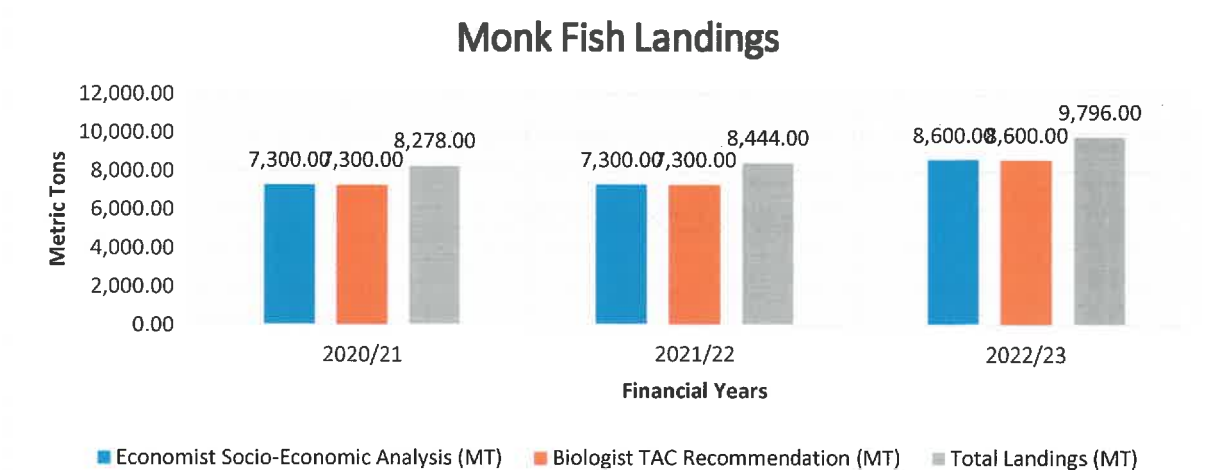


Source: MFMR TAC reports

Based on the Rock Lobster stock provided by the biologists and the scientific evidence socio-economic analysis on the socio-economic conditions provided by the economists over the periods under review, there were no variations between the Rock Lobster TAC recommended by the biologists and that of the economists put forth, which was 180 MT. However, the landed volume in 2020/21 and 2021/22 was higher than the TAC by 6.1% and 1.1%, respectively. In addition, the Total Allowable Catch in total for the 3 (three) financial years exceeded by only 16 Metric Tons.

Research from biologists found that overfishing and high number of by-catches is prevalent. Despite the decreasing inclination in the over catching, the reports further reveals that the stock is currently in an over-exploited state and consequently requires rebuilding to a more sustainable level. This suggests that the decrease in the over catching percentages is not due to compliance with regulations, but as a result of a depleting stock.

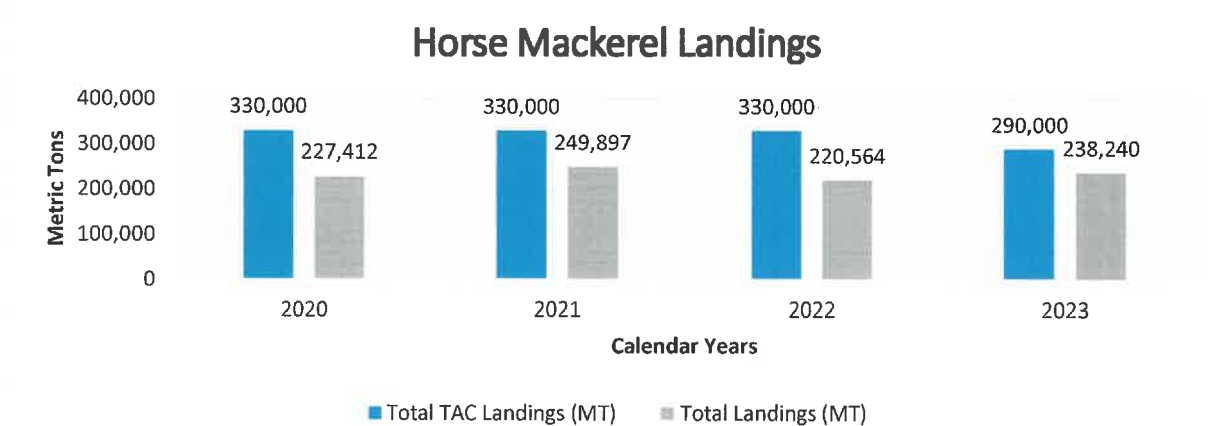
Figure 3: Summary of Monk TAC and Landings



Source: Auditors data analysis: MFMR TAC reports and response from MFMR for comments

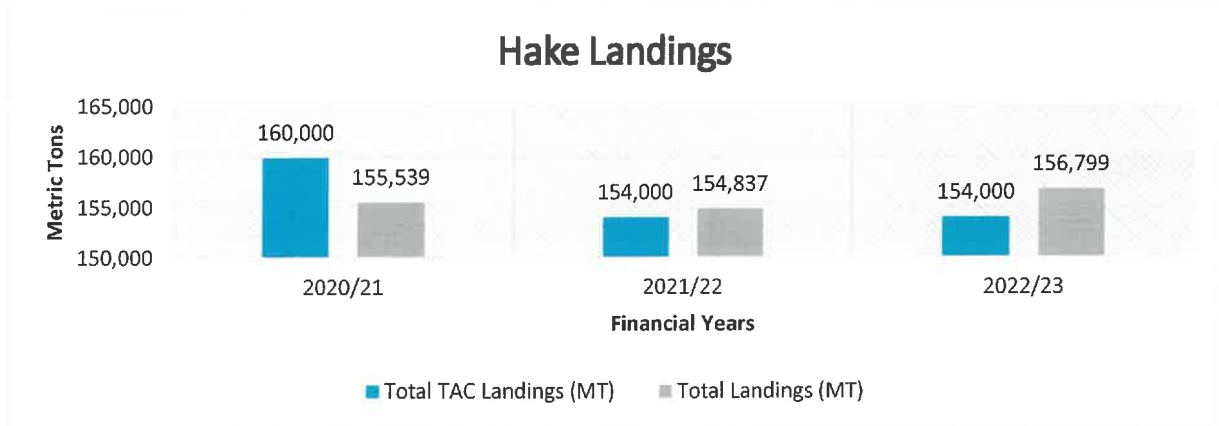
While it was set 18% higher in 2022/23, the landed value in 2020/21 and 2021/22 was higher than the TAC by 13% and 16% respectively. Based on the Monk stock provided by the biologists, and the socio-economic analysis on the socioeconomic conditions provided by the economists over the periods under review, there were no variations between the Monk TAC recommended by the biologists and that of the economists. While variations were absent, the landings for the periods 2020/21 and 2021/22 were higher than the recommended TAC. The biologists used calendar years, while the economists used financial years in their reports. Consequently, the 8600MT for the calendar year 2023 may fall under the 2023/24 financial year. Lastly, the Total Allowable Catch in total for the 3 (three) financial years exceeded by 3,318 Metric Tons.

Figure 4: Summary of Horse Mackerel TAC and Landings



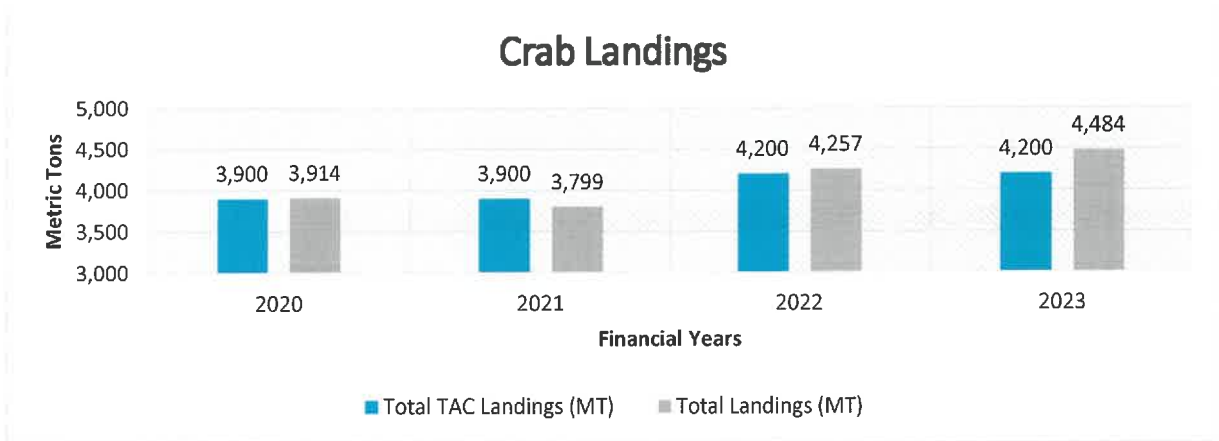
Source: Auditors data analysis: MFMR TAC reports and response from MFMR for comments

Figure 5: Summary of Hake TAC and Landings



Source: Auditors data analysis: MFMR TAC reports and response from MFMR for comments

Figure 6: Summary of Crab TAC and Landings



Source: Auditors data analysis: MFMR TAC reports and response from MFMR for comments

Additionally, the audit could not determine the best scientific evidence of TAC for Hake, Horse Mackerel, and Crab stocks provided by the biologists and the implications of the scientific evidence on the socioeconomic analysis provided by the economists over the period under review because the evidence provided is not sufficient.

The use of calendar and financial years result in the use of inconsistent/incomparable information which increases the risk of the depletion of Rock Lobster, Monk, Horse Mackerel, Hake and Crab stock resources and is an indicator that the strategies implemented were ineffective to ensure adherence to the recommendation. Thus undermining scientific evidence. Furthermore, the

landings above the TAC recommendations imply the ineffectiveness of the strategies implemented during that particular years.

The obvious effect is that the depletion of all fisheries and maritime stocks in the sea and the adverse effect the depletion of stock has on ecological eco-system of the maritime and fisheries.

Conclusion

The audit found that the use of calendar and financial years increases the catch landings that is used by biologists and economists respectively, which states the Total Allowable Catch (TAC) for specific fisheries resources even though the initial recommendation stated that the Marine Resource Advisory Council recommendation to the Minister should place more emphasis on scientific evidence. In addition, Marine Resource Advisory Council's (MRAC) recommendations to the Minister placed more emphasis on the socio-economic analysis which is the socio-economic conditions in the country.

Recommendation

The audit recommends that the Executive Director of Ministry of Fisheries and Marine Resources (MFMR) must use a singular format for the usage by biologists and economists for recommending the Total Allowable Catch (TAC) for aquatic species. Furthermore, the audit recommends that the MRAC TAC recommendations to the Minister places more emphasis on the scientific evidence rather than information stemming from the socio-economic analysis reports.

Comments from Ministry of Fisheries and Marine Resources (MFMR)

" Summary of the Rock Lobster TAC and Landings" the graph has 2 TAC's one allegedly set by the TAC and one set by the biologist" MFMR would like to inform that the economists do not propose, suggest or recommend TAC, the TAC's are recommended by the scientist to the Minister through the Marine Resources Advisory Council, and endorsed by cabinet that is published in the government gazette every fishing season.

*The report indicated that the TAC recommended by the Economist and Biologists are the same, however the stand to indicate that the MFMR economist does not recommend TAC, but rather carry out a SOCIO-ECONOMIC ANALYSIS of each TAC regulated species. These reports present an outlook of a fishery performance per fishing season and illustrate the performance of each sub sector and look at the following; **the Namibian ownership of the fishery in terms of rights granted, its operations, landings, investment, employment, fish prices, value addition, local and international markets, income and expenditure, government revenue, contribution to corporate social responsibility and food security.***

On the same page of the report the auditors have indicated that economists used Financial years, while biologists used calendar years, on this I would like to inform that economist do not use financial years but rather fishing seasons per sub sectors.

The report indicated that the audit could not determine the implication on the socio economic evidence analysis of the TAC provided by the Economist over the period under review because evidence provided is not sufficient” attached is copies of socio economic impact assessment that was made by the Economist for the period under review.

OAG response to comments

The audit found through documentary evidence that rights holders of quotas did not adhere to Total Allowable Catch (TAC's) recommendations set by Biologists, as stated by MFMR comments, that it is only Biologists recommendations that is forwarded to Marine Resources Advisory Council (MRAC) and is sent to Cabinet for approval. Figures 2-6 clearly illustrates that all Total Landings for Rock Lobster, Monk, Hake and Crab exceed the TAC's.

Recommendation 3: The Ministry should ensure proper planning and prioritization of activities to ensure efficient and effective sea patrols.

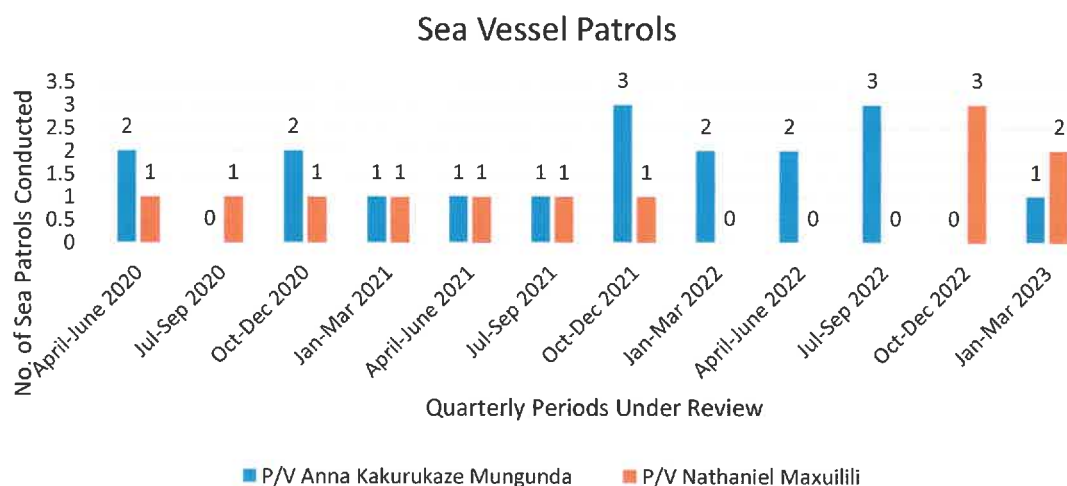
According to the MFMR's strategic planning for 2017/18-2021/22 there was strategic planning to ensure efficient and effective sea patrol activities. However, the MFMR did not conduct strategic planning for the 2022/23 financial year, as the very next strategic plan was for the period of 2023/24-2027/28.

Furthermore, documents reviewed indicated that there were no new fleets acquired for sea patrol activities for the period under review. Documents reviewed show that there were three patrol vessels, namely R/V Mirabilis (for research); P/V Anna Kakurukaze Mungunda (for patrols) and P/V Nathaniel Maxuilili (for patrols), as well as two fixed-wing aircrafts, namely Sea Eagle 1 and Sea Eagle 11, that were used to strengthen the control of fishing activities through sea patrols.

Interviews conducted revealed that the MFMR plans annually for sea patrol activities. Furthermore, the MFMR planned a number of patrol activities, through a strategic plan and an annual plan that they intended to undertake consisting of six trips, lasting 16-20 days with two patrol vessels, and includes the following activities:

- Patrols more on the northern (Angolan) side;
- Engage Sea Shepherd Global to assist with patrol activities;
- Joint patrols with the Navy and Nampol; and
- Monitoring, control, and surveillance.

Figure 7: The patrol vessels activities for the period under review.



Source: Directorate of Operations Quarterly Reports

Documents reviewed show that in 2021/22 and 2022/23, there was no plan for sea patrols with the vessel Nathanael Maxuilili. This was because there was maintenance being done on the vessel. Further, the mechanical breakdown of the aforementioned sea patrol vessel resulted in a 64% target achievement for sea patrols undertaken during the 2021/22 financial year. Consequently, five patrol missions were not conducted, leading to an ineffective implementation of the targets set for that particular year. This also implies that the Ministry was limited in responding on a timely basis, given the availability of only one patrol vessel.

Meanwhile, the Ministry achieved 121% implementation of sea patrols for the 2022/23 financial year. This follows the availability of both patrol vessels as well as additional assistance from a civilian patrol craft. Thus, the MFMR planned for and prioritized activities (KPIs) related to sea patrols for the 2022/23 financial year.

Lastly, Patrolling Vessel Nathaniel Maxuilili continuous repairs certainly hampered the sea patrolling capabilities further for MFMR, as it has been docked for two (2) consecutive financial years. Hence, IUU (Illegal, Unreported and Unregulated) fishing could still happens in Namibian waters.

Conclusion

Sea patrol activities were planned and conducted, however, the efficiency and effectiveness of the patrols were lacking due to continuous repairs of patrolling vessels. Hence, IUU (Illegal, Unreported and Unregulated) fishing still happens in Namibian waters.

Recommendation

The audit recommends that the Executive Director of Ministry of Fisheries and Marine Resources (MFMR) budgets and plans for maintenance expenses and time for patrolling vessels, to ensure that the efficiency and effectiveness of the patrols is guaranteed and deters IUU (Illegal, Unreported and Unregulated) fishing does not happen in Namibian waters.

Recommendation 4: Dysfunctional Automatic Location Communication devices on vessels should be repaired and brought into operation

According to the main audit report “*During the 2013 financial year, 154 vessels were installed with the ALC devices but only 79 vessels ALC’s were functional.*” Furthermore, documents reviewed revealed that all fishing vessels are actively tracked on the Vessels Monitoring System (VMS) to continually monitor any vessels fishing in the restricted areas, as shown in Table 4 below. No incidents of dysfunctional Automatic Location Communication (ALC) devices were reported for the period under review.

Table 4: Fishing vessels actively tracked on the VMS

Financial year	Total number of vessels	Total number of actively tracked vessels on VMS
2020/21	169	169
2021/22	162	162
2022/23	170	170

Source: MFMR reports

Interviews and observations conducted revealed that all vessels have met VMS regulation requirements. The VMS monitors vessels with ALC devices from the center. Furthermore, if the ALC is not functional, it is fixed. Repairs are done outside the MFMR as it is the responsibility of the right holder to ensure that dysfunctional ALCs work and one out of twenty may report dysfunctional ALCs.

The VMS monitoring system continually monitors vessels in the exclusive economic zone (EEZ). As a result, the Ministry can catch vessels fishing illegally in Namibian waters as well as vessels entering restricted areas. This implies an effective method to track all vessels harvesting in Namibian waters and reduce illegal fishing.

Conclusion

All the fishing vessels are actively tracked on the Vessels Monitoring System (VMS) to continually monitor any vessels fishing in the restricted areas. Furthermore, no incidents of dysfunctional ALC devices were reported during the period under review.

Recommendation 5: The Fisheries Observers Agency (FOA) should deploy fisheries observers on all required vessels.

This recommendation was not implemented as the MFMR decided to adopt a policy of natural attrition which refers to zero recruitment. When observers exit the FOA, positions were not filled unless it is for critical positions such as those at the management level. Correspondence from the MFMR revealed that this was done to contain the growing wage bill of the FOA until its funding model has been reviewed or any second source of revenue is introduced.

Furthermore, documents reviewed revealed that over the period under review, the FOA overspent their budget. Some of the reasons provided for overspending were, among others:

- Recurrent payments due to legacy issues from past decisions with financial implications; and
- Insufficient coverage of vessels leading to levies not collected and negative financial implications.

However, the observers continue to report violations and issue fines for irregularities in fishing during the periods under review.

Documentary reviews and interviews conducted revealed that the FOA filled 125 (54%) out of 230 fisheries observers vacancies on the establishment. All fisheries observers received grade-one training depending on their duration of stay with the Agency and were later sent to the Namibian Maritime and Fisheries Institute (NAMFI) for additional training. Furthermore, no fisheries observer was recruited for the periods under review. The last intake was in the 2015/16 financial year.

The shortage of fisheries observers resulted in a 53% deployment coverage on the vessels. This is because of the size of the vessels. It should be noted that some vessels are too small and do not require a fisheries observer on board. Instead, they received a non-observer trade form. This form authorizes a small fishing vessel to operate in the Namibian waters without a fisheries observer on board and thus exempting these vessels from any fines.

Furthermore, documents stated that during the 2022/23 financial year, there were 170 registered fishing vessels. This supports the narrative shortage of fisheries observers' deployment on all these vessels. Thus, it becomes challenging to curb violations.

Interviews further revealed that vessels commit violations such as:

- Dumping of fish in the sea;
- Illegal fishing activities; and
- Non-compliance with the laws and Illegal, Unregulated and Unreported (IUU) fishing.

When the above violations are committed, the FOA files a violation report and submits it to the Monitoring, Control, and Surveillance (MCS) Directorate within the MFMR. The MCS directorate investigates both parties and finds solutions to the root causes of the violation reports.

Non-deployment of fisheries observers on all the vessels will lead to:

- The quality of the data is compromised and inaccurate sampling because of the lack of full FO (Fisheries Observers) operational capacity;
- Reduction in Fisheries Observers coverage; and
- Reduction in data collection and sampling equipment.

The aforementioned factors consequently lead to the ineffective implementation of work related duties. Therefore implying, the failure to achieve various objectives.

Conclusion

The Fisheries Observer Agency (FOA) reduced the deployment of observers to contain the growing wage bill of the agency. FAO only achieve 53% percent coverage rate of all fishing vessels due to the shortage of observers. Non-deployment of observers may result in quality of the data compromised and inaccurate sampling because of the lack of full FO operational capacity. Reduction in Fisheries Observers coverage and the aforementioned factors consequently lead to the ineffective implementation of work related duties. Therefore implying, the failure to achieve various objectives.

Recommendation

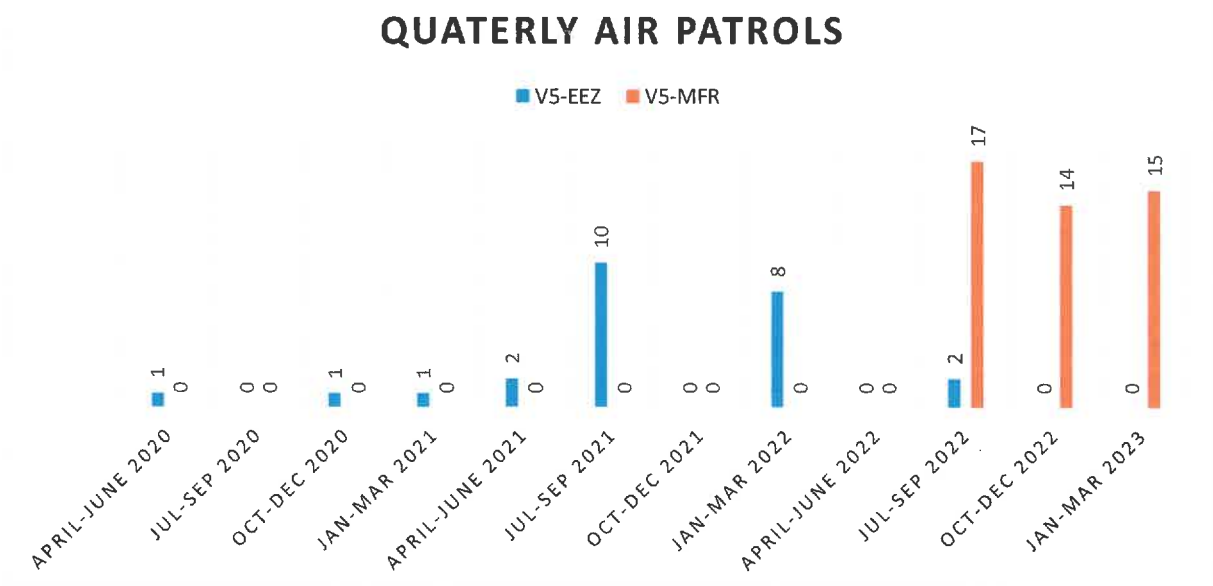
The audit recommends that the Executive Director of Ministry of Fisheries and Marine Resources (MFMR) should increase the Fisheries Observer Agency (FOA) budget, in order for the agency to increase the percentage coverage rate of all fishing vessels.

Recommendation 6: The Ministry should ensure that there is proper communication between the radio center and pilots during air patrols.

According to the Main Audit report of 2016 “The audit further found that air patrol missions are being cancelled due to unfavourable weather conditions and the lack of communication with the operational room onshore. As a result, there is inadequate surveillance of fishing activities.”

According to documents reviewed, the Fisheries Monitoring Centre is operational 24 hours a day when sea and air patrols are underway. However, during the 2021/22 and 2022/23 financial years, communication was affected due to either technical problems or bad weather. Furthermore, documents reviewed revealed that only 3 air patrols were conducted during the 2020/2021 financial year. See below figure 8 on air patrols carried out during the period under review:

Figure 8 Air Patrols for Directorate of Operations on Quarterly Basis



Source: Directorate of Operations Quarterly Reports

Clearly, the graph above indicates very few air patrols was conducted as from April 2020 up until June 2022. Reasons for this was that all types of technical maintenance (e.g. radar) was outstanding, COVID-19 pandemic restrictions for the MFMR staff and sea vessels and, lastly, delays in the renewal of pilot licenses. However, as from July 2022 up until March 2023 only observations was recorded, but no IUU (Illegal, Unreported and Unregulated) fishing activities were recorded. The spider system improves communication and is able to track the aircraft, monitor illegal fishing activities in Namibian waters, and communicates with the patrol captain, who can arrest those conducting illegal activities. The spider system helps to save on fuel, time, costs, and it's more efficient and economical.

Physical observation conducted by the auditors' found that the MFMR has an operation room that deals with communication. There were two radio systems, namely Very High Frequency (VHF) for short range and High Frequency (HF) for long range. However, communication between the radio centre and the pilot was flawed at the time of the field visit. This was because it took the pilot approximately 7 minutes to respond to the operator in the operation room. The operator alternated between VHF and HF channels at 12h36 and obtained a response from the pilot at 12h43 on the HF range.

Picture 1: VHF radio system in Walvis Bay, Erongo region



Source: Picture taken by auditors on 29/11/2023 during fieldwork in the Erongo region.

Delays in responding may result in potential loss of lives, which in turn may involve economic costs to the Ministry to compensate for the lives loss and replacement or repair of aircrafts. It may also result in pilots not being able to receive communication to fly a particular direction where illegal fishing may be taking place, ahead of the patrol vessels to suspend such activities. Thus, affecting timely responses to protect marine resources.

Conclusion

The Fisheries Monitoring Centre is operational for sea and air patrols. However, communication between the radio centre and the pilot is affected by either technical problems or bad weather.

Recommendation

The audit recommends that the Executive Director of Ministry of Fisheries and Marine Resources (MFMR) should improve communication through maintenance of telecommunications equipment the between the radio center and pilots during air patrols.

Recommendation 7: The Ministry should ensure that suitable vehicles are available and develop measures to reduce the delays in maintaining vehicles

Documents reviewed revealed that the MFMR head office has issued maintenance contracts to some duty stations (such as Rundu) as a measure to reduce the delays in maintaining vehicles in the 2021/22 financial year. Furthermore, documents revealed that contracts for vehicle maintenance for the 2022/23 financial year will only be advertised and offered once the annual procurement plan is advertised, and the MFMR plans to develop a transport maintenance plan based on vehicle status by the 2023/2024 financial year as a measure to reduce delays in vehicle maintenance. Furthermore, documents revealed that procurement has become challenging as

bidders challenge bids and more time needs to be invested in preparing bidding documents and conducting evaluations.

Interviews conducted revealed that the MFMR only allocated vehicles according to the environment in which patrol activities are undertaken. For instance, sedans are allocated for inland patrol activities, while Toyota 4X4s are allocated for coastal patrol activities. The MFMR purchased 8 vehicles in 2020/21 and 2021/22. However, a directive to not acquire vehicles for the 2022/23 financial year limited the number of suitable vehicles that could be purchased.

Interviews further revealed that the MFMR’s measures to reduce delays in maintaining vehicles, included the provision of monthly progress reports by other departments. However, the measures are minimal because there are other players involved. For instance, the process of the Procurement Committee is a hindrance, and not all departments comply with the submission of monthly reports. Contract management is a challenge in terms of the quality of goods and services procured.

Furthermore, documents reviewed revealed that 12 (9 Bakkies and 3 Sedans) vehicles were allocated to the Zambezi region. In addition, 5 out of 12 (42%) of the vehicles was grounded as per table 5 indicates below:

Table 5: Patrol vehicles and status thereof in the Zambezi Region

Number of patrol vehicles available	Status/condition of the vehicle
5 (2 Sedans and 3 Bakkies)	Grounded
7 (6 Bakkies and 1 Sedan)	Operational

Sources: MFMR master list 2020-2023

Picture 2: Some of the grounded vehicles in Zambezi region.



Picture 3



Picture taken by auditors on 08/11/2023 during field work at Zambezi region.

Interviews revealed that the MFMR has 4x4 vehicles which are suitable for patrols. However, the developed measures did not reduce the delay in maintaining vehicles. This is because Zambezi regional office sends their vehicles to the approved contractor of Kavango-East region which takes (3) three months to repair the vehicles.

Furthermore, documents reviewed revealed that during the period under review, the MFMR in Kavango East region has outsourced repairs and maintenance to a third party (Dunedin Investment Cc) for maintenance, service and repair and to overhaul their vehicles for a period of 36 months. Documents also revealed that there were seven (five bakkies, one truck, and one boat) as patrol vehicles allocated to the Kavango-East region, of which five (5) were operational and two (2) were grounded at the time of the audit, as indicated in the table below:

Table 6: Status of Patrol Vehicles and boat in Kavango-East Region:

Vehicle type and Number of Vehicle Available	Status/condition of the vehicle
Truck (1)	Grounded
Bakkies (5)	Operational
Boat (1)	Needs repair

Source: MFMR's Rundu master list 2020-2023

Prior to maintenance, requisitions are submitted to the Transport Officer in the region, then forwarded to the head office. Although the vehicles are old models, they are maintained, and the process is shorter and runs smoothly in the region. Furthermore, prior to the issuance of the

contract, the office experienced a situation whereby all the office vehicles were grounded. As the table 7 below indicates:

Table 7: Number of days taken on patrol vehicles maintenance

Regions	Total Average of working days for the period under review
Kavango-East	34
Erongo	31

Source: MFMR's Kavango-East and Erongo Quotations and Tax Invoices 2020-2023

Table 7 above illustrates the number of days it takes to obtain approval for the maintenance of MFMR vehicles in the Kavango-East region for the periods under review. It takes an estimated of 34 days on average for the quotation submission, approval, service, and payment of the maintenance of the vehicles for the approved contractor to be completed. In addition, the 34 days does not reveal efficiency on the part of the MFMR's vehicle maintenance process and demonstrates the region's inability to respond to community calls on a timely basis. As a result, the overall process of 34 days deters the execution of patrol plans for over a month, resulting in the under-achievement or under-performance of the Directorate of Operations in the region as well.

Lastly, documents reviewed revealed that the MFMR Erongo Region had seven (7) suitable vehicles (4x4 bakkies) and all were in a good condition for patrols.

The MFMR, through budget motivations (the need to do patrols, the vehicle parts needed, and the condition and kilometers of the vehicles), indicates how many vehicles are needed per year because vehicles travel vast distances and difficult terrains. However, the MFMR encounters challenges with vehicles such as:

- Some vehicles are old, but they are trying to maintain them, and there is a need for 4x4 vehicles;
- Vehicles wait long periods for repairs, and the procurement process takes long for vehicles to get fixed, which hampers the attainment of work targets;
- The patrol terrain is 400km (Kunene to Muob), but the north has not been covered for years; and
- The terrain is also rough, such that vehicles get damaged.

The interviews conducted revealed operational staff from the Erongo region wrote letters to management and the Executive Director on the importance of reliable vehicles and, in emergencies to Government garage. However, the procurement process is very slow. The MFMR mainly requires 4x4 vehicles and needs four to five of them. Planning is difficult with limited resources.

The interviews further revealed that the vehicles were maintained. However, the process has been centralized at Windhoek, thus leading to further delays. There was no contract provided to them despite having requested, but it has not materialized for the 2020/21 and 2022/23 financial years. Furthermore, the audit analysed that on average it takes 31 working days to from Quote Date till Purchase Order Date to maintain MFMR patrol vehicles.

Lastly, through document analysis the audit found that the MFMR spent less than half of the budgeted of N\$ 1 555 000 million on maintenance costs for the period under review. See table below:

Table 8: Vehicle Maintenance Budgeted and Actual Expenses

Financial Years	Budget for Directorate of Operations for Maintenance of Vehicles N\$	Annual Maintenance Expenses for Directorate of Operations for Maintenance of Vehicles N\$	Variance N\$
2020/21	360 000.00	355 271.26	4 728.74
2021/22	495 000.00	134 735.50	360 264.50
2022/23	700 000.00	259 698.58	440 301.42
Total	1 555 000.00	749 705.34	805 294.66

Source: MFMR Annual and Quarterly Reports

Furthermore, in the 2020/21 financial year the Directorate of Operations had to maintain more vehicles at a single point in time than in any other time for the period under review, due to more patrols vehicles that needed repairs.

The challenging of bids by bidders may still prolong the process of maintaining vehicles, thus delaying the execution of patrol activities. As a result, they are not efficient. Not having a contractor in the regions may lead to inspectors not being able to conduct river system and coastal patrols. Furthermore, patrolling along rivers will also decrease because of the limited number of operational patrolling vehicles, which will lead to a rise in IUU fishing in the river system basins and coastal areas.

Conclusion

The audit found through documentary evidence that MFMR did in fact had designated contactors (e.g. Rundu) to maintain vehicles for patrolling. However, delays in the maintenance of patrolling vehicles is chronically experienced as transport maintenance plans is developed late, seeking approval for maintenance is cumbersome, procurement has become challenging as bidders challenge bids and bidding documents and conducting evaluations needs more time.

Recommendation

The audit recommends that the Executive Director of Ministry of Fisheries and Marine Resources (MFMR) should ensure that the procurement and approval process in maintaining vehicles are conducted within the requirements as prescribed by the procurement Act.

Recommendation 8: The Ministry should strengthen the control measures to ensure that proper fishing methods are used and protect the ecosystem.

8.1 Inland fisheries

According to documents reviewed, this recommendation is still in ongoing status as the MFMR is busy consulting and reviewing the Marine Resources and Inland Fisheries Act to address issues faced by inspectors when enforcing the law.

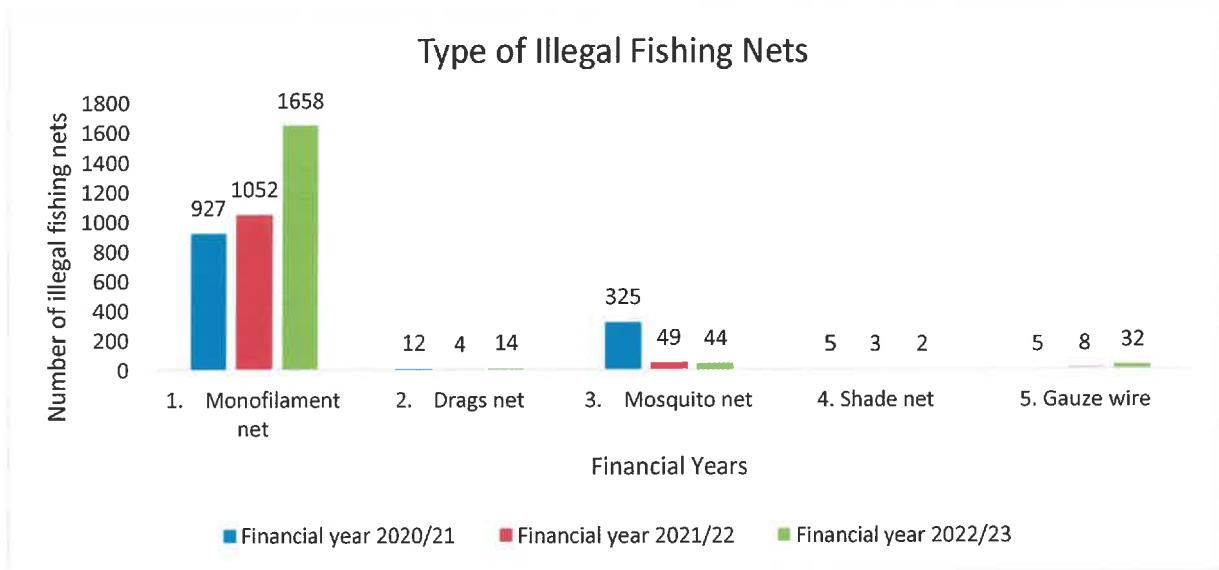
Interviews conducted revealed that the MFMR has the following control measures in place to control over fishing and protect the ecosystem.

- Fishing permits were issued and were only valid for a month;
- Net registration involves providing fishermen a net tag with a unique number to validate fishing activities;
- Fisheries reserves prohibits fishing permanently to ensure reproduction of the species;
- Closed seasons are enforced between the 01 December and 28 February on an annual basis for the Zambezi region; and
- River and land patrols by fisheries inspectors, who ensure fishing nets do not exceed 100 meter and that fishing is done along and not across the river system.

Furthermore, documents reviewed by the audit found that there were still cases reported or opened for illegal fishing in inland fisheries visited. Among others illegal fishing methods were practiced, fishing with prohibited mosquitos' nets, fishing with drag nets, fishing with shade nets, fishing with a monofilament gillnet, Gauze wire, fishing without licenses and no tag on the fishing net and bashing in the Zambezi and Kavango river systems for the periods under review. The audit further found through observations and interviews that fishermen still used the above mentioned illegal and destructive fishing methods to enable them to catch more fish. The use of destructive methods destroys the breeding and living organisms on the riverbed.

According to the documents reviewed, there were fluctuations in the confiscated illegal fishing nets for the periods under review, as shown in figure 9 and picture 4 and 5 below.

Figure 9: Summary of confiscated illegal fishing nets in the Zambezi Region



Source: MFMR Zambezi regional directorate of Operation annual reports

Picture 4: Some of the confiscated illegal nets in Zambezi region.



Source: Pictures taken by auditors on 08/11/2023 during field work in the Zambezi region.

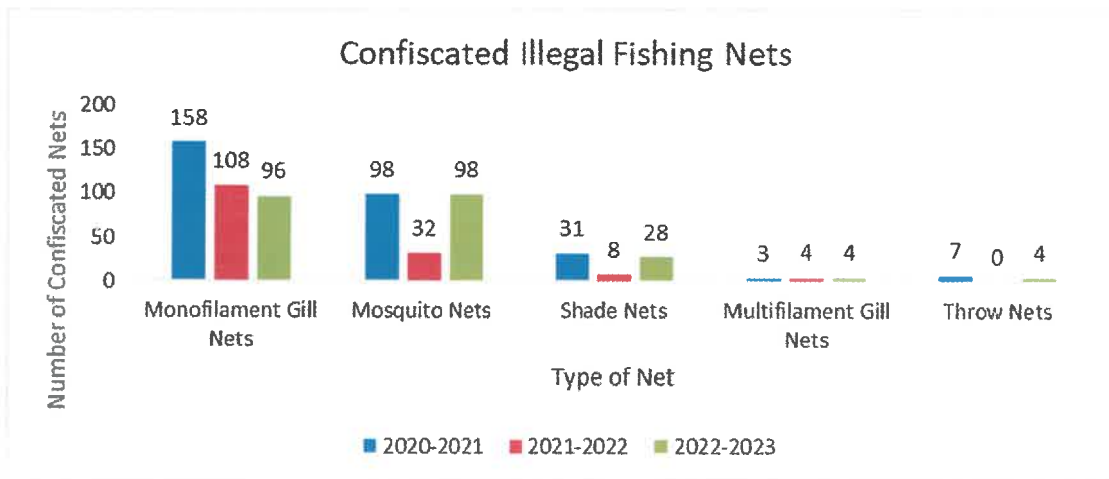
Picture 5: Illegal fishing net found in the canoe at Zambezi region.



Source: Pictures taken by auditors on 08/11/2023 during field work at the river.

Figure 10 below shows that despite the ban of monofilament nets in 2016 and the planned and conducted river patrols for the periods under reviews there was still a sharp increment of using monofilament nets and more illegal fishing methods.

Figure 10: Summary of confiscated illegal fishing nets in the *Kavango-East Region*



Source: MFMR’s Kavango-East Region Directorate of Operations Annual Reports

As per Figure 10 above, there was a 95% decrease in the number of confiscated illegal fishing nets between 2020/2021 and 2021/2022 and an increase of 34% between the 2021/2022 and 2022/2023 financial years. In addition, the lack of an operational patrol boat to catch those fishing with illegal fishing nets in the Kavango river system may also be a contributing factor.

Picture 6: Some of the confiscated illegal gears in Kavango East region.



Source: Picture taken by auditors on 15/11/2023 during field work at Kavango East region

Interviews conducted revealed that there is another challenge of fishermen fishing at night, while fisheries inspectors do not conduct operations at night due to security reasons. It should be noted that fisheries inspectors are not equipped for safety against armed fishermen. Additionally, there was a case opened against a fishermen for threatening and intimidating a Fisheries Inspector in one of the region's visited.

Furthermore, the Kavango East region has only one assigned patrol boat, which is used by more than one directorate. This leaves the boat susceptible to frequent maintenance issues. Hence, the river boat was grounded at the time of audit. River patrols were not conducted on both sides of the river because of the presence of only one boat, and the region only has four fisheries inspectors responsible for a river system covering a distance of over 400km. As a result limited river patrol may lead to the unsustainable management of inland fisheries resources.

Interviews conducted revealed that the MFMR has the control measures to ensure that proper fishing methods are used and protect the ecosystem as follows.

- The Fisheries Inspectors conduct daily patrols, monitoring and surveillance;
- Awareness campaigns are conducted at a quarterly basis;
- MFMR officials help conservancies with fishery reserves on a trans-border level/forum;
- MFMR also have joint patrols with Botswana and Zambia; and
- Fisheries Inspectors issued fines and burn illegal nets and open cases for illegal fishing.

Despite the strengthening aspects identified and enforced by the Ministry, interviews revealed that the control measures are not effective as illegal fishing activities continue to increase.

8.2 Marine Fisheries

Documentary reviews, observations, and interviews conducted revealed that the MFMR has the following control measures to protect the ecosystem:

- Total Allowable Catch of the various fish stocks to avoid depletion;
- Closing season for hake;
- By catches of fish stocks such as Sardines (Pilchards) which results in fines;
- Fisheries observers in each vessel and Vessels Monitoring System (VMS) on each vessel;
- Only certain gears are allowed;
- Makes use of the required mesh sizes;
- Certain areas are prohibited from fishing activities;
- Having working group meetings with stakeholders;
- Use the Automatic Location Centre to track vessels fishing in Namibian waters;
- Introducing areas for fishing to prevent overexploitation of fish stocks;
- Implements fishing gear to catch fish;
- Restrictions on the size of the fish harvested;
- Recommendations from biologists research;
- Make use of closed seasons for various species;
- The closure of Paaltjies from January to March every year;
- Imposed restricted areas down south, Torrabay, and Terrance Bay;
- Conduct inspections;
- Confiscate illegal baits, such as worms; and
- Furnishing of fines on illegal fishing activities and methods.

According to the interviews conducted, gill nets are not allowed in Marine fisheries. The industry only allows the use of trawl and purse seine nets, whose mesh sizes are specified according to the fishery pursued. This is due to the fact that these allow juvenile fish to escape and consequently leading to sustainable fisheries resources in the long run. Further, the Marine Resource Act, 2000 (Act 27 of 2000) authorizes descriptions of:

- The place and time in which harvesting operations may be conducted;
- Species, size and other characteristics and quantity of marine resources that may be harvested;
- Methods and gear that may be used; and
- Measures to limit the amount of harvesting capacity.

These measures are displayed on the fishing licences issued by the MFMR.

Additionally, the Marine Resource Act, 2000 (Act 27 of 2000) prohibits the harvest of any animal by means of a driftnet, being a gillnet or any other net, or a combination of such nets, with a total length exceeding 2.5 kilometers, or any shorter length as may be prescribed, being placed in the water and allowed to drift for the purpose of trapping or entangling marine resources. However, interviews conducted revealed that some fishing vessels still combine prescribed nets to exceed the allowable total length. This threatens the sustainability of the conserved resources for future generations.

Despite the above mentioned control measures, illegal fishing activities and methods persist. For instance, some of the by catches are attributed to deliberate fishing activities of targeting prohibited fish species by vessels/fishermen. This is due to low-priced fines which are incomparable to the returns they obtain from the sale of these fish species by catches. Consequently, the fines charged are not effective to prevent illegal fishing and to ensure the timely rebuild of the stock to 1 million metric tons by or before 2030. As displayed below in Table 9:

Table 9: Erongo Region Issuance of Fines

Indication of Fines Recorded for the Period Under Review	No. of Fines Issued for the Period Under Review
Prohibited annelid worms	768
No recreational fishing permit	732
Harvest undersize fish	375
Harvest undersize white mussels	344
Harvest undersize rock lobsters	269
Harvest rock lobster in berry	46
Supply false information	5
Fishing in prohibited area	16
Failure to give 24hrs notice for inspector monitoring landings	4
Fishing with 2 nets for mullets	6
Fish in excess	22
Kob over 70cm	18
Rock lobster in excess	206
Interference with fisheries inspector duty	2
Harvest White mussels in excess	19

Source: MFMR Quarterly Reports from Directorate of Operations

Additionally, fishermen challenge the effectiveness of the prescription of mesh sizes and lengths, by combining the prescribed nets to exceed the allowable total length. Thus, the MFMR lacks strengthening measures to discourage such destructive methods.

Picture 7: Some of the confiscated illegal fish in Erongo region



Source: Picture taken by auditors on 29/11/2023 during field work at Erongo region.

Picture 8: Some of the confiscated illegal fishing nets in Erongo region



Source: Picture taken by auditors on 29/11/2023 during field work at Erongo region.

Further, Namibia's Marine Resource Policy of the year 2004 provides the MFMR the prerogative to develop and implement measures to manage and control fisheries resources. It should also be noted that the measures identified by the auditee in this report are consistent with those identified

in the main audit report. Clearly, MFMR's current control measures does not strengthen to ensure that proper fishing methods are used and to protect the ecosystem.

Illegal fishing may lead to the breakdown of the river and ocean ecosystems and extinction of many aquatic species. Furthermore, the loss of certain fish species would lead to the potential collapse of Namibia's fishing industry entirely. In addition, there is also a risk that the fishing sustainability and the protection of eco-system will not be achieved due to increased incidences of illegal fishing methods.

Furthermore, during a coastal patrol alongside fisheries inspectors, the auditors interviewed a fishermen who was caught with fish beyond the allowable limit of 10 and was not in possession of a fishing license. The picture below shows a fishermen fishing exceeding the quantity of fish that may be harvested per day using hook and line.

Picture 9: Fishermen caught fishing a higher quantity of fish than what is allowed



Source: Picture taken by auditors on 29/11/2023 during field work at Erongo region.

The presence of illegal activities may undermine the effectiveness of the measures undertaken by the Ministry and lead to an increase in the quantity of fish caught, and consequently to the depletion of fisheries resources.

Conclusion

Despite having control measures in place to prevent illegal fishing activities, illegal fishing still being recorded in inland fisheries because of inconsistencies/ineffectiveness in the implementation of control measures and timing of the fishing which is at night.

Furthermore, illegal fishing activities and methods still persist in Marine resources due to the low-priced fines which are incomparable to the returns they obtain from the sale of these prohibited fish. Making all control methods to protect the ecosystem ineffective.

Recommendation

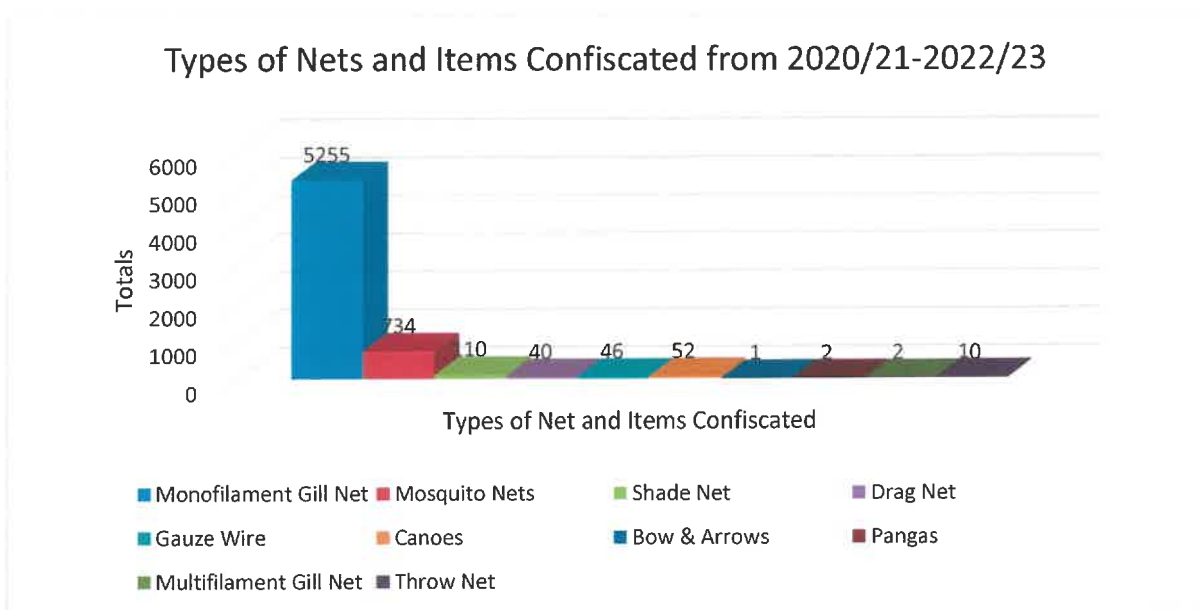
The audit recommends that the Executive Director of Ministry of Fisheries and Marine Resources (MFMR) should implement all control measures consistently for all Inland Fisheries across the country. Furthermore, the Ministry should increase fines for all illegal fishing, by-catch and prohibited areas fishing to ensure proper fishing methods are used and protect the ecosystem.

Recommendation 9: The MFMR should specify and consider the sustainable fishing gillnet to be used.

9.1 Inland Fisheries:

According to Government Gazetted Notice No. 296 of 15 December 2016, monofilament nets were banned from being used as regulated fishing gear in inland fisheries. Furthermore, there was a prohibition on the issuing of licenses for the use of such nets as regulated fishing gear. However, documents reviewed revealed that there were still cases of reported illegal fishing using monofilament nets. According to interviews conducted, multifilament nets are specified as sustainable in inland fisheries. This is due to the fact that they are visible to the fish and ensure that some fish are caught, while allowing others to easily avoid the net. Additionally, monofilament nets are highly prohibited as they are very thin and can catch more fish, which may limit reproduction. As per observations conducted, more thinner and advanced monofilament nets are in demand which are obtainable from the Zambian market. Interviews conducted further revealed that the use of monofilament nets persist because they are cheaper, are readily available in neighboring Zambia and give good yields as compared to multifilament nets.

Figure 11: Types of Nets and Other Items Confiscated:



Source: Directorate of Operations Quarterly Reports

Even though MFMR specified the preferred gill net, there were still recordings of high number of illegal confiscated nets and items, as the figure above clearly indicates that the consideration by MFMR about sustainable gill net to be used is not effective.

Furthermore, the use of monofilament nets and other prohibited items lead to the breakdown of river ecosystem and the extinction of many aquatic species.

Conclusion

The MFMR did gazette Notice No. 296 of 15 December 2016 regulating that monofilament nets are banned from being used as regulated fishing gear in inland fisheries. However, illegal fishing with monofilament nets is still persistent as the nets are easily obtainable in the market. This making the gazette not effective.

Recommendation

The audit recommends that the Executive Director of Ministry of Fisheries and Marine Resources (MFMR) should make the fines, punishment and enforcement harsher for transgressors that still use the banned monofilament nets and any other unlawful nets.

Recommendation 10: Fisheries reserves, closed seasons and furnishing of catch report should be enforced on the Inland fisheries.

10.1 Fisheries Reserves:

According to the Government Gazetted Notice No. 206, 297, and 298 of 15 December 2016, the MFMR gazetted 10 community small-scale fisheries management areas in the Kavango and Zambezi regions. This is in comparison with the time of the main audit where there was no Gazetted fisheries reserves in Zambezi and Kavango river systems.

Furthermore, Gazetted Notice No. 206 of 15 December 2016, section 3 clearly specifies fishing activities permitted in the fisheries reserves. Interviews further revealed that fishing in fisheries reserves is only done for recreational purposes.

The establishment of the fisheries reserve in the inland fisheries may lead to the effective, sustainable use of fisheries resources and protection of the ecosystem.

10.2. Closed Seasons:

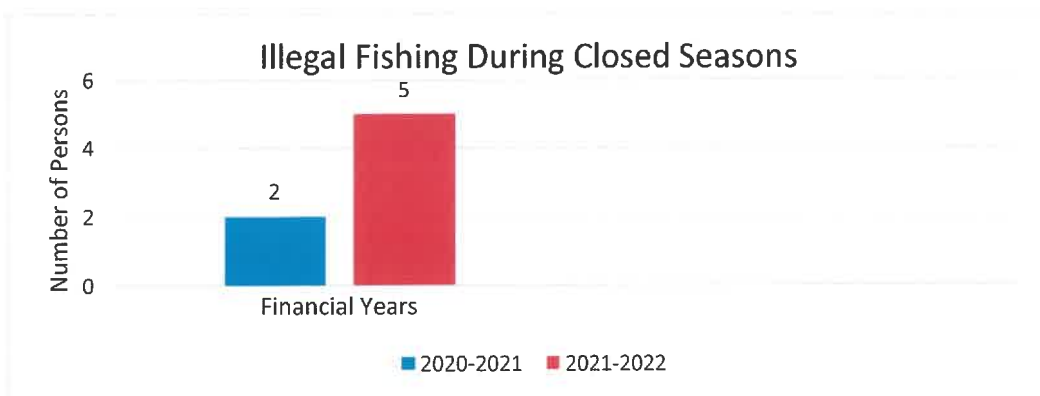
According to the government Gazetted Notice No. 206, 297, and 298 of 15 December 2016, the MFMR has succeeded in the gazetting of 10 community small-scale fisheries management areas in the Kavango and Zambezi regions. A closed fishing season starting from 01 December to 28 February every year was also introduced in 2016 in the Zambezi river system. The aim is to allow for the breeding of the most prominent economic and important fish species. Interviews conducted revealed that closed fishing seasons are communicated to law enforcement officials. Consequently, individuals caught in possession of fresh water fish at the Zambezi road blocks are required to provide proof that the fish was not obtained from the Zambezi river system. However, this is not

perceived to be effective by the Ministry as the river system area is too vast for 4 inspectors to control.

Interviews conducted revealed that, the MFMR experiences illegal fishing during closed seasons. These illegal fishing activities occur mostly at night. This follows when the foreign counterpart (e.g. Zambia) does not enforce measures of inspection on their side. Another factor contributing to illegal fishing during closed seasons is increased demand for fish by Zambezi natives working outside the region. The natives return to the region during closed seasons for holidays, and hire fishermen to catch fish for them.

Although the Ministry confiscated items, Case Register was inconsistently completed, as noted through documented review. It should be noted that the figures captured in the MFMR Case register are not consistent with those of the annual reports used below. The total number recorded by the Case register is 13 from 2020 to 2022, while the annual reports only captured 7 incidents for the financial years under review. See figure 12:

Figure 12: Statistical trends of illegal fishing activities during the closed season as per annual report



Source: Auditors data analysis: MFMR Annual Report data

Figure 12 shows a 60% increase in the number of illegal fishing activities during closed seasons between 2020/2021 and 2021/2022 financial years and none was recorded for the 2022-2023 financial year. Thus a further analysis could not be conducted. Furthermore, auditors observed fishermen were armed and holding aggressive behaviour towards fisheries inspectors during patrols.

Interviews conducted revealed that closed seasons have not been introduced in the Kavango river system. Although closed seasons are not introduced in the region, interviews conducted revealed that the MFMR experiences the most illegal fishing incidents at night. However, these are challenging to control because the fisheries inspectors are not adequately armed and lack relevant patrol vehicles, such as functional patrol boats. Moreover, the Angolan counterpart does not enforce measures of inspection on their side, which makes it challenging as offenders escape to

the Angolan side, where fisheries inspectors do not have access due to a lack of a functional patrol boat. Furthermore, the access roads along the river sides is obstructed by land structures and muddy and flood prone areas.

The inconsistent capture of illegal fishing activities undermines the reliability of information. This consequently impacts the correctness of the strategies the Ministry may employ given the inaccuracy of the data. The Ministry may not be able to measure their performance nor accurately determine its proximity to attaining objectives to decrease or eradicate illegal fishing during closed seasons. Furthermore, this implies that more resources may be available for future generations given the sustainability measure and improve economic activities as larger fish may be available for sale as opposed to infant species that may be caught during closed seasons. This reduces the effectiveness of the measures in place. Moreover, Namibians may not be appealed to fully comply with the measures when the counterpart appears lenient on the shared river system.

Furthermore, as per the auditor's observations, the safety and intimidation of inspectors may inhibit effective enforcement of the measures to eradicate illegal fishing activities.

10.3. Catch Landing Reports:

The main audit report dated 2016 indicated that that there was no landing areas established in inland fisheries. Still no landing areas were established by the MFMR at the time of the follow-up audit. The fishermen enter and leave the river at any point, there is no requirement to declare the amount of fish harvested. As a result, the Ministry cannot enforce the catch report.

Conclusion

The MFMR has gazetted 10 community fisheries management areas in the Kavango-East and Zambezi regions river system. However, the control measures that MFMR has implemented e.g. closed season has not been effective, as illegal fishing is still being recorded during closed seasons. This is caused by the understaffing and relaxed enforcement by Angolan and Zambian counterparts.

In addition, MFMR did not establish landing areas at inland fisheries as a result it is impossible to enforce the catch reports.

Recommendation

The audit recommends that the Executive Director of Ministry of Fisheries and Marine Resources (MFMR) should establish landing areas in order to enforce the furnishing of catch reports on the Inland Fisheries.

The audit recommends that the Executive Director of Ministry of Fisheries and Marine Resources (MFMR) should work closely with the counter parts (Zambian and Angolan governments) to deter illegal fishing during closed seasons on the Kavango and Zambezi river systems.

Recommendation 11: The MFMR should establish the Inland Fisheries Council and the Inland Fisheries Committee as required by the Act.

The audit noted that the MFMR have not established the Inland Fisheries Council and the Inland Fisheries Committee as required by the Inland Fisheries Resources Act, 2003 (Act 1 of 2003) since the initial audit. The Inland Fisheries Resources Act, 2003 (Act 1 of 2003) under section 10 requires the Council to be compensated and the MFMR does not have an Inland Fishery Fund to cater for the remuneration.

In contrast to Inland Fisheries Resources Act, 2003 (Act 1 of 2003), this undermines the effectiveness of the Ministry's current attempts to conserve and protect the aquatic ecosystems and to sustainably develop inland fisheries resources; undermines fisheries inspectors attempts to provide for the control and regulation of inland fishing. This is because there is no Council that can further oversee the current measures implemented in inland fisheries. The existence of this Council would adequately present the issues and needs on the ground to ensure that the Regional Offices implements concerns with urgency as the MRAC may endeavor to do.

Conclusion

The MFMR has not established the Inland Fisheries Council and the Inland Fisheries Committee as required by the Inland Fisheries Resources Act, 2003 (Act 1 of 2003) due to a lack of money to compensate the Council members.

Recommendation

The audit recommends that the Executive Director of Ministry of Fisheries and Marine Resources (MFMR) should budget and compensate members of the Inland Fisheries Council and the Inland Fisheries Committee as required by the Act.

ANNEXURE 1: LIST OF DOCUMENTS

List of documents that was analyzed during the Follow-up Audit listed below:

1. Strategic Plan and Annual Reports for the MFMR;
2. The by-catch reports of the Sardine;
3. Management decision letters on the Sardine stock moratorium;
4. Moratorium conditions;
5. State of the stock reports for Sardine;
6. Minutes of the recommended TAC to the Minister by the Marine Resource Advisory Council;
7. Minutes of the set TAC by the Minister;
8. The Economist recommendations reports;
9. The Quarterly reports for the Sea Patrol activities;
10. The proposed Sailing and Aerial programme;
11. Detailed database of all fishing vessels installed with the Automatic Location Communication;
12. Detailed VMS data of all the fishing vessels;
13. The requisitions for the new fleet and allocated fleet for Sea Patrol activities;
14. Maintenance reports for patrol vehicles / Job cards;
15. Transport reports of the patrol vehicles;
16. Approved Procurement Plan of vehicles;
17. The Sea and Aerial Surveillance activities undertaken;
18. Management action plans in relations to the management and control of inland fisheries resources;
19. Budgets and the Actual expenditures for the Marine and Inland Fisheries Resources Activities;
20. Issued contracts for the maintenance of vehicles;
21. Marine Resources and Inland fisheries Act, 2003 (Act 22 (3) of 2003);

22. Marine Resources and Inland Fisheries Act, 2003 (Act 296 of 2003);
23. Ministry's Gazetted Notices 206, 297 and 298;
24. MFMR MSC Inland Inspectorate Annual Reports;
25. Policies on Management and Control of Marine and Inland Fisheries Resources;
26. Minutes of meetings for operations and activities relating to Management and Control of Marine and Inland Fisheries Resources;
27. Internal memos for operations and activities relating to Management and Control of Marine and Inland Fisheries Resources; and
28. Directorates' risk register and internal audit reports.

ANNEXURE 2: STATUS OF RECOMMENDATION IMPLEMENTATION

Recommendation	Status of Implementation
1. The MFMR should conduct research and develop measures to re-build the sardine stock.	Partially Implemented.
2. The Marine Resource Advisory Council recommendation to the Minister should place more emphasis on scientific evidence.	Not Implemented.
3. The Ministry should ensure proper planning and prioritization of activities to ensure efficient and effective sea patrols.	Not Implemented.
4. Dysfunctional Automatic Location Communication devices on vessels should be repaired and brought into operation.	Implemented.
5. The Fisheries Observers Agency should deploy fisheries observers on all required vessels.	Partially Implemented.
6. The Ministry should ensure that there is proper communication between the radio centre and pilots during air patrols.	Partially Implemented.
7. The Ministry should ensure that suitable vehicles are available and develop measures to reduce the delays in maintaining vehicles.	Partially Implemented.
8. The Ministry should strengthen the control measures to ensure that proper fishing methods are used and protect the ecosystem.	Not Implemented.
9. The MFMR should specify and consider the sustainable fishing gillnet to be used.	Implemented.
10. Fisheries reserves, closed seasons and furnishing of catch report should be enforced on the Inland fisheries.	Partially Implemented.
11. The MFMR should establish the Inland Fisheries Council and the Inland Fisheries Committee as required by the Act.	Not Implemented.