REPUBLIC OF NAMIBIA

PERFORMANCE AUDIT REPORT OF THE AUDITOR-GENERAL ON

THE IMPLEMENTATION OF SUSTAINABLE DEVELOPMENT GOALS 2.3 AND 2.4

WITHIN THE MINISTRY OF AGRICULTURE, WATER AND LAND REFORM FOR THE FINANCIAL YEARS 2020/2021, 2021/2022 AND 2022/2023

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TO THE HONOURABLE SPEAKER OF THE NATIONAL ASSEMBLY

I have the honour to submit herewith my Performance audit report on the Implementation of Sustainable Development Goals 2.3 and 2.4 within the Ministry of Agricluture, Water and Land Reform for the financial years ended 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, APRIL 2025

JUNIAS ETUNA KANDJEKE
AUDITOR-GENERAL

Table of Contents

ABBREVIATIONS/ACRONYMS

ADC	Agriculture Development Centre
CA	Conservation Agriculture
CCAP	Comprehensive Conservation Agriculture Programme
CRAVE	Climate Resilient Agriculture in three of the Vulnerable Extreme northern crop
DAPEES	Directorate of Agricultural Production, Extension and Engineering Services
DARD	Directorate of Agricultural Research and Development
DCPP	Dry Land Crop Production Programme
EIF	Environmental Investment Fund
FAO	Food and Agriculture Organization of the United Nations
FBO	Farmer-Based Organization
IREMA	Improving Rangeland and Ecosystem Management Practices of Small Holder Farmers under conditions of climate change
M&E	Monitoring and Evaluation
MAWLR	Ministry of Agriculture, Water and Land Reform
NDP	National Development Plan
NGO	Non-Governmental Organization
NPC	National Planning Commission
NSA	Namibia Statistic Agency
NAMSIP	Namibia Agricultural Mechanization and Seed Improvement Project
IDI	INTOSAI Development Initiative
ISAM	IDI's SDGs Audit Model
RACI	Responsible Accountable Consulted and Informed
NPK	Nitrogen, Phosphorus, and Potassium
NAP	Nitrogen Ammonium Phosphate

LIST OF TABLES, PICTURES AND CHARTS

LIST OF TABLES

LIST OF CHARTS

DEFINITION OF TERMS

The definitions below indicate the meaning of how the listed terms are used in this policy in order to facilitate understanding of their usage and application.

Commercial Farming	Farming that focuses on producing agricultural products for sale in the market, rather than solely for subsistence purposes. *(Google definition)*
Result Orientated Approach	Assess whether an outcome or output objectives have been achieved or services are operating as designed.
Subsistence Farming	A form of farming in which nearly all the crops or livestock raised are used to maintain the farmer, and the farmer's family, leaving little, if any, surplus for sale. *(Google definition)*
Conservation Agriculture	Is an approach to managing agro-ecosystems for improved and sustained productivity, increased profits and food security, while preserving and enhancing the resource base and the environment. CA is characterised by three linked principles, namely: Continuous minimum mechanical soil disturbance, permanent organic soil cover and diversification of crop species grown in sequences and/or associations.

AUTHORS

Lorenzo Bock

Genovefa Shilongo

Andelaine Tsowases

Comments received

The Ministry of Agriculture, Water, and Land Reform (MAWLR) provided comments on the findings in the report. These comments are incorporated in Chapter 4 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, Section 26(3) of the State Finance Act authorised the Office of the Auditor-General to carry out special audits of which Performance audit is one. Therefore, this audit report is a coordinated audit comprises of compliance and performance audit with an environmental element which focus on the implementation of SDG 2.3 & 2.4 doubling food production and sustainable agriculture.The purpose of the report is to assess the progress made by the Ministry of Agriculture, Water, and Land Reform (MAWLR) in achieving the national target of doubling food production and promoting sustainable agriculture.

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

KEY FINDINGS

Government efforts for coherence and integration in implementation of the national target (SDG 2.3 and 2.4)

The audit revealed that the Ministry of Agriculture, Forestry and Land Reform (MAWLR) ensures inter-sectorial synergy policies to implement SDGs 2.3 and 2.4. However, the MAWLR lacks coordination and cross-sector synergies. This lack of horizontal coherence creates a risk of duplication of efforts and hampers the achievement of SDG targets.

Implementation of a set of policies contributing to the achievement of the national target

Data analysed revealed that the Namibia Statistics Agency, MAWL, and key stakeholders did not improve the quality of a government-led statistical system for developing periodic targets for SDG 2.3 & 2.4 and developing data management systems for accurate reporting. Documentary reviews revealed that SDG target 2.4 on sustainable food production systems was not reflected in the baseline, and the National Planning Commission's Voluntary National Review Reports were silent on the implementation of these targets. The MAWL also failed to provide evidence of accurately reporting strategic objectives related to food security and productivity.

Overall improvement of Performance relating to the achievement of Strategic Plan Targets

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

The audit revealed that the DAPEES and the Directorate of Agricultural Research and Development (DARD) failed to provide evidence of performance improvement in achieving targeted seed production, adaptive research activities, advisory services, and Conservation Agriculture practices.

Comments from the MAWLR:

DARD with the support from NAMSIP trained and increased the number of seed growers, secured additional hectares (30) of land at Sikondo Irrigation Project for seed multiplication and fixed irrigation system and other related electrical works on irrigation system.

Response on the Comment of MAWLR by OAG

MAWLR did not provide evidence in terms of performance improvement regarding the achievement of targets regarding targeted seed production, adaptive research activities, advisory services, and Conservation Agriculture practices. A revised table of figures was provided on the targets by MAWL, however, the audit found that the revised figures was not reconciling with the figures reported in the government accountability reports.

The Implementation of Actions toward achieving SDG 2.3 and 2.4

- **Conservation Agriculture (CA)**

The audit revealed that the DAPEES did not provide ripping services to 98% of crop farming households in Oshana, Kunene, and Kavango East regions, posing a risk to food security and climate adaptation. The audit also found that only 2% of households were provided with ripping services, compared to the total households conducting subsistence farming.

- **Horticulture Support Programme**

The MAWLR implemented a national agriculture support programme to enhance crop production and food security for farmers in the Kavango region. The program provided subsidized farm inputs such as improved seeds, fertilizer, pesticides, herbicides, and garden equipment. However, the number of farmers benefitted from the program fluctuated, with the Kavango region experiencing a decrease in beneficiaries from 2020/21 to 2021/22 and an increase from 2021/22 to 2022/23. The Oshana region saw an increase in farmers from 85 to 136, while the //Kharas regions saw a decline. Interviews with farmers revealed shortcomings in the program, such as not keeping crop yield data, not training farmers to conduct soil sample tests, and using synthetic fertilizers.

Interviews with Farmers also reported challenges in controlling pests, requiring more shade nets, experiencing water shortages, and blocking drip irrigation pipes. These challenges hinder horticulture production, leading to inefficiency by the DAPEES and state funds.

- **Agricultural Equipment/Implements**

The MAWLR procured conservation agriculture implements through the NAMSIP project to enhance agricultural productivity and empower rural people. However, interviews and observations in Kavango, Kunene, and Oshana regions revealed that the implements were not compatible with their intended use, causing issues like rippers not being compatible with tractors, seed planters spreading too much seeds, and service providers not available locally to repair imported tractors.

Comments from the MAWLR:

The implements at crop research stations were perceived not to be compatible with tractors. To address this complaint, the NAMSIP Technical Assistant for Crop Mechanisation together with DAPEES Engineers conducted ' Tractor-aggregations' Operations Training' for technical staff (implement operators, handyman, workhands and operator drivers).at crop research stations at Mannheim from 24 November 2024 to 08 December 2024.It was found a major problem is poor handling of machinery as a result of lack of the technical know-how on the operation and management of the equipment /implement that include adjusting and calibrating .

The main objective of the training was to enhance the capacity building of the staff or farm machinery operators at the research stations to meet the challenges of the received tractors and accompanying implements so as to cure the perception of inappropriate tractor-implement matching, sustain mechanization of agriculture and support the seed production program at the research stations.

Similarly, seed planters have different seed plates with varied cells that can accommodate varied seed geometrical dimensions (metering units with different sizes to match different types of seed) and require adjustment and /or calibration to suit the size of the seed.

- **DCPP – Dry Crops production Programme**

The MAWL has implemented a Dryland Crop Production Programme (DCPP) to boost food production and productivity along the cereal value chain. The program provides subsidies on tractors for various agricultural services, including ploughing, ripping, disking, and planting.

However, the audit found that government tractors do not reach farmers on time during the ploughing season due to a shortage of tractors, broken grounded tractors, and delayed servicing. Over 80% of tractors are operational, with only 15% in Kavango East, Kunene, and Oshana regions not working. The Kharas region lacks tractors due to livestock farming. The Kunene region has the highest proportion of non-operational walking tractors, with 50% of them non-functional. This hampers food production during the ploughing season.

The data analysis shows that more women have benefited from the fertilizer subsidies from the DAPEES over the past three financial years, aligning with the principle of leaving no one behind. However, interviews revealed that the MAWLR did not ensure farmers use organic fertilizers, as the National Agriculture policy 2015 is silence on the environmental-friendly fertilizer types. Farmers were still using NPK and NAP.

- **SSDDCA – Small Livestock Management**

The audit found through interviews, documentary analysis and physical observations that the visited Regional offices have implemented the Small Stock Distribution and Development Programme. However, the revolving program objective was not achieved as the audit noted that only 351 (76%) of the 460 small livestock farmers could be revolved after 5 years, with an average

gain of 88% per year. The //Kharas and Kunene regions had the best average gain per livestock per year, while Oshana and Kavango East regions had the worst. Despite receiving training on animal husbandry, small stock castration, and record keeping, many farmers reported losing goats due to theft, water shortage, diseases, abortion, and wild animals. Additionally, 36% of the 22 visited small-livestock farmers did not provide supplements to maintain good animal health.

- **Poultry Value Chain Development Scheme project.**

The programme modality made provision that beneficiaries are required to have an existing farm in order to benefit from the poultry subsidies poultry. The audit found that the regions visited benefited from the program, but not all the beneficiaries visited had chickens at the audit time. Interviews revealed that some farmers gave away chickens due to to chicken not breeding. As a result, the state funds did not achieve the intended results and inefficiency by the DAPEES.

Monitoring, Evaluation and Inspection

- **Agricultural Management Information system**

At the time of the audit, the DAPEES failed to establish a structured information system for data collection and dissemination of agricultural information, leading to estimation-based planning results. This results in the MAWL not accurately reporting food security objectives and providing inaccurate data for the Namibian Statistics Agency and baselines for NDP 6.

- **Farm verifications through Inspections**

The DAPEES audit found that they could not provide evidence of extension officers conducting farm verifications to determine if farmers meet criteria for benefits. Interviews and physical observations revealed a shortage of vehicles for these verifications, with non-functional ones stationed without repaired. The audit also found that the DAPEES did not promptly repair vehicles for extension officers. This could lead to incorrect beneficiaries benefiting from the MAWL subsidies, wasting government funds on food security activities and causing other beneficiaries to lose out.

- **Monitoring Implementation of Environmentally Friendly Fertilizers**

The audit revealed that the DAPEES has provided subsidies on fertilizer to farmers to boost food production, but there is no restriction on using environmentally friendly fertilizers. Farmers have the choice between organic and inorganic fertilizers. Physical observations show that inorganic fertilizers like NPK, UREA, and Nitrogen Ammonium Phosphate are used due to their affordability, causing long-term environmental damage.

Adequate Storage of Hazardous Substance and Agriculture Implements

The audit revealed that the MAWLR failed to ensure safe storage of agricultural equipment and hazardous substances, posing risks to employees' health and safety, and the environment during seeping, leaking, fire, or accidental release. The storage area was not designated as hazardous substance storage, isolated from other activities, and not clearly marked with warning signs, posing health hazards and soil contamination risks.

Research and Development

The audit found that the visited research centers which is Bangani, Mashare, and Omahenene, were established to conduct agricultural research and conserve genetic material. However, the audit revealed that these centers primarily focused on seed multiplication activities for mahangu and cow peas, resulting in no new crop varieties developed to better adapt to climate and enhance crop production resilience.

Comments from the MAWLR:

It should be noted that Mashare is not a crop research station and is one of the two (2) MAWLR training institutions, the other being Tsumis.

There are ongoing research activities on different crops the five crops re research stations namely Bagani, Kalimbeza, Mannheim, Okashana and Omahenene. Experimental trials are conducted on smaller areas to enable research to manage variation in the trials which could have given the impression that no research is being conducted.

However, research stations are also involved in seed multiplication particularly basic/foundation seed production as part of their mandate.

The Ministry has through mutation breeding developed 15 cowpea and 12 sorghums of seven (7) cowpea and four (4) sorghum have been provisionally released.

In addition, (6 Pearl Millet varieties were recommended to be listed as national varieties, however, due to the cross-pollination nature of this crop, there was a high rate of contamination during seed multiplication.

As a result, further research is still required to achieve purity in order to avail best pearl millet varieties to the nation.

The Ministry through the Directorate of Agricultural Research Development conserves 1573 accessions both in-situ and ex-situ at various localities namely, crop research stations, Genebank at the National Botanical Research Institute (NBRI) under the Ministry of Environment, Forestry and Tourism and Svalbard Global Seed Vault in Norway. This is to ensure that the country has access to genetic materials for use in crop research activities such as breeding to develop new crop varieties and/ or crop improvement.

Response on the Comment of MAWLR by OAG

MAWLR did not provide evidence during the time of the audit to substantiate their comment provided on research and development, therefore, the finding was not changed.

- **National Seed Council**

The MAWL failed to establish the National Seed Council, which would oversee the development of Namibia's national seed system. This lack of a seed service board and crop variety release committee could hinder the country's development of climate-resilient crops, potentially impacting its food security.

Comments from the MAWLR:

The Seeds and Seeds Varieties Act, No.23 of 2018 which was passed by the Parliament provides for the establishment of the Namibia Seed Council. However, the Act is yet to come into force once the Regulations have been gazetted. The lay man draft of the Regulations has been finalized and submitted to the legal Drafters. The Namibia Seed Council will only have established once the Regulations have been gazetted and process is ongoing

Government efforts at multi-stakeholder engagement in implementation of national targets

Documentary reviews reveal no coordination among stakeholders, with the Ministry and stakeholders working in isolation despite a common goal of effective communication. The audit found that DAPEES established Regional CA forums to coordinate agricultural activities, but these forums were inactive in visited regions due to committee members not reaching the quorum.

The extent to which government mainstreamed the principle of 'leave no one behind' in implementing the national targets.

The audit found that the Ministry's programme modality did not prioritize inclusivity for the marginalized community and disadvantage group, resulting in vulnerable group being left behind. The majority of households are female-led, and the majority of beneficiaries are youth, highlighting the need for gender equality in programs.

CONCLUSION

The audit found that the Ministry of Agriculture, Water and Land Reform and stakeholders were inefficient in implementing projects intended to achieve SDG 2.3 and 2.4, doubling food production and promote sustainable agriculture. This inefficiency is due to inadequate systems and mechanisms to ensure policy coherence and ensure the availability of necessary agricultural inputs.

RECOMMENDATIONS

To address the inefficiency in implementing projects aimed at achieving SDG 2.3 and 2.4, in the Ministry of Agriculture, Water, and Land Reform, the audit recommend the following actions:

- The Accounting officer of MAWLR and stakeholders should review and assess existing policies to ensure policy coherence for efficient SDG implementation, promoting a whole-of-government approach in doubling food production and sustainable agriculture, thereby promoting sustainable development;
- The Accounting Officer of MAWLR and stakeholders must establish baseline indicators, set periodic targets, and manage national and regional agricultural sectors to monitor and evaluate SDG indicators 2.3 and 2.4;

- The Accounting officer of MAWLR should prioritize activities promoting sustainable agriculture, enhance monitoring mechanisms, and ensure harmonised implementation of sustainable practices;
- The Accounting officer of MAWLR should conduct a needs assessment to identify suitable agricultural implements for the regional environment, training in soil sampling and pest control and enhance reporting mechanisms to ensure timely and adequate supply to farmers;
- The Accounting officer of MAWLR should establish a system to guarantee the availability of tractors, seeds, and fertilizers in sufficient quantity and quality to meet farmers' needs;
- The Accounting officer of MAWLR should establish mechanisms to ensure farmers revolve livestock within the specified timeframe to maintain the project's continuity and sustainability;
- The Accounting officer of MAWLR should establish a mechanism to ensure extension officers are adequately equipped to verify farmers before approving them as program beneficiaries;
- The Accounting officer of MAWLR should conduct market research to develop and purchase environmentally friendly organic fertilizer to support farmers in mitigating climate change effects;
- The Accounting officer of MAWLR should develop a comprehensive strategy for providing climate-resilient seeds, establish a dedicated governance body, and implement robust monitoring mechanisms to identify and develop crop varieties suited to local climate conditions, ensuring climate resilience is a key focus;
- The Accounting officer of MAWLR should establish a structured communication framework with all stakeholders to ensure alignment and collaboration towards common goals. Mandatory attendance requirements and a committee should facilitate communication and align on goals and strategies. Joint action plans detailing stakeholder roles, responsibilities, and contributions to promote coordinated efforts; and
- The Accounting officer of MAWLR should revise program modality to include disadvantaged and marginalized groups, prioritizing inclusivity in planning and implementation to ensure active engagement and support.

CHAPTER 1

1.1 INTRODUCTION

Namibia is the driest country in Sub-Saharan Africa and depends largely on groundwater. Only 2% of Namibia's land receives sufficient rainfall to grow crops. Seventy[1] percent (70%) of the country's population depends directly or indirectly on agriculture for their income and livelihood, mostly in the subsistence sector. However, the country's arid climate and geographic conditions do not favor farming and the crop variety is rather limited. Major crops include maize, millet and sorghum. There are mainly two types of farming in Namibia, namely commercial farming and subsistence farming.

Namibia adopted the United Nations Sustainable Development Goals (SDGs) within its National Development Plans (NDPs), incorporating them into various policy and strategic planning documents. SDG2, which focuses on achieving Zero Hunger by eradicating hunger, double food production and promoting sustainable agriculture, aligns with the objectives of NDP5. Under NDP5, there is a commitment to expanding irrigated land by 5,536 hectares and encouraging at least 50% of farmers to adopt Conservation Agriculture practices. This aligns with the need to meet the growing food demands of the expanding population at the local and national levels.

The successful realization of SDG 2 depend on the MAWLR and key stakeholders ability to adopt a cross-sectorial approach that facilitates the integration and coordination of efforts related to all 17 SDGs. This necessitates the establishment of a shared platform for implementing the SDGs and achieving SDG2. To effectively combat hunger and promote sustainable agriculture, it is imperative to address various factors, including consumer behavior, environmental and resource management, climate change mitigation and adaptation, and the imperative to generate employment opportunities and investments within the agricultural sector.

1.2 MOTIVATION

Despite the Government's commitment, through Ministry of Agriculture, Water and Land Reform (MAWL) and stakeholders[2], to double food production and sustainable agriculture, the following performance risks indicators were identified during the Pre-study stage in terms of the following:

- There was no periodic target for the SDG 2.3 and 2.4 to measure progress towards Vision 2030 by the Namibia Statics Agency;
- There was no baseline target set by the Namibian Statistics Agency (NSA) to measure the progress for SDG 2.4;
- There was no horizontal coherence amongst the stakeholders, leading to duplication of efforts and working in silos;

[1] GIZ Sector Brief Namibia: Agriculture, March 2022

[2] Environmental Investment Fund (EIF)
National Planning Commission (NPC)
Namibia Statistics Agency (NSA)

- The MAWLR failed to achieve set targets for seed production tonnage; advisory services and the extent to which Conservation Agriculture (CA) practices are adopted;
- The MAWLR inconsistently conducted verification of farms, in order for farmers to benefit from the subsidies;
- There was no co-ordination amongst key stakeholders on implementing and achieving the key targets;
- The MAWLR invested in implements that are not suitable for local conditions, hence implements acquired are not being used;
- There is a risk that N$ 1 182 161 062 spent from the 2018/19 financial year to the 2021/22 financial year was not aligned to the Strategic Plans related to projects earmarked for Climate Resilient Agricultural Systems and Sustainable Food Production.
- Risk of fraud and corruption. The internal audit department of MAWLR could not provide evidence on whether they timely conducted audits on the Directorate of Agricultural Production, Extension and Engineering Services (DARD) and the Directorate of Agricultural Research and Development (DARD), to timely identify weaknesses in controls that could lead to fraud and corruption; and
- Environmental risks such as the storage of hazardous substances.

CHAPTER 2: AUDIT DESIGN

2.1 AUDIT METHODOLOGY

The team conducted the audit in accordance with the performance auditing standards and guidelines issued by the International Organization of Supreme Audit Institutions (INTOSAI). The guidelines and policies conform to International Standards of Supreme Audit Institutions (ISSAIs), specifically ISSAI 3000 and provide guidance on the planning, execution and reporting of audit findings.

Furthermore, the team conducted the audit in accordance with the I*NTOSAI Development Initiative* (IDI)'s SDGs Audit Model (ISAM) framework, which offers a methodology for auditing SDG implementation, and Performance Auditing guidelines.

The ISAM, indicates that SAIs should examine the progress made in achieving nationally agreed-upon targets connected to SDG targets:

- while ensuring policy coherence;
- considering multi-stakeholder involvement; and
- adhering to the leaving no one behind principle.

The audit used a results and problem performance audit approach, which is recommended by the ISAM to assess the progress made by the MAWLR and stakeholders in implementing the SDG 2.3 &2.4.

Result Orientated Approach – *Assess whether an outcome or output objectives have been achieved or services are operating as designed.*

Problem Orientated Approach – *Examines, verifies and analyses the causes of particular problems and deviations from the criteria.*

2.2 AUDIT OBJECTIVE

To evaluate the progress made by the Ministry of Agriculture, Water, and Land Reform (MAWLR) in achieving the national target of doubling food production and promoting sustainable agriculture.

The audit utilized the combination of the result and problem oriented approaches to establish the level of implementation for the SDG 2.3 and 2.4. The audit tested the different programs implemented by the Ministry, in order to establish how effective and efficient the Ministry was in achieving the listed targets.

Specific Audit Objective:

1. Determine whether there is alignment and coherence within the regulatory framework of the MAWLR and its stakeholders. Additionally, assess the adoption of these frameworks in strategic planning guidelines;
2. Evaluate whether the MAWLR has ensured that farmers have access to sufficient tools and inputs to achieve the goals of doubling food production and promoting sustainable agriculture;
3. Examine the coordination among multiple stakeholders involved in the implementation of initiatives aimed at doubling food production and promoting sustainable agriculture; and
4. Assess if the MAWLR and stakeholders insure gender inclusivity and consider the disadvantaged groups in the agriculture projects implemented.

Within the audit objective the risk to three E's were assessed as follows:

Economy: Activity Based Costing Analysis to assess whether the MAWLR adhered to the Management Policy of 2011, *"ensuring that medium and long-term budgets are informed by and aligned to Strategic Plans. Equally, Annual Plans need to be consistent with the availability of appropriate finance."*

Efficiency – Assess whether the MAWLR have utilized the resources at their disposal to implement sustainable agriculture and double food production to ensure food security and zero hunger in Namibia.

Effectiveness – Assess whether the MAWLR and stakeholders achieved their national target of doubling food production and promoting sustainable agriculture.

Environmental: Assess whether the MAWLR and stakeholders promote organic fertilizer to mitigate environment impact, as synthetic fertilizer used for crop farming contribute to water pollution and soil acidification.

2.3 AUDIT SCOPE

2.3.1 Audit object

The main audit investigation centered on evaluating the functions, frameworks, and initiatives of the MAWLR and key stakeholders tasked with implementing SDG 2.3 and 2.4.

2.3.2 Time coverage

The main study covered three financial years 2020/21, 2021/22, and 2022/23 for analysis and review in order to establish a trend or developments in secondary data through documentary review, whilst primary data was collected through physical observations and interviews. The

assessment aimed to scrutinize performance indicators throughout this timeframe, emphasizing any disparities or similarities in performance to measure progress toward achieving SDG 2.3 and 2.4.

2.3.3 Geographical coverage

The geographical coverage of the listed activities of the MAWLR covered all 14 regions. However, due to the vastness of the regions, five regions: Khomas, Kavango East, Oshana, //Kharas, and Kunene were visited by the audit team. The selection of these regions are explained below:

Khomas Region: to gather audit evidence at the head office through interviews and document collection;

Kavango East, Oshana, /Kharas and Kunene: to gather information from regions that have implemented Conservation Agriculture (CA), and also represent different geographical areas of the country, taking into account the varying degrees of impact from drought in each region. This selection also aimed to represent communities with diverse cultural orientations regarding crops and livestock production. The purpose was to facilitate meaningful comparisons in relation to the government's efforts to achieve SDG targets 2.3 and 2.4. For details, refer to the sampling plan in *Appendix I.*

2.4 AUDIT EVIDENCE

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

2.4.1 Interviews

The purpose of the interviews was to gather information as evidence and to get clarification on how MAWLR implanted SDG 2.3 &2.4, in terms of doubling food production and maintaining sustainable agriculture. Furthermore, also to collect the perspective of different stakeholders and to corroborate information obtained from document reviews. The audit team conducted a total of 19 interviews. *See attached Appendix III.*

2.4.2 Physical Observations

The purpose of the physical observations were to determine whether projects implemented have achieved its objectives, by observing the crop, livestock and poultry production, in order to corroborate with documents. *See attached Appendix IV.*

2.4.3 Document Analysis

The purpose of the documents analysis was to corroborate interviews and physical observations. *See attached Appendix V.*

2.5 THE NEED FOR AN EXPERT

The audit did not need an expert.

2.6 ASSESSMENT OF RISK OF FRAUD AND CORRUPTION (CA)

The risk of fraud and corruption was assessed by first testing whether DAPEES and DARD have controls in place to timely detect and prevent fraud and corruption. Thereafter, the audit assessed whether the Internal Audit Department of MAWLR, have timely conducted audits on DAPEES and DARD and whether their recommendations that are link to the risk of fraud and corruption was timely implemented.

CHAPTER 3: DESCRIPTION OF THE AUDIT AREA

3.1 MANDATE, VISION AND MISSION

Mandate

The Ministry of Agriculture, Water and Land Reform (MAWLR) mandate is derived from the following documents: Namibian Constitution; Vision 2030; National Development Plans; Harambee Prosperity Plan; 2014 SWAPO Party Elections Manifesto; Sustainable Development Goals; Growth at Home Strategy; Agenda 2030; Agenda 2063; Paris Agreement of Climate Change; Comprehensive Africa Agriculture Development Programme which is "to promote, develop, manage and utilize the agriculture, water and forestry resources sustainably."

Vision

"A recognized leading contributor to food and nutrition security, equitable access to agriculture, water and forestry resources and enhanced livelihoods."

Mission

"To create an enabling environment and develop strategies, programmes and projects aimed at enhancing food nutrition security and improving the livelihoods of Namibians."

3.1.1 Organizational Structure

The Ministry is headed by the Minister. The Executive Director (ED) reports to the Minister and there are 11 (eleven) directorates. The Main study focused on the Department of Agriculture, Extension and Engineering services and Directorate of Research and Development. *See attached Appendix IX*

3.1.2 Funding

The funding for the activities of the MAWLR Reform in relation to the relevant directorates for the financial years under review are as follows:

Table 1: Budget allocation for the Department of Agricultural Production, Extension and Engineering Services is as follows:

Financial year	Authorized Expenditure N$	Actual Expenditure N$	Variance N$
2020/21	194 963 236	195 154 396.40	(191 160.40)
2021/22	194 466 818	183 360 384.43	11 106 433.57
2022/23	181 583 000	175 730 020.00	5 852 980

Source: *Report of the Auditor-General on the accounts of the MAWLR for the financial years ending 2020/21-2022/23*

During the financial year 2021/22, the underspending within the main division was attributed to two key factors. Firstly, staff members who had retired resulted in decreased expenditure. Secondly, there were delays in the delivery of printed purchase orders, which meant that these orders could not be fulfilled within the specified timeframe during the year under review. While, 2022/23 underspending was due to tenders of diesel, which were not awarded on time, and supplier could not deliver timeously until the end of the financial year under review.

Table 2: Budget allocation for the Directorate of Agriculture Research and Development

Financial year	Authorized Expenditure N$	Actual Expenditure N$	Variance N$
2020/21	134 840 151	128 937 757.13	5 902 393.87
2021/22	126 528 147	110 026 845.89	16 501 301.11
2022/23	131 832 845	121 110 355.99	10 722 489.10

Source: *Report of the Auditor-General on the accounts of the MAWL for the financial years ending 2020/21-2022/23*

In the financial year 2020/21, the table above illustrates a 4.4% underspending within the Directorate. This was primarily caused by delays in addressing critical issues such as repairing broken transformer at Mashare Agricultural Development Institute (MADI), procuring water pump parts at Bagani Research Station, and acquiring a server for the monitoring and evaluation system under the Namibia Agricultural Machination and Seed Improvement Project (NAMSIP). These delays were attributed to Covid-19 restrictions, as the primary suppliers were located outside Namibia's borders. Consequently, the allocated funds for invoice payments in this division remained unutilized.

In contrast, in the 2021/22 fiscal year, the underspending was attributed to an unfilled vacant position during the financial year under review. Another contributing factor within the development budget was the earmarked funds for payment of a variation order related to Katima/Liselo farms in the Zambezi region. The Ministry had submitted a request to the Central Procurement Board and was awaiting a response, which further contributed to the underspending.

3.1.3 Staff establishment

The Staff establishment for the period 2020/21-2022/23 for the Department of Agricultural Production, Extension and Engineering Services and Directorate of Agriculture Research and Development was not provided.

3.2 KEY ROLE PLAYERS OF THE MINISTRY OF AGRICULTURE, WATER AND LAND REFORM

The following key role players were identified using the INTOSAI Development Initiative's sustainable Development Goals Audit Model (ISAM) to conduct stakeholders' analysis:

Table 3: Roleplayers Analysis

Stakeholders	Role	Interest	Priority for the audit.
Ministry of Agriculture, Water and Land Reform	To create a conducive environment for increased and sustained agriculture production and productivity; To accelerate the agriculture sector contribution to National Growth Domestic Product; and To promote development of national agriculture sector across the value chain.	To empower farmers and increase food security.	High
Environmental Investment Fund	The Environmental Investment Fund is mandated by the Environment Investment Fund of Namibia Act, 2001, (Act No. 13 of 2001) "To provide for the establishment of an Environmental Investment Fund of Namibia in support of sustainable environmental and natural resources management in Namibia; to constitute the Board to manage and control the Fund, and to define its powers and functions; and to provide for incidental matters."	To have a more inclusive approach, and to regulate the use of natural resources to prevent wastage, inefficiency and degradation.	High

	The role of the EIF is as follows: Mobilise funding, and; allocate funding to activities and projects, which promote the sustainable use and efficient management of natural resources for the benefit of all Namibians.		
National Planning Commission	The National Planning Commission is mandated by the National Planning Commission Act 2013 (Act No. 2 of 2013) to: (a) "Spearhead the identification of Namibia's socio-economic development priorities; (b) formulate short-term, medium-term and long-term national development plans in consultation with regional councils; (c) develop monitoring and evaluation mechanisms to ensure effective implementation of the national development plans; (d) evaluate the effectiveness of Government socio-economic policies; (e) coordinate the development of government socio-economic policies to ensure consistency; and (f) mobilise, manage and coordinate international development cooperation."	Monitoring and evaluation of the national agreed targets linked to the SDGs.	High
Namibia Statistic Agency	The Namibia Statistic Agency Act is mandated as a national technical and institutional framework to facilitate	Maintain and record keeping of SDG data	High

	the capture, management, maintenance, integration, distribution and use of spatial data (Statistics Act 9 of 2011, Section 47(1)).	and information.	

Source: Own audit analysis

3.3 SDG INDICATORS

As a signatory to the Agenda 2030, Namibia committed to implement SDG 2.3 and 2.4 which aspire to attain food security worldwide by 2030 through implementation of sustainable agricultural techniques that will increase resilience of farmers to climate change impacts, and minimize the negative climate impacts of increased agricultural production/ productivity efforts as stipulated in the NDP5. Each SDG target has accompanying indicators to measure attainment, as indicated below:

Table 4: Indicators for SDG Targets 2.3 & 2.4

SDGs	Indicators
2.3: By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment.	2.3.1: Volume of production per labour unit by classes of farming /pastoral /forestry enterprise size; and 2.3.2: Average income of small-scale food producers, by sex and indigenous status.
2.4: By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality.	2.4.1. Proportion of agricultural area under productive and sustainable agriculture.

3.3.1 Key principals in SDG Implementation

As opposed to the past approach to interventions to attainment of food security which were characterised by government players working in silos and limited collaboration with non-government actors, the SDGs emphasise collaboration with and inclusion of all, especially the

most vulnerable. As such, the implementation of the SDGs is anchored on four key principles, as explained below:

a) **Whole of Government approach:** Countries are expected through their NDPs responsible for the implementation of the national target to take into account the interconnections, as well as the collaboration, coordination and communication mechanisms between them, and provide a holistic picture of the actions taken at different levels of government. The audit assesses the extent of coherence and integration in the implementation of the policies.

b) **Policy coherence:** Policy coherence involves being mindful of the cross-cutting nature and long-term impact of policies, thereby, creating mechanisms for interactions across sectors and aligning actions between levels of government.

c) **Leave no one behind:** Countries are meant to prioritize the vulnerable groups in implementing the SDGs. The audit has considered women and girls in agriculture and also agricultural interventions in refugee hosting communities.

d) **Multi stakeholder engagement:** Governments are meant to reach out to and involve multiple stakeholders in the setting and implementing of nationally agreed targets linked to SDGs. The principle requires that implementation and follow up processes of the SDGs should be participatory and inclusive, including all levels and sectors of government, civil society and the private sector, members of parliament and national human rights institutions, among others.

3.3.2 Interlinkage between SDG 2.3 & 2.4 and other SDG Targets

There exist inter-linkages/ synergies between the two SDG targets 2.3 and 2.4, as well as between the two targets and other SDG targets. A synergy is a beneficial or detrimental interaction among two or more actions, which may result in an impact greater or less than the sum of individual actions. For instance, the interaction between SDG 2.3 and 2.4 can be beneficial as implementation of sustainable agricultural practices (SDG 2.4) makes farmers more resilient to climate change-related shocks such as drought and floods, increasing food production and contributing to food security (SDG 2.3). On the other hand, a trade-off/ negative synergy may arise in a case where efforts to increase agricultural production, productivity and incomes result in greater carbon emissions or destruction of carbon sinks such as wetlands and forests may the increase the effects of climate change and affect the soil quality.

Efforts should be made to augment positive synergies and minimize the negative. In addition, analysis of these synergies informs assessment of policy coherence and progress towards goal achievement.

The interlinkages between SDG Targets 2.3 and 2.4 and other SDG targets are explained in the table below:

Table 5: Synergies between SDG Targets 2.3 & 2.4

Targets	Indicators	Description of the Synergies (Positive or negatives)
5.a Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws.	5.a.1 (a) Proportion of total agricultural population with ownership or secure rights over agricultural land, by sex; and (b) share of women among owners orrights-bearers of agricultural land, by type of tenure.	Positive one-way synergy with 2.3. Giving women greater land rights may result in greater food security as they would have more say in what crops are grown, and how much is retained for domestic consumption.
13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.	13.1.1 Number of countries with national and local disaster risk reduction strategies.	Negative 2-way synergy with 2.3 For instance, climate related mitigation strategies may limit increase of agricultural production, productivity and incomes say in cases where some land is prohibited for cultivation. On the other hand, the quest to increase agricultural productivity and incomes may lead to climate related effects because it may involve destruction of natural cover like forests and swamps. **Positive 2-way synergy with 2.4**. For instance, climate related mitigation strategies may lead to implementing of resilient agricultural practices and vice versa.
15.3 By 2030, combat desertification, restore degraded land and soil, including land affected by	15.3.1 Proportion of land that is degraded over total land area.	**Negative 2-way synergy with 2.3**

desertification, drought and floods, and strive to achieve a land degradation-neutral world.		For instance, restoring degraded land and soil may mean destruction of agricultural farms and pastoral areas which may hinder agricultural production and income. On the other hand, human activities to increase in agricultural productivity and income may affect quality of the soils thus leading to land degradation. **Positive 2-way synergy with 2.4** For instance, implementing of resilient agricultural practices may include restoration of degraded land and soil thus combating desertification. On the other hand combating desertification may involve implementing of resilient agricultural practices.
8.5 By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.	8.5.1 Average hourly earnings of female and male employees, by occupation, age and persons with disabilities. 8.5.2 Unemployment rate, by sex, age and persons with disabilities.	**Positive 2-way synergy with 2.3** For instance, productive employment with inclusion of vulnerable groups can be achieved with increased agricultural production and vice versa. **Negative 2-way synergy with 2.4** For instance, efforts to implement resilient agricultural practices to reduce effects of climate change may leave some

		women and persons with disabilities unemployed.
17.11 Significantly increase the exports of developing countries, in particular with a view to doubling the least developed countries" share of global exports by 2020.	17.11.1 Developing countries and least developed countries' share of global exports.	**Positive 2-way synergy with 2.3** For instance, increase of the country's exports can be achieved with increased agricultural production and vice versa. **Negative 2-way synergy with 2.4** For instance, efforts to increase the country"s exports may hinder the implementation of some resilient agricultural practices such as encroachment on natural resources hence increasing the effects of climate change and vice versa.
2.5 By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seedand plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed.	2.5.1 Number of plant and animal genetic resources for food and agriculture secured in either medium or long-term conservation facilities.	**Positive 2-way synergy with 2.3** For instance, increased agricultural production can be achieved with efforts in genetic diversity of seeds, cultivated plants and domesticated animals and vice versa **Negative one-way synergy with 2.4.** Implementing it negatively affects 2.4 For instance, efforts to maintain the genetic diversity of seeds, cultivated plants and domesticated animals may negatively affect

		implementation of resilient agricultural practices.
17.12 Realize timely implementation of duty-free and quota-free market access on a lasting basis for all least developed countries, consistent with World Trade Organization decisions, including by ensuring that preferential rules of origin applicable to imports from least developed countries are transparent and simple, and contribute to facilitating market access.	17.12.1 Average tariffs faced by developing countries, least developed countries and small island developing States.	**Positive one-way synergy with 2.3.** Implementing it positively affects 2.3 For instance, Efforts to facilitate market access encourage increased agricultural production, productivity and incomes. **Negative one-way synergy with 2.4.** Implementing it negatively affects 2.4 For instance, Efforts to facilitate market access may hamper strategies of promoting resilient agricultural practices since farmers may be tempted to look at the gains in increased production due to a ready market.
9.a Facilitate sustainable and resilient infrastructure development in developing countries through enhanced financial, technological and technical support to African countries, least developed countries, landlocked developing countries and small island developing States.	9.a.1 Total official international support (official development assistance plus other official flows) to infrastructure.	**Positive one-way synergy with 2.3.** Implementing it positively affects 2.3 For instance, efforts towards sustainable resilient infrastructure development in Namibia may increase agricultural production and productivity **Negative one-way synergy with 2.4.** Implementing it negatively affects 2.4 For instance, efforts towards resilient agricultural practices may be hampered with increase in technological

		advancement and technical support to farmers in Namibia.

3.3.3 Government efforts for coherence and integration in implementation of national targets

3.3.3.1 Government actions to attain SDGs 2.3 and 2.4

In order to sustainably double agricultural production and productivity of small scale farmers, the government of Namibia implemented the following interventions through legal, policy, programme and projects:

i) Dry land;

ii) Fertilizer use (organic and inorganic fertilizers);

iii) Improved seeds and breeds (Higher yield, drought resistant, quick maturing, pest resistant);

iv) Pesticide use;

v) Irrigation and rain water harvesting; and

vi) Extension services (improved agro-techniques and technologies).

The interventions above are broadly implemented by the MAWLR through the Departments of Agriculture production, Extensions and Engineering Services (DAPEES), and Research and Development.

3.3.3.2 Laws and Legislation to address Sustainable Food production

The Ministry of Agriculture, Water and Land Reform is mandated to promote, develop, manage and utilize Agriculture, Water and Forestry resources. Further to formulate, review and implement national policies, plans, strategies, regulations and standards and enforce laws, regulations and standards along the value chain of crops and livestock. The ministry achieves this through collaboration with other government agencies, ministries and non-state actors.

The Namibian Government have developed a number of policies, guidelines and regulations in relation to sustainable food production which are presented below:

Table 6:Linkage of Laws and Regulation to sustainable food production

Policy, Laws And Regulation	Link to ensure Sustainable Food Production
NDP5	The government will intensify agricultural extension services to smallholder farmers and/or communal farmers by providing information on how to organize themselves into cooperatives, access credit and acquire agricultural implements such as tractors. Furthermore, government will support the modernization of agriculture production. There will be increased, acquiring land for redistribution, supportive infrastructure for small-scale farmers including increased access to market, quality control support and better seeds. Green scheme projects will be expanded." Further states, • "5 536 ha of land for irrigation will be developed, 82 200 ha of land is bush thinned annually, advance the use of Conservative Agriculture (CA) with at least 50% of farmers practicing CA, expands green scheme, support small scale and subsistence farmers. • Provide information on modern farming practices including information on how communal farmers can organize cooperatives, access credit and acquire agricultural equipment. • To increase productivity of subsistence farming. Crop rotation; soil enrichment and organic pesticides usage will also be encouraged especially on communal lands"
National Agriculture Policy 2015	Chapter 1 Section 3.1 of the Namibia's Agricultural Policy (2015), in order to implement policies on crop production, the Government shall: • Expand Green Scheme Programmes under which it will develop irrigable land along perennial rivers and large dams and other sustainable water sources; • Implement conservation agriculture programmes; • Implement the Dry Land Crop Production Programme (DCPP) and support farmers through the provision of subsidized fertilizer, improved seeds as well as weeding and ploughing services;

	• Expand extension services and capacitate extension personnel in order to bring services closer to crop farming communities; • Implement and support Horticulture Development Programme; • Support research for soil fertility enhancement technologies; and • Develop Agricultural Training Centre's (ATC's) and continue to import and adapt the latest production technologies to Namibian conditions. Chapter 5, Section 3 of the Namibia Agriculture policy of 2015, states "...in order to implement the stated policies on international cooperation Government shall: 3.1 Initiate and ensure the implementation of all bilateral, regional, and multilateral agreements related to the agriculture sector by meeting all Namibia's obligations while taking maximum advantage of benefits offered under these agreements. 3.2 Create a central repository of all international agreements that are related to agriculture, water and forestry. 3.3 Monitor and evaluate Namibia's conformity to her international obligations under bilateral, regional and multilateral agreements and conventions."
National Agriculture Strategic Plan 2017/18-2021/22	The objectives aimed to increase productivity during the strategic period through the implementation of appropriate technologies e.g. Comprehensive Conservation Agriculture (CCA) and mechanization in order to ensure food security at both household and national level. Increasing the grains capacity to ensure the availability of food at all times. To strengthen agriculture, water and forestry research capacities for technology development and strengthen the coordination between research and advisory services to facilitate technology transfer. The strengthened coordination between research and advisory services will transform the sector into a more knowledge intensive system through research, capacity building and professionalization of producers thereby ensuring efficient and effective technology generation and dissemination.

Comprehensive conservation Agriculture Programme for Namibia 2015-2019	The overall objective of this programme is to counter and reverse land degradation and to adapt to climate change/ variability through the adoption of CA as a basis for sustainable crop production and improved food production security at both national and farm, including smallholder, levels.
National Policy on Climate Change for Namibia	The main purpose of the national climate change policy of Namibia is to provide the legal framework and overarching national strategy for the development, implementation, monitoring and evaluation of climate change mitigation and adaptation activities. The policy promotes the enhancement of synergies amongst sectors and stakeholders for effective and efficient mitigation and adaptation responses to climate change in Namibia. In addition, the policy facilitates identification of sector and cross-cutting climate change strategies and actions for implementation to lower Namibia's overall risks, and the risks of the most vulnerable groups and sectors. The policy also provides a legal basis for resource mobilisation to address climate change adaptation and mitigation.
Namibia Seed Policy 2013	The primary objective is to enhnace availability of good quality seed and thereby ensure household food security.

3.3.4 Ministry of Agriculture, Water and Land Reform structure and other players involved in efforts to attain SDG targets 2.3 and 2.4

1. The Ministry of Agriculture, Water and Land Reform is the focal point of efforts to ensure food production and sustainable agriculture by 2030 supported by the following keys players who are outside the agriculture sector:

2 Ministry of Environment, Forest and Tourism;

3 National Planning Commission;

4 Namibia Statistic Agency; and

5 Environmental Investment Fund.

3.3.4.1 The Role and responsibility of Key players in SDG 2.3 and 2.4

The Responsible, Accountable, Consulted and Informed (RACI) analysis was undertaken to establish the role of the different role players in efforts to attain sustainable food production, as summarized in the matrix below:

Table 7: RACI Analysis

RACI Analysis					
Key:					
Responsible: who is responsible for the implementation of the task; who is assigned to work on this task?					
Accountability: Who has the authority to take decisions, whose head will be answerable if this goes wrong or is not done?					
Consulted: Anyone who can tell me more about this task; anyone who has to be consulted before this task is done.					
Informed: Whose work depends on this task; who has to be informed/updated after this work is done?					
Activities (Process)	Ministry of Agriculture, Water and Land Reform	Ministry of Environment, Forestry and Tourism	National Planning Commission	Environmental Investment Fund	Namibia Statistic Agency
Adopting the SDGs in law & regulation	RA	R	CI	RA	CI
SDG Implementation	RA	R	CI	R	CI
Data collection	R	R	R	R	RA
Ensure food security in Namibia	RA	C	I	R	I
Promote adoption of productivity & enhancing technologies	RA	R	C	R	I

3.4 SYSTEM DESCRIPTION

The Departments of Agriculture production, Extensions and Engineering Services (DAPEES) within MAWLR is responsible for developing strategies and implementing the SDGs indicators 2.3 &2.4. Whereas, The Namibia Statistics Agency is tasked with adopting and tailoring the Sustainable Development Goals (SDG) indicators to align with the country's context. Further, DAPEES is responsible for the coordination with various stakeholders, in order to establish a baseline, collect and disseminate crucial data essential for tracking progress toward progress toward achieving SDGs indicators. The National Planning Commission of Namibia is charged with monitoring, and evaluation of SDG implementation and the publication of the voluntary National Report on SDG progress. The Environmental Investment Fund is responsible for support of sustainable environmental and natural resource management.

3.4.1 Government efforts for coherence and integration in implementation of national targets

According to the Agriculture policy 2015, "efforts are made to provide a coherent framework, inter-linkages through the value chain as well as the sectors that are relevant to agriculture. The Namibia Agriculture Policy is the overarching policy and will serve as a base for drafting new as well as aligning existing policies, law and regulations. The policy presents a framework for the design of programmes and projects that will steer the performance of the sector."

3.4.2 Implementation of a set of policies contributing to the achievement of the national targets

According to the Getting Started with the Sustainable Development Goals, a guide for stakeholders of 2015, "Improving the quality of government-led statistical systems must be a first order priority, to ensure that countries can track progress on the SDGs and make evidence-based course corrections. The process of conducting a needs assessment must therefore start as soon as possible, in conjunction with the baseline and benchmarking process."

3.4.3 Overall improvement of Performance relating to the achievement of Target

According to paragraph 1.3 of the Performance Management Policy of Namibia of 2011, "The PMS is designed to ensure performance continually improvement" For the purpose of this audit, the improvement of objectives indicated in the Strategic Plan targets related to the Sustainable Agriculture was assessed.

3.4.4 Planning and Implementation of Food Production and Sustainable Agriculture

According to paragraph 7.3 of the Performance Management Policy of Namibia of 2011, "Medium and long-term budgets need to be informed by and aligned to strategic Plans. Equally, Annual Plans need to be consistent with the availability of appropriate finance."

According to paragraph 8.1.6 of the Performance Management Policy of Namibia of 2011, "Annual Performance Assessments and appraisals are to be conducted in April each year."

3.4.5 Implementation of Actions toward achieving Target 2.3 and 2.4

The MAWLR has implemented programmes that aimed to make progress in achieving Target 2.3 and 2.4:

According to MAWLR Strategic Plan of 2017/18-2021/22, "**Key Performance Indicators**: are simply measures of performance. They answer the question "How can success be measured and tracked?" Indicators help MAWLR to define and evaluate how successful is the Ministry towards the implementation of the initiatives."

The following are the key performance indicators to measure the progress the Ministry made towards achieving Target 2.3 and 2.4 to ensure food security in Namibia by:

- Tonnage of quality seed produced;
- Yields in tons of cereals harvested per hectare under rain fed;
- % of farmers practicing Conservation Agriculture (CA);
- Number of hectares developed for irrigation;
- % of farmers capacitated;
- Number of adaptive research technologies developed; and
- Number of genetic resources conserved.

3.4.5.1 Conservation Agriculture (CA)

According to the Comprehensive Conservation Agriculture Programme for Namibia (2015 – 2019), the object are as follows:

- to counter and reverse land degradation and to adapt to climate change/variability through the adoption of CA as a basis for sustainable crop production and improved food security at both national and farm, including smallholder, levels.

The programme specifically aims to:

- Increase awareness and knowledge of CA among stakeholders, including farmers, extension workers, researchers and policy- and decision-makers;
- Increase farmers' and extension workers' skills of practicing CA;
- Conduct farmer-focused research to develop appropriate CA technologies and packages for the farming systems;
- Establish institutional arrangements for harmonized and coordinated implementation of the CA programme;
- Ensure farmers have sustained access to CA equipment, inputs, markets and services; and
- Develop standards, then monitor and evaluate adoption and impact of CA.

3.4.5.2 Horticulture Support Programme

The Namibian Agricultural Policy (December 2015), Crop Production states, "In order to implement the stated policies on crop production, Government shall: Implement and support the Horticultural Development Programme."

In addition, the Horticulture Development Programme Modality state the purpose of the project is to ensure sustainable access, availability, use of essential farm inputs and capacity building of the small-scale horticulture producers.

3.4.5.3 Agricultural Equipment/Implements

According to the Comprehensive Agriculture Programme for Namibia (2015 – 2019) section 8.9.1 "Adapt proven CA technologies to local conditions. Establish suitable crop rotations and suitable crop varieties for local rainfall regimes and moisture conservation techniques (e.g. ripping), in the context of CA. Draw from work done locally since the 1990s and conduct additional on-farm trials where necessary."

3.4.5.4 Dry Crops Production Programme

According to Comprehensive Agriculture Programme for Namibia (2015 – 2019), section 8.8.2: "Introduce incentive schemes: e.g. subsidised CA equipment purchase or replacement schemes. These services could be part of existing programmes, with some modifications."

Table 8: DCPP subsidies Services

Services	Subsidy
Ploughing (disking; ripping; planting) by GRN TRACTORS	(Each service is at $250.00/ha/service) N$ 250.00
Ploughing (disking; ripping; planting) by PRIVATE TRACTORS	(Each service is at $350.00/ha/service) N$ 350.00
Ploughing by Drought Animal Power (DAP) (per ha)	(Each service is at $250.00/ha/service) N$ 250.00
Weeding to a maximum of 5ha/farmer	(Each service is at $250.00/ha/service) N$ 250.00

3.4.5.5 Small livestock management

The MAWLR implemented the Small Stock Distribution and Development Programme in Communal Areas (SSDDCA). This revolving project is aimed at providing quality core breeding flock of suitable local small stock to selected vulnerable households to gain a sustainable means of income generation and increased food security. After three years some quality selected

offspring's will go into a revolving scheme for redistribution where a farmer who received 21 small livestock will revolve 21 small livestock after three years.

According to the project modality, it is the responsibility of the beneficiary to maintain and clean his/her kraal regularly and report livestock losses. The extension officers have the right to inspect the kraal during his/her visits.

3.4.5.6 Poultry Value Chain Development Scheme project

The Poultry Value Chain Development Scheme overall objective is to provide poultry producers with subsidized inputs and capacity building along the value chain for income generation, employment creation in order to improve their socio-economic situation.

3.4.6 Farm verification

According to Comprehensive Agriculture Programme for Namibia (2015 – 2019), section 8.4.2: "Supervise CA promotion and implementation by all extension agents, inside and outside the MAWF."

3.4.7 Research and Development

According to the Namibian Agricultural Policy (December 2015), "In order to implement the stated policies on research and development, Government shall:

- Avail funds and develop programmes to promote innovation and research on appropriate technologies;
- Promote the participation of more farmers and seed cooperatives in order to ensure adequate seed production;
- Introduce new crop varieties that will adapt to local conditions through research stations; and
- Expand plant breeding and seed multiplication centers.

3.4.8 Monitoring and Evaluation

According to Namibian Agricultural Policy, Chapter 7, Section 3.1, the Government shall:

- "Design structured systematic process for the collection of data and dissemination of agricultural information."

3.4.9 Agricultural Management Information system

According to section 3.1 of Chapter 7 of the Namibian Agricultural Policy (2015), In order to implement the policies on agricultural management information system, Government shall:

- 3.1 Design structured systematic process for the collection of data and dissemination of agricultural information.

3.5 Government efforts at multi-stakeholder engagement in implementation of national targets

3.5.1 Stakeholder Coordination

According to the Namibian Agricultural Policy (2015), section 3.3.2, "The implementation of the strategies under this policy is expected to be a concerted effort by a host of role players within the Government, private sector and civil society as well as with the support of the international cooperating partners, all under the coordination and supervision of the Ministry of Agricultural, Water and Forestry. The stakeholders are expected to supplement Government/policy strategies with the aim to attain the objectives of this Policy."

3.6 The extent to which government mainstreamed the principle of 'leave no one behind' in implementing the national targets.

According to SDG, target 2.1, by 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round.

3.7 The risk of fraud and corruption

According to action 2.1.5 of the National Anti-Corruption Strategy and Plan 2021-2025, OMAs should "conduct corruption risk assessment and other system examination of procedures on corruption vulnerabilities and provide recommendations for risk mitigation and Organizational transformation."

It is important for DAPEES and DARD to timely implement the Internal Audit Department audit recommendations to timely address the risk of fraud and corruption. The Internal Audit Department should also regularly conduct internal audits on the DEA to ensure the implementation of their recommendations.

According to the International Professional Practices Framework (IPPF) for Internal Auditors, 2019 "To enhance and protect organisational value by providing risk-based and objective assurance, advice, and insight", the role of the internal auditor within an organisation can be clarified as:

- Providing objective risk based assurance;
- Being a trusted advisor; and
- Providing the organisation with insight.

The internal auditor needs to fulfil these roles so as to enhance and protect their respective organisation's value."

3.8 Storage of Hazardous Substance

According to Subsection 1 of Section 182 of the Labour Act 1992 as amended: Regulations relating to the Health and Safety of Employees at work, "...hazardous substances shall at any time be stored in such a manner that they do not create a risk to the health and safety of employees or other persons, nor any risk of contamination of the environment, due to seeping, leaking, fire or accidental release."

Subsection 2 of Section 182 of the Labour Act 1992: Regulations relating to the Health and Safety of Employees at Work states that, "...areas designated for storage of hazardous substances shall be isolated from other activities and be clearly marked with appropriate warning signs."

CHAPTER 4: FINDINGS

4.1 Government efforts for coherence and integration in implementation of the national targets (SDG 2.3 and 2.4)

Vertical Coherence

Vertical coherence requires that the different levels of government – national, regional, and local follow common policy objectives and align systems of funding, accreditation and quality assurance. The data analysed revealed that the SDG targets 2.3 and 2.4 were intergrated in the following documents/policies *(See annexure VI)*

- The National Development Plan 5;
- National Agricultural Policy 2015;
- National Agriculture Strategic Plan 2017/18-2023; and
- Namibia Seed Policy 2013.

The above indicates that there are inter-sectoral synergy policy coherence in the National system to implement SDG 2.3 and 2.4.

Horizontal Coherence

Horizontal coherence implies that there is understanding and coordination across policy areas within national or regional or local government. The audit found that the Ministry of Agriculture, Water and Land reform (MAWLR) did not coordinate adequately by ensuring that there are cross-sector synergies policy coherence that aligning actions between the levels of government. This is illustrated below:

The National Agriculture Policy of 2015 and the National Policy on Climate Change for Namibia are not aligned in terms of environmentally unfriendly fertilizers to be discouraged.

At the time of the audit, it was noted that the National Agriculture Policy is silent on the discouragement of scientific fertilizer which is not environmental friendly and which have an impact on climate change. This is in contradiction with the Climate Change Policy, and resulted in the MAWLR subsidizing synthetic fertilizers, which are harmful to the environment and contributes to climate change.

The absence of horizontal coherence in the government policies, creates a risk of duplication of efforts, as the MAWLR and key role players are using the fragmented approach of working in silos, thus hampering the achievement of the SDGs Targets.

Conclusion

The audit conclude that based on our audit evidence, the current governance arrangements for the implementation of the SDGs 2.3 & 2.4 at the country and local levels are not effective. This is because the MAWLR and role players are operating in silos and, or with standalone policies and

if they continue to operate with disintegrated policies, there will be continued duplications and overlaps of policies which will ultimately stretch the limited resources at Government disposal. The policies being incoherent, could mean that the governance structure has failed to encourage synergistic interactions among all stakeholders.

Recommendation
The Accounting Officer of the MAWLR and role players should review and assess the existing policies to ensure policy coherence within the government for efficient implementation of SDGs with an integrated approach. Harmonised policies will consequently, promote whole of government approach in doubling food production and sustainable agriculture.

4.2 Implementation of a set of policies contributing to the achievement of the national target

The audit found that the Namibia Statistics Agency (NSA), MAWL and key role players did not adequately coordinate to achieve improving the quality of a government-led statistical system in terms developing periodic targets for the SDG2.3 & 2.4 and develop data management systems to accurately and timely report on the implementation SDG 2.3 & 2.4.

The above finding is further explained by the following findings found during the time of the audit:

- Documentary reviews revealed that the SDG target 2.4 on sustainable food production systems was not reflected in the SDGs baseline of the Namibia Statistic Agency, regardless of the availability of data at the time of the audit. This is because no national definition and standardized computation methodology exist among stakeholders. As a result, there is no data available to establish the extent of implementation, and to inform planning;
- The National Planning Commission have issued two Voluntary National Review Reports on SDGs progress. However, documentary review revealed that both these reports are silent on the status of the implementation of the SDG indicators 2.3 and 2.4. (doubling the agricultural productivity and sustainable food production systems). This hampers the monitoring of progress of the SDG targets and vision 2030; and
- The MAWL could not provide evidence in terms of accurately reporting the achievement of strategic objectives relating to ensuring food security in Namibia and promote adoption of productivity & enhancing technologies. (See also paragraph 4.3 in this regard.)

Conclusion
The audit concluded that, despite the adequate legal and policy framework, the MAWLR did not ensure horizontal coherence in managing the sector at national level among government agencies to monitor and evaluate the implementation and the performance of the targets indicator of the SDG.2.3 and 2.4 as there are no baseline and periodic targets set. The absence of coordination among sectors poses a significant challenge in establishing the level of implementation and to monitor and evaluate SDG progress. Without these baselines, assessing the implementation of SDGs will be hindered, potentially leading to delays in achieving the goals.

Recommendation

It's imperative for the Accounting Officer of the MAWLR and roleplayers to establish baseline indicators, set periodic targets and coherent management of the national and regional agricultural sectors. This will enable the monitoring and evaluation of the implementation and achievement of SDG indicators 2.3 and 2.4.

4.3 Overall improvement of Performance relating to the achievement of Strategic Plan Targets

The Ministry of Agriculture, Water and Forestry

During the time of the audit the Directorate of Agricultural Production, Extension, and Engineering Services (DAPEES) and the Directorate of Agricultural Research and Development (DARD), did not provide documented evidence of performance improvement during the period under review for the following targets as required by paragraph 1.3 of the Performance management Policy of 2011:

- Achieving the targeted tonnage of seed production and yield the number of adaptive research activities conducted;
- The percentage of farmers receiving support through advisory services; and
- The extent to which Conservation Agriculture (CA) practices were adopted.

Comment from MAWLR

The Ministry through the DAPEES continue to provide advisory services to targeted farming communities along crop and livestock value chains as well as Conservation Agriculture practices. During 2023/24 the Ministry provided capacity building to a total of 76402 (35490 male and 40912 female) crop and livestock production. Furthermore, the Ministry continue to promote Conservation Agriculture through implementation of the Comprehensive Conservation Agriculture Programme. During 2023/24 financial year a total of 2698 (1057 male and 1641 female) CA farmers were trained in CA. The CCAP evaluation report 2021-2021 funded by the FAO and conducted by the UNAM and NUST consortium in 2023 revealed the following:
Outcome 1: Increase awareness, knowledge and application of CA / Good Agricultural Practices (GAPs) among stakeholders, including farmers, extension workers, researchers, policy-makers and decision-makers.
91.8% of the respondents were aware of CA practices, and 57.1% reported to have received training in CA country wide. The high awareness and capacity building is attributable to the stakeholder efforts by the Ministry and development partners such as the FAO, GIZ, NNF AND IRDNC among others.

Response on the Comment of MAWLR by OAG

MAWLR did not provide evidence in terms of performance improvement regarding the achievement of targets regarding targeted seed production, adaptive research activities, advisory

services, and Conservation Agriculture practices. A revised table of figures were provided on the targets by MAWL, however, the audit found that the revised figures were not reconciling with the figures reported in the government accountability reports.

4.4 Planning and Implementation of Food Production and sustainable Agriculture

Managing Budget Performance in Relation to key strategic outputs.

During the time of the audit the DAPEES and the DARD could not provide evidence as to what extent the amount of N$ 914 319 759.84 was spent during the period under review and was aligned to the Strategic Plan Objective to ensure food security in Namibia. The audit only received vote code summary reports of DARD and DAPEES which do not provide a link between budgeted expenditures and the achievement of Strategic Objectives. As a result, the absence of supportive documentation for expenditure during the period under review has raised concern on whether or not the budget was spend on the intended activities that are linked to the achievement of strategic objectives.

Moreover, the DAPEES and DARD did not ensure that annual plans are consistent with the availability of appropriate funds during the period under review. This is explained as follows:

- DARD viremented N$ 107 297 857.00 to other Directorates and still underspend its budget by N$ 33 176 183.99 during the period under review *(See table 9 below):*

Table 9: DARD Virements and Under Expenditure

Financial Year	Virements N$	Budget Under Expenditure N$
2020/21	(54 502 849.00)	5 902 393.87
2021/22	(11 558 853.00)	16 501 301.11
2022/23	(41 236 155.00	10 772 489.01
Total	**(107 297 857.00)**	**33 176 183.99**

Source: *Audited Financial Statements of MAWL 2020/21-2022/23*

- DAPEES viremented N$ 19 327 054.00 to other Directorates and still underspend its budget by N$ 17 150 573.97 (*see table 10 below):*

Table: 10 The DAPEES Virements and under expenditure

Financial Year	Virements N$	Budget Under Expenditure N$
2020/21	(8 395 236.00)	191 160.40
2021/22	(10 159 818.00)	11 106 433.57
2022/23	(772 000.00)	5 852 980.00
Total	**(19 327 054.00)**	**17 150 573.97**

Source: *Audited Financial Statements of MAWL 2020/21-2022/23*

The fact that MAWL did not ensure that annual plans are consistent with the availability of appropriate finance during the period under review. It is also an indication that funds were not prioritised for the key activities related to the operations of the DAPEES and DARD to achieve objectives which are summarised below and indicated further in the report.

- The DAPEES and DARD did not achieve targets i.e. tonnage of seed production and yield, inadequate agricultural implements, inadequate conservation agriculture, etc.;
- Inadequate monitoring and evaluation;
- Inadequate agricultural implements; and
- Inadequate multi-stakeholder engagements.

4.5 The Implementation of Actions toward achieving SDG 2.3 and 2.4

4.5.1 Achievement of Targets linked to achieving SDG 2.3 and 2.4

Documentary review revealed that the DAPEES and DARD did not achieve the targets desired during the period under review with regards to the following:

- **Tonnage of seed production and yield**

The audit observe that during the 2022/23 financial year, the DARD met 33% and 76% of their respective targets, which were 75 tons of foundation seeds and 280 tons of certified seeds. In comparison, in the 2021/22 financial year, the DAPEES achieved 47% of the foundation seed target, while, the DARD exceeded its certified seed target, reaching 117% of the goal with 226 tons produced, compared to a target of 72 tons for foundation seed and 226 tons for certified seed. However, no target data was provided for the 2020/21 financial year as indicated in the table 11 below.

Table 11: Targeted Foundation and Certified Seeds production in Tons

Financial Year	Target		Actual		Variance	
	Foundation Seeds	Certified Seeds	Foundation Seeds	Certified Seeds	Foundation Seeds	Certified Seeds
2022/23	75	280	25	212	50 (67%)	68 (24%)
2021/22	72	226	18.8	264	53.2(74%)	38 (117%)
2020/21	*	*	17	62	*	*
Total	147	506	60.8	538	103.2	30

Source: *Government Accountability Reports 2020/21 to 2022/23*

The table above shows that the DARD performed well, with an increase in the production of certified seeds over the two financial years. However, there was underperformance in the production of foundation seeds during the 2021/22 and 2022/23 financial years.

- **Number of adaptive research projects**

The audit found that there was an increase of 400% (4 adaptive research projects in 2020/21 financial year to 20 adaptive research projects in 2022/23 financial year) for the number of adaptive research conducted by the DARD during the 2020/21 to 2021/22 financial years. However, the audit could not assess whether the adaptive research conducted was favourable or not, due to lack of targets developed. See table 11 below:

Table 12: Number of Adaptive Research

Financial Year	Target	Actual	Variance
2022/23	*	20	*
2021/22	*	11	*
2020/21	*	4	*

Source: Government Accountability Reports

Comment from MAWLR

From the contacted adaptive research, new farming technology e.g., improved varieties were developed and distributed to farmers.

Response on the Comment of MAWLR by OAG

MAWLR did not provide evidence during the time of the audit to substantiate their comment provided on research and development, therefore, the finding was not changed.

- **Percentage of farmers supported through advisory services**

The audit found through data analyses, that the DAPEES is responsible for capacitating farmers through advisory services on conservation agriculture, crop production, horticulture, livestock production, poultry, animal and plant health, as well as rangeland management. In the 2020/21 financial year, the DAPEES achieved 48% of the target, which was 172 563 farmers, while in the 2022/23 financial year, it achieved 57% of a target of 130 896 farmers. However, for the 2021/22 financial year the DAPEES did not indicate the targeted farmers to be supported through advisory as a result the audit could not assess whether targets was achieved or not. See table 12 below.

Table 13: Number of farmers supported through advisory services

Financial Year	Total Targeted farmers	Actual Farmers supported	Farmers not supported	Percentage target achieved
2022/23	172 563	83 487	89 076	**48%**
2021/22	*	38 554	*	*
2020/21	130 896	74 790	56 106	**57%**
Total	**303 459**	**196 831**	**145 182**	

Source: Government Accountability Reports

**Information not available*

Farmers not adequately supported through advisory services risks them to be unequipped to respond to the adverse effects of climate change in terms of food production through agriculture and ultimately hamper the achievement of the strategic objective to ensure food security in Namibia which is linked to SDG 2.3.

Conclusion

The audit conclude that the MAWL did not achieve the intended objective of production of the target seed, conducting research in establishing the crop variety that are climate resilient and insuring that the farmers are capacitated in sustainable agriculture to ensure doubling food production which contravened their key performance indicators..

Recommendation

The Accounting Officer of the MAWLR should establish measures to ensure that targets set are achieved in order to achieve sustainable agriculture and double food production.

4.5.2 Conservation Agriculture (CA)

The audit found that for the period under review, on average, the DAPEES did not provide ripping services to 98% (36 506 households out of 37 138 households) of the households conducting crop

farming in the Oshana, Kunene and Kavango East regions. *(See table 14 below)*. This created the risk that 36 506 households conducting crop farming in the aforementioned regions are not sustainably producing crops for improved food security and were not resilient to adapt to climate change. During the time of the audit the DAPEES could not provide evidence of how they monitored and evaluated the adoption and overall impact of CA implemented and not implemented, so that the audit can assess whether DAPEES economically, efficiently and effectively planned for availability of implements, i.e. tractors to reach farmers timely during rainy seasons.

Table 14: Comparing ripping services with households conducting subsistence farming

Region	Households	Ripping services 2020/21	Ripping services 2021/22	Ripping services2022/23	Total services	% of total ripping service provided	% of ripping service not provided
Oshana	55,816	159	131	87	**377**	**1%**	**99%**
Kunene	27,774	48	*	144	192	1%	99%
Kavango East	31,122	256	161	541	958	3%	97%
//Kharas	33,841	*	*	*			
Average	37 138	155	292	257	**704**	**2%**	**98%**

OAG own analysis

** //Kharas region does not have ripping services, because farmers are livestock orientated, instead of subsistence farming in terms of crops.*

The above table indicates that from all the regions where ripping service were provided, only 2% on average were reached, compared to the total households conducting subsistence farming.

Conclusion

Whilst the MAWLR through DAPEES had made progress in mainstreaming climate change with adopting sustainable agriculture in their plans, the implementation of the measures put in place is not effective to encourage farmers to adopt the sustainable agriculture practices.

Recommendation

The Accounting Officer of the MAWLR should prioritise the activities that help spearhead sustainable agriculture, improve monitoring mechanism as well as harmonising the implementation of sustainable agriculture practices.

Comment from the MAWLR:

Conservation agriculture (CA), is among the climate smart agriculture practices proving to mitigate of some of the climate change and food systems challenges in Namibia. CA is a farming approach that promotes natural ecological processes to increase agricultural yields and sustainability by 1) minimizing soil disturbance, 2) maintaining permanent soil cover, and 3) diversifying crops. Ripping is just one of the practices for minimum soil disturbance. Ripping is not recommended to be done annually as it defeats the objective of minimum soil disturbance.

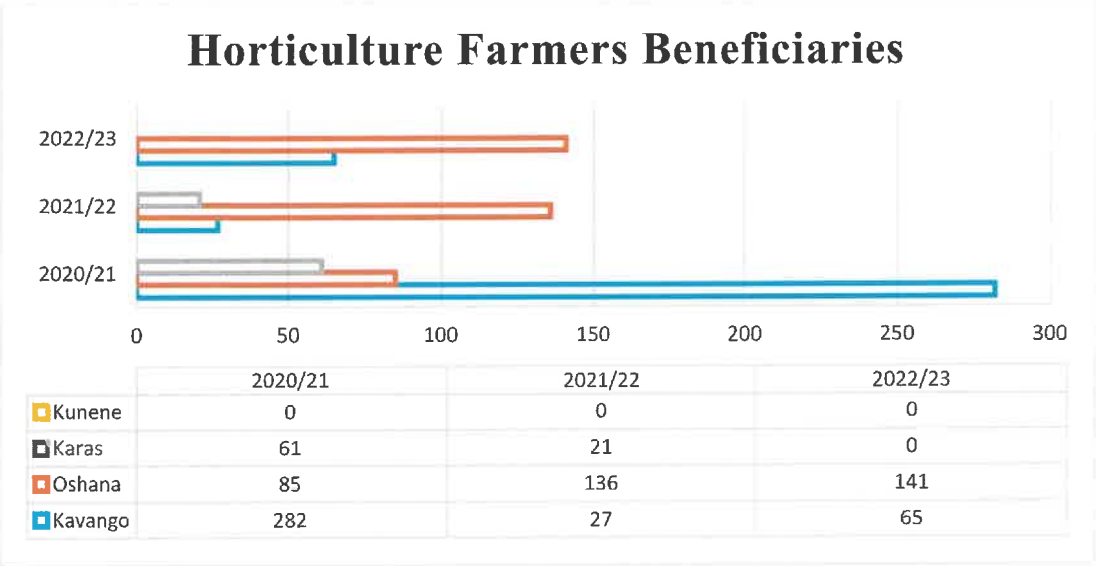
The CCAP evaluation report 2021-2021 revealed the following:

Outcome 5: Ensure sustained access by farmers to appropriate CA equipment, inputs and services. Government and development partners introduced new technology to farmers. CA equipment provision needs to be improved. Most farmers reported a lack of critical CA equipment, such as tractor-drawn rippers (45.0%). Most farmers (67.1%) reported access to CA services, and 79.0% had access to seeds developed under local conditions.

4.5.3 Horticulture Support Programme

Document analysis revealed that the Ministry have implemented a national agriculture support programme aimed at enhancing crop production, thereby increase food security and resilience of farmers to climate change through subsidised farm inputs such as improved seeds, fertilizer, pesticides, herbicides and garden equipment. Chart 1 below indicates the number of farmers that benefitted from the horticulture program in the visited regions during the period under review:

Chart 1: Horticulture Farmer Beneficiaries



	2020/21	2021/22	2022/23
Kunene	0	0	0
Karas	61	21	0
Oshana	85	136	141
Kavango	282	27	65

Source: OAG own analysis

The chart 1 above indicates that the Kavango region had a fluctuation in the number of farmers that benefitted from the Horticulture support programme of inputs subsidies, i.e. the farmer beneficiaries decreased by 110% (from 282 to 27) from the 2020/21 to the 2021/22 financial years and increased by 141% (from 27 to 65) from the 2021/22 to 2022/23 financial years. Whereas, the Oshana region recorded an increase in the number of farmers that benefitted from the Horticulture support programme on inputs subsidies, i.e. the farmer beneficiaries increased by 60 % (from 85 to 136) from the 2020/21 to the 2021/22 financial years and increased by 4% (from 136 to 141) form the 2021/22 to the 2022/23 financial years.

Moreover, the //Kharas regions recorded a decline over the financial years under review i.e. the farmer beneficiaries decreased by 66% (from 61 to 21) from the 2020/21 to the 2021/22 financial years and further decreased by 100% (from 21 to 0) from the 2021/22 to the 2022/23 financial years. Information provided by the Kunene region was not accurate for the audit to establish a trend. The audit could not establish the target set by the Ministry related to horticulture farmers benefitted per region to determine whether it is good or bad performance in terms of the number of farmer beneficiaries that benefitted and how it feeds into the Strategic Objective '*To Promote the adoption of productivity & enhancing technologies.*' Interviews at all the visited farmers who benefited from the Horticulture support programme indicated the following shortcomings which is an indication that MAWL does not achieve the aforementioned Strategic Objective:

- Data on crop yields are not kept by farmers resulting in the MAWL not able to factually report on the productivity of farmers;
- 60% (12/20) are not trained to conduct soil sample tests which risk farmers to plant seeds on unfertile land; and

- 35% (7/20) uses synthetic fertilizers which is environmentally unfriendly and risks the sustainability of crop produce.

Farmers in general revealed the following challenges which indicates that the MAWL capacity building of farmers is not working.

- Farmers do not know how to control mice and pests destroying plants;
- Farmers require more shade nets, because existing shade nets are damaged;
- Farmers experience water shortage and find it difficult to adapt; and
- Too much calcium in water causes blockage of drip irrigation pipes.

Furthermore, as per the programme modality, beneficiaries are required to have an existing garden in order to benefit. However, interviews conducted with regional officials revealed that, one of the farmers who benefited from the programme had a garden at the time, but it died due to a water shortage. The Horticulture support programme modality is silent on the period of existence of the garden after benefiting from the subsidies. The farmers interviewed indicate the challenges of pest damage and water shortage which hampers the horticulture production. As a result, this leads to state funds not achieving the intended result and inefficiency by the Directorate of Agriculture production engineering and Extension (DAPEES) service.

Conclusion

Whilst the MAWLR through DAPEES had made progress in mainstreaming climate change through implementation of the horticulture programme, in order to increase food production, the efficiency of the programme is hampered by shortcomings such as insufficient training, use of environmental unfriendly fertilizer, shortage of garden equipment, concerns of water shortage and pest management.

Recommendation

MAWLR should prioritise the activities such as training of soil sampling and pest control which might help spearhead sustainable agriculture, improve monitoring mechanism as well as harmonising the implementation of sustainable agriculture practices.

Comment from the MAWLR:

The Horticulture Support Programme is a subsidy programme funded by state funds. Through this programme, the Ministry provide subsidy to horticultural producers for accessibility and affordability to agricultural inputs such as seeds, fertilizer, irrigation materials, value addition, water pumps, tanks and stands among others. The programme is demand driven and therefore, the fluctuation in beneficiaries as farmers only participates when there is a need. Farm record keeping including production and marketing data is among the topics covered during trainings by the agricultural extension staff members in the regions. The Ministry continue to provide advisory services on soil fertility management including soil sampling and interpretation of soil test results for correct fertilizer application. The Ministry has a soil laboratory where farmers are assisted with soil testing at a minimum cost.

The Ministry is aware of the challenges related to pests, the need for shade nets, challenges with water among others. As a result, the Horticulture Support Programme was designed to address and mitigate these challenges. Many farmers have already benefited through procurement of shed nets, solar submerged pumps and centrifugal water pumps. With regard to the challenges of drip irrigation blockages, it's necessary to note that clogging is one of the major challenges of drip irrigation systems. In this regard the Ministry continue to advice farmers on methods to prevent clogging as the major cause is the physical clogging related to poor irrigation water quality, filtration system poorly designed and installed, the debris such as sediment may be pumped into the pipeline and drip tapes/drip lines. When debris passing through the dripper labyrinth, they will block the flow channel and make the dripper clogged. Some has to do with the type and quality of the drip irrigation system. However, the Ministry does not prescribe to the farmer on the exact product type a farmer should procure. In this regard, the Ministry provides technical advisory services on the appropriate technologies, but it the farmers' choice on the items they prefer to procure. The Ministry only provides the subsidy for affordability by the farmers.

Response by the OAG on the comment of MAWLR:

The Ministry is responsible to provide technical advice on appropriate technologies and should thus ensure that farmer's challenges are timely addressed to ensure good service delivery to the Namibian citizen. The audit reveals that the Ministry should improve its advisory service regarding appropriate technologies and not just say it is the farmer's choice to procure sub-standard implements. It ultimately remains the Ministry's responsibility to ensure farmers procure quality items.

4.5.4 Agricultural Equipment/Implements

The DARD within the MAWLR, through the NAMSIP project procured conservation agriculture implements for ploughing, ripping, disking, planting in order to serve the research Centre and farmers to enhanced the agricultural productivity by empowering the rural people. However, interviews and physical observation conducted in the Kavango, Kunene and Oshana regions revealed that the agricultural implements procured were not compatible for the intended use. This is because no needs assessment was conducted before procuring agricultural implements. The following issues were recorded:

- Rippers could not be used with tractors;
- Rippers were not suitable for the ploughing environment;
- Seed planters' spreads too much seeds and breaks down easily; and
- Service providers are not available to repair and service the purchased implements, resulting in implements to remain unrepaired and untimely maintenance thereof.

As a result, the agricultural implements procured becomes redundant and the intended objective of procuring these is not achieved and hinders the agricultural productivity. The pictures below display some of the implements that were observed:

Pictures: Agricultural implements

Picture of the grounded tractors and implements observed in the Oshana, Kavango and Kunene regions. These are mostly implements procured through the NAMSIP project.

Picture 1: Planters

Picture 2:Seeders (not compatible with soil)

Picture 3: Feeders

Picture 4: Grounded tractor

Sources: OAG own pictures

Conclusion

The MAWLR had no mechanisms to ensure that the appropriate agricultural implements are available to farmers. This is caused by oversight to supply agricultural implements to meet the

actual demand by the MAWLR. This might impact the productivity of food production in the country, a situation that lead to food insecurity.

Recommendation

The Accounting Officer of the MAWLR should conduct a needs assessment to establish appropriate agricultural implement suitable to the regional environment and improve available reporting mechanism so as to ensure timely and adequate quality and quantity implements are supplied to farmers.

Comment from the MAWLR:

The implements at crop research stations were perceived not to be compatible with tractors. To address this complaint, the NAMSIP Technical Assistant for Crop Mechanisation together with DAPEES Engineers conducted Tractor-aggregations' Operations Training' for technical staff (implement operators, handyman, workhands and operator drivers). at crop research stations at Mannheim from 24 November 2024 to 08 December 2024.It was found a major problem has to do with poor handling of machinery as a result of lack of the technical know-how on the operation and management of the equipment /implement that include adjusting and calibrating .

The main objective of the training was to enhance the capacity building of the staff or farm machinery operators at the research stations to meet the challenges of the received tractors and accompanying implements so as to cure the perception of inappropriate tractor-implement matching, sustain mechanization of agriculture and support the seed production program at the research stations.

Subsequently, all agricultural implements at research stations that were deemed inappropriate are fully functional following the training.

The report indicated the challenges were experienced at crop research station, yet with exception of Kavango East Region there are no research stations in Kunene and Oshana Regions.

Furthermore, it should be noted farm machinery such as walking tractors, tractors with implements procured through the Project to provide agricultural services to farmers only came into operations ***during the 2023/2024*** *financial year and* ***not 2022/2023*** *as alluded to in the report. This is after the project conducted training on 'Operation and Maintenance of Agricultural Machinery and Equipment' for 152 Farm Machinery Operators (FMOs) which took place concurrently at MADI, MITC. Okashana RDC and Tsumis Arid Zone Agricultural Centre (TAZAC) from 20 November -16 December 2023 after which the FMOs were deployed to the regions to provide agricultural services.*

The Project was only able to conduct training once verification, inspection, testing and commissioning of tractors with matching implements was completed and the Purchaser issued the Supplier with a Notification of Acceptance to the Technical Specifications, Testing and Commissioning on 23 November 2023. This is due to late delivery of the tractors as the Ministry had to cancel the initial contracts awarded to first bidder and awarded to two other bidders.

It should be noted that this a one-month mandatory training to ensure that Farm Machinery Operators (FMOs) are well equipped with necessary knowledge and skills to operate the tractor and implements.

Response by the OAG on the comment of MAWLR:

The fact that the audit did not conduct audit observations at at MADI, MITC. Okashana RDC and Tsumis Arid Zone Agricultural Centre (TAZAC) as was commented on by MAWLR shows that that the need for the procurement of appropriate agricultural implements is a countrywide problem that is not addressed timely by MAWL. Also, it not just about training operators on the use of farm implements, it is also important that the implements are compatible with the Namibian environment and that service providers are easily available when implements break down to timely support farmers during key seasons.

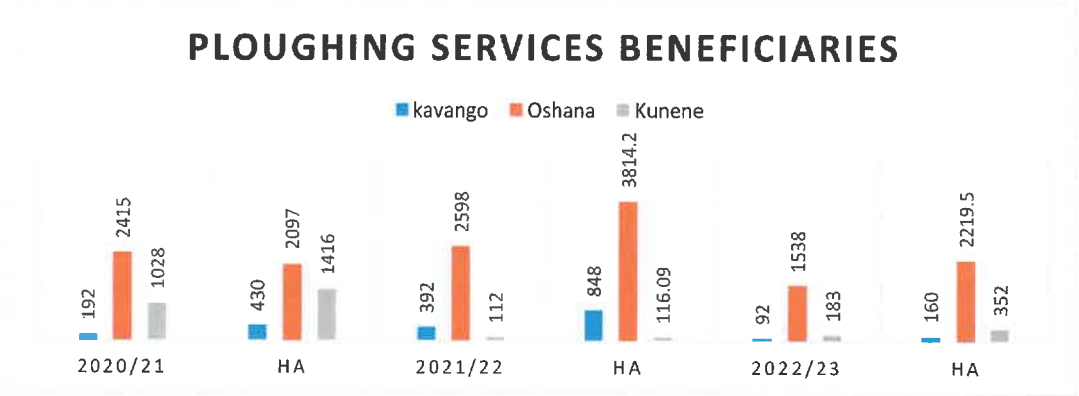
4.5.5 DCPP – Dry Crops production Programme

Data analysis revealed that the MAWL have implemented a Dryland Crop Production Programme aimed to increase food production and productivity along the cereal value chain thereby enhancing food security and creating resilience to climate change by introducing incentive schemes such as subsidies on certain services.

a) Ploughing Subsidies

The MAWLR provides a subsidy on tractors for farmers for the following services: ploughing, ripping, disking and planting. According to the Namibia Agricultural Policy (2015), Government shall implement the Dry land Crop Production Programme (DCPP) and support farmers through the provision of subsidized fertilizer, improved seeds as well as weeding and ploughing services.

Chart 2: The following is the number of farmers that benefited from the ploughing service:



Sources: OAG own analysis

The audit found, through interviews and documentary reviews that the Government tractors do not timely reach the farmers during the ploughing season. This is due to a shortage of tractors,

grounded tractors as they are broken and often not fixed on time and the available working tractors are not serviced on time before the rainy season. See Table 15 below:

Table 15: Agricultural Tractors and Equipment/Implements

Regions	Equipment	Total number of equipment	Equipment Operational	%	Equipment Non-operational	%
Kavango	Tractors	51	42	82%	9	18%
	Other Machines	255	221	87%	34	13%
	Farm Implements	142	115	81%	27	19%
Oshana	Tractors	59	45	76%	14	24%
	Walking Tractors	9	7	78%	2	22%
	Tractors Drawn Implements	17	6	35%	11	65%
Kunene	Tractors	25	24	96%	1	4%
	Walking Tractors	30	15	50%	15	50%
	Tractors Drawn Implements	94	82	87%	12	13%
Total		682	557	81%	129	19%
Average	Tractors			85%		15%
Average	Walking Tractors			72%		28%
Average	Tractors Drawn Implements			67%		32%

Source: OAG own analysis

The table above indicates that more than 80% of the tractors were operational at the time of the audit and on average 15% of the tractors in the Kavango East, Kunene and Oshana regions were not working. The //Kharas region did not have tractors during the time of the audit. However, interviews revealed that the available tractors are not sufficient to cover the farmers in the three respective regions. This leads to hampering of food production during the ploughing season.

On walking tractors, the audit also noted that the Kunene region has the highest proportion of non-operational walking tractors, with a rate of 50%. Interviews conducted revealed that they could not be fixed, because imported tractors and parts were difficult to find.

Furthermore, the number of farmers who received fertilizer subsidies from DAPEES, as well as the number of females and males who benefited from the subsidy program over the past three financial years can be seen in appendix VII. The data analysis indicates that more women have benefited from the program, aligning with the principle of leaving no one behind.

Interviews conducted revealed that the MAWLR did not ensure that farmer's uses organic fertilizers as the National Agriculture policy 2015 is silent on the types of fertilizer farmers should use to protect the environment. Interviews further revealed that farmers are using fertilizer such as NPK and NAP.

Conclusion

The MAWLR does not meet the demand of the farmers input and did not develop mechanism to ensure that farmers have access to the Agriculture input (tractors, seeds and fertilizers) during the ploughing season.

Recommendation

The Accounting Officer of the MAWLR should develop proper mechanism to ensure that the tractors, seeds and fertilizers are readily available in appropriate quantity and quality to meet the demand of the farmers and ensures timely distribution of tractors.

Comment from the MAWLR:

The demand for ploughing services is high. The Ministry has a total of 442 tractors of which 131 functional tractors from the old tractor fleet under the DCPP and additional 311 of the 350 procured through the Namibia Agricultural Mechanization and Seed Improvement Project (NAMSIP), distributed to the 14 regions of the country translating to 3 and 4 tractors on per constituency in the 10 communal crop growing regions of Zambezi, Kavango East, Kavango West, Kunene, Ohangwena, Oshana, Omusati, Oshikoto, Otjozondjupa and Omaheke and 1 to 2 tractors for Khomas, Erongo, Hardap and //Karas region. In addition, more walking tractors were procured and distributed in the regions. It is critical to note that, additionally, the DCPP makes provision of subsidy for the utilization of private tractors including Drought Animal Power to reduce the high demand of ploughing services.

A directive is usually communicated to all regions for the commencement of DCPP services effect from 1st November to 1st week of March each year. The Ministry has entered into agreement with the Regional Councils for the joint implementation of this programme. In this regard, dedicated banking accounts were created with the Regional Councils to fast track the payment of services including servicing of tractors and payment of tractor operators to ensure timely deployment. As a result, servicing of tractors and deployment of tractors is usually timely.

The Ministry continue to promote the use of organic fertilizers. Synthetic fertilizers are used globally by most country including the USA, Russia, China and India among others and provides

quick nutrients to plants, and increase crop yields but have environmental concerns. It is a food security concern and as such the Ministry continue to promote the use of organic fertilizers for gradual shifting to organic while safe guarding the livelihood of the Namibians as organic fertilizers cannot quickly provide the required nutrients to plants for enhanced yields.

4.5.6 SSDDCA – Small Livestock Management

The audit found through interviews, documentary analysis and physical observations that the visited Regional offices have implemented the Small Stock Distribution and Development Programme. However, the audit found that DAPEES did not ensure that the Small Livestock Distribution and Development Programme in communal areas achieve the objective of sustainable food production due to inadequate training and inspections conducted during the period under review. The finding is further explained as follows:

Revolving Small Livestock

The 22 Small livestock farmers in the visited regions should revolve at least 460 livestock after 3 years of receiving 21 goats (1 ram and 20 ewes) to new beneficiaries to ensure the sustainability of the Small Stock Distribution and Development Programme in Communal Areas (SSDDCA).

The data analyses of physical observations during the time of the audit revealed that after 3 years the 22 farmers-were unable to revolved at least 460 small livestock to new beneficiaries. The audit found that only 313 (68%) small livestock could be revolved based on an overall average gain per livestock of 36 livestock (8%) per year out of 460 small livestock received from government and number of years left on the revolving program during the time of the audit, whilst the number of deaths averages 8 livestock per year *(see annexure VIII)*.

The //Kharas and Kunene regions had the best average gain per livestock per year with 14 and 13 livestock's gains per year respectively from 334 small livestock received, whilst Oshana and Kavango East regions had the worst livestock average gain per year, with 1 and 8 gains respectively per year from 126 small livestock received from government.

Moreover, despite all the visited small stock farmers in the Kunene, Kavango East and Oshana regions and 53% of the //Kharas region small stock farmers receiving training on animal husbandry, small stock castration, record keeping, there is an indication that the training did not assist farmers because they indicated that they lose goats due to the following which negatively affects the revolving program:

- Theft;
- Water Shortage;
- Diseases;
- Abortion; and
- Wild animals.

In addition, 8 out of 22 (36%) visited small-livestock farmers did not provide lick, lucern and fodder to their animals as additional supplements to maintain good animal health. This is indicated in the following table:

Table 16: Average Small Livestock Stock Gains and Deaths and Deaths per year

Region	Number of Small Livestock farmers sampled	Small Livestock farmers not providing lick, lucern and fodder to small livestock	% farmers not providing lick, lucern and fodder to small livestock
Oshana	3	3	100%
Kunene	3	1	33%
Kavango-East	3	0	0 %
//Kharas	13	4	31%
Total	22	8	Overall Average 36%

Source: OAG own Analysis of Physical Observations Conducted

Conclusion

The audit concluded that the Livestock programme is not effective as the MWALR did not meet the revolving rate per current average gains. Thus, will not revolve the livestock as per the project objective, except for //Kharas region.

Recommendation

The Accounting Officer of the MAWL should develop mechanisms to ensure that farmers revolve livestock within the timeframe set in the modality to ensure continuation and sustainability of the project and to consider the regions that are doing well and concentrate them.

Comment from the MAWLR:

Small Stock Distribution and Development in Communal Areas is among the prioritised Ministry programmes targeting vulnerable farming households to gain a source of income, and livelihood improvement. The audit is correct, the programme has success stories in some regions while other regions have not performed successfully. Drought is a major contributor to the situation among other challenges. The Ministry continue to capacitate beneficiaries to ensure that they revolve to other farmers. The Ministry has signed agreements with the beneficiaries in line with the programme protocol document. The Ministry continue to provide training to beneficiaries on small stock production including supplementation.

4.5.7 Poultry Value Chain Development Scheme project.

As per the programme modality, beneficiaries are required to have an existing poultry producers in order to benefit from the poultry subsidies.

Documentary evidence revealed that all regions observed benefited from the programme. However, not all beneficiaries had chickens at the time of the audit. According to interviews conducted, this was due to the chickens not breeding and some of the farmers gave the chickens away.

Furthermore, the Poultry support programme modality is silent on the period of existence of the chicken farm after benefiting from the subsidies. As a result, this leads to state funds not achieving the intended result and inefficiency by the Directorate of Agriculture production engineering and Extension (DAPEES) service.

Conclusion

The audit conclude that the programme is not effectively implemented and is not sustainable in the long run if farmers are not productive in their poultry farming. Thus, the DAPEES development capacity and monitoring mechanisms of the programme is ineffective.

Recommendation

The Accounting Officer should develop mechanisms to ensure developing the farmers' capacity and monitor the progress of the farmers for the continuation and sustainability of the Poultry Value Chain Development Scheme Project.

Comment from the MAWLR:

The observation of the audit that the beneficiaries are required to have an existing farm is not correct. The modalities make reference to existing poultry producers and not necessarily owning a farm, as poultry production can be done even in urban and peri-urban setups. It is correct that some farmers might not have chicken due to incidences of mortalities among others and the incidence of some reported who gave away their chickens. It is the reason why the Ministry targets existing producers to increase success. Poultry is among the successful subsidy programmes and evidence exist in more egg's availability in communities and at affordable prices and as such the state funds is in good use.

Response by the OAG on the comment of MAWLR:

The finding did not say that the beneficiary is required to have an existing farm, but must be at least an existing poultry producer.

4.6 Monitoring, Evaluations and Inspections

4.6.1 Agricultural Management Information system

During the time of the audit, the DAPEES could not provide evidence that they designed a structured information system for the collection of data and dissemination of agricultural information. As a result, the actual results of planning are based on estimation meaning that the MAWL is not factually reporting the achievement of objectives related to food security and is not providing accurate and reliable data for the Namibian Statistics Agency and accurate baselines for NDP 6.

Comment from the MAWLR:

The Ministry take note of data management as a challenge. However, the Directorate has a monitoring plan aligned to the MAWLR plan linked to the strategic plan and the NDPs. Data collection tools in form of reporting templates and other data collection forms are communicated to the regions and the regions are usually reporting quarterly. There is a need to strengthen data management.

Response on the Comment of MAWLR by OAG

MAWLR did not provide evidence during the time of the audit to substantiate their comment on having a proper Agricultural Management System in place that is accurate and complete in terms of regional data submitted to the head office, therefore, the finding was not changed.

4.6.2 Farm verifications through Inspections

During the time of the audit the DAPEES could not provide evidence whether their extension officers conducted verifications at the existing farms to determine whether the farmers meet the criteria such as having an established garden or poultry project in operation to qualify for the benefits. Interviews in the visited regions revealed that there is a shortage of vehicles for extension officers to conduct farm verifications. This was corroborated through physical observations conducted by the audit, which revealed non-functional vehicles stationed at the regional offices. The DAPEES do not timely repair motor vehicles that extension officers can use. There is a risks that incorrect beneficiaries benefit from the MAWL subsidies due to the inadequate farm verifications, resulting in a wastage of government funds because the funds are not spend on food security activities, and other beneficiaries lose out from benefiting.

Conclusion

The audit conclude that extension officers were unable to conduct effective farm verifications due to the grounded and shortage of vehicles which caused by the delays in vehicles repairs. This situation poses a risk of incorrect beneficiaries receiving MAWL subsidies, leading to potential wastage of government funds and undermining the intended benefits of the program.

Recommendation

The Accounting Officer of the MAWLR should develop mechanism to ensure that extension officers are provided government vehicles to undertake farmers' verification procedure before approving the farmers as programme beneficiaries.

Comment from the MAWLR:

The Ministry recognises the limited availability of vehicles for field works in the Region hindering effective coordination and monitoring of agricultural programmes. In this regard, the Ministry has commenced with the procurement of vehicles. In this regard, 14 vehicles were procured during the end of the 2023/24 financial year to be distributed during the 1st quarter of the 2024/25 financial year. Budgetary provision is made to procure additional vehicles to the regions during the 2024/25 financial year.

4.6.3 Monitoring Implementation of Environmentally Friendly Fertilizers

The audit noted that the DAPEES implemented the subsidies on fertilizer for farmers to enhance food production in all the regions. However, there is no restriction to use environmental friendly fertilizers. Thus, farmers have an option between organic and inorganic fertilizers. The audit found through physical observations that farmers make use of inorganic fertilizers, e.g. NPK (Nitrogen Phosphorus Potassium), UREA and Nitrogen Ammonium Phosphate because it is a cheaper option. As a result, these inorganic fertilizers have a negative impact on the environment in the long run.

Conclusion

The audit conclude that the MAWLR did not ensure that subsidies encourage farmers to use environmental friendly fertilizers. The lack of restrictions on the type of fertilizers used, has led to a preference for inorganic options. This trend raises environmental concerns, as the extensive use of inorganic fertilizers can have detrimental long-term effects on the environment.

Recommendation

The Accounting Officer of the MAWLR should conduct market research to establish and procure organic fertilizer that are environmental friendly to subside and encourage farmers to mitigate environmental impacts.

Comment from the MAWLR:

The utilization of synthetic fertilizers is not due to affordability but to the contrary the importance of NPK and MAP as a basal fertilizer to improve the growth of crops and, Urea as top dressing to improve the vegetative, flowering as well enhanced crop yield. There is no policy restricting the utilization of fertilizer types and as a result, it is the farmers' choice to utilize fertilizer of his/her choice.

Response on the Comment of MAWLR by OAG

The MAWLR did not provide evidence during the time of the audit to substantiate their comment provided on environmentally fertilizers to be used by farmers. The audit take note that MAP and NPK is important as a basal fertilizer to improve the growth of crops and Urea as a top dressing to improve the vegetative, flowering as well as enhanced crop yield. However, the use of inorganic fertilizers are still in contravention with the National Policy on Climate Change in Namibia.

4.6.4 Adequate Storage of Hazardous Substance and Agriculture Implements

The audit found through physical observations in the regions visited, the MAWLR did not ensure that agricultural equipment and hazardous substance were stored in a manner that do not create a risk to the health and safety of employees or other person, nor any risk of contamination to the environment due to seeping, leaking, fire or accidental release. Furthermore, the area was also not designated as a storage area of hazardous substances and isolated from other activities, and neither was it clearly marked with appropriate warning signs. This risks health hazard and soil contamination.

Conclusion

The MAWL did not ensure that agriculture implements are properly stored for the safety of the implements, staff and to protect the environment.

Recommendation

The Accounting Officer of the MAWLR should ensure that agriculture implements are stored in well contained storage to prevent deterioration, health hazard and soil contamination.

Comment from the MAWLR:

The Ministry take note of the observation and is working to address the challenges. The procurement of the construction of storages facilities for tractors and implements is on-going with the Ministry. a service provider. Efforts are made ensure safe storage of inputs such as fertilizers, pesticides and seeds in the regions.

4.7 Research and Development

The visited research centers (Bangani Research Centre, Mashare Research and Omahenene Research Centre), under the DARD are developed for agricultural research and conserve crop and livestock genetic material for current and future use. However, at the time of the audit, data analysis revealed that all the research centres visited focused solely on seed multiplication activities on mahangu and cow peas. As a result, no new crop varieties have been developed to better adapt to our climate and enhance resilience in crop production.

National Seed Council

The MAWL did not establish the National Seed Council that will oversee or is charge with the responsibility of monitoring the development of the national seed system. Hence, the seed service board and the crop variety release committee are not established. As a result, Namibia might not develop its own climate resilient crops which will affect the food security of the country.

Conclusion

The audit concludes that the MAWLR still has significant progress to make in delivering climate-resilient seeds to the farmers. There is currently no established mechanism or governance structure in place to oversee the monitoring and research needed to identify crop varieties that are well-suited to our country's climate.

Recommendation

The Accounting Officer of the MAWLR should establish a comprehensive strategy for providing climate-resilient seeds, set up a dedicated governance body or task force responsible for overseeing seed provision and ensuring that climate resilience is a key focus. Also, the MAWLR should implement monitoring mechanisms for robust systems to track the effectiveness in order to identify and develop crop varieties that are well-suited to the local climate conditions.

Comments from the MAWLR:

DARD received funds through the operational budget and managed to implement research projects with the intention to develop appropriate farming technologies both for crops and livestock. However, funding is not sufficient to cover operational costs for the 19 training institutions, crop and livestock research stations under the Directorate. To address the gap in the funding, the Directorate requested and was granted approval by the Treasury during 2024/2025 Financial Year to retain the revenue generated on research stations in a Trade Account to strengthen agricultural research and development functions.

- *The Ministry through NAMSIP has recruited 877 seed growers (individual, members from cooperatives, organised groups and private entities) and 8 entities that participate in multiplication of certified seed.*
- *The Crop Research Division is currently evaluating climate resilient pearl millet varieties that were developed in India for potential release in Namibia.*

The current total area at crop research station under seed production 190.84ha. Furthermore, Namibia has experienced successive droughts and seed is being produced under dryland production. However, 2022/2023 and 2023/2024 the Project facilitated seed production under irrigation at the Sikondo Green Scheme Irrigation Project, The Ministry has terminated a contract for a Supplier who failed to execute his contractual obligations in installing the irrigation system at Mannheim Crop research Station. Furthermore, the Ministry through the Project will upgrade

the irrigation systems at Omahenene, Mannheim Crop Research Stations and Mashare Irrigation Training Centre. In this regard, the Ministry is in the process of signing a contract with a Technical Assistant for Irrigation who will provide overall engineering, procurement, and management support to MAWLR in planning, designing, implementing, managing, and monitoring the tasks associated with the irrigation projects under NAMSIP. In efforts to expand area for seed multiplication, the Project facilitated repair and maintenance of the centre pivot at the Bagani Research Station which is now fully functional.

4.8 Government efforts at multi-stakeholder engagement in implementation of national target

Documentary reviews further confirm that there is no coordination amongst stakeholders. The MAWLR and stakeholders are working in isolation even though they share the common goal of achieving effective and timely communication on implementation.

The audit found that the DAPEES has established Regional CA forums to coordinate agricultural activities in all regions to strengthen the implementation of CA. However, at the time of the audit, for the regions visited, the forum were inactive because the committee members were not forming a quorum at various meetings.

Conclusion

The audit conclude that there is a significant gap in coordination among stakeholders in the agricultural sector and although the DAPEES has made efforts to establish Regional CA forums to enhance coordination, these forums are not functioning effectively. The inactiveness undermines the intended goal of strengthening agricultural implementation and indicates a need for improved coordination and engagement among all parties involved.

Recommendation

The Accounting Officer of the MAWLR should establish a clear framework for regular and structured communication between the Ministry and all relevant stakeholders to ensure alignment and collaboration towards common goals. Furthermore, they should implement measures to ensure that committee members are consistently present and engaged, such as setting mandatory attendance requirements. This committee should be tasked with facilitating communication and ensuring alignment on goals and strategies. The Ministry should also develop joint action plans that detail the roles, responsibilities, and contributions of each stakeholder. This will help clarify expectations and promote coordinated efforts.

Comment from the MAWLR:

The Ministry concur with the audit report on the inactive CA Regional Forums in line with the CCAP Evaluation Report. However, coordination exists at national level through the National Conservation Agriculture Forum hosted annually. The CCAP 11 is designed to strengthen coordination among stakeholders.

Response on the Comment of MAWLR by OAG

The audit take not of MAWLR coordination at national level through the National Conservation Agricultural Forum hosted annually, however, the audit concludes that the aforementioned coordination does not cascade into regional level well, which defeats the objective of the CCAP 11 to strengthen coordination among stakeholders.

4.9 The extent to which government mainstreamed the principle of 'leave no one behind' in implementing the national target.

The audit observed that the Programme modality did not make provision for the disadvantage groups and marginalized community. Thus the Ministry did not prioritize the principle of inclusivity, in order to ensure that no vulnerable group is left behind.

The audit noted that most of the household are female-led, hence the majority of the programmes implemented are female. The audit also noted that majority of beneficiaries are youth.

Conclusion

The audit concluded that the MAWLR program did not effectively enforce inclusivity for disadvantaged and marginalized groups[3], as it lacks a clear and explicit commitment to the concept of inclusivity. The program's modality documents does not address or incorporate the needs and participation of these vulnerable communities, resulting in their exclusion from the benefits and opportunities provided.

Recommendation

The Accounting Officer of the MAWLR should revise the program modality to include specific provisions for disadvantaged and marginalized groups. Inclusivity should be a core principle in the planning and implementation phases ensuring that disadvantaged and marginalized groups are actively engaged and supported.

No comments were provided by the MAWLR

4.10 The Risk of Fraud and Corruption

The audit found that the DAPEES and the DARD do not have controls in place to address the risk of fraud and corruption and relies on the internal audit department to assess the controls relating to fraud and corruption for the aforementioned Directorates. The audit found the following:

The internal audit department of the MAWLR could not provide evidence on whether they put controls in place that timely detect fraud and corruption at the DAPEES and the DARD. Documentary reviews during the time of the audit revealed that the internal audit department

[3] Marginalized communities refer to groups of people who experience social, economic, and/or political exclusion or discrimination based on characteristics such as race, ethnicity, gender, sexual orientation, socioeconomic status, disability, or religion.

detected fraud and corruption after it already occurred during the 2022/23 and 2021/22 financial years, no information was provided for 2020/21 financial year. The aforementioned are indicated as follows:

Unauthorized use of Blue Fuel Tag/Device

During the 2022/23 financial year an employee used +/- N$ 53 759.75 worth of fuel and oil on the blue fuel tag/device that was meant to be used for a motor vehicle for official work for the DAPEES for private purposes. The motor vehicle fuel and oil could have been used by DAPEES officials for fieldwork to conduct monitoring and verification at farm operations by extension officers.

Physical observations conducted during the time of the audit further revealed in the Oshana and Kunene regions that official vehicles are non-functional and cannot be used by DAPEES and interviews further revealed officials need to use the private vehicles of farmers and private tractor service providers. Interviews also revealed that extension officers have to approve grant applications via cellphones due to lack of motor vehicles. This compromises the independence of extensions workers which are subject to possible bribes.

Diesel Loss

During the 2021/22 financial year the observation and investigation of the internal audit department revealed that staff members of DAPEES responsible for diesel distribution could not explain how they determine the total loss of fuel. According to the internal audit department it is a clear indication of gross negligence. As a result diesel could have been stolen by staff members which hampered DAPEES to effectively carry out inspections at farms.

Stock Control on Livestock

During the 2021/22 financial year the internal audit department found that 32 cattle from different categories out of 189 cattle could not be traced by DAPEES on the day of the auction and could not be sold to bidders. The 32 cattle could have been stolen which hampered the revenue generation of DAPEES to support critical activities relating to SDG 2.4 & 2.3.

Moreover, during the time of the audit, the auditors found the following during physical observations conducted at the Kavango East and Kunene Regions which was not highlighted by the reports of the Internal Audit Department:

- Farmers benefitting from subsidies without existing gardens; and
- Inadequate record keeping of implements stored at the offices at the Kavango East region.

Conclusion

The audit concluded that MAWL lack adequate controls to prevent and detect fraud and corruption, relying on the internal audit department for oversight.

Recommendation

The Accounting Officer of the MAWLR should develop specific controls and procedures to prevent and detect fraud and corruption within DAPEES and conduct regular risk assessments to identify vulnerabilities and update controls accordingly.

No comments were provided by the MAWLR

CHAPTER 5 OVERALL AUDIT CONCLUSION

The audit concluded that the Ministry of Agriculture, Water and Land Reform, along with stakeholders, is ineffective and inefficient in implementing projects aimed at achieving SDG 2.3 and 2.4, which focus on doubling food production and promoting sustainable agriculture. This inefficiency stems from the lack of adequate systems and mechanisms to ensure coherence in policies and regulations, and to guarantee the availability of agricultural inputs in the right quantities and quality needed to support sustainable agriculture and increase food production in the country.

APPENDIX I: SAMPLING PLAN

1.1 Purpose of the Sampling Plan

The purpose of the sampling plan is to plan the study and sample the number of agriculture projects relating to the implementation of SDGs 2.3 & 2.4 that will form part of the audit within the Ministry of Agriculture, Water and Land Reform (MAWLR) for data analysis purposes.

The following are the projects for the MAWLR that are implemented by the Directorate of Agricultural Production, Extension and Engineering Services and Directorate of Agriculture Research and Development for climate-resilient agriculture practices to improve food production in the country:

- Comprehensive Conservation Agriculture Programme;
- Dry land crop production Programme;
- Small Stock Distribution and Development in Communal Areas Projects;
- Poultry Value Chain Development Scheme; and
- Horticulture support Programme.

1.2 Sampled Regions

The clustered sampling technique[4] was employed to select four regions (Kunene //Kharas, Kavango, and Oshana regions), because these regions are among the communal populated regions with substantial potential to double in food production, aligning with the Ministry's targets for cereals and livestock. The geographical coverage of the listed activities of the MAWLR covered all 14 regions. However, due to the vastness of the regions, five regions: Khomas, Kavango East, Oshana, //Kharas, and Kunene were visited by the audit team. The selections of these regions are explained below:

Khomas Region: to gather audit evidence at the head office through interviews and document collection;

Kavango East, Oshana, /Kharas and Kunene: to gather information from regions that have implemented CA, and also represent different geographical areas of the country, taking into account the varying degrees of impact from drought in each region. This selection also aimed to represent communities with diverse cultural orientations regarding crops and livestock production. The purpose was to facilitate meaningful comparisons in relation to the government's efforts to achieve SDG targets 2.3 and 2.4.

1.3 Interviews

Stratified random sampling was applied to select the projects of MAWLR and key stakeholders for auditing. The projects were not homogeneous and therefore stratified random sampling ensured that bias was avoided and that each projects and beneficiaries have an equal chance of being selected.

[4] The audit concentrated on regions with the highest representation of communal farmers, as projects primarily aim to benefit this demographic.

1.4 Physical Observations

Simple random sampling was applied to select places for physical observation, in order to have an equal representation of the different projects implemented by MAWLF and key stakeholders. The physical observations were conducted at the communal farmers that were listed as project beneficiaries.

1.5 Documentary Reviews

The audit applied simple random to select documentation for audit, because the information is not homogenous. Also, where information provided was limited for sampling purposes, the audit applied convenience sampling.

1.6 Sample Population

The population is the 5 projects under MAWLR which are implemented in all the 13 regions. However, since the projects number is not significant the audit will consider all the projects for the audit. Five Projects of MAWLR = 5 Population is projects implemented between 2018/19 and 2022/23 financial years.

1.7 The Sample Size

The audit used the probability sampling technique to determine the sample size for the audit. Stratified random sampling will be applied because the projects of MAWLR and EIF are not homogenous and the audit want to avoid bias when computing the sample size.

Stratified sampling method will be used to divide the population into strata and a simple random sample will be used to select the Farmers from the clusters. Analysis will then be conducted from the sampled clusters. The sampling method will also be used to select participant for interviews and observation purpose.

At the time of planning, the database of the farmers that benefited from all the projects was not availed yet by the ministry. Thus, the team sources data from documents received to select beneficiaries' farmers from each region to be visited. The simple random sampling was applied from the cluster of the population of seven projects and three farmers are to be selected per projects. Thus, the data will be collected at the sample farmers' activities, the research and development Centers of MAWLR and Regional offices. All documents collected from these regions will be analyzed without being sample.

The sampled projects from Oshana, Kavango West, Kunene and //Kharas

Projects	Population of beneficiaries	Sampled for observation
1. Comprehensive Conservation Agriculture (CA) Programme;	Kavango West:541 Kunene: 144 Oshana: 87 Kharas: 0	3 CA Farmers 0 farmers 9 farmers 0 farmers
2. Dry land crop production Programme;	Kavango East: 541 Kunene region:144 Oshana: 87 Kharas: 0	3 Farmers 0 farmers 9 Farmers 0
3. Small Stock Distribution and Development in Communal Areas Projects;	20 beneficiaries per region	3 Small stock Farmers Per region.
4. Poultry Value Chain Development Scheme;	Kavango East: 314 Kunene: 78 Oshana: 314 Kharas: 52	3 Poultry farmers 3 Farmers 2 Farmers 3 Farmers
5. Horticulture support Programme.	Kavango East: 243 farmers Kunene: 20 Oshana: 141 Kharas: 25	4 Horticulture farmers 3 Horticultures Farmers 7 Horticulture farmers 4 Horticulture

Source: *MAWLR Documents and Annual Plans.*

The sampled projects listed in table above, more information of was used collect from the sampled regions on those specific interventions focusing on climate resilient agricultural systems and sustainable food production activities from the responsible Directorate under MAWLR. This sample will be used to gather information through physical observations, interviews and documentary reviews. The entire system and process in terms of how the MAWLR implement climate resilient agricultural systems and sustainable food production will be assessed from the sampled activities from Kunene, Oshana and Kavango East regions.

APPENDIX II: AUDIT CRITERIA AND AUDIT QUESTION

Audit questions	Sub-questions	Assessment criteria
1. To what extent is the Nationally agreed target regarding SDG 2.3 & 2.4 achieved?	1.1 Is there coherence among the different laws & regulation?	According to the Agriculture policy 2015, states "efforts are made to provide a coherent framework, inter-linkages through the value chain as well as the sectors that are relevant to agriculture. The Namibia Agriculture Policy is the overarching policy and will serve as a base for drafting new as well as aligning existing policies, law and regulations. The policy presents a framework for the design of programmes and projects that will steer the performance of the sector."
	1.2 Is there baseline target set for SDG 2.3 & 2.4?	According to the Getting Started with the Sustainable Development Goals, a guide for stakeholders of 2015, states, "…Improving the quality of government-led statistical systems must be a first order priority, to ensure that countries can track progress on the SDGs and make evidence-based course corrections. The process of conducting a needs assessment must therefore start as soon as possible, in conjunction with the baseline and benchmarking process."
	1.3 Is there coordination amongst stakeholder in implementing SDG?	According to the Namibia Agriculture Policy, states "…The implementation of the strategies under this policy is expected to be a concerted effort by a host of role players within the Government, private sector and civil society as well as with the support of the international cooperating partners, all under the coordination and supervision of the Ministry of Agricultural, Water and Forestry. The stakeholders are expected to supplement

		Government/policy strategies with the aim to attain the objectives of this Policy."
	1.4 Has the Government mobilized the required resources for achieving the selected national selected target?	According to the Getting Started with the Sustainable Development Goals, a guide for stakeholders of 2015, "Countries must mobilize adequate public and private resources to invest in key sustainable development areas."
	1.5 Are Government budgets aligned, sufficient and adequate for achievement of the target?	According to the Getting Started with the Sustainable Development Goals, a guide for stakeholders of 2015, "In other cases, national budget outlays should be increased to finance a scaling-up of public services and infrastructure investments. If private and domestic public resources are insufficient to finance the SDGs they need to be complemented by non-concessional and concessional international public finance, including official development assistance (ODA) for the poorest countries."
2. What interventions did government implement to ensure attainment SDG targets?	2.1 To what extent did MAWLR ensure that agricultural implements procured are suitable to the local conditions?	Comprehensive Conservation Agriculture Programme for Namibia state"…Collaborate with DAPEES, DARD, farmers and suppliers in the identification, selection and testing of implements and tools."

	2.2 To what extent does MAWLR ensure that implement timely reach farmers?	Comprehensive Conservation Agriculture Programme for Namibia state "…Collaborate with DAPEES, DARD, farmers and suppliers in the identification, selection and testing of implements and tools." Agriculture Policy of 2015 states "Expand extension services and capacitate extension personnel in order to bring services closer to crop farming communities."
	2.3 To what extent does MAWLR ensure that subsidies reach intended farmers?	According to the Agricultural policy of 2015, "…In order to implement the stated policies on crop production, Government shall: 3.1.3 Implement the Dry Land Crop Production Programme (DCPP) and support farmers through the provision of subsidized fertilizer, improved seeds as well as weeding and ploughing services 3.1.4 Expand extension services and capacitate extension personnel in order to bring services closer to crop farming communities."
	2.4 To what extent does MAWLR ensure subsidies encourage farmers to use environmental friendly fertilizers?	Comprehensive Conservation Agriculture Programme for Namibia states "…CA is practiced in conjunction with other Good Agricultural Practices (GAPs) for increased and stabilized yields, reduced production costs (labour, machinery, fuel, fertilizer), climate-change adaptation and mitigation, reduced land degradation and water conservation. Some of the complementary GAPs are timeous farm operations, use of improved seed,

		targeted applications of both mineral and organic fertilizers and integrated pest management. The principles of CA are valid for all Namibia's crop-production systems and all levels of mechanization, although varying techniques and practices apply in varying circumstances.
	2.5 To what extent does DAPEES conduct verification of the existence of farmers before approving subsidies?	Comprehensive Conservation Agriculture Programme for Namibia states "…Introduce incentive schemes: e.g. subsidised CA equipment or replacement schemes. These services could be part of existing programmes with some modifications. Provide services at subsidised rate to CA farmers. Study the feasibility of community-based operators'/service providers. Pilot the use of community-based operators for the provision of CA services.
	2.6 To what extent did MAWLR introduce new crop variety that will adopt to local condition through research stations?	Namibia Agriculture Policy of 2015, "…In order to ensure the sustainable research and development in Namibia's agriculture and agro-processing sectors, Government shall: 2.1 Promote existing and develop new crop varieties and livestock breeds in order to adapt to ever changing climatic conditions. 2.2 Promote the adaptation of exotic genetic materials. 2.3.Produce and multiply breeders' and foundation seeds."
3 To what extent did MAWLR conduct monitoring and	3.1 To what extent did MAWL design structure systematic process for the	Namibia Agriculture Policy of 2015, "…In order to implement the policies on agricultural management information system, Government shall: 3.1 Design

evaluation of the SDG 2.3 & 2.4 implementation?	collection of data and dissemination of agricultural information?	structured systematic process for the collection of data and dissemination of agricultural information. 3.2 Collaborate with NSA in conducting agricultural census, annual agricultural surveys and other specialized agricultural surveys. 3.3 Enhance the corroboration between NSA and all stakeholders on collection and collation of agricultural data. 3.4 Operationalize and strengthen the agricultural data user-producer forum."
	3.2 To what extent did MAWLR develop and submit evidence based agricultural information regarding SDG 2.3 &2.4 to the Namibia Statistic agency?	Namibia Agriculture Policy of 2015, "...In order to implement the policies on agricultural management information system, Government shall: 3.1 Design structured systematic process for the collection of data and dissemination of agricultural information. 3.2 Collaborate with NSA in conducting agricultural census, annual agricultural surveys and other specialized agricultural surveys. 3.3 Enhance the corroboration between NSA and all stakeholders on collection and collation of agricultural data. 3.4 Operationalize and strengthen the agricultural data user-producer forum"

APPENDIX III: INTERVIEWS CONDUCTED

MAWLR	Interviews
Head office	**Focus Group:** Deputy Director Chief Agricultural Scientific Officer
Head office	Project Coordinator
Kavango Regional Office	**Focus Group:** Chief Agricultural Scientific Officer Agricultural Economist Agricultural Technician
Kaisosi Agricultural Development Centre	**Focus Group:** 2x Agricultural Technician
Bangani Research Centre	**Focus Group:** Chief Agricultural Technician Agricultural Technician Artisan and Laborers
Mashare Research Centre	Agricultural Technician
Omahenene Research Centre	Chief Agricultural Technician
Kunene Regional Office	Acting Chief Agricultural Technician
Omusati Region	Chief Agricultural Scientific Officer
	Focus Group: Agricultural Scientific Officer Agricultural Technician Officer
// Kharas Region	**Focus Group:** Chief Agricultural Scientific Officer Agricultural Technician Officer

APPENDIX IV: OBSERVATIONS CONDUCTED

MAWL Projects Observed	Types of Projects
	Horticulture Production farmers;
	Poultry Value Chain Development Project;
	Smalls Scale Farmers;
	Bangani Research Centre;
	Dry land crop production;
	Warmquelle and Khowarib Green Schemes;
	Fransfontein Community Garden; and
	Horticulture Production farmers.
Types of farming	**Farmers**
Crops farming	Muroro Horticulture;
	Ndonga Linena dryland and horticulture;
	Salem Community Garden (43 members);
	Kaisosi Horticulture Garden;
	Waldrud Mbangu Horticulture;
	Maria Goretti;
	Otjovihe;
	Okondaurie; and
	Omatetewe-Makange.
Livestock	Shinunga ;
	Shamanbungu;
	Otjomatenba;
	Okorosave;
	OSia Otengua;
	Garamateya;
Poultry	Katondo poultry farm;

APPENDIX V: DOCUMENTS REVIEWED

1. Malabo Declaration on Accelerated Agricultural Growth and Transformation for Shared Prosperity and Improved Livelihoods;
2. Namibia Agriculture Policy, 2015;
3. Namibia's 5th National Development Plan (NDP5);
4. MAWLR Strategic Plan 2017-2021/22;
5. Comprehensive Conservation Agriculture Programme for Namibia 2015-2019;
6. Environmental Investment Fund of Namibia Act 13 of 2001;
7. National Planning Commission Act No.2 of 2013;
8. Sustainable Development Goals and Fifth National Development Plan Indicator Framework Namibia;
9. National Policy on Climate Change for Namibia;
10. Namibia Seed Policy;
11. Implementation Modalities for the Horticulture Support and Value Chain Development Programme 2022/23;
12. Guideline for the rain fed agronomic subsidy programmes 2022/2023;
13. Implementation Guideline for the Poultry Value Development Scheme 2022/2023;
14. DAPEES Small Stock Distribution and Development in Communal Areas Projects;
15. MAWL Annual Report 2020/2021;
16. DAPEES Annual Reports 2019/20;
17. DAPEES Annual Report 2018/2019;
18. Dry Land Crop Production Programme Monitoring Report, 2020/21;
19. Dry Land Crop Production Programme Monitoring Report, 2019/20;
20. NAMSIP 2nd Quarterly Progress Report From 01 July 2022-31 October 2022;
21. Accountability report 2022/23;
22. Sector Brief Namibia: Agriculture;
23. Kavango East Annual Plan for 2022-2023;
24. Kavango East Annual Plan for 2021-2022;
25. Kavango East Annual Plan for 2020-2021;
26. Project Progress Assessment Report;
27. Kavango East Quarterly Report Jan-March 2023, 2022/2023;
28. Kavango East Quarterly Report April-June 2022/2023;
29. Kavango East Quarterly Report Jan-March 2022/2023;
30. Kavango East Quarterly Report Oct-Dec 2021/2022;
31. Kavango East Quarterly Report July-Sep 2021-2022;

32. Kavango East Quarterly Report April-June 2021/2022;
33. Kavango East Quarterly Report Jan- March 2021/2022;
34. Kavango East Quarterly Report July - Sept 2020/2021;
35. Kavango East Quarterly Report April- June 2020/2021;
36. Kavango East Quarterly Report July – Sep 2022/2023;
37. Revolving agreements for DAPEES small stock distribution and Development in Communal Areas;
38. Small Stock Distribution and Development for Communal Areas;
39. Minutes for the Regional Conservation Agriculture Forum Kavango East;
40. Period of Reporting July - September 2022;
41. DCPP Tractor and Implement Inventory 2019 Kavango; and
42. Mashare Certified seed report for 2022.

APPENDIX VI: Synergies in the policy law and regulation coherence.	
Policy, Laws And Regulation	**Linkage of Policy, Laws And Regulation to ensure Sustainable Food Production**
NDP5	The government will intensify agricultural extension services to smallholder farmers and/or communal farmers by providing information on how to organize themselves into cooperatives, access credit and acquire agricultural implements such as tractors. Furthermore, government will support the modernization of agriculture production. There will be increased, acquiring land for redistribution, supportive infrastructure for small-scale farmers including increased access to market, quality control support and better seeds. Green scheme projects will be expanded." Further states, • "5 536 ha of land for irrigation will be developed, 82 200ha of land is bush thinned annually, advance the use of Conservative Agriculture (CA) with at least 50% of farmers practicing CA, Expand green scheme, support small scale and subsistence farmers. • Provide information on modern farming practices including information on how communal farmers can organize cooperatives, access credit and acquire agricultural equipment. • To increase productivity of subsistence farming. Crop rotation; soil enrichment and organic pesticides usage will also be encouraged especially on communal lands"
National Agriculture Policy 2015	Chapter 1 Section 3.1 of the Namibia's Agricultural Policy (2015), in order to implement policies on crop production, the Government shall: • Expand Green Scheme Programmes under which it will develop irrigable land along perennial rivers and large dams and other sustainable water sources; • Implement conservation agriculture programmes; • Implement the Dry Land Crop Production Programme (DCPP) and support farmers through the provision of subsidized fertilizer, improved seeds as well as weeding and ploughing services; • Expand extension services and capacitate extension personnel in order to bring services closer to crop farming communities; • Implement and support Horticulture Development Programme; • Support research for soil fertility enhancement technologies; and

	• Develop Agricultural Training Centre's (ATC's) and continue to import and adapt the latest production technologies to Namibian conditions. Chapter 5, Section 3 of the Namibia Agriculture policy of 2015, states "...in order to implement the stated policies on international cooperation Government shall: 3.1 Initiate and ensure the implementation of all bilateral, regional, and multilateral agreements related to the agriculture sector by meeting all Namibia's obligations while taking maximum advantage of benefits offered under these agreements. 3.2 Create a central repository of all international agreements that are related to agriculture, water and forestry. 3.3 Monitor and evaluate Namibia's conformity to her international obligations under bilateral, regional and multilateral agreements and conventions."
National Agriculture Strategic Plan 2017/18-2022/23	The objectives aimed to increase productivity during the strategic period through the implementation of appropriate technologies e.g. Comprehensive Conservation Agriculture (CCA) and mechanization in order to ensure food security at both household and national level. Increasing the grainst orage capacity to ensure the availability of food at all times. To strengthen agriculture, water and forestry research capacities for technology development and strengthen the coordination between research and advisory services to facilitate technology transfer. The strengthened coordination between research and advisory services will transform the sector into a more knowledge intensive system through research, capacity building and professionalization of producers thereby ensuring efficient and effective technology generation and dissemination.
Comprehensive conservation Agriculture Programme for Namibia (2015-2019)	The overall objective of this programme is to counter and reverse land degradation and to adapt to climate change/ variability through the adoption of CA as a basis for sustainable crop production and improved food production security at both national and farm, including smallholder, levels.

National Policy on Climate Change for Namibia	The main purpose of the national climate change policy of Namibia is to provide the legal framework and overarching national strategy for the development, implementation, monitoring and evaluation of climate change mitigation and adaptation activities. The policy promotes the enhancement of synergies amongst sectors and stakeholders for effective and efficient mitigation and adaptation responses to climate change in Namibia. In addition, the policy facilitates identification of sector and cross-cutting climate change strategies and actions for implementation to lower Namibia's overall risks, and the risks of the most vulnerable groups and sectors. The policy also provides legal basis for resource mobilisation to address climate change adaptation and mitigation.
Namibia Seed Policy 2013	The primary objective is to enhnace availability of good quality seed and thereby ensure household food security.

APPENDIX VII
Seed subsidies beneficiaries

Seed subsidy	Beneficiaries	2020/21	2021/22	2022/23
1. Mahangu seed	Male	543	2135	2054
	Female	1585	5410	3407
Total tons availed		27 tons	53.3 ton	36.5
2. Maize seed	Male	0	0	164
	Female	0	0	215
Total tons availed		0	0	1.1
3. Cowpeas seed	Male	28	158	225
	Female	32	302	368
Total tons availed		0.564 tons	2.26	1.05
4. Sorghum seed	Male	55	477	289
	Female	85	798	566
Total tons availed		4.6 tons	6 tons	4.3
Kavango - East				
Mahangu seed	Male	92	0	0
	Female	165	0	0
Maize seed	Male	0	651	814
	Female	0	689	1132
Kunene				
Mahangu seed	Male	102	144	56
	Female	190	266	88
Maize seed	Male	1604	60	57
	Female	1311	100	115

Fertilizer Subsidy beneficiaries

Fertilizer subsidy	**Beneficiary**	**2020/21**	**2021/22**	**2022/23**
	Male	671	108	16
	Female	1126	154	24
Total tons of NPK availed		27.4	9.5 ton	0.05 ton
Total tons of UREA availed		1.75	1.75	1 ton
Total tons of MAP availed		10	6	0
Total tons of AS availed		2.8	0	0
Total		**41.95**	**17.25**	**1.05**

APPENDIX VIII: Average Small Livestock Stock Gains and Deaths and Deaths per year

Region	Number of Livestock farmers sampled	Number of Livestock Received	Number of Livestock to revolve	Year Livestock Received	Current Number of Livestock inclusive of Sales	Approximate Time period since receiving first livestock, as per observations during the time of the audit	Average Livestock died, stolen or lost per farmer	Average Livestock Gained per year per farmer	Revolving rate per current average gains (3 years after receiving livestock)
Oshana	3	63	63	2016	74	7 years	(32/3 farmers)/7 years=2	1	0
Kunene	3	63	63	April 2021 (1 farmer) and April 2022, 2 farmers)	118	1 year and 4 months	(8/3farmers)/1.33 years=2	14	42
Kavango East	3	63	63	September 2019, farmer, April & March 2020, farmers	163	4 years	(9/3 farmers)/4 years=1	8	0
//Kharas	13	271	271	2019 (once) mostly 2021	611	2 years	(89/13 farmers)/2 years=3	13	271
Total	22	460	460				8	36	313

APPENDIX IX: ORGANISATIONAL STRUCTURE