

REPUBLIC OF MAURITIUS

NATIONAL AUDIT OFFICE

PERFORMANCE AUDIT REPORT

IMPLEMENTATION OF SUSTAINABLE DEVELOPMENT GOAL 2 (ZERO HUNGER)

TARGETS 2.3 AND 2.4

ENHANCING FOOD SECURITY AND SUSTAINABLE AGRICULTURAL PRACTICES IN MAURITIUS

**MINISTRY OF AGRO-INDUSTRY, FOOD SECURITY,
BLUE ECONOMY AND FISHERIES**

MARCH 2025

FOREWORD

Section 16 (1A) of the Finance and Audit Act makes provision for the Director of Audit to carry out performance audit and report on the extent to which a Ministry, Department or Division is applying its resources and carrying out its operations economically, efficiently and effectively.

I am pleased to send to the Honourable Prime Minister, Minister of Finance, Defence, Home Affairs and External Communications and Rodrigues and Outer Islands, this Performance Audit Report entitled “Implementation of Sustainable Development Goal 2 (Zero Hunger) Targets 2.3 And 2.4 - Enhancing Food Security and Sustainable Agricultural Practices in Mauritius”, to be tabled in the National Assembly.

The National Audit Office (NAO), under the guidance of the African Organisation of English-Speaking Supreme Audit Institutions (AFROSAI-E), carried out a performance audit on the implementation of Sustainable Development Goal (SDG) 2 - Zero Hunger, more specifically Targets 2.3 and 2.4 as a follow-up and review of SDG in the region.

SDG Target 2.3 is directly related to increasing food security and Target 2.4 aims to ensure sustainable agricultural practices.

The Ministry of Agro-Industry, Food Security, Blue Economy and Fisheries formerly known as the Ministry of Agro-Industry and Food Security (MAIFS) is the lead agency for implementing SDG 2. The performance audit assessed the interventions of MAIFS and different entities operating under its aegis towards enhancing food security and sustainable agricultural practices in Mauritius, with respect to SDG Targets 2.3 and 2.4.

NAO identified performance gaps in MAIFS interventions with respect to these targets. These gaps included the lack of accountability for results, outstanding reforms and weaknesses in the organisational set-up of MAIFS. Same should be promptly addressed otherwise, there is a high risk that the goals of enhancing food security and sustainable agricultural practices may not be met.

NAO has made a series of recommendations including the setting up of an autonomous structure, responsible for the formulation of policies and plans relating to food security and sustainable agricultural practices; drive institutional reforms, monitor performance; and hold respective stakeholders accountable for their assigned responsibilities. The relevant authorities may decide on the appropriate model for the setting up of the structure.

I take this opportunity to thank the Accounting Officers and the staff of the Ministry of Agro-Industry, Food Security, Blue Economy and Fisheries, Ministry of Foreign Affairs, Regional Integration and International Trade, Ministry of Finance (formerly Ministry of Finance, Economic Planning and Development), and Statistics Mauritius, Officer in Charge and the staff of the Food and Agricultural Research and Extension Institute, General Manager and the staff of Small Farmers Welfare Fund, for their collaboration. I also wish to express my sincere thanks to my staff for their hard work and dedication.



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17 March 2025

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ABBREVIATIONS AND ACRONYMS

AMB	Agricultural Marketing Board
FAO	Food and Agricultural Organisation
FAREI	Food and Agriculture Research and Extension Institute
IA	Irrigation Authority
IDI	INTOSAI Development Initiative
INTOSAI	International Organisation of Supreme Audit Institutions
KPI	Key Performance Indicator
LUD	Land Use Division
MAIFS	Ministry of Agro-Industry and Food Security
MAIFSBEF	Ministry of Agro-Industry, Food Security, Blue Economy and Fisheries
MFARIIT	Ministry of Foreign Affairs, Regional Integration and International Trade
MDGs	Millennium Development Goals
MOF	Ministry of Finance
MOFEPD	Ministry of Finance, Economic Planning and Development
NAO	National Audit Office
SDGs	Sustainable Development Goals
SAIs	Supreme Audit Institutions
SDU	Sustainable Development Unit
UN	United Nations
UNDP	United Nations Development Programme
VNR	Voluntary National Report
WHO	World Health Organisation

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EXECUTIVE SUMMARY

In September 2015, the Republic of Mauritius adopted the 2030 UN Agenda for Sustainable Development and its 17 Sustainable Development Goals (SDGs). Mauritius achieved most of the Millennium Development Goals and targets, although it faced several challenges during their implementation. Despite progress made, there are constraints and issues which, if not attended to promptly, may undermine the benefits obtained towards achieving the SDG targets. Those constraints and issues¹ comprise the effects of climate change which have ripple effects on agriculture, food security, the economy and the livelihoods of the population.

Why NAO carried out this audit

The International Organisation of Supreme Audit Institutions (INTOSAI) called upon member Supreme Audit Institutions (SAIs) to contribute to the follow-up and review of the SDGs. Related to this initiative, the African Organisation of English-Speaking Supreme Audit Institutions (AFROSAI-E) embarked on and guided member SAIs in conducting an SDG Coordinated Audit on an audit topic relevant to SDG 2.

- SDG Target 2.3 is directly related to food security as there is an expectation to double the agricultural productivity and incomes of small-scale food producers by the year 2030.
- SDG Target 2.4 aims to ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production.

Mauritius is a net food importer, importing around 77 per cent of its total food requirements. Its main imports are wheat flour, rice, milk, meat, and temperate fruits which are the primary basic foods². Mauritius is increasingly dependent on food imports placing the country on a dangerous and compromising path of relying on global food markets³.

In Mauritius, food crop production is dominated by small-scale farming with some 12,000 small farmers having an average holding of 0.3 hectare and a few farms greater than two hectares. Livestock production is undertaken by 4,000 breeders comprising mainly of cattle, goats, sheep and pigs⁴. The main challenges for the agriculture sector in Mauritius are to increase productivity and diversification while considering the adverse environmental impacts.

¹ As per the Strategic Plan 2016-2020, these constraints and issues include: decreasing size of land holdings and conversion for urban development, adverse agro climatic conditions, climate change risks and natural disasters; increasing threats from introduction of new pests and diseases; and competition for resources (human, land and water) from other economic sectors.

² As per paragraph 1.1 page 7 of the Strategic Plan 2016-2020.

³ As paragraph 2.2.3 page 9 of Assessment of the Non-Sugar Sector in Mauritius- The African Development Bank Group, October 2020. Report commissioned by MAIFS.

⁴ Pathways to a Sustainable Food System for a healthier tomorrow- Roadmap, Economic Development Board, March 2023 -Page 4.

The then Ministry of Agro-Industry and Food Security (MAIFS) and entities operating under its aegis were facing several challenges in their interventions to enhance food production and sustainable agricultural practices.

What NAO did

NAO assessed the interventions of MAIFS towards enhancing food security and sustainable agricultural practices in Mauritius, with respect to Sustainable Development Goal 2 (Targets 2.3 and 2.4). Relevant methodologies were used to gather and analyse data, understand the audit area, along with obtaining sufficient, relevant and reliable audit evidence to support the conclusion and recommendations.

What NAO found

Our findings relate to the audit scope which covered the period January 2016 to December 2023 and was supplemented with relevant information prior to January 2016 and up to December 2024.

1. Setting up of Targets 2.3 and 2.4 and related indicators

- Following the adoption of SDGs in 2015 and in relation to the United Nations Resolution (A/Res/70/1, paragraphs 55 and 59), national targets based on national circumstances had to be set by member countries. It was only in July 2022, that is, some six years after the adoption of SDGs, that MAIFS formulated the national Targets 2.3 and 2.4 by way of a Plan of Action.

The formulation of the targets was not based on clear assumptions, limiting factors and quantitative assessments carried out.

- As per United Nations Resolution (A/Res/70/1, paragraphs 55 and 59), the global SDG Targets which guided the formulation of national targets (referred to above) should have been incorporated into national planning processes, policies and strategies.

However, sectoral policy documents such as, the 3-Year Strategic Plans and annual Budget Speeches, which were intended to supplement and provide the necessary strategic policy orientation in the implementation of the SDGs, made no mention of national targets corresponding to Global SDG 2 Targets.

- For a target to be fully aligned with the Global SDG Target, it has to correspond to the global one in terms of scope, ambition, availability of indicators to measure progress and allocated resources.

National targets 2.3 and 2.4 did not correspond fully in terms of these criteria, and hence, were partially aligned with corresponding global SDG Targets.

- The 2030 UN Agenda recognises that quality, accessible, timely and reliable disaggregated data are essential to measure progress on SDGs and to ensure that no one is left behind.

The proxy indicator for Target 2.3.1 was relevant and adequate but did not provide information on the vulnerable group of small-scale food producers to ensure that they are not left behind.

- The national indicator 2.4.1 derived by MAIFS from the global one, focused only on the proportion of cultivated area under sheltered farming, excluding aspects of fertiliser and pesticide usage, both of which are key metrics to measure sustainable agricultural practices.

In that respect, the indicator was inadequate to measure and report on progress achieved in sustainable agricultural practices.

- Validation of data comprises the certifying of the specific methodology used to collect data and ensuring their accuracy and quality of their source. Validation of data was not carried out properly to ensure that what was being measured was reasonably accurate as they were critical for the reliability of indicators.

In the case of estimates of food crop production by Food and Agricultural Research and Extension Institute (FAREI), lack of proper validation has materially overstated production figures for 2021 and 2022. This will materially impact on the measurement of progress towards SDG Target 2.3.

2. Progress made towards enhancing food security and sustainable agricultural practices

- The official implementation of SDGs started in January 2016, following its adoption in September 2015. The formulation of SDG 2 targets should have been initiated as far back as the year 2016, to enable tracking of progress on each indicator. As previously mentioned, it was only in 2022, that is, some six years later that national targets 2.3 and 2.4 were formulated.

In this Report, in the absence of these national SDG targets 2.3 and 2.4, the Strategic Plan 2016-2020 targets for selected food crops (including strategic crops) and livestock were used as a proxy to assess progress towards self-sufficiency and sustainable agricultural practices.

- Some Rs 4.8 billion were spent during the period July 2016 to June 2020 by MAIFS on food crops and livestock, and which comprised expenditure on projects and activities (inclusive of grants, schemes and incentives) specified in the Strategic Plan.

The recommended Committee specified in the Strategic Plan was not set up for follow-up and supervision of implementation of the SDG targets. Progress reports on the implementation of the Plan were not prepared. Neither the mid-term nor the second evaluation exercise of the Strategic Plan, as envisaged, was carried out by MAIFS.

- Targets to be achieved by the year 2020 were set for selected food crops with the potential for increased production. The aim was to consolidate production for those crops where self-sufficiency was already attained and their production needed to be increased to meet the increasing demand, if resources allowed.

None of the targets set were attained.

Instead, actual production per crop item fell below estimates. This included the production of strategic crops, potato, onion and garlic, which was on the decreasing trend and did not meet the objective of increasing self-sufficiency. As regards livestock, local production of milk and dairy products, beef, goat/mutton/ pork, and honey was well below targets set.

- The interventions of MAIFS were not adequate to address the constraints and challenges identified in the Strategic Plan 2016-2020. Some 50 per cent of the projects and activities in the Strategic Plan were implemented.

As of December 2023, there was no marked improvement. Some 29 per cent and 48 per cent of grants for food crops and livestock respectively were unutilised for the period 2015-16 to 2021-22. Incentives and schemes aimed at boosting food crop and livestock production, though well intended, did not achieve the expected results.

MAIFS did not have the necessary human resources to design and monitor projects, incentives and schemes, identified in the sheltered and bio-farming initiatives, as highlighted in the African Development Bank (ADB) October 2020 report paragraph 3.6.1.

The Sheltered Farms at Plaine Magnien constructed at a cost of some Rs 36.8 million and the sheltered farm at Ville Bague remained unused and were left in a state of abandonment over some five years. Similarly, the organic farm at Britannia was not operating at its full capacity. These projects were implemented without ensuring the availability of water, which is a key requirement for cultivation.

- Major constraints and challenges identified, as far back as the year 2016, in the Strategic Plan, had not been effectively addressed by MAIFS as of October 2023. Gaps in the provision of efficient and harmonised support services have not been bridged by a re-organisation of the livestock institutions under MAIFS.

Livestock production was highly dependent on imported, costly inputs comprising mainly animal feeds and breeding animals. The setting of heifer farms to increase the

availability of breeding animals was still operating below expected capacity. Livestock development was constrained by limited land resources and environmental exigencies which limited livestock operations in specific areas.

The ‘Special Livestock Zones’ envisaged by MAIFS have not yet materialised. Several legislations for the livestock sector were outdated and have not been reviewed to address present needs.

- MAIFS did not have effective oversight on how the projects, incentives and schemes were achieving results with alignment to the set targets. The Key Performance Indicators (as per annual Statement DA–‘*Progress Report on Achievements and Performance*’ of the Accounts of the Government of Mauritius) which were linked to the strategic objective of MAIFS were reflecting outputs rather than outcomes and were inadequate to measure progress.
- Several KPIs, on their own, did not measure achievement related to increasing food crop and livestock production. For example, the extent of state land allocated for food crop cultivation and livestock, as a KPI, was insufficient to indicate how ultimately it contributed to increase food crop cultivation and livestock development.
- As of June 2023, only some 50 per cent of state land under the purview of MAIFS and which was leased for agricultural purposes to farmers were occupied, and even those stated to be occupied were not used efficiently. This represented a lost opportunity to increase production by making maximum use of the available land.
- The take-up rate of the grants and subsidies was higher for the food crop sector, 71 per cent compared to 52 per cent for livestock. Several of the livestock schemes had very low take-up rates and did not cater appropriately for the most vulnerable farmers. Small-scale breeders encountered challenges in importing animals, acquiring land for fodder production, and obtaining permits for animal rearing in residential zones.

3. Legal and policy frameworks and institutional arrangements towards the attainment of targets 2.3 and 2.4

- SDGs represent a long-term transformative change which has to be planned, nationally owned, supported and achieved through nationwide awareness, and commitment.

As of December 2023, there was no national plan covering at least a period of five years incorporating SDG Targets 2.3 and 2.4 and their financing through national budgets.

Records examined for the period January 2019 to October 2023 at MAIFS indicated that no guidance was issued to the latter to integrate SDG 2 into its programmes or incorporate them in its strategic planning, or assess existing or proposed policies against the 2030 Agenda and the SDG targets.

There was a lack of integration of the activities among the Ministry and entities operating under its aegis and also there were cases of lack of policy coherence. For example, both FAREI and Agricultural Services had entomology and plant pathology services which lacked integration among these activities. There was no official collaborative approach to fruit fly control between these two institutions. Similar lack of integration was observed in the follow-up on residue of pesticides in food crops.

The Agricultural Services, FAREI and Small Farmers Welfare Fund (SFWF) each own individual databases of the farmers they serviced and for other users such as applicants for permits and licenses. In many instances, these refer to the same individuals. The databases contained duplicate or incomplete information which renders coordination and follow-up difficult.

- The implementation of projects which were promoting or sustaining an increase in food crops and livestock was hampered by the following:
 - (i) The lack of horizontal policy coherence hampered the implementation of projects promoting or sustaining an increase in food crops and livestock. MAIFS did not have a clear strategy on how to deal with aspects of horizontal policy incoherence and how these aspects had to be factored well in advance during project design.
 - (ii) There were several legislations identified in the Strategic Plan 2016-2020 that needed amendments to support the enhancement of food production and sustainable agricultural practices, since the year 2016, and same has not been done yet.
 - (iii) The participation of stakeholders promotes effective decisions, by allowing groups affected by those decisions to communicate their needs and interests and support governments in tailoring, implementing and reviewing public policies.
 - (iv) A mechanism for stakeholder engagement was identified and put in place, however, stakeholders were not being consulted. Key stakeholders were not being engaged to obtain their feedback which could have been potentially integrated in the planning and implementation of policies for the implementation of SDG 2.

As a result, there was inadequate multi-stakeholder engagement during the process of setting Targets 2.3 and 2.4.

- During the period 2014 to 2022, some Rs 469 million were disbursed in respect of 25 schemes which required the involvement of SFWF. However, SFWF did not maintain its data disaggregated in different dimensions that is, age, sex, harvested area, production etc., and more importantly on the socio-economic conditions of the small farmers' community.

The low uptake of several schemes indicated that there was a segment of farmers who could not benefit from same. They could not meet all the criteria and were more likely

to be left behind. As of December 2023, there had been more focus on the number of schemes being implemented and the amount disbursed rather than assessing whether the most vulnerable were being targeted effectively.

4. Budgeting for achieving the targets

- Systemic integration of SDGs requires Government not only to translate its high-level SDG commitments and priorities into national and local plans, but also to reflect same in budget decisions and service delivery.

Some Rs 794 million and Rs 361 million were spent annually on the Development of Non-Sugar Sector (Crops) and Livestock Production and Development respectively. However, there was no clarity on the measurement of SDG Targets 2.3 and 2.4 in the annual budgets.

KPIs were not measuring adequately progress towards food security and sustainable agricultural practices. Assessment of whether the budget was sufficient, used economically and aligned to SDG was not carried out by MAIFS.

- The current line-item budgeting did not provide linkage of budgets with policies/SDGs. It mainly provided information on expenditures and revenues which were not tagged with SDG 2 targets.
- The importance of a functional SDG 2 Working Group was not among the priorities of MAIFS. The Plan of Action prepared by MAIFS, comprising the newly formulated SDG Targets 2.3 and 2.4, was not submitted to the then Ministry of Finance, Economic Planning and Development during the preparation of the Budgetary Estimates 2023-24.

5. Measuring, monitoring and reporting on progress achieved

- The level of collaboration among MAIFS and the relevant stakeholders was inadequate to provide proper measurement, monitoring and reporting on the progress of SDGs.
- A system to measure, monitor and report on progress being achieved was set up in January 2021. It had not yet delivered results as expected. In the absence of an updated SDG Tracker, the SDG Dashboard presented actual figures, without additional analysis of progress achieved during the period 2016 to 2022.
- One SDG Tracker published in 2019 reported that Target 2.3.1 was on track despite official statistics showing a decline in annual total food crop production per unit area and livestock head per farm.

Similarly, Target 2.4.1 was reported to be on track despite its indicator was not published on the SDG Dashboard.

What NAO concludes

MAIFS, as the Lead Agency responsible for achieving Targets 2.3 and 2.4 of SDG 2 (Ending Hunger), invested significantly in its interventions to enhance food security and sustainable agricultural practices. The Strategic Plan 2016-2020 guided these interventions during the period 2016 to 2020.

Some Rs 4.8 billion were spent during the period July 2016 to June 2020 by MAIFS on food crops and livestock, and comprised expenditure on projects and activities, inclusive of grants, schemes and incentives, specified in the Strategic Plan 2016-2020.

However, the interventions of MAIFS did not yield the expected results in the following ways:

- There was no marked improvement in food crop and livestock production and in sustainable agricultural practices during the period examined to provide assurance that the SDG targets 2.3 and 2.4 would be met;
- Mauritius is still increasingly dependent on food imports and vulnerable to external economic and geopolitical factors;
- None of the targets set in respect of selected food crops was attained. Instead, actual production per crop item fell below estimates. This included the production of strategic crops such as potato, onion and garlic which was on a declining trend and did not meet the objective of increasing self-sufficiency, despite all the incentives and grants provided;
- Sheltered farming which was promoted as climate-resilient and sustainable agriculture, was vulnerable to unfavourable climatic conditions and pests. For example, production in sheltered culture projected at some 16,500 tonnes for the financial year 2022-23, was around 10,000 tonnes, that is, 6,500 tonnes, below target by some 40 per cent;
- Local production of milk and dairy products, beef, goat/mutton/pork, and honey was well below the targets. Livestock production depended highly on imported, costly inputs comprising mainly animal feeds and breeding animals. This rendered the sector very vulnerable to external factors;
- Self-sufficiency was attained in the poultry sector, but it was still very vulnerable due to its heavy dependence on imported feeds. Any disruption in overseas markets would easily compromise this self-sufficiency status;
- As of December 2023, there was no marked improvement as some 50 per cent of the projects and activities in the Strategic Plan were implemented. Some 29 per cent and 48 per cent of grants for food crops and livestock respectively were unutilised for the period 2015-16 to 2021-22. Incentives and schemes aimed at boosting food crop and livestock production did not achieve the expected results;

- MAIFS was challenged in formulating Targets 2.3 and 2.4, which were not adequate in comparison with the corresponding global SDG targets. The targets set were very ambitious and ought to have been formulated through a multi-stakeholder engagement;
- The Strategic Plan of MAIFS was not connected to appropriate funding arrangements, and the annual budgets were not tagged with Targets 2.3 and 2.4;
- The institutional reforms did not materialise to address overlaps, risks, challenges in the sector, and gaps in the coherence and integration of policies;
- The Service Improvement Plan and a Results-Based Management Framework with pre-defined Monitoring and Evaluation Plans to make service providers more focused on priorities and more accountable for results were not in place; and
- The Steering Committee to review and evaluate progress and provide guidance was not set up.

MAIFS and entities operating under its aegis are responsible for enhancing food security and sustainable agricultural practices. However, there was a lack of accountability due to inadequate KPIs.

Moreover, the organisational setup was not conducive to obtaining the expected results.

If the lack of accountability for results, implementing reforms and tackling weaknesses in the organisational set-up are not promptly addressed, there is a high risk that the goals of enhancing food security and sustainable agricultural practices may not be met in the medium term.

What NAO recommends

1) Setting up of a structure responsible for Policy, Planning, Monitoring and Evaluation in respect of Increasing Food Self-Sufficiency

Food self-sufficiency in Mauritius is part of the larger issue of food security⁵ and it encompasses the extent to which the country can satisfy its food needs from domestic production. In that perspective, the Strategic Plan 2016-2020 was expected to lead Mauritius to a higher level of food self-sufficiency in-domestic production of specific crops and livestock through the interventions of Ministry of Agro-Industry, Food Security, Blue Economy and Fisheries (MAIFSBEF) and entities operating under its aegis.

However, the expected increase in self-sufficiency was not achieved. This performance gap can be traced to several key factors, such as the lack of accountability for results, long outstanding reforms and inherent weaknesses in the organisational set-up of MAIFS and the

⁵ As per Food and Agricultural Organisation, the widely accepted definition points to the following dimensions of food security: food availability, food access, utilisation and stability. Accessible at https://www.fao.org/fileadmin/user_upload/eufao-fsi4dm/docs/concepts_guide.pdf

entities operating under its aegis.

During the period 2021-2023, MAIFS attempted to formulate a new strategic plan for food crops and livestock for the ensuing five years but faced several challenges. One of the main challenges was the frequent changes⁶ in the posting of Accounting Officers to the Ministry, which was not conducive to the timely formulation of a new strategic plan following the expiry of the previous one.

The then Agricultural Policy Analysis Unit of MAIFS did not deliver on aspects of monitoring and evaluation of the Strategic Plan 2016-2020.

The Working Group on SDG 2, under the responsibility of MAIFS held a first meeting in October 2022 and remained dormant afterwards.

In March 2024, MAIFS submitted a document titled “Roadmap & Strategic Plan 2024-2030” for the crops and livestock sector to NAO. The purpose of the document is to depict a collaborative vision, aligned with the United Nations’ Sustainable Development Goals, especially Goal 2, to end hunger, achieve food security and improved nutrition, and promote sustainable agriculture.

NAO is of the opinion that the need for accountability for results, long outstanding reforms and weaknesses in the organisational set-up of MAIFSBEF and entities operating under its aegis, were still not effectively addressed in the strategic plan.

Given the importance of food self-sufficiency for the population and the economy and the need for a better organisational set-up to deliver results, NAO recommends the following:

- The setting up of an autonomous structure reporting to the policy makers of MAIFSBEF. This structure will be responsible for formulating the national strategic orientation concerning food security and sustainable agricultural practices through medium to long-term strategic planning.

Such an autonomous structure will provide continuity in setting policy directions, formulation of strategic plans and follow-up of same.

- As a separate structure, it will comprise governmental and non-governmental representatives, as key stakeholders. They will include senior administrative, technical and scientific officers from MAIFSBEF and entities operating under its aegis, representatives from the planters’/breeders’ community and organisations like the Mauritius Chamber of Agriculture.

Also, individuals with expertise in research, analysis, and consultancy relating to domains such as agro-industry, agronomy, food processing, trade and agricultural

⁶ Changes in posting of Accounting Officers (Senior Chief Executive and Permanent Secretary grades) occurred in: September 2020, March 2021, July 2021, March 2023 and April 2024

economics can be onboarded.

- The structure, administratively independent of MAIFSBEF, can objectively drive institutional reforms, monitor performance and hold respective stakeholders accountable for their responsibilities. It can fulfil this responsibility in the same way as recommended in the Strategic Plan 2016-2020, which is as follows:
 - (i) A Service Improvement Plan for providing key services to farmers and the public, by setting Key Performance Indicators for each stakeholder.
 - (ii) Adoption of a Results-Based Management Framework with pre-defined Monitoring and Evaluation Plans to make service providers more focused on priorities and more accountable for results.
 - (iii) The review of progress, production of evaluation reports and provision of guidance on corrective actions to be taken.
- In turn, the structure will be accountable to the policymakers on the following areas:
 - (i) Monitoring each stakeholder to ensure that they deliver according to what is expected in relation to the resources allocated and ensuring corrective actions are taken to attain the set targets, save in case of force majeure.
 - (ii) Proposing concrete remedial actions with regard to underutilization of leased agricultural land, schemes and incentives not delivering as per expectations, inadequate follow-up on the residual level of pesticides in food crops and aligning interventions to meet Targets 2.3 and 2.4.

2) Formulating an Action Plan for the food crop and livestock sectors

An Action Plan for the food crop and livestock sectors covering at least the next five years and appropriately connected to future fund mobilisation through annual budgets should be prepared as a top priority.

During each budgetary estimate exercise, MAIFSBEF should reprioritise and revise the Action Plan based on funds allocated. Budgetary expenditures and revenues should be tagged with SDG Targets 2.3 and 2.4, and accompanied by appropriate KPIs for monitoring and evaluation purposes through a results-based framework.

The other priority, would be for MAIFSBEF to re-examine the assumptions used to formulate the targets, adopt a methodology that uses more quantitative analysis and factor in performance information of recent years. Data validation should be privileged.

3) Promoting the Use of Artificial Intelligence (AI) to facilitate achievements of Sustainable Development Goal 2

Agriculture is one of the areas in which AI can be used to meet the challenges in the sector. It plays a transformative role in enhancing food security, particularly in alignment with SDGs 2.3 and 2.4. These goals focus on doubling the agricultural productivity and incomes of small-scale food producers (SDG 2.3), and ensuring sustainable food production systems and resilient agricultural practices (SDG 2.4).

The potential benefits are substantial from precision farming that enhances crop yields while reducing resource waste to improved market insights that empower farmers to make informed decisions.

Some areas where AI can contribute significantly are as follows:

- **Smart Irrigation Systems:** AI models analyse weather patterns and soil moisture levels to optimize irrigation schedules, ensuring efficient water use. This is crucial for areas with limited water resources and arable land;
- **Pest and Disease Management:** AI-powered systems detect early signs of pest infestations and diseases through image recognition and pattern analysis. Early intervention helps in minimizing crop losses and improving overall yield;
- **Yield Prediction and Crop Management:** AI analyses historical data and real-time inputs to predict crop yields and provide recommendations for crop management. This helps in planning and allocating resources effectively, increasing productivity and reducing waste;
- **Sustainable Resource Management:** AI helps in monitoring and managing natural resources such as water and soil, promoting sustainable agricultural practices. This aligns with the goal of maintaining ecosystems and preventing land degradation; and
- **Policy and Decision Support:** AI provides valuable insights for policymakers by analysing large datasets on agricultural production, market trends, and environmental impacts. This supports the development of evidence-based policies and programs that enhance food security and sustainability.

It is imperative that MAIFSBEF strategically incorporate AI into the Agricultural sector now, ensuring no one is left behind. As recommended in the report “Mauritius AI Strategy of 2018,” it is therefore critical that the Ministry develops a strategy and action plan followed by an implementation framework for the use of AI to address the problems faced in the Agricultural sector.

4) Monitoring the Use of State Land and the Sheltered Structures

The monitoring and reporting mechanism on the use of State Land should be improved through better collaboration between the Land Use Division and FAREI.

The sheltered structures which were in an abandoned and derelict state should be rehabilitated and put to beneficial use. Appropriate actions should be taken to provide basic facilities, such as water, to make the structures operational and ensure that the lessees use the structures effectively.

5) Restructuring Existing Schemes to boost Production

The objectives of the existing schemes were laudable. However, they should be reviewed to be more effective and geared towards boosting the inclusiveness of the vulnerable planters so that nobody is left behind. There should be consultation at the design stage with relevant stakeholders before approving schemes.

6) Bridging gaps in the legal and policy framework

Performance gaps were noted in the legal and policy frameworks. It is imperative that these be addressed promptly so as to give the proper legal framework for concerned institutions to carry out their functions more effectively.

7) Reorganisation of Agricultural Services

It is imperative that the reorganisation of Agricultural Services be a top priority for MAIFSBEF, as recommended by the Food Agricultural Organisation in 2014.

8) Monitoring of Targets 2.3 and 2.4 of SDG 2

Regular meetings with concerned stakeholders should be held to take stock of progress made towards achieving the targets and to take necessary corrective actions.

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CHAPTER ONE

INTRODUCTION

This chapter provides a background of the subject matter examined and describes the audit approach used in carrying out the audit.

1.1 Background

In September 2015, following the conclusion of the Millennium Development Goals (MDGs) era, 193 Member States of the United Nations (UN), including the Republic of Mauritius, adopted the 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals (SDGs). Mauritius had achieved most of the MDGs and targets, by addressing several challenges during their implementation.

SDGs are different from MDGs as they cover the social, economic and environmental dimensions of sustainable development. These dimensions open up new challenges to meet the targets.

Whereas SDGs are global in nature and universally applicable, each Government has to set its national targets, over the 15 years starting from 2016 and ending 2030, guided by the global level of ambition but considering national circumstances, realities, capacities, levels of development, policies and priorities and decide on how these global SDG targets are incorporated into national planning processes, policies and strategies.

1.1.1 Prior work carried out by the National Audit Office

Taking cognizance of these challenges, the National Audit Office (NAO) carried out a Performance Audit titled ‘Preparedness for the Implementation of Sustainable Development Goals’, which was laid before the National Assembly in 2019.

In the Report, efforts being made to create an enabling environment for the implementation of the 2030 Agenda for Sustainable Development were acknowledged, but the measures taken so far by authorities were found to be inadequate to support its preparedness towards the implementation of SDGs.

1.1.2 Status of Sustainable Development Goals in Mauritius

As per the UN Sustainable Development Report 2023 titled ‘Implementing the SDG Stimulus’⁷, the status of the progress of the 17 SDGs in the Republic of Mauritius was as follows:

⁷ Accessible at <https://dashboards.sdgindex.org/profiles/mauritius>

- Four SDGs (1, 6, 9 and 17) were on track or maintaining achievement;
- Two SDGs (5 and 8) were moderately improving; and
- Nine SDGs (2, 3, 4, 7, 11, 13, 14, 15 and 16) were stagnating.

Information was not available in respect of two SDGs (10 and 12). Despite progress made, there are constraints and issues which, if not attended to, have the potential to threaten the gains made towards achieving the SDG targets. These include the impact of climate change, environmental sustainability, disaster risk management and building resilience. Mauritius is inherently vulnerable to natural disasters and the effects of climate change which have ripple effects on agriculture, food security, the economy and livelihoods of the population.

1.1.3 Food Security and Sustainable Agricultural Practices in Mauritius

Mauritius is a net food importer, importing around 77 per cent of its total food requirements. Its main imports are wheat flour, rice, milk, meat, and temperate fruits which are the primary basic foods⁸. Mauritius is increasingly dependent on food imports placing the country on a dangerous and compromising path of relying on global food markets⁹.

Food crop production is dominated by small-scale farming with an average holding of 0.3 hectare by some 12,000 small farmers and a few farms greater than two hectares. Livestock production is undertaken by some 4,000 breeders of cattle, goats, sheep and pigs.¹⁰

The main challenges for the agriculture sector in Mauritius are to increase productivity and diversification of the sector while considering the adverse environmental impacts on agriculture.

1.2 Audit Motivation

The International Organisation of Supreme Audit Institutions (INTOSAI) called upon member Supreme Audit Institutions (SAIs) to “contribute to the follow-up and review of the SDGs within the context of each nation’s specific sustainable development efforts and SAIs’ individual mandates”.

As a contribution to SAI efforts, the INTOSAI Development Initiative (IDI), INTOSAI’s Knowledge Sharing Committee (KSC) and other partners launched the ‘Auditing SDGs’ initiative to support SAIs in conducting high-quality audits of SDGs.

Pursuant to this initiative, the African Organisation of English-speaking Supreme Audit

⁸ As per paragraph 1.1 page 7 of the Strategic Plan 2016-2020.

⁹ As paragraph 2.2.3 page 9 of Assessment of the Non-Sugar Sector in Mauritius- The African Development Bank Group, October 2020. Report commissioned by MAIFS.

¹⁰ Pathways to a Sustainable Food System for a healthier tomorrow- Roadmap. Economic Development Board, March 2023 -Page 4

Institutions (AFROSAI-E) embarked on and guided member SAIs in conducting an SDG Coordinated Audit on an audit topic relevant to SDG 2.

SDG Target 2.3 is directly related to food security as there is an expectation to double the agricultural productivity and incomes of small-scale food producers by 2030. SDG Target 2.4 aims to ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production.

The then Ministry of Agro-Industry and Food Security (MAIFS), also referred to as ‘the Ministry’, and entities operating under its aegis were facing a lot of challenges in their interventions to increase food production and sustainable agricultural practices.

It is against this background that NAO carried out this Performance Audit titled ‘Enhancing Food Security and Sustainable Agricultural Practices in Mauritius’ on the implementation of SDG 2 focussing on Targets 2.3 and 2.4.

1.3 Audit Objective

The audit assessed the interventions of MAIFS towards enhancing food security and sustainable agricultural practices in Mauritius, in alignment with Targets 2.3 and 2.4 of SDG 2.

The implementation of the set of policies that contribute to the achievement of nationally agreed SDG Targets 2.3 and 2.4 was assessed. The audit was designed by formulating five audit questions and the answers to these questions supported the conclusion against the objective.

The performance audit concluded on the progress made towards the achievement of the nationally agreed targets; how likely the targets would be achieved based on current trends; and the adequacy of the national target in comparison with the corresponding global SDG targets.

The audit questions are as follows:

- 1) To what extent the national targets 2.3 and 2.4 were adequate, comprehensive, relevant and aligned with the Global SDG Targets?
- 2) With respect to targets set in the Strategic Plan 2016-2020, what progress was made towards increasing food production and the proportion of agricultural area under productive and sustainable agriculture?
- 3) To what extent MAIFS had provided adequate and well-functioning legal and policy frameworks and institutional arrangements towards the attainment of these targets?

- 4) To what extent MAIFS had planned and budgeted for increasing food production and the proportion of productive and sustainable agricultural land area?
- 5) To what extent MAIFS was measuring, monitoring and reporting on the attainment of these targets?

Appendix IV presents the list of the related audit sub-questions and their referencing to the findings' paragraphs of Chapter Three.

1.4 Audit Scope

The focus of the audit was on the interventions of MAIFS, as the Lead Organisation for the implementation of SDG 2 at the national level and hence the main auditee, to increase food production, with particular attention to small-scale vulnerable groups, and the promotion of sustainable agricultural practices.

The activities of the Ministry of Foreign Affairs, Regional Integration and International Trade (MFARIIT) with respect to the responsibility and leadership role of coordinating, monitoring and reporting processes in respect of SDGs were assessed. The support provided by Statistics Mauritius to MAIFS regarding SDG 2 data, indicators and targets was also assessed.

The geographical coverage was limited to the Island of Mauritius only.

The audit covered the period January 2016 to December 2023 and was supplemented with relevant information prior to January 2016 and up to December 2024.

1.5 Audit Approach

The audit was conducted in accordance with the International Standards of Supreme Audit Institutions (ISSAI) 3000 Performance Auditing Standard of the International Organisation of Supreme Audit Institutions (INTOSAI).

The INTOSAI Development Initiative's (IDI) SDGs Audit Model (ISAM)¹¹ Pilot Version 2020 was used as guidance. A combination of two approaches was used to determine the nature of the examination to be carried out, and is described as follows:

- a system-oriented approach to examine the proper functioning of the management systems at MAIFS and entities operating under its aegis.
- a result-oriented approach to assess whether the outcome or output objectives have been achieved.

¹¹ Accessible at <https://www.idi.no/work-streams/relevant-sais/auditing-sdgs/audit-sdgs-implementation/isam>

The measurement of effectiveness was based on the extent to which the objectives have been met and the prevalence of conditions necessary to ensure the achievement of these objectives.

1.6 Audit Methodology

Different methodologies were used to gather and analyse data, understand the audit area, along with obtaining sufficient, relevant and reliable audit evidence that supports the conclusion and recommendations.

Data was gathered mainly from files and documents. This was complemented by interviews, site visits and a survey to confirm information in files and to ascertain and assess processes being carried out. Quantitative and qualitative data obtained from interviews, document reviews and visits were compiled and analysed, to provide competent evidence to support the conclusion and recommendations.

Trend analysis was used to identify and interpret the impact of interventions over the examined period. Sampling and benchmarking were also carried out. Content analysis was extensively used.

1.6.1 Documents reviewed

Information relating to legislations, policies, strategies, structures, methodologies, protocols, projects and processes was collected through a review of files, documents and databases available at MAIFS, FAREI and SFWF.

1.6.2 Personnel interviewed

Interviews and meetings were carried out with:

- Key personnel at senior management and operational levels of MAIFS and entities operating under its aegis.
- Responsible officers at the Ministry of Foreign Affairs, Regional Integration and International Trade, the then Ministry of Finance and Economic Planning and Development, Statistics Mauritius and Economic Development Board.
- Representatives of collaborating organisations like the Mauritius Chamber of Agriculture.
- Farmers involved in open air cultivation, sheltered cultures, organic farming and breeders.

The interviews and discussions were used to confirm the information obtained from the documents reviewed to supplement information that was not available in the reviewed documents and explore potential suggestions to bridge the performance gaps identified.

1.6.3 Site Visits

Site visits were carried out at selected farms to ascertain the processes involved. Also, discussions were held with relevant stakeholders on relevant aspects of management, interventions, outputs and outcomes related to food crop and livestock production and sustainable agricultural practices during the site visits.

1.6.4 Sampling

Purposive sampling was used to focus on specific issues relating to enhancing food security and sustainable agricultural practices, that would be more appropriate to answer the audit questions. Details on the sampling units are in relevant paragraphs of the Findings Chapter to support the conclusion.

1.7 Assessment Criteria

The main criteria used as a basis for evaluating the evidence collected, developing audit findings, and reaching a conclusion on the audit objective and the related audit questions, were extracted from:

- The Strategic Plan 2016-2020 of MAIFS;
- The UN Resolution A/RES/70/1; and
- Good practices and guidelines from relevant publications of The United Nations Development Programme (UNDP), the Food and Agriculture Organisation (FAO) and other international organisations.

Details on additional assessment criteria used are described in the relevant paragraphs in the Report.

1.8 Data Validation Process

MAIFS and MFARIIT were provided with the Report to comment on its factual accuracy, the conclusion drawn based on the findings and the implications of the recommendations. Relevant extracts were submitted to Statistics Mauritius for comments.

1.9 Structure of the Performance Audit Report

The remaining part of the Report covers the following:

- Chapter Two describes the audit area, the processes, structures, roles and responsibilities of key players and relevant stakeholders;
- Chapter Three presents the audit findings based on the five specific audit questions;
- Chapter Four provides the audit conclusion; and
- Chapter Five presents the recommendations based on the audit findings and conclusion.

CHAPTER TWO

DESCRIPTION OF THE AUDIT AREA

This Chapter describes the audit area, structures, roles and responsibilities of key players involved in enhancing food security and sustainable agricultural practices.

2.1 General

The effects of climate change are more likely to adversely affect production, prices, incomes and ultimately the livelihoods and lives of the farming community. The impact and economic cost are significant on national food production and food security.

Mauritius is a net food importer, with an overall self-sufficiency ratio of less than 30 per cent.

There are indications that food insecurity will increase and some of the main reasons are as follows:

- (i) Decreasing size of land holdings and conversion of agricultural land for urban development;
- (ii) Competition from cheaper imports from large-scale producing countries;
- (iii) Adverse agro-climatic conditions, climate change risks and natural disasters;
- (iv) Increasing threats from new pests and diseases; and
- (v) Competition for resources from other economic sectors.

MAIFS is the Lead Organisation for the implementation of SDG 2 at national level and is responsible for achieving food security, improving nutrition and promoting sustainable agriculture.

2.2 Strategic Planning, Policy Framework and Institutional Mechanism for Implementation of SDGs

In 2018, MFARIIT was assigned the responsibility and leadership role of coordinating, monitoring and reporting processes in respect of SDGs. As per the Voluntary National Report (VNR)¹² of July 2019, a Steering Committee to coordinate, monitor and report on the implementation of SDGs in Mauritius was to be established.

¹² Voluntary National Review Report of Mauritius. Page 13 -16. Published by: Ministry of Foreign Affairs, Regional Integration and International Trade.

In addition, pending the adoption of the draft Roadmap for the Implementation of SDGs and the establishment of a proposed SDG working structure, the National Network for Sustainable Development and the ex-National Economic and Social Council were expected to look into the implementation of national policies that were geared towards sustainable development.

Also, to ensure an inclusive, transparent and coherent approach, which brings together all relevant stakeholders and partners, an Inter-Ministerial Coordination Committee at the apex, to serve as the high-level platform for the implementation of SDGs and chaired by the Minister of MFARIIT was envisaged.

Four Working Groups that would build more synergies across sectors, address bottlenecks, sustain and accelerate progress, establish partnerships, and comprehensive measurement mechanisms and help explore financing options were to be set up.

Furthermore, Government Programmes, sectoral policy documents, 3-Year Strategic Plans and annual Budget Speeches were expected to supplement and provide the necessary strategic policy orientation in the implementation of the SDGs. Refer to Appendix 1 which illustrates the alignment of National Policies with SDGs, as per the VNR of July 2019.

2.3 Mandate, Policy and Legal Framework to address Food Security and Sustainable Agricultural Practices

One of the objectives of MAIFS¹³ in relation overall agricultural development is to devise and implement policies for the sustainable development of the agricultural sector and to support the farming community through different measures and schemes to enhance the production of safe food and ensure food security as well as preserve the native biodiversity and ecosystem.

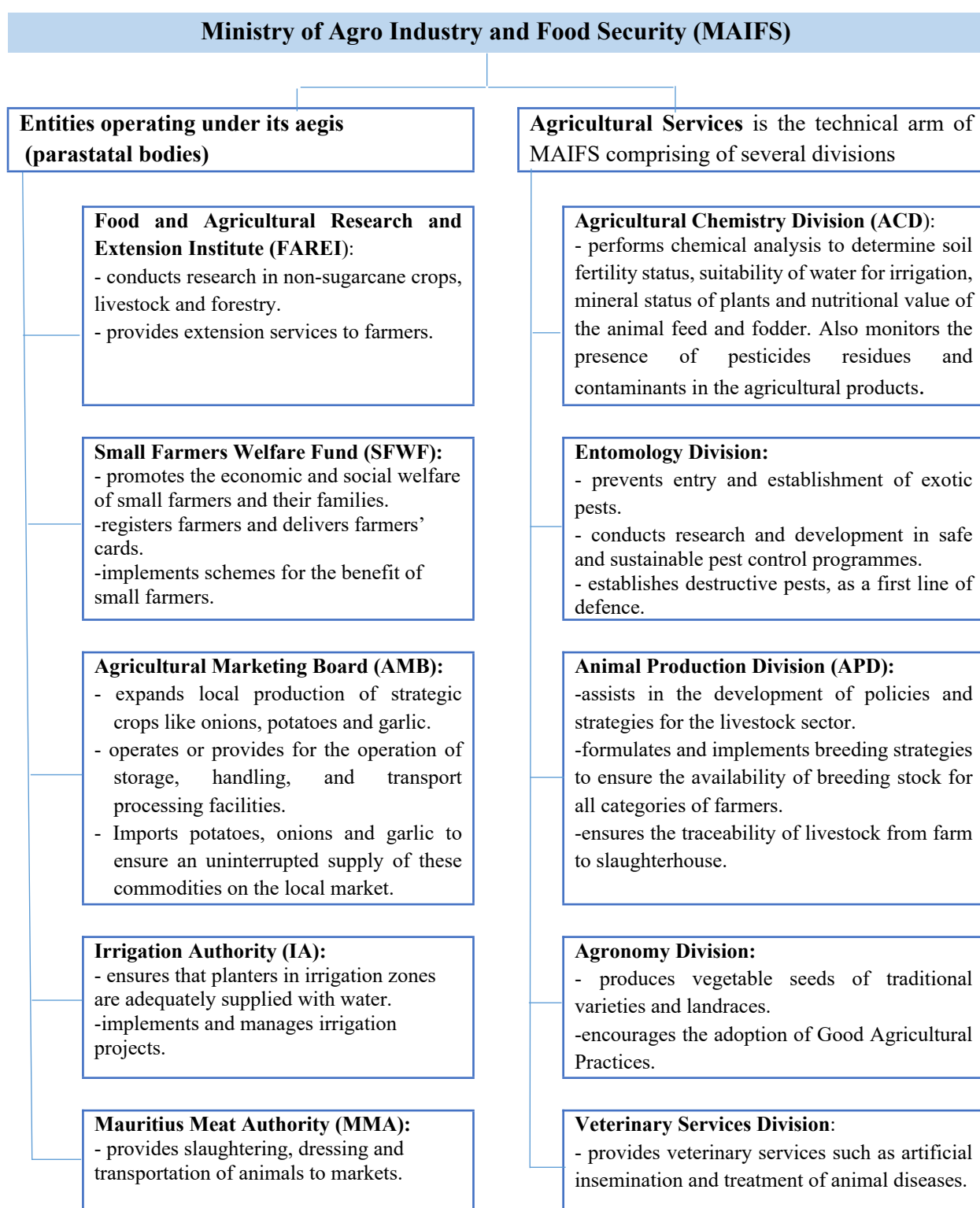
It also maintains and enhances agricultural production and food safety by exercising control, regulating, advising, and disseminating information through various acts, policies, and programmes.

2.3.1 Roles and Responsibilities of Key Players

The Ministry implements its statutory obligations through many institutions and agencies charged with various responsibilities. The divisions and entities operating under the purview of MAIFS are as per Figure 1.

¹³ As per the Strategic Plan 2016-2020, page 16 paragraph 2.4

Figure 1: Key roles of entities operating under the purview of MAIFS



Source: MAIFS

2.3.2 Roles and Responsibilities of Other Key Stakeholders

The roles and responsibilities of other key players are as per Figure 2.

Figure 2: Roles and responsibilities of Key Stakeholders

Stakeholder	Roles & Responsibilities
Ministry of Foreign Affairs, Regional Integration and International Trade (Sustainable Development Unit)	The coordination, monitoring and reporting of all matters on SDGs are bestowed to this Ministry who report to Cabinet. Government then reports to the United Nations through the Voluntary National Report.
Ministry of Finance, Economic Planning and Development	Mobilises resources for implementation of goals, gives directives on budgetary estimates, and is responsible for budget monitoring.
Statistics Mauritius	<ul style="list-style-type: none"> - Examines and advises on the adaptability of the Global SDG indicators taking into consideration national priorities and policies; - Advises on the level of disaggregation and the data sources for each indicator; recommends the institutional arrangements/ coordination mechanism to put in place for efficient data sharing procedures among national data producers and stakeholders.
Department of Climate Change of the Ministry of Environment, Solid Waste Management and Climate Change	The Department is responsible among others, for the following: Development of a National Climate Change Adaptation Policy Framework; formulation of Technology Needs Assessment identifying and prioritising relevant technologies for adaptation to and mitigation of climate change impacts.
Farmers, Agricultural Workers, Mauritius Chamber of Agriculture	They are directly concerned with all interventions and all three dimensions (social, economic and environmental).
Subject matter experts, international organisations, Non-Government Organisations (NGOs) and Civil Society.	Provide support towards the implementation of SDGs through capacity building and funding.

Source: NAO Analysis based on official records of respective stakeholders

2.4 Legislative Framework

There is a legal and regulatory framework for the agricultural sector. This helps to guide projects and other interventions, to clarify policies for the benefit of the farming community, and to develop the necessary legislative basis and regulations to underpin and facilitate the implementation of policies and activities in the sector.

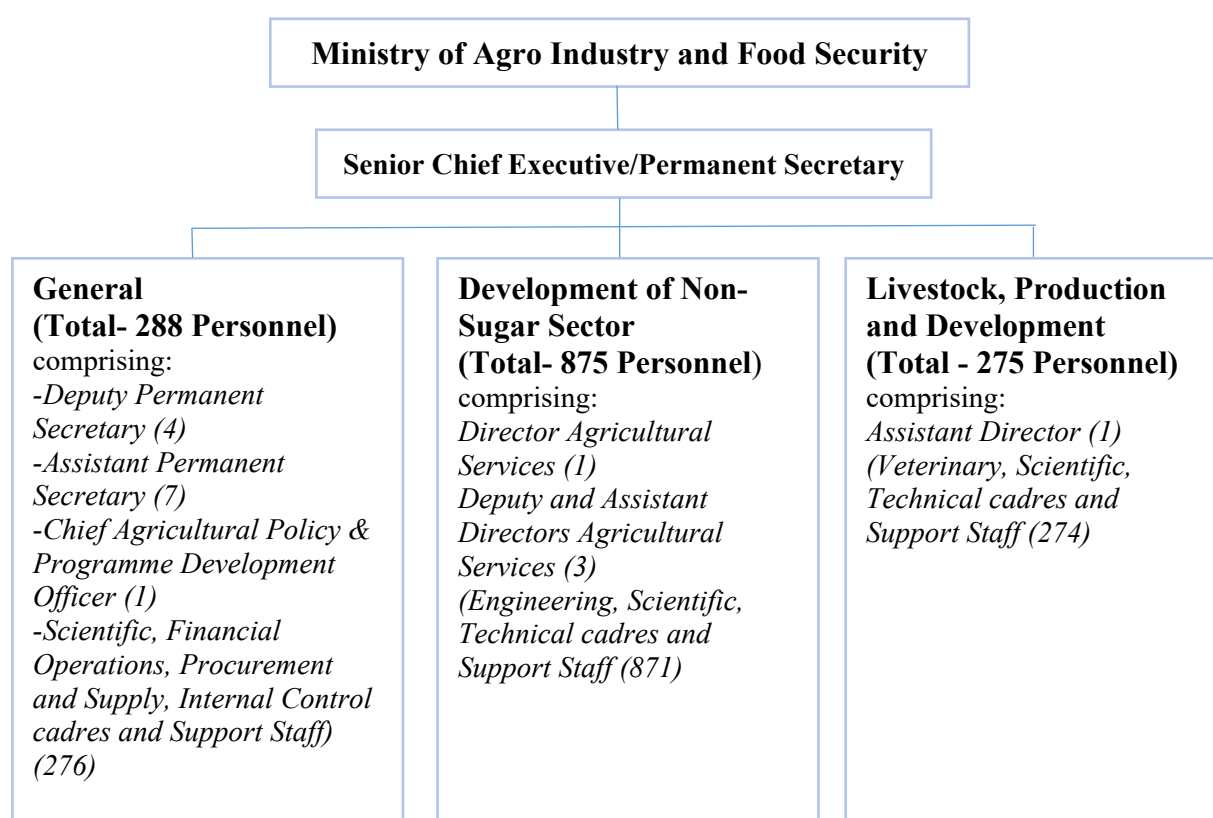
Relevant legislations that require amendments are discussed in Chapter 3.

2.5 Planning, Budgeting and Staffing

Bids for funds for the implementation of interventions in the agriculture sector are discussed with MOFEPD during budget exercises. The funding of Estimates of all the interventions is done through annual budgets, after approval of same by the National Assembly.

The amount spent by MAIFS on the development of the non-sugar sector, food crops and livestock production and development were Rs 4.7 billion and Rs 2.1 billion respectively during the period 2016-17 to 2021-22. The staffing in respect of food crop and livestock sectors at MAIFS, excluding parastatal bodies like FAREI and SFWF, is as per Figure 3.

Figure 3: Staffing of MAIFS in relation to Food Crop and Livestock Sector



Source: NAO Analysis as per Estimates 2023-24

2.6 Measuring, Monitoring and Reporting (MFARIIT-SDU)

In January 2021, Government approved the setting up of a permanent Sustainable Development Unit (SDU) at MFARIIT to coordinate, monitor and assess the implementation of SDGs. Specific ministries were assigned to lead on the work of each of the Goals, where each Lead Organisation was required to constitute Working Groups that would include stakeholders actively involved in the delivery of their respective Goals.

CHAPTER THREE

FINDINGS

This Chapter presents the audit findings on the assessment of the Ministry of Agro-Industry and Food Security interventions towards enhancing food security and sustainable agricultural practices in Mauritius, in alignment with SDG Targets 2.3 and 2.4.

3.1 General

The findings are organised into five sections, as per the audit questions and sub-questions, to answer the audit objective. The sections are as follows:

Section A	<i>Setting up of Targets 2.3 and 2.4 and related indicators</i>
Section B	<i>Progress made towards enhancing food security and sustainable agricultural practices</i>
Section C	<i>Adequate and well-functioning legal and policy frameworks and institutional arrangements toward the attainment of these targets</i>
Section D	<i>Budgeting for achieving the targets</i>
Section E	<i>Measuring, monitoring and reporting on progress achieved</i>

SECTION A: Setting up of Targets 2.3 and 2.4 and Related Indicators

This section examines whether the national SDG targets 2.3 and 2.4 are adequate, comprehensive, relevant and aligned with the Global SDG Targets.

A.1 Introduction

As per Paragraphs 55 and 59 of the United Nations Resolution (A/Res/70/1), the levels of development differ across countries, and national processes are required to set relevant and realistic targets for each country.

Consequently, each government can set its national targets, based on national circumstances, and decide on how these global SDG targets should be incorporated into national planning processes, policies and strategies.

Nationally agreed targets are distinguishable from the Global SDG targets. While a national target may differ in scope and the terminology used from Global SDG targets, it needs to be adequate, comprehensive, relevant and aligned to the latter.

This Section examines the alignment of local targets with Global SDG Targets, adequacy and comprehensiveness of indicators, formulation of SDG Targets 2.3 and 2.4, and validity of data used to track progress¹⁴.

A.2. Partial Alignment of National Target with Global SDG Targets 2.3 and 2.4

What NAO found

- *The policy, planning and budgetary documents of MAIFS examined for the period January 2016 to October 2023 made no mention of any specific alignment with any existing target with SDG 2.*
- *Sectoral policy documents such as the 3-Year Strategic Plans and annual Budget Speeches are intended to supplement and provide the necessary strategic policy orientation in the implementation of SDGs. However, there was no mention of any national target corresponding to Global SDG 2 Target.*
- *There was partial alignment of the national targets with corresponding global SDG Targets 2.3 and 2.4 in the national planning documents.*

What NAO recommends

Full alignment of Targets 2.3 and 2.4, including all other global SDG targets, should be ensured by MAIFSBEF in forthcoming national plans.

Criteria¹⁵: The alignment of a country's targets that corresponds to those of the Global SDGs indicates its readiness to implement the Agenda. The extent to which national targets that correspond to global SDG targets are reflected in national planning documents, is assessed by mapping corresponding global SDG targets against the targets of existing national long-term, medium-term, and sectoral development plans.

A national target in a planning document is considered fully or partially aligned with the corresponding global SDG target on the following basis:

- **Fully aligned:** There is a target in the national planning document that corresponds to an SDG target, not only in text, but also in scope and ambition. In some cases, it has defined indicators to measure their progress and/or allocated resources.

¹⁴ SDG Target 2.3 is directly related to food security as there is an expectation to double the agricultural productivity and incomes of small-scale food producers by 2030. SDG Target 2.4 aims to ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production.

¹⁵ Sourced from: 'Rapid Integrated Assessment (RIA) Facilitating mainstreaming of SDGs into national and local plans.' Copyright © 2017 United Nations Development Programme. Page 10-14. Accessible at https://www.undp.org/sites/g/files/zskgke326/files/publications/RIA%20Tool%20-26.12.201-Final_0.pdf

Ambition relates to the global SDG target being matched or surpassed by the national target. In respect of scope, the national target should address sub-themes or specific groups identified in the global SDG target.

- **Partially aligned:** There is a target in the national planning document that corresponds to a global SDG target, but not completely in either scope or ambition or there are no indicators to measure their progress.

Condition: The policy, planning and budgetary documents of MAIFS examined for the period January 2016 to October 2023 made no mention of any specific alignment with any existing target with SDG 2. Sectoral policy documents such as the 3-Year Strategic Plans and annual Budget Speeches are intended to supplement and provide the necessary strategic policy orientation in the implementation of the SDGs, however, there was no mention of any national target corresponding to Global SDG 2 Target.

The Strategic Objectives of both the three-year Strategic Plans 2017/18-2019/20 and 2018/19 - 2020/21 were *“To achieve the four-fold objective of increasing productivity of agricultural land, export revenue, local production of healthy foods by environmentally sustainable practices, and enhancing eco-tourism through preservation of the country’s unique biodiversity”*.

As per the Three-Year Strategic Plan 2017/18-2019/20, the average annual growth in agricultural land productivity, as measured by the gross value added per hectare, was estimated at four per cent over the period 2011 to 2016.

After allowing for climatic and market risks as well as eco-friendly production methods, it was considered that a two per cent annual increase in agricultural land productivity was an achievable target for the next decade. However, in the Three-Year Strategic Plan 2018/19 - 2020/21, the annual increase was revised to four per cent.

The national target in both strategic plans corresponded to Target 2.3 only, and there was no mention of Target 2.4 therein.

There was no specific budget allocated and indicators designated to fund and monitor the achievement of the targeted four per cent annual increase in agricultural land productivity.

In respect of scope, the national target did not cover the sub-themes and specific groups identified in the global SDG target.

Consequence: There was partial alignment of the national targets with corresponding global SDG Targets 2.3 and 2.4 in the national planning documents.

Cause: Mauritius Vision 2030 and Government Programme 2015-2019 which laid the foundation for the Three-Year Strategic Plans were prepared prior to the year 2016. The 2030 Agenda for Sustainable Development was adopted and the implementation was initiated in 2016.

Consequently, these national planning documents did not reflect adequately all the global SDG 2 Targets.

Recommendation: Full alignment of Targets 2.3 and 2.4, including all other global SDG targets, should be ensured by the Ministry of Agro-Industry, Food Security, Blue Economy and Fisheries (MAIFSBEF) in forthcoming national plans.

Ministry's Comment–MAIFS

Initiatives have been taken to include global SDG targets in the forthcoming national budgets and plans for better alignment.

A.3 National Indicators for Targets 2.3 and 2.4 - Relevant but Inadequate

(a) Target 2.3 and Indicators 2.3.1 and 2.3.2

What NAO found

The 2030 UN Agenda recognises that quality, timely, and reliable accessible disaggregated data are essential to measure progress on SDGs and to ensure that no one is left behind. The proxy indicator for Target 2.3.1 was relevant and adequate to measure food production but did not provide information on the vulnerable group of small-scale food producers to ensure that same is not left behind.

What NAO recommends

Production data should be analysed by MAIFSBEF and Statistics Mauritius to assess the productivity of small-scale producers and to identify the extent of their vulnerability. This will support the formulation of development policies to alleviate their vulnerability and hence ensure alignment with the objective of Target 2.3.

Criteria: According to FAO¹⁶, the focus of Indicators 2.3.1 and 2.3.2 is investing in small-scale farmers to increase food security and nutrition for the poorest, as well as food production for the local and global markets.

Small-scale food producers are one of the main workforces producing food, and since they are in a position of relative vulnerability, it is necessary to promote the development of policies to support them.

Condition: The global Indicators for Target 2.3 (2.3.1 and 2.3.2) were not adopted as relevant data was not being captured at national level. Alternative indicators were available and adopted, and are as per Table 1.

Table 1: Indicators for Target 2.3	
Global Indicator	Alternative
2.3.1 – Volume of production per labour unit by (a) Farming, (b) Pastoral, (c) Forestry and (d) Enterprise size	(i) Proxy indicator- Annual total food crop production per unit area (tonnes). (ii) Proxy indicator- Number of livestock heads per farm.
2.3.2 Average income of small-scale food producers by sex and indigenous status	Statistics Mauritius to capture the information in Continuous Multipurpose Household Survey.

Source: Statistics Mauritius and MAIFS

The two proxy indicators of 2.3.1 did not discriminate between small-scale farmers and corporates but focused rather on total national food crop and livestock production and

¹⁶<https://www.fao.org/3/cb7121en/cb7121en.pdf>

productivity. The global indicator for 2.3.2 was adopted and the responsibility of data capture was allocated to Statistics Mauritius. However, as of October 2023, no data had been captured.

Consequence: The proxy indicator for Target 2.3.1 was relevant and adequate to measure food production but did not provide information on the vulnerable group of small-scale food producers to ensure that nobody is left behind.

Cause: As per information obtained during meetings at MAIFS and Statistics Mauritius, data were collected in a manner that could identify the annual production of food crop and livestock of different categories of farmers such as individuals, those grouped into cooperatives, by size of land tenure and livestock heads and corporates.

The top management of MAIFS did not ensure that the data were analysed to identify the annual productivity of each group, particularly those vulnerable small-scale farmers.

Recommendation: Production data should be analysed by MAIFSBEF and Statistics Mauritius to assess the productivity of small-scale producers and to identify the extent and trend of their vulnerability. This will support the formulation of development policies to alleviate their vulnerability and hence ensure alignment with the objective of Target 2.3.

MAIFSBEF should establish a Data Analytics Committee comprising representatives from MAIFSBEF, Statistics Mauritius, FAREI and other stakeholders to facilitate the assessment of small-scale producers' productivity. This committee should convene meetings as deemed appropriate to ensure regular analysis and informed decision-making.

(b) Target 2.4 and Indicator 2.4.1

What NAO found

The national Indicator 2.4.1 derived by MAIFS from the global one, focussed only on the proportion of cultivated area under sheltered farming, excluding aspects of fertiliser and pesticide usage, both of which are key metrics to measure sustainable agricultural practices. In that respect, the indicator was inadequate to measure and report on progress achieved in sustainable agricultural practices.

What NAO recommends

MAIFSBEF should reassess whether all cultivations under sheltered farming indiscriminately satisfy the sustainable agriculture concept of Indicator 2.4.1, considering the implication of the use of fertiliser, pesticides and their vulnerability to adverse agro-climatic conditions and pests.

Criteria: According to FAO¹⁷, to ensure that enough food is produced without critically degrading natural resources, there is a need for a transition to sustainable agricultural systems. By tracking the proportion of agricultural land area by its suitability status, SDG Indicator 2.4.1 provides an assessment of progress toward sustainable agriculture.

The global indicator was adopted but customised to the local context. Production of food crops under sheltered farming for example, hydroponics was considered to be sustainable as it represented a shift from traditional open field cultivation. Hence, the proportion of land area under sheltered farming in comparison to the total area under cultivation was considered as the relevant indicator.

Condition: However, the national indicator was inadequate in the following ways:

- The agricultural Sustainable Nitrogen Management Index (SNMI) provides a comprehensive measurement of the environmental performance of agricultural production. It measures agricultural sustainability. The index for Mauritius was relatively closer to the worst level of sustainability, representing a major challenge¹⁸.

Best soil management and fertilisation practices can be conducted only if the soil status is known which is normally ascertained through soil testing prior to the beginning of a crop cycle¹⁹.

This would help to assess the quantity of fertiliser required, decreasing the excessive use of fertilisers which negatively impacts on the SNMI and dependency on imports.

However, the number of soil tests carried out by small farmers or by FAREI on their behalf was very low. During the period January 2019 to October 2023, the number of soil tests carried out at the Agricultural Chemistry Division of MAIFS were as follows: five tests for private individual farmers, 638 tests for FAREI and 12 tests for MAIFS.

This represented an average of less than 150 tests annually for a community of some 10,000 planters.

Subsidies amounting to some Rs 100 million were granted to 5,192 small farmers of food crops and fruits during 2021-22 to alleviate the impact of increases in prices of imported fertilisers.

- Reduced pesticide use has a strong positive impact on soil biodiversity, pollinators, and natural enemies of pests, with benefits for agriculture and biodiversity²⁰.

¹⁷<https://www.fao.org/documents/card/en?details=CA5157EN/>

¹⁸ <https://dashboards.sdginde.org/static/profiles/pdfs/SDR-2023-mauritius.pdf>

¹⁹ Small Farmers Welfare Fund, Ref SFWF/115/3 July 2022.

²⁰ Biodiversity International (2022) Agrobiodiversity Index Report 2021: Assessing Mediterranean Food Systems. Rome (Italy): <https://hdl.handle.net/10568/11847>

Tests on 646 food crop samples²¹ from 342 growers carried out by the Pesticides Regulatory Office in 2022, revealed the following: 30 samples had pesticides residues above the maximum limit, and in 117 samples pesticides not recommended for use in such type of crops were detected. These 147 samples collected included those growers of both sheltered and open field whose samples were recurrently either above the maximum residue level or had residues of non-recommended pesticides over past years.

During the year 2023, in 20 samples collected from Organic and MauriGap²² certified growers, two samples exceeded the maximum residue limit and in one sample non-recommended pesticides were used.

- During the period 2015-16 to 2021-22, grants allocated for the construction of sheltered farming amounted to some Rs 200 million. The target for 2022-23 in respect of production under protected culture was set at 16,500 tonnes.

However, only some 60 per cent of the target was achieved. Appendix II refers. The cultivations were not resilient as they were severely impacted by adverse agro-climatic conditions and pests during that period.

Consequence: The national indicator 2.4.1, focussed only on the proportion of cultivated area under sheltered farming, excluding aspects of fertiliser and pesticide usage, both of which are key metrics to measure sustainable agricultural practices. Although the proxy indicator 2.4.1 was relevant, it was inadequate.

Cause: The Accounting Officer of MAIFS did not ensure that all the parameters associated with this indicator, were considered and adequately examined in consultation with Statistics Mauritius and the Pesticides Regulatory Office.

Recommendation: MAIFSBEF should reassess whether all cultivations under sheltered farming indiscriminately satisfy the sustainable agriculture concept of Indicator 2.4.1, given the implication of the use of fertiliser, pesticides and their vulnerability to adverse agro-climatic conditions and pests.

Remedial Actions should be taken to control and reduce the level of pesticides so as not to cause harm to the health of the population.

Ministry's Comment

MAIFS - Indicators can be enhanced so that we are fully aligned with the SDG targets if the national data collection system is enhanced and necessary training, methodology and resources are provided.

²¹ Non-statistical sampling was used from a population of some 10,000 growers

²² Mauritian Standard on 'Specification for Good Agricultural Practices for Crop Production – MauriGap – Part 1 – Basic requirements. It establishes basic requirements for sustainable crop production, focusing on Good Agricultural Practices for food safety, environmental stewardship and farmer /worker welfare. It applies to open and protected field cultivation as well as to hydroponics. It is used for inspection and certification purposes of the crop production process.

A.4 National Targets 2.3 and 2.4 in the year 2022 - Not Properly Set

What NAO found

- *Following the adoption of SDGs in 2015 and in relation to the United Nations Resolution (A/Res/70/1, paragraphs 55 and 59), national targets based on national circumstances had to be set. It was only in July 2022, that is, after some 6 years, that MAIFS formulated the national Targets 2.3 and 2.4 by way of a Plan of Action.*
- *There was not enough clarity on the assumptions, limiting factors and quantitative assessments carried out to formulate the Targets.*
- *Target 2.3 has not been properly substantiated. The values for Target 2.4 were incorrect.*

What NAO recommends

MAIFSBEF will need to review all the targets set in 2022 in consultation with Statistics Mauritius and the Sustainable Development Unit of MFARIIT and other relevant stakeholders.

Criteria²³: SDGs and targets are integrated and indivisible, global in nature and universally applicable, considering different national realities, capacities and levels of development and respecting national policies and priorities.

Targets are defined as aspirational and global, with each Government setting its national targets guided by the global level of ambition but taking into account national circumstances.

Each Government will also decide how these aspirational and global targets should be incorporated into national planning processes, policies and strategies.

Condition: National targets were not set for the period 2016-21 though, proxy indicators were already identified. It was only in July 2022, that is after some six years, that MAIFS formulated the national targets in a Plan of Action as requested by MFARIIT.

The Plan of Action was to enable MFARIIT to identify a roadmap with clear timelines for the implementation of SDG 2 along with other SDGs. In the Plan of Action, indicators had to be identified and targets had to be set over a 2-year timeline, up to 2030. **Appendix V** refers.

²³ UN Resolution A/RES/70/1, paragraph 55, Accessible at https://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A_RES_70_1_E.pdf

(a) Analysis of Target for Indicator 2.3.1

The targets set is as per Table 2.

Table 2: Target for Indicator 2.3.1 as per Plan of Action					
Indicator	Base year 2019	2022	2025	2028	2030
<i>(i) Proxy indicator - Annual total food crop production per unit area (tonnes)</i>	93,741	105,974	Increase the production by 2%	Increase the production by 2%	Attain self-sufficiency of 25%
<i>(ii) Proxy indicator - Number of livestock heads per farm</i>	Not available -	Not available	Not available	Not available	Attain self-sufficiency of 25%

Source: MAIFS

Information obtained from documents examined and clarification meetings held with personnel of the Ministry showed that the methodology used to set the targets comprised qualitative assessments only.

There was not enough clarity, in quantitative terms on what assessment had been carried out to conclude on increases in production or self-sufficiency, resources that had to be mobilised to achieve same, and limiting factors that had been considered.

In addition to the data gap for livestock, scrutiny of the underlying factors and assumptions revealed the following:

- Inadequate details on policies, measures, and projects under implementation to justify the increase in production.
- Funding of the measures and projects was simply stated as ‘from the budget’.

Officers of MAIFS explained that the targets were based on production practices, varieties, efficient use of irrigation systems and new technology.

However, how these could be quantified was not substantiated.

Also, the periodic two per cent increase was stated to be aligned with the strategic objectives in the three-year plans, but there were no details of additional funds that had to be mobilised to support same.

(b) Analysis of Target for Indicator 2.4

The target set is as per Table 3.

Table 3: Target for Indicator 2.4.1 as per Plan of Action					
<i>Indicator</i>	Base year 2019	2022	2025	2028	2030
<i>2.4.1 Proportion of agricultural area under productive and sustainable agriculture (%)</i>	-	90	95	100	110

Source: MAIFS

Instead of expressing the target in proportion, it had been expressed in absolute values. The actual area under sheltered farming has been recorded.

Consequence: The setting of the targets was not timely. Target 2.3 has not been properly substantiated and the periodic values for Target 2.4 are incorrect.

Cause: It was only in January 2021 that a permanent Sustainable Development Unit (SDU) was set up at MFARIIT to coordinate, monitor and assess the implementation of the 17 SDGs. The target-setting exercise though initiated in year 2020 gained momentum in year 2022.

MAIFS did not have effective consultation with Statistics Mauritius for appropriate guidance on the use and analysis of appropriate data for setting targets.

The targets set in the past Three-Year Strategic Plans 2017/18-2019/20 and 2018/19-2020/21 were not reviewed to assess on what quantitative basis they were formulated to ensure their relevance in new prevailing conditions.

Recommendation: MAIFSBEF will need to review all the targets set in 2022 in consultation with Statistics Mauritius, SDU and other relevant stakeholders.

A.5 Sources of Data, Collection Method and Validation- Data not Properly Validated

What NAO found

- *Validation of data comprises the certifying of the specific methodology used to collect data and ensuring their accuracy and quality of their source. Validation of data was not carried out properly to ensure that what was being measured was reasonably accurate as they were critical for the reliability of indicators.*
- *In the case of estimates of food crop production by FAREI, lack of proper validation has materially overstated production figures for 2021 and 2022. This will materially impact on the measurement of progress towards SDG Target 2.3.*

What NAO recommends

MAIFSBEF and FAREI should implement data validation processes, overseen by SDU and Statistics Mauritius, to enhance the reliability of data used to measure progress.

Criteria²⁴: The 2030 UN Agenda recognises that quality, accessible, timely and reliable disaggregated data are essential to measure progress on SDGs and to ensure that no one is left behind.

Condition: The sources of data, collection methods and validation with respect to food production have been examined and the key observations are as follows:

- (i) **Estimates of food crop production by FAREI.** Monthly surveys are carried out for the collection of data on production and area cultivated with respect to some 40 crops as per an approved methodology by FAREI.

The estimates for the years 2021 and 2022 were examined and material discrepancies were noted as follows:

- Production Estimates were not adjusted for damage caused by heavy rainfall during March - April 2021 in the North and East districts and localities.
- Although crops were reported to be affected by diseases, drought and fruit flies, necessary adjustments were not carried out on the production estimates in the sample cases examined.
- In a sample covering one District, monthly crop harvested per unit area was constant irrespective of the month, locality, and other considerations (pests, droughts, etc).

²⁴ Sourced from 'SDG Accountability Handbook - Using and Improving Data' Page 1, Accessible at <https://sdgaccountability.org/wp-content/uploads/2019/05/Using-and-Improving-Data.pdf>

(ii) Estimates of food crop production by Statistics Mauritius. Many households own a kitchen garden or produce food crops on a small scale partly for their own use and partly for sale. These figures were not captured by FAREI, hence figures such as area and production obtained from FAREI were adjusted by Statistics Mauritius to consider backyard production of certain crops.

Statistics Mauritius did not carry out any physical survey, but rather used a methodology to estimate backyard production based on the results of a census carried out as far back as 2014.

(iii) Estimates of milk production by FAREI. The officers of the Livestock Extension Unit carry out monthly surveys on breeders of cows and other livestock. The periodicity of measurement enables officers to survey one breeder on average two to three times yearly.

Based on that survey, an estimate of the number of milking cows is made and it is assumed that 70 per cent of the cows are lactating, and each cow gives 10 litres of milk daily over 365 days. For example, in 2022, an estimate of 816 cows was made among breeders, and 70 per cent of cows were estimated to be lactating. This led to a production estimate of 2,084,880 litres of milk.

However, factors like the stage of lactation, sickness, and cow nutrition that can affect the outputs were not factored in.

(iv) Estimates of honey production by the Entomology Division. Baseline data such as the number of registered beekeepers for a specific period, the average number of hives per beekeeper and the average amount of honey harvested per hive are used.

However, how external factors such as rain spells, adverse temperatures, poor flowering of melliferous plants, occurrence of pests and predators and theft are factored into a 10 per cent reduction in production have not been disclosed.

The Division stated that it had no access to the service of a biometrician to validate its methodology and annual production figures.

Consequence: In the case of the estimate of food crop production by FAREI, the lack of proper validation has materially overstated production figures for 2021 and 2022. This will materially impact the measurement of progress towards SDG Target 2.3.

In the case of milk and honey production, independent validation of the methodology negatively impacts the reliability of the figures to calculate the relevant KPIs (paragraph D.2, refers).

Cause: The Biometry and Statistics Division of FAREI did not validate properly the data obtained from the Crop Extension Division before submitting same to Statistics Mauritius.

Additionally, due to the absence of services of a biometrician in the Entomology Division, data on honey production was not validated. Furthermore, neither SDU of MFARIIT nor Statistics Mauritius ascertained that data validation processes were in place at MAIFS and FAREI.

Recommendation: FAREI and MAIFSBEF should implement a proper data validation processes, overseen by SDU and Statistics Mauritius, to enhance the reliability of data used to measure progress.

Ministry's Comment

***MAIFS** - A Data Repository System is being put in place which will assist in the proper supervision of the officers.*

SECTION B: Progress made towards enhancing Food Security and Sustainable Agricultural Practices

This section examines the progress made towards increasing food production and the proportion of agricultural area under productive and sustainable agriculture and the likelihood of meeting Targets 2.3 and 2.4.

B.1 Introduction²⁵

In year 2016, MAIFS in its Strategic Plan 2016-2020, had set out the goals and objectives to be attained by the year 2020 in respect of improving the level of food security and food safety and promoting more sustainable agriculture.

The objectives were two-fold, namely increasing production of high-quality crops, vegetables and meat and satisfying local demand, and promoting the development of the agri-business sector to enhance import substitution to reduce dependency on imports.

The outcome was to take Mauritius to a higher level of food security whilst respecting the need for safe food and better nutrition of the population, sustainable agricultural development in a climate-friendly mode as well as safeguarding farmers' livelihoods.

MAIFS took several initiatives to address these challenges, among which were the implementation of projects, schemes and incentives. Despite these schemes, some constraints still prevailed, namely the unavailability of agricultural land, high input prices, labour scarcity and the high cost of production.

To address these problems and move forward, the proposals were to release land for agricultural development; implement the incentive schemes under the Food Security Programme; to promote good agricultural practices (GAP) and the adoption of new technology packages to ensure the quality of produce and to promote value-addition through agro-processing.

In this section, the following areas were examined:

- Progress made under the Strategic Plan 2016-2020 on projects, activities, and targets;
- Efficient use of scarce resources like state lands;
- Implementation of schemes; and
- The likelihood that SDG Targets 2.3 and 2.4 would be met based on performance.

²⁵ The Strategic Plan 2016-2020 for the Food Crop, Livestock and Forestry of the Ministry of Agro Industry and Food Security dated January 2016, page 1, 13 and 15.

B. 2 Assessment of Progress -No Evaluation of Strategic Plan 2016-2020

What NAO found

- *Some Rs 4.8 billion were spent during the period July 2016 to June 2020 by MAIFS on food crops and livestock, which included expenditure on projects and activities inclusive of grants, schemes and incentives specified in the Strategic Plan.*
- *The recommended Committee was not set up for the follow-up and supervision of the implementation of the Strategic Plan.*
- *Progress reports on the implementation of the Plan were not prepared. Neither the mid-term nor the second evaluation exercise of the Strategic Plan, as envisaged was carried out by MAIFS.*

What NAO recommends

MAIFSBEF should adopt Monitoring and Evaluation exercise as an important tool to ensure that its interventions are aligned with its strategies and plans, and is embedded and funded in forthcoming strategic plans.

Criteria²⁶: As per the Strategic Plan, a high-powered Steering Committee was to be set up for the follow-up and supervision of its implementation. The Committee was expected to ensure proper and timely execution of the provisions of the Strategic Plan in order to achieve the expected outcome within the scheduled timeframe.

The Agricultural Policy Analysis Unit (APAU) of MAIFS had to ensure that progress reports submitted by those entities implementing the Strategic Plan were not merely a narrative of activities but provided a critical assessment of the effectiveness of programmes relative to set targets.

A mid-term evaluation exercise, three years after the onset of the Strategic Plan, was envisaged to appraise progress.

A second evaluation report also had to be prepared six months prior to the end of the Strategy's time frame to assess progress and provide follow-up on strategic orientations.

APAU was expected to write the terms of reference for the evaluation exercises which would have been contracted out.

Condition: Some Rs 4.8 billion were spent during the period July 2016 to June 2020 by MAIFS on food crops and livestock. This amount comprised expenditure on projects and activities inclusive of grants, schemes and incentives specified in the Strategic Plan.

²⁶ The Strategic Plan 2016-2020 for the Food Crop, Livestock and Forestry Paragraph 11.3, Page 88-89.

The Committee was not set up for the follow-up and supervision of implementation. Progress reports on the implementation of the Plan were not prepared. Neither the mid-term nor the second evaluation exercise of the Strategic Plan, as envisaged was carried out by MAIFS.

Internal assessments were carried out on some schemes.

Consequence: MAIFS did not have adequate oversight on how the projects, incentives and schemes were effective in relation to the set targets.

KPIs that were linked to the Strategic Objectives of MAIFS were reflecting outputs rather than outcomes and were inadequate to measure progress (paragraph D.2.1 refers).

In an assessment of the non-sugar sector²⁷ carried out in October 2020, the following were highlighted by the Consultant of the African Development Bank:

- An Analysis of the implementation based on information provided by MAIFS officials involved in the implementation of the strategic plan indicates that only 50 per cent of the interventions had been fully implemented;
- The incentives and schemes though considered to be well intended and managed, did not achieve the intended benefits of increasing production, productivity and trade of non-sugar sector products. For example, out of the 16 schemes managed by FAREI, the Agricultural Marketing Board (AMB) and SFWF only eight were assessed to be highly to moderately successful based on utilisation and application rates.

Cause: The top management²⁸ of MAIFS is responsible for formulating policies and legislations that guide and support development as well as monitor outcomes of policy interventions. However, the execution of these responsibilities was negatively impacted by capacity gaps²⁹ in areas of designing projects, monitoring and evaluation frameworks.

Even though a strategy evaluation by an external appraiser was recommended in the Strategic Plan, the Accounting Officer of MAIFS did not initiate same to ensure that the strategy was effective, objectives were met, and it was responsive to changing conditions.

²⁷Assessment of the Non-Sugar Sector in Mauritius by the African Development Bank Group, October 2020, Page 8 paragraph 2.2.1 and page 60 paragraph 4.6. Report commissioned by MAIFS.

²⁸ Top management refer to Senior Chief Executive/ Permanent Secretary of MAIFS, Chief Agricultural Policy and Programme Development Officer of APAU, Director of Agricultural Services and Chief Executive Officer of FAREI.

²⁹ Assessment of the Non-Sugar Sector in Mauritius- The African Development Bank Group, October 2020. Report commissioned by the MAIFS. Page 54, paragraph 4.1.2

Recommendation:

The top management of MAIFSBEF should adopt evaluation as an important exercise and embed it in all forthcoming strategic plans. This will provide the Ministry an assessment to what extent interventions are aligned with strategies and plans.

MAIFSBEF should ensure that its interventions are aligned with strategies and plans and appropriately funded.

Ministry's Comment

MAIFS - *In the forthcoming Strategic Plan, all targets and KPIs will be included to redress the situation for better assessment of progress.*

B.3 Targets of the Strategic Plan 2016-2020 Not Met

What NAO found

- *In the absence of national SDG targets 2.3 and 2.4, the Strategic Plan 2016-2020 targets for selected food crops including strategic crops and livestock were used to assess progress towards self-sufficiency and sustainable agricultural practices.*
- *None of these targets was attained, instead, actual production per crop item fell below estimates.*
- *The production of strategic crops such as potato, onion and garlic were on the decreasing trend and did not meet the objective of increasing self-sufficiency.*
- *The interventions of MAIFS have not been adequate to address the constraints and challenges identified in the Strategic Plan. Only some 50 per cent of the projects and activities were reported to be implemented. Incentives and schemes, though well intended, did not deliver the expected results.*
- *MAIFS did not put in place a proper system to design and monitor projects, incentives and schemes as identified in the sheltered and bio-farming initiatives. The Sheltered Farms at Plaine Magnien constructed at a cost of some Rs 36.8 million and the one at Ville Bague remained unused and were left in a state of abandonment.*
- *Similarly, the organic farm at Britannia was not operating at its full capacity.*
- *These projects were implemented without ensuring the availability of water, which is a key requirement for cultivation.*

What NAO recommends

The top management of MAIFSBEF should re-assess whether it has the necessary resources and appropriate qualified personnel to formulate plans, the implementation of which should be adequately funded, monitored and evaluated for necessary corrective actions. Based on that assessment, it should formulate its targets.

(a) 2020 targets for selected food crops not met

Criteria³⁰: Since the 1990s, considerable effort has been made to produce selected food crops to meet national requirements and ensure some measure of self-sufficiency using an import-substitution strategy. Mauritius has always been a net food importing country being heavily reliant on imports of staple food such as rice, wheat flour, edible oil, milk, meat and temperate fruits.

³⁰ The Strategic Plan 2016-2020 for the Food Crop, Livestock and Forestry of the Ministry of Agro-Industry and Food Security dated January 2016. Paragraph 3.1, page 19, Paragraph 3.5 page 25.

As of 2016, the food crop sector has been meeting the food consumption requirements of the population with an overall self-sufficiency rate of 23 per cent. Close to 100 per cent self-sufficiency was considered to be achieved in respect of fresh vegetables and tropical fruits.

Targets to be achieved by the year 2020 were set for selected food crops with potential for increased production. The aim was to consolidate production for those crops where self-sufficiency was already attained, and their production needed to be increased to meet the increasing demand if resources allowed.

Condition: The 2020 target set for selected crops with potential for increased production is as per Table 4. None of the targets was attained, instead actual production per crop item fell below estimates.

Table 4: 2020 targets for selected crops with potential for increased production

Crop	unit	from	to	% increase	% increased self-sufficiency
Crucifers	tonnes	6,625	8,645	30.5%	
Carrot	tonnes	4,952	6,500	31.3%	
Chillies	tonnes	1,488	1,900	27.7%	
Cucurbits	tonnes	28,263	31,734	12.3%	
Garlic	tonnes	62	300	383.9%	from 9 to 15%
Mushroom	tonnes	22	60	172.7%	
Onion	tonnes	7,000	8,500	21.4%	from 38 to 50%**
Potato	tonnes	19,000	21,600	13.7%	from 76 to 80%**
Tomato	tonnes	11,200	15,000	33.9%	

** These targets are realistic in view of seasonality and limits on the storage life of these perishable products. Higher targets are realisable only if opportunities open up for export or processing.

The main crucifers comprise cauliflower, cabbage and broccoli. Cucurbits comprise species such as pumpkin, cucumber, squash, chayote (chouchou), calabash, zucchini, ridge gourd, bitter gourd and snake gourd.

Source: Strategic Plan 2016-2020

The production of strategic crops³¹ was on the decreasing trend and did not meet the objective of increasing self-sufficiency. Table 5 refers.

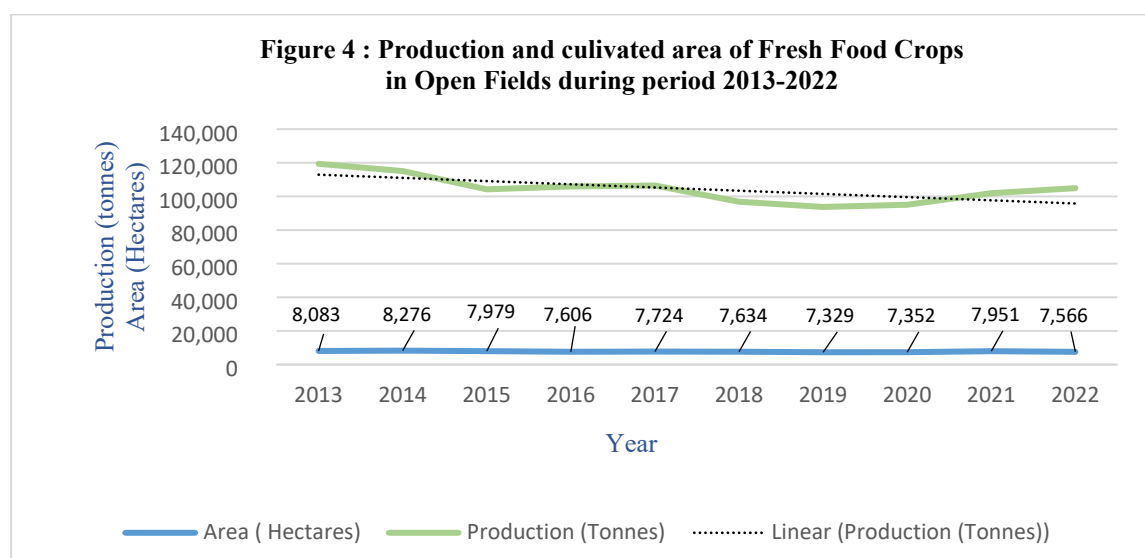
Table 5: Actual and Targeted production of strategic crops during period 2016-20

Crop	Actual production in tonnes during 2016-2020					Targeted (tonnes) in 2020	Targeted self-sufficiency (%) in 2020
	2016	2017	2018	2019	2020		
Garlic	120	96	71	48	39	300	9 to 15
Onion	6,388	5,134	3,440	3,219	3,641	8,500	38 to 50
Potato	16,326	14,124	17,033	14,822	14,192	21,600	76 to 80

Source: Strategic Plan 2016-2020

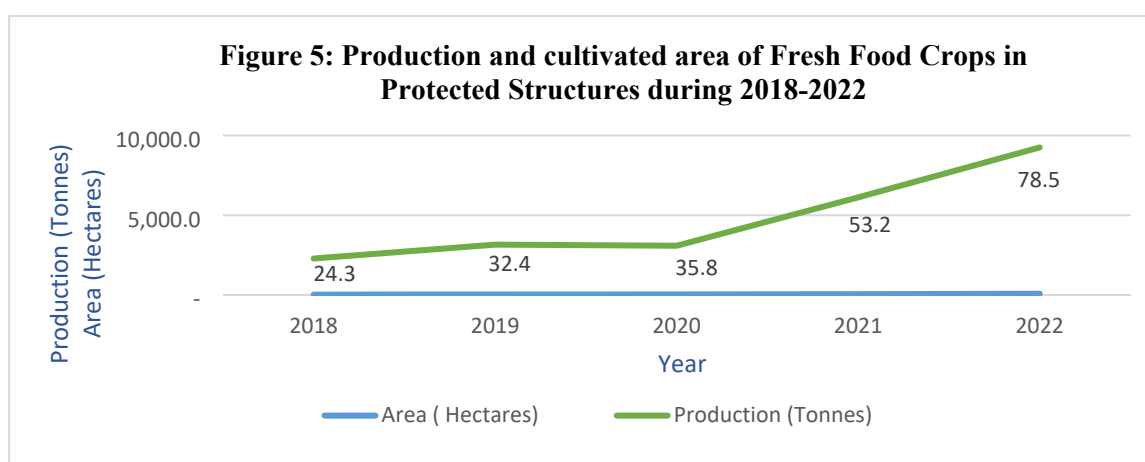
³¹ Potatoes, onions and garlic are considered as strategic crops by Government, with the aim of enhancing food security and economic benefits for the country. These crops are produced largely by smallholder farmers; thus, increased production can improve the livelihood of smallholders as there is ready market to meet national demand- (Assessment of the Non-Sugar Sector in Mauritius- The African Development Bank Group, October 2020)

The production of fresh food crops was on a decreasing trend over the last ten years as shown in Figure 4.



Source: MAIFS and Statistics Mauritius

The targets estimated at some 5,000 tonnes for Fresh Food crops under hydroponics included in Sheltered Structures were met. Figure 5 shows the actual production during the period 2018 to 2022.



Source: MAIFS and Statistics Mauritius

Food crops like tomato, lettuce, sweet pepper and cucumber were the main crops grown in protected cultures. However, they accounted for less than 10 per cent of both the variety of crops grown and the amount harvested in open fields.

In respect of production for the year ending 2023, the statistics were as follows:

- The production of food crops for open fields increased by 33 per cent from 107,878 tonnes in 2022 to 143,883 tonnes.
- The production of strategic crops in open fields like potatoes and onions decreased by

17 percent and 27 percent respectively.

- The production of food crops under covered cultures increased by 22 per cent from 9,236 tonnes to 11,281 tonnes.

These statistics, published by Statistics Mauritius, were provisional and were not subject to any validation exercise at the level of FAREI (paragraph A.5 refers).

The status of several projects geared to boost food crop production has been assessed and is described below:

(i) Setting of 100 Sheltered Farms- One farm at Plaine Magnien costing some Rs 36.8 million never exploited and in an abandoned state

The setting up of sheltered farms, in line with Government's policy was to stimulate agricultural innovation and promote sustainable agriculture with a view to boosting cultivation/production of crops presently being imported.

The setting up of the 100 sheltered farms, 60 hydroponic farms of 500 square metres each on a plot of land of 1,500 square metres and 40 net farms of 4,000 square metres each on a plot of land of 4,220 square metres was announced in the 2018-19 Budget Speech with necessary utility services such as water and electricity.

Five sites were identified, and construction of 20 units was carried out in November 2020 at one site in Plaine Magnien, costing some Rs 36.8 million.

149 applications had been received for renting these net farms, but had not been rented out due to the non-availability of water and electricity. The Central Water Authority (CWA) had not acceded to providing water for irrigation purposes, and a contract amounting to some Rs 1 million for drilling a borehole was allocated in February 2023.

During a site visit by officers of NAO in September 2023, all the 20 units over an area of 10 arpents had not been put to productive use. They were abandoned, overrun with wild vegetation inside and outside, and the insect-proof nets were already damaged (Figure 6 refers).



Source: National Audit Office

Figure 6: One farm at Plaine Magnien costing some Rs 36.8 million in an abandoned state

(ii) The Skills and Entrepreneurship Development Programme

The Sheltered Farming Park was intended to provide facilities for the promotion of sheltered farming systems aimed at unemployed graduates who get one year of support to establish a successful farming business.

The whole park was to serve as facilities for the promotion of sheltered farming systems and to encourage the venture of educated youths in primary agricultural production under an internship programme of one year.

■ *Damaged and Underutilised Sheltered Farming Park at Plaine Magnien*

The park comprised 10 modular units completed in the year 2018 with a floor space of some 1,989 square metres each, equipped with drip irrigation and fertigation facilities and costed some Rs 15 million.

Nine units were allocated, inclusive of water and electricity supply. By the year 2022, when the COVID-19 pandemic was over, only four beneficiaries resumed cultivation of the plots. The other five plots remained unoccupied, and turned out to be weedy and outgrown with wild vegetation. During a site visit in September 2023, it was observed that the net structure was damaged in all the plots (Figure 7 refers).

Irregular water supply affecting cultivation and non-renewal of lease agreements since the year 2021 were reported.



Source: National Audit Office

Figure 7: Damaged and abandoned unit at Plaine Magnien Sheltered Farming Park

- *Damaged and Unexploited Sheltered Farming Park at Ville Bague*

Construction of this park was completed in May 2019, costing some Rs 10 million for six units. Each unit, comprising a plot of 1,697 square metres equipped with a drip and fertigation system, was assigned to six individual beneficiaries in December 2019.

However, no cultivation was carried out on the plots for more than three years due to lack of water and access to electricity supply.

During a site visit in September 2023, it was observed that the net structure was damaged, weedy, and outgrown with wild vegetation in all the plots (Figure 8 refers).



Source: National Audit Office

Figure 8: Damaged and abandoned sheltered unit at Ville Bague

(iii) Britannia Organic Zone (Project in Alignment with SDG Target 2.4) - Objectives Not Met

In 2015, MAIFS had set a target of 50 per cent of local food to be produced according to bio-norms within five years and planned to place 100 hectares of land at the disposal of planters to establish a model bio-farm.

An amount of Rs 20 million was allocated in Budget 2016-2017 for the development of the first organic zone on state-owned land of 27.83 hectares. This zone was only a start as Government planned to spread bio-farms across 100 hectares of state land.

This bio-farm project was riddled with so many difficulties as described in the Case Example that MAIFS aborted the extension of the bio-farming zone at Plaine Magnien and La Flora.

Case Example: Britannia Organic Zone

The Britannia Organic Zone project costing some Rs 10 million on a total area of 27.83 hectares (66 arpents) was set up in the year 2017. Out of the 66 arpents, 48 arpents were allocated to 10 promoters to carry out bio farming, some 13 arpents were vacant, and FAREI had set up an agro-forestry on 5 arpents.

The allocation of plots was carried out following an interview exercise with applicants who submitted projects for the cultivation of food crops under organic norms. MAIFS conducted mechanical land preparation for the entire area and the connection of the organic zone to the electricity grid, covering all associated expenses. Plantations started on site in June 2017.

In August 2020, FAREI reported that the beneficiaries were encountering difficulties in producing organic vegetables due to: (1) no proper source of water for irrigation, (2) contamination of the zone through runoff water and (3) pesticides drifts from neighbouring conventional fields and (4) soil infertility issues.

However, as of December 2023, after six years there has been no provision of water supply for irrigation on site.

Observations during the site visit carried out in September 2023 are as follows:

- 13 arpents of land were unallocated and have been vacant since 2017. Out of the 10 promoters who started operations in 2017 on an area of 48 arpents, only five beneficiaries were active over an area of 27 arpents. The rest of the land (some 44 per cent) was abandoned.
- There was no data available on the quantity of food crops harvested, though the zone was under the purview of the Bio-Farming Unit of FAREI.
- Only one beneficiary was reported to be certified in organic food crop production.
- The only beneficiary present on site when interviewed, expressed a lack of technical support from FAREI in dealing with specific issues relating to organic farming like control over pests. His cabbage plantation was heavily infested with pests (Figure 9 refers) and could not be controlled by bio-pesticides. Officers who were trained in organic farming techniques were no longer posted in the Bio-Farming Unit.

Organic cultivation of cabbage



Cabbage damaged by pests



Source: National Audit Office

Figure 9: Organic Cultivation at Britannia

As per the Bio-Farming Unit, there were additionally some 125 farmers cultivating over an area of some 220 arpents (92.8 hectares). Four of the farmers' production have been certified to be organic.

However, the annual quantity of organic food crops produced was not documented.

Consequence: The targets of the Strategic Plan have not been met, indicating that based on current trends it is unlikely that the national targets set (paragraph A.4 (a) refers) in respect of SDG Target 2.3 and 2.4 would be achieved.

Cause: The interventions of MAIFS and its agencies such as FAREI were not adequate to address the constraints and challenges identified in the Strategic Plan. Some 50 per cent of the projects and activities were reported to be implemented. Incentives and schemes, though well intended, did not deliver the expected results.

Relevant personnel of MAIFS and entities operating under its aegis were not properly trained to design and monitor projects, incentives and schemes as identified in the sheltered and bio-farming initiatives.

Recommendation: MAIFSBEF should re-assess whether it has the appropriate resources to formulate plans, the implementation of which should be adequately funded, monitored and evaluated for necessary corrective actions. Based on that objective assessment, it should formulate its targets.

(b) 2020 targets for livestock not met

What NAO found

- *Local production of milk and dairy products, beef, goat, mutton, pork and honey was well below the targets.*
- *The livestock sector has been constrained mainly by the high cost of animal feed and by the limited number of commercial farms, lack of appropriate breeding stock, insufficient land allocated for livestock activities and fodder production, the low adoption rate of good husbandry practices by farmers, inadequate veterinary services, and abiding by environmental and sanitary laws.*
- *Major constraints and challenges identified as far back as 2016 in the Strategic Plan, had not been addressed effectively by top management of MAIFS.*
- *The take-up rate of Livestock Schemes was only 52 per cent as it did not cater appropriately for the most vulnerable farmers. Small-scale breeders encountered challenges in importing animals, acquiring land for fodder production, and obtaining permits for animal rearing in residential zones.*

What NAO recommends

Priority areas on which MAIFSBEF should focus are:

- *A re-organisation of the institutions which are operating under its aegis and responsible for livestock, in order to provide harmonised services to the farming community.*
- *A review of all projects, incentives and schemes to ensure they effectively meet their objectives.*
- *The setting up of the ‘Special Livestock Zones’ and enhancing the capacity of heifer farms.*
- *Necessary amendments to legislation of the livestock sector to address current needs.*
- *A re-evaluation and adjustment of the livestock grant and subsidy schemes to better address the needs of small-scale breeders.*

Criteria³²: The livestock sector development aimed at boosting local production and marketing of milk, meat, poultry and related value-added products, thereby increasing food self-sufficiency and the sector’s contribution to the economy. Based on the status of the livestock species, trends and in view of the different incentive schemes already under way, realistic targets were set for 2020 as per Table 6.

Table 6: Production Target for Livestock for 2020	
Livestock	Targeted self-sufficient in 2020 (%)
Poultry meat	100
Venison	100
Milk	6
Beef	4
Goat/Mutton	100
Pork	65
Honey	25

Source: Strategic Plan 2016-2020

Condition: As of the end of the year 2022, the status of self-sufficiency³³ was as follows:

- Self-sufficiency was maintained for poultry meat, eggs and venison;

³² The Strategic Plan 2016-2020 for the Food Crop, Livestock and Forestry of the Ministry of Agro-Industry and Food Security dated January 2016, paragraph 4.1, page 40.

³³ Status for year 2020 was not available. The status for 2022 was sourced from publication “Les Assises de L’Agriculture” Pathways To A Sustainable Food System for Healthier Roadmap Page 4 & 5 of the Economic Development Board, in collaboration with the Ministry of Agro Industry and Food Security.

- Local production satisfied less than six per cent of the total requirements of milk and dairy products;
- Only some 9.5 per cent of the total requirements of meat and meat products (beef, goat/mutton and pork); and
- Only some six per cent of self-sufficiency was achieved for honey.

Schemes and Incentives - relatively low uptake for Livestock Schemes

Comparatively, the food crop sector was allocated three times more grants and subsidies than the livestock sector during the period 2015-16 to 2021-22 as shown in Table 7. The take-up rate of the grants and subsidies was higher for the food crop sector, 71 per cent, as compared to 52 per cent for livestock.

Table 7: Grant and subsidies disbursed to the Food Crop and Livestock Sectors				
Financial year	Expenditure - Food Crop sector		Expenditure - Livestock sector	
	Budgeted (Rs million)	Actual disbursed (Rs million)	Budgeted (Rs million)	Actual disbursed (Rs million)
2015-16	110.1	72.5	46.0	18.6
2016-17	154.4	96.6	46.3	16.5
2017-18	167.4	120.6	47.5	24.7
2018-19	197.0	107.6	40.6	25.8
2019-20	152.0	115.7	33.6	10.9
2020-21	115.8	112.8	29.6	23.4
2021-22	117.3	99.6	35.5	26.5
Total	1014.0	725.4	279.1	146.4
Percentage disbursed		71%		52%

Source: Annual figures from statement D1 of Treasury

Out of a total of eleven schemes, five were managed by FAREI, three by SFWF and the remaining three by the Agricultural Services of MAIFS.

The main reasons for the low uptake of the schemes were analysed for four schemes managed by FAREI and are presented in Table 8. In addition to these reasons, disbursement is generally a lengthy process and farmers with larger animal populations were not eligible for these schemes.

Table 8: Main reasons for low uptakes of Schemes during period 2015-16 to 2021-22

	Schemes	Take up rate (%)	Rational of scheme	Main reasons behind low uptake
1	Cattle Breeders Scheme	10	To address difficulties in acquiring/importing better breeds.	No capacity to import, poor adaptation of animals and issues with reproduction.
2	Pasture Development Scheme	9	To address high-cost inputs such as feeds.	No land to plant fodder. Fodder was available freely by roadsides and sugar cane tops.
3	Goat and Sheep Breeding Scheme	7	To provide support to buy better breeds.	Need permit/licenses, rearing space and additional funds which many farmers did not have.
4	Upgrading of Livestock Farm/Poultry Scheme	26	Financial support to upgrade or construct rearing structures.	Need permit/licenses, rearing space and additional funds which many farmers did not have.

Source: NAO analysis

Except for sheep rearing, there was a decline in the number of small breeders and animal population during period 2018-2022. Table 9 refers.

Table 9: Details on livestock population during period 2015-2022

Year	Cattle		Goat		Sheep		Pig	
	Number of small breeders	Number of heads	Number of small breeders	Number of heads	Number of small breeders	Number of heads	Number of small breeders	Number of heads
2015	790	4,705	2,545	26,714	208	2,731	465	21,964
2016	650	3,531	2,346	26,670	242	2,663	466	24,161
2017	592	3,091	2,411	25,339	240	2,882	464	21,445
2018	575	3,508	2,330	25,540	243	3,005	456	19,662
2019	536	3,036	2,294	25,447	256	3,062	447	20,897
2020	556	4,093	2,238	25,165	268	3,206	447	20,749
2021	508	2,964	1,941	20,768	304	3,929	405	16,570
2022	538	3,512	1,856	21,608	375	4,367	429	21,484

Source: Statistics Mauritius

Consequence: With this current trend, achieving the specified goals of the programs, especially in terms of improving livestock production and self-sufficiency, poses a challenge. While the existing initiatives support active farmers in maintaining their operations, the limited adoption of these programs hindered a greater number of breeders from benefiting of same.

The targets were not met, indicating that with the current trend, it is unlikely that the target set (paragraph A.4 (b) refers) with respect to SDG Target 2.3 would be achieved.

Cause: For years, the sector has been constrained mainly by the high cost of animal feed and by the limited number of commercial farms, lack of appropriate breeding stock, insufficient land allocated for livestock activities and fodder production, low adoption rate of good husbandry practices by farmers, inadequate veterinary services, and pressure from environmental and sanitary laws³⁴.

Major constraints and challenges identified as far back as year 2016 in the Strategic Plan, had not been addressed effectively by MAIFS as of October 2023. These include:

- Gaps in the provision of efficient and harmonised support services have not been bridged by a re-organisation of the livestock institutions under MAIFS (Paragraph C.3 refers).
- Livestock production was highly dependent on imported, costly inputs comprising mainly animal feeds and breeding animals. The setting of heifer farms to increase the availability of breeding animals was still operating below expected capacity.
- Livestock development was constrained by limited land resources and environmental exigencies which limit livestock operations in specific areas. The ‘Special Livestock Zones’ envisaged by MAIFS did not materialise.
- Several legislations for the livestock sector found to be outdated have not been reviewed to address present needs.

According to MAIFS, the effectiveness of its interventions through the implementation of projects, schemes, and incentives could not be measured on the sole basis of self-sufficiency, local production of meat, number of breeders and number of heads of animals raised. Its interventions have rather assisted farmers in maintaining their operations.

Recommendations: The top management of MAIFSBEF should clarify whether its strategic objective is to maintain the operation of existing farmers whilst not necessarily raising the level of self-sufficiency, or whether its interventions are primarily geared towards enhancing self-sufficiency.

If the strategic objective is to increase the level of self-sufficiency, then it should be more actively committed to addressing the constraints and challenges identified in the Strategic Plan. Priority areas on which the top management should focus include the following:

- A re-organisation of the institutions which are operating under its aegis and responsible for livestock, in order to provide harmonised services to the farming community.

³⁴ The Strategic Plan 2016-2020 for the Food Crop, Livestock and Forestry of the Ministry of Agro Industry and Food Security dated January 2016, paragraph 4.1, page 40.

- A review of all projects, incentives and schemes to ensure they effectively meet their objectives.
- The setting up of the ‘Special Livestock Zones’ and enhancing the capacity of heifer farms.
- Necessary amendments to legislations of the livestock sector to address current needs.
- A re-evaluation and adjustment of the livestock grant and subsidy schemes to better address the needs of small-scale breeders.

Ministry’s Comment

***MAIFS** -The Ministry is re-organising the Agricultural Services. Review procedures are being carried out for projects, incentives and schemes to meet the objectives. Necessary amendments to legislation are being brought in the Finance Bill after extensive discussion and consultation with the veterinary of the Livestock sector. A new Strategic Plan for the period 2024-2030 has been finalised. Targets have been set on the basis of relevant assumptions and scientific information provided by relevant Organisations/ Departments. The Strategic Plan has been prepared based on several outcomes such as “Les Assises de L’Agriculture” and also took into account the assessment of initiatives/policies proposed in the Strategic Plan 2016-2020.*

B.4 Inefficient Use of Scarce State Lands for Food Crop and Livestock Production

What NAO found

- *The top management of MAIFS was unable to ensure efficient use of land over which it had control.*
- *Only some 53 per cent of the land was reported to be allocated and under beneficial use as of June 2023. These plots were materially underutilised and there was no visibility on the quantum of production which was being realised.*
- *This represented a lost opportunity of increasing production by making maximum use of the land in order to meet targets set in the Strategic Plan, and the national Target 2.3.*

What NAO recommends

- *The top management of MAIFSBEF should re-consider the need to provide the required resources to the Land Use Division (LUD) in order to increase the number of monitoring site visits and be more responsive in dealing with abandoned or underutilised plots.*
- *The top management of MAIFSBEF should develop more capacity in project design and monitoring. It should set up a common platform among LUD, FAREI and SFWF to share information on plot identification, status of occupation and production figures (livestock and food crops).*

Criteria³⁵: In recent years, significant land areas have been moved out of agriculture to make way for infrastructure and residential development. The area of cultivable land is under tremendous pressure to meet highly competing and at times conflicting demands for development. Unutilised lands represent a waste of valuable resources and a missed potential to increase agricultural production.

With the scarcity of fertile agricultural land resources in Mauritius, it is essential to have continuous monitoring of the extent and type of both state and private lands available in each region, their current land use pattern, and any change in land use.

Condition: An analysis of state land leased for agricultural purposes was carried out. Table 10 refers. Out of the 9,836 arpents of land under the purview of the Land Use Division (LUD) of MAIFS as of June 2023, only 52.6 per cent were potentially under beneficial use for agricultural purposes.

³⁵ The Strategic Plan 2016-2020 for the Food Crop, Livestock and Forestry of the Ministry of Agro Industry and Food Security dated January 2016. Paragraph 7.2.1 Page 70-71.

Table 10: Status of state land under purview of Land Use Division as at June 2023

Status	Total Extent of Land under purview of LUD		Allocated for Food Crops		Allocated for Livestock	
	Arpent	%	Arpent	%	Arpent	%
Occupied/Bulldozed/Cleared/Fallow	5,171	52.6	1,553	66.9	148	46.5
Abandoned/Non-Compliance/No Activity	2,820	28.7	367	15.8	77	24.3
Neglected	244	2.5	66	2.8	30	9.5
No access	383	3.9	46	2.0	17	5.3
Squatting	92	0.9	3	0.1	-	-
No status in records	1,114	11.3	285	12.3	46	14.4
Not identified	10	0.1	2	0.1	-	-
Total	9,836	100	2,322	100	318	100

Source: Land Use Division (MAIFS)

Further analysis of LUD's records indicated the following:

- Some 67 per cent of state land allocated for the cultivation of food crops was identified as 'occupied/bulldozed/cleared/fallow'. This classification did not provide visibility on the extent to which these plots were put to maximum beneficial use. LUD did not keep records³⁶ of the annual food crop production on each of these plots covering an area of 1,553 arpents.
- Some 46.5 per cent of land area allocated to livestock was recorded to be under use. LUD did not keep records³⁷ on the number of heads raised on these plots and the annual production.

Assessment of the extent to which state land plots are put to beneficial use in a sample of cases

The use of a sample of leased land was analysed in detail to determine to what extent they were put to beneficial use (Table 11 refers).

³⁶ Though FAREI collect monthly data on food crop harvested island wise, these data are not exploited by LUD to confirm to what extent these plots are put to beneficial use.

³⁷ Statistics on heads of animals raised island wise are collected by FAREI.

Table 11: Status of leased land at six sites in 2023							
Locality	Status as at 2023 (Month)	No of plots	Extent (Arpent)			(%) Occupied	Purpose
			Total	Occupied	Not Occupied*		
Olivia	June	26	48.6	12	36.6	24.7	1
L'Esperance	July	26	45.18	12.19	32.99	27	1
Ville Bague	May	4	26.9	5	21.9	18.6	2
Rouge Terre	July	24	47.85	26.41	21.44	55.2	3
Mare D'Albert	August	38	44.21	38.09	6.12	86.1	3
Britannia	September	14	66.03	32	34.03	48.5	4
Total		132	278.77	125.69	153.08	45	
* Comprise Area Neglected, Abandoned, Vacant and being Squatted.							
1- Food Crop, 2 – Food Crop and Sheltered Farming, 3- Food Crop & Livestock, 4- Organic Mixed Farming/ Food Crops and Agro-Forestry							
Source: Land Use Division (MAIFS)							

(i) Rouge Terre Project (status as of July 2023) - Land with irrigation facilities underutilised

Since the year 2013, 20 of the 24 plots were allocated for food crop production, whereas the remaining four were allocated for livestock. Only 10 of the plots (some 50 per cent) were occupied. The remaining 10 were either neglected or abandoned. All these plots were provided with irrigation infrastructure by the Irrigation Authority (Figure 10 refers).



Source National Audit Office

Figure 10 Plots with irrigation infrastructure in an abandoned state

Three of the four plots allocated for livestock had never been exploited and were in an abandoned state. One of the beneficiaries who occupied the land experienced several difficulties such as: the death of animals due to diseases, theft and delay in obtaining a Building and Land Use Permit from the Local Authority. Also, the other beneficiaries were not granted Preliminary Environmental Report approvals for the rearing of livestock due to the presence of a stone crusher within a radius of 200 metres from the plots.

(ii) Rouge Terre Post Harvest Facility Unit, Project associated with the lease of some 48 arpents - No Value for Money Obtained

The aim of constructing this post-harvest facility on one of the plots was to improve the income of farmers by ensuring the efficient handling, storage, and processing of food crops after they have been harvested from the surrounding cultivation³⁸. The facility was furnished with equipment for washing and packaging of vegetables and a small cold room for storage of same.

The construction cost amounted to some Rs 2.6 million in 2013. This facility has never been utilised since then. During the period 2013 to January 2023, some Rs 4.6 million have been spent on utility bills and security services. In December 2020, AMB declined the offer of MAIFS to take over this facility for its agro-processing project. An expression of interest was launched in May 2021 to rent over this facility but was not yet finalised as of June 2024.

During a site visit in June 2023 by officers of NAO, it was noted that the Unit was in an abandoned state (Figure 11 refers). Also, the equipment and the cold room's infrastructure were in a deteriorated state as per MAIFS records.



Source National Audit Office

Figure 11: Post-Harvest facility never used and in an abandoned state

³⁸ As per MAIFS and FAREI records, construction of this facility was financed by the Food Security Fund and was meant to be used for that purpose.

(iii) Mare D’Albert Project - Underutilised Land Resources

In February 2011, a total of 57 arpents of state land was allocated to five beneficiaries for raising of livestock and dairy projects. Information on the livestock activities prior to 2021 was not available at FAREI. The status over the period 2021 to June 2023 is as per Table 12.

Table 12: Overview of Use of Land at Mare D’Albert					
	Beneficiary ³⁹	Area (arpents)	Status		
			2021	2022	As of June 2023
1	A	9	Dairy project not implemented. Fodder initially planted removed, used for food crop.	Only one arpent used for crop production.	No agricultural activity being carried out.
2	B	9	Goat/sheep rearing not carried out. 3 arpents of fodder plantation cleared out. Plot in an abandoned state.	75 coconut trees and 75 banana suckers planted. 4 arpents cleared out, 5 arpents abandoned.	Same state as in 2022.
3	C	9	Only 3 animals were on site, fodder plantation on only 2 arpents of land Plot in an abandoned state.	The lease was terminated and land retrieved.	Land not yet allocated.
4	D	10	75 goats, 1.5 arpent under fodder plantation in December 2021.	60 goats, 1.5 arpent under fodder cultivation in March 2022.	92 goats, 45 hens and fodder plantation over 4 arpents.
5	E	19	Issues with the productivity of cows, and all sold. Had 5 goats, 1 sheep, 20 rabbits and 150 hens.	10 rabbits, 10 hens and 25 ducks. Benefited grant of Rs 200,000 for the multiplier goat project.	5 goats, 10 arpent under fodder plantation. 35 coconut plants and banana plants were cultivated.

Source: Land Use Division (MAIFS) and FAREI

The status indicates that the plots were underutilised. When compared with FAREI Guidelines⁴⁰ on the ratio of animals to the area of land required, the extent of land allocated exceeded by several folds that which was required. In the case of Beneficiary D, the latter has been living in an illegal construction concrete and corrugated iron sheet structure on that plot since the year 2021. A pull-down notice was served to the beneficiary in February 2022 by MAIFS.

However, the illegal construction was still not pulled down as observed during a site visit by officers of NAO in September 2023.

³⁹Identities of the beneficiaries are not being disclosed in the Report.

⁴⁰1 arpent of land for 10 heads of goats for fodder production, 1.5 square metres for housing and 3-4 square metres per goat for exercise pen.

Consequence: The Strategic Plan identified scarcity of fertile land and small-size holdings which prevented benefits from economies of scale for mechanisation among the major constraints to boost the production of food crops and livestock. MAIFS was unable to ensure efficient use of land over which it had control. Only some 53 per cent of the land was reported to be allocated and under beneficial use as of June 2023. These plots were materially underutilised and there was no visibility on the quantum of production which was being realised.

This represented a lost opportunity for increasing production by making maximum use of the land in order to meet targets set in the Strategic Plan, and the national Target 2.3.

Causes: The oversight of LUD was inadequate to ensure the optimal use of leased State land for agricultural purposes.

As per monitoring reports at MAIFS, leased lands production was found to be ineffective. Limitations in those activities, along with inadequacies in the lease agreement, and insufficient sharing of valuable information among stakeholders had not allowed the Ministry to fully assess the extent to which these plots were being used for the purpose for which they were allocated.

Moreover, current findings show that MAIFS did not consider adequately land use planning requirements when allocating land for livestock projects. Also, it was not responsive to scenarios where plots were abandoned or unutilised in irrigation zones, or lessees were defeating the purpose for which the plots were allocated to them.

As mentioned in paragraph B.2, MAIFS had technical capacity gaps in designing and implementing projects and this led to the non-utilisation of the post-harvest facility since its construction some 10 years ago.

Some recurrent challenges reported by LUD management were: (1) lack of human resources, (2) transport facilities to carry out regular site visits of leased plots, and (3) inaccessibility of plots. One particular challenge that prevailed was that a specific plot was assigned different identification numbers by different stakeholders for example SFWF and FAREI and there was no common platform to share such information.

This led to the missed opportunity to share information on production figures and the status of the plots collected by FAREI during its monthly visits.

Recommendations: The top management of MAIFSBEF should step up its commitment to address the recurrent issues encountered in monitoring the use of agricultural state lands by carrying out a follow-up on the implementation of the recommendations of the performance audit report of June 2020.

It should re-consider the need to provide the required resources to LUD in order to increase the number of monitoring site visits and be more responsive in dealing with abandoned or

underutilised plots.

It should develop more capacity in project design and monitoring. It should set up a common platform among LUD, FAREI and SFWF to share information on plot identification, status of occupation and production figures of livestock and food crops.

The top management of MAIFSBEF and LUD should develop a comprehensive agricultural land use policy with clearly defined objectives for the sustainable use and management of agricultural land. It must establish a mechanism for monitoring and evaluating the policy's effectiveness with regular reviews and updates based on feedback and changing conditions.

Ministry's Comment

***MAIFS** - FAREI has been compiling data on production on both state and private lands. FAREI will now disaggregate data to obtain production on state land. A formal committee has now been set up for sharing of information on state land under the chairmanship of the Assistant Director of Agricultural Services with the following stakeholders: FAREI, SFWF, Irrigation Authority and Sugar Insurance Fund Board. The Lease Agreement has been amended to include a yearly yield report from the lessee, compulsory training of 30 hours by FAREI plus 75 per cent attendance prior to signature of the lease agreement for new beneficiaries.*

SECTION C: Legal and Policy frameworks, and Institutional arrangements towards attainment of targets

This section examines whether there were adequate and well-functioning legal and policy frameworks, and institutional arrangements to achieve the targets.

C.1 Introduction

The 2030 UN Agenda is not a legally binding agreement, and it is up to the countries' governments to decide how they will give effect to their commitment of achieving the targets. It encourages national target-setting and adaptation of SDGs into national processes, policies, and strategies. National development plans play a critical role as they are at the centre of the policymaking process⁴¹.

This Section examines the extent to which legal and policy frameworks and institutional arrangements for the achievement of the targets have been provided. The following aspects are also covered:

- (i) Integration of the two targets in national development plans and policies, with a long-term perspective.
- (ii) A whole-of-government approach to provide a holistic picture of the actions taken at different levels of government. This comprises policy coherence which is of a cross-cutting nature and long-term impact of policies, thereby, creating mechanisms for interactions across sectors and aligning actions among different levels of government.
- (iii) Multi-stakeholder engagement includes collaborating with all relevant stakeholders in policy planning, design and assessment.
- (iv) Leave no one behind emphasises inclusive governance mechanisms that take account into persons who are at a disadvantage.

⁴¹Accelerating 2030 Agenda Integration: Aligning National Development Plans with the SDGs — No. 25, 2021. Authors Tarek Katramiz and Mahesti Okitasar © United Nations University ISSN: 2409-3017.

C.2 Status on Institutional Arrangement as of October 2023

What NAO found

- *National development plans play a critical role as they are at the centre of the policymaking process. There was no single, long-term, overarching national development plan to drive SDGs implementation forward.*
- *As of October 2023, there was no national plan covering at least a medium-term period of five years incorporating the SDG targets and their financing through national budgets.*
- *Records examined for the period January 2019 to October 2023 at MAIFS did not integrate SDG 2 into its programmes or incorporate them in its strategic planning, or assess existing or proposed policy against the 2030 Agenda and the SDG targets.*
- *The initiative of MOFEPD in 2019 to bring more clarity in terms of the integration of the SDGs in national policies and budgeting was not implemented.*
- *The Inter-Ministerial Coordination Committee expected to serve as the high-level platform for the implementation of the SDGs has been phased out.*
- *The Four Working Groups that would build more synergies across sectors, address bottlenecks, sustain and accelerate progress, establish partnerships, comprehensive measurement mechanisms and help explore financing options did not hold any meeting.*

What NAO recommends

- *MAIFSBEF should explicitly reference SDG Targets 2.3 and 2.4 in its policy, planning or budget documents. MFARIIT should reconsider the finalisation of the Roadmap and activation of the Four Working Groups.*
- *MOF should renew the call to integrate SDGs in national policies and budgeting.*

Criteria: With the support of the UNDP, a Draft Roadmap for the Implementation of SDG in Mauritius was prepared in 2017 and updated by MFARIIT in 2018. This Draft Roadmap reviewed the likely determinants of success in implementing Agenda 2030 and provided insight into the alignment of national policy frameworks across sectors with the SDGs.

It also reviewed institutional frameworks to foster the implementation of SDGs and made suggestions on: interventions to accelerate progress across SDGs, mobilisation of innovative finance, enhancement of data and monitoring capacity, and actions for advocacy and engagement in advancing the Agenda.

The finalised Roadmap was intended to inform further consultations within Government and

with other stakeholders on how to advance the SDGs at national level as part of the process of finalising Vision 2030 and related decisions.

Pending the adoption of the Draft Roadmap and a proposed SDG working structure, the National Network for Sustainable Development (NNSD) and National Economic and Social Council (NESC) were expected to contribute indirectly towards the implementation of SDGs. While these two structures were not directly linked to the implementation of the SDGs, they nevertheless had to look into the implementation of national policies which were geared towards sustainable development (Chapter 2, paragraph 2.2 refers).

Condition

(i) The SDG Roadmap was still at draft stage and the SDG working structure not functional

As of November 2023, the Roadmap was still at draft stage.

MFARIIT reported that the Inter-Ministerial Coordination Committee expected to serve as the high-level platform on the implementation of the SDGs has been phased out.

The Four Working Groups expected to build more synergies across sectors, address bottlenecks, sustain and accelerate progress, establish partnerships, comprehensive measurement mechanisms and help explore financing options did not hold any meeting.

(ii) No single, long-term, overarching national development plan to drive SDGs implementation forward.

There was no national document making reference to the achievement of SDG. However, Mauritius obtained an SDG Index Score of 68.0 and was ranked 93 out of 166 countries.

The Three-year Strategic Plans for financial years 2017/18-2019/20 and 2018/19-2020/21, and the associated Budget Speeches, which provided strategic directions to the National Budgets made no mention of the implementation of SDGs. In respect of years 2021/2022 and onwards, no three-year strategic plans were prepared.

Records examined for the period January 2019 to October 2023 at MAIFS indicated that no guidance was issued to the latter to integrate SDG 2 into its programmes or incorporate them in its strategic planning, or assess existing or proposed policy against the 2030 Agenda and the SDG targets.

In response to the findings of NAO's Report 'Preparedness for the Implementation of Sustainable Development Goals', MOFEPD in its 2019-2020 Budget Circular requested Ministries to include targets in budget estimates for monitoring progress towards the achievement of SDGs. This aimed at bringing in more clarity in terms of the integration of the SDGs in national policies and budgeting.

However, this instruction was not complied with by Ministries and Departments.

Consequence

As per the UN Sustainable Development Report 2023 (referred in paragraph 1.1.2) Mauritius ranked 93 out of 166 countries with an SDG Index Score⁴² of 68.0, and was overall improving moderately.

However, progress on SDG 2 was stagnating.

Limited or no reference to the SDGs in policy, planning or budget documents examined did not necessarily mean that initiatives outlined in these documents were not aligned with the SDGs. However, their inclusion would have confirmed that SDGs were a key consideration whether in the medium or long-term perspective.

The SDGs require long-term directed change, with long-term investment plans essential for national success in meeting the goals⁴³. As of November 2023, there was no national plan covering at least a medium-term period of five years incorporating the SDG targets and their financing through national budgets.

Cause

A majority of governments⁴⁴ have published some form of strategic vision and/or action plan to implement the SDGs. For many, this takes the form of a national sustainability strategy explicitly linked to the 2030 Agenda goals and targets.

In Mauritius, a mainstreaming approach has been adopted. In this approach, SDGs are implemented by each line ministry/department through interventions within the scope of its mandate. Committees and structures, envisaged under this approach, to enhance follow-up and coordination among ministries /departments, build more synergies across sectors and address bottlenecks have either been phased out or are non-functional.

For example, the initiative of MOFEPD in 2019 to bring more clarity in terms of the integration of SDGs in national policies and budgeting was not implemented.

⁴² The overall score measures the total progress towards achieving all 17 SDGs. The score can be interpreted as a per centage of SDG achievement. A score of 100 indicates that all SDGs have been achieved- Accessible at <https://dashboards.sdgindex.org/profiles/mauritius>

⁴³ Sustainable Development Report- 3.2 SDG integration into sectoral policies and pathways: scorecards for the Six SDG Transformations. Accessible at <https://dashboards.sdgindex.org/chapters/part-3-government-efforts-and-commitments-for-the-sdgs>

⁴⁴ Sustainable Development Report- 3.1 Political leadership and institutional coordination: results from the 2023 SDSN survey of government efforts for the SDGs. Accessible at <https://dashboards.sdgindex.org/chapters/part-3-government-efforts-and-commitments-for-the-sdgs>

Recommendations

MAIFS should explicitly reference SDG Targets 2.3 and 2.4 in its policy, planning and budget documents.

MFARIIT should reconsider the finalisation of the Roadmap and activation of the Four Working Groups.

The Ministry of Finance (MOF) should renew the call to integrate SDGs into national policies and budgeting.

Ministries' Comments

- **MAIFS**- SDG targets are embedded in the Strategic Plan 2024-2030 of the Ministry and budget allocations would be sought to enable the implementation of projects and schemes that would help to achieve the relevant targets.
- **MFARIIT**- The arrangement to have Four Working Groups as proposed by the UNDP in 2016 was not implemented.

C.3 Coherence and Integration Issues

What NAO found

- *Development in the agricultural sector necessitates the participation of multiple stakeholders in order to address the risk of fragmented policies, and lack of alignment, integration and coordination. In that perspective, in the Strategic Plan, the need to review the roles and re-orientate the actions of the entities (FAREI and Agricultural Services) operating under MAIFS was identified to better respond to these risks.*
- *As of October 2023, the review and re-organisation were not carried out, leading to lack of integration of the activities of these entities.*

What NAO recommends

The top management of MAIFSBEF should consider the re-organisation of Agricultural Services as recommended in the Strategic Plan.

Criteria: MAIFS is entrusted with the responsibility for all matters pertaining to agriculture and food security. It decides the overall related policies and development and provides guidance to entities operating under its aegis.

In the Strategic Plan 2016-2020, the need to review their roles and re-orientate their actions to better respond to the new challenges was identified. Based on the recommendations of FAO, the proposal was to re-structure the Agricultural Services so that it would concentrate on policy, control and regulatory functions and transfer its services to FAREI and other entities.

For example, in the case of livestock, it would bring more livestock services under one management, which should in principle ensure better coordination between extension, research and veterinary care.

Condition: As of October 2023, the review and re-organisation had not been carried out. Several shortcomings related to coherence and integration were observed and are described below:

(i) Coherence and integration between Agricultural Services and FAREI

Currently, the Agricultural Services is considered to be the technical arm of MAIFS for its regulatory and policy functions as well as for the provision of miscellaneous services to the farming community.

FAREI was established in 2014 through the FAREI Act 2013 to take over the functions of the Food and Agricultural Research Council (FARC) and the then Agricultural Research and Extension Unit (AREU) as part of reforms to ensure cost-effective and quality services and optimise human resources. Currently, it has the responsibility to conduct research in non-sugarcane crops, livestock, agro-forestry and to provide an extension service to farmers.

Lack of integration in several areas was observed, as follows:

- Both FAREI and Agricultural Services had entomology and plant pathology services which lacked integration among same. There was no official collaborative approach to fruit fly control between these two institutions.
- Similar lack of integration was observed in the follow-up on residue of pesticides in food crops.

Officers of the Pesticides Regulatory Office raised ‘Improvement Notices’ addressed to growers whose samples had exceeded the maximum residue level together with those not complying with the list of recommended pesticides. These officers also performed field visits, met growers and carried out sensitisation on the proper usage of pesticides. The Pesticide Regulatory Office sent a monthly list of samples whereby the maximum residue level was exceeded together with those not complying with the list of recommended pesticides to the Extension Unit of FAREI for follow-up.

However, there was no feedback mechanism to confirm how the Officers of the Extension Unit acted upon this information to prevent the recurrence of excess use of pesticides through sensitisation/education of farmers during their field visits.

(ii) *Absence of Consolidated databases*

The Agricultural Services, FAREI and SFWF each own individual databases of the farmers they service and for other users such as applicants for permits and licenses. In many instances, these refer to the same entity.

The databases carry duplicate or incomplete information which renders coordination and follow-up difficult. For example, FAREI had a database for extension services which was different from that of SFWF and which impacted coverage and provision of facilities such as grants and schemes.

The database used by the Pesticides Regulatory Office for follow-up of residues of pesticides in food crops was different from that used by FAREI for coordination and follow-up.

Consequence: The potential of achieving operational efficiency and better service delivery could not be achieved.

Cause: The Accounting Officer of MAIFS did not initiate any exercise to consider and examine all the issues related to the proposal of restructuring the role of Agricultural Services.

Recommendation: MAIFSBEF must consider the re-organisation of Agricultural Services as recommended in the Strategic Plan.

C.3.1 Gaps in Horizontal Policy Coherence

What NAO found

- *Lack of horizontal policy coherence hampered the implementation of projects promoting or sustaining an increase in food crops and livestock.*
- *The top management of MAIFS did not have a clear strategy on how to deal with aspects of horizontal policy incoherence and how these aspects had to be factored well in advance during project design.*

What NAO recommends

- *The top management of MAIFSBEF should promote the setting up of inter-ministry committees, or propose a higher level inter-ministerial committee, to address issues outside its mandate or control.*
- *While designing projects or schemes, issues which are outside its control and which will impact negatively on the implementation, have to be considered thoroughly.*

Criteria⁴⁵: Horizontal coherence refers to an integrated and balanced approach to achieving a specific target of sustainable development, an approach which breaks down traditional sectoral silos and promotes cooperation and integration.

It addresses inconsistencies, trade-offs, and gaps in related policies across different sectors such as agriculture, education, and environment among others.

Condition: Several projects were negatively impacted due to untimely or non-provision of utility services, permits, and clearances. For example, in the Rouge Terre Project, the beneficiary obtained the Building and Land Use Permit from the Local Authority after a long delay.

In the case of the Plaine Magnien Sheltered Farm project, water was not provided for irrigation purposes. At Britannia Bio-farming project, the issue of water rights was not sorted out which was impacting on food crop cultivation.

Consequence: Lack of horizontal policy coherence hampered the implementation of projects promoting or sustaining an increase in food crops and livestock.

Cause: The top management of MAIFS did not have a clear strategy on how to deal with aspects of horizontal policy incoherence and how these aspects had to be factored well in advance during project design.

⁴⁵ Accessible at <https://sdg.iisd.org/news/study-explores-policy-coherence-in-transforming-food-systems/>

Recommendation: The top management of MAIFSBEF should promote the setting up of inter-ministry committees, or propose a higher level inter-ministerial committee, to address issues outside its mandate or control. While designing projects or schemes, issues which are outside its control and which will impact negatively on the implementation, have to be considered thoroughly.

C.4 Alignment of Legal Framework with Nationally Agreed Target - Revision of Legislations Still Outstanding

What NAO found

- *There were several legislations identified in the Strategic Plan 2016-2020 that needed amendment since the year 2016 but have not been amended as of December 2023. For example, legislations for the livestock sector were outdated and should have been reviewed and adapted to address the present needs.*
- *These amendments were being addressed on an adhoc basis instead of being planned, prioritised and followed up closely to ensure their timely enactment.*

What NAO recommends

The top management of MAIFSBEF should consider all the needed amendments and new legislations, should be enacted as soon as possible.

Criteria: A major role of MAIFS is to provide a policy and regulatory framework for the agricultural sector. These help to guide projects and other interventions, clarify policies for the benefit of the farming community, and develop the necessary legislative basis and regulations to underpin and facilitate the implementation of policies and activities in the sector.

Condition: There were several legislations identified in the Strategic Plan 2016-2020 that needed amendment since year 2016, but had not been amended as of December 2023.

For example, legislations for the livestock sector were found to be outdated, and should have been reviewed and adapted to address the present needs. There was also a need to harmonise same with other legislations relating to livestock production, processing and marketing and to formulate new legislation to regulate the sector.

Other acts that needed amendments or new legislation that needed to be introduced include the following:

- A review of the Chemical Fertilisers Control Act 1980 to extend control to new forms of fertilisers, composts, inoculants and growth promoters;
- Extend the Dangerous Chemicals Control Act 2004 to cover the import, trade and usage of alternative pest control products such as bio-pesticides, sprout inhibitors and ripeners, and to provide for enforcement;
- New legislation for Organic Agriculture / bio-farming so as to build the institutional framework and the appropriate inspection systems; and
- Amendments to the Regulations of the Pesticides Act in order to provide for a mechanism for issuing penalties in cases of non-compliance with the requirement to keep pesticide

residues in food crops below maximum level and use of only recommended pesticides.

Consequence: As per interviews, discussions and records examined, the implementation of policies and activities in the food crop and livestock sectors were negatively impacted due to the absence of updated legislation.

Cause: Generally, amendments or introduction of new legislations involved lengthy consultations with several stakeholders, comprised cross-cutting issues and span over more than one year. These amendments were being addressed on an ad hoc basis by MAIFS instead of being planned, prioritised and followed up closely to ensure their timely enactment.

Recommendation: The top management of MAIFSBEF should consider all the needed amendments and new legislations, and ensure that policy approval is obtained as soon as possible.

C.5 Multi-stakeholder Engagement - Key Stakeholders not Engaged for SDG 2

What NAO found

The participation of stakeholders promotes effective decisions, by giving groups affected by those decisions the opportunity to communicate their needs and interests and support governments in tailoring, implementing and reviewing public policies.

- *Although a mechanism for stakeholder engagement was identified and put in place, stakeholders were not being consulted.*
- *Key stakeholders were not being engaged to obtain their feedback which could be potentially integrated in the planning and implementation of policies for the implementation of SDG 2.*

What NAO recommends

MAIFSBEF should activate the operation of the SDG 2 Working Group.

Criteria: One of the principles of the 2030 Agenda is the requirement for all implementation and follow-up processes to be participatory and inclusive, including all levels and sectors of government, civil society and the private sector among others. The participation of stakeholders promotes effective decisions, by giving groups affected by those decisions the opportunity to communicate their needs and interests and support governments in tailoring, implementing and reviewing public policies.

Participation and consultation also build ownership of the 2030 Agenda, and therefore contributes to a whole-of-society approach to the implementation of the SDGs.

The SDG 2 Working Group had to be led by MAIFS. The Group would compose of Statistics Mauritius, five ministries, parastatal bodies, non-governmental organisations and/or private sector bodies.

Condition

- The SDG 2 Working Group has not met over the last two years.
- A Climate Change Working Group at FAREI to coordinate climate change issues among institutions and key stakeholders in the agricultural sector had not yet been set up, though recommended in the Strategic Plan 2016-2020.
- The Mauritius Chamber of Agriculture (MCA) representing the large-scale farmers/businesses in Mauritius in the agricultural sector, main producers of strategic crops like potatoes and involved in livestock farming, was not involved in the exercise of setting Targets 2.3 and 2.4 of the Plan of Action.

Consequence: Although a mechanism for stakeholder engagement was identified and put in place, stakeholders were not being consulted. Hence key stakeholders were not being engaged to obtain their feedback which could have been potentially integrated in the planning and implementation of policies for the implementation of SDG 2.

Cause: The required level of awareness on the necessity of promoting multi-stakeholder engagement was not present at MAIFS.

Recommendation: MAIFSBEF should activate the operation of the SDG 2 Working Group.

C.6 No Monitoring and Evaluation Exercise carried out to ensure ‘Leaving No One Behind’

What NAO found

- *An important perspective for assessing the impact of SFWF schemes in leaving no one behind is by monitoring and evaluating the contribution of small farmers to the overall economy with emphasis on their contribution to food security in relation to the funds disbursed to support them.*
- *During the period 2014-2022, some Rs 469 million were disbursed in respect of 25 schemes which required the involvement of SFWF. However, SFWF did not maintain its data disaggregated in different dimensions (i.e. age, sex, harvested area, production etc), and more importantly on the socio-economic conditions of the small farmers community.*
- *The low uptake of several schemes indicated that there was a segment of farmers who could not benefit from same. They could not meet all the criteria and were more likely to be left behind.*
- *As of December 2023, there has been more focus on the number of schemes being implemented and the amount disbursed rather than assessing whether the most vulnerable were being targeted effectively.*

What NAO recommends

MAIFSBEF should plan, fund and execute an evaluation of the impact of the schemes/incentives implemented by SFWF and take corrective actions to ensure that no one is left behind.

Criteria: The functions of SFWF are to manage and optimise its financial and other resources to further the social and economic welfare of small farmers and their families. These functions are executed by setting up and developing schemes and projects, including schemes for agro processing enterprises and schemes in respect of loans or other financial assistance, for the welfare of small farmers and their families.

In the Strategic Plan, it was noted that the concern for farmers’ welfare was laudable, but there was unfortunately no data about the socio-economic conditions of the farming community. That gap had to be addressed as a matter of priority so that the impact of policies on farmers’ income and well-being might be better appreciated.

Consequently, an important perspective for assessing the impact of SFWF schemes in leaving no one behind is by monitoring and evaluating the contribution of small farmers to the overall economy with emphasis on their contribution to food security in relation to the funds disbursed to support them.

Condition:

- Data in a disaggregated form, that is, broken down in terms of different dimensions (e.g. sex, age, income, disability, etc) is required to track, if any, vulnerable group is being left behind. As mentioned in paragraph A.2.2, disaggregated data is either not available or not captured to track vulnerable groups in respect of Targets 2.3 and 2.4.
- During the period 2014-2022, some Rs 469 million were disbursed in respect of 25 schemes (Table 13 refers) which required the involvement of SFWF. However, SFWF did not maintain its data disaggregated in different dimensions that is, age, sex, harvested area, production etc, and more importantly on the socio-economic conditions of the small farmers community.

Table 13 Schemes administered by SFWF, amount disbursed and number of beneficiaries			
Sn	Scheme / Incentives	Amount (Rs million)	Number of Beneficiaries
1	Agricultural Calamities Solidarity Scheme (CLCS)	9.40	1,622
2	Crop Loss Compensation Scheme (ACASS)	15.63	789
3	Free CLCS & ACASS Covers	32.24	3,278
4	Farmers Protection Scheme (FPS)	50.27	5,780
5	Relief Measures	70.64	8,531
6	Tea Sector Support Scheme (TSSS)	44.81	11,908
7	Winter Allowance Scheme	26.81	5,339
8	One Off Allowance to Tea Growers	7.97	1,127
9	Mini Tea Harvester Scheme (MTHS)	1.10	110
10	Accident Insurance Scheme	3.68	534
11	Life Insurance Scheme (LIS)	2.56	480
12	Fertiliser Subsidy Scheme (FSS)	100.32	5,192
13	Bio Farming Support Scheme (BFSS)	7.87	641
14	Heifer Productivity Incentive Scheme	13.67	381
15	Subsidy on Agricultural Mechanisation Scheme (SAM)	8.74	1,328
16	Bar Acquisition Scheme (BCAS)	0.27	27
17	Compost Subsidy Scheme	61.21	8,554
18	Pre Market Test	12.28	70
Total		469.47	

Source: Small Farmer Welfare Fund

Consequence: In paragraph B.3 (b), the low uptake of several schemes indicated that there was a segment of farmers who could not benefit from same. They could not meet all the criteria and were more likely to be left behind.

As of December 2023, there has been more focus on the number of schemes being implemented and the amount disbursed rather than assessing whether the most vulnerable were being targeted in an effective manner.

Cause: Across ministries and departments, there are monitoring functions, focusing largely on financial monitoring, output monitoring of budget measures, and some monitoring in social sectors⁴⁶. However, the key link missing is the results-based monitoring of outcomes and rigorous evaluation of policy implementation that would create the ability to learn from implementation pitfalls and make necessary policy adjustment.

The absence of the practice and commitment to carry out result-based monitoring of outcomes accounted for MAIFS not commissioning an assessment on the interventions of SFWF, despite same was recommended in the Strategic Plan it formulated.

Recommendation: MAIFSBEF should plan, fund and execute an evaluation of the impact of the schemes/incentives implemented by SFWF and take corrective actions to ensure that no one is left behind.

⁴⁶ Mauritius Through the eye of a perfect storm- coming back stronger from the COVID Crisis. A World Bank Group Country Economic Memorandum April 2021, Page 93 paragraph 189. Accessible at <https://documents1.worldbank.org/curated/en/586691621628367648/pdf/Mauritius-Through-the-Eye-of-a-Perfect-Storm-Coming-Back-Stronger-from-the-COVID-Crisis-A-World-Bank-Group-Country-Economic-Memorandum.pdf>

SECTION D: Budgeting for Achieving the Targets

This section examines to what extent the Ministry has planned and budgeted for increasing food production and the proportion of agricultural area under productive and sustainable agriculture.

D.1 Introduction

Systemic integration of the SDGs requires governments to not only translate their high-level SDG commitments and priorities into national and local plans, but also reflect them in budget decisions and delivery. Better budgeting in the context of SDG implementation means a clear and measurable presence of SDG targets in budget allocations, reports, and other elements of the budget cycle (UNDP 2020)⁴⁷.

The following areas were examined:

- Are MAIFS' budgets at different levels aligned, and adequate for achievement of the target?
- Did MAIFS include all relevant stakeholders in the planning and budgeting for the target?

D.2 Inadequate Clarity and Measurement of Presence of SDG Targets 2.3 and 2.4 in the Budgets

What NAO found

- *Systemic integration of SDGs requires governments to not only translate their high-level SDG commitments and priorities into national and local plans, but also reflect them in budget decisions and delivery.*
- *An average of Rs 1.1 billion were spent annually on Development of Non-Sugar Sector (Crops) and Livestock Production and Development. However, there was no adequate clarity and measurement of SDG Targets 2.3 and 2.4 in the annual budgets.*
- *The KPIs were not measuring adequately progress towards food security and sustainable agricultural practices. Assessment of whether the budget was sufficient, used economically and aligned to SDG was not carried out by MAIFS.*
- *The current line-item budgeting did not provide linkage of budgets with policies/SDGs.*

⁴⁷ Budgeting for the Sustainable Development Goals- Aligning domestic budgets with the SDGs- Chapter 1 'The Opportunity for Accelerating the Achievement of SDGs Through Integration in Budgets.' Page 2. Accessible at https://sdgfinance.undp.org/sites/default/files/UNDP%20Budgeting%20for%20the%20SDGs%20-%20Guidebook_Nov%202020.pdf

It mainly provided information on expenditures and revenues which were not tagged with SDG 2 targets.

- *The importance of a functional SDG 2 Working Group was not among the immediate priorities of MAIFS.*

What NAO recommends

- *MAIFSBEF, MFARIIT and MOF need to enhance awareness and capacities of their officers in areas of formulation and tracking of KPIs, and linkage of SDGs to strategic planning. For example, KPIs for annual food production should provide visibility on the production of strategic crops and other food crops with potential for increased production as recommended in the Strategic Plan 2016-2020.*
- *MOF should renew its Budget Call Circular on the inclusion of targets for monitoring progress towards SDGs and ensure compliance with same.*

Criteria⁴⁸: It is important to assess whether the budgets allocated and their distribution across ministries and entities reflect adequately the national priorities, policies and action plans set and the roles of these ministries and entities in achieving the national target. Additional budget considerations include whether the budget is sufficient, is actually being spent, and those financial resources are being used economically.

Condition

(i) Circulars recommending tagging of SDGs to budgets not complied with

In response to the findings of NAO's Report 'Preparedness for the Implementation of Sustainable Development Goals', MOFEPD in its 2019-2020 Budget Circular requested Ministries to include targets for monitoring progress towards the achievement of SDGs.

However, this instruction was not complied with and the following was observed:

- Budget Estimates/ Budget Speeches over past years often did not mention SDGs, and where they did, it was only at an aggregate and narrative level.
- SDGs goals and targets were not mentioned in Public Sector Investment Programme (PSIP).

⁴⁸ IDI's SDGs Audit Model - Chapter 1 | Audit of SDGs implementation: Definition, key concepts and audit process, Page 11. Accessible at <https://www.idi.no/work-streams/relevant-sais/auditing-sdgs/audit-sdgs-implementation/isam>

(ii) The Strategic Plan 2016-2020 was not connected to annual budgets

During the past six financial years 2016-17 to 2021-22, some Rs 16.7 billion were allocated to the agricultural sector through the budgets of MAIFS, of which some Rs 14.9 billion were spent. The actual expenditure for the Development of Food Crop and Livestock production sectors, amounting to some Rs 6.9 billion, that is some 46 per cent of the total expenditure.

Compensation to employees and direct payroll cost for administrative, technical and support staff for the Food Crop and Livestock sectors of MAIFS only accounted for some 40 per cent, a yearly average of some Rs 399 million.

Grants and subsidies amounted to some Rs 2.7 billion, representing some 39 per cent of the total expenses. Expenditure on Acquisition of Non-Financial Assets amounted to some Rs 650 million, representing some 9.3 per cent of the total expenditure. Details are as per Table 14.

Table 14: Analysis of expenditure for development of non-sugar sector (food crops) and livestock production and development during period 2016-17 to 2021-22

Expenditure	Non-Sugar Sector (Food Crops) (Rs'000)	Livestock Production and Development (Rs'000)	Total for period (Rs'000)	Average yearly (Rs'000)	Percentage (%)
Recurrent Expenditure					
Compensation of Employees	1,688,826	705,025	2,393,851	398,975	40
Goods and Services	444,622	244,036	688,659	114,776	12
Subsidies	301,250	185,379	486,630	81,105	8
Grants	1,294,254	764,950	2,059,204	343,201	34
Other Expense	290,887	61,527	352,414	58,736	6
<i>Total Recurrent</i>	<i>4,019,839</i>	<i>1,960,918</i>	<i>5,980,758</i>	<i>996,793</i>	
Capital Expenditure					
Grants	162,057	19,551	181,609	30,268	19
Other Expense	61,734	61,651	123,385	20,564	13
Acquisition of Non-Financial Assets	524,976	125,876	650,853	108,475	68
<i>Total Capital</i>	<i>748,768</i>	<i>207,079</i>	<i>955,846</i>	<i>159,308</i>	
TOTAL	4,768,607	2,167,997	6,936,604	1,156,101	
<i>Source: Treasury Accounting System</i>					

The Strategic Plan 2016-2020 comprised a coherent policy with a clearly delineated strategy, a designated lead institution, and a proposed coordination mechanism for its implementation. An average of Rs 1.1 billion was spent annually on the Development of the Non-Sugar Sector (Crops) and Livestock Production and Development.

However, there was a lack of clarity on how it was connected to the annual budgets during that period.

(iii) Key Performance Indicators not measuring adequately progress towards food security and sustainable agricultural practices

KPIs published as per ‘Statement DA - Progress Report on Achievements and Performance’⁴⁹ of the Accounts of the Government of Mauritius is as per **Appendix VI**. The KPIs were expected to be aligned with the strategic objective “*To achieve the four-fold objective of increasing productivity of agricultural land, export revenue, local production of healthy foods by environmentally sustainable practices, and enhancing eco-tourism through preservation of the country’s unique biodiversity*” of the Three-Year Strategic Plans.

Observations on their relevance and adequacy to measure progress towards food security and sustainable agricultural practices are as follows:

- The KPIs were inadequately outcome-focused, with many of them reflecting outputs rather than outcomes. For example, the production of food crops and livestock was not related to the level of self-sufficiency being achieved.
- For several KPIs, there were absence of data to reflect achievement.
- Some KPIs, on their own did not measure achievement related to increase food crop and livestock production. For example, the extent of state land allocated is insufficient to show its efficient use given that some 50 per cent is either abandoned, neglected or inefficiently used (paragraph B.4 refers).

(iv) Monitoring of Key Performance Indicators not linked to adequacy of 2022-23 Budget

An important step to enhance implementation capacity is the development of outcome monitoring and evaluation linked to both budget and planning processes. For the financial year 2022-23, some Rs 748 million and Rs 308 million were spent on the development/ production of food crops and livestock respectively. The achievement is as per Appendix II.

The following were observed:

- The KPIs for the financial year 2022-23 were different from those of financial year 2021-2022 and of prior years. This renders follow up difficult.
- The target in respect of production under protected culture was not met. Cultivation under protected culture was expected to be more resilient to pest and agro-climatic conditions, but had been severely affected by same. Grants of some Rs 200 million were disbursed in respect of protected culture since 2015 as support.

⁴⁹ The KPIs are formulated in the Three-Year Strategic Plans in relation to Strategic Directions and Enablers.

- There were several important KPIs which were not assessed in parallel to those officially outlined in the ‘*Statement DA - Progress Report on Achievements and Performance*’ of the *Accounts of the Government of Mauritius*.’ Examples are as follows:
 - *FAREI’s KPIs for livestock*. Given that livestock production was on the decline, information was requested from FAREI on how output/outcome of the breed performance assessment, improved farming practices/technologies and fodder evaluation have cascaded down and have been applied/vulgarised at Extension level to maintain/ enhance livestock production. Table 15 refers.

Table 15 : Key Performance Indicators for Livestock						
Key Action	Indicator	Actual 2018-19	Actual 2019-20	Actual 2020-21	Actual 2021-22	Actual 2022-23
Training of Farmers , visits and advisory services	1.No of training carried out	63	61	N/A	66	90
	2.Number of farmers trained	1,410	1,426	N/A	1,336	1,227
	3.Number of visits and advisory services	16,787	30,000	N/A	20,250	23,744
Breed performance Assessment	No of breed being assessed	5	5	N/A	4	5
Improving farming practices / technologies	Number of farming practices / technologies improved	3	3	N/A	3	4
Feed/fodder evaluation	Number of feeds/fodder evaluated	3	3	N/A	3	5

Source: FAREI

As of December 2023, the information was not submitted to NAO.

- *FAREI’s KPIs for crops*. Key Actions and KPIs in relation to their impact on boosting food crop production are as per Table 16.

Table 16 : Key Performance Indicators for Food Crops						
Key Action	Indicator	Actual 2018-19	Actual 2019-20	Actual 2020-21	Actual 2021-22	Actual 2022-23
Introduction of new crop varieties	Number of varieties introduced and tested	90	113	N/A	187	43
Development of new crop varieties	Number of varieties developed	5	5	N/A	1	2
Development of new technologies	Number of new technologies developed	1	1	N/A	1	3

Source: FAREI

Except for fact sheets on the introduction and development of new crop varieties and technologies, there was no documentation on how and what benefits were realised at the field level.

- The records examined at MAIFS did not provide enough information on the extent to which outcome monitoring and evaluation were linked to both budget and planning processes to ensure that adequate funds were provided to meet KPIs. For example, one of the key tasks of the Entomology Division was Fruit Fly control.

According to the Division, fruit flies were among the most destructive and widespread pest of fruits and vegetables in Mauritius. It was estimated that annually 30 per cent of production were damaged by the flies. The effectiveness of its operation was affected in the following ways due to insufficient funding:

- There were insufficient vehicles at the Mapou and Flacq sub offices to transport some 40 Insecticide Sprayer Operators to apply treatment in planters' fields. On days when transport was not available they carried out minor works like cleaning chemical store, washing sprayer, collection of infected fruits etc.
- Though the fruit fly pest was a problem across the island, treatment of planters' fields was carried out only in certain part of the island.

(v) Working Group on SDG 2 at MAIFS was dormant

The Working Group on SDG 2 at MAIFS which was responsible for reflecting sectoral policies and plans, updating sectoral plans and strategies to reflect SDG priorities, engaging key stakeholders and keeping track of progress on their set of SDGs, and aligning the budget with SDG priorities did not meet to discuss mobilisation of funds in respect of Budget Estimates 2022/23 and 2023/24.

The Plan of Action prepared by MAIFS was not used by the latter during the preparation of the Budget Estimates 2023-24.

Consequence: There was not adequate clarity and measurement of SDG Targets 2.3 and 2.4 in the annual budgets. The KPIs were not measuring sufficiently progress towards food security and sustainable agricultural practices and the top management of MAIFS did not assess whether the budget was sufficient, used economically and aligned to SDG.

Cause: During interviews and discussions with officers of MAIFS, MFARIIT and MOFEPD, NAO identified that officers of these ministries were not aware of linking the SDGs to strategic budgeting, and hence compliance with the requirement of MOFEPD Budget Circular.

Linking SDGs to strategic budgeting was a challenge in many countries⁵⁰, similar to Mauritius, where the following shortcomings were common:

- National Plans/Development Strategies (NDS) did not integrate SDGs across investment pillars, failing to identify specific goals, targets, and baselines;
- Budget Policy Statements did not mention SDGs, and where they do, only at an aggregate and narrative level;

⁵⁰ Budgeting for the Sustainable Development Goals A Modular Handbook UNDP, September 2022 -Module B: Shortcomings in linking the SDGs to strategic budgeting – Page 19
Accessible at: <https://sdgfinance.undp.org/sites/default/files/B4SDGs%20ModularHandbook.pdf>

- SDG Financing Strategies and Integrated National Financing Frameworks (INFFs) were not developed;
- SDG Costing were not undertaken, leading to SDGs not being placed at the heart of financial systems;
- Linkages between SDG priorities and inter-sectoral and territorial resource allocations are often underdeveloped (e.g. in Medium-Term Budget/Expenditure Frameworks);
- SDGs goals and targets were poorly integrated into Public Investment Plans (PIP) and expenditure performance frameworks, with sector ministries unaware of the global SDG indicators; and
- SDG related fiscal rules were still to be developed.

Also, MAIFS did not have the resources to develop relevant, sufficient and consistent KPIs to track progress. Based on the information gathered, the functioning of Working Group 2 was not among the immediate priorities of MAIFS.

Recommendations

- (i) MAIFSBEF, MFARIIT and MOF officers have to be trained in areas of formulation and tracking of KPIs, and linkage of SDGs to strategic planning.
- (ii) MAIFSBEF should ensure that the Working Group is operational, as decided by government and delivers as per its terms of reference.
- (iii) MOF should renew its Budget Call Circular on the inclusion of targets for monitoring progress towards SDGs and ensure compliance with same.

It can consider some good practices of several countries⁵¹ which are as follows:

- Ministries/ Departments would be required to add one column to the existing budget submission templates describing the relevance of each budget programme to SDGs and their targets.
- Also, a separate template could be introduced for new/additional funding which would require explicit mention of SDGs.
- MOF has to devise the proper SDG budgeting framework.
- Ministries should work towards showing the linkage of activities, programmes/sub-programmes, or spending units/projects with specific SDGs and the targets to add justifications for their budgets.

⁵¹ Budgeting for The Sustainable Development Goals A Modular Handbook UNDP, September 2022 -Module B: Establishing SDG policy and budget linkage - A Step-by-Step Guide- Page 29.

SECTION E: Measuring, monitoring and reporting on progress achieved

This Section examines the system in place for measuring, monitoring and reporting on progress towards the achievement of the Targets 2.3 and 2.4.

E.1: Measuring, Monitoring and Reporting on Progress Achieved

What NAO found

- *The review and follow-up processes for the SDGs emphasise the monitoring of progress towards achieving the targets, However, the level of collaboration among MAIFS and relevant stakeholders was inadequate to provide satisfactory measurement, monitoring and reporting on the progress of SDGs.*
- *Though a Committee has been set up since January 2021 to measure, monitor and report on progress being achieved, it has not yet delivered as per its terms of reference.*
- *In the absence of an updated SDG Tracker, the SDG Dashboard presented actual figures, without additional analysis of progress achieved during the period 2016-22.*

What NAO recommends

Regular joint meetings and workshops involving representatives from MAIFSBEF, MFARIIT, and Statistics Mauritius should be carried out to enable satisfactory measurement, monitoring and reporting on progress.

Criteria: As per paragraph 78 and 79 of the UN Resolution A/RES/70/1, the review and follow-up processes for SDGs emphasise monitoring progress towards targets. Evaluations can help answer ‘why’ targets are achieved or not achieved, and can help identify what can be done to improve the success of future initiatives.

An effective, transparent and inclusive system had to be put in place for measuring, monitoring and reporting on progress towards the achievement of the selected national target.

Statistics Mauritius is expected to play a key role in measuring the achievement of SDGs. According to the 2030 Agenda, the annual progress report on SDGs prepared by the UN Secretary General in cooperation with the international statistical system will be based on global indicators and data produced by national statistical systems⁵².

The follow-up and review processes at all levels will be ‘rigorous and based on evidence, informed by country-led evaluations and data which is high-quality, accessible, timely, reliable and disaggregated by income, sex, age, race, migration status, disability and geographic location and other characteristics relevant in national contexts.

⁵² Para 74 UN Resolution A/RES/70/1.

Condition:

(i) System for measuring, monitoring and reporting progress not functioning as intended

As mentioned in paragraph C.2, the Inter-Ministerial Coordination Committee at the apex, that was to serve as the high-level platform on the implementation of SDGs was phased out. The Four Working Groups at MFARIIT that would build more synergies across sectors, address bottlenecks, sustain and accelerate progress, establish partnerships, comprehensive measurement mechanisms and help explore financing options had not held any meeting at the time of the audit.

A permanent Sustainable Development Unit (SDU) was set up in January 2021 at MFARIIT to coordinate, monitor and assess the implementation of the 17 SDGs, and the African Union Agenda 2063.

In May 2022, SDU requested the Plan of Action on SDG 2 from MAIFS which was submitted in July 2022. A review on the Plan of Action by SDU revealed the following shortcomings:

- Qualitative and quantitative inputs for some indicators were not submitted.
- Qualitative information was not supported by clear explanation of policies/measures / projects under implementation.
- Appropriate time frame for policy actions was not identified.
- Data gaps were identified.

As of October 2023, MAIFS had not responded to the clarifications sought by SDU as far back as August 2022.

(ii) Inadequate measurement, monitoring and reporting on progress

- Statistics Mauritius maintained a dashboard⁵³ on all SDGs on excel sheets, based on information submitted by Lead Ministries/Departments. Extract of the dashboard, as of October 2023, relating to SDG 2.3 and 2.4 are as per Appendix III.

The dashboard in Appendix III did not show what progress was being achieved in respect of these two targets in the following ways:

- Data for Indicator 2.3.2 was not disclosed as same was not collected by Statistics Mauritius during its Continuous Multipurpose Household Survey (paragraph A.2.1 refers).

⁵³https://statsmauritius.govmu.org/Pages/Statistics/By_Subject/SDGs/SB_SDG.aspx

- Data for Indicator 2.4.1 and for Proxy Indicator 2.3.1 (Number of livestock heads per farm), compiled by MAIFS was not disclosed.
- *SDG Tracker was not updated and progress did not match with official statistics.*

A first SDG Tracker was prepared by MFARIIT in 2019 and as of November 2023 it was not updated.

The SDG Tracker of 2019 reported that Target 2.3.1 was on track despite official statistics showed a decline in annual total food crop production per unit area and livestock per head per farm (Proxy Indicators (i) and (ii) – Table 1 Page 31. refers).

Similarly Target 2.4.1 was reported to be on track though data in respect of its indicator was not reported on the SDG Dashboard.

Consequence: A system was set up in January 2021 to measure, monitor and report on progress being achieved. It has not yet delivered as per its terms of reference. In the absence of an updated SDG Tracker, the SDG Dashboard presented actual figures, without additional analysis of progress achieved during period 2016-22.

Cause: Examination of records and discussions held at MAIFS, MFARIIT and Statistics Mauritius revealed that the close collaboration among these stakeholders to provide for satisfactory measurement, monitoring and reporting on progress was inadequate.

The SDG Database was updated twice yearly. Statistics Mauritius sent an extract of the database with selected indicators, to Ministries and Departments for data. It did not enquire over non-submission of data unless there were inconsistencies in data or there was an indicator in respect of which metadata had recently been updated or developed. If the Ministry or Department had not sent any data in respect of any indicator, Statistics Mauritius would not make the follow up with the Ministry for submission of same.

Recommendations

MAIFSBEF should provide the required clarifications to MFARIIT and relevant data to Statistics Mauritius. This will enable the update of the SDG Tracker.

Regular joint meetings and workshops involving representatives of MAIFSBEF, MFARIIT, and Statistics Mauritius should be carried out.

Ministry's Comment

MFARIIT- *SDU has no oversight role over responsibilities held by other ministries and is mandated to coordinate among all stakeholders with a view to fulfilling the reporting obligations of Mauritius. The Ministry has taken on board the recommendation for having more meetings among stakeholders.*

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CHAPTER FOUR

CONCLUSION

This Chapter concludes against the audit objective based on the analysis and findings supported by audit evidence as elaborated in the previous Chapter.

4.1 Objectives of the Strategic Plan 2016-2020

MAIFS, as the Lead Agency responsible for achieving Targets 2.3 and 2.4 of SDG 2 (Ending Hunger), has been investing significantly in its interventions to enhance food security and sustainable agricultural practices.

Some Rs 4.8 billion were spent during the period July 2016 to June 2020 by MAIFS on food crops and livestock, and which included expenditure on projects and activities (inclusive of grants, schemes and incentives) specified in the Strategic Plan.

The main objectives of the Plan were two-fold. The first was to increase the production of high-quality strategic crops, vegetables and meat to satisfy local demand and the second was to promote the development of the agri-business sector to enhance import substitution to reduce dependency on imports. To ensure effective implementation of the Plan, key reforms and the setting up of appropriate mechanisms were recommended as follows:

- In respect of institutional reforms, major changes were expected with the conversion of the Agricultural Services of MAIFS into a Directorate which would focus on policy formulation, control and regulatory functions;
- Formulation of a Service Improvement Plan for providing key services to farmers and the public;
- The Plan was expected to be accompanied by the adoption of a Results-Based Management with pre-defined Monitoring and Evaluation Plans to make service providers more focused on priorities and more accountable for results; and
- A high-level Steering Committee had to be established by MAIFS to review progress, produce evaluation reports, and provide guidance.

4.2 Major Risks and Challenges Anticipated in the Plan

In the Plan, major risks and challenges were already identified which could compromise its effective implementation and it included the following:

- Adverse economic and climatic conditions;
- The capacity of MAIFS to implement projects and switch to results-based management;

- The ability of MAIFS to mobilise adequate financial resources to fund its interventions;
- Weak co-ordination and linkages between institutions, farmers and other stakeholders;
- Limited land availability, small size of land holdings which debarred from economies of scale;
- Relatively low farm productivity associated with limited uptake of modern management techniques;
- High cost of labour and agricultural inputs; and
- An ageing farming community and youth not attracted by farming.

4.3 What NAO Concludes

The interventions of MAIFS have not yielded the expected results in the following ways:

- There is no marked improvement in domestic food crop and livestock production and in sustainable agricultural practices during the period examined to provide the assurance that there is adequate capability at the national level to meet the SDG Targets 2.3 and 2.4;
- None of the targets set in respect of selected food crops was attained. Instead, actual production per crop item fell below estimates. This included the production of strategic crops such as potato, onion and garlic which was on a decreasing trend and did not meet the objective of increasing self-sufficiency, despite all the incentives and grants provided.
- Mauritius is still increasingly dependent on food imports and vulnerable to external economic and geopolitical factors;
- Sheltered farming which was promoted as climate-resilient and sustainable agriculture, was still vulnerable to unfavourable climatic conditions and pests. For example, production in sheltered culture projected at some 16,500 tonnes for the financial year 2022-23, realised a shortfall of some 6,500 tonnes;
- As regards livestock, local production of milk and dairy products, beef, goat/mutton/pork, and honey was well below the targets. Livestock production depended highly on imported, costly inputs comprising mainly animal feeds and breeding animals. This rendered the sector very vulnerable to external factors;
- Self-sufficiency was attained in the poultry sector. However, it was still very vulnerable due to its heavy dependence on imported feeds. Any disruption in supply from international markets would easily compromise the self-sufficiency status;

- Only some 50 per cent of the projects and activities in the Strategic Plan were implemented. As of December 2023, there was no marked improvement.
- Some 29 per cent and 48 percent of grants for food crops and livestock respectively were unutilised for the period 2015-16 to 2021-22. Incentives and schemes aimed at boosting food crop and livestock production, though well intended, did not achieve the expected results.
- MAIFS was challenged in formulating Targets 2.3 and 2.4, which were not adequate in comparison with the corresponding global SDG targets. The targets set were very ambitious and ought to have been formulated through a multi-stakeholder engagement;
- The Strategic Plan of MAIFS was not connected to appropriate funding arrangements and the annual budgets were not tagged with Targets 2.3 and 2.4;
- The institutional reforms did not materialise to address lack of integration, risks, challenges in the sector, and gaps in the coherence and integration of policies;
- The Service Improvement Plan and a Results-Based Management with pre-defined Monitoring and Evaluation Plans to make service providers more focused on priorities and more accountable for results were not in place; and
- No Steering Committee was established by MAIFS to review and evaluate progress and provide guidance,

Overall, although MAIFS and entities operating under its aegis are responsible for enhancing food security by increasing domestic food production and sustainable agricultural practices, there is a lack of accountability for results. The existing KPIs are inadequate to measure their accountability.

Moreso, the existing organisational setup is not conducive to obtaining the expected results.

If the lack of accountability for results, reforms and weaknesses in the organisational set-up are not promptly addressed, there is a high risk that the challenge of enhancing food security and sustainable agricultural practices will not be met.

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CHAPTER FIVE

RECOMMENDATIONS

This Chapter presents the summary of recommendations based on the findings and conclusion.

5.1 Setting up of a structure Responsible for Policy, Planning, Monitoring and Evaluation in respect of Increasing Food Self-Sufficiency

In March 2024, MAIFS submitted a document titled “Roadmap & Strategic Plan 2024-2030” for the crops and livestock sector to NAO. This document was in line with the United Nations’ Sustainable Development Goals, especially Goal 2, to end hunger, achieve food security and improved nutrition, and promote sustainable agriculture.

NAO is of the opinion that the need for accountability for results, long outstanding reforms and weaknesses in the organisational set-up of MAIFS and entities operating under its aegis, has still not been addressed effectively in the strategic plan.

Thus, NAO recommends the following:

- The setting up of a structure reporting to the policy makers of MAIFSBEF. This body will be responsible for formulating the national strategic orientation concerning food security and sustainable agricultural practices through medium to long-term strategic planning and can work in collaboration with the Economic Planning arm of the Ministry of Financial Services and Economic Planning.

Such a structure will provide continuity in setting policy directions, formulation of strategic plans and follow-up of same.

- The structure will comprise governmental and non-governmental representatives, as key stakeholders. These key stakeholders will include senior administrative, technical and scientific officers from MAIFSBEF and entities operating under its aegis, representatives from the planters’/breeders’ community and organisations like the Mauritius Chamber of Agriculture. Also, individuals with expertise in research, analysis, and consultancy relating to domains such as agro-industry, agronomy, food processing, trade and economics can be onboarded as and when required and sub-committees can be set up for each different sector.
- The structure can objectively drive institutional reforms, monitor performance and hold respective stakeholders accountable for their responsibilities.

5.2 Formulating an Action Plan for the food crop and livestock sectors

An Action Plan for the food crop and livestock sectors covering at least the next five years and appropriately connected to future fund mobilisation through annual budgets should be prepared.

MAIFSBEF should re-examine the assumptions used to formulate the targets, adopt a methodology that uses more quantitative analysis and factor in performance information of recent years. Data validation should be privileged.

5.3 Promoting the Use of Artificial Intelligence to help deliver on Sustainable Development Goal 2

According to the International Telecommunication Union, the UN agency for Information Telecommunication Union, innovations in Artificial intelligence (AI) will be central to achieving the UN's Sustainable Development Goals. AI offers many opportunities for the benefit of citizens.

Agriculture is one of the areas in which AI can be used to meet the challenges in the sector. It plays a transformative role in enhancing food security, particularly in alignment with SDGs 2.3 and 2.4. These goals focus on doubling the agricultural productivity and incomes of small-scale food producers (SDG 2.3), and ensuring sustainable food production systems and resilient agricultural practices (SDG 2.4).

The potential benefits are substantial, from precision farming that enhances crop yields while reducing resource waste to improved market insights that empower farmers to make informed decisions.

Some areas where AI contributes significantly are as follows:

- **Smart Irrigation Systems:** AI models analyse weather patterns and soil moisture levels to optimize irrigation schedules, ensuring efficient water use. This is crucial for areas with limited water resources and arable land;
- **Pest and Disease Management:** AI-powered systems detect early signs of pest infestations and diseases through image recognition and pattern analysis. Early intervention helps in minimizing crop losses and improving overall yield;
- **Yield Prediction and Crop Management:** AI analyses historical data and real-time inputs to predict crop yields and provide recommendations for crop management. This helps in planning and allocating resources effectively, increasing productivity and reducing waste;
- **Sustainable Resource Management:** AI helps in monitoring and managing natural resources such as water and soil, promoting sustainable agricultural practices. This

aligns with the goal of maintaining ecosystems and preventing land degradation; and

- **Policy and Decision Support:** AI provides valuable insights for policymakers by analysing large datasets on agricultural production, market trends, and environmental impacts. This supports the development of evidence-based policies and programs that enhance food security and sustainability.

It is imperative that MAIFSBEF strategically incorporate AI into the Agricultural sector and ensure that no one is left behind. As recommended in the report “Mauritius AI Strategy of 2018”, it is therefore critical that the Ministry develops a strategy and action plan followed by an implementation framework for the use of AI to address the problems faced in the Agricultural sector.

5.4 Monitoring and Use of State Land and the Sheltered Structures

The monitoring and reporting mechanism on the use of state lands should be improved through a better collaboration with Extension Officers of FAREI.

The sheltered structures which are in an abandoned and derelict state should be put to beneficial use. Appropriate actions should be taken to provide basic facilities, such as water, to make the structures operational and ensure that the lessees use the structures effectively.

5.5 Restructuring Existing Schemes to boost Production

The intentions of the existing schemes are laudable. However, they should be reviewed so that they become more effective and are geared towards boosting the inclusiveness of the vulnerable planters so that nobody is left behind.

During the design stage of schemes, there should be effective consultation with relevant stakeholders before approving the schemes.

5.6 Bridging gaps in the legal and policy framework

Performance gaps were noted in the legal and policy frameworks and it is imperative that these be addressed promptly so that concerned institutions can carry out their functions more effectively.

5.7 Reorganisation of Agricultural Services

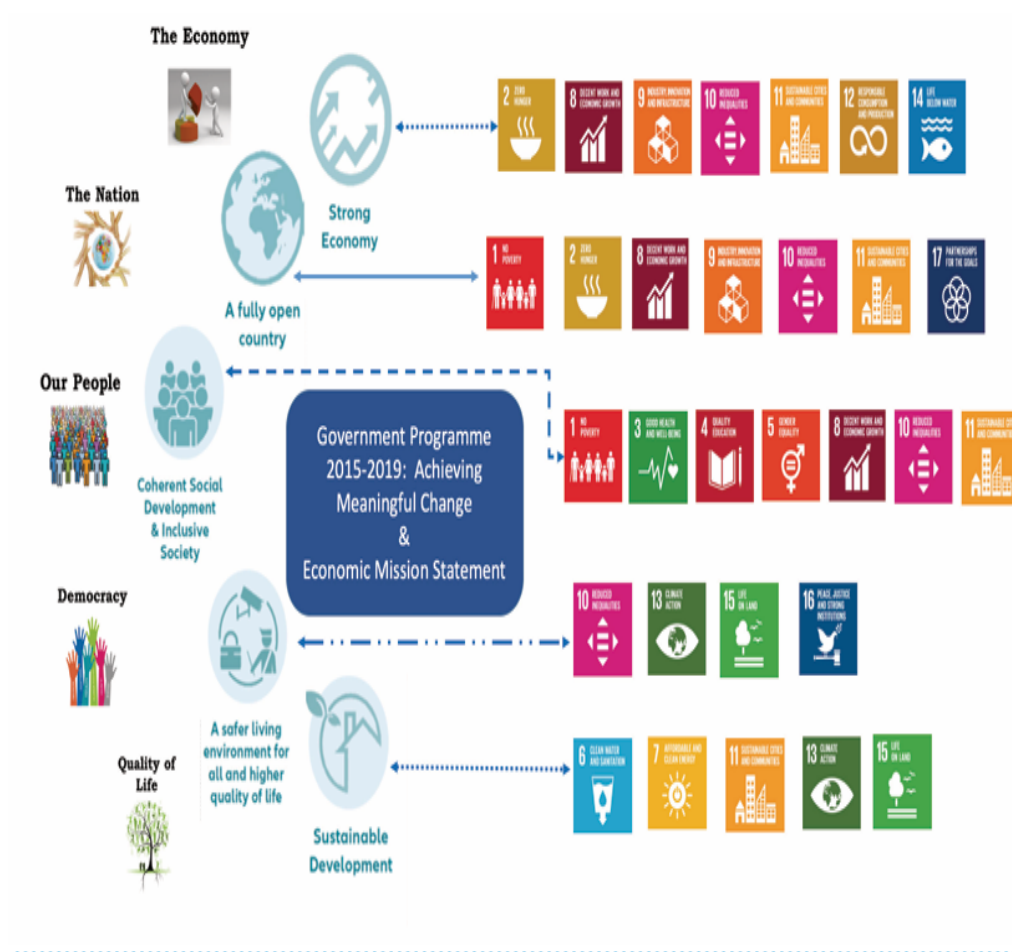
It is imperative that the re-organisation of Agricultural Services be a top priority to MAIFSBEF, as recommended by the Food Agricultural Organisation in 2014.

5.8 Monitoring of Target 2.3 and 2.4 of SDG2

Regular meetings should be held to take stock of progress made and take necessary remedial actions.

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Alignment of National Policies with SDGs



Source: Voluntary National Report of July 2019

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APPENDIX II

MONITORING OF OUTCOME INDICATOR, MAIN SERVICE AND KEY PERFORMANCE INDICATORS FOR FY 2022/2023					
Outcome	Outcome Indicator		Target 2022/2023	Achievements as at 30 June 2023	Remarks
Improved food security level with increased local production of all non-sugar crops (food crops, vegetables, fruits) and livestock.	Increased local production of food crops (tonnes)		>120,000	137,314	Food crops include production under sheltered farming and hydroponics.
Delivery Unit	Main Service	Key Performance Indicator	Target 2022/2023	Achievements as at 30 June 2023	Remarks
FAREI	Promote climate resilient/protected culture	Production under protected culture (tonnes)	16,500	9,979	Production was affected due to unfavourable agro-climatic condition. Tomato and sweet pepper production were impacted by insect pest (Tuta Absoluta & thrips).
Agricultural Marketing Board	Encourage local production of strategic crops	Operationalisation of the National Wholesale Market	Dec-22	Jul-23	The National Wholesale Market was inaugurated on 27 July 2023. Delays were due to the fact that additional works had to be carried out including sewerage system, drainage system and electrical works.
Entomology Division	Promotion of Apiculture	Volume of honey produced (tonnes)	35	33	Reduced production due to presence of devastating pests of honey bees, decrease in the area of melliferous plants and unfavourable weather conditions.
Horticulture Division	Increase availability of local seeds	Volume of seeds produced under Quality Declared Seeds (Kg)	540	220	Planters incurred substantial crop losses (50%) following the occurrence of torrential rainfall in January and February 2023.
Small Farmers Welfare Fund	Provide support to small farmers	Area under Agricultural land mechanization support (arpents)	3,000	2,967	An amount of Rs 8.9 M has been disbursed for 1244 beneficiaries covering 3,039 arpents of land.
Livestock Division	Supply of breeding stock (combination of Cattle, Goat, Sheep)	Number of calves, lambs and goat kids produced	200	133	Limitation in availability of breeding animals. The figure provided relates to the number of calves and lambs produced by Melrose and Salazie Farms.

Source: Ministry of Finance, Economic Planning and Development

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APPENDIX III

Extract of the Dashboard relating to SDG 2.3 and 2.4 as of 29 October 2023

Indicators	Responsible Organisation	Data source & Frequency	Unit	2016	2017	2018	2019	2020	2021
2.3.1 Volume of production per labour unit by (a) Farming, (b) Pastoral, (c) Forestry and (d) Enterprise size	SM	FAREI - yearly							
(i) Proxy indicator - Annual total food crop production per unit area			Tonnes per hectare	13.7	13.7	12.7	12.8	12.9	12.8
Beans and peas				5.5	6.0	5.5	5.8	5.5	6.1
Cabbage and Cauliflower				18.5	18.3	15.4	14.1	13.3	12.5
Creepers				...	12.2	10.8	12.0	11.6	12.2
Onion				23.0	20.8	12.5	13.2	20.8	22.9
Potato				21.3	19.9	23.7	20.8	21.8	19.3
Tomato				13.9	14.7	13.5	13.5	13.3	15.2
(ii) Proxy indicator - Number of livestock heads per farm	MAIFS	FAREI - yearly	Per farm						
Cattle				...	8.3	6.1	6.5	...	...
Pigs				...	46.2	43.1	46.7	...	...
Sheep				...	12.1	12.4	17.8	...	...
Goat				...	10.6	10.4	11.2	...	...
Small Poultry Farm Eggs				...	2,407	2,448	1,052	...	...
Broiler				...	1,593	4,289	1,512	...	...
Duck				...	21.9	21.9	...	...	...
2.3.2 Average income of small-scale food producers by sex and indigenous status.	MAIFS			...	...	...	...	...	...
2.4.1 Proportion of agricultural area under productive and sustainable agriculture.	MAIFS	MAIFS							

Source: Statistics Mauritius

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List of Audit Questions and Sub-questions

Audit Question 1	To what extent the national targets 2.3 and 2.4 are adequate, comprehensive, relevant and aligned with the Global SDG Targets?	
	Sub-questions	
	1.1	Have nationally agreed indicators been set up to measure the nationally agreed target?
	1.2	Are they consistent with SDG indicators?
	1.3	Have baselines for the target indicators been established and used?
	1.4	What are the data collection mechanisms for the measurement of indicator progress?
	1.5	What are the institutional set-up and the methodology used to collect data on the indicators?
	1.6	What are the information attributes related to the indicators (disaggregation, source, period, etc)?
Audit Question 2	In respects of targets set in the Strategic Plan 2016-2020, what progress has been made towards increasing food production and proportion of agricultural area under productive and sustainable agriculture?	
	Sub-questions	
	2.1	Has MAIFS achieved its planned progress on the Strategic Plan 2016-2020 in the absence of national targets?
	2.2	Considering the current trend, will MAIFS efforts lead to achievement of the selected national target as per the planned timeline?
Audit Question 3	To what extent MAIFS has provided for adequate and well-functioning legal and policy frameworks and institutional arrangements towards attainment of these targets?	
	3.1	Has MAIFS taken the necessary measures to align the legal and policy frameworks as well as the institutional set-up with the nationally agreed target?
	3.2	Is the legal and policy framework horizontally and vertically coherent (without gaps, overlaps, duplication and fragmentation) with respect to the target?
	3.3	Has MAIFS put in place institutional arrangements for effective vertical and horizontal coherence?
	3.4	Do the legal and policy frameworks and institutional arrangements adequately address the needs of identified vulnerable groups related to the target?
	3.5	Has MAIFS informed and involved citizens and stakeholders (including state and nonstate actors like legislative bodies, the public, civil societies and the private sector) in the processes and institutional arrangements to put in place robust legal and policy frameworks for achievement of the national agreed target?

Audit Questions and Sub-questions

Audit Question 4	To what extent MAIFS had planned and budgeted for increasing food production and the proportion of productive and sustainable agricultural area?	
	4.1	Are MAIFS budgets at different levels aligned, sufficient and adequate for achievement of the target?
	4.2	Did MAIFS include all relevant stakeholders in the planning and budgeting for the target?
	4.3	Do the government plans and budgets address the specific needs of identified vulnerable groups related to the target?
Audit Question 5	To what extent MAIFS was measuring, monitoring and reporting on attainment of these targets?	
	5.1	Has MAIFS put in place an effective, transparent and inclusive system for measuring, monitoring and reporting on progress towards the achievement of the selected national target?
	5.2	Are measurement, monitoring and reporting being carried out as intended?

**Indicators and Plan of Action of the then Ministry of Agro Industry and Food Security
(Extract)**

	Base year 2019	2022	2025	2028	2030
2.3.1 Volume of production per labour unit by (a) Farming, (b) Pastoral, (c) Forestry and (d) Enterprise size					
<i>(i) Proxy indicator - Annual total food crop production per unit area (tonnes)</i>	93,741	105,974	Increase the production by 2%	Increase the production by 2%	Attain self-sufficiency of 25%
<i>(ii) Proxy indicator - Number of livestock heads per farm</i>					Attain self-sufficiency of 25%

	Base year 2019	2022	2025	2028	2030
2.3.2 Average income of small-scale food producers by sex and indigenous status	<i>Statistics Mauritius to capture the information in CMPHS</i>				

	Base year 2019	2022	2025	2028	2030
2.4.1 Proportion of agricultural area under productive and sustainable agriculture		90	95	100	110

Source: MAIFS

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Statement DA – ‘Progress Report on Achievements and Performance’ of the Accounts of the Government of Mauritius

	Key Actions for Financial year:	Key Performance Indicator	Target	Achievement	Remarks
	2016-17				
1	Increase the extent of de-rocked lands belonging to small farmers	Additional land de-rocked (hectares)	1,000	758	De-rocking, land preparation and plantation works are in progress on the remaining extent. Heavy rainfall recorded during the months of March and April 2017 has affected the progress of works. The MCIA is having recourse to the services of Agricultural Mechanisation Unit, corporate sector and other private operators of machines for derocking and land preparation works
2	Improve farm productivity and reduce post-harvest losses for strategic food crops by promoting value addition agri-businesses	Per centage reduction in post-harvest losses in non-sugar crops	20%	N/A	Figure not available: Study being undertaken to quantify post-harvest losses. In parallel entrepreneurs trained in value addition of agricultural produce and in upgrading of their products.
3	Dedicate more state land for bio farming activities	Additional land area put under bio farming activities (hectares)	40	34.2	Land area under bio-farming activities is as follows: (a) organic agriculture: 10 projects (49A) at Britannia and 1 project (8.5A) at Ville Bague, (b) Sustainable agriculture under Mauri gap Standards: 4 projects (20A) at Plaine Magnien and 1 project (1A) at Raffray, Dubreuil (c) Natural farming: 2 projects (3A) at Bois Marchand.
4	Increase meat and milk production through the setting up of livestock Zones, heifer farms and modular dairy farms on state lands	1. Additional meat Produced (tonnes)	2400	N/A	The decrease in local meat production (less 560 tonnes) is explained by the outbreak of the Foot and Mouth Disease in 2016. Construction of the livestock zone: Bids received for the construction of the livestock zone are being evaluated
		2. Number of Dairy Units farms set up	≥ 1	N/A	Contract for construction of heifer farm awarded in July 2017
5	Re-launch apiculture and honey production through the setting up of bee reserve zones on state forest lands	Number of bee Reserve Zones set Up	≥ 2	2	22ha at Bras D'Eau and 5ha at Les Salines

Source: Annual Report of the Accountant-General and the Accounts of the Government of the Republic of Mauritius for the financial year ended 30 June 2017

APPENDIX VI- Continued

	Key Actions for Financial year:	Key Performance Indicator	Target	Achievement	Remarks
	2017-18				
1	Increase the extent of de-rocked lands belonging to small farmers	Minimum additional land area de-rocked (ha)every year	400ha	242ha	Contract agreement signed for a total extent of 317ha. Land preparation and plantation completed on 242ha.The progress of works has been hampered due to unfavourable climatic conditions during the first quarter of the year
2	Bring back abandoned cane lands under cultivation	Minimum additional area (ha)	500	348	Contract agreement signed for a total extent of 554ha. Land preparation effected on 360ha, and plantation completed on 348ha. Unfavourable climatic conditions during the first quarter of the year have affected the progress of works.
3	Use of state land for Bio farming activities	State land area put under bio farming activities (cumulative) (ha)	30	38.9	78.9ha leased and 38.85ha put under use
4	Eradication of fruit flies, a serious pest for local fruits and vegetables	Production and release of sterile flies in nature to crowd out the species	5M	500,000	500,000 sterile flies have been released at Poudre-D'or village for the control of fruit flies attacking mango and other fruits. The fruit fly rearing facility under construction is expected to be completed by Oct/Nov 2018.

Source: Annual Report of the Accountant-General and the Accounts of the Government of the Republic of Mauritius for the financial year ended 30 June 2018

APPENDIX VI- Continued

	Key Actions for Financial year:	Key Performance Indicator	Target	Achievement	Remarks
	2018-19				
1	Use of state lands for Bio farming	State land area put under bio-farming activities (cumulative) (ha)	60	25	Bio farming Zone at Britannia
2	Increase local honey production	Volume of honey produced in tonnes	27.5	25	

Source: Annual Report of the Accountant-General and the Accounts of the Government of the Republic of Mauritius for the financial year ended 30 June 2019

APPENDIX VI- Continued

	Key Actions for Financial year:	Key Performance Indicator	Target	Achievement	Remarks
	2019-20				
1	Use of state land for bio - farming activities	State land area put under bio-farming activities (cumulative) (ha)	110	35	Due to water problem at Bio Organic Zone at Britannia, growers were not able to increase production
2	Increase local honey production	Volume of honey produced in tonnes	30	28	Honey production influenced by unfavourable conditions and prevalence of varroa mites and small hive beetles. In order to increase honey production, bee zones have been created at Petit Sable and La Ferme.

Source: Annual Report of the Accountant-General and the Accounts of the Government of the Republic of Mauritius for the financial year ended 30 June 2020

	Key Actions for Financial year:	Key Performance Indicator	Target	Achievement	Remarks
	2020-21				
1	Increase local agricultural production for greater self sufficiency	Local production of food crops (tonnes)	115,000	109,339	
		State land area allocated for crop production, bio- farming activities, livestock and honey production (ha)	900	1,235	
2	Increase local honey production	Volume of honey produced (tonnes)	27	27	

Source: Annual Report of the Accountant-General and the Accounts of the Government of the Republic of Mauritius for the financial year ended 30 June 2021

APPENDIX VI Continued

	2021-22					
	Outcome	Outcome Indicator	Target 2021/22	Achievement		
	Improved food security level with increased local production of all non-sugar crops (food crops, vegetables, fruits)	Local production of food crops, including under sheltered and bio farming systems (tonnes)	110,000	110,588	Figure excludes local fruits	
	Delivery Unit	Main Service	Key Performance Indicator	Target 2021/22	Achievement	Remarks
1	FAREI	Conduct research and training to introduce new crop varieties	Number of new varieties introduced and tested	15	30	New varieties introduced and tested for potatoes, onions, kaylan, roses and chrysanthemums.
2	Entomology Division	Promotion of apiculture through training of beekeepers	Volume of honey produced (tonnes)	30	30	

Source: Annual Report of the Accountant-General and the Accounts of the Government of the Republic of Mauritius for the financial year ended 30 June 2022

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