



REPUBLIC OF MAURITIUS

## **NATIONAL AUDIT OFFICE**

# **PERFORMANCE AUDIT REPORT**

## **FOOD PRODUCTION - ARE AGRICULTURAL STATE LANDS OPTIMALLY UTILISED?**

**Ministry of Agro-Industry and Food Security**

**JUNE 2020**



## PREFACE

Section 16(1A) of the Finance and Audit Act requires 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 submit to the Minister of Finance, Economic Planning and Development, and through him to the National Assembly this Performance Audit Report entitled "Food Production- Are Agricultural State Lands Optimally Utilised?". The subject matter was selected for the audit in view of its significance and the difference it can make to the lives of citizens through the enhancement of the operational efficiency and effectiveness in its management.

The objective of the audit was to assess whether the Agricultural State Lands were efficiently and effectively managed and employed for agricultural development by the Ministry of Agro- Industry and Food Security. The Report contains audit findings, conclusion, recommendations and emphasises on areas of improvements on management and monitoring of state lands leased for agricultural development. The Ministry was given the opportunity to comment on the content of the Report.

My Office intends to carry out a follow-up audit at an appropriate time regarding actions taken by the audited entity in relation to the implementation of the recommendations.

I would like to take this opportunity to thank the Senior Chief Executive and staff of the Ministry of Agro-Industry and Food Security for their cooperation and collaboration. I also wish to express my sincere thanks to the staff of the Performance Audit Unit of the National Audit Office for their commitment.



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Director of Audit  
National Audit Office  
**PORT LOUIS**

30 June 2020



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# CONTENTS

	<b>Page</b>
<b>ABBREVIATIONS</b>	iii
<b>EXECUTIVE SUMMARY</b>	1
<b>CHAPTER ONE – INTRODUCTION</b>	
1.1 Background	7
1.2 Motivation	7
1.3 Audit Objective	8
1.4 Audit Design	8
1.5 Audit Scope	8
1.6 Audit Methodology	8
1.7 Methods of Data Collection	8
1.8 Assessment Criteria	9
1.9 Data Validation Process	9
1.10 Structure of the Audit Report	10
<b>CHAPTER TWO – DESCRIPTION OF THE AUDIT AREA</b>	
2.1 Background	11
2.2 Policy and Goal of Ministry	11
2.3 Land Use Division	12
2.4 Roles and Responsibilities of Other Stakeholders	18
2.5 Schemes for Modernisation and Innovation	19
2.6 Overview of Agriculture in Mauritius	19
2.7 Agricultural Land	21
<b>CHAPTER THREE – FINDINGS</b>	
3.0 General	23
3.1 Agricultural Lands Controlled by the Ministry	23
3.2 Monitoring of State Lands	24
3.3 Agricultural State Lands for Bio-Farming	30
3.4 Revitalisation of the Tea Sector	32
3.5 Changes in the Sugarcane Sector and their Impact on Lands	35
3.6 Site Visits	39
<b>CHAPTER FOUR – CONCLUSION</b>	43
<b>CHAPTER FIVE – RECOMMENDATIONS</b>	
5.1 Monitoring of Agricultural State Lands	45
5.2 Enhancing the Survey of State Lands for Leasing	45
5.3 Addressing Issues in Bio- Farming	45
5.4 Addressing Issues in the Tea Sector	46
5.5 Addressing Issues in the Sugar Sector	46

*Continued*

## **CONTENTS** *(Continued)*

	<b>Page</b>
<b>TABLES</b>	
Table 1 Area under Crops Harvested (ha) 2015 – 2018	21
Table 2 Examples of Stocking Density recommended by FAREI	25
Table 3 Details of Land Allocated	33
<b>FIGURES</b>	
Figure 1 LUD Organisation Chart	13
Figure 2 Actions taken by LUD against Defaulters	16
Figure 3 ASLs leased and Vacant (ha)	23
Figure 4 Trends in the Sugar Sector 2001 – 2019	37



## ABBREVIATIONS

ASL	Agricultural State Land
CISD	Central Information System Division
FAREI	Food and Agricultural Research and Extension Institute
Ha	Hectare
LMC	Lander Mills Commodities International
LUD	Land Use Division
MAAS	Multi-Annual Adaptation Strategy
MCIA	Mauritius Cane Industry Authority
MHL	Ministry of Housing and Land Use Planning
MSPA	Mauritius Sugar Producers Association
NAO	National Audit Office
NAPRO	National Agricultural Products Regulatory Office
PIN	Parcel Identification Number
SIFB	Sugar Insurance Fund Board
SLC	State Land Committee
SL	State Land



## EXECUTIVE SUMMARY

Land resources in Mauritius are finite and under pressure. Different sectors have demands on land and affect how they are used. Land management is the process of managing the use and development of land resources. A proper management of land to meet the national priorities is important.

Land is the basis for all forms of agricultural development. In Mauritius, agricultural lands are mainly used for sugarcane, tea, food-crop and livestock productions. The Ministry of Agro-Industry and Food Security (Ministry) manages agricultural lands under its control through its Land Use Division (LUD).

In January 2016, the Ministry noted that, in recent years, significant land areas have been moved out of agriculture to make way for other development. This trend has continued to date. Areas under agricultural crops harvested have been decreasing by some 1,700 hectares (ha) every year since 2016. Loss of agricultural land is a major problem because as more land is lost, it will become more difficult to produce the amount of food needed to feed the population.

Policies implemented in the agricultural sector with a view to achieving food self-sufficiency have had limited success. Overall, incentive measures put in place did not produce the expected results. Mauritius has long been, and remains, a net food importer.

This audit assignment assessed whether the Ministry's Agricultural State Lands (ASLs) were efficiently and effectively managed and employed for agricultural development.

The period under review spanned from January 2012 to December 2019. To get an insight of the latest development in land management, information up to February 2020 has been included in the Report.

### Key Findings

- 1) In recent years, lands under agricultural crops harvested have continued to decrease at the rate of 1,700 ha every year to reach some 56,000 ha in 2018.
- 2) As of mid-November 2019, the Ministry had some 4,134 ha of ASLs which were managed by the LUD. Some 3,218 ha were leased to individuals, companies and cooperative societies for different agricultural purposes, and 893 ha were vacant.
- 3) 25 per cent of leased plots inspected by LUD in 2019 were abandoned, neglected, not fully utilised or maintained, and not used as per the terms of the lease. The other 75 per cent were described as 'occupied', 'cleared' and 'bulldozed'. These findings were based on visual observations made. Measurements were neither taken nor were estimates made.

The LUD's monitoring and assessment did not indicate how well the lands were applied to the purposes for which they were granted, and if the produce from these resources was satisfactory. A systematic and scientific monitoring and assessment of land resources had not been carried out by LUD.

- 4) An essential requirement relating to minimum performance levels to be achieved by the lessee or at which it should operate was not spelled out in the lease agreement.
- 5) The Food and Agricultural Research and Extension Institute (FAREI) has already worked out the stocking density for the livestock sector. It shows how many animal heads can be reared on any hectare of agricultural land or in a given space area. FAREI also considers land under food crops to be optimally used when the whole area is covered with greens, and two to three crop cycles can be achieved for large variety of vegetables in any year. Though the information was available at FAREI, it was not used by the Ministry when drawing the lease agreement to indicate and, more importantly, require what the lessee needs to achieve over the land granted during the lease period. The same information can be used as a yardstick to measure the lessee's usage of the land and performance.
- 6) Stakeholders, like FAREI, Mauritius Cane Industry Authority (MCIA), Sugar Insurance Fund Board (SIFB) and National Agricultural Products Regulatory Office (NAPRO) visit farmers on their lands or carry out inspections to assess their activities and provide advice to them where necessary. Important information is collected during these visits. It can be helpful to LUD in the monitoring of its lessees' activities, and use of the agricultural lands granted. Unfortunately, it was not requested by, or shared with, LUD.
- 7) With the coming into effect of new Regulations under the Cadastral Survey Act as from 1 July 2013, the need to assign a Parcel Identification Number (PIN) to any plot of land granted on lease became mandatory. As of July 2013, survey exercises had to be undertaken on parcels of land covering some 3,941 ha. With the addition of new Mauritius Sugar Producers Association's (MSPA) lands to LUD's land bank over the years, the volume of surveying jobs also grew. As of mid-November 2019, the land database showed 4,963 plots spreading over 4,134 ha. Of these, only 668 ha (725 plots) had been surveyed and assigned PINs as at the same date. This represented about 16 per cent only of all land areas that needed to be surveyed.
- 8) The Survey Office attached to LUD was unable to effect land surveying works of the scale mentioned above due to inadequate labour force. During the last three years, the Office surveyed only 148 ha of land. In 2019, only 35 plots of land leased or to be offered on lease were surveyed. This output was low when compared to some 215 plots that should have been covered annually.
- 9) The contract to survey some 2,533 ha out of 4,076 ha of lands, including sub-divisions of lots, fixing of boundary limits and assignment of PINs, was awarded to a private contractor in 2016. The contract period was two years (ending late May 2018) and the price was Rs 15.2 million. The contractor's performance on the assignment was unsystematic and unsatisfactory. The management of the contract, including the monitoring of its execution by the Ministry was also not effective.

During the two year contract period, only around 21 per cent of the work was executed. As of February 2020, the contract was not yet completed. Works have been allowed to be undertaken without the Ministry formally approving extension of time and setting an end date. No liquidated damages have been charged.

Deliverables were received at LUD with varying degrees of completion with enormous delays. These had some serious impacts on LUD's works. Indeed, the necessary documents, PINs and boundary stones for a number of plots were still awaited so that lease agreements could be entered and plots handed over to new beneficiaries. Renewal of expired leases was also delayed.

- 10) Government proposed several measures to encourage farmers to minimise the use of synthetic agro-chemicals and shift towards bio food production. The Ministry earmarked 100 ha of ASLs for bio farming activities, along with introducing, in 2016, a Bio Farming Promotion Scheme to encourage a gradual shift towards bio/organic production. The Ministry identified 25 ha of ASLs as a dedicated bio-farming zone but it did not carry out any assessment on the lands to ascertain whether they were suitable for bio-farming. As of December 2019, only 8.65 ha were occupied. No other regions were identified for organic farming. A new legislation to regulate all aspects of organic agriculture /bio-farming was deemed necessary, but as of December 2019, same was not yet prepared.
- 11) In August 2015, the Ministry decided to revitalise the tea sector with a view to encouraging tea planters and manufacturers not to abandon their tea plantations. A comprehensive socio-economic and environmental study on the long-term prospects of the sector was not carried out to determine whether the tea sector was viable before considering the need to revive it. In August 2016, 253 ha of ASLs had been earmarked for tea cultivation within the ex-tea belt for prospective tea planters. However, as of August 2019, the Ministry allocated some 94 ha only to 18 new lessees. As at December 2019, of the 94 ha, only six ha were occupied by eight lessees.

The Ministry allocated some 47 ha of ASLs to a Foreign Company, in 2015 and 2017, for tea cultivation. As of December 2019, the allocated lands had never been utilised for tea plantation. Similarly, of some 21 ha allocated to small planters at La Grande Chartreuse, about one third was either not maintained or left in an abandoned state.

- 12) As of mid-November 2019, the LUD had some 1,700 plots of land covering about 1,459 ha that were under active leases granted for sugarcane cultivation. Lessees were essentially small planters. LUD inspections in 2019 revealed that about 17 per cent of the lands (228 plots – 188 ha) were in an abandoned or neglected state.

Over the past years, the sugar industry has undergone a reversal of its previous favourable performance and continues to experience a declining trend. Falling revenues and increasing costs have forced several small and medium scale planters abandoning or neglecting sugarcane cultivation. The main causes for this situation are the major changes brought to our principal markets, and not doing enough to mitigate their effects, particularly on the small and medium scale planters.

The maintenance of the sugar industry is important from the economic, energy and environmental domains. Rapid and massive cane land abandonment needs to be averted. In 2019, the Ministry enlisted the services of a Consultant to advise on strategic options for the transition and sustainable transformation of the sugar cane industry. The expert should also, among others, assess the acreage for the cultivation of sugarcane to ensure adequate supply of sugar to the production cluster and formulate specific measures for small planters to continue their involvement in sugar.

## **Conclusion**

The Ministry has to some extent been able to efficiently and effectively manage its ASLs leased for agricultural development. The management of the ASLs was marked with shortcomings.

Monitoring activities in respect of leased lands have not been effective. Limitations in these activities, along with inadequacies in the lease agreement, and insufficient sharing of valuable information amongst stakeholders have not allowed the Ministry to fully assess the extent to which the ASLs are being used for the purpose for which they were allocated.

## **Key recommendations**

- 1) With a view to assessing how well land resources are applied to the purposes for which they are granted and if the produce from these resources are satisfactory, the LUD needs to carry out a systematic and scientific monitoring of its land resources.
- 2) Performance levels to be achieved by lessees or at which they should operate should be explicitly spelled out in lease agreements.

LUD should work in close collaboration with the various stakeholders like FAREI, Mauritius Cane Industry Authority, Sugar Insurance Fund Board and National Agricultural Products Regulatory Office to set the minimum performance levels in the different agricultural sectors in which lands are given on lease.

- 3) Service delivery by LUD's Survey Office needs to be enhanced so that more plots of lands are surveyed. A strict and periodic monitoring of the employment of resources available, and output delivery of the Office by LUD should be exercised.
- 4) An end date for the contract with the private contractor should be fixed. The performance security should be renewed. A close monitoring of the works undertaken will have to be effected. Penalties provided in the contract should be applied where and when necessary.
- 5) A new legislation for organic agriculture/ bio-farming covering all aspects of organic farming should be developed.

Other suitable regions for organic farming should be identified.

- 6) The Ministry should address the reasons for land abandonment in the tea sector. The selection criteria for allocation of ASL should be reviewed.
- 7) Prompt adequate actions need to be taken and appropriate support provided to ensure the viability of the sugar sector, that sugarcane fully fulfils its multifunctional role, and lands are kept under commercial production.

The Ministry should ensure that the measures to be recommended by the Consultant are given due consideration and implemented.

## **Summary of Ministry's Response**

### ***Survey and allocation of vacant land***

The Ministry explained that allocation of land had been put on hold due to survey exercise by the private land surveyor having not yet been completed. The Ministry is in the process of resolving this issue and allocation of land with Parcel Identification Number has already started.

### ***Bio Farming***

The Ministry informed NAO that it is working on a framework to be provided to planters in the bio-farming sector.

It also explained that suitable regions for organic farming have been earmarked at Plaine Magnien and La Flora. Issues related to water resources are also being addressed presently.

### ***Tea Sector***

The Ministry informed that it will also maintain the newly cultivated fields for three to four years.





# CHAPTER ONE

## INTRODUCTION

*This Chapter provides an introduction to the subject matter and describes the approach used to carry out this Performance Audit.*

### 1.1 Background

Land is the platform on which human activities take place, and is also the source of materials needed for these activities. The land resources of Mauritius are finite and under pressure. Housing, transportation, energy, water, agriculture, tourism, and economic development – all of these sectors have demands on land and affect how they are used. Land management is the process of managing the use and development of land resources. Hence, a proper management of land to meet the national priorities is important.

Land is the basis for all forms of agricultural development. In Mauritius, agricultural lands are mainly used for sugarcane, tea, food-crop and livestock productions. The Ministry of Agro-Industry and Food Security (Ministry) manages agricultural lands under its control through one of its Divisions.

### 1.2 Motivation

In January 2016, the Ministry noted that, ‘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’.<sup>1</sup> This trend has continued to date. Areas under agricultural crops harvested have been decreasing by some 1,700 hectares (ha) every year since 2016. Loss of agricultural land is a major problem that the agricultural sectors face because as more land is lost, it will become more difficult to produce the amount of food needed to feed the population.

Over the years, various policies have been implemented in the agricultural sector with a view to achieving food self-sufficiency, increasing food self-reliance, and encouraging the export of high value agricultural produce, among others. Self-sufficiency has been achieved in the production of most fresh vegetables, of poultry meat and eggs. Some success has also been recorded in the exports of certain flowers and tropical fruits. Overall, the various incentive measures put in place did not produce the expected results. Mauritius has long been, and remains, a net food importer.

It is against this background that the National Audit Office (NAO) has carried out this Performance Audit on ‘Food Production – Are Agricultural State Lands Optimally Utilised?’

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<sup>1</sup> Strategic Plan 2016 – 2020 for the Non-Sugar Sector.

### **1.3 Audit Objective**

The audit assessed whether the Ministry's Agricultural State Lands (ASLs) were efficiently and effectively managed and employed for agricultural development.

### **1.4 Audit Design**

The audit objective is further detailed by the following audit questions:

- Are ASLs being sufficiently employed in agricultural development?
- Are the right criteria being used to select beneficiaries (lessees) of ASLs?
- Is the Ministry correctly managing and monitoring the leased ASLs?

The answers to these questions supported the conclusion against the audit objective.

### **1.5 Audit Scope**

The focus of this report is the usage, management and monitoring of the ASLs in Mauritius under the control of the Ministry. The activities examined included processes and practices in the systems relating to allocation of land resources, and land lease management and monitoring. The report did not cover ASLs under the control of the Forestry Service which operates under the aegis of the same Ministry.

The period under review spanned from January 2012 to December 2019. To get an insight of the latest development in land management, information up to February 2020 has been included in the Report.

### **1.6 Audit Methodology**

The audit was conducted in accordance with the requirements of the NAO Performance Audit Manual, which is based on International Standards of Supreme Audit Institutions. Different methodologies were used to understand the audit area, along with obtaining sufficient, relevant and reliable audit evidence that support the conclusions and recommendations.

### **1.7 Methods of Data Collection**

In order to carry out the audit, data was collected through interviews and document reviews. Site visits were also carried out to confirm information in files and to get acquainted with the activities carried out.

### ***1.7.1 Documents Reviewed***

Information relating to policies, strategies, programmes, systems, procedures and practices was collected through review of files and documents at the Ministry. The data was used to confirm information obtained from interviews and to understand how the strategies put in place by the Ministry were implemented and its systems were operating.

### ***1.7.2 Personnel Interviewed***

Interviews were carried out with key personnel of the Ministry and staff of the Land Use Division (LUD), a department responsible for managing the ASLs, as well as with key staff of several stakeholders that help the Ministry in managing its land resources.

The interviews were used to confirm information obtained from the documents reviewed and for providing more explanations where information was not available in the reviewed documents.

### ***1.7.3 Site Visits***

Site visits to lands leased for various purposes – food-crop and livestock production, tea and sugarcane cultivation, bio-farming and agri-business – were also effected. These allowed an assessment of the condition of the lands.

## **1.8 Assessment Criteria**

Criteria are the standards that were used as a basis for evaluating the evidence collected, developing audit findings and reaching conclusions on the audit objective. To assess the management of ASLs, criteria were drawn from various sources, such as:

- Legislations, including the State Lands Act and Cadastral Survey Act;
- ‘Guidelines on Agricultural Lease’ published by the Ministry;
- Lease contracts entered between the Ministry and lessees for ASLs; and
- Government guidelines and procedures that regulate administrative operations within the Ministry and interaction with other Government Bodies

Other assessment criteria used are given in the relevant paragraphs in Chapters Two and Three.

## **1.9 Data Validation Process**

The audit criteria, findings and recommendations were presented and discussed with the management of the Ministry and LUD to confirm their suitability, relevance and accuracy.

## **1.10 Structure of the Audit Report**

The remaining part of the Report covers the following:

- Chapter Two presents a description of the audit area, the roles and responsibilities of the Ministry and other key players involved in the management of ASLs. It also provides a description of the system for managing ASLs.
- Chapter Three presents the audit findings based on the audit questions.
- Chapter Four provides the audit conclusion.
- Chapter Five outlines the practicable recommendations based on the audit findings and conclusion.

## CHAPTER TWO

### DESCRIPTION OF THE AUDIT AREA

*This Chapter describes the audit area, the roles and responsibilities of the Ministry and other key players involved in the management of ASLs. It also describes the system for managing ASLs.*

#### 2.1 Background

Agricultural land is typically land devoted to agriculture for the production of crops and rearing of livestock to produce food for humans. It also includes permanent pastures. As such, agricultural land is generally synonymous with cropland or farmland, as well as pasture lands.<sup>2</sup> Given the small size of the island, agricultural lands in Mauritius are limited and have to face competing demands from other sectors. This demands efficient and effective land management to retain and make good use of such resources.

The Ministry manages its available agricultural lands through the LUD. Other stakeholders assist in such management at varying degrees. In the paragraphs that follow, the objectives, roles and responsibilities of the Ministry, and of entities operating under its aegis are defined. The systems operated are described. Incentives and schemes put into place to support agriculture, and thereby ASLs development are also presented.

#### 2.2 Policy and Goal of Ministry

The overall policy of the Ministry is to strengthen food security and sustainable agricultural development through improvements in productivity, provision of safe food, increased contribution of agriculture to the economy, creating more awareness and interest for agriculture, and sustainable use of resources.

The main objective of the Ministry is to raise the national food security level by maintaining self-sufficiency in those agricultural products, where it is possible, and by generating an increase in local production of others. It also aims to promote the development of the agri-business sector to enhance import substitution so as to reduce reliance on imports.

With respect to agricultural lands, the Ministry has within its organisation structure the LUD which is responsible for the management of the lands. LUD is one of the many divisions of the Agricultural Services, a department of the Ministry, which acts as its technical arm. The Department is headed by a Director.

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<sup>2</sup> The Food and Agricultural Organisation (FAO) considers agricultural land to be a collection of: (i) arable land which refers to land producing temporary crops, fallow land and pasture land used for such crops within any five year period; (ii) land under permanent crop, that is, land producing crops that do not require annual replanting; and (iii) permanent pastures which are natural or artificial grasslands and shrub lands which can be used for grazing livestock.

## 2.3 Land Use Division

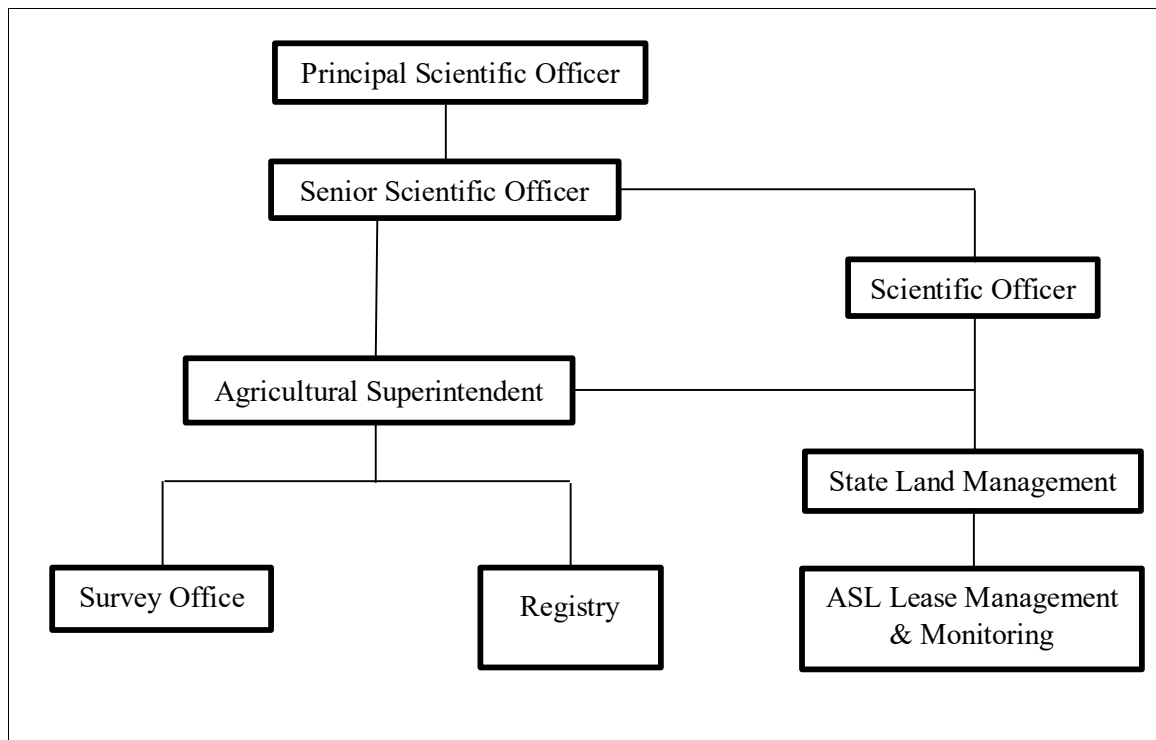
The Division is responsible for the preservation of agricultural lands against non-agricultural use. It provides rational advice on the use of land resources of Mauritius for agricultural purposes. As of end February 2020, it administered some 4,217 hectares (ha) of State Lands (SLs) vested in the Ministry. ASLs falling under the purview of LUD are grouped into four categories:

- (a) *Land Settlements*. These stemmed out of a 1950 policy by the same name with the objectives of forming a peasant farming class whose members would make a living off the lands to partially overcome unemployment and to brake the migration of the rural population towards urban areas. There are 22 land settlements spread across the country forming a total extent of 665 ha. A few blocks of these lands have been leased to the Irrigation Authority which, in turn, has leased same to planters.
- (b) *Ex-Tea Lands*. With the retrenchment of the Tea Sector as from 1995, former tea growers received on lease SLs for agricultural diversification. The whole area represents an extent of 2,701 ha and is distributed across 35 localities in humid to super humid regions.
- (c) *Mauritius Sugar Producers Association's (MSPA) Lands*. These lands were acquired by Government from the Mauritius Sugar Producers Association. The properties have been transferred piecemeal, and as of end February 2020, 363 ha out of a total of 422 ha have already been entrusted to the LUD.
- (d) *Other State Lands*. These comprise part of former agricultural stations of the Ministry and parcels of ASLs scattered island-wide. The total extent is 488 ha.

### 2.3.1 Organisation Structure of Land Use Division

To carry out its activities, the LUD is staffed with officers of various grades – Scientific Officer, Surveyor, Agricultural Superintendent, Technical Officer and Agricultural Support Officer, amongst others. The structure cum responsibility lines at the Division are portrayed in Figure 1. Management of the Division rests with a Principal Scientific Officer who reports to the Ministry's Senior Chief Executive through the Director, Agricultural Services. Other scientific and technical officers of the Division offer their technical expertise in agricultural and land lease matters. The Agricultural Superintendent handles administrative matters of the Division.

Figure 1 LUD Organisation Chart



Source: LUD

### 2.3.2 Activities of Land Use Division

In managing the ASLs, the Division undertakes the following tasks:

- Process requests for ASLs from members of the public;
- Draw up agricultural land leases and collect land rents accruing therefrom;
- Monitor the use of ASLs in collaboration with the Food and Agricultural Research and Extension Institute (FAREI), the Mauritius Cane Industry Authority (MCIA), the Sugar Insurance Fund Board (SIFB), the National Agricultural Products Regulatory Office (NAPRO) and the Small Farmers Welfare Fund;
- Ensure compliance with all the clauses of the lease agreements, serve notices and takes necessary actions against defaulters; and
- Conduct surveys of plots of land to be leased.

The above jobs are more fully described in the following paragraphs.

#### (i) Application for and Allocation of State Land

The Ministry grants agricultural leases to individuals, companies or cooperative societies. The objective of such leases is to boost local food production and other agricultural

produce.<sup>3</sup> Any person, company or cooperative society who is willing to undertake agricultural activities may apply for SL.

An application in the form of a letter is submitted to the Ministry. The project proposal needs to be fully described. The following information needs to be furnished or clearly spelt out:

- identity of applicant/promoter<sup>4</sup>
- proven track record of applicant/promoter
- business and concept plan (applicants may solicit assistance from FAREI to prepare their business plans)
- extent of land required<sup>5</sup> and location
- if the project is eco-friendly

The Ministry may add new criteria to reflect changes and developments in the agricultural sector.

Applications received at the Ministry are forwarded to the LUD and FAREI for their assessment and views. The assessment exercise considers the feasibility of the project, technical and financial capacity of applicant, applicant's profile (experience/track record in the activity proposed), whether the project is in line with Government's/Ministry's objective, availability of land in the prospected region, and suitability of the prospected site to the project purpose. The results of the assessments by, and views of the LUD and FAREI are communicated by the latter during the Ministry's State Land Committee (SLC)<sup>6</sup> sittings. If land applied for is available and found suitable for the purpose, a recommendation for the grant of a lease is submitted by the SLC for approval by the Ministry. Recommendations to approve or reject applications are summarised and sent to the Senior Chief Executive for endorsement.

A Letter of Intent in which the terms and conditions of a future lease are expressed is issued to the successful applicants by the Ministry.

#### *(ii) Agricultural State Land Leases and Lease Rental*

The Lease Section at LUD is responsible for drawing of lease agreements, their renewals and cancellations, as well as collection of rents and revenues. Changes to lease agreements, especially with respect to tenancy and purpose of lease are also processed at the Division.

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<sup>3</sup> Agricultural land leases also allow individuals who are unemployed to undertake economic activities so that they can earn a living and, thereby, help to alleviate poverty.

<sup>4</sup> Name, address and contact details of applicant or its representatives. In the case of a company, its profile and shareholding structure need to be detailed.

<sup>5</sup> The minimum land that can be applied for by an individual is 0.422 ha, and for a company/cooperative society, 0.844 ha.

<sup>6</sup> The State Land Committee comprises representatives of the Ministry's administration, LUD and FAREI. The Committee sittings are held to consider batches of applications received at the Ministry on a first in first out basis.



Upon receipt of copies of the Letter of Intent and Letter of Acceptance of the terms and conditions of the lease (sometimes with variation(s) proposed) by the applicant, the agricultural lease is drawn based on model lease agreements which the LUD has designed for the different agricultural sectors. Prior to being used as a model, same is duly vetted by the Attorney General's Office. The latter sees to it that the lease is in line with the relevant Sections of the State Lands Act. The lease is usually granted for a period of seven years with possibility for renewal. Certain agricultural activities bear fruits over longer terms. Therefore, lease of a longer term (for example 20 years) is allowed with the approval of the Ministry. The main conditions of the lease are summarised and listed below:

- lessee to start agricultural activity on the land issued within a prescribed time period as from the date of signature of the lease. The lessee has the responsibility to obtain the necessary clearances and permits, including a Preliminary Environment Report, from the relevant authorities before starting the agricultural activity.
- lessee not to carry any other agricultural activities other than that approved and mentioned in the lease agreement without the prior written approval of the lessor.
- lessee may, with the written approval of the lessor, erect any light structure on the land leased which is required for the proper running of the agricultural activity. Such structure should be easily removable on expiration of the lease or its cancellation.
- lessee not to sublet or assign the whole or any part of his interest under the lease without the express written permission of the lessor. In case subletting is authorised, terms and conditions of the lease, as well as rental payment may be revised.
- lessee not to engage into any material and/or significant modification of the soil layout and of its natural characteristics.
- lessee to dispose of all solid and liquid wastes, and agro-chemicals in such manner as not to pollute the air and/or water and not to cause any damage to the land and the environment.

The lease agreement contains other clauses relating to:

- the lessor's power to enter and inspect the land at all reasonable times and to carry such activities, like preventing soil erosion;
- resumption of the land by the lessor for any purpose against payment of indemnity to the lessee;
- cancellation of the lease for failure to comply with any of the conditions of the lease, like not starting agricultural activity within the prescribed time period or for lease rentals remaining unpaid for more than three months; and
- termination or transfer of the lease.

The rent payable on the lease is Rs 1,000 for every 0.422 ha per annum and Rs 1,500 where irrigation facilities are provided. For other types of agricultural lease, the rent is set at the market value as assessed by the Valuation Department. All lease rentals are payable in advance and bear interest at the rate of eight per cent from the due date, if paid more than a month after falling due.

(iii) *Monitoring of Leased Lands and Rental Payments*

To ensure that optimum use is made of the plot of lands given on lease and to ascertain that the conditions mentioned in the lease agreements are adhered to effectively, officers of the LUD carry out monitoring exercises through field visits. As from February 2019, with the recruitment of Agricultural Support Officers, field visits are undertaken on a quarterly basis. When a lesser number of officers was available, this interval was longer. Each officer is assigned a number of plots, ranging from 200, covering some 150 ha (for newly recruited staff) to 925 that spread over up to 806 ha (for the more experienced staff members).

Maps of the site and plots are carried for the field visits. On site, monitoring starts with visual observations to ascertain whether:

- the terms of the lease (for example purpose) are complied with;
- the land is occupied or abandoned (wholly or partially; measurements are not taken); and
- the lessee has encroached on the terrain of a neighbour.

Cases of non-compliance and abandoned plots are reported upon. The LUD officer issues a warning letter to the non-compliant lessee. The latter is given a one-month delay as from the date of the letter to take corrective actions and to remedy the shortcomings mentioned in the warning letter.

The Lease Section serves notices to pay rent to lessees who fail to settle their dues within the prescribed time. Two notices showing the rent amount and interest accrued thereon are served. In the second and final notice, the lessee is given 48 hours to pay the amount due. Failure to settle the arrears, the lessee is explicitly informed that appropriate action will be taken by the Ministry to retrieve the plot. Failure to comply with these notices and warning letters mentioned above leads to retrieval of the plots and lease cancellation by the Ministry. The LUD notifies and recommends the latter for necessary actions against the defaulters. Figure 2 below shows the different scenarios and actions taken by the LUD against the lessees.

*Figure 2 Actions taken by LUD Against Defaulters*

<b>Rental</b>	<i>Not paid</i>	Notice to pay rent issued. If lessee fails to comply after two notices served, procedure to retrieve the plot and cancel the lease is triggered.	Notice to pay rent and a warning letter issued. If lessee fails to comply after two notices and the warning, procedure to retrieve the plot and cancel the lease is initiated.
	<i>Paid</i>	No action necessary as lessee complies with terms of lease agreement.	Warning letter issued. If lessee fails to comply after the warning, procedure to retrieve the plot and cancel the lease is activated.
		<i>Developed</i>	<i>Not developed</i>
			<b>Land</b>

Source: NAO Analysis

At times, the LUD requests other stakeholders, like FAREI to provide information to assess whether the plot is being optimally occupied. FAREI, MCIA and SIFB are also contacted to confirm squatting detected on plot(s) of land and to provide the identity of the illegal occupant.

The decision of the Ministry to retrieve the plot of land is communicated to the defaulting lessee, and the latter is required to 'quit, leave and vacate' the property. The lessee may contest this decision by making an appeal to the Ministry, and can go as far as to challenge the decision in a Court of Law. Formal retrieval of plot and cancellation of lease is done when a final decision is obtained in that respect.

Special visits are also effected following requests from the Ministry to attend to cases relating to appeal against retrieval of plots, renewal of leases, illegal occupation of lands, boundary issues, change of plots, and requests for the opening of access roads on SLs.

*(iv) Survey of Land for Leasing*

The Survey Office attached to the LUD is staffed with a Surveyor, Technical Design Officers and Survey Field Officers who carry out surveys on SLs to be leased. According to the Cadastral Survey Act, no lease of any plot of land can be granted unless a Parcel Identification Number (PIN) has been assigned to that plot of land. The same legislation provides that the Registrar-General shall not register a land lease deed without the PIN for the land parcel. Following the survey of a plot, a survey report is prepared, a plan is drawn and an application made to the Chief Surveyor of the Ministry of Housing and Lands for the issue of the PIN. Relevant sections of the Cadastral Survey Act that provide for the above, became effective on 1 July 2013.

On handing over of a plot to a lessee, the registered lease agreement with the PIN thereon, the survey plan and the survey report are required. The plot and its boundary limits need to be shown to the tenant. Fixing of boundary stones by the Surveyor sets the limits for the plot.

**2.3.3 Land Lease Management System**

To facilitate and better manage SL leases, the Central Information System Division (CISD) designed and developed a computerised system for the LUD. The system was installed in 2018, and training was dispensed to officers. In addition to basic data on the SLs (for example location, acreage, tenants' details, purpose of lease or vacant) managed by the LUD, findings from field visits, payments of lease rentals, change of plot, renewal, transfer, application for retrieval of plots and cancellation of leases are recorded in the system. Prior to the operation of the system as from April 2019, these data was held on Excel files.

## 2.4 Roles and Responsibilities of Other Stakeholders

The roles and responsibilities of other stakeholders are described below:

### 2.4.1 *Food and Agricultural Research and Extension Institute*

FAREI operates under the aegis of the Ministry. It conducts research in non-sugarcane crops, livestock, agro-forestry and provides an extension service to farmers.

Its research departments aim at the development of new cropping technologies and raising productivity in the livestock sector. Its Extension and Training Department ensures technology transfer to the farming community and agro entrepreneurs. Its main activities include provision of technical advisory services, training and information dissemination, facilitating access to Government incentives, field data collection on production, and socio-economic and agronomic issues.

The expertise of FAREI in the non-sugar sector and its knowledge of the farming community help to evaluate applications for SLs and provide advice to the SLC. The expertise is also solicited by LUD as it is useful to assess the occupation of leased lands and helps in monitoring of same. Joint site visits with officers of FAREI are also organised.

### 2.4.1 *Mauritius Cane Industry Authority*

The MCIA is a corporate body that became operational with the merging of six cess funded institutions<sup>7</sup>. Its mission is to promote the development of the cane sector and its clusters through systematic policy measures, creating an enabling environment with innovative and efficient services, research and development, technology transfer and value addition to meet current and future challenges. Its overall objective is to render the sugar cane industry more effective and efficient.

The Authority has such functions as are necessary to further its objectives, and may, among others provide technical advice, assistance and training to planters on cane cultivation, harvesting and post-harvest operations. Site visits to cane fields and plantations by MCIA officers allow them to collect data and assess how the different stages are undertaken. Adverse conditions are highlighted, and necessary advice given to planters to redress same. For example, competitive weeds, gaps between stools, bad fertilisation and a field which is abandoned reflect inadequate maintenance or bad handling of a plantation. They warrant corrective measures that MCIA recommends. Information gathered during site visits enable one to assess how well lands are being used and plantations taken care of.

The MCIA also manages agricultural land and, in particular, abandoned fields under appropriate projects.

Its expertise in sugarcane matters and closeness with small planters are helpful to LUD in monitoring lands leased under cane cultivation.

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<sup>7</sup> The institutions were: (i) Cane Planters and Millers Arbitration and Control Board; (ii) Farmers Service Corporation; (iii) Mauritius Sugar Authority (iv) Mauritius Sugar Industry Research Institute; (v) Mauritius Sugar Terminal Corporation; and (vi) Sugar Planters Mechanical Pool Corporation. The MCIA became the apex organisation of the sugar cane industry as the operations and activities of these institutions were vested onto it.

### **2.4.2 Sugar Insurance Fund Board**

The purpose of the SIFB is to insure the sugar production of planters, metayers and millers, against losses due to the effects of inclement weather, such as cyclones, drought and excessive rainfall. Fire occurrence in sugar cane field is another risk covered by the Fund. Insurance cover is provided to planters who intend to harvest their plantations. Such plantations need to be registered with the Fund.

The Inspectorate Division of the Fund carries out a minimum of three periodical inspections<sup>8</sup> every year to assess the condition of land under cane cultivation. Adverse items, like those described in the previous paragraph (weeds, gaps and inadequate fertilisation) are communicated to planters and are advised to apply corrective measures to eliminate them. Losses arising due to unattended adverse items are not compensable during an event year.

### **2.4.3 National Agricultural Products Regulatory Office**

NAPRO operates as a division within the Ministry, and it is mandated to control and regulate the import, export, production and sale of meat, tea, tobacco and derived products, as well as their preparation, processing, manufacturing and packing. It also regulates the activities and the premises related to slaughtering of animals, and determine the sale price for tea/tobacco leaves to manufacturers.

It licenses tea cultivators (including metayers), manufacturers, importers and exporters. It operates tea nurseries that provide cuttings (from mother plants) for vegetative propagation and for production of plantlets.

Together with FAREI, it assists the LUD to monitor land leased for tea cultivation.

## **2.5 Schemes for Modernisation and Innovation**

To support the farming community in making the most of land resources available to them and operate in a more conducive environment, incentives in the form of schemes have been provided since 2014. The latter cover the food crop and livestock sectors. The schemes offer technical and financial support for sheltered farming, purchase of equipment, seed purchase, rain water harvesting, fruit protection, bio-farming, livestock breeding and pasture development, among others.

## **2.6 Overview of Agriculture in Mauritius**

Up until the 1970s, Mauritius has had a primarily agricultural economic system, dominated by the mono-crop sugarcane. Since then, the country has experienced the growth of other sectors, alongside a diversification within the agriculture industry. Overall, the move away from agriculture has seen a gradual decline in its contribution to the national economy – the sector contributed to around 3.2 per cent to Gross Domestic Product (GDP) in 2018

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<sup>8</sup> A pre-registration inspection is carried out in February and March, that is, before registration. Post registration inspection is undertaken from June to August. Post-harvest inspection is programmed as from October of a year up to end of harvest. The post-harvest inspection confirms the harvested extent.

(early 1970's: about 30 per cent). Agriculture, however, still plays a vital and multi-functional role. It contributes to GDP, and has significant economic, social and environmental impacts.

Sugarcane is, by far, the most planted crop on the island. Indeed, with its inherent natural traits, sugarcane is ideally suited to local conditions and has remained to this day the only crop in Mauritius to be cultivated on a truly industrial scale for export markets.<sup>9</sup> In 2018, its share in agriculture stood at 14 per cent. Sugar aside, Mauritius also yields a wide range of agricultural products which includes food crops, tea, fruits, flowers, poultry, livestock and fish. Agricultural production activities are undertaken mainly by a large number of small producers and the corporate sector. Some 8,000 small planters operate in the food crop sector<sup>10</sup> and around 5,000 farmers are active in the livestock sector producing meat and milk. The corporate sector is mainly involved in the sugar sector, but it has diversified to cover food crops, venison, poultry, processed milk products and animal feed.

Local production, however, is not sufficient to meet the food requirements of the country and it has to rely heavily on imports. With an overall self-sufficiency ratio of less than 30 per cent (2018), Mauritius is a net food importer. In 2018, imports of agricultural and food products accounted for some Rs 40 billion, representing 21 per cent of total imports. Products imported included meat, milk and dairy products, cereals including wheat and rice, certain vegetables and fruits (like potatoes, onions, pulses, apples, oranges and grapes), coffee, tea and spices, and oils and beverages.

With a view to achieving food self-sufficiency, encouraging the export of high value crops, and developing the agro-processing sector, various policies have been implemented within the non-sugar sector since the mid 1970's. Except in the production of fresh vegetables, of poultry meat and eggs where Mauritius achieved self-sufficiency<sup>11</sup>, the various incentive measures put in place did not produce the expected results. A certain degree of satisfaction has also been registered in agricultural exports of flowers and tropical fruits, like pineapples and litchis. As regards agro-processing, a few firms have also succeeded to establish themselves by transforming imported raw materials into finished products with the main objective to supply the local market.

The above may be attributed to the fact that Mauritius suffers from a number of constraints. These include a limited size, unfavourable climatic conditions (droughts, heavy rains and cyclones), disinterest in agricultural activities, ageing and insufficient labour for the sector, and pressure on agricultural lands.

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<sup>9</sup> From 2015 through 2018, sugarcane occupied some 86 per cent of all agricultural lands under crops harvested (see paragraph 2.7).

<sup>10</sup> A whole spectrum of vegetables is grown. Spices and fruits produced include chillies, ginger, garlic, bananas, pineapples and litchis.

<sup>11</sup> Potatoes and onions need to be mentioned as exceptions. The country is not self-sufficient in these commodities. In 2018, self-sufficiency level for potatoes and onions stood at 61 and 21 per cent respectively. Therefore, imports are still required to meet local consumption. In times of drought and following cyclones and/or heavy rainfall, imports of other vegetables become a necessity.

## 2.7 Agricultural Land

According to the Agricultural Census<sup>12</sup> carried out by Statistics Mauritius in 2014, the extent of agricultural land, then, was estimated at some 83,000 ha which represented some 45 per cent of the island's surface. The exercise also revealed that more than 75 per cent of available agricultural lands were utilised for the cultivation of permanent and temporary crops. In recent years, lands under agricultural crops harvested have continued to decrease at the rate of 1,700 ha every year to reach some 56,000 ha in 2018<sup>13</sup> as shown in Table 1.

*Table 1 Area under Crops Harvested (ha) 2015 – 2018*

<b>Crop</b>	<b>2015</b>	<b>%</b>	<b>2016</b>	<b>%</b>	<b>2017</b>	<b>%</b>	<b>2018</b>	<b>%</b>
Sugarcane	52,387	86	51,476	86	49,974	86	47,678	85
Tea	574	1	622	1	622	1	656	1
Food crops	8,077	13	7,766	13	7,780	13	7,646	14
<b>Total</b>	<b>61,038</b>		<b>59,864</b>		<b>58,376</b>		<b>55,980</b>	

*Source: Statistics Mauritius*

A gradual decrease in agricultural lands is not a good sign for agriculture.

<sup>12</sup> The Food and Agriculture Organisation recommends that every country should conduct an Agricultural Census every 10 years. The latest census carried out in Mauritius was in 2014 and its results were published in December 2017.

<sup>13</sup> Digest of Agriculture 2018 (Statistics Mauritius). Statistics Mauritius does not compile land acreage employed by the livestock sector.





# CHAPTER THREE

## FINDINGS

*This Chapter presents the audit findings on whether the Ministry's Agricultural State Lands were efficiently and effectively managed and employed for agricultural development.*

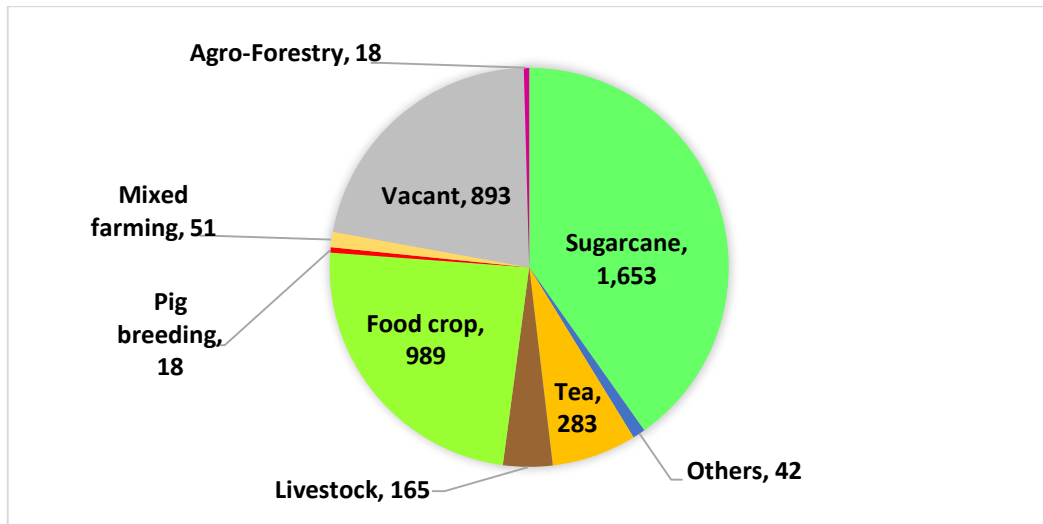
### 3.0 General

This Chapter describes the findings arising from the examination of the activities undertaken by the Ministry in the management of ASLs for agricultural development. The areas examined were monitoring of lease lands, land surveying and land usage in selected agricultural sectors.

### 3.1 Agricultural Lands Controlled by the Ministry

As of mid-November 2019, the Ministry had some 4,134 ha of SLs which were managed by its LUD.<sup>14</sup> The lands were subdivided into 4,963 plots of which 3,764 portions covering 3,218 ha were leased to individuals, companies and cooperative societies for different agricultural purposes. The remaining 1,199 plots (893 ha) were vacant. There was a difference of 23 ha which were neither leased nor vacant. Figure 3 shows the distribution of LUD's leased and vacant lands only (4,111 ha).

*Figure 3 ASLs Leased and Vacant (ha)*



*Source: LUD and NAO analysis*

Note: 'Food crop' includes organic food crops and fruits; 'Livestock' includes poultry and fodder cultivation; and 'Others' comprise agri-business, nursery and ornamentals and hydroponics

<sup>14</sup> Data from the Land Lease Management System (LLMS) operated by the Division was made available on 18 November 2019. Figures stated here reflect the results of our audit analysis of the data at that point in time. As survey exercise on LUD's ASLs is ongoing and correct acreage determined for the plots, and new MSPA lands are added to the database, the total extent of land will change. Since mid-November 2019, new figures posted in the LLMS have changed the total acreage to 4,217 ha by end February 2020 (see paragraph 2.3 in the previous Chapter). Unless stated, figures given in this Chapter are based on the analysis of the 18 November 2019 data.

The Ministry explained that the difference of 23 ha concerned a case at Mon Bois where some 34 ha had been leased and only 14 ha reported in the Land Lease Management System. It was also pointed out that the System was still being updated and necessary corrections were being made whenever the need arises with the collaboration of the CISD.

## **3.2 Monitoring of Agricultural State Lands**

In general, a leased plot of land is considered to be well utilised and developed when it is fully applied to the purpose for which it is granted, and it brings forth the expected output. For example, a cropland should be covered with crops at recommended intervals, and should generate a reasonable amount of agricultural produce on harvesting. Similarly, land given for livestock rearing should hold a farm with a fitting number of animal heads thereon.

In 2019 (up to mid November 2019), LUD Officers inspected 1,882 plots given on lease to planters and/or farmers to find out how they were being used and to assess their state. These plots covered an extent of 3,375 ha. An analysis of the land lease database maintained by the Division revealed that some 25 per cent of the plots visited were abandoned, neglected, not fully utilised or maintained, and not used as per the terms of the lease.<sup>15</sup> These findings were based on visual observations made. Measurements were neither taken nor were estimates made by the staff of the Division. This also applied to the other 75 per cent of the plots inspected that were described as ‘occupied’, ‘cleared’ and ‘bulldozed’. The entries made in the land database, following LUD’s monitoring and assessment did not indicate how well the land resources were applied to the purposes for which they were granted, and if the produce from these resources was satisfactory.

The 25 per cent of lands broadly termed as abandoned are a matter of concern that needs to be redressed. The term ‘utilised’ and/or ‘occupied’ for the remaining 75 per cent did not also convey that the ASLs were optimally used. The LUD has never carried out a systematic and scientific monitoring and assessment of its land resources.

The overall policy and strategy of the Ministry is to increase production of food crops and meat to satisfy local demand, and to enhance import substitution so as to reduce dependency on imports. Hence, it is essential to carry out a thorough assessment of the use of the Ministry’s agricultural land resources offered to these ends. Measuring performance is a ‘sine qua non’ step in correcting shortcomings, and furthering development in any field. This can be a time and resource consuming activity for LUD, but with the assistance of the various stakeholders mentioned in the previous Chapter, a systematic and scientific ‘modus operandi’ can be worked out, and put into effect for a more efficient and effective leased land management system.

### **3.2.1 Absence of Performance Level in Lease Agreement**

In the present lease agreement used by LUD, what are required of a lessee on several issues are stated (Chapter 2, paragraph 2.3.2(ii) refers). However, an essential requirement relating to a minimum performance level to be achieved by the lessee or at which it should

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<sup>15</sup> Entries made in the computerised system to indicate this were: ‘Abandoned’, ‘Neglected’, ‘Partly Occupied’, ‘Partly Occupied/Partly Abandoned’, ‘Partly Cleared’, ‘Partly Cleared/Partly Abandoned’, and ‘Non-Compliance’, among others.

operate is not spelled out in the agreement. For years, lease agreements drawn have missed this important condition.

It has been mentioned earlier that LUD often contacts FAREI for information to assess the occupation of leased lands. There were instances when the latter was requested to communicate the stocking density for certain animal species reared on farmlands visited by LUD. The details were used to compute the acreage needed for the number of animal heads observed on the farms. The LUD recommended excision of any excess of land given if no improvement was noted over consecutive visits to the lessees' premises.

FAREI has already worked out the stocking density for the livestock sector. It shows how many animal heads can be reared on any hectare of agricultural land or in a given space area. Including this stocking density in the lease agreement will indicate and, more importantly, require what the lessee, as a livestock breeder, needs to achieve over the land granted during the lease period. The same information can then be used as a yardstick to measure the lessee's usage of the land and performance. Though the information was available at FAREI, it was not used by the Ministry when drawing the lease agreement.

Table 2 shows the stocking density recommended by FAREI for selected ruminants and non-ruminants that can be used as conditions in land lease agreement for the livestock sector.

*Table 2: Examples of Stocking Density recommended by FAREI*

<b>Ruminant</b>			
<i>Specie</i>	<i>Confined System</i>		<i>Grazing system</i>
	<i>Area for housing only (m<sup>2</sup>/head)</i>	<i>Housing and fodder production (head/ha)</i>	<i>(head/ha)</i>
Dairy Cattle	10	10	2 – 3
Beef Cattle	6	12	3 – 4
Goat and Sheep	3	25	10
<b>Non-ruminant</b>			
<i>Specie</i>	<i>Category</i>	<i>Space requirement</i>	<i>Area for a typical herd/ flock structure</i>
Pig	Sow	3 m <sup>2</sup> per sow	1 boar, 5 sows and 40 fatteners: 60 m <sup>2</sup>
	Boar	4 m <sup>2</sup> per boar	
	Fattener	1 m <sup>2</sup> per fattener	
Broiler	Growing bird	1 m <sup>2</sup> for 11 birds	500 broilers: 50 m <sup>2</sup>
Layer	Laying birds (in cage)	1 m <sup>2</sup> for 25 birds	500 layers on battery system (on a two tier stepped system): 20 m <sup>2</sup>
	Growing birds (pullets and layers) on floor	1 m <sup>2</sup> for 4 – 5 birds	500 layers: 125 m <sup>2</sup>

*Source: FAREI*

As regards food crops, according to FAREI, lands are considered to be optimally used when the whole area is covered with greens, and two to three crop cycles<sup>16</sup> are followed every year. Of course, the number of cycles varies between crops for a one year period. However, with the inclusion of the recommended brief period(s) when the land has to be rested (fallowing) before replanting, two to three crop cycles can be achieved for large variety of vegetables. It should be pointed out that once the agricultural activity on the land commences (within the prescribed time period mentioned in the lease agreement), the performance levels will be attained over time. For crop plantations, this could be in the ensuing year, and for animal rearing, this would be at later stage. In either cases, close monitoring will have to be exercised to ensure that the lands are developed, and their produce are upcoming, as early as possible. Allowances will also have to be made for factors that affect the activity, like diseases, epidemics and other ‘force majeure’ – cyclones, droughts and heavy rainfalls. The relevant Division of the Agricultural Services will have to be contacted to confirm diseases and epidemics affecting the output of the agricultural activity, for example, the Division of Veterinary Services for animal sickness.

Lands are also leased for other purposes, like sugarcane and tea cultivation, fruit production, bio-farming, nursery, flowers and ornamentals, and poultry. With the help of the stakeholders who are knowledgeable in their respective fields, the adequate density or number of cycles can be worked out for an optimum use of the lands leased for these different purposes. The expected produce from these land resources can also be estimated.

### ***3.2.2 Insufficient Sharing of Information from Stakeholders***

In the previous Chapter, the main activities of stakeholders, like FAREI, MCIA, SIFB and NAPRO were described. In short, they visit farmers on their lands or carry out inspections to assess their activities and provide advice to them where necessary. Important information is collected during these visits. It can be helpful to LUD in the monitoring of its lessees’ activities, and use of the agricultural lands granted. Unfortunately, it was not shared with, or requested by LUD. To illustrate how the monitoring exercise of LUD can be eased, the information collected by MCIA and SIFB will be used here.

Both the MCIA and SIFB are service providers to the sugarcane industry. The MCIA visits planters and their fields to assess how the different stages of the cane crop cycle – crop selection, land preparation, planting of cane cuttings, irrigation, crop growth, fertilisation and harvesting – are undertaken. Any irregularity detected during these stages, and also the presence of competitive weeds, gaps between stools, and land neglect and/or abandonment are communicated to the planter. Advice is given and corrective actions are recommended.

The SIFB carries out three scheduled inspections to sugarcane plantations insured with it to identify non-secured risks – adverse items like the last three noted by MCIA mentioned above, and bad fertilisation that will affect the planter’s insurance cover in case they are not remedied.

Overall, the two entities assess whether a given plot is well planted and the cane plantation is well maintained. If this is the case, then it can safely be said that optimum use of land is being made.

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<sup>16</sup> A crop cycle comprises the different stages that a planter follows from crop selection to harvesting. They are: crop selection, land preparation, seed selection, seed sowing, irrigation, crop growth, fertilisation, and harvesting.

Hence, information collected by MCIA and SIFB is useful to LUD in monitoring its lands under sugarcane cultivation which accounts for some 40 per cent of its land resources. These entities effect their visits at different times of the year. Therefore, access to the information collected will allow the LUD to follow the usage and development of the land over time. Obtaining information from these stakeholders should not, however, exempt LUD from effecting its own regular visits to the plots. In fact, findings of LUD could also be shared with MCIA and SIFB.

Cane harvest data that both the MCIA and SIFB analyse can hint to cases of leased land sub-letting, which may warrant further investigation. Sub-letting is illegal according to the lease agreement. Therefore, in addition to field data collected, any abnormalities discovered on analysis of harvest data could also be communicated to LUD for further enquiry.

FAREI is active in the crop (except sugarcane) and livestock sectors. Information on status of land cultivation and land usage by lessees, and on production data collected from fields will, similarly, be of help to LUD in monitoring lands leased in these sectors. At this stage, it is important to state that the stakeholders are not being asked to carry a land use monitoring on behalf of LUD. What is required is that all information collected and data analysis, mentioned above, by the stakeholders in their normal course of operations could be shared with LUD as they are valuable for leased lands monitoring.

### ***3.2.3 Inefficiencies in the Survey of State Lands for Leasing***

With the coming into effect of new Regulations under the Cadastral Survey Act as from 1 July 2013, the need to assign a PIN to any plot of land granted on lease became mandatory. The same legislation provides that the Registrar-General shall not register a land lease deed without the PIN for the land parcel. The PIN is issued by the Ministry of Housing and Land Use Planning (MHL)<sup>17</sup>. For each plot, a survey exercise has to be undertaken, survey report prepared and plan drawn. On receipt of an application for a PIN, MHL's Chief Surveyor checks the documents produced to ascertain whether the whole exercise has been carried out in the prescribed form and manner. Only in the affirmative, is the PIN issued.

Therefore, as from July 2013, PINs were needed for the drawing of new and renewed leases for LUD's lands. At LUD, only master plans (showing a number of plots) for the different regions where its lands are located were available. A survey report and a plan for each plot had to be prepared, and boundary stones fixed to define its limits. As of July 2013, survey exercises had to be undertaken on parcels of land covering some 3,941 ha. With the addition of new MSPA lands to LUD's land bank, the volume of surveying jobs, also, grew over the years. As of mid-November 2019, the land database showed 4,963 plots spreading over 4,134 ha under the control of the Division. As at the same date, only 725 plots (668 ha) had been surveyed and assigned PINs. This represented about 16 per cent only of all land areas that needed to be surveyed.

#### *Unsatisfactory Surveying Works*

Of the 725 plots mentioned above, most of them were surveyed by a private contractor from 2016 to November 2019 as the Survey Office attached to LUD was unable to effect land surveying works of the scale mentioned in the foregoing paragraph. The main reason for

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<sup>17</sup> Formerly, Ministry of Housing and Lands (MHL). We will use the old acronym, MHL, in this report.

this condition was inadequate labour force. In 2019, the Survey Office was staffed with one Land Surveyor, three officers of the Technical Design Officers Grade and a dozen of the Survey Field Workers Grade. Vacancies have been high at the Office. One post of Survey Technician has not been filled since January 2014. Within the Technical Design Officer Grade, some 72 per cent of the posts were vacant between 2014 and 2016.

In addition to surveying SLs for leasing, the Office was also called to survey the Agricultural Services' administrative sites, its stations, and, at times FAREI's lands. The Surveyor was also solicited by the Land Conversion Unit of the Ministry, on a weekly basis, to compute land conversion taxes.<sup>18</sup> During the past three years, the Office surveyed 118 plots, drew 101 plans, fixed boundary stones at 113 plots, and carried out survey works for several departments<sup>19</sup>. 148 ha of land were covered during these three years. In 2019, only 35 plots of lands leased or to be offered on lease were surveyed. These outputs were low. According to the Surveyor, with the available labour force and time, only five plots of SLs in different locations can be surveyed every week. At this rate, some 215 plots<sup>20</sup> should have been covered annually or at least 600 plots surveyed over the past three years.

### *Securing Land Surveying Services*

Aware of the limitations of the Survey Office and an urgency to survey plots to facilitate their handing over to lessees who had already signed agreements since 2013-14, the Ministry approached the MHL to discuss the possibility of having its services to survey LUD's lands. However, such discussions were not fruitful. In 2016, the contract to survey some 2,533 ha of lands (out of a total of 4,076 ha, not yet surveyed then), including subdivisions of lots, fixing of boundary limits and assignment of PINs was awarded to a private contractor. The contract price and period were set to Rs 15.2 million and two years (ending 23 May 2018) respectively.

The management of the contract, including the monitoring of its execution by the Ministry was not effective. These are discussed below.

### *Underperformance by Contractor*

Overall, during the two year contract period, only around 21 per cent of the work was executed. It was agreed with the service provider that the assignment would be undertaken phase-wise. A priority list was drawn for plots which had been allocated to 200 beneficiaries who had signed leases without the PINs. These should have been surveyed by June 2016. LUD received the deliverables with varying degrees of completion with some 15 months delay in September 2017. By that date, about 527 ha only had been surveyed which represented 21 per cent of the assignment. Over the following 16 months, there was no progress on the contractual surveying works. Works resumed in February 2019, and a year later, the contract was not yet completed. In early January 2020, LUD estimated that

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<sup>18</sup> Land conversion taxes are levied by the Ministry on privately owned agricultural lands that are converted to other purposes.

<sup>19</sup> These included: the horticulture and seed production centres of the Horticulture Division (Agricultural Services), FAREI's Head Office and Farmer Training School, site previously occupied by Vallée d'Osterlog and Farmers Service Centre, and site of ex-Tea Development Authority's building.

<sup>20</sup> We have assumed that, every year, the officers worked for 43 weeks only in any year. The remaining nine weeks were for Vacation Leave (4 weeks), Casual Leave (2 weeks), Sick Leave (1 week), and Public Holidays (2 weeks).

an additional 20 per cent of the assignment was completed (504 ha) since resumption. Thus, more than 3½ years after the contract start date, some 40 per cent only of the works were completed.

For the second batch of completed jobs, outputs were again delivered with varying degrees of completion at different times as follows:

- For some regions, only site plans for the whole regions were received. No survey plans for the individual plots were submitted.
- For other regions, only survey plans were delivered.
- For others, survey plans and reports were submitted, but without the PINs.

For many, boundary stones had yet to be fixed. As at end of February 2020, the number of plots surveyed with boundary walls fixed totalled 885 only. The manner the deliverables were received at LUD rendered follow up quite challenging.

For the remaining 60 per cent, works were only partially completed as at end of 2019. A survey for a plot is considered as complete when its plan and survey report are drawn in accordance with the provisions of the Cadastral Survey Act, its PIN received and boundary stones fixed. As per the contract, soft copies of all documents produced in AutoCAD format needed to be submitted. As of December 2019, the contractor had not yet submitted these documents for the plots surveyed since May 2016. The contract is still ongoing, and no end date has yet been fixed.

The Ministry's calls for progress, repeated drawing of attention to systematic delays in discharging the tasks, convocation to attend meeting and request to submit work plan indicating how the remaining works would be carried out by the contract end date were all in vain. Similar requests continued in March 2018, but were again to no avail.

Thus, the contractor's performance on the assignment was unsystematic and unsatisfactory.

#### *Contract Management and Monitoring of Surveying Works by Ministry*

In early April 2018, the Ministry issued a final notice to the contractor. On 9 April 2018, the latter informed through a letter 'that due to unforeseen circumstances of rainy days during the last two years and uncomfortable condition prevailing on the site areas, it will not be possible to complete the works as scheduled'. It also stated that it 'strongly believe that some seven months of extension will be needed to complete parcelling and final individual plans'. However, the proper procedures for requesting extension of time was not followed by the Contractor. Good practices in contract management require that properly presented time extensions must contain specific supporting information like:

- Notice of specific issue causing the delay(s);
- List of activities that are affected by the delay;
- The exact amount of time being requested, specifying working days or calendar days; and
- Recommendations given to the contract administrator.

In the present case, no request for time extension was received. The letter of 9 April 2018 only informed the Ministry about the conditions preventing completion of the assignment on time, and the period needed to complete the work. None of the supporting information mentioned above were provided. The contractor did not state the exact numbers of days on which rain fell, but instead used expressions such as ‘at least 80 rainy days or about 60 rainy days’, during periods for which he kept records. These records were never submitted to support its claim. Records from the Meteorological Services were produced with another two months’ delay in mid-June 2018, after the Ministry had asked the contractor for their submission. The Ministry did not respond to the letter from the Contractor. As such, survey works did not progress from April to November 2018.

In mid-December 2018, the Ministry granted an extension of four months for completion of the works by 30 April 2019. This was, however, refused by the contractor, in early February 2019. He again claimed that a seven-month period (ending August 2019) was necessary to complete the assignment. As of end July 2019, the Ministry did not take any decision.

At a meeting in early September 2019, the contractor informed that it will take more time to complete the works. Again, no end date was fixed for the contract. As of February 2020, the contract was not yet completed, was ongoing and no liquidated damages have been charged. Meanwhile the performance security bond representing 10 per cent of the contract sum submitted by the contractor in May 2016, expired in June 2018. As the contract is still ongoing, the Ministry did not request the Contractor for a new performance security bond.

The inordinate delays have some serious impacts on LUD’s works. Indeed, the necessary documents, PINs and boundary stones for a number of plots are still awaited so that lease agreements can be entered and plots handed over to lessees. As of end of January 2020, 12 new beneficiaries could not sign their leases, and plots could not be allocated to 254 lessees who have signed agreements over the years 2013 to 2019. Renewals for leases which expired in 2019 could not be done for at least 105 lessees. In 2020, another 133 leases will expire, and it is not known when the assignment will be completed.

The Ministry explained that allocation of land had been put on hold due to survey exercise by the private Land Surveyor having not yet been completed. The Ministry is in the process of resolving this issue and allocation of land with Parcel Identification Number has already started.

### **3.3 Agricultural State Lands for Bio-Farming**

‘Organic agriculture is a holistic production management system which promotes and enhances agro-ecosystem health, including biodiversity, biological cycles, and soil biological activity. It emphasises the use of management practices in preference to the use of off-farm inputs, taking into account that regional conditions require locally adapted systems. This is accomplished by using, where possible, agronomic, biological, and mechanical methods, as opposed to using synthetic materials, to fulfil any specific function within the system’. (FAO/WHO Codex Alimentarius Commission, 1999).



Government decided to encourage farmers to minimise the use of synthetic agrochemicals and shift towards bio food production due to increasing public concern for food safety and the increasing rate of cancer cases registered in 2015.

Organic agriculture is beneficial to nature protection and biodiversity conservation. It contributes to the prevention of land degradation. The shift towards bio-farming would ensure the production of safe and quality food, with standards and norms defined. The organic label denotes compliance with very specific production and preparation methods. For farmers to use the organic label, they must receive certification that the product complies with applicable standards of their operations following third-party inspections.

The Ministry proposed several measures to achieve Government's vision for bio food in its Strategic Plan 2016-2020. Policies were geared to promote the shift from conventional farming to environmentally sustainable and safer mode of food production by facilitating access to State Land. Government planned to place 100 ha of land at the disposal of planters to establish model bio-farms. A Bio Farming Promotion Scheme was introduced in 2016 to encourage a gradual shift towards bio/organic production through sustainable production practices, and hence, minimising the use of synthetic fertilisers and pesticides.

### ***3.3.1 Legislations on Bio Farming***

Government considered it an absolute necessity to put in place a legal framework to cater for national and local issues in relation to bio farming. There were currently no specific laws on bio farming. A new legislation for organic agriculture /bio-farming covering all aspects of organic farming was necessary, so as to regulate this sector, and recommendations be made for an effective organic certification set up. In this way, an appropriate institutional framework and inspection systems will be built. Government will be able to optimise the use of agricultural land to achieve sustainable levels of food self-sufficiency, while taking into account related environmental and social considerations. The legislations will define the rules of organic production taking account of sanitary status, regional differences in climate and local conditions, stages in development and specific husbandry practices. In addition, land suitability and suitable areas for organic production will be identified ensuring that the key prerequisites are met. For example, the organic production zones should be away from the non-organic agricultural and residential zones.

The organic legislations will further regulate the market of organic certification, ensuring that certification bodies are suitable to certify organic production, and follow the national or the international standards referred to in the legislations. As of December 2019, there was still no legislation on organic farming. The absence of legislations did not allow the Ministry to set the criteria to assess ASL's suitability which was a prerequisite for organic farming.

The Ministry informed NAO that it proposes to start consultations and work for new legislation required.

### ***3.3.2 Agriculture State Lands Identified for Bio Farming***

For organic or bio-farming, it was essential to identify clusters which can be sited in suitable locations away from pesticides zones, the soil well drain, fertile, with high organic matter content and irrigation facilities available. The Ministry identified a dedicated bio-farming

zone established on an acreage of approximately 25 ha acquired under the 2,000 Arpents Government/ MSPA Agreement, at Britannia. However, it did not carry out any assessment on the land to ascertain whether it was suitable for bio farming. The land acquired was not yet surveyed at the time of allocation, and PINs were not yet allocated.

In May 2018, promoters at Britannia complained about several problems and constraints which prevented them from starting plantation. Land demarcation was done after one year from the signature of their lease agreement. Water for irrigation purposes was not available. Water accumulated on one of the promoter's plot during rainy periods. The site allocated was near that of a Company which produced lot of rock dusts which when washed with water flowed to their sites, thereby affecting their soil structure.

A sum of Rs 20 million was provided in the Budget 2016-17 for the setting up of an exclusive Bio-Farming/Organic zone with comprehensive modern infrastructural facilities at Britannia. However, the Ministry did not put in place facilities, such as water supply, buffer zone, fencing and better access to site.

As of December 2019, no other regions were identified for organic farming as initially planned by the Ministry to place 100 ha at the disposal of planters.

The Ministry informed NAO that suitable regions for organic farming have been earmarked at Plaine Magnien and La Flora. Issues related to water resources are also being addressed presently.

### **3.3.3 Land Used and Abandoned**

Article 9 (a) of the Lease Agreement stipulates that the lessee shall keep the land leased in a neat and tidy condition. Out of 25 ha of ASL earmarked for bio farming, 22 ha were allocated to 10 promoters in 2017 and one promoter in 2019. However, as at end of December 2019, only 8.65 ha of the 22 ha were occupied. In March 2018, plantations had started on the sites, except for three promoters whose lands were fallowed, but their loans were not yet approved. Following several site visits effected by the Ministry, in April 2018, they were served with warning letters for abandonment of their respective plots of State Land in accordance with the Lease Agreement and were given one month's time to take corrective measures.

As of December 2019, as no corrective measures were taken, 13.35 ha of the lands allocated at Britannia for Bio Farming were abandoned. According to LUD, the main reason for land abandonment at Britannia was non-availability of water.

## **3.4 Revitalisation of the Tea Sector**

In August 2015, the Ministry decided to revitalise the tea sector with a view to encouraging tea planters and manufacturers not to abandon their tea plantations. In the same year, a Foreign Investor also showed interest to invest in the production of 'bio' tea. At that time, according to Statistics Mauritius, tea consumption per capita decreased from 1.25 kg in 2012 to 1.1 kg in 2015, while domestic utilisation of tea also decreased from 1,586 to 1,398 tonnes. An estimated cost and revenue per arpent per year was worked out to determine whether the tea sector was viable for full timers. The Ministry established that since tea

field would yield a revenue of some Rs 60,000 for full timers, on a larger scale, the tea sector was viable.

However, a comprehensive socio-economic and environmental study on the long term prospects of the sector was not carried out by the Ministry to determine whether the tea sector was viable before considering the need to revive it. It was only after the decision to revitalise the tea sector was taken that the Ministry decided to carry out a preliminary study to identify the different types of tea market in Mauritius, and other studies to look into the demand for the forthcoming 10 years. Revitalisation of the sector increased the pressure for the demand for ASLs. As of December 2019, the tea sector was still struggling to be revived. The impact on ASLs is described below.

### 3.4.1 Allocation of Agricultural State Lands for Tea Cultivation

In 2016, the Ministry took several measures identified in its Strategic Plan (2016 – 2020) with the objective to ensure that the tea sector remained competitive and sustainable. One of the measures to boost up the tea sector was to increase the existing area under tea cultivation to enable planters to become full timers and generate sufficient income. The measures proposed were to release approximately 260 ha of abandoned ASLs for tea plantation, training of planters for setting up tea nurseries to raise plantlets for in-filling of fields and support to rehabilitate abandoned tea plantations, amongst others.

In August 2016, according to the LUD, of the 407 ha of uncommitted and vacant ASLs, 253 ha had been earmarked for tea cultivation within the ex-tea belt for prospective tea planters, both local and international.

From 2016 to August 2019, out of the 253 ha, the Ministry allocated some 94 ha to 18 new lessees, representing only 37 per cent of the ASLs targeted. The details of the land allocated are shown in Table 3.

*Table 3 Details of Land Allocated*

<b>Planters</b>	<b>Area of Land Allocated (ha)</b>	<b>Period</b>
Foreign Company A	47 ha	4 ha in 2015, 43 ha in 2017
Foreign Company B	31 ha	June 2019
Individuals	16 ha	2018 to 2019
<b>Total</b>	<b>94 ha</b>	

*Source: Ministry's Records*

As at December 2019, of the 94 ha of lands allocated, only six ha (some seven per cent) occupied by eight lessees were under tea cultivation. 2.5 ha of land for three lessees at La Grande Chartreuse had not yet been planted with tea seedlings though lease agreements had been drawn since February 2019.

The Ministry did not meet its objective in increasing the area under tea cultivation from 2015 to end of 2019. It has not been able to boost up tea production, thereby increase planters' revenue, and meet the increasing demand in tea products, in spite of several incentives being offered to the tea cultivators.

### **3.4.2 Land Abandonment**

Article 12 of the lease agreement stipulates that the lease is cancelled ‘de plein droit’ and without payment of any compensation if the lessee fails to start tea cultivation within six months from the date of signature of the lease.

A Foreign Company, registered in Mauritius in 2013 and led by a foreign investor re-opened the ex-Dubreuil Tea Factory in September 2017. Tea leaves were bought from tea growers for tea production. It was allocated 4 ha in 2015 and 43 ha in 2017. The Company was viewed as a support in reviving the tea sector. In 2017, only the 4 ha of the lands allocated in 2015 were cleared. In December 2018, a warning letter for abandoned plot was sent to the Company for breach of the lease agreement, and the latter was given two months to take remedial actions.

The Company’s request to bring its tea seedlings from abroad was not approved by the Ministry as the importation of tea seedlings was restrained by National Plant Protection Office. In April 2019, the Company found that the price for planting materials was too high as it would require an additional investment for the tea seedlings. It thus requested the Ministry for the supply of tea seedlings free of charge to which the latter did not agree on ground of fairness towards other millers, but proposed other options which would reduce the cost of the planting materials.

Since the Ministry allocated to the Company the 47 ha of ASLs, they had never been put to use for tea cultivation. In July 2019, the Ministry decided to finalise the process for retrieval of all State Lands which the Company had not developed unless concrete actions were undertaken. The latter responded by cleaning some 0.84 ha of lands. As of December 2019, the Company had relinquished its rights over the 43 ha of leased lands and requested the Ministry to terminate its lease agreement due to high cost of tea seedlings and labour maintenance. Since their allocations in 2015 and 2017, the 47 ha allocated to the Foreign Company had never been utilised for tea plantation.

From 2015 to 2019, these 47 ha could have been allocated to other tea planters.

### **3.4.3 Small Planters**

As per the Lease Agreement, the lessee shall keep the land leased in a neat and tidy condition. 21 ha of State Land at La Grande Chartreuse earmarked in 2017 was allocated to 20 small tea growers, each receiving approximately about one ha for tea cultivation. 13 had their fields planted as at December 2018. In November 2019, six other plots amounting to a total of six ha, which have been bulldozed, were left in an abandoned state.

Following site visits in January and February 2019, LUD reported that several tea plantations were infested with weeds. As of December 2019, an area of two ha with tea cultivation was weedy. Five ha of tea plantations were in an abandoned state. In order to achieve higher productivity, tea plantations should be kept free from weeds and properly maintained.

Tea growers could not maintain the tea cultivation which entailed high maintenance cost. After several warnings from the LUD and no action taken by the lessees, the former recommended for the retrieval of the lands and cancellation of the lease agreements.

The LUD has been effective in retrieving the six plots which were not cultivated and re-allocated only four of the abandoned plots to new lessees in 2019.

The Ministry informed NAO that it will also maintain the newly cultivated fields for three to four years.

#### **3.4.4 Selection Criteria of New Lessees**

New lessees were allocated State Lands only after an assessment was done based on their knowledge and experience in tea cultivation, place of residence, capacity to source and supply planting materials and financial resources to fund tea planting operations. The selection criteria required the applicants to have the necessary financial resources for developing their business. According to the Ministry, one of the reasons which led to land abandonment in tea cultivation was that planters had insufficient financial means to sustain the maintenance costs of their tea plantations before these reached maturity, and hence harvested. The cost of setting up new plantations and maintaining them was relatively high, and required considerable workforce. Unlike other crops, fresh tea plantations take approximately four to five years before harvesting the green tea leaves on a profitable level.

A scrutiny of a sample of applicants' request for State Lands for tea cultivation showed that in several cases, the source from where the applicant would obtain his financial resources was not mentioned in the business proposal.

The financial capacity of the applicants was not thoroughly assessed by Ministry before allocating the lands. Since, the cost of setting up new plantations and maintaining them was relatively high and required considerable workforce for weeding, as pesticides could not be used, it was important for the Ministry to assess the financial capacity of the applicant.

### **3.5 Changes in the Sugarcane Sector and their Impact on Lands**

As of mid-November 2019, the LUD had some 1,700 plots of land covering about 1,459 ha that were under active leases granted for sugarcane cultivation. Plot sizes ranged from 380 m<sup>2</sup> to 2.3 ha, and the beneficiaries were essentially small planters. Site visits undertaken to some 1,200 plots by the staff of the Division (1,076 ha) in 2019 revealed that about 17 per cent of the lands (228 plots - 188 ha) were in an abandoned or neglected state.

Over the past years, the sugar industry has undergone a reversal of its previous favourable performance and continues to experience a declining trend. Falling revenues and increasing costs have forced several small and medium planters abandoning or neglecting sugarcane cultivation on their privately owned or leased lands. The main causes for this situation are the major changes brought to our principal markets, and not doing enough to mitigate their effects, especially on the small and medium scale planters. These are briefly described below:-

### ***3.5.1 Reform to European Union Sugar Regime.***

For decades, the European Union (EU) has been our main buyer for sugar. Revenue derived from the exports of sugar at preferential prices under the Sugar Protocol<sup>21</sup> was stable and predictable. However, reform to the EU Sugar Regime as from 2006 led to the abolition of the Protocol and to dwindling sugar prices. These have adversely affected the sugarcane sector in Mauritius.

### ***3.5.2 End of Preference, Abolition of European Union Quotas and Impacts***

The 2006 Reform led to the demise of the African, Caribbean and Pacific Sugar Protocol and a cumulative reduction of 36 per cent in sugar price in 2009. Since then, and with the lifting of production quotas as from 30 September 2017, sugar prices in a deregulated EU market fell and have tended to align closer to the lower world prices. For Mauritius, the Reform represented a substantial loss of revenue. This coupled with the high cost of production drove, especially, small and medium planters out of the sugar business. Indeed, as from 2006, on average, some 1,600 ha have gone out of cane production annually - the regression being mostly among smaller planters than the sugar corporates.<sup>22</sup>

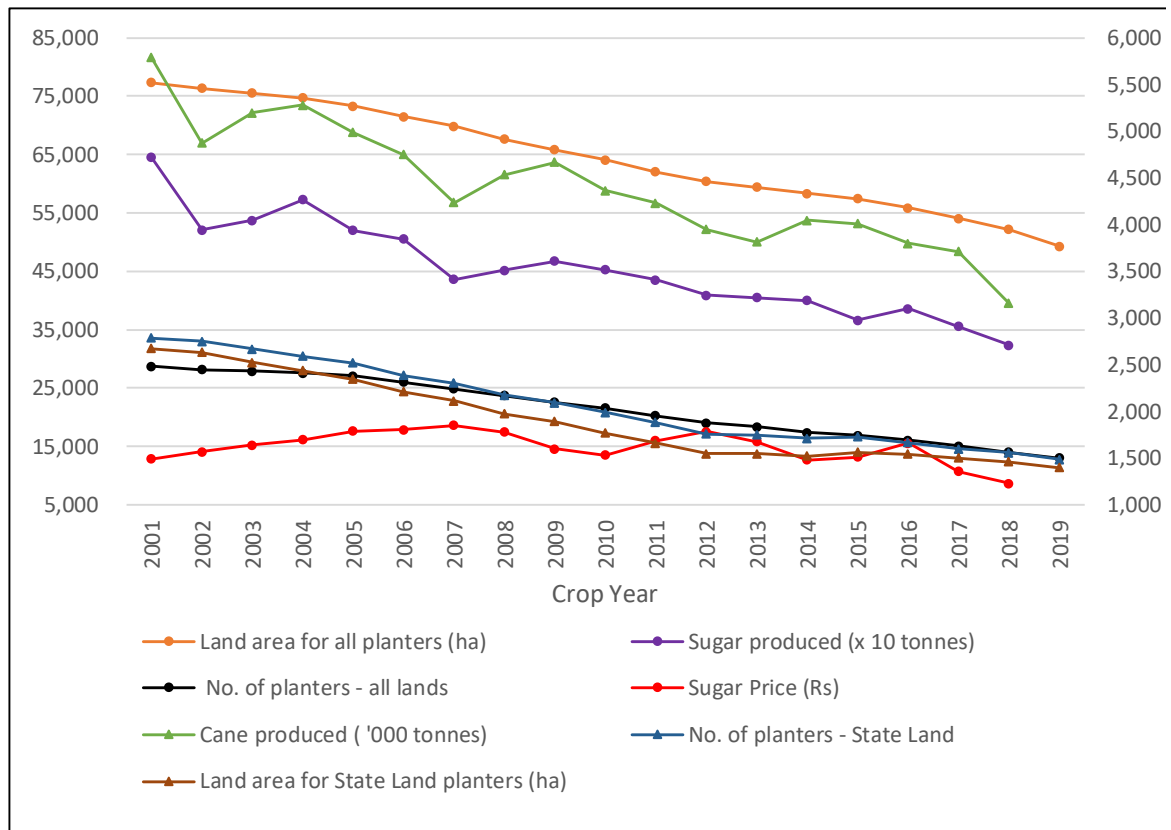
Figure 4 shows the drop in acreage under cane cultivation, reduction in number of planters, falling cane and sugar outputs, and fluctuations in sugar prices since 2001. The price has dipped considerably during the past three years. The downward trends pictured have been recorded in spite of efforts and substantial funds put in to maintain the economic viability of the industry.

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<sup>21</sup> Under the Protocol, the EU undertook to import 1.3 million tonnes of sugar from African, Caribbean, and Pacific countries (of which Mauritius is a member) based on quotas, at guaranteed prices (above world market prices) and on a duty-free access basis. Sugar has been traded under the Sugar Protocol since 1975.

<sup>22</sup> Acreage under cane cultivation and supply of cane to factories had both been decreasing continuously since the early 1990's, that is, even during the heydays of the Sugar Protocol. The main reasons for this downward trend were (a) increasing production cost; (b) absence of economies of scale; (c) ageing planter population and unwillingness of youngsters to take up cane plantation; (d) scarcity of labour; and (e) small scattered plots and unresolved succession problems. Annual decrease averaged 530 ha between 1990 and 2005. As from 2006, the rate of decline was heightened, it trebled to some 1,600 ha annually.

Figure 4 Trends in the Sugar Sector, 2001 – 2019



Note: Values on the left axis applies to lines with ●. Values on the right axis applies to lines with Δ  
 Source: MCIA and SIFB

### 3.5.3 Attempts to Redress Declining Trends

Knowing that the Reform would affect the sugar sector in countries that traditionally supplied it with raw sugar, the EU allocated significant sums of money under the Accompanying Measures to Sugar Protocol Countries to restructure their sugar industries and move up the value chain or to diversify away from sugar. Disbursements totalling some € 250 million to Mauritius followed the production of a Multi Annual Adaptation Strategy (MAAS) 2006-15<sup>23</sup>. The latter was destined to keep the local sugar industry viable, sustainable and continue fulfilling its multifunctional role. It contained measures, such as a higher level of electricity generation from bagasse, higher production of special sugars, production of ethanol for the energy and transport sectors, derocking and irrigation of cane fields, increased mechanisation of field operations and the regrouping of small planters.

Lander Mills Commodities (LMC) International in another Report<sup>24</sup>, stated that MAAS 2006-15 ‘contained a comprehensive set of recommendations, and a certain number of them

<sup>23</sup> MAAS 2006-15 was prepared by the Ministry following the submission of a report by Lander Mills Commodities (LMC) International on ‘Accelerated Reform Programme in the Sugar Action Plan 2005-2015’ at a cost of € 140,000 to Government. LMC International is an expert in research and analysis which provides strategic insights for informed decision making to organisations dealing with agricultural commodities, biofuels, foods and industrial materials, as well as their end-use markets.

<sup>24</sup> The LMC Report on ‘The Economic, Social and Environmental Impact on Mauritius of Abolition of Internal Quotas of Sugar in EU Market’ was commissioned to review all the threats to, challenges and opportunities for, the Mauritius sugar sector in the wake of the forthcoming lifting of EU production quotas

were implemented, albeit in some cases with considerable delays'. The Consultant also made an assessment of the implementation of the MAAS measures.

LMC International also made a series of recommendations, in its 2015 Report, for the industry to undergo major structural changes so as to meet the challenges looming ahead with the EU's Common Agricultural Policy Reform for the post 2013 period, and in particular, the abolition of EU's internal sugar production quotas. The LMC 2015 Report's findings and recommendations were reviewed by a High Level Implementation Committee<sup>25</sup> in 2016 with a view to advising Government how to implement the recommendations contained in the Report. While the High Level Implementation Committee had agreed with most of the findings and recommendations on the thrust areas covered by LMC and advised Government to go along the lines proposed by the Consultant, Government decided to implement some measures only.

#### ***3.5.4 Implementation of Recommendations and Impact on Land Resources***

The implementation of the measures/recommendations in the MAAS 2006-15 and LMC 2015 Reports, to varying extents and with different rates of success, have had and will have (as several measures are still being applied or have yet to be put into effect) a direct bearing on the sugar sector as a whole, and therefore, on land resources available for cane cultivation. The decline in cane area, until 2019, shown in Figure 4 may indicate that not enough has been done over the years to make and keep the industry viable, more particularly for the small and medium scale planters.

Sugarcane has an important multi-functional role. The sale of sugar provides important export earnings (though wavering and diminishing since some years now) to the economy. In addition to providing employment to many in the industry, sugarcane cultivation has other benefits, the main ones being:

- *Supply of Renewable Source of Energy.* Cane is valuable for the energy sector. On average, the burning of bagasse accounts for some 15 per cent of the country's annual electricity production. This helps to avoid importation of costly other sources of power generation, like coal and high sulphur heavy fuel oil, thereby, resulting in substantial budget savings and lower emission of air pollutants.

Ethanol can be produced from cane which is also useful for the energy sector and the running of vehicles. Unfortunately, these possibilities have not yet been exploited in Mauritius.

- *Protection and Preservation of the Environment.* By covering large extents of land on the island, cane plantations represent an important carbon sink. Many small planters grow canes on lands leased from Government and the large estates located in rocky,

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as from 2017 and to formulate a new action plan for the industry. The Report was submitted in 2015, and the study cost Government £ 143,660.

<sup>25</sup> The High Level Implementation Committee comprised representatives of several Ministries, the MCIA, the then Mauritius Research Council, the then Board of Investment, Consultants (with experience in the sugar and financial sectors) and small planters. The Committee also consulted all stakeholders of the sector, like planters (small, medium and large), institutions and organisations representing the producers, millers, and the MCIA.



hilly and low yielding regions – ‘the difficult areas’<sup>26</sup>. Cane on these lands helps to prevent soil erosion and its negative impact on the environment.

- *Greenery for the Tourism Sector*. Cane plantations provide a soothing and appealing landscape. LMC International, in its 2015 Report, recommended:

The maintenance of the sugar industry is vital now and will be so in the future from the economic, energy and environmental domains. Its multi-functional role confers upon it the role of the guardian of land, and it is thus what is termed as an essential public good that needs to be preserved’.

Hence, rapid and massive cane land abandonment needs to be averted.

### **3.5.5 New Consultancy Work**

The need to come up with a strategy which would provide clarity and help in finding solutions to ensure the long term sustainability and viability of the sector prompted Government, in April 2019, to commission another comprehensive study on the sugar sector. The objective of the consultancy work is to provide policy makers with advice on strategic options for the transition and sustainable transformation of the sugar cane industry. It should also, among others, assess the acreage for the cultivation of sugarcane to ensure adequate supply of sugar to the production cluster and formulate specific measures for small planters to continue their involvement in sugar. The study is being conducted by a Consultant from the World Bank at a cost of some US \$ 410,000 to Government.

## **3.6 Site Visits**

The photo report on the pages overleaf shows our observations made during visits at selected sites where ASLs have been leased for different agricultural purposes.

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<sup>26</sup> The extent of difficult areas vary according to the classification used. MAAS, in 2005, set the acreage to 5,000 ha based on the practicalities and associated cost of cultivation. Around the same time, the then MSIRI estimated that some 12,400 ha fell into this category based on environmental and socio-economic factors (LMC Report 2015).

### 3.6.1 Photo Report

#### Food crop



A

B

C

D

Well cultivated lands at **Plaine Sophie**



E

F

G

H

Lands at **La Chaumiere** not occupied (E and F) and **Plaine Sophie** abandoned (G and H). The absence of water supply facilities at La Chaumiere caused several lessees thereat not to occupy or abandon their plots.

#### Tea Sector



I

J

K

L

Plantations at **La Grande Chartreuse**. A few plots are well maintained (I and J) by lessees while others were left in an abandoned state (K and L). All the plots were planted by the Ministry in December 2018 before leasing and handing over to tea growers. The Ministry did not think it wise to maintain plots occupied by defaulting lessees to safeguard the investment made.

#### Bio-farming



M

N

O

P

Well planted and maintained plots under bio-farming (M and N, open field and O, sheltered) at **Britannia**. Construction of shelter for hydroponic cultivation (P).



Q

R

S

T

Not occupied or abandoned lands for bio-farming projects at **Britannia** as a result of water supply issues

**Livestock**



Lessee at **La Brasserie** allocated some 27 ha of lands for livestock (A, B and C) and poultry rearing (D), and food crop growing. Some 17 ha are used for cattle breeding and grazing pastures (B). With only 25 cattle heads, lands used for cattle rearing activities were not optimally used.



Vacant land at **La Ferme** (E). Lands at **La Canneliere** (F and G) leased for livestock projects, but not occupied. Livestock projects could not be started because of objection of water authorities as waste materials from animal rearing activities would contaminate water collected at **Midlands Dam** reservoir (appears in background in F). Lands have been leased for livestock projects at **La Canneliere** without prior consultations with water authorities indicating inadequate planning at the level of the Ministry. Lessees have been suggested to grow food crops, but only a few have agreed to the conversion. The **Canneliere** site is marked with large extent of lands which are unoccupied/abandoned, so much so that access roads to plots are even blocked (H).

**Other activities**



Agro-processing plant under construction on leased land at **Wooton**



Sugarcane cultivation at **Butte Chaumont**



Illegal construction of health track on ASL leased for food crop production at **Wooton**



## CHAPTER FOUR

### CONCLUSION

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

The Ministry has to some extent been able to efficiently and effectively manage its ASLs leased for agricultural development. The management of the ASLs was marked with shortcomings. Some plots of lands are still vacant, while for those already leased, some planters are gradually abandoning them.

Monitoring activities have not been effective. Limitations in monitoring activities, along with inadequacies in the lease agreement, and insufficient sharing of valuable information amongst stakeholders have not allowed the Ministry to fully assess the extent to which the ASLs are being used for the purpose for which they were allocated. Inefficiencies in the survey of State Lands have adversely impacted on the finalisation of new and renewed leases.

Though the Ministry has taken some initiatives to boost up the tea and the sugar sectors, the planters are facing difficulties to sustain their plantations, and they are abandoning the ASLs leased to them. The financial capacity of the applicants has not been thoroughly assessed by Ministry before allocating the lands. The Ministry is promoting bio-farming among planters, but this has not been followed by appropriate framework for the identification and selection of ASLs on which to carry out this activity.



## CHAPTER FIVE

### RECOMMENDATIONS

*This Chapter presents the recommendations based on the findings and conclusions. They are presented under each of the areas examined.*

#### **5.1 Monitoring of Agricultural State Lands**

With a view to assessing how well land resources are applied to the purposes for which they are granted and if the produce from these resources are satisfactory, the LUD needs to carry out a systematic and scientific monitoring of its land resources.

Performance levels to be achieved by lessees or at which they should operate should be explicitly spelled out in lease agreements. These minimum performance levels could be posted on the Ministry's website so that applicants for lands become aware what are expected of them as a prospective lessee for ASL.

LUD should work in close collaboration with the various stakeholders like FAREI, MCIA, SIFB and NAPRO to set the minimum performance levels in the different agricultural sectors in which lands are given on lease. A memorandum of understanding should be entered between the Ministry and the stakeholders for the sharing of information collected through field visits.

LUD needs to inform the stakeholders about the identity of its lessees and the State Land on which they are tenants.

The performance levels or targets should be used as a yardstick to measure a lessee's usage of the land and performance.

#### **5.2 Enhancing the Survey of State lands for Leasing**

Service delivery by the Survey Office attached to the LUD will have to be enhanced so that more plots of lands are surveyed. A strict and periodic monitoring (say, on a weekly basis) of the employment of resources available, and output delivery of the Office by LUD will help in achieving this.

An end date for the contract with the private contractor should be fixed and communicated to him. The performance security should be renewed. A close monitoring of the works undertaken by the service provider will have to be effected. Penalties provided in the contract should be applied where and when necessary.

#### **5.3 Addressing Issues in Bio Farming**

- A new legislation for organic agriculture/ bio-farming covering all aspects of organic farming should be developed so as to set the criteria to assess ASL's suitability which is a prerequisite for organic farming.

- The Ministry needs to identify other suitable regions for organic farming for the expansion of the sector.
- The Ministry has to set up appropriate infrastructural facilities at the dedicated bio-farming zone to prevent promoters from abandoning their lands.

#### **5.4 Addressing Issues in Tea Sector**

- The Ministry should address the reasons for land abandonment in order to attract new tea growers and prevent actual ones from abandoning their plot of lands.
- The selection criteria for allocation of ASL should be reviewed.

#### **5.5 Addressing Issues in the Sugar Sector**

Prompt adequate actions and suitable support need to be taken to ensure the viability of the sector, that sugarcane fully fulfils its multifunctional role, and lands are kept under commercial production.

The Ministry should ensure that the measures recommended by the Consultant from the World Bank are given due consideration and implemented.





**National Audit Office**

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