

# MAURITIUS CANE INDUSTRY AUTHORITY

REPORT AND ACCOUNTS  
**2019 - 2020**





Mauritius Cane Industry Authority

**REPORT AND ACCOUNTS**

**1 JULY 2019 to 30 JUNE 2020**

## MAURITIUS CANE INDUSTRY AUTHORITY

Date: 31 March 2022

### VISION

To ensure a sustainable cane industry as an important pillar within the socio-economic framework of the country

### MISSION

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

The Honourable Maneesh GOBIN  
Attorney General  
Minister of Agro-Industry and Food Security  
PORT LOUIS

Sir

I have the honour to submit the Report and Accounts of the Mauritius Cane Industry Authority for period 1 July 2019 to 30 June 2020.

Yours faithfully



Medha GUNPUTH  
**CHAIRPERSON**



## CORPORATE INFORMATION

Chairperson of Board of Directors	Mr Medha GUNPUTH
Auditors	National Audit Office Air Mauritius Centre President John Kennedy Street, Port Louis
Legal Adviser	Solicitor General Solicitor General's Office R. Seeneevassen Building Port Louis
Head Office	Moka Road Réduit 80835
Telephone	(230) 454-1061
Fax	(230) 464-5345
Email	cs@mcia.mu
Website	www.mcia.mu

## TABLE OF CONTENTS

<b>A</b>	<b>(1) CORPORATE MATTERS</b>	<b>8</b>
	Introduction	8
	Establishment of the Authority	8
	Objectives of the Authority	8
	Functions of the Authority	9
	Powers of Authority	10
	Monopoly of Authority	10
	Corporate Governance Report	12
	Structure and Composition of the MCIA Board of Directors	13
	Powers of the Board of Directors	14
	Conflicts of Interest	14
	Structure and Composition of the Advisory Council	15
	Tenure of Office	16
	Board and Sub-Committees	16
	Auditing and Accounting	20
	Integrated Sustainability Reporting	20
	Corporate Social Responsibility	22
<b>A</b>	<b>(2) HUMAN RESOURCE MANAGEMENT</b>	<b>23</b>
	Introduction	23
	Organisational Structure	23
	Senior Management Profile	26
	Internal Audit	27
	Industrial Relations	28
	Health and Safety	28
	Training and Development	28
	Overseas Missions	31
	Retirement	32
	Permanent Transfer	33
	Death in Service	33
<b>B.</b>	<b>POLICY AND PLANNING</b>	<b>34</b>
	Mandate and Functions	34
	Activities related to Amendments of the SIE Act, MCIA Act and Budgetary measures	34
	Budgetary measures and Government decisions for Financial year 2019 and 2020 and progress on previous measures	41
	The SIE (Amendment) Act 2016 – Workers employed by Job Contractor	47
	Registration and payment of a contribution to the MCIA for the importation and sales of sugar on the local market	48
	Activities related to the Multi Annual Adaptation Strategy (2006 - 2015)	48
	<b>Project 1:</b> Field operations and the regrouping of planters	49
	<b>Project 2:</b> Centralization of sugar factories	50
	<b>Project 3:</b> Socio – Economic Projects in favour of Employees of the Sugar Industry	52
	Agricultural Land Management System	60
	Cane Replantation Scheme	61



Métayers	61
Fair Trade	61
Environment Issues of the Sugarcane Cluster	61
Study by the World Bank on the Sugarcane Industry	62
International Scene	63

### **C. MAURITIUS SUGARCANE INDUSTRY RESEARCH INSTITUTE – RESEARCH AND DEVELOPMENT 65**

Research & Development Committee	65
The 2019 Crop	65
Plant Breeding	65
Field Experimentation, Liaison and Communication	67
Biotechnology	68
Microbiology and Plant Pathology	70
Entomology	72
Cultural Operations, Weed Agronomy and Mechanization	73
Agricultural Chemistry	75
Irrigation and Land Resources	76
Sugar Technology	79

### **D SERVICE TO FARMERS (EXTENSION & TRAINING) 81**

Objectives	81
Functions	81
Operations of the Farmers Service Agency	81
Field Visits	81
Planters Productivity Improvement Programme (PIIP)	81
Demonstrations	81
Conducted Tours	82
Surveys	82
Group Meetings	83
Info Sheets	83
Soil Sampling	83
Field Days	83
Visit by Planters to FSC	83
Liaison Meetings	83
Seed Cane Supply	83
Nurseries Established	84
Sugarcane Planters Regrouping Project (SPRP)	84
Agricultural Land Management System	84
Planters Fund	85
Planters Harvest Unit	85
Advance Supply of Fertilisers	85
Radio Talks	85
TV Programmes	85
Events	86
Human Resource Matters	86
Committees	86

### **E. SERVICE TO FARMERS (AGRICULTURAL AND MECHANISATION) 87**

Objectives and Functions	87
Services to the Planting Community	87
Main Categories of Hirers	88

### **F. CANE MILLING ARBITRATION AND CONTROL 89**

Role and Functions	89
Arbitration of disputes and handling of grievances	89
Registration of Cane contracts	90
Start and End of Crop 2019	90
Canes Milled	90
Sucrose Content Tests	90
Sugar Production	91
Assessment of sugar and molasses	91
Assessment of scum	92
Final Road Rate for Crop 2019	92
Determination of Price of Molasses	92
Weighbridge Calibrations and Checks	93
Value Added Products	93
Closure of weighbridges	93
Staff matters	93

### **G(1) SUGAR STORAGE AND HANDLING UNIT (SUGAR TERMINAL) 95**

Introduction	95
Receiving Station	95
The Storage Sheds	96
Unloading of Non-Originating Sugar at the Terminal Quay	96
Delivery of Sugar to Refineries	96
Staff Matters	97
Maintenance and Repairs	97
Sugar Movements	97

### **G(2) SUGAR STORAGE AND HANLIDING UNIT (BAGGED SUGAR) 98**

Transfer of the Operations of the Bagged Sugar Storage and Distribution Co Ltd to MCIA	98
Principal Activities	98

### **H. DIRECTORS RESPONSIBILITY STATEMENT 100**

### **I. INDEPENDENT AUDITOR'S REPORT 101**

### **J. FINANCIAL STATEMENTS 107**

### **K. LIST OF ABBREVIATIONS 141**

## Introduction

The sugar cane industry crossed another milestone with the establishment of the Mauritius Cane Industry Authority (MCIA), bringing under its ambit the operations and functions of the six Service Providing Institutions. This merger formed part of the reform process within the industry, as a consequence of Government's policy to sustain the planting community subsequent to the 36% drastic cut in the price of sugar. For the MCIA, the objective was to bring down cess not to exceed 4% of the ex-Mauritius Sugar Syndicate price as from crop 2011.

The Ministry of Agro-Industry and Food Security took the initiative to provide for the establishment of the Mauritius Cane Industry Authority with a view to render the sugar cane industry more effective and efficient. With the Proclamation of the Mauritius Cane Industry Authority Act (No. 40 of 2011) on 19 March 2012, the Mauritius Cane Industry Authority was created as a body corporate to take over the powers and objects of the following six cess funded institutions, namely:

- (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
- (vi) Sugar Planters Mechanical Pool Corporation

The Mauritius Cane Industry Authority became the apex organisation of the sugar cane industry and the relevant Acts of the six cess funded institutions were repealed and the operations and activities of the institutions were vested with the MCIA.

Following Cabinet's decision on 22 August 2014, the MCIA took over the activities of the Bagged Sugar Storage Co Ltd, which now operates under the name Sugar Storage and Handling Unit (Bagged Sugar).

## Establishment of the Authority

The Mauritius Cane Industry Authority was established as a body corporate on 15 December 2011 with the enactment of the Mauritius Cane Industry Authority Act (No. 40 of 2011). The Act came into force by Proclamation on 19 March 2012.

## Objectives of the Authority

The objects of the Authority are to:

- (a) monitor, oversee and coordinate all activities relating to, and ensure a fair, efficient and effective administration and operation of the cane industry;
- (b) promote and support the sustainable development, efficiency and viability of the cane industry;
- (c) formulate and implement policies, strategies, plans, programmes and schemes in relation to the cane industry;
- (d) promote and facilitate the sustainable development of the cane cluster in Mauritius and in the region;
- (e) by means of research and investigation, ensure the technical progress and efficiency of the cane industry;
- (f) monitor and co-ordinate the activities of the cane industry, including planting, milling, processing, transport, bulk handling and marketing;
- (g) co-ordinate the activities of organisations concerned with the cane industry in the private and public sectors;
- (h) overview the storage, sampling, bagging, packing, loading and unloading of sugar;
- (i) maintain a pool of machinery for agricultural purposes;
- (j) resolve disputes between planters, millers and middlemen;
- (k) overview the registration of cane contracts;
- (l) promote the development and use of co-products;
- (m) facilitate the participation of employees and planters in the cane industry;
- (n) ensure that necessary essential services are available to planters;
- (o) promote the setting up of cane nurseries and the supply of cane setts to planters;
- (p) facilitate the adoption of modern and efficient agricultural practices by planters.

The following additional objectives were conferred on the MCIA after amendments were brought to the SIE Act. The Sugar Industry Efficiency (Amendment) Act 2016 was proclaimed on 23 December 2016 and became operational on 1 January 2017.

- (q) foster the use of biomass, including sugar cane, cane trash, high fibre cane, fuel canes, gramineae and other related biomass, in the production of electricity and biofuels for transport ; and
- (r) foster competitiveness of all segments of production in the cane industry.

## Functions of the Authority

The Authority has such functions as are necessary to further its objectives most effectively and may, in particular:

- (a) set up and manage such agricultural or other centres as the Minister may determine;
- (b) hire the agricultural machinery of the Authority to such persons and on such terms and conditions as the Board may determine;
- (c) provide technical advice, assistance and training to planters on cane cultivation, harvesting and transport of canes and post-harvest operations;
- (d) manage agricultural land and, in particular, abandoned fields in Sugarcane Planters Regrouping Project (SPRP) or such other similar projects;
- (e) enter into management contracts on behalf of planters;
- (f) devise agricultural credit schemes in consultation with financing agencies;
- (g) ensure that arrangements are made so that canes of small planters are harvested at their optimal sucrose content;
- (h) assist cooperative societies in benefiting from the Fair Trade Initiative or such other similar projects;
- (i) provide, operate and maintain facilities for the storage, sampling, bagging, packing, loading and unloading of sugar or such co-product or other commodity as the Minister may approve;
- (j) set up a planters' data bank;
- (k) commission studies and consultancies in respect of any specific or general issue affecting the cane industry;
- (l) review, on a regular basis, the economic and financial performance as well as the problems and prospects of the cane industry;

- (m) periodically commission a revaluation of the fixed assets of the cane industry;
- (n) commission long-term master plans for the viability and sustainability of the cane cluster, with due regard to the interests of all parties concerned;
- (o) make recommendations to the Mauritius Revenue Authority regarding a rational and uniform system of granting capital allowances, including allowances in respect of equipment depreciation, in relation to the cane industry ;
- (p) as and when appropriate, examine the accounts of millers and planters and offer advice on the forms to be used in connection with the presentation of those accounts;
- (q) collect contribution from the sale of sugar on the local market for the purposes of compensation under section 46 (2) (k) of the MCIA Act;
- (r) advise the Minister on:
  - (i) the formulation and management of policies, strategies and schemes in relation to the cane industry;
  - (ii) the provision of adequate means of inland access or, after consultation with the Mauritius Ports Authority, sea access, to the sugar terminal;
  - (iii) the transport of sugar to and from the sugar terminal;
  - (iv) all measures necessary to ensure the viability of the cane industry.

By virtue of the SIE (Amendment) Act 2016, the following functions have been added:

- (ra) manage, for the purpose of fostering the production of sugar cane and bagasse, the Sugar Cane Sustainability Fund set up under the Sugar Industry Efficiency Act;
- (rb) keep and maintain, for the purpose of sugar reform under the Sugar Industry Efficiency Act, a Land Conversion Right (LCR) register;
- (rc) promote the production of energy from biomass generated by the sugar cane industry, develop and monitor the Renewable Sugar Cane Industry Based Biomass Framework specified in the Sugar Industry Efficiency Act;

- (rd) determine, under the Sugar Industry Efficiency Act, the sale price of molasses to distillers producing ethanol for blending or export or potable alcohol for export;
- (re) establish, under the Sugar Industry Efficiency Act, the Joint Molasses Allocation Committee for the allocation of molasses between distilleries;
- (rf) promote the Sugar-Based Agro-Industry and to generate sugar through the use of local raw materials, develop and monitor the Sugar Based Agro-industry Framework referred to in the Sugar Industry Efficiency Act;
- (rg) provide value addition from ethanol obtained from molasses or from other raw material obtained from sugar cane, develop and monitor the Ethanol and Molasses Framework referred to in the Sugar Industry Efficiency Act.

For the purposes of section 5(1) (i) of the MCIA Act, the facilities to be provided by the Authority shall include:

- (a) loading and unloading quays;
- (b) buildings, sheds and other structures; and
- (c) plant, machinery and equipment.

### Powers of Authority

The Authority has such powers as are necessary to attain its objectives and discharge its functions most effectively and may, in particular, subject to the MCIA Act:

- (a) enter into a contract, in accordance with the Public Procurement Act, including a contract for the supply of goods, services, plant, equipment or materials for the execution of works;
- (b) receive grants and donations, and raise funds;
- (c) subject to para e (i), fix and levy fees and charges;

- (d) enter into an agreement with any person for the performance, or provision, by that person, of any service or facility which the Authority is authorised to perform or provide;
- (e) with the Minister's approval:
  - (i) fix the rate of charges in respect of the storage, bagging, packing, loading or unloading, at the sugar terminal, of sugar or any other commodity;
  - (ii) undertake, by agreement with the Mauritius Ports Authority, the execution of bulk handling or automated or semi-automated cargo handling operations in respect of any commodity other than sugar;
  - (iii) give such guidelines as it considers appropriate to the Mauritius Sugar Syndicate for the purpose of formulating, coordinating and harmonising the policies of those organisations in keeping with the objectives of the MCIA Act.

### Monopoly of Authority

1. Subject to section 7(1)(b) of the MCIA Act, no person, other than the Authority or an authorised body shall:

- (a) as from the appointed date, store or load into a ship any sugar manufactured in Mauritius; or
- (b) during such time as may be specified, store such other commodity as may be prescribed.

2. (a) Subject to section 7(1) b) of the MCIA Act and to such conditions as may be prescribed, as from the appointed date:

- (i) every miller shall cause all the sugar manufactured at his factory to

be delivered to the Authority or, with the approval of the Authority, to an authorised body;

(ii) any sugar delivered under para (a) shall be consigned to the Mauritius Sugar Syndicate in the name of its owner;

(iii) the Authority or an authorised body, as the case may be, shall receive any sugar manufactured and delivered to it under para (a).

(b) The Board of Directors may authorise a miller to store sugar at his factory or at such other place as it may approve.



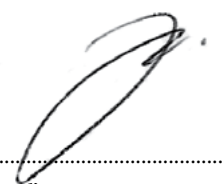
## Corporate Governance Report

### Compliance and Enforcement

The Board of Directors is responsible for ensuring that proper standards of Corporate Governance are maintained, and applied throughout the organisation. The report has been prepared as far as practicable in accordance with the 'Code of Corporate Governance for Mauritius'. The Chairperson and Members of the Board of Directors fully understand the importance of Corporate Governance, and believe that the adoption of high standards of governance are imperative for the enhancement of all stakeholders' trust and confidence including the planters' community and continuously take steps to improve governance within the framework of the Mauritius Cane Industry Authority Act (No. 40 of 2011) and other applicable legislations.

### Statement of Compliance

We confirm to the best of our knowledge that the Mauritius Cane Industry Authority has complied with all its obligations and requirements under the Code of Corporate Governance.

  
 Jacques M d'UNIENVILLE, G.O.S.K.  
 BOARD MEMBER

  
 Medha GUNPUTH  
 Senior Chief Executive,  
 Ministry of Agro-Industry  
 and Food Security  
 CHAIRPERSON

## Role and power of the Board of Directors and its members

### Structure and composition of the MCIA Board of Directors

The structure, composition and the manner of appointment of members have been established by Section 8 (1) of the Act.

The composition of the Mauritius Cane Industry Board of Directors during the period 1 July 2019 - 30 June 2020 is shown in the Table below:

**Table 1. Composition of the Board of Directors during the period 1 July 2019 - 30 June 2020**

Mr Bojrazsing Boyramboli (as from 23 .8 2018)	<b>Chairperson</b>
Mrs Chandanee Jhowry (up to 15.12.2019)	Representative of the Ministry of Agro-Industry and Food Security
Mrs Damyantee Takoory (16.12.2019 to 6.1.2020)	
Mrs Indira Rugjee (as from 7.1.2020)	
Mr Vikraj Ramkelawon	Representative of the Ministry of Finance and Economic Development
Mr Jacques M D'Unienville, G.O.S.K	Member having wide experience in the sugar industry sector
Mr Nundlall Basant Rai, P.D.S.M	Member having wide experience in the sugar industry sector
Mr Jean Li Yuen Fong	Member having wide experience in the sugar industry sector
Mr Amal Kumar Mohabeer Mungur	Member having wide experience in the sugar industry sector

### Tenure of Office

Every member of the Board, other than the ex-officio member, holds office for a period of 2 years and shall be eligible for reappointment. The Chief Executive Officer is in attendance at Board Meetings and may take part in its deliberations, but

does not have the right to vote. The other Directors, Assistant Director and Managers are also called to be in attendance as and when required. The Administrative Manager acts as Secretary to the Board.

## Powers of the Board of Directors

As per the new section 9(1)(a) of the Mauritius Cane Industry Authority Act, the Board of Directors shall meet at least once every month.

Sections 10 (1) to (6) of the Act stipulate the powers of the Board of Directors as follows:

- (1) (a) The Board may, on the recommendation of the Chief Executive Officer, set up one or more departments, split one of those departments into two or more, or merge two or more of those departments into one.
- (b) For the purpose of ensuring the efficient and effective operation of any department, the Board may set up within that department such number of sections or units as it may determine.
- (2) The Board may set up such committees of not more than five persons as may be necessary to assist it in the discharge of its functions and the exercise of its powers. The persons may be members and non-members.
- (3) The persons referred to above shall:
  - (a) be appointed by the Board on such terms and conditions as it may determine; and
  - (b) be paid such allowance as the Board may, with the approval of the Minister, determine.
- (4) A committee shall:
  - (a) be chaired by the Chief Executive Officer or such other person as the Board may determine;
  - (b) meet as and when required by the Board or as often as the Chairperson of that committee thinks necessary; and
  - (c) within such time as may be fixed by the Board, submit a report which shall contain its observations, comments and recommendations on any matter referred to it by the Board.

- (5) The committee shall regulate its meetings in such manner as it may determine.
- (6) The Board shall not concern itself with any matter relating to the exercise by the MSIRI or the Control and Arbitration Committee of their powers or the discharge of their functions.

### Conflicts of Interest

Section 9 (3) of the Mauritius Cane Industry Authority Act provides that where a member has any interest, direct or indirect, in any matter before the Board, he shall, as soon as reasonably practicable, disclose to the Board the nature of the interest and shall not take any part in the deliberation of the Board relating to that matter.

### Role and Function of the Chairperson of Board of Directors

The Chairperson of the Board of Directors is non-executive and is appointed by the Minister of Agro-Industry and Food Security under Section 8(2)(a) of the Act. The role and functions of the Chairperson are set out below:

- (a) to preside over meetings of the Board and to ensure its smooth functioning in the interest of good governance;
- (b) to encourage and ensure active participation of members in discussions and Board matters;
- (c) to ensure that all relevant information and facts are placed before the Board to enable members to reach informed decision;
- (d) to execute contracts, jointly with the Chief Executive Officer, on behalf of the Authority.

### The Advisory Council

The new Section 10A of the Mauritius Cane Industry Authority Act provides for the setting up of an Advisory Council which shall assist the Board in the discharge of its functions.

## Structure and Composition of the Advisory Council

The structure, composition and the manner of appointment of members have been established by the new Section 10A (2) of the Act.

The composition of the Advisory Council is as follows:

**Table 2. Composition of the Advisory Council**

Mr Marie Joseph Jacques Gerard Chateau De Balyon	Chairperson
Mrs Soovidama Ponien Vencatachellum	Representative of the Ministry responsible for the subject of cooperatives
Vacant	Representative of the Ministry responsible for the subject of environment
Dr P.M. K. Soonarane	Representative of the Ministry responsible for the subject of public utilities
Mr Devesh Dukhira	The Chief Executive Officer of the Mauritius Sugar Syndicate
Dr Rajun Jugurnath (From Jan 2016-Dec 2018) Replaced by Mr Newk-Fon Hey Tow Y. K. J.	The Chief Executive Officer of the Sugar Insurance Fund Board
Mr Rishi Raj Sharma Hauzaree (Replaced by Mr D. Jhugaroo as from January 2018)	Representative of the Irrigation Authority
Mrs Jacqueline Sauzier	Representative of the Chamber of Agriculture
Mr Satyanand Govinda	Representative of the Fair Trade Cooperative Federation
Mr Louis Lindlay Clifford Verny	Representative of the employees of the MCIA
Mr Sebastien Lavoipierre	Representative of millers
Mr Louis Jean Francois S��n��que	Representative of power producing companies
Mr Ajay Parsan	Representative of refiners and agro-processors
Mr Rafick Ahmad Chatharoo, MBE Mr Hemant Rao Anand Sonoo Mr Trilock K. Ujoodah	3 representatives of planters, one of whom shall represent small planters
Mr Pranjeewan Ramjuttun Mr Gerard Lall Mr Sachidanand Rajaram Mr Lan Hing Po Hee Foon	4 representatives of recognised trade unions of the sugarcane industry, including a representative of staff, overseers, non-agricultural employee and agricultural employee

### Tenure of office

Every member of the Council holds office for a period of 2 years and shall be eligible for reappointment.

The composition of the Advisory Council is being reconstituted.

### Role and Function of the Chief Executive Officer

Section 11 (1) (a) of the MCIA Act provides that there shall be a Chief Executive Officer who shall be appointed by the Board on a fixed term performance contract and or on such other terms and conditions as it may determine, subject to the approval of the Minister of Agro-Industry and Food Security. The Chief Executive Officer:

- (a) is responsible for the execution of the decisions policy of the Board and for the control and management of the day-to-day business of the Authority;
- (b) acts in accordance with such directives as he may receive from the Board;
- (c) seeks to achieve such annual performance targets as may be set by the Board;
- (d) submits to the Board, every 3 months, a report on the activities and finances of the Authority.

In addition, the Board may, subject to such instructions as it may give, delegate to the Chief Executive Officer such of its powers and functions as may be necessary for the efficient management of the day-to-day business and activities of the Authority, other than the power to:

- (i) sell or exchange any property or make any investment or donations;
- (ii) borrow money; or
- (iii) enter into a contract which exceeds the prescribed amount.

With the approval of the Board, the Chief Executive Officer may also delegate his powers and functions to such employee as he may determine.

### Role of the Executive, non-Executive and Independent non-Executive Directors

The Board of Directors of MCIA and the Advisory Council, their composition and the manner they are constituted are set out in the new Sections 8 and 10A of the Act. None of the members are executive. However, given the strategic importance of the Mauritius Cane Industry Authority, the Act has ensured that members of its Board of Directors and the Advisory Council represent appropriate Ministries and other stakeholder groups that have a direct interest in the different operational aspects of the Authority for its efficient, effective and smooth running.

### Statement of Remuneration Policy

Section 8 (4) of the Mauritius Cane Industry Authority Act provides that every Member of the Board of Directors shall be paid such fees and allowance as the Board may, with the approval of the Minister, determine. In practice, the remuneration of the members of the Board is determined by the Pay Research Bureau. The fees paid to the Chairpersons of the Board and other Committees during the 12-month period under review to 30 June 2020 amounted to MUR887,100 and fees paid for other Board Members and Committees amounted to MUR261,775. The salary paid to the key management personnel during the year under review amounted to MUR11,777,375. The new section 10 (3)(b) of the MCIA Act provides that every appointed member of the Council shall be paid such fees and allowances as the Board may, with the approval of the Minister, determine.

### Board and Sub-Committees

The Board has two sub-committees appointed under its powers conferred by Section (10) (2) of the Act:

- (a) a Finance Committee which recommends to the Board in respect of financial matters; and
- (b) a Staff Committee which recommends to the Board on all staff matters relating to recruitment, etc.

### Composition of Finance Committee

The Finance Committee was constituted of the following Board Members:

Table 3. Finance Committee	
Mr Jacques M d'Unienville, G.O.S.K	Member having wide experience in the sugar industry sector (as Chairperson)
Mrs Chandanee Jhowry (up to 15.12.2019) Mrs Indira Rugjee(as from 7.1.2020)	Representative of Ministry of Agro-Industry and Food Security
Mr Vikraj Ramkelawon	Representative of Ministry of Finance and Economic Development

### Composition of Staff Committee

The Staff Committee is constituted of the following Board Members:

Table 4. Staff Committee	
Mr Amal K M Mungur	Member having wide experience in the sugar industry sector (as Chairperson)
Mrs Chandanee Jhowry (up to 15.12.2019) Mrs Damyantee Takoory (from 2.12.2019 to 6.1.2020) Mrs Indira Rugjee (as from 7.1.2020)	Representative of the Ministry of Agro-Industry and Food Security
Mr Jean Li Yuen Fong	Member having wide experience in the sugar industry sector

### Other Committees

#### (1) Audit and Risk Committee

The Audit and Risk Committee has met only once during the financial year 2019/2020. It monitors and reviews the effectiveness and integrity of MCIA's internal financial controls, audit functions and risk management systems. In carrying out its responsibilities, the Committee has full authority to investigate all matters that fall within its terms of reference.

The Audit and Risk Committee's role is to assist the Board in discharging its responsibilities and duties in relation to specific matters pertaining to financial reporting process, internal controls, internal audit function, external audit and risk frameworks.



**Table 5. Audit and Risk Committee**

Representative of Ministry of Agro-Industry and Food Security Mrs Chandanee Jhowry (up to 15.12.2019) Mrs Indira Rugjee (as from 7.1.2020) Deputy Permanent Secretary Ministry of Agro-Industry and Food Security	Chairman
Mr Jean Li Yuen Fong Member having wide experience in the sugar industry sector	Members
Mr Nundlall Basant Rai, P.D.S.M Member having wide experience in the sugar industry sector	

## (2) The Anti-Corruption Committee

The MCIA has established the Anti-Corruption Committee. It discharges the following responsibilities:

- overseeing and coordinating the implementation of corruption prevention strategies
- advising on corruption prevention issues
- reviewing the Anti-Corruption Policy of MCIA which comprises risk assessments for all major activities of the institution

The Anti-Corruption Committee is composed of the following members:

1. Mr. Leeladhanjiv Jhuboo	Senior Internal Auditor (Chairperson)
2. Mr. Satish Purmessur (up to 4 May 2020)	Director, SSHU
3. Mr. Ip-Yam Fong Yan	Director, AMU

## (3) Management Committee

The Chief Executive Officer holds fortnightly management meetings with all the Directors, Assistant Directors and Managers to ensure the smooth running of all the departments of the Authority.

## Access to Independent Advisers

The Board and the sub-committees have the right to retain independent external legal or other advisers as they deem necessary.

## Board Information

The members of the Board are given accurate, timely and clear information so that they can maintain full and effective control over the strategic, financial and operating policies of the Authority.

## Board and Sub-Committee Meetings

Eight (8) Board of Directors meetings were held during period 1 July 2019 - 30 June 2020. The following table shows the attendance at the Board of Directors Meetings.

**Table 6. Attendance at the Board of Directors Meetings  
Period 1 July 2019 - 30 June 2020**

Names	Board of Directors Meeting
Chairperson: Mr Bojrazsingh Boyramboli (as from 23 August 2018)	8
<b>MEMBERS</b>	
Mrs Chandanee Jhowry (up to 15.12.2019)	4
Mrs Damyantee Takoory (from 16.12.2019 to 6.1.2020)	1
Mrs Indira Rugjee (as from 7.1.2020) Representative of Ministry of Agro-Industry and Food Security	3
Mr Vikraj Ramkelawon Representative of Ministry of Finance and Economic Development	3
Mr Jacques M D'Unienville, G.O.S.K Member having wide experience in the sugar industry sector	6
Mr Nundlall Basant Rai, P.D.S.M Member having wide experience in the sugar industry sector	8
Mr Jean Li Yuen Fong Member having wide experience in the sugar industry sector	8
Mr Amal Kumar Mohabeer Mungur Member having wide experience in the sugar industry sector	8

## Secretary

Section 8(9) provides that the Board shall designate an employee to act as Secretary. The Administrative Manager of the Authority acts as Secretary to the Board and other sub-committees. He is responsible *inter alia* to:

- prepare and attend every meeting of the Board;
- keep minutes of proceedings of every meeting of the Board; and
- have such other duties as may be conferred on him by the Board.

## Environment Risk

The Mauritius Cane Industry Authority does not operate in a manner that may cause harm to the environment in general nor does it use materials of risky nature which may affect the environment. The Authority complies with the relevant environmental laws and regulations.

## Corporate Quality

A key aspect of risk management is to ensure high operational and service standards to all its stakeholders, especially the planters, so as to maintain a good corporate image.

## Operation Risk

The Authority maintains its fleet of vehicles, tractors, etc. so as to ensure continuous service to the planters' community. The Sugar Storage and Handling Unit is ready to receive sugar at any time. The Authority has never delayed any operation due to operating failures.

## Security

The Sugar Storage and Handling Unit being a national strategic facility is under the surveillance of the Police on a 24 h-basis. Access to the Sugar Terminal is restricted and controlled. The Authority ensures that security is maintained at all times.

## Foreign Exchange Risk

The Authority is not exposed to foreign exchange risk. It is financed mainly by means of a cess from sugar proceeds. The cess is levied each year and in such a manner and at such rate not exceeding 4% of the ex-Mauritius Sugar Syndicate price as may be prescribed and after consultation with the Board. However, during the financial year 2017/2018, Government took the decision to waive temporarily the cess on crop 2017 and contributed to meet the operational costs of the MCIA.

## Insurance Risk

All the assets and potential insurable liabilities are covered by appropriate insurance policies.

## Internal Control

The Board is primarily responsible for the effectiveness and efficiency of the system of internal

control, while the design, implementation and monitoring of the system devolves on Management.

## Internal Audit

The system of internal control at the Authority includes checks and balances through the operation of internal checks. The internal control system ensures the efficiency and effectiveness of the Authority.

## Auditing and Accounting

### Accounting

The Board is responsible for the preparation of accounts which fairly presents the state of affairs of the Authority and the results of its operations and complies with International Public Sector Accounting Standards (IPSASs). In this context, the Board is responsible for adequate accounting records, maintenance of an effective system of internal control, and choice of accounting policies supported by reasonable and prudent judgment.

### Audit

Section 52 (3) of the Mauritius Cane Industry Authority Act provides that the Auditor to be appointed under Section 5 (1) of the Statutory Bodies (Accounts and Audit) Act shall be the Director of Audit.

## Integrated Sustainability Reporting

The Authority is a not-for-profit organisation. It *inter alia* provides services to the sugarcane industry. The Authority has throughout acted responsibly both as a service provider in a strategic position and as a 'responsible citizen'.

### Ethics

The Authority is committed to the highest standards of integrity and ethical conduct with all its stakeholders. It has built up a culture of efficiency and effectiveness at work, and follows the general code of ethics prevailing in the public sector.

## Environment

The Authority carries out its activities in such a manner that they do not constitute any threat to the environment.

## Health and Safety

Security and safety assessment is carried out periodically by the Health and Safety Committee. Two part-time Safety and Health Officers replaced by a full time Officer as from October 2014 are employed to ensure compliance with the Authority's safety, health and environment policies and existing legislations and regulatory framework. Security and safety assessment of the Sugar Terminal is carried out periodically by a Registered Machinery Inspector. The Authority complies with all relevant Health and Safety legislations.

## COVID-19 Pandemic

Being a serious threat to people's health, the novel coronavirus (2019-nCoV) (COVID-19) presents challenges to people and organizations around the globe, and Mauritius is no exception. COVID-19 has, *inter-alia*, completely changed the economic and social environments and behaviours of the Mauritian Citizens.

Mauritius was hit by the pandemic Coronavirus (COVID-19), an infectious disease caused by a newly discovered coronavirus as from 18 March 2020. Government imposed a nationwide confinement measure as from 19 March 2020 at 20h00 until 02 April 2020 at 20h00. Subsequently, in order to prevent further propagation of the disease in Mauritius, a curfew order was issued from 3 April 2020 to 3 May 2020 which was further extended from 4 May 2020 to 1 June 2020.

Pursuant to the decision of Government of Mauritius with respect to national confinement measures and curfew order, MCIA remained closed in the first instance as from 20 March 2020 to 23 April 2020. However, some Officers at the managerial level as well as other Staff attended duty using the Work Access Permits which were issued to them by the parent Ministry of Agro-Industry and Food Security to enable them to circulate during the confinement period. During that period, Officers at managerial level of MCIA were called upon to attend monitoring meeting at the Ministry of Agro-Industry and Food Security on the Sugarcane Cluster on a regular basis as well as to attend internal management meetings at the MCIA. The staff of the Finance Department was also called to attend duty to process MCIA's salary and other urgent payment while Messengers/Office Attendants were also requested to attend duty.

The Government approved a Strategy and Action Plan for a phased resumption of economic and other activities in the Public Sector. Following Circular Letter No. 31 of 2020 from the Ministry of Public Service, Administrative and Institutional Reforms dated 4 May 2020, officers and employees were requested to attend duty on roster as from 11 May 2020 to 31 May 2020. They were again issued a Work Access Permit. Normal duty in the Civil Service, including the MCIA became effective as from 1 June 2020.


## Corporate Social Responsibility

The Authority is a not-for-profit entity and as such endeavours to minimise operating costs for the benefit of the planters' community.

The Sugar Storage and Handling Unit of the Authority organises guided visits to the Sugar Terminal during the crop season on Tuesdays and Thursdays for students of primary school. From feedback received, such visits have been very beneficial to the students.

### Donations

No donations have been made to any political party or organisation.

  
Jacques M d'UNIENVILLE, G.O.S.K.  
BOARD MEMBER

  
Medha GUNPUTH  
Senior Chief Executive,  
Ministry of Agro-Industry  
and Food Security  
CHAIRPERSON

## A (2) HUMAN RESOURCE MANAGEMENT

### Introduction

The role of the Human Resource Division is primarily to make an effective contribution towards the achievement of the Authority's corporate objectives as well as fulfilling its social responsibilities. To accomplish this role, the Human Resource Department is, *inter alia*, committed to:

- Assist in the design and development of an effective structure which will respond to changing environment and needs of the Authority.
- Obtain and develop the human resources required by the Authority and to use and motivate them effectively.
- Assist in creating and maintaining a co-operative climate of relationships within the Authority through effective communication channels and cross-functional team work.

- Assist in meeting the Authority's social and legal responsibilities.

- Promote a safe working environment and general welfare of staff at the Authority.

The Authority has a total workforce of 532 employees as at 30 June 2020 on its permanent and pensionable establishment.

### Organisational Structure

The organisational structure of the MCIA, as approved by the MCIA Board of Directors, provides for six departments, namely:

- Office of the Chief Executive Officer
- Control and Arbitration Department (CAD)
- Mauritius Sugarcane Industry Research Institute (MSIRI)
- Farmers Service Agency (FSA)
- Agricultural Mechanization Unit (AMU)
- Sugar Storage and Handling Unit (SSHU)

The Organisation Structure is depicted in the figure below:-

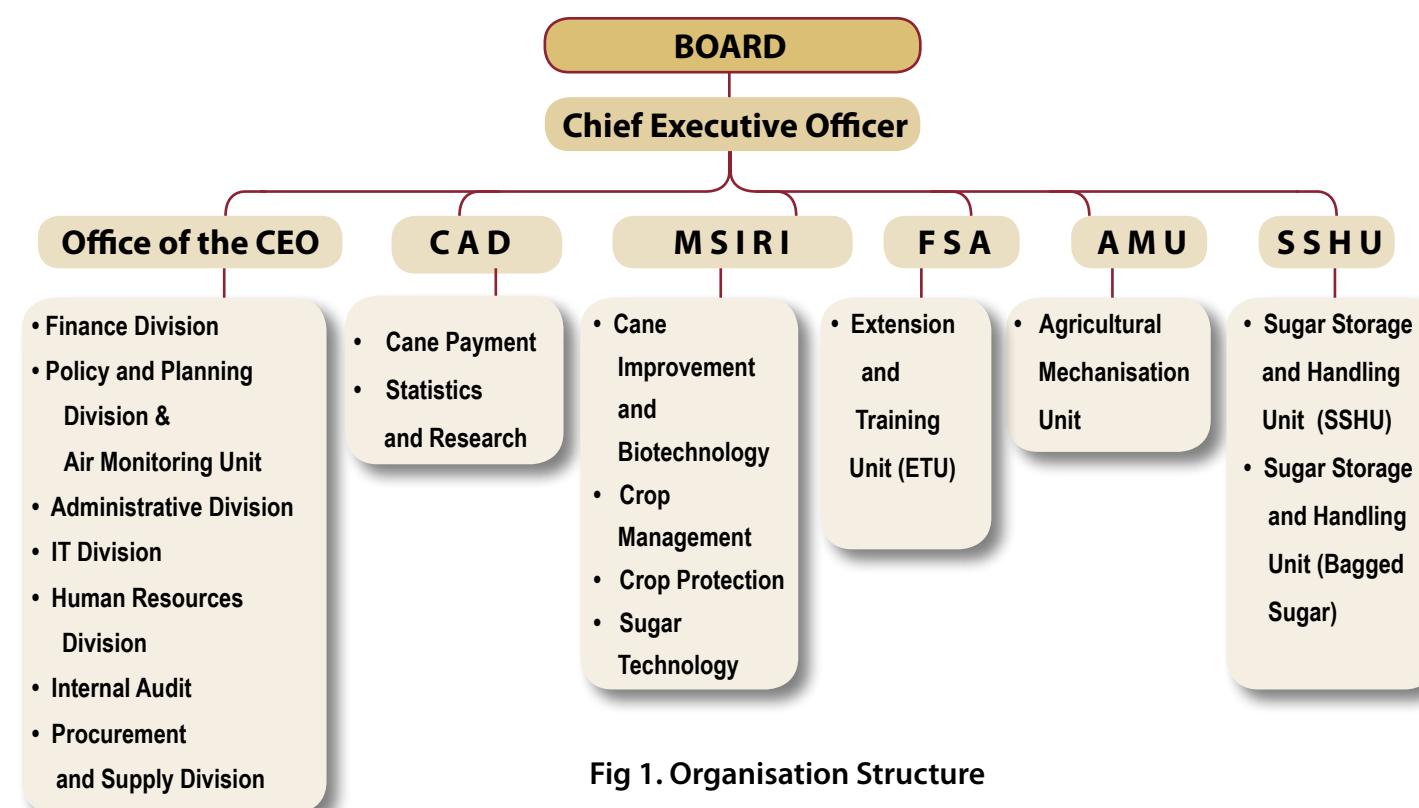


Fig 1. Organisation Structure



## (a) OFFICE OF THE CHIEF EXECUTIVE OFFICER

This Department is responsible to provide corporate services throughout the Authority, ensuring that all resources and facilities are made available to facilitate all other departments to achieve their respective objectives. The Department comprises of the Chief Executive Officer who is responsible for the execution of policies and the overall administration and management of the MCIA. It comprises of the following divisions:-

**I. Finance Division** – responsible, *inter alia*, for the proper administration of the general fund of the Authority, preparation of the annual budget estimates, statement of accounts and annual reports. It also has to provide accurate and timely financial information and statistics to internal and external bodies. Fifteen (15) employees were attached to the Division.

**II. Policy and Planning Division** – responsible, *inter alia*, for the preparation and reviewing of the strategic plan of the Authority, carrying out regular assessment of the challenges and opportunities of the industry, both in the local and international scene and preparation of plans and policies with the objective of ensuring long term viability and sustainability of the sugar cane cluster. It is also responsible for the Air Monitoring Unit. Eleven (11) employees were attached to this Division.

**III. Administration Division** – responsible, *inter alia*, to provide secretarial facilities to the Board and its sub committees, to establish and implement administrative procedures for the efficient functioning of the Authority, management of office space and general maintenance of buildings and premises and also for internal and external communication. Fourteen (14) employees were attached to this Division.

**IV. Information Technology Division** – The IT Section is responsible for the overall design,

implementation and management of the IT infrastructure and Applications within the MCIA. The unit provides support services to all the other Departments/Divisions in the organization including the sub-offices (outstations) and is also responsible for ensuring that all the hardware/systems owned by the Authority are in good working conditions. Assistance is also provided to any user having difficulties with either a software/program or with hardware such as printers, scanners, and workstations.

Two (2) employees were attached to this Division.

## V. Human Resources Division

The Human Resource Division is responsible, *inter alia*, for the development and implementation of HR policies and procedures, monitoring disciplinary cases, employees' grievances and promotion of a safe work environment and general welfare of staff. This department has also to undertake constant review of organisation structure in view of the changing needs of the Authority. Seven (7) employees were attached to this Division.

## VI. Internal Audit Division

The function of the Internal Audit Division is to provide independent, objective assurance aimed at adding value and improving MCIA's Operations, Governance, Risk Management and Internal Controls.

The MCIA's Internal Audit function reports functionally to the Board's Audit and Risk Committee and administratively to the Chief Executive Officer. The Internal Audit Division is governed by an Internal Audit and Risk Charter approved by the Audit and Risk Committee. In addition, the internal audit function's mandate and annual audit coverage plans are approved by the Audit and Risk Committee.

Three (3) employees were attached to this Division.

## VII. Procurement and Supply Division

The Procurement and Supply division is the office responsible for the acquisition of supplies and services to support the MCIA activities. It is the entity, within the MCIA, authorized to do the procurement and supply such as seeking for quotations for small value items, issuing of purchase orders, following up of deliveries, receiving of goods, stocking at the right locations and issuing to users.

Three (3) employees were attached to this Unit.

## (b) CONTROL AND ARBITRATION DEPARTMENT (CAD)

Prior to the setting up of the MCIA, the Control and Arbitration Department was a department under the aegis of the Ministry of Agriculture, known as the Cane Planters and Millers Arbitration and Control Board.

The objectives of the Control and Arbitration Department are, *inter alia*, to control milling activities, arbitrate disputes among millers, planters and other stakeholders and determine the quantum of sugar and by-products accruing to producers. Twenty (20) employees were attached to this Department

## (c) MAURITIUS SUGARCANE INDUSTRY RESEARCH INSTITUTE (MSIRI)

The MSIRI, a Research Centre of international repute, was, prior to the creation of the MCIA, an autonomous statutory body, governed by its own terms and conditions of service as approved by its Board. With the creation of the Mauritius Cane Industry Authority, the MSIRI has now become a department of the Authority. This department is mainly responsible to carry out research on sugarcane with a view to enhance competitiveness of the cane industry and also on technical and engineering options for improving efficiency of factories and for value addition to co-products. 120 employees were attached to this Department.

## (d) FARMERS SERVICE AGENCY (FSA)

This department is, *inter alia*, responsible for:

- (a) organising training/seminars with a view to improve the cane yield of planters
- (b) ensuring the supply of planting materials to planters.

Prior to the setting of the MCIA, this Department was an autonomous parastatal body, that is, the Farmers Service Corporation. Fifty-nine (59) employees were attached to this Department.

## (e) AGRICULTURAL MECHANISATION UNIT (AMU)

This Unit is primarily responsible for the provision of mechanical cultivation services to the sugarcane planters for the preparation of their lands prior to replantation after a sugarcane crop cycle. It also provides cane loading facilities during the crop season.

Like other departments, this unit was also, prior to the creation of the MCIA, an autonomous parastatal body and was known as the Sugar Planters Mechanical Pool Corporation. In the execution of its activities, the unit has one hundred and fifty-five (155) employees in its establishment.

## (f) SUGAR STORAGE AND HANDLING UNIT (SSHU)

This Unit comprises of two sections:

### (i) Bulk Sugar Storage

This Unit is responsible, *inter alia*, for the receipt, storage and loading of sugar into ships. This unit was, prior to the setting up of the MCIA, an autonomous parastatal body, known as the Mauritius Sugar Terminal Corporation. Thirty-six (36) employees were attached to this Division.

### (ii) Bagged Sugar Storage And Distribution

This unit also falls under the supervision of the Director, SSHU and is responsible, *inter alia*, for

the receipt, handling and storing of bagged sugar from the Sugar Estates and for the distribution of sugar for local consumption and for export. Prior to it being merged with the MCIA, this Unit was a private company, known as, the Bagged Sugar Storage and Distribution Co. Ltd. The unit has eighty-seven (87) employees in its establishment.

### Senior Management Profile

**Table 7. Senior Management Profile**

Name	Post	Qualifications
Mr Bundhoo Jugdis	Chief Executive Officer (contractual up to 20 October 2019 including handing over period of one month)	BSc (Salford), MSc Soil Chemistry(Reading), MSc Information Science (City) Member of the Institute of Information Scientists
Mr Soniah Rajkamal	Chief Executive Officer (with effect from 20 Sept 2019) Director, Farmers Service Agency (up to 19 Sept 2019)	BSc, MSc (Maur)
Mr Purmessur Satish	Chief Executive Officer (as from 5 May 2020) Director, SSHU (up to 04 May 2020)	BSc, MSc (Maur)
Dr Saumtally Salem	Director, MSIRI	BSc (Dund) MPhil (Cantab) PhD (Reading)
Mr Ip-Yam Fong Yan	Director, Agricultural Mechanisation Unit	BTech (Maur) Registered with the Council of Professional Engineers
Mr Busgeeth Devendranath	Assistant Director (Ag. Director, CAD)	BSc (Maur)
Mr Ramdharee Yashwantsingh	Ag. Director FSA (wef 15 Nov 2019) Manager, ETU	BSc, MSc (Maur)
Dr (Mrs) Dookun-Saumtally Asha	Principal Research Manager	BSc (Newcastle) MSc (Newcastle) PhD (Reading)
Mr Ramchurn Narottam Sharma	Manager, SSHU (Bagged Sugar)	LCCI (H), ACCA II
Mr Santbakshsingh Sunil	Manager, Human Resource	BA (Delhi), MBA (Delhi), Master in Public Policy and Administration (Maur)
Mr Deena Sachim Duth	Manager, Finance	FCCA

**Table 7. Senior Management Profile (contd.)**

Name	Post	Qualifications
Mr Woodun Ritesh	Manager, IT	BSc (Maur), MSc (Maur)
Dr Seeruttun Sumantlall	Research Manager, MSIRI	BSc (Maur), MSc (Cranfield), PhD (Pretoria), MIAgre
Mr Rivière Vivian	Research Manager, MSIRI	BSc (Maur), MSc (Cranfield)
Dr Ng Cheong Ronald	Research Manager, MSIRI	BSc (Reading), MSc (Cranfield), MBA (Maur), PhD (Free State)
Mr Mungroo Ishwurduth	Field Manager, AMU	BSc (Maur), MSc (Maur), Registered Professional Engineer
Mr Awotarowa Anil	Manager, ETU	BSc (Maur), MBA (Maur)
Mr Chadandeo Baboolall	Manager, ETU	BSc (Maur), MBA (Maur)
Mr Hassen Khodoruth	Administrative Officer (Ag. Administrative Manager)	BCom (Punjab), MBA HR Management (Maur)
Mr Luckraj Jhurry	Analyst/Senior Analyst (Ag. Manager Policy and Planning)	BSc (Maur), MSc in Agricultural Development (London)

### Internal Audit

**Table 8. Internal Audit**

Name	Post	Qualifications
Mr Leeladhanjiv Jhuboo	Internal Auditor/ Senior Internal Auditor	LLB (Maur) BSc (Oxford Brooks), MBA (Maur) ACCA, MIPA, IIA

## Industrial Relations

The majority of the employees at MCIA are members of unions.

To ensure sound employee relations, regular meetings are held with representatives of the unions, where most disputes are discussed and resolved. The union representatives have appointed a Coordinator in the person of Mr P. Ramasawmy. Meetings are also held with non-unionised employees and their grievances are, as far as possible, attended to.

## Health and Safety

The policy at the Authority is to provide a safe and healthy work environment and to bring to the minimum, potential accident hazards and risks of injury.

## Safety and Health Committees

The Safety and Health Committee provides the platform where Management and representatives of employees jointly identify potential hazards and find ways and means to eliminate or reduce them.

The following employees attended the following courses/workshops for period 1 July 2019 to 30 June 2020:

**Table 9. Courses/Workshops**

Course Title	Name	Organised by	From	To
Workshop on "Using Agricultural Processing Technologies for Value-Addition and Exporting Processed Food to the United States"	Mr S Saumtally Dr, Mrs A Dookun-Saumtally Dr & Mrs A Soobadar Dr	American Chamber of Commerce	16 July 2019	
GEF support to United Nations Convention to Combat Desertification (UNCCD) 2018 on National Reporting Process-Umbrella IV Inception Workshop	Mrs Cahoolessur Kumari	Ministry of Agro Industry and Food Security- Forestry Services	21 Aug 2019	

For the Authority, Health and Safety is an absolute priority. Therefore, the safety-related objectives are mandatory components for each unit/department while carrying out its activities. The MCIA is committed to implementing its Health and Safety Policy, through compliance of legislative requirements as a minimum standard. To achieve the objective, the Authority has appointed a full-time Safety and Health Officer.

During year 2019/2020, the Health and Safety Committee held fourteen (14) meetings.

## Training and Development

The Authority is aware that its objectives can be achieved only if it has a knowledgeable Human Resource.

The main objective of training is to establish a sound relationship between the employee and his job, the optimum man-task relationship. Such a relationship is at its best when employees' attitude to the job is right, when his knowledge of the job is adequate and he has developed the necessary and required skills. Thus training is a continuous activity to provide employees with the desired knowledge, skill, aptitude and habit to manage external pressure and competition.

**Table 9. Courses/Workshops (contd.)**

Course Title	Name	Organised by	From	To
"Negotiation and Mediation Skills"	Mrs P Seeruttun & Mrs S Rughooputh	Civil Service College	10 and 12-Sept 2019	
Safe Operating Procedure-MCIA core Sampling Sites	CAD Crop Seasons Employees	MCIA HR and CAD dept.	15 Oct 2019	
Seminar on Occupational Safety and Health	Mr Busawon Yuvraj – Technical and Maintenance Officer-AMU workshop	Ministry of Labour, Human Resource Department and Training	28 January 2020	29 January 2020
On the job training-Safety and Health (OSHA-Duties of Employer, Duties of Employee, Machinery Safety, Ergonomic, Fire and Electrical Safety)	19 employees	MCIA HR dept.	13 Jan 2020	
On the job training-Air Monitoring	5 employees	MCIA HR dept.	10 January 2020	15 January 2020
Enhancing Business Integrity in Mauritius	Mr Purmessur Satish - CEO Mr Khoodoruth M.H - Ag. Administrative Manager	Independent Commission Against Corruption (ICAC)	18 Feb 2020	19 Feb 2020
National Research Week (NRW) in the Higher Education Sector: "Research Beyond Frontiers"	Mr Saumtally S Dr	Higher Education Commission/Min of Education, Tertiary Education, Science and Technology	01 Apr 2020	03 Apr 2020
On the job training-COVID-19 protocol	86 employees of the BSSD	MCIA HR dept.	13 May 2020	
On the job training-guideline thermometer	14 employees from: MSIRI-5 CAD-2 SSHU-2 BSSD-2 AMU-3	MCIA HR dept.	26 May 2020	
On the job training-COVID-19 protocol	MSIRI (attendants)- 3 CAD (attendants)- 2 SSHU (attendants)-3	MCIA HR dept.	27 May 2020	
On the job training-COVID-19 protocol	AMU-33 (workshop field) AMU- 16(field officers)	MCIA HR dept.	04 June 2020	



**Table 9. Courses/Workshops (contd.)**

Course Title	Name	Organised by	From	To
On the job training-Safe Operating Procedure-MCIA core Sampling Sites and COVID-19	CAD Crop Seasons 21 employees from Alteo and Omnicane	MCIA HR and CAD	27 June 2020	
On the job training-Safe Operating Procedures-MCIA core Sampling Sites and COVID-19	CAD Crop Seasons Employees 19 employees from Terra	MCIA HR and CAD	09 July 2020	
Seminar on Occupational Safety and Health	Mrs. Anusha Deeljur- Brizmohun	Ministry of Labour, Industrial Relations, Employment and Training	16 and 17 July 2019	
Negotiation and Mediation Skills	Mrs. Marie Diana Paola Seeruttun and Mrs. Swastee Devi Rughooputh	Civil Service College	10 and 12 September 2019	
Seminar on Chemical Safety for Employers/Employees	Mrs. Anusha Deeljur- Brizmohun	Ministry of Labour, Industrial Relations, Employment and Training	21 and 22 October 2019	
Writing Effective Minutes of Meeting	Mrs. Marie Désirée Edwige Liliane Sakhabuth, Mrs. Swastee Devi Rughooputh and Mrs. Hewantee Rambhujun	Civil Service College	2 October 2019	
Registry Procedures	Mrs. Omeshwaree Bundhoo, Mrs. Zeenat Gaungoo, Mrs. Marie Claire Marion and Mr. Jean Philippe Modeste	Civil Service College	5 November 2019	
The Workers' Rights Act 2019 – A legal and Practical Analysis	Mr. Sunil Santbakshsingh	Business Mauritius	9 and 10 December 2019	
Seminar on Occupational Safety and Health	Mr. Sachinn Prabhakar Busawon	Ministry of Labour, Human Resource Development and Training	28 and 29 January 2020	
The Workers' Rights Act 2019	Mr. Sunil Santbakshsingh	The Institution of Engineering and Technology	31 January 2020	

## Overseas Missions

The following overseas missions were carried out during the period 1 July 2019 - 30 June 2020:

**Table 10. Overseas Missions**

Name	From	To	Objective of Mission
Ng Cheong R	11-Aug-19	18-Aug-19	Consultancy services for Tanganyika Sugar Industries S A at Gihanga, Burundi.
Dookun-Saumtally A Dr(Mrs)	27-Aug-19	08-Sep-19	Participation in XXX ISSCT 2019 Congress + Post Congress Tour, Argentina.
Saumtally S Dr	27-Aug-19	08-Sep-19	Participation in XXX ISSCT 2019 Congress + Post Congress Tour, Argentina.
Behary-Paray N (Mrs)	19-Oct-19	01-Nov-19	Visit to IAEA/ISCAMEN, Argentina to review progress of work and determine future work plan for the IAEA - funded project
Mahadea-Nemdharry R (Mrs)	06-Nov-19	08-Nov-19	Participated in the Australia Awards - Africa Alumni - Debrief Workshop in Pretoria, South-Africa.
Saumtally S Dr	11-Nov-19	18-Nov-19	Nominated by the Mauritius Academy of Science and Technology (MAST) to attend the 15th Annual Meeting of African Science Academics (AMASA15), Accra, Ghana.
Dookun-Saumtally A Dr (Mrs)	20-Nov-19	21-Nov-19	Speaker at a Collaborative Workshop on - Assessing the State of Laboratory Biosafety and Biosecurity in the SADC Region, Academy of Science of South Africa (ASSAF), Johannesburg, South-Africa.

## Retirement

The following Officers retired during the year 1 July 2019- 30 June 2020:

Table 11. Retirement			
Name	Post	Department /Section	Date
CHATOORSING Nemkumar	HMU Driver	CAD	03-Aug-19
LOWTUN Anand	General Worker/ Field Worker/ Gardener	MSIRI	02-Sep-19
FRANCOIS JPS	WVMA	AMU	20-Sep-19
BACCUS Abdool Nashir Goolam Mahamed	Senior Test Chemist	CAD	12-Oct-19
PILLAY SAMOO Paramasiven	General Worker/ Field Worker/ Gardener	MSIRI	31-Oct-19
RAWCHAND Devnarain	Senior Terminal Operator	SSHU	02-Feb-20
CHINTAMUNEE Hooblall	Operator	AMU	10-Feb-20
RUNNOO Meghburrin	Driver	MSIRI	17-Feb-20
CHINAPIAH Vela	General Attendant	MSIRI	01-Mar-20
GOOROOCHAND Nandeswar	Assistant Stores Officer	SSHU	01-Mar-20
MANGAR Michael	TO/STO Research	MSIRI	01-Mar-20
JOHAHEER Banookumar	Project Officer	FSA	05-Mar-20
TEELUCK Mohan	RO/SRO	MSIRI	10-Mar-20
RAMESSUR Devanand	Radio Operator / Telephonist	AMU	14-Mar-20
SONIAH Rajkamal	CEO	FSA	25-Mar-20
AROEUM Mario	General Attendant	MSIRI	11-Apr-20
UMRIT Gunshiam	RO/SRO	MSIRI	24-May-20

## Permanent Transfer

Table 12. Termination of Contract				
SN	Name	Post	Department /Section	Date
1.	PURMESSUR Ranveersingh	Stores Superintendent	AMU	3-May-20

## Death in Service

1. Mr Harrish SOBRUN, Workshop and Vehicle Maintenance Attendant at AMU on 16 September 2019.
2. Mr Jaykissoo SEEBORUTH, Agricultural Machinery Operator at AMU on 26 October 2019
3. Mr Pravindranath PURSUN, WVMA at AMU on 6 February 2020.
4. Mr Sanjeev SONATUN, Welder at AMU on 19 June 2020.

## B. POLICY AND PLANNING

### “CHOOSING THE RIGHT STRATEGY IS THE KEY ROLE OF THIS UNIT”

#### Mandate and Functions

The mandate of the Policy and Planning Division revolves around the following main components:

- Formulating policies, programmes and projects to promote the development of the sugar cane cluster;
- Directing the implementation of such policies, programmes and projects with a view to achieve the sectorial and national objectives within agreed timelines; and
- Monitoring, reviewing and reforming all systems and procedures to ensure the conduct of business in an efficient manner deploying modern management techniques and technology where applicable.
- The Policy and Planning Unit coordinates with all other departments of MCIA and provides operational support to the sector and hence builds synergy among departments, stakeholders and Authorities.

### Activities related to Amendments of the SIE Act, MCIA Act and Budgetary measures

#### Amendments to the MCIA Act

Following the budget speech 2020/ 2021, the Finance (Miscellaneous Provisions) Act 2020 had amended the **MCIA Act in section 24(3)** concerned with delivery of canes to factories. This amendment will provide for:

- The Control and Arbitration Committee of the MCIA to process application for the manufacture of another type of sugar, that is, integral sugar
- A Miller to deliver cane juice or any other intermediate product in sugar processing to a person engaged in the production of products other than sugar, subject to approval of the Board.

Section 24(3)(b) now reads as follows:

“Subject to subsection (4), a planter may, with the written authorization of the Control and Arbitration Committee:-

- Use canes grown by him to manufacture the types of sugar known as-
  - Khandasari sugar;
  - Jaggery sugar; or
  - Integral sugar

A new paragraph (6) is added to read as follows:

“(6) A miller may, with the authorization of the Control and Arbitration Committee, deliver cane juice or any other intermediate product in sugar processing to a person engaged in the production of products other than sugar”

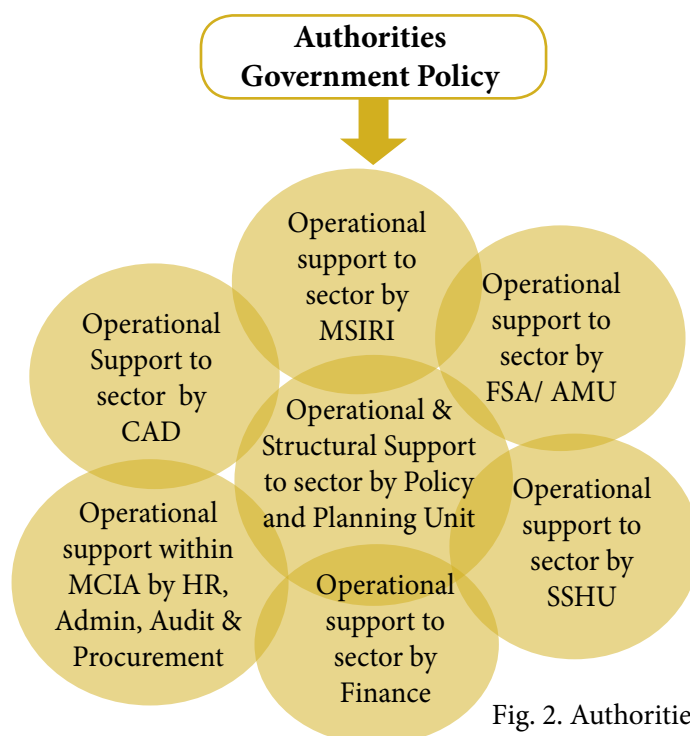


Fig. 2. Authorities - Government Policy

The COVID-19 (Miscellaneous) Act has brought an amendment to the **MCIA Act in section 2**, by deleting the definition of “crop year” and replacing it by a new definition.

#### Current definition:

“Crop year” means the period extending from 16 January in a year to 15 January in the following year

Now being replaced by this new definition:

“Crop year “means the period extending from 16 January in a year to 15 January in the following year or such other period as the Minister may prescribe.

The following sections deal with status and progress achieved during the period related to provisions of the law and budgetary measures 2019 to 2020.

### Progress on issues related to provisions of the law

#### Ethanol and Molasses Framework- Provision of the SIE Act

The components of this framework are:

- the revenue to planters from molasses;
- allocation of molasses to distillers; and
- blending ethanol with mogas.

#### Revenue to planters for molasses:

Revenue to planters for molasses is derived from a basket of prices comprised of:

- Molasses sale to distillers and distiller bottlers producing potable alcohol for the local and export market;
- Molasses sale to distiller producing ethanol for the export market;
- Molasses sale to the livestock sector; and
- Contribution of MUR40/ L of absolute alcohol obtained from distiller-bottler, importer or manufacturer in respect of potable alcohol for home consumption.



## Molasses pricing mechanism

The Molasses pricing mechanism for the different users of molasses is as per the amendments brought to the SIE (Amendment Act) 2016.

**Table 13. Current pricing mechanism- Sale price of Molasses**

Year	AMCO/MMCO export molasses	Distillers who produce alcohol for the local market and export market	Livestock sector who use molasses for animal feed
Prior to 2014	Ex-factory price	Local market and export MUR 3,000/t	MUR 3,000/t or FOB whichever is higher
2014	FOB	Local market MUR 3,500/t Export market FOB (Omnicanne FOB for 3 years only 2014-2016)	MUR 3,000/t
2015	FOB	Local market MUR 3,500 Export market FOB	MUR 3,000/t
2016 (SIE Act)	Deemed FOB	Local market 1.75 x deemed FOB Export market deemed FOB	MUR 3,000/t changed to MUR 2,500/t in March 2017 by CAD
2019 (Sale price of Molasses) Regulations 2019	Deemed FOB	To set the upper limit of price of molasses sold to distiller-bottlers producing potable alcohol for the domestic market or any person using molasses to produce syrup and beverages and which shall not exceed MUR3,500/t molasses. This regulation is applicable for crop years 2017, 2018, and 2019. The regulation was published in Government Notice No 39 of 2019.	

It is to be recalled that the Mauritius Molasses Company (MMCO) ceased exporting molasses as from 2014 while the Alcohol and Molasses Company (AMCO) ceased exporting molasses as from 2017. However, AMCO currently provides storage and distribution services of molasses to the distilleries short of molasses storage facilities.

As the World Bank study was ongoing, the MCIA Board of Directors decided to maintain the same provisional deemed FOB price of molasses for crop 2019 at MUR2,147.18/t of molasses. The total proceeds from molasses was MUR269.8M. The blended price of molasses paid to planters for crop 2019 was MUR2,347.24/t of molasses.

Table 14 shows the blended price of molasses paid to planters for the period 2004 -2019.

**Table 14. Blended Price of Molasses paid to Planters**

Year	Tonnes molasses produced tel quel	Tonnes molasses sold at 86° Brix after deducting amount in kind	LEI USD	Freight USD	Other costs USD	FOB USD payable by users of molasses	Price payable to planters (MUR/t)
2004	154,987	n.a	103.78	44.96	17.22	41.6	911.57
2005	144,423	n.a	135.24	55.91	21.51	57.82	1,563.31
2006	139,081	n.a	152.42	69.13	20.0	63.29	1,898.18
2007	129,752	n.a	160.48	98.75	10.82	50.91	1,361.69
2008	141,847	n.a	187.60	94.05	15.60	77.95	2,181.32
2009	145,338	n.a	215.57	90.64	15.12	109.81	3,016.29
2010	144,137	n.a	206.09	96.06	12.21	97.82	2,689.33
2011	136,324	n.a	204.96	120.15	11.86	72.95	1,981.64
2012	123,916	n.a	201.67	116.07	11.10	74.5	2,235.18
2013	125,837	n.a	218.64	140.59	13.52	64.53	1,970.98
2014	139,309	137,379	207.48	130	12.94	64.54	2,316.51
2015	132,107	130,952	187.55	126.7	10.63*	50.22	2,074.00
2016	117,675	117,215	175.04	112.7	5.59	56.75	2,242.89
2017	121,815	121,367	Deemed FOB price of MUR 2,147.18				2,390.88
2018	102,769	101,939	Deemed FOB price of MUR 2,147.18				2,376.10
2019	117,106	114,954	Deemed FOB price of MUR 2,147.18				2,347.24

Note: (a) Prior to 2014, molasses were traded by MMCO and AMCO. No data available on quantity sold @ 86° Brix. For 2014 and onwards when MMCO ceased operations, MCIA has recorded the volume traded.

(b) For 2014 crop: freight taken as indicative (available from MSS)

(c) For 2015 crop: freight taken as average 4 years period 2011 - 2014 and the \$2 commission computed in other costs that is deducted from LEI reference price was abolished

(d) For 2016, freight taken as average 5 years period 2009-2013

(e) For crop 2017: molasses sold is at 86° Brix and excludes molasses taken in kind.

Price paid to planters is on basis of a deemed FOB price of MUR 2,147.18 and MUR 3,500

for distiller-bottlers producing potable alcohol for domestic market.

The deemed FOB was based on an LEI of 155 Euro and exchange rate of MUR 39 for the months of June - November 2017 and a percentage of 35.52%

(f) For crop 2018: molasses sold is at 86° Brix and excludes molasses taken in kind.

Price paid to planters is on basis of a deemed FOB price of MUR 2,147.18 and MUR 3,500 for distiller-bottlers producing potable alcohol for domestic market.

(g) For crop 2019, price paid to planters is on basis of a deemed FOB price of MUR 2,147.18 and MUR 3,500 for distiller-bottlers producing potable alcohol for domestic market.

### Contribution of MUR40/L Absolute Alcohol

The contribution collected by the Mauritius Revenue Authority for crop 2019 (July 2019 -June 2020) both from the distiller-bottler or manufacturer and importers based on potable alcohol derived from cane or cane products reached MUR157,323,167. This included arrears of MUR150,000 settled by Saint Aubin Ltd for the period. This contribution was generated from some 3.933 million litres of potable alcohol sold on the local market. Planters were paid at the rate of MUR605.95/t of sugar at 98.5 pol or MUR1,369.89/t of molasses @ 86° Brix after deducting molasses taken in kind.

Daily Capacity	HLA/Day	Allocation as a % of available molasses	Molasses tel quel (t) allocated for crop 2019	Molasses at 86° Brix (t) allocated for crop 2019
Grays Distillery	291.1	22.97%	25,834.16	24,594.89
Medine Distillery	234.3	18.49%	20,795.54	20,595.13
Omnican Distillery	742	58.55%	65,839.43	65,696.66

The available molasses is molasses left for allocation to distilleries after deducting molasses allocated to the livestock sector and molasses taken in kind.

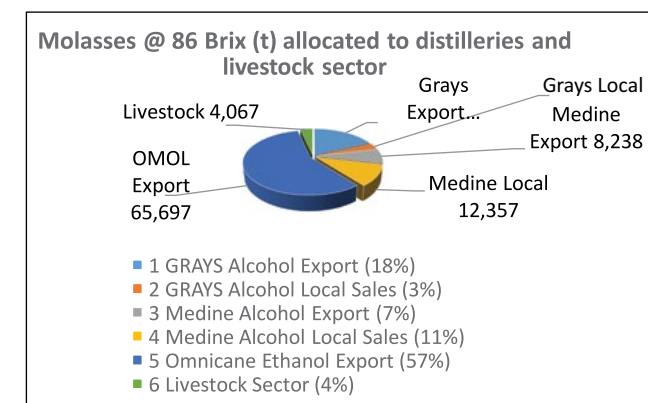


Fig 3. Molasses @ Brix (t) allocated to distilleries and livestock sector

### Blending Ethanol with Mogas- Provision of the SIE Act

The work plan for development of the Ethanol Blending framework consists of the following activities:

- Recruitment of a Consultant
- Capacity Building for the stakeholders through a study tour

The total revenue derived from molasses including the bottler contribution and paid to planters for crop 2019 amounted to MUR3,717.13/t of molasses (MUR2,347.24+ MUR1,369.89).

### Molasses Allocation to Distillers and Distiller-Bottlers- Provision of the SIE Act

Several meetings were held with the distillers as per section 15D of the SIE Act. The Joint Molasses Committee met in June 2020 and the allocation was subsequently finalized in proportion based on certified installed capacities as at January 2016 as it was the case for previous years.

- Development of standards for the ethanol and the mogas
- Procurement of the ethanol by the State Trading Corporation
- Pricing Mechanism for the blended product
- Commissioning and installation of the blending, storage and distribution network by the oil companies
- Trial test runs and use by the public.

A draft Terms of Reference for the recruitment of the Consultant is under consideration by the Ministry of Finance and Economic Planning and Development.

### Biomass Framework- Provision of the SIE Act

The Government has announced plans to increase the use of renewable sources of energy from the current 22% to 35% by 2025. In the same vein, in order to ensure energy security and sustainability, Government had in its Budget Speech 2020/21 showed a more ambitious target of increasing the share of local renewable energy in our energy mix to 40% by 2030.

The table and chart below illustrates the percentage share of resources in the energy mix in 2019.

Table 15. The current percentage share of resources in energy mix in 2019			
	Source	Current electricity(GWh) generation by source in 2019	current % share of resources in energy mix
Non renewable	coal	1174.1	36.2
	HFO	1349	41.7
	Gas turbine( kerosene)	11.7	0.4
Renewable	Bagasse	430.11	13.3
	Cane Trash	9.49	0.3
	Hydro	98.6	3.0
	Landfill gas	19.9	0.6
	Photovoltaic	128.5	4.0
	Wind	15.2	0.5
	Waste to energy	0	0.0
	<b>Total generation</b>	<b>3236.6</b>	<b>100.0</b>

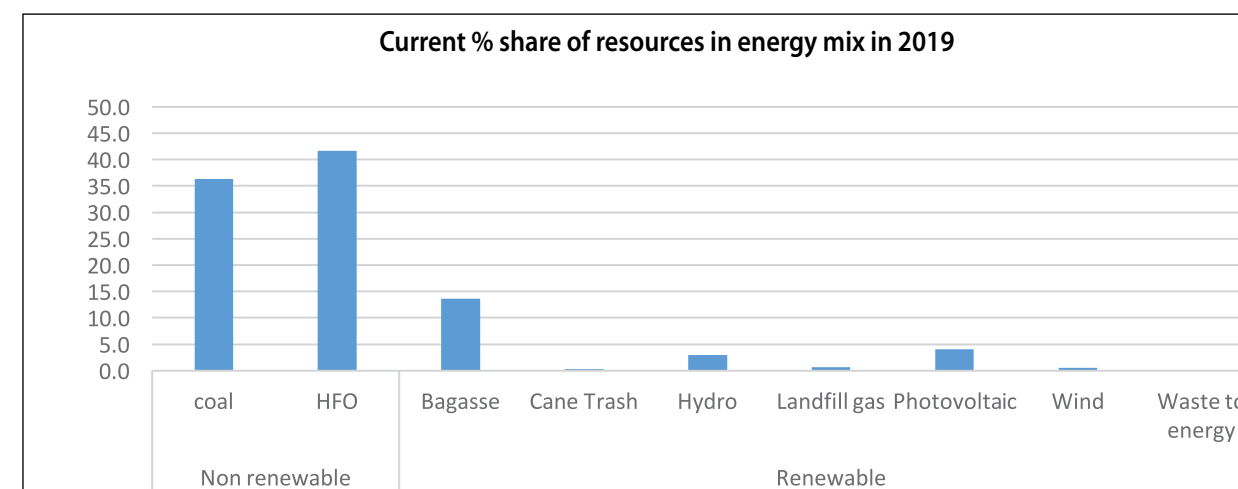


Fig 4. Current % share of resources in energy mix 2019

It is recalled that the Ministry of Energy and Public Utilities (MEPU) had signed a Tripartite Partenariat convention with FEXTE (Fonds d'Expertise Technique et d'Echanges d'Expériences), l'Agence de L'Environnement et de la Maitrise de L'Energie (ADEME) and l'Agence Française de Développement (AFD). The aim was to reinforce renewable energy development in Mauritius and Reunion Island in non-interconnected zones.

The Firm Nodalys of France was awarded the consultancy contract by the Ministry of Energy and Public Utilities in June 2019 to work on the second phase of the study.

The terms of reference for the study included the following:

- Provide an economic assessment of each recommended biomass resource identified under phase 1 for electricity production;
- Identify gaps/barriers in the current legal framework, financing and regulation in the bioelectricity sector and propose recommendations to address them;
- Investigate the possibility of regrouping small planters for biomass cultivation and necessary incentives to be provided so that the viable capacity for the biomass plant can be constructed;



- d) Recommend viable production of each biomass resource and identify investment requirements and farmer group(s) best prescribed for each instrument;
- e) Examine the potential, identify any sources and determine whether it is economically justified to import biomass from countries in the region with a view to substituting coal fuel in existing three coal-bagasse power plants if economically feasible, propose instruments for allowing for such imports;
- f) Propose innovative and sustainable financing schemes to encourage small planters (especially those who have abandoned their land) to replant their lands with energy crops;
- g) Develop a financial tool to determine the utility generation tariff for biomass electricity from different sources as well as the different stream usage other than electricity generation;
- h) Propose a compensation mechanism for CEB, in collaboration with URA, to offset any additional costs potentially generated by bioelectricity compared to other energy sources;
- i) Define a general technical, financial and legal framework allowing producers to inject bioelectricity into the grid;
- j) Recommend appropriate incentives (including fiscal incentives) to encourage planters and farmers to invest (particularly small planters); and
- k) Define an action plan to integrate for achieving the strategic targets as well as key performance indicators for its successful implementation.

A Steering Committee led by the Ministry of Energy and Public Utilities was overseeing the work of the Consultant. The MCIA formed part of

the Steering Committee.

As per an approved plan, the Consultant was on inception mission to Mauritius in June 2019 wherein he met all the relevant stakeholders including the MCIA. The MCIA, Policy and Planning Unit, provided all relevant information. During the next visit to Mauritius in December 2019, the MCIA organized for the Consultant to meet the representatives of planters associations and Mauritius Co-operative Agricultural Federation followed by field visits on 17 and 18 December 2019 to the plantations of eucalyptus and bamboo by Beau Vallon Ltd and Alteo respectively.



Fig 5. Bamboo plantation at Alteo



Fig 6. Eucalyptus plantation at Beau Vallon Ltd

The planters were given the opportunity to learn about the cultivation of these new types of energy crops. The findings of the Consultant were discussed with representatives of planters.

An Executive Summary and a draft report were submitted to the Steering Committee in January 2020. A validation workshop with all relevant stakeholders was held in July 2020.

It was understood that the outcomes of this study would serve as an input for development of the Biomass Framework provided for in section 13B of the SIE Act.

## Budgetary measures and Government decisions for Financial year 2019 and 2020 and progress on previous measures

Table 16. Status and progress on budget measures and Government decisions		
Financial Year	Budget Measures	Progress/ Achievement as at date
2016/2017	<b>Abandoned Cane Lands</b> To put agricultural land to modern and more productive use. In that context, the Mauritius Cane Industry Authority will set up an Agricultural Land Management System to bring unutilized abandoned cane lands of small planters under productive use.	In July 2020, representative from the Firm nvisionIT gave a training to employees of the MCIA on the use of the tool developed to map out lands. This tool would be used to update information.
	<b>Drone Technology</b> Introduction and adoption of drone technology in agriculture, starting with the sugar industry. This new technology will improve the assessment and monitoring of crop performance on large areas.	MCIA has already procured the two drones equipped with sprayer and sensor respectively. The procurement of a software for the calibration of algorithms / procedures has been completed. Training for the use of the equipment has been done in January 2020. MCIA / MSIRI is in the process of procuring two powerful workstations to enable the use of the software for the successful running of the project.
	<b>Biomass</b> Government is working on a scheme to encourage the use of biomass such as cane trash and woodchips by the Independent Power Producers operating in the sugar industry.	The Consultant during his mission of December 2019 met the representatives of planters. A draft report from the Firm Nodalis was submitted in January 2020. A validation workshop with all the stakeholders was held in July 2020. The Consultant is considering the comments received by stakeholders and the final report is being awaited.
2018	<b>Government Decisions</b> <b>27 December 2019</b> Pending the outcome of the study by the World Bank, Government took the following decision: <ul style="list-style-type: none"> <li>"the Sugar insurance Fund Board would extend the financial support given to small planters for crop 2018 to other categories of producers, namely large planters and millers."</li> <li>An inter-Ministerial Committee comprising the Ministry of Agro Industry and Food Security, the Ministry of Energy and Public Utilities and Ministry of Finance, Economic planning and Development has been set up to determine the remuneration for bagasse for crop 2019.</li> </ul>	This one off financial assistance from SIFB amounted to MUR1,250/t sugar was extended to the millers for <b>crop 2018</b> . An additional one-off financial assistance each of MUR1,095.67/t sugar was paid to all planters other than small planters and also the millers for <b>crop 2018</b> .  All measures have been implemented for crop 2018.  Consultations are in progress



The status and progress on budget measures and decisions taken by Government concerning the sugar sector are tabulated as follows:

Table 17. Budget Measures		
Financial Year	Government Decisions	Progress/ achievement
2019-2020	(i) waiving the amount due by small planters under the FORIP (Field Operations Regrouping Project) Scheme;	Implemented
	(ii) waiving 50% of the advance on fertilizers provided to planters through the Mauritius Cane Industry Authority (MCIA);	Implemented
	(iii) the insurance premium paid to the Sugar Insurance Fund Board by planters producing up to 60 tons of sugar is also being waived for crop 2019;	Implemented
	(iv) provision in the budget of the MCIA to meet the shortfall arising from the suspension of CESS payments for crop 2019;	Implemented
	(v) provision of funds under the Cane Replantation Programme to encourage planters to bring their lands back under cultivation;	Implemented (Additional information is given below).
	(vi) Provision of MUR15 M for the MCIA to acquire equipment for harvesting sugar cane of small planters;	Implemented and the harvester will be used during the Crop 2021.
	(vii) A National Biomass Framework will be developed for the use of sugarcane biomass, including cane trash, for electricity generation; and	The Final report from the Consultant Nodalis was awaited.
	(viii) Government has already sought the assistance of the World Bank to provide strategic policy options or making the sugarcane Industry sustainable, in the medium and long term; and	The World Bank has held several consultative meetings with the stakeholders. The study is ongoing.
	(ix) For crop 2019, all planters will benefit from a special unprecedented price of MUR 25,000 per tonne of sugar for the first 60 tonnes of sugar accrued to them. This is more than double the price they would otherwise have obtained.	Implemented

The following budgetary measures were announced in the Budget 2020/2021 for the crop 2020 namely:

- For crop 2020, Government will ensure that planters receive a guaranteed price of MUR25,000 per tonne for the first 60 tonnes of sugar.
- The insurance premium payable to the Sugar Insurance Fund Board by planters producing up to 60 tonnes of sugar will be waived for crop 2020.
- The Mauritius Cane Industry Authority (MCIA) will meet the shortfall arising from the suspension of CESS payments for crop 2020.
- The Cane Replantation Programme will be maintained to encourage planters to bring back land under sugarcane cultivation.
- The rate of customs duty on imported sugar will be increased from 80% to 100%.

In addition, a decision of the Government concerned with fertilizer scheme was taken on 20th September 2019 concerning the crop 2020 and which reads as follows:

*“Government took note of the Fertilizer Scheme being implemented by the Mauritius Cane Industry Authority for the benefit of sugarcane planters with a view to improving cane husbandry and crop productivity.*

*As announced in Budget Speech 2019-2020, Government decided to waive 50% of the advance on fertilizers provided to planters cultivating up to 100 ha of sugar cane for crop 2019. Accordingly, for crop 2020, it has been decided that henceforth, the same Scheme would be implemented for planters cultivating up to 100 ha of sugarcane.”*

The impact of the support provided by Government on the revenue of the planters and millers is tabulated below for the period 2015 to 2019:

Total Revenue (MUR / t sugar) derived by planters producing up to 60 t sugar					
Revenue Streams	2015	2016	2017	2018	2019
Sugar (Ex MSS Price)	13,166.37	15,571.50	10,716.64	8,685.60	11,383.65
MSS Enhanced Payment			600		
MSS Financial Support			850	14.4	
Bagasse Transfer Price Fund (BTPF)	162.29	149.83	164.81	161.05	143.06
Molasses	941.46	865.36	1,038.71	950.77	1,035.77
Distiller Bottler Contribution	320.54	498.7	500.62	585.94	604.49
<b>Revenue sugar +coproducts (MUR/ t Sugar)</b>	<b>14,590.66</b>	<b>17,085.39</b>	<b>13,870.78</b>	<b>10,397.76</b>	<b>13,166.97</b>
Insurance premium waiver	600	720.00	600.00	600.00	467.29
Cess Waiver					455.35
Financial Support for bagasse	1,100.00	1,100.00	1,100.00	1,100.00	
Additional Financial support for bagasse			1,250.00		
Sugar Insurance Fund	2,000.00		1,250.00	1,250.00	
Government Budget				3,287.00	10,910.39
<b>Total Government Financial support</b>	<b>3,700.00</b>	<b>1,820.00</b>	<b>2,950.00</b>	<b>7,487.00</b>	<b>11,833.03</b>
<b>Total Revenue+ Financial Support(MUR/t Sugar)</b>	<b>18,290.66</b>	<b>18,905.39</b>	<b>16,820.78</b>	<b>17,884.76</b>	<b>25,000</b>

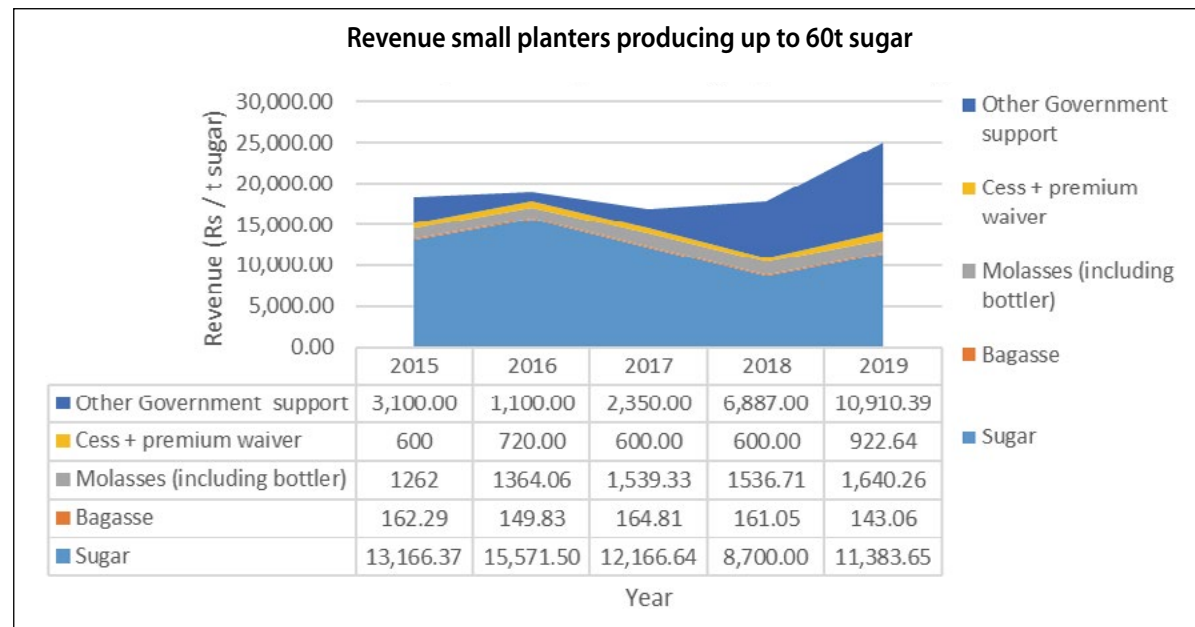


Fig 7. Revenue Small planters producing up to 60t sugar

**Total Revenue (MUR / t Sugar) derived by individual and corporate planters producing more than 60 t sugar, who are not millers**

Revenue Streams	2015	2016	2017	2018	2019	
					First 60 t sugar	In excess 60 t sugar
Sugar (Ex MSS Price)	13,166.37	15,571.50	10,716.64	8,685.60	11,383.65	11,383.65
MSS Enhanced Payment			600			
MSS Financial Support			850	14.4		
Bagasse Transfer Price Fund (BTPF)	162.29	149.83	164.81	161.05	143.06	143.06
Molasses	941.46	865.36	1,038.71	950.77	1,035.77	1,035.77
Distiller Bottler Contribution	320.54	498.7	500.62	585.94	604.49	604.49
<b>Revenue sugar +coproducts (MUR/ t Sugar)</b>	<b>14,590.66</b>	<b>17,085.39</b>	<b>13,870.78</b>	<b>10,397.76</b>	<b>13,166.97</b>	<b>13,166.97</b>
<b>Government Financial Support (MUR/ t Sugar)</b>						
Insurance premium waiver						
Cess Waiver					455.35	455.35
Financial Support for bagasse	300.00	300.00	300.00	300.00		
Additional Financial support for bagasse				1,250.00		
Sugar Insurance Fund	2,000.00		1,250.00	1,250.00		
Additional SIF one off support				1,095.67		
Government support for guaranteed price					11,377.68	
<b>Total Government Financial support</b>	<b>2,300.00</b>	<b>300.00</b>	<b>1,550.00</b>	<b>3,895.67</b>	<b>11,833.03</b>	<b>455.35</b>
<b>Total Revenue+ Financial Support(MUR/t Sugar)</b>	<b>16,890.66</b>	<b>17,385.39</b>	<b>15,420.78</b>	<b>14,293.43</b>	<b>25,000.00</b>	<b>13,622.32</b>

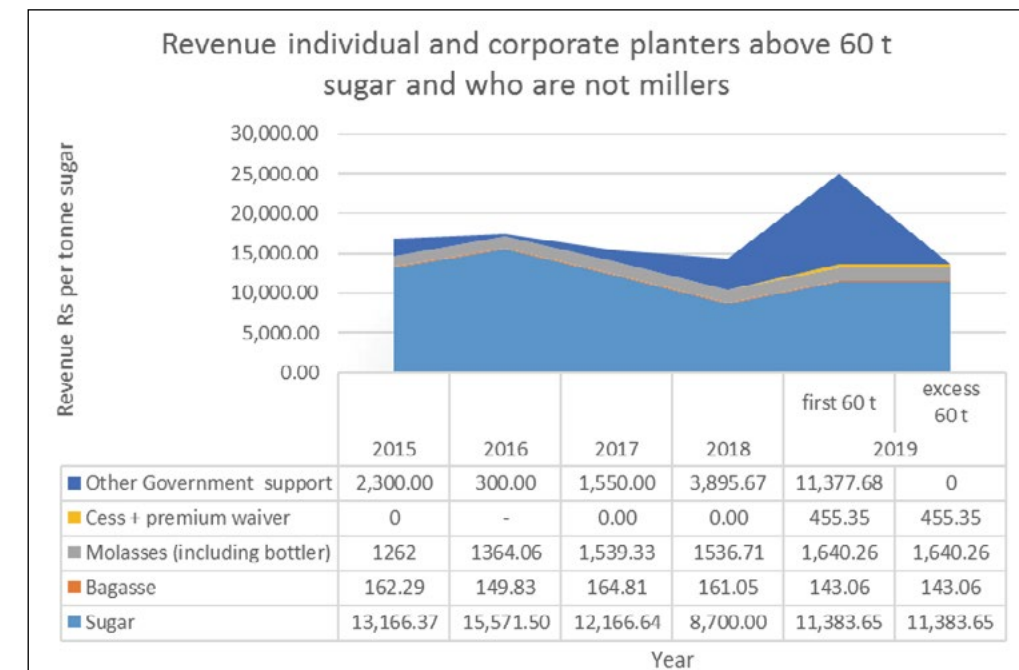


Fig 8. Revenue Individual and Corporate planters above 60t sugar and who are not millers

**Total Revenue (MUR/ t Sugar) derived by Corporate planters who are millers**

Revenue Streams	2015	2016	2017	2018	2019	
					First 60 t sugar	In excess 60 t sugar
Sugar (Ex MSS Price)	13,166.37	15,571.50	10,716.64	8,685.60	11,383.65	11,383.65
MSS Special advance				14.4		
MSS Enhanced Payment			600			
MSS Financial Support			850			
Bagasse Transfer Price Fund (BTPF)	60.35	55.03	55.43	52.79	66.34	66.34
Molasses	941.46	865.36	1,038.71	950.77	1,035.77	1,035.77
Distiller Bottler Contribution	320.54	498.7	500.62	585.94	604.49	604.49
<b>Revenue sugar +coproducts (MUR/ t Sugar)</b>	<b>14,488.72</b>	<b>16,990.59</b>	<b>13,761.40</b>	<b>10,289.50</b>	<b>13,090.25</b>	<b>13,090.25</b>
<b>Government Financial Support (MUR / t Sugar)</b>						
Insurance premium waiver						
Cess Waiver					455.35	455.35
Financial Support for bagasse	300.00	300.00	300.00	300.00		
Additional Financial support for bagasse				1,250.00		
Sugar Insurance Fund	2,000.00		1,250.00	1,250.00		
Additional SIF one off support				1,095.67		
Government Budget					11,454.40	
<b>Total Government Financial support</b>	<b>2,300.00</b>	<b>300.00</b>	<b>1,550.00</b>	<b>3,895.67</b>	<b>11,909.75</b>	<b>455.35</b>
<b>Total Revenue+ Financial Support(MUR/t Sugar)</b>	<b>16,788.72</b>	<b>17,290.59</b>	<b>15,311.40</b>	<b>14,185.17</b>	<b>25,000.00</b>	<b>13,545.60</b>

Revenue Corporate Planters who are millers

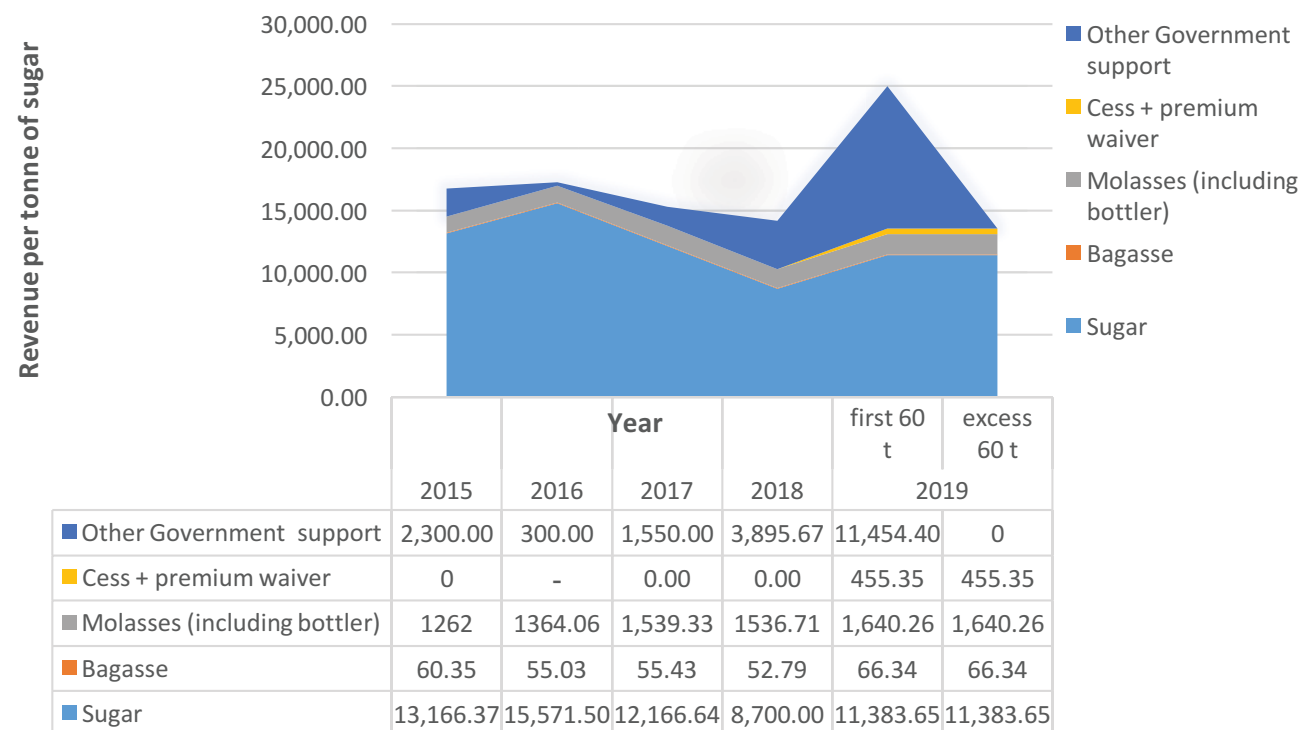


Fig 9. Revenue Corporate planters who are also millers

Total Revenue (MUR / t Sugar) derived by Millers					
Revenue Streams	2015	2016	2017	2018	2019
Sugar (Ex MSS Price)	13,166.37	15,571.50	10,716.64	8,685.60	11,383.65
MSS Enhanced Payment			600		
MSS Financial Support			850	14.4	
<b>Gross Revenue sugar +coproducts (MUR/ t Sugar)</b>	<b>13,166.37</b>	<b>15,571.50</b>	<b>12,166.64</b>	<b>8,700.00</b>	<b>11,383.65</b>
Government Financial Support (MUR/ t Sugar)					
Insurance premium waiver					
Cess Waiver					455.35
Financial Support for bagasse					
Additional Financial support for bagasse					
Sugar Insurance Fund	2,000.00		1,250.00	1,250.00	
Additional SIFB Financial support				1,060.77	
Government Budget					
<b>Total Government Financial support</b>	<b>2,000.00</b>	<b>0.00</b>	<b>1,250.00</b>	<b>2,310.77</b>	<b>455.35</b>
<b>Total Revenue+ Financial Support(MUR/t Sugar)</b>	<b>15,166.37</b>	<b>15,571.50</b>	<b>13,416.64</b>	<b>11,010.77</b>	<b>11,839.00</b>

Revenue Millers

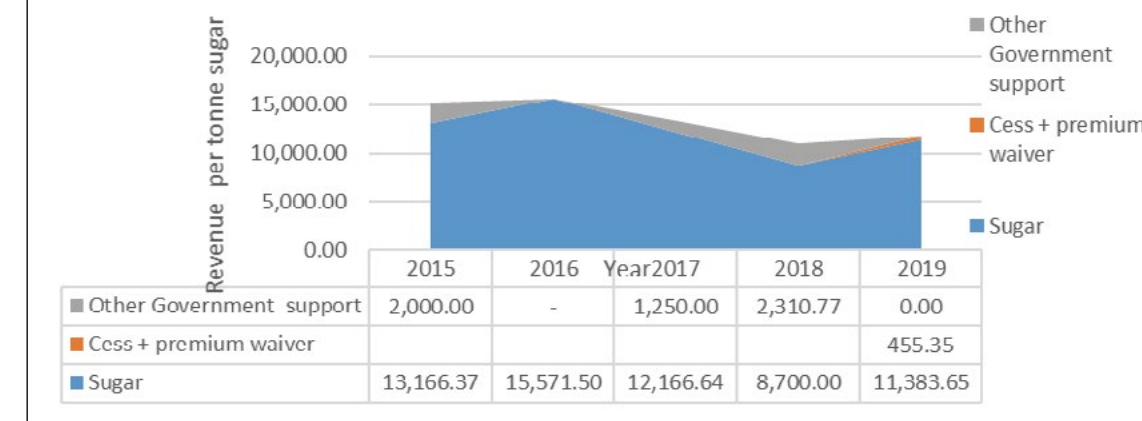


Fig 10. Revenue millers

### The SIE (Amendment) Act 2016 – Workers employed by Job Contractor

The MCIA has set up a committee to determine the number of man-days to be performed by workers employed by job contractors and seasonal workers employed by the employer of the Sugar Industry as per the provisions of the SIE Act. The total number man-days of seasonal workers to be required in the sugar industry shall be determined by MCIA in consultation with the recognized trade unions and the employers on or before 30 April of each year for the following crop year. The composition of the meeting shall consist of the MCIA, a representative of employers and a representative of recognized trade unions.

The employers of the industry consist of growing and milling sugar companies. In the sugar sector, employees are normally categorized as agricultural and non-agricultural workers. During the setting up of the Technical Committee, it was agreed by all stakeholders that employers will be represented by one representative from the growing companies and another one from the milling companies. Similarly, for the trade union one member from each category of employees is represented on the Technical Committee.

For the Crop 2019, MCIA has requested the sugar companies to submit the required man days in order to enable the Technical Committee to discuss on same before determining the number of man-

days to be performed by workers employed by Job Contractors and seasonal workers employed by the employer of the Sugar Industry. After several meetings held for Crop 2019 no consensus could be reached.

### Technical Committee on seasonal workers

A Technical Committee on seasonal workers and workers employed by Job Contractors was set up.

In January 2020, discussions were held at the level of the Policy and Planning Unit at the MCIA to find a way forward to settle the issue of seasonal workers by end of April 2020.

As per SIE Act Technical Committee is composed of:

- A representative of the MCIA as Chairperson;
- A representative of employer; and
- A representative at the relevant recognized trade union.

Sugar Companies consist of growing and milling companies. In the sugar sector, employees are categorized as agricultural and non-agricultural workers.

Consequently, it was agreed by all stakeholders that employers will be represented by one member from the growing companies and another from the milling companies.



Similarly, one member from each category of employees is represented on the Technical Committee.

For the year 2019/2020, the Committee is composed as follows:

- (i) A representative from the MCIA as Chairperson
- (ii) A representative from growing companies  
Mr Christian Marot up to March 2020  
(Retired from service)
- (iii) A representative from milling companies  
Mr Mario Antonio
- (iv) A representative of agricultural workers  
Mr Devanand Ramjuttun
- (v) A representative of non-agricultural workers  
Mr Lall Dewnath

As per the SIE Act, the Ministry responsible for the subject of labour assists the Technical Committee in carrying out its tasks.

The Technical Committee was assisted by Messrs L. Jhurry, R. Gutteea and D. Nursimulu for the compilation of information required by the Committee.

During the COVID-19 lock down period, the Policy and Planning Unit at the MCIA liaised with the sugar companies on the difficulties that they were facing due to the lockdown. The Unit also prepared a database to collect information from sugar companies for the Technical Committee to work on.

Prior to lockdown only one sugar company submitted information required by the Technical Committee.

After the lockdown period, the Policy and Planning Unit liaised with stakeholders on the way forward for Crop 2020 and scheduled meetings in the following weeks.

## Registration and payment of a contribution to the MCIA for the importation and sales of sugar on the local market

As per the Regulation made under section 63 of the MCIA Act in 2012 and subsequent amendment made thereon, every importer of sugar for domestic consumption and industrial usage has to make a contribution of MUR3.70/kg of sugar to MCIA. Furthermore, an import duty of 80% is applicable on imported sugars for domestic consumption to render such sugar less competitive vis-à-vis locally produced sugar.

For the year 2019, 31 companies/importers were registered with the MCIA. An amount of 16,617 Mt of sugar was imported/sold on the local market and some 14,030 Mt of locally produced sugar were sold locally. The MCIA has received a total contribution of some MUR 113M, which have been used for the payment of pensions for the ex-dockers.

As regards the quality of sugar imported, the importers are required to submit the certificate of analysis as a prerequisite for customs clearance of the imported consignment.

## Activities related to the Multi Annual Adaptation Strategy (MAAS) (2006 - 2015)

During the course of the year 2019 to June 2020 the following activities continued under the projects related to the MAAS plan:

**Project 1:** Field operations and the regrouping of planters

**Project 2:** Rightsizing of production entities: the implementation of a Voluntary Retirement Scheme

**Project 3:** Centralization of sugar factories

## Other components:

- (i) Electricity generation
- (ii) Métafers
- (iii) Fair Trade
- (iv) Environmental issues

## Project 1: Field operations and the regrouping of planters

The objectives of this project are to improve the cost competitiveness of the field sector and to ensure the sustainable and reliable supply of canes by small planters through regrouping. The Field Operations Regrouping and Irrigation Project (FORIP) was to cover some 12,000 ha during the period 2006-2015. Given the recent increase in demand from planters to join this scheme, Government decided to extend the scheme until end June 2022 and provision was made for the allocation of additional funds accordingly.

The implementation of FORIP was initially based on a multi-phased approach, i.e. Phases I, II and III. Phase IV was initiated in July 2009 and was completed in December 2010. For the period 2010-2015 the implementation of the project was based on a calendar year basis in line with the Programme Based Budgeting (PBB) for the allocation of funds. Subsequently, as from 2016 the project was implemented on a financial year basis.

In 2016, the appellation of the project was changed to Sugarcane Planters Regrouping Project (SPRP) with modifications to the Planters Contract Agreement and the scope of works, which is summarised below:

- (i) planters who must be owners of less than an aggregate of 15 ha compared to 25 ha previously to be eligible join this project (i.e. the scheme targets the small/medium planters who are the most vulnerable ones);
- (ii) additional conditions have been included to enable the MCIA not to proceed with works under certain specific terms and conditions;

(iii) the previous provision pertaining to planter's contribution has been amended to link it with the viability price of sugar. Planters will need to contribute only for years when the ex-MSS price of sugar exceeds MUR 16,000/t;

(iv) under the new scheme the provision regarding the payment of cash advance to planters was abolished as was the case under FORIP.

However, in case a planter has got a cash flow problem, the MCIA would look into the possibility to make arrangements with banking institutions to enable the planter to contract a loan;

(v) no provision will be made for the rehabilitation of fields once handing over has been carried out;

(vi) no provision will be made for excavation works and carting away of rocks in difficult areas; and

(vii) otherwise, all other provisions of FORIP have been maintained.

The total cumulative extent regrouped, derocked and planted during the period covering 2006 to end June 2020 is 11,568 ha (i.e. representing some 96.3 % of the extent earmarked under this project) involving some 12,151 planters as indicated in Table 18.

**Table 18. Area involved under the different phases of FORIP [2006 -2015] and SPRP [2016-2019]**

Phase (Period)	Area (ha)	No. of Planters
Phase I (Aug 2006 – April 2007)	340	245
Phase II (May 2007 – April 2008)	973	785
Phase III (May 2008 – June 2009)	1,081	1,149
Phase IV (Jul 2009 – Dec 2010)	1,215	735
Phase V (Calendar year 2011)	1,325	1,407
Phase VI (Calendar year 2012)	1,396	1,675
Phase VII (Calendar year 2013)	1,331	1,597
Phase VIII (Calendar year 2014)	1,458	1,665
Phase IX (Calendar year 2015)	564	677
Phase X (Jan 2016 to July 2016)	590	708
Phase XI (FY 2016/2017)	727	872
Phase XII (FY 2017/2018)	293	328
Phase XIII (FY 2018/2019)	258	289
Phase XIV (July 2019 - June 2020)	17	19
<b>Total</b>	<b>11,568</b>	<b>12,151</b>

The actual cane transport / associated costs incurred by the millers amounted to MUR87.174M and an agreement was made amongst the parties to meet the additional cost. Before the start of the Crop 2020, MCIA has initiated consultation with the above-mentioned stakeholders including Medine Ltd to find a solution for Medine's cane transport cost for the Crop 2020 onwards.

## Project 2: Centralization of sugar factories

### Closure of Medine Sugar Factory

Following the Closure of Medine Sugar Factory, a memorandum of understanding was signed on 25 June 2019 for the sharing of the cane transport and associated costs amongst the three millers (Terra, Omnicane and Alteo Ltd), MCIA and MSS for the Crop 2019 for an estimated amount of MUR85M.

## Project 2: Centralization of sugar factories

The progress on monitoring of factory closure conditions for the period 2017 to June 2020 is tabulated below:

Table 19. Factory Closures					
Closed Factories	Disbursement of Fund from EU to meet Cash Compensation to Beneficiaries	Disbursement of Planters Fund	Handing over of Title Deeds to Beneficiaries	Erection of 150m <sup>2</sup> fertilizer store or multipurpose building	Road Infrastructure
1. St Felix closure in 2006	✓	✓	✓	*	✓
2. Riche En Eau closure in 2007	✓	✓	✓	*	✓
3. Mon Desert Mon Tresor closure in 2007	✓	✓	✓	*	✓
4. Mon Desert Alma closure in 2008	✓	✓	✓	*	✓
5. Union St Aubin closure in 2011	✓	Overdue MUR 6M not yet settled by Omnicane	✓	*	✓
6. Mon Loisir closure in 2012	✓	✓	✓	Pending	✓
7. Deep River Beau Champ closure in 2014	✓	✓	In Progress	Pending	✓
8. Medine closure in 2019	No EU fund. Payment was made to beneficiaries by Medine Ltd.	✓ Payment made for first year	In Progress	Medine Ltd has been requested to submit the survey report for the Henrietta Office	Not required

Note: ✓ means completed

Note: \* means pending, OMOL claims financial difficulty

Omnicanne Milling with respect to closure of Union St Aubin Sugar Factory still has an overdue account of MUR6M. Following closure of the Medine Sugar Factory in 2019, they have made the first payment of MUR3M in June 2020.

### Fertilizer Store/Multipurpose Complex

With regard to the erection of fertilizer stores or multipurpose complexes, there was in principle an agreement that for all the closures that have occurred in the south, OMOL will provide fertilizer store at two sites namely Plaine Magnien and Britannia. Clearance has been obtained from the District Council for the site at Plaine Magnien. However, no progress was recorded for the development of the site as OMOL claimed having financial difficulty.

In the context of the closure of Mon Loisir and Deep River Beau Champ the cane receiving mills namely Terra Milling and Alteo Milling respectively have not proposed sites for this development.

There has been no new development regarding the above factory closures. Medine Ltd has submitted its proposed sites for the setting up of the fertilizer store following the closure of Medine Sugar Factory. A site visit was made in the presence of the representatives of MCAF Ltd, MCIA and Medine Ltd, whereby a decision was taken during the site visit for the setting up of the fertilizers store at the Henrietta Office (i.e. the building adjacent to the main road). Medine Ltd was requested to submit to all parties a survey report of the existing building for the setting up of the store as well as parking/delivery space.

### Road Infrastructural Works

The MCIA has liaised with RDA for any outstanding road infrastructural works to be completed by Omnicanne and Alteo in the context of closure of Union St Aubin and Deep River Beau Champ. All the works were completed.

### Project 3: Socio – Economic Projects in favour of Employees of the Sugar Industry

- MCIA has been liaising with the sugar companies and Government Authorities to complete all the outstanding infrastructure works.
- An Inter-Ministerial Committee has been set up by Government since 2019 on land to be allocated to former employees of the Sugar Estates under the Voluntary Retirement Scheme (VRS), Early Retirement Scheme (ERS) and Blue Print (Sugar Factory Closures).
- Mauritius had 259 Sugar Mills in the year 1838 and at the beginning of the 19th century, there were 60 to 80 Mills.
- As from the year 2019, after the closure of Médine sugar factory, Mauritius has only three sugar factories namely, Terra Sugar Milling, Omnicanne and Alteo Milling.

### Development on Voluntary Retirement Scheme (VRS)

- The responsibility to implement the VRS is entrusted to the MCIA (Policy and Planning Unit)
- Several Ministries, Government Authorities, District Councils and Municipalities are either directly or indirectly involved to ensure that the conditions imposed in the Letter of Intent (LOI) issued by the Ministry of Housing and Land Use Planning is respected and onsite and offsite infrastructure works are carried out properly.
- All infrastructure works are completed at the satisfaction of the beneficiary, MCIA, and Government Authorities.

**Table 20. STATUS OF HANDING OVER OF TITLE DEEDS FOR VRS/ERS/BLEU PRINT**

Period	Schemes	No. of Beneficiaries	Title Deeds handed over	Outstanding Cases
2001 - 2007	VRS 1 BLUE PRINT	8,317 1,051 <b>9,368</b>	9,368 (For 2001-2007)	Nil
2007 - 2014	VRS 2: 2007 2012	6,728 411		
	ERS	209		
	BLUE PRINT	1,145		
		<b>8,493</b>	1,500	571
Jan 2015 - May 2019	VRS 2	44		
	BLUE PRINT	107		
		151	7,539	
June 2019 - June 2020			534	
<b>GRAND TOTAL</b>		<b>18,012</b>	<b>17,441</b>	<b>571</b>

**Table 21. Outstanding cases for completed sites as at 30 June 2020**

Status	Number of Title Deeds	
1 Title deeds under preparation by Notary:	70	97
- VRS: Piton	27	
- Blue Print: Belle Vue Maurel		
2 Title deeds ready for handing over		-
<b>Total</b>		<b>97</b>



Table 22. Title Deeds under preparation

Sugar Companies	Site	Works in Progress	Title deeds under Preparation
<b>VRS 2</b>			
Médine Ltd.	Palma	118	
Médine Ltd.	Bambous	115	
Alteo Ltd	Piton		70
Cie Gros Cailloux Ltd		44	
<b>St Félix SE</b>	Rivière des Anguilles	144	
		<b>421</b>	<b>70</b>
<b>BLUE PRINT (Factory closures)</b>			
Alteo Ltd.	Belle Vue Maurel	-	27
Alteo Ltd.	Bonne Mère	126	
Médine Ltd.	Casela	107	
		<b>233</b>	<b>27</b>
<b>GRAND TOTAL</b>		<b>654</b>	<b>97</b>

#### VRS

##### Works ongoing

- Palma - 118 beneficiaries
- Bambous - 115 beneficiaries
- Piton - 70 beneficiaries  
(works completed/preparation of draft title deeds)
- St. Felix - 144 beneficiaries

##### Blue Print

- L'Amitié - Title Deeds handed over on 26 February 2020 (3 beneficiaries)
- La Clémence - Title Deeds handed over on 26 February 2020 (132 beneficiaries)
- Belle Vue Maurel - Title Deeds to be prepared (27 beneficiaries)
- Rivière des Créoles - Title Deeds handed over on 26 February 2020 (9 beneficiaries)
- Casela - Works not yet started (107 beneficiaries)

#### STATUS OF VRS AND BLUE PRINT

Table 23. Status of VRS and Blue Print

	Sugar Company	Scheme	Morc Board MHL/M	No of beneficiaries	Site	Status
1	Médine		M/17413	118	Palma	<ul style="list-style-type: none"><li>- Company is awaiting EIA report.</li><li>- On receipt of EIA Company will proceed with infrastructure works.</li><li>- Land Acquisition required for upgrading of the Palma Round-about.</li></ul>
2	Médine	VRS	M/17402	115	Bambous	<ul style="list-style-type: none"><li>- Upgrading of the Culvert along the A3 – Black River Road is financed by RDA and Medine S.E.</li><li>- RDA is responsible for upgrading of the culvert.</li><li>- MCIA will follow up with Medine S.E to ensure that dredging works start immediately after completion of the culvert.</li><li>- Morcellement Permit will be issued only upon receipt of clearances from all relevant Authorities.</li></ul>
3	Alteo	VRS	M/16288	70	Piton	<ul style="list-style-type: none"><li>- MCIA has vetted the draft title deeds.</li><li>- Company to do needful to fix date for signature of title deeds.</li></ul>
		Blue Print	M/17165	126	Bonne Mere	<ul style="list-style-type: none"><li>- CWA to issue clearances.</li><li>- Morcellement Board to issue Morcellement Permit to enable Company to prepare title deeds.</li></ul>

Table 23. Status of VRS and Blue Print (contd.)

	Sugar Company	Scheme	Morc Board MHL/M	No of beneficiaries	Site	Status
4	St Felix SE	VRS	M/17413	144	Chemin Grenier	- 30% works outstanding. - Company in financial difficulties.
5	Cie de Gros Cailloux	VRS	M/18726	44	Kahin (Gros Cailloux)	- Works nearly completed.
6	Alteo Ltd	Blue Print	M/16872	132	La Clemence	- Title Deeds handed over to beneficiaries on 26 February 2020.
		Blue Print	M/17166	9	Rivière des Créoles	- Title Deeds handed over to beneficiaries on 26 February 2020.
7	Medine S E	Blue Print	M/19914	107	Casela	- Works not yet started.
Total				865		

**Surplus plots of land on the VRS/ERS/Blue Print employees' site and on the Phasing out of Sugar Camps**

**Surplus plots of land:**

VRS	76
Phasing out of sugar camps	60
B. Print	26
<b>Total</b>	<b>162</b>

- All companies will submit their status on completion of the schemes.

- It has been agreed by all stakeholders that the land could be sold subject to:

1) Approval of MCIA as the Morcellement has been approved by the Morcellement Board under certain socio-economic projects under the supervision of the MCIA.

2) Plot of land to be kept and maintained on a regular basis until a decision is taken.

3) No one will be authorized to occupy the plot of land.

4) All plots should be properly pegged.

Land to be sold to:

(i) All persons that the Company had an agreement with evidence as at December 2016 and having informed the MCIA.

(ii) Land will not be sold to those employees who have already benefitted plots of land under VRS/ERS/Blue Print and Phasing out of sugar camps.

(iii) Land to be sold by sugar companies to existing permanent employees in the Cane Industry after having refunded the amount of MUR300,000 (representing the infrastructural cost) to the MCIA.

Table 24. Surplus plots of land under VRS/ERS/Blue Print/Phasing out of Sugar Camps

Sugar Company	Scheme: VRS /ERS/ Blue Print/ Phasing out of Sugar Camps	Name of site	Number of surplus plots
St. Felix S.E Co. Ltd.	VRS 1	CheminGrenier	45
Mont Choisy	Phasing out of Sugar Camps	Mont Choisy	2
St. Aubin	VRS 1		2
Medine	Phasing out of Sugar Camps	Eaux Bonnes	8
	VRS 1	Camp Mapou Chebel	5 2
Cie Sucrière de Bel Ombre	VRS 1	Case Noyale	2
Terragri Ltd.	VRS 1	Bois Mangues	8
	VRS 2	Bois Mangues	1
		Mon Goût Maison Blanche	1 6
Omnican Ltd.	VRS 1	Batimara - R. des Anguilles Britannia	2 1
Britannia	Phasing out of Sugar Camps	Camp Berthaud 1	4
Mon Trésor Mon Désert	Phasing out of Sugar Camps	Cote D'Or Deux Bras Sauveterre	4 1 1
Omnican Milling Operations	Blue Print	Tyack	8
Omnican (St. Felix)	Blue Print	St. Felix	14
Omnican (Mon Trésor)	Blue Print	Mon Trésor	4
Omnican Ltd.	Phasing out of Sugar Camps	Desplaces	41
<b>Total</b>			<b>162</b>

• N.B. Mont Choisy and Terragri are in the process to sell the surplus plots of land

The winding up of the Phasing Out of Sugar Camps project was held on 20 December 2017.

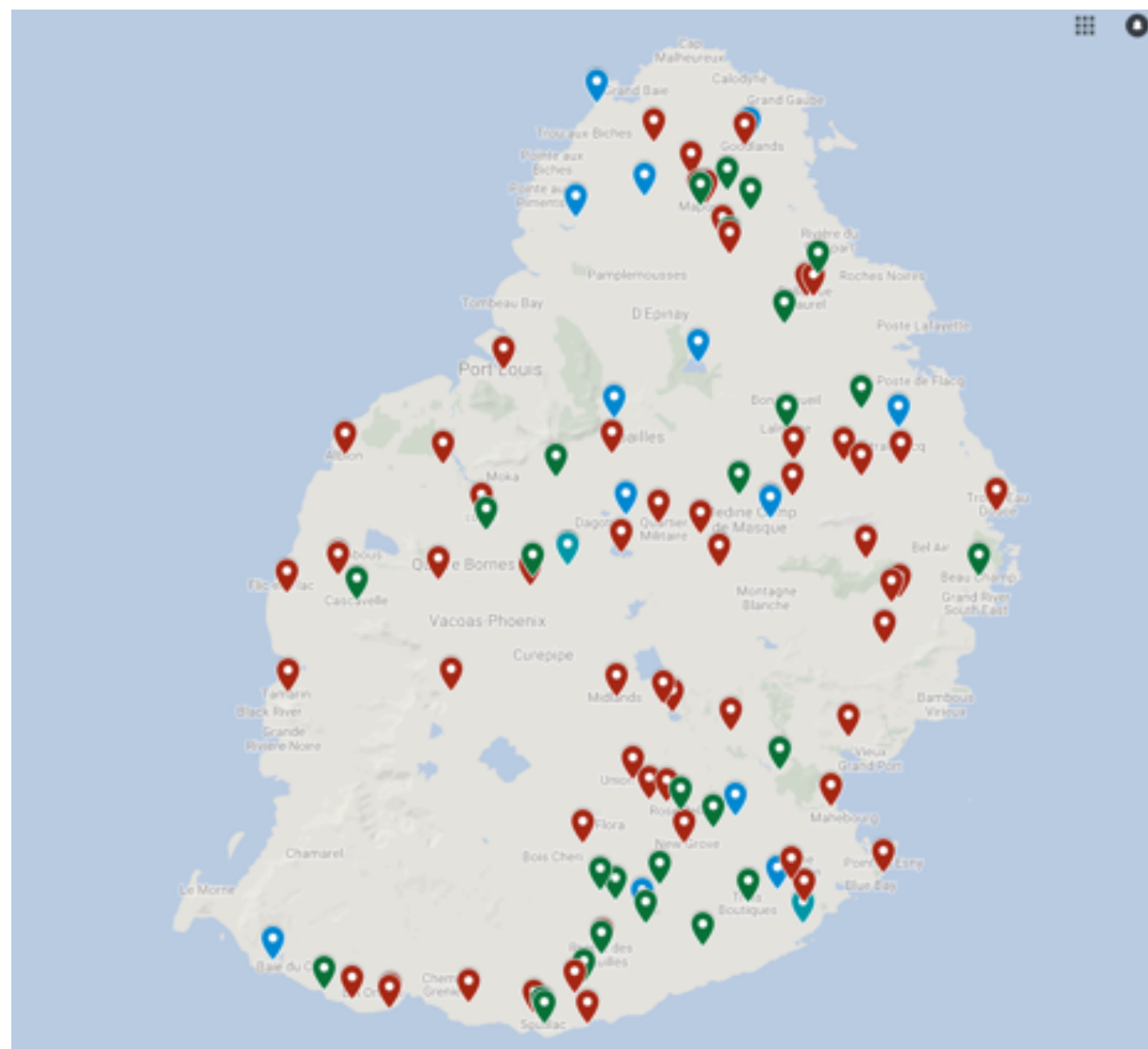


Fig. 11 Sugar Camps

Note:

1. Red marks refer to sugar camps that existed previously
2. Green marks refer to sugar camps that have been rehabilitated/moved
3. Blue marks refer to sugar camps that have not been moved

## Housing Grant

Beneficiaries of Blue Print and Phasing out of Sugar Camp are eligible for an amount of MUR 7,000 as a Housing Grant on reaching the slab level of their residence on the plot of land that they have obtained.

Table 25. Housing Grant

Scheme	No. of Beneficiaries	Amount (Rs)
Phasing out of sugar camp	113	791,000
Blue Print (factory closure)	109	763,000
<b>Total</b>	<b>222</b>	<b>1,554,000</b>

Table 26. Status of plots of land under Factory Closures – As from Year 2004

S.N	Request for Closure	Sugar Factory Closed	Year Closed	Number of Workers and Staff	Extent of Land Developed (Arpents)	Scheme	Date Handed Over Title Deeds
1	Highlands	Highlands	2002	126	23.22	Blue Print	June 2004
2	Britannia	Britannia	2003	141	24.42	Blue Print	February 2005
3	St. Felix	St. Felix	2007	154	26.50	Blue Print	December 2014
4	MTMD (SUDS)	MTMD	2007	143	25.00	Blue Print	February 2013
5	Riche en Eau (SUDS)	Riche en Eau	2007	150	26.12	Blue Print	February 2016
6	Mon Desert Alma	Mon Desert Alma	2007	189	24.12	Blue Print	November 2010 / June 2011
7	Union St. Aubin (OMNICANE)	Union St. Aubin	2010	-	-	Blue Print	June 2015
8	Mon Loisir (CUMIL)	Mon Loisir	2012	-	-	Blue Print	Gokhoola February 2017/P. D'Or Hamlet February 2017/La Clémence February 2020 /L'Amitié Outstanding
9	Deep River Beau Champ	Deep River Beau Champ	2014	161	-	Blue Print	Q. Victoria November 2018/Bel Air March 2019/R.des Créoles February 2020/Bonne Mere Outstanding
10	Medine	Medine	2019	113	25.00	Blue Print	On going
			<b>Total</b>	<b>1,177</b>	<b>174.38</b>		

- N.B. For the period 1985-2001, eight sugar factories have closed.



## Other components

### Electricity Generation

In 2019, electricity generation went up by 3.4% from 3,132 GWh (269 ktoe) in 2018 to 3,237 GWh (278 ktoe), of which 78.3% (2,535 GWh or 218 ktoe) was generated from non-renewable sources and 21.7 % (702 GWh or 60 ktoe) from renewable sources.

The Independent Power Producers produced around 54.8% of the total electricity generated and the Central Electricity Board produced the remaining 45.2%.

During the same period 2018-2019, sales of electricity increased by 3.9% from 2,650 GWh to 2,754 GWh and the average sales price remained around MUR 6 per kWh.

### The CEB/IPP's Power Purchase Agreements

#### Alteo Power Plant – contract extension for 3 years

The extended contract at Alteo covers the period 2019- 2022.

The extended contract takes on board cane trash combustion as a pilot project. It is for the first time that IPP's and trash suppliers would be remunerated for the use of trash with a production of some 3 GWh as a test case. The trash suppliers would be remunerated at MUR1.00 / KWh.

#### Terragen power plant-contract extension for 2 years

The Terragen power plant contract expired in June 2020. The contract was renewed to cover the period 2020 -2022.

## Agricultural Land Management System (ALMS)

### *Development of an Electronic Data Management System*

In order to bring back abandoned land to efficient use, particularly in the context of declining production, Government has set up a scheme known as the Agricultural Land Management System (ALMS). Under the ALMS project, the MCIA is implementing the Cane Replantation Scheme (CRS) to assist all those planters who are committed to re-establish cane cultivation in their abandoned fields. In parallel, the MCIA has implemented the Electronic Data Management System (EDMS) project, which is explained below.

The EDMS shall provide real-time information and visuals identifying the physical and exact geographical location of each plot of land through a satellite image. It will initially track the land that is under sugarcane cultivation and also the current land use of fields which were previously under sugarcane cultivation by using colour codes to represent the different status of the lands. The system is targeted to be used as a knowledge-based management system on land utilization for policy formulation on how to make the best use of land resources.

Initially, the system will be used to track the status of lands belonging to the non-corporate sector of the cane industry but eventually, it will be scalable so as to take on board the corporate sector as well as other agricultural lands (e.g. FAREI and Forestry Department among others).

A prototype of the system has been completed for the Alteo Factory Area last year. Subsequently, MCIA has procured the services of a supplier to complete this exercise for all the other remaining factory areas. The supplier has completed the assignment in March 2020 and the system is now live and running on the cloud and can be accessed from anywhere provided a username and password have been allocated to the person accessing the system.

## Cane Replantation Scheme (CRS)

Another component of the ALMS is the implementation of the 2019/2020 budgetary measure through the Cane Replantation Scheme (CRS). The objective of the CRS is to motivate planters to replant sugarcane, either in their abandoned fields or renew their fields which have already completed a cane cycle of at least 6 years under the Field Operations, Regrouping and Irrigation Project through the payment of a cash grant of MUR 83,000/ha. Whereas those planters who did not complete a cane cycle of 4 years would be eligible for a reduced cash grant of MUR 58,000 /ha only for the replantation of their fields. This scheme will ensure that planters do not eventually abandon their plantations given the present difficult context.

Eligible planters will be required to make their own arrangements and incur all the expenses for the land preparation and plantation of their fields. Upon completion of works and verification to the satisfaction of the MCIA, a one-off cash grant of MUR 83,000/ha or MUR 58,000/ha will be paid to the planters. As at end June 2019, land owners holding a total extent of 448 ha have signed their respective contract agreement with the MCIA to benefit from the scheme and an extent of 442 ha has already been replanted. Work is ongoing on the remaining extent.

### Métayers

Pursuant to the agreement reached between the Ministry of Agro-Industry and Food Security (MoAIFS) representing Government and MSPA on 29 March 2010, the MCIA requested members of the ex-MSPA to implement provisions of the agreement. This agreement also makes provision for the possibility for a métayer to buy the land he/she is occupying if it is considered as non-strategic or an alternative plot of land if the land occupied is considered to be strategic by the owner estate. The final price will include a discount of 35% as per the provision of the said agreement.

The MCIA is monitoring and acts as a facilitator regarding the implementation of the provisions of the agreement. For the Crop 2019, only Constance

La Gaiete (CLG) Co. Ltd. has submitted its request to the MCIA for the sales of some of its métayers land to the métayers who are occupying the said plots. MCIA has submitted the valuation report made by CLG Co. Ltd to the Government Valuation Office for cross-valuation.

### Fair Trade

Export of sugar for small planters under the Fair-Trade accredited system is yet another avenue for generating additional revenue and this is contributing towards overcoming the impact of the reduction in sugar price.

There is a potential for small planters to export some 40,000 t of sugar under this label. Export of sugar sold at a premium rate of 60 USD/t of sugar under this label has decreased from 18,530t in 2018/19 to a provisional figure of 16,500t in 2019/20 due to deregistration of certain co-operative societies. These co-operative societies have already embarked on the process of recertification and in the event of recertification, the total volume of sugar exported under this label would increase eventually. The total premium received and paid to producers for the Crop 2018 is estimated around MUR40M.

A new system of accreditation for the small planters who are grouped into cooperatives has been set up under the Altromercato Ferrero initiative, which involved the export of some 4,000t of white refined sugar shipped to Ferrero whereby an additional premium of €40/t of sugar was received by the cooperatives. Under this scheme, some 700 registered cooperative planters are also eligible to receive both bio and chemical fertilizers free of cost in line with the recommendation made by the MSIRI after soil analysis.

### Environment Issues of the Sugar Cane Cluster

#### Air Pollution Monitoring System

For the period July 2019 - June 2020 the total number of tests carried out was 110. It also included emission tests carried out for Port Mathurin and Pointe Monnier CEB Power Stations for Rodrigues in July 2019.

Parameters tested	2017 (July 2017 to June 2018 - 12 months)	2018 (July 2018 to June 2019 - 12 months)	2019 (July 2019 to June 2020 - 12 months)
Stack emissions	76	78	48
Particulate matter	76	73	
Ambient air quality	37	45	31
PM 10	24	17	15
Indoor Air Quality	21	25	16
<b>Total</b>	<b>234</b>	<b>238</b>	<b>110</b>

The revenue generated from activities of the air pollution monitoring was MUR5.59M for the same period:

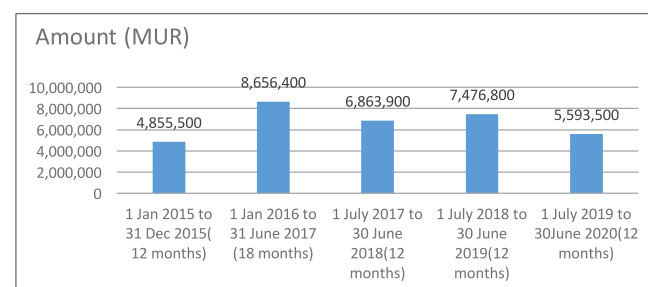


Fig 12. Revenue generated from activities of the air pollution

## Training

Health and Safety Training on OSHA 2005, Risk Assessment, Personal Protective Equipment, Manual Handling and Work at Height was provided to the Air Monitoring team in January 2020.

## Study by the World Bank on the Sugarcane Industry

The objective of the Advisory Services is to provide policy recommendations to the Government of Mauritius regarding the development of the sugarcane sector. The Advisory Services include the following activities and deliverables:

### A. Competitiveness assessment of the sugarcane sector

A competitiveness assessment of the advantages of the agro-industrial enterprises and farmers, including: productivity; cost of productions; opportunity costs; and revenues from different potential market sources. The assessment will use simple Excel-based models, farm budgets and firm-level costs for the production and processing of sugar, energy and other by products to simulate different scenarios for the industry following external factors.

### B. Vision exercise with sector stakeholders

Discuss various scenarios and options for the future of the sugar sector with sector stakeholders, including undertaking institutional assessments and using design thinking tools and approaches.

### C. Proposed policy actions and implementation plan:

A policy note summarizing the sector review and providing main recommendations for public policy and programs for the future development of the sugar cane sector.

### D. Time frame :

The Advisory Services Agreement was signed in January 2020 and closes on November 30, 2020.

### E. Progress achieved

The World Bank (WB) had already organized consultations with stakeholders of the sugar cane sector during the period 7-9 October 2019 and was assisted by Messrs. John Keyser (Senior Economist), Davide Signa (Consultant) and Dinesh Surroop (Consultant).

During these consultations, the World Bank has had the opportunity to meet almost all stakeholders of the industry namely representatives of relevant Ministries, the planters, Trade Unions, millers, IPPs and Service Providing Institutions to know the sector and to have hands-on information directly from them.

In October 2019 the WB has requested additional data/information from Stakeholders through the MCIA to enable them to move forward on this assignment. All the requirements were submitted to the Consultant. Furthermore, the local Consultant of the WB has had the opportunity to meet stakeholders of the industry on a one-to-one basis to clarify on their requests and to have additional information on the sector. WB met the service providers, association of planters, individual planters, the millers and IPPs.

As and when required, sessions of video conference were also held between the representatives of the Ministry, the MCIA and with the World Bank Team in Washington to clarify matters pertaining to the progress on this advisory service.

During the period February 2020 - mid - March 2020, the World Bank with the assistance of the MCIA, MCA and various planters' associations has worked on a Multi-Year Template for Collecting Farm-Level Data on Costs and Returns of Sugarcane Production.

On 18 March 2020, MCIA circulated the final farm budget template to the MCA, MCAF Ltd and the Farmers Service Agency requesting their members and planters to fill and submit same directly to the representatives of the World Bank by Friday 27 March 2020.

MCIA had made arrangement to convene individual planters as well as members of MCAF in different FSCs (North, South, East, West and Centre) to explain to them the template proposed by World Bank (WB) and to assist them during this exercise for the submission to the Consultant.

The above plan could not be respected because of the lockdown of the country as from 19 March 2020. It was very difficult to have the participation of planters to conduct the above exercise owing to the sanitary problem and there was need for authorization/permit from Government for movement, which was restricted to essential services only.

During the period of confinement, MCIA has made arrangement with some planters who are

conversant with computers to fill the template as per the requirement of the WB. Only three planters responded positively to the request and submitted the template directly to the WB representatives. Furthermore, following the intervention of FSA / MCIA, two planters had conversation with an overseas representative of WB on the farm budget template.

On 27 March 2020, MCIA apprised the WB that this assignment could only be conducted (to meet its purpose) only after the period of lockdown be removed by Government. The MCIA was apprised that ENL, Medine Ltd, Alteo Ltd, Omnicane and Terra have been able to submit the filled template to the World Bank during the period of confinement.

The World Bank (WB) team has continued to provide its services under this RAS agreement more specifically during COVID-19 through regular contact with stakeholders through virtual tools and has worked on the draft competitiveness and sector model.

## International Scene

On the international scene, the sugar industry is facing great difficulties following the recent drastic fall in the price of sugar on the world market and the increased competition for the export of its sugars on the world market including in the EU, with the abolition of the production quota on beet sugar and isoglucose on the European market as well as the maintenance of external tariffs as from October 2017. This situation has resulted in a surplus production of sugar, especially in the very first year, which has forced the price well below the world market price.

There is a need to embark on a more aggressive marketing campaign for the export of sugar on more remunerative markets. All the stakeholders of the industry are working closely with a spirit to secure additional markets for our sugars and diversify our marketing strategy to look for more remunerative markets such as China, India, SADC, COMESA, Saudi Arabia, etc.



At the SADC level, the trade of sugar is regulated by Annex VII of the SADC Trade Protocol. This annex is discriminatory in nature, given that only member countries of the SACU are able to restrict access to their markets while non-SACU countries have agreed to open their markets to other SADC Member States. Such a unilateral quota restriction by the SACU is considered as a non-tariff barrier to trade. In response to these barriers to trade, non-SACU Member States have also introduced tariff and non-tariff barriers for sugars imported from other SADC countries and this situation is penalizing the export from Mauritius. Mauritius is exploring all possibilities to remove this trade restriction for its sugar traded on the regional markets. The interest of Mauritius was discussed at last meeting of the Technical Committee on Sugar in July 2020. The fact that the Mauritius sugarcane industry is in a very difficult situation and pending the proposed review of the SADC sugar regime, Mauritius has asked for a duty-free quota of 50,000t in the SADC sugar market. The Mauritius Sugarcane Industry has also witnessed the efforts made to help to open new market opportunities in order to safeguard the interest of all partners of this sector. Persistent marketing strategies coupled with economic diplomacy has finally managed to make a breakthrough on the Chinese market, which has allowed Mauritius to benefit from a reduced tariff quota for 50,000t for the export of special sugars, which will become effective progressively as from 2022. Furthermore, efforts are being made to secure an additional export volume of our sugars on the Indian market.

## C. MAURITIUS SUGARCANE INDUSTRY RESEARCH INSTITUTE

### Research & Development Committee (R&D)

Eight meetings of the R&D Committee were held in 2019 (Table 28) and a range of topics was discussed for the decision-making process and to move forward the research agenda for the benefit of the industry. The deliberations also contributed in providing the necessary collegial directions to pursue the R&D programme, most of which are reported in this section.

Table 28. Attendance of Members to the R&D Committee in 2019	
NAMES	Number of meetings attended
Dr J C Autrey, CSK, Chairperson	8
<b>MEMBERS</b>	
Mr J Li Yuen Fong	6
Prof T Bahorun, GOSK	6
Mr N Basant Rai, PDMS	7
Mr J C Desvaux	6
Mr R K Hemoo	8
Mr J R Lincoln	3
Mr D Lavoipierre (Alternate)	3
Mr Y Mungroo	7

### The 2019 Crop

Cane elongation measurements were done on a fortnightly basis during the period starting from December 2018-June 2019 in 46 sites located in the different agro-climatic zones of the five sugarcane sectors of the island. Monthly samplings of cane

were carried out in some 109 fields (representative of the different agro-climatic zones and different cultivated varieties), from the last week of April to November 2019 in order to assess ripening and assist planters in planning the optimal time of harvest.

The 2019 crop was characterized by higher sugar production and cane crushing, but with a reduced area of 2 624 ha compared to 2018. The area harvested stood at 45 054 ha. The total sugar produced from 3,403,310 tonnes of cane amounted to 331,105 t. The harvest season was extended till the third week of January 2020 due to the closure of Médine sugar mill and all the cane produced in the West sector had to be processed by the remaining three mills of the island. The crop was characterized by generally favourable climatic conditions in terms of rainfall, except for the months of February and March and above normal solar radiation that prevailed during the elongation phase. Total stalk height over the island at the end of the growth phase stood about 4% above the normal. In contrast, during the ripening phase, generally wet conditions were observed over of the island and more specifically from June to August in most sectors. Solar radiation was below normal and temperature amplitude well below normal from April to September 2019. These conditions were not conducive to ripening with an extraction rate of 9.73% compared to 10.26% in 2018 and to the average of 9.81% during the past five years. Overall cane productivity in 2019 stood at 75.6 TCH and was higher than the 66.2 TCH for 2018 Crop and the 74.1 TCH for the mean of the past five years. Cane quality in 2019 was better than in 2018 with the average fibre content over the island being 15.96% in 2019 compared to 16.05% in 2018 and 16.24% for the mean of the last five years. Moreover, the mean sugar productivity in 2019 was 7.35 TSH exceeding those of 2018 (6.79 TSH) and the mean of the past five years (7.26 TSH).

### Plant Breeding

A total of 941 crosses were performed and comprised 314 genetic combinations involving 147 different female parents, including recently



released varieties and 45 male-fertile parents. The number of seedlings produced amounted to 50 916 comprising 13 666 for the dry zone, 19 444 for the humid zone and 16 660 for the super-humid zone. In addition, 1146 seedlings were produced for selecting high biomass and multi-purpose varieties.

The evaluation and selection of new genotypes at the preliminary phase were carried out based on set criteria including agronomic characteristics, laboratory quality characters, morphological (low flowering intensity, erect growth habit) attributes and ratoon ability especially at the more advanced selection stages. The selection cycle started with an initial population of 62 882 seedlings, comprising 241 genetic combinations. Twenty-six genotypes were selected from stage 4 trials in 2019, for further evaluation. The best genotypes, that were selected from stage 4 trials over the recent years 2018, 2017 and 2016, were advanced to the final stages of selection to test their adaptation to soil types, suitability for harvest at different periods and their ratooning ability. A total of 15 trials were planted in the B, F, L, P irrigated and P rainfed soils. These trials comprised 81 promising varieties for testing in plant cane and three ratoon crops. Sixty-three varieties were planted for harvesting at mid-season in four different soil types and 16 varieties were planted for harvesting at early-season in the B and P (irrigated) soils.

Selection of sugarcane is a lengthy, laborious and expensive process and, in Mauritius, the programme spans over 12-15 years. A study was carried out to assess the relevance of testing in ratoons at Stage 3 and 4 trials. The results pointed to a higher predictability of their cane and sugar yield potentials in first ratoon crop than at plant cane, thus advocating the strategy of maintaining selection in ratoon. Strategies are being investigated to shorten the selection programme without loss in precision at early selection stages.

Linear Mixed Models (LMM), that allow the analysis of multi-level and unbalanced data, are being increasingly investigated and applied in the breeding programme. With the significant genotype

by environment interactions that exist under a mosaic of soil types and microenvironments in Mauritius, a number of agronomic parameters can now be validated through formal investigations using statistical tools, namely the Additive Main effects and Multiplicative Interaction (AMMI) and Genotype x Environment Effects (GGE) multivariate models that include good visualization tools.

Climatic data spanning over almost the last five past decades used to determine trends in temperature (1971-2016), rainfall (1951-2016) and solar radiation (1978-2016), in the dry zones (North and West sectors) and over the island. The mean temperature over the whole island has increased by  $0.25^{\circ}\text{C decade}^{-1}$ , with the increase in minimum temperature being twice that of maximum temperature, thus resulting in a decrease of the temperature amplitude by  $0.15^{\circ}\text{C decade}^{-1}$ . On the other hand, annual rainfall has decreased by 38 mm  $\text{decade}^{-1}$ , while solar radiation has increased by 13 MJ  $\text{m}^{-2} \text{decade}^{-1}$ . Adaptation measures to reduce the impacts of climate change on sugarcane productivity are currently being implemented, with emphasis on the production of drought tolerant sugarcane cultivars, changes in harvest date and adoption of efficient irrigation techniques.

The traditional way of naming varieties developed locally (i.e. M-varieties) was revisited. Since its creation in 1953, MSIRI has released 62 varieties, bred locally. The varieties were named according to a nomenclature based on those selected at the end of stage 2 and the year the cross was sown. This nomenclature is useful to breeders, but growers encounter difficulties to remember the name and often get mixed up with the figures. Thus, a new and easier system was proposed and adopted. The new naming is 'M' followed by a number in a sequential way. It was proposed to start with M1 for *M 147/44*, that was the first variety released after the creation of the MSIRI in 1953 and *M 63* for *M 591/01*, the last variety released in 2019, approved by the Cane Release Committee for commercial cultivation.

*M 63* (Figure 12) is a high cane and sugar yielding variety with fairly high to high sucrose content,

high profitable sugar and low fibre content. It has good ratooning ability and flowering intensity is low. Cane yield of *M 63* is high at middle-season harvest, exceeding the average of commercial standard varieties *M 1400/86*, *M 2593/92*, *R 570* and *R 573* by an average of 16% in the L and P soils under irrigated conditions. It produces high sugar yield, at mid-season harvest, exceeding the average of commercial varieties. Its profitable sugar is high and exceeds those of *M 1400/86*, *M 2593/92*, *R 570* and *R 573* by an average of 28%. It is adapted to the L and P soils, under irrigated conditions and for harvest at middle-season. It has a fairly erect growth habit with an average number of stalks of medium diameter and height. Variety *M 63* is resistant to gumming, smut and leaf scald diseases, slightly susceptible to yellow spot and susceptible to brown rust.



Figure 12. A stool of variety *M 63*

### Field Experimentation, Liaison and Communication

Field Experimentation is responsible of four experimental stations located at Réduit, Ferret, Belle Rive and Union Park and three sub-stations at La Sourdine, Valetta and Trois Ilots. The experimental fields consist of breeding plots used for crossing purposes, nurseries for propagation of materials, preliminary and final phase variety trials, research trials related to work in agronomy and genomics.

In 2019, one hundred and sixty (160) trials implemented on a total acreage of 80.3 ha were

under experimentation on the stations, substations and sugar estates. Some 175 tonnes of cane were used as planting material for experimentation and for establishing new nurseries and observation plots, while 2,175 t of cane following data collection were harvested and sent to the mills. A new approach has been adopted whereby all stations combine resources together to optimise the use of resources with a view of increasing efficiency at work.

During the year, a total of 56 final phase trials (11 in the North, 18 in the Centre/East, 19 in the South and 8 in the West) were monitored. These trials were harvested at different harvest dates during the crop season. Data were collected and processed to evaluate the performance of the test varieties against the standard ones in terms of cane yield (TCH), sucrose content (IRSC %), fibre yield ( $\text{tha}^{-1}$ ) and sugar yield (TSH).

Variety *M 1959/03* out-yielded all other varieties in trials at early as well as late harvest in the superhumid zones. Varieties *M 3779/06*, *M 3869/06*, *M 1669/08* and *M 1639/09* showed promising results and are being multiplied in different agro-climatic zones for further observations.

Fifteen new final phase trials were planted during the year: two in F soil at Valetta substation, two in F soil at Britannia, three in B soil at Rose Belle, two in L soil at Trois Ilots, four in P irrigated soil at Médine and two in P non-irrigated soil at Forbach.

The promotion of new high performing varieties to replace old varieties amongst stakeholders of the sugarcane industry was a major focus of the Department in 2019. Figure 13 illustrates the area occupied by nine major new sugarcane varieties namely: *M 1989/99*, *M 2283/98*, *M 683/99*, *M 1392/00*, *M 2502/99*, *M 1002/02*, *M 915/05*, *M 1256/04* and *M 1561/01* released since 2013.

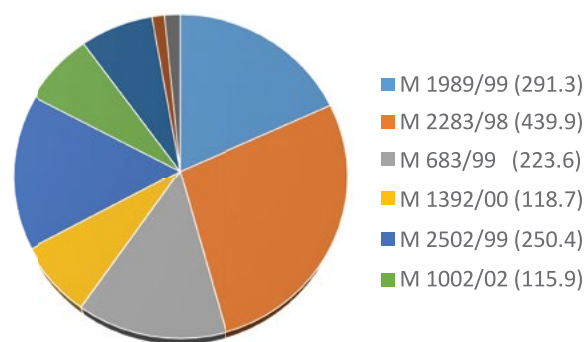


Fig 13. Area (ha) under new varieties

Cuttings of new varieties were distributed to large/corporate and small planters across the five sectors (East, North, West, Centre and South) and the area under cultivation.

It was observed that varieties *M 1989/99* released in 2013, *M 2283/98*, *M 683/99* and *M 2502/99* released in 2015 occupied a total area of 1 205 ha and constituted about 75% of land replanted under new varieties. *M 1989/99*, *M 2283/98*, *M 683/99* and *M 2502/99* are now considered as well established commercial varieties followed by *M 1392/00*, *M 1002/02* and *M 915/05*.

Observation plots and industrial trials established in close collaboration with sugar estates and planters have further promoted the adoption of new and higher performing varieties. Observation plots with varieties *M 683/99*, *M 2502/99*, *M 1392/00*, *M 216/02*, *M 1256/04*, *M 1392/00*, *M 216/02*, *M 1698/02*, *M 3779/06*, *M 3869/06* and *M 1669/08* were established at Medine while varieties *M1669/08* and *M1639/09* were planted at Trois Ilots. All varieties had a very good stand; however, planters were impressed by two varieties namely *M3779/06* and *M1639/09*.

Interaction with stakeholders was maintained through meetings at Head Office, as well as personalized and regional field visits. Two meetings were organised at MSIRI with representatives from the corporate planters, Farmers Service Agency, Planters' Services on estates and large and medium planters to discuss on various issues, namely; orange rust, establishment of final phase trials and observation plots of promising sugar cane varieties

in 2019, climate during 2018-2019, status of crop growth during the season 2019 and information on the newly released variety *M 63*.

### Biotechnology

DNA barcoding can serve as a quick tool for identification of invasive pest species. Mauritius was unfortunately subjected to two major pests incursions during 2019. In March, a suspected infestation by the fall armyworm (FAW), *Spodoptera frugiperda*, which has a wide host range of more than 350 plant species, including sugarcane, was observed in maize plantations in Rodrigues, followed a few days later by infestation in Mauritius. In both cases molecular analysis confirmed the presence of the pest species in the country. Two strains of *S. frugiperda* namely; the rice-strain and corn-strain were identified both in Mauritius and Rodrigues.

As the pest is a potential danger for sugarcane, scouting of sugarcane fields across the island to check for any attack by FAW started soon after its first observation in Mauritius. Sugarcane growers were alerted through meetings and wide circulation of information on the potential danger of the pest on sugarcane. Fortunately, *S. frugiperda* infestation has not been observed in sugarcane plantations.

Another dangerous pest, the tomato leaf miner, *Tuta absoluta*, which is a serious pest attacking tomato and other crops that had spread to Africa and the Indian Ocean Islands in the last few years was also encountered in Mauritius. Suspected specimens were observed in a tomato fields at Solitude, Bon-Ésprit in early September 2019 by officers of the Agricultural Services of the Ministry of Agro Industry and Food Security. Specimens were barcoded by MSIRI and identified as *T. absoluta*.

The prompt identification of these two invasive pest species using DNA barcoding highlights the beneficial application of biotechnological tools in modern agriculture.

### Detection of Sugarcane bacilliform virus

*Sugarcane bacilliform virus* (SCBV; genus *Badnavirus*; family *Caulimoviridae*) which causes leaf fleck disease (Figure 14) was first reported in Mauritius in 1989 and its detection was by electron microscopy and serologic. Since 2010, conventional PCR test is applied for its detection. New molecular diagnostics today is showing that the virus is genetically diverse consisting of four species, and as such, previously utilized diagnostic primers may have failed to detect newly characterized strains. Newly published real-time Taqman PCR tests allowed the detection of at least three species of SCBV present in Mauritius. Further screening of commercial varieties will establish the genetic diversity of the virus locally.



Figure 14. Leaf fleck symptoms caused by Sugarcane bacilliform virus in leaf (left) compared to healthy leaf (right)

The DNA fingerprinting test for sugarcane varieties at MSIRI is currently accredited ISO/IEC 17025:2005 by MAURITAS. Funds received from the Ministry of Agro-Industry and Food Security, enabled the purchase of a new ABI SeqStudio genetic analyser. Validation and optimization exercises were carried out to confirm the applicability of the new equipment for sugarcane fingerprinting. DNA fingerprinting tests previously

done on the ABI 310 were repeated on the ABI SeqStudio. New protocols to operate the SeqStudio operation for DNA fingerprinting of sugarcane were documented. Validation of the equipment and procedures were done using the control variety *R 570* as well as commercial varieties *M 1176/77* and *M 1400/86*. Following extensive repeatability, reproducibility tests, and validation tests the new ABI SeqStudio was approved for use in the accredited DNA fingerprinting test of sugarcane, providing increased throughput with its four capillaries and quicker processing time as opposed to the older equipment.

Newly released sugarcane variety *M 63* and promising varieties *M 1959/03* and *M 3779/06* were cultured in vitro using young leaf rolls. Some 6000 plantlets of promising varieties *M 1959/03* and *M 3779/06* were produced and potted. For *M 63*, some 5000 plantlets were bulked in vitro.

Twelve varieties namely *M 52/78*, *M 96/82*, *M 1394/86*, *M 2593/92*, *M 2283/98*, *M 3502/99*, *M 683/99*, *M 1561/01*, *M 216/02*, *M 1698/02*, *M 1256/04* and *M 915/05* were cultured in vitro. All varieties, except *M 96/82* did not regenerate into plantlets. The remaining eleven varieties were multiplied and rooted. All tested free to major diseases, using molecular tests, and were planted in the quarantine facility, with the objective to produce disease free cuttings for export.

At the request of a banana grower, some 5000 plantlets of variety 'petite naine' were multiplied in the laboratory and some 2500 plantlets potted in the glasshouse.

Gene editing, by deletion, was selected as an approach to optimize CRISPR/Cas9 protocol in sugarcane. The requirement for this approach is the construction of a plasmid cassette containing two target sites. Progress was made in designing CRISPR/Cas9 vector modules containing two target sites with the objective to knockout the well-studied sugarcane brown rust resistance (*Bru1*) gene as a model, before further attempting application of CRISPR technology for other genes in sugarcane. Three segments of the *Bru1* region



were selected from which twelve target sites were identified using online software CCTOP (<https://crispr.cos.uni-heidelberg.de/>). Target site pairs with the highest score for Cas9 affinity were selected for CRISPR/Cas9 vector module construction.

Eight pairs of target sites were synthesized in vitro by PCR mutagenesis and were successfully cloned in CRISPR/Cas9 vector modules pHEE401, pBUN621, pBUN411 and pBUN421, containing either Basta or hygromycin reporter genes and the cauliflower mosaic virus (CaMV) promoter and maize ubiquitin promoter for Cas9 expression. The next step would involve the transformation of sugarcane calluses with these plasmids using the biolistic gun or *Agrobacterium tumefaciens* and the testing for gene deletions in transformed plantlets.

A training population of 380 *Saccharum spp.* accessions was established at Réduit in 2017 for Genomic Selection (GS) studies with respect to traits associated with sucrose accumulation. The population consisted of 350 hybrid sugarcane varieties, 20 noble canes; *Saccharum officinarum* and 10 wild cane varieties *Saccharum spontaneum*. The hybrid canes from this training population consisted of commercial varieties and parental lines imported from more than 30 breeding stations worldwide. Among the hybrid canes, 80 varieties were bred at MSIRI, and 48 of which were released for commercial cultivation, while the remaining have been used mostly as breeding parents.

Cane sampling was carried out in first ratoon of the training population, showed the progress made in sugarcane breeding to improve the sucrose content over the last few decades. The data was sorted according to Pol% cane and the top 60 varieties were further scrutinized. Among these 60 varieties, 19 were Mauritian varieties released for commercial cultivation. This high frequency of M varieties in the list of top varieties clearly demonstrates the efficiency of the breeding and selection programme, that has for objective to release varieties with improved sucrose content. The results also indicate that imported varieties do not usually perform well under our local conditions, hence the need for a local sugarcane breeding programme.

The primary goal of the application of transcriptomics to improve the sugarcane breeding programme is to identify differential expression of those genes that contribute to sucrose content in sugarcane. In this respect, three varieties with high / medium sucrose content; *M 1400/86*, *M 52/78* and *M 1464/03*, and three varieties with low/medium sucrose content; *M 1551/80*, *M 1246/84* and *M 3560/94* were identified and selected for RNA sequencing (RNASeq) studies. This selection was based on the results obtained from the sucrose content analysis carried out in August 2018 on first ratoon canes. To assess the hormonal variation among the six varieties, RNA was extracted, from the meristematic tissue in May 2019, prior to the onset of flowering. The RNA extracts were outsourced for library construction and next generation sequencing. The total number of sequence reads per sample following RNASeq amounted to 5.5 million to 6.7 million. Sequence data analysis identified nearly 15,000 different genes being expressed among the six varieties. Further analysis is currently being carried out to identify those genes which are uniquely present or which are expressed in high doses in high sucrose content varieties or vice versa.

### Microbiology and Plant Pathology

The status of sugar cane diseases was generally low in commercial fields during the year. With the removal of the highly susceptible variety *M 3035/66* in the East, the incidence of gumming disease (*Xanthomonas axonopodis* pv. *vasculorum*) has greatly subsided. Only some foliar symptoms were observed on remaining stools of the variety in field borders, but no systemic infection was observed. The use of resistant varieties has largely contributed to the decline of the disease in this sector. Although the climatic conditions were favourable at the beginning of 2019 for leaf scald (*Xanthomonas albilineans*) infection, the disease was insignificant in commercial fields. Some systemic infection and foliar stripes were observed in some non-commercial varieties grown in nurseries and in the germplasm collection.

Similar to 2018, smut (*Sporisorium scitamineum*) was insignificant during the year. Low infection was observed in varieties *R575* and *M 1176/77* in the West, while some whips were present in variety *R575* at Union, in the South. For brown rust (*Puccinia melanocephala*), mild infection of was observed in *M 1176/77*, cultivated in the humid regions of Fuel and Beau Champ and in commercial fields under irrigation at Mon Trésor. Symptoms were also found in young tillers of variety *M 2593/92*, planted in areas favourable to the disease at Alteo and in irrigated fields of the North.

The weather at the beginning of the year was not favourable for yellow spot (*Mycovellosiella koepkei*) infection. Peak infection was observed in June with 34.8%, 34.4% and 30.8% in *M 703/89*, *R570* and *R579* respectively (Figures 15). The incidence of yellow spot in commercial variety *M 703/89* was followed in the superhumid zone. Disease infection in the variety was high, particularly in the East with a peak of 40.2% observed at Providence in June.



Fig 15. Yellow spot infected leaves of a susceptible variety

Surveys carried out during the period January to May showed an increase in intensity of orange rust and this was more perceptible in varieties *R570*, *R582* and *M 2705/06*. Long season crops of *R570*, in the South, that showed very low to mild infection in June 2018 were moderately infected in early February 2019. Similar observations were made in long season plantations of *R570* in the northern and eastern sectors. In several sugarcane growing

areas, varieties *R570* and *R582* maintained their susceptibility to the disease. The surveys indicated that orange rust was well established over the island and cultivated varieties were now showing their potential infection to this new disease. As was the case in 2018, a peak in infection was noted in April/May 2019. The intensity of infection varied in different areas on the same variety. The reaction of cultivated varieties to orange rust will be followed since sugar cane growing areas encompass several agro-climatic regions.

The purpose of multiplication nurseries in a varietal selection programme is to provide pure and disease-free planting material of test and cultivated varieties for selection trials, observation plots and disease resistance trials. This remains an important measure for the control of systemic diseases. Promising varieties are multiplied in a four-step nursery scheme in parallel to trials that assess their commercial potential. In 2019, a new N1 nursery was established at Ferret, in the sub-humid irrigated zone, with 30 varieties comprised of 26 promoted from the preliminary phase of selection and four promising clones. Varieties *R582* and *R585* were removed from N2 nursery and variety *M 1669/08* was added, resulting in a total of seven varieties multiplied over an area of 0.57 ha. Three varieties, *M 1959/03*, *M 3779/06* and *M 3869/06* were upgraded to N3 nursery and planted over an area of 0.84 ha by the end of 2019. No variety was planted in the N4 nursery. An area of 0.375 ha of newly released variety *M 63* was also available as planting material.

The last four varieties *N49*, *N51*, *N53* and *N56* received from South Africa in April 2017 under quarantine cycle 2015-2017 were released, in 2019, from closed quarantine to open quarantine for one crop cycle. For the new quarantine cycle 2018-2020, 13 varieties were under observation in 2019, five varieties each from Australia and South Africa received during the year, along with three varieties received from Ecuador in 2018. The varieties *GT15*, *GT19*, *NA02-1618* and *NA05-1619* received from CIRAD/VISACANE, France, in 2018 were harvested in plant cane.



Twenty-seven varieties (12 from Mauritius, 7 from Guatemala and 8 from USA) were harvested in May and left to ratoon in the ACP *International Sugarcane Quarantine*. During the year, variety M 2593/92 was replanted while recently released varieties M 1561/01, M 216/02, M 1256/04 and M 915/05 were introduced in the facility, bringing a total of 17 Mauritian varieties and 15 foreign varieties available for export.

Validation reports and standard operating procedures for the determination of *Bacillus cereus*, *Staphylococcus aureus* and *Enterococci* in sugars were completed and submitted to Mauritius Accreditation body MAURITAS in May, and in November all three tests received accreditation for ISO/IEC 17025:2005 standard, bringing altogether 24 tests, at MSIRI, accredited in microbiology. Other tests currently undergoing validation include determination of *Clostridium perfringens*, *Enterobacteriaceae* and *Thermophilic Acidophilic Bacteria* in sugars.

During the year, a total of 381 samples of white refined, raw and special sugars and related products such as massecuite and syrup were analysed for spoilage and/or pathogenic bacteria at the request of clients from the industry. In addition, microbiological analyses were carried out on 19 samples of water and factory condensates. Twenty-nine soil samples were also analysed for the bacterial wilt pathogen, *Ralstonia solanacearum*.

## Entomology

White grub damage was reported in May over a total area of 9.6 ha in young plant cane at Queen Victoria. Damage symptoms due to an early infestation by beetles were prominent in a field under varieties M 1561/01 and M 2256/88. Morphological identification of field-collected beetles and young larvae revealed only the presence of *Heteronychus licas*. Infestation was monitored closely for about two months and insecticide was applied in localized infested areas against the larval stages. In June, another severe localized infestation by larval stages of *H. licas* was reported in another field under variety R573 at the same location.

In the context of the implementation of the White Grub Protocol, soil samplings conducted from July to August and light traps operated in January, November and December did not reveal any presence of the white grub, *Hoplochelus marginalis* in Mauritius.

Gappy stands were reported in plant cane fields under variety M 2256/88 at Haute Rive. Morphological identification of larvae collected indicated presence of mainly *Adoretus* spp., which are not of economic importance to sugar cane in Mauritius. Close monitoring and surveys in four fields showing deadheart symptoms, after 2-3 weeks, revealed a low larval population of *Adoretus* spp., *A. piceum* and *H. licas*.

Damage by the soft scale, *Pulvinaria iceryi*, was reported at Queen Victoria, Beau Champ, Benares, and Constance. Predatory coccinellids, parasitoid species and cutting back severely infested areas and trashing effectively controlled the pest.

Sugar cane armyworms (*Mythimna* spp.) occurred on more than 350 ha in young regrowth of mechanically harvested fields at Antoinette, Souvenir, Bon Espoir, Belle Vue, Ferret, Mon Loisir, Beau Séjour, Mon Desert Alma, Britannia, Mon Trésor, Henrietta and Bassin. Surveys at Belle Vue, Ferret and Bon Espoir revealed an advanced stage of infestation. Damage to the leaf spindle by *M pyrausta* was observed in a 5-month old plant cane, of variety M 1002/02 at the Mount. At Haute Rive, an unusual and important infestation of the sugar cane whitefly, *Neomaskiella bergii*, was observed.

As for the sugar cane thrips, *Fulmekiola serrata*, the population followed at Ferret, showed that R579 and M 1400/86 were most infested while M 703/89 and R570, the least infested compared to Réduit where M 683/99, M 1400/86 and R570 were found with most thrips and the varieties with the least thrips were R579 and M 703/89.

The efficacy of *chlorantraniliprole* as an alternative to replace *thiamethoxam* (neonicotinoid insecticide) for the control of sugarcane white grub, *H. licas*, was investigated in two field trials in the severely

infested 2.5 months old plant cane field of variety R573 at Queen Victoria. Thiamethoxam was found to be much more effective than chlorantraniliprole, while efficacy of the two insecticides after one week was comparable when every single row was treated. New trials will have to be established using varying dosage rates of chlorantraniliprole. Quality sterile insect technique, for potential control of the sugar cane spotted borer *C. sacchariphagus*, was pursued during the year, in collaboration with South African Sugar Research Institute (SASRI) and the University of Stellenbosch (SU).

To determine the distribution and incidence of the yellow sugarcane aphid (*Sipha flava*), 26 fields were surveyed in nine localities across the island. The highest population was recorded in the West at Cascavelle and Chebel, on varieties M 1176/77 and M 1400/86 with a mean of 36 - 81 aphids per cane stool.

Varietal reaction was also assessed in young plant cane in two variety trials, at Cascavelle, in September and October. Varieties M 2882/03, M 793/11, M 743/11, M 879/11 and M 2997/06 had the highest population of aphids with a mean number exceeding 40 aphids per stool. Further follow up in November indicated a drastic decline in the pest population, as observed in 2018, and was associated with the presence of biocontrol agents, heavy rains and crop growth.

The Fall Armyworm (FAW), *Spodoptera frugiperda*, was reported for the first time in Mauritius in maize plantations at end of March. The larva can be distinguished from other armyworm species by the presence of an inverted “Y” on the head capsule and four dots on the posterior part of the body (Figure 16). Island-wide surveys were immediately conducted in young plant cane fields across 25 different sites to determine its presence, if any, in sugar cane. No FAW attack was observed in sugar cane. From May to July, pest monitoring through the placement of pheromone traps on MSIRI substations and some sugar estates resulted in a total of 529 moths being captured, but none revealed to be FAW. A few collected larvae were found to be parasitized by hymenopteran parasitoids while some were found to be infected

naturally by an entomopathogen fungus, belonging to the genus *Paecilomyces*.



Fig 16.. Male moth and larva showing an inverted “Y” on the head capsule and 4 dots on the posterior part of the body of *Spodoptera frugiperda*

## Cultural Operations, Weed Agronomy and Mechanization

Trash (leaves and residues left after mechanized harvesting of sugarcane) collection for bioelectricity production has been pursued in 2019 at Terra and Alteo where, respectively, some 9 600 and 4 300 tons have been baled, transported and processed in the cogeneration plants. In parallel, the trials initiated in 2014 to study the agronomic apprehensions associated with this new practice of trash collection were continued with respect to hypotheses that partial trash removal may impair cane growth and yields as this new practice would leave behind less trash for soil moisture conservation, suppression of weeds, and long-term effect on soil fertility and its carbon content. During the 2019 crop season, six trials pertaining to the above agronomic factors were harvested; three trials at Terra - situated at Mauricia, the Mount and Solitude, and three at Alteo - situated at Queen Victoria, Gibraltar and Mon Loisir. At all sites, no difference in cane yields was observed and this means that the approximately 50% of trash left behind after collection was still conserving a minimum level of soil moisture to benefit the crop.

One of the other benefits of the trash remaining in the fields after mechanized green cane harvesting is its capacity to suppress emergence of most annual weeds as a physical barrier or minimizing light required to trigger their seed germination. At all trial sites, partially collecting trash was not found to render weed management more difficult or costly. Changing the trash management has again proved to have no difference whether the N is applied as urea or nitrate-based. As the practice of trash collection is adopted only at Terra and Alteo where controlled traffic through dual row planting at 1.90 m is practiced, risks of additional soil compaction due to the baling and transport operations are minimal.

The use of remote imagery captured by drones or unmanned aerial vehicles (UAV), has tremendous potential to identify variations in the field and to deal with them using alternative strategies. Images taken by low altitude remote sensing platforms such as drones have low cost of operation, high spatial and temporal resolution, and high flexibility in image acquisition programming. Recently, UAVs have also been equipped with a small tank and spraying accessories to enable application of agrochemicals in the fields.

The MCIA/MSIRI has completed the acquisition of a drone system equipped with multispectral camera/sensors, together with associated software for image interpretation and analysis, together with a drone sprayer. The main objectives include the development of agronomic applications for improving sugarcane production. Research will focus on developing rule-sets (with appropriate procedures and algorithms) to correlate the data collected with agronomic characteristics such as cane development and biomass estimation, gaps in fields, early detection of weeds and their infestation levels, leaf chlorophyll for nitrogen requirements, detection of disease and pests attacks, etc. The drone may also be used to collect spatial data on sugarcane areas including updating of databases on land use or abandonment; such data will be shared with other institutions involved in the sugarcane industry. Furthermore, the Institute will also carry out tests on the application of selective herbicides with the 'drone sprayer' on localized infestations

(e.g. vine weeds) inside sugarcane fields where labour or tractors cannot gain access due to the advanced stage of growth of the cane.

The initial part of the project is focusing on the development of the rule-sets associated with the processing of multispectral data, and will be followed with ground-truthing for validation of the applications developed. Preliminary results are interesting and show that this technology has a promising future within our sugarcane production system.

Experimental works initiated as from 2017 to evaluate the bio-herbicide pelargonic acid for its efficacy in post-emergence of weeds were pursued in 2019. In trials carried out in plant cane at Médine, Mon Désert Alma and Belle Vue, pelargonic acid has been found to cause some scorching on young leaves of some weed species a few days after spraying, but the effect does not persist thereafter. Further trials implemented on the MSIRI experimental stations at Réduit and Belle Rive, and at Riche Terre have shown that pelargonic acid causes non-selective burn-down of green tissues 2 hours after spraying, with the effect being more pronounced at higher rates. As pelargonic acid caused the same scorching on the sugarcane leaves, application will have to be directed on cane interrows or through under-canopy application. More trials are expected to confirm the above results and to assess any possibility of tank-mixing with other bio-herbicides to broaden the spectrum of control.

Herbicide Care is made from natural sources and is composed of silicate phosphate, vegetable oil and brine; a product which is certified by EcoCert. Herbicide Care has been tested under various agroclimatic conditions. At Valetta where the main weeds present at the time of spraying consisted of *Ageratum conyzoides*, *Bidens pilosa*, *Digitaria horizontalis* and *Kyllinga elata*. satisfactory to good control of weeds was achieved 3 weeks after spraying with Care at 4.0 and 8.0 L/ha, the latter rate causing very severe stunting with some kill. At the Mount, Herbicide Care showed good defoliation of weeds with chlorosis two weeks after spraying and some burns at growth points with lower rates, with the effects becoming more pronounced at higher

rates. At Trois Ilots and at Riche Terre, all rates of the bio-herbicide Care caused stunting effects on weeds, and as at the Mount, Care also showed severe adverse effects on cane growth, particularly at the higher rates.

The preliminary conclusions from the four trials show that herbicide Care seems to be more effective on grasses and sedges than broad-leaved weeds. The highly phytotoxic effects seen on both plant and ratoon cane indicates that this herbicide may only be used in developed sugarcane and through under-canopy spraying, particularly in the context of organic sugarcane production.

A project was initiated in 2017 to assist Omnicane in complying with the pesticides limit fixed for certification by Bonsucro, i.e. a total permissible amount of 5.0 kg active ingredients/ha/annum. In December 2019, Omnicane received its certification from Bonsucro. The support from MSIRI in that project was in two phases; firstly, after an appraisal of the standard herbicide treatments used on the different sections and their total amount of active ingredients, some 'validation' trials were proposed and laid down to evaluate the efficacies of a few new tank-mixes containing lower amount of active ingredients. The second phase consisted of assistance and support to the Omnicane team for the implementation of the new alternative treatments. A similar project was initiated in 2018 at Alteo where herbicide treatments with lower amounts of active ingredients were also proposed for validation in 2019. The proposed herbicide treatments have provided satisfactory levels of control as compared to their conventional treatments. The new herbicide treatments have also been applied at commercial level and an assessment in the total amounts of active ingredients, together with their impact of levels of control and costs, will be made in 2020 before embarking on certification processes.

### Agricultural Chemistry

Nitrogen fertilizer recommendations for sugarcane are reviewed as and when required so as to maximise net revenue from fertilization. In view of the increase in the price of sugar to MUR 25,000/t

of sugar for the first 60 t of sugar accrued, the recommended rate for N was increased from 1.2 to 1.4 kg N for each tonne of cane expected for high response soils (P, L and H soils) while for low response soils (B and F soils) the recommended rate was maintained at 1.2 kg N per tonne cane in order to maximize net returns. Recommendations for phosphorus (P) and potassium (K), which are based on soil test results, remained unchanged.

Analytical services were provided to small and medium planters and sugar estates for soil and plant testing with a view to advise growers on the best fertilizer management practices. A total of 795 soil samples from fields to be replanted were analysed and fertilizer recommendations made. In addition, sugarcane leaf samples from 243 Permanent Sampling Units (PSUs) were analysed to assess crop nutritional status. In addition to the routine soil and plant testing, non-routine analytical services were provided upon request from stakeholders in the sugarcane industry as well as from private organizations. Some 490 samples comprising of a wide range of matrices including liquid and granular fertilizer, sugar, molasses and water were analysed.

Soil testing and foliar diagnosis constitute two essential tools in fertilizer best management practices (BMP) that have allowed growers to make sound economic decisions regarding sugarcane fertilization. However, conventional testing methods are cumbersome, expensive and have longer turnaround time. Consequently, routine soil and plant testing is currently limited to few basic parameters, a complete characterization of their nutrient status being too time-consuming and expensive. In that context, a Bruker Alpha II FT-IR Spectrometer and a Bruker Tracer 5i pXRF Spectrometer were acquired with a view to provide high quality, high-throughput analytical services to the sugarcane industry.

The FT-IR spectra obtained (Figure 17) were calibrated against reference data obtained by conventional methods using partial least-square regression (PLSR) models which were then validated using built-in chemometrics software



(Bruker Optics Inc.). Using this technique, it was possible to predict soil properties (soil organic C, pH, total N, total P and exchangeable Ca and magnesium) and plant parameters (total N, total Ca and Mg) with an acceptable level of accuracy. Further calibration and validation will be an ongoing process so as to extend the predictive ability of the models to a wider range of soil properties and plant parameters. Concurrently, the Tracer 5i pXRF was calibrated for soil and plant analyses by the World Agroforestry Centre (ICRAF), Kenya and validation of the installed calibration was carried out using reference plant samples at MSIRI. It is expected that with increased spectra acquisition and chemical profiling, the predictive ability of the FT-IR and pXRF spectrometers will be enhanced to acceptable levels of accuracy for a wide range of parameters. Once optimized, spectral techniques will provide high quality high throughput analytical services to growers.

Field trials to study the agronomic impact of removal of 50% of total trash for energy production were pursued in 2019. The available data suggested that the removal of 50 % trash did not impact on nutritional status of the sugarcane crop as determined by foliar diagnosis and total nutrient (N, P, K) uptake by the crop before harvest.

Nitrogen fertilizer use efficiency by sugarcane is generally low, not exceeding about 30%. Foliar application of N is regarded as a possible option for enhancing fertilizer N uptake. Field trials to study the efficacy of foliar application of part of the crop's N requirement were harvested on two soil types (P and H soils). The data accumulated to date confirmed the earlier findings that reducing the soil applied N by 40-50% combined with foliar application of urea-N to supply between 25 and 50% of the recommended dose, did not adversely affect crop nutrient status, as determined by foliar diagnosis. The trials will need to be pursued further to confirm the long-term efficacy of foliar N application as a means of enhancing N use efficiency by sugarcane.

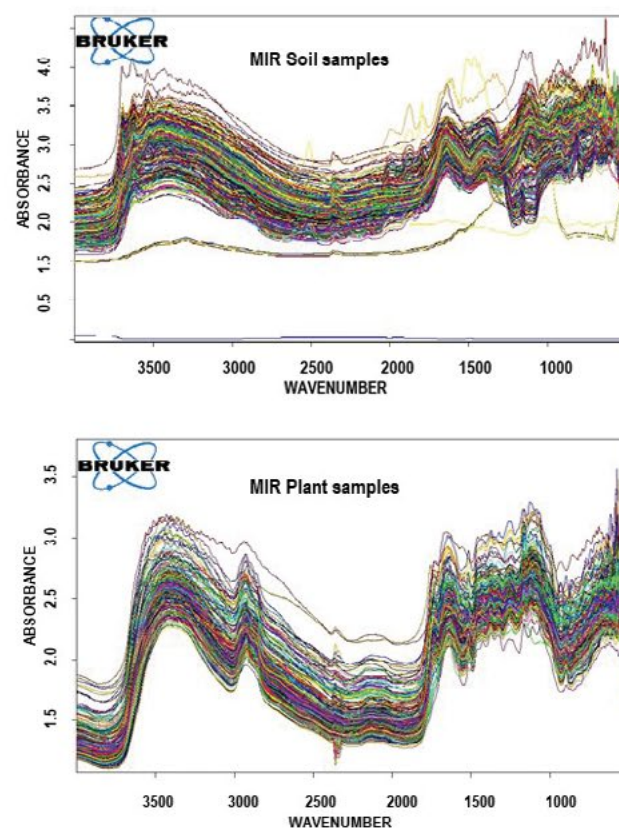


Fig 17. Mid-infrared absorbance spectra for calibration of (A) soil samples and (B) sugarcane leaf samples.

## Irrigation and Land Resources

A drip irrigation trial at Chebel (Médine SE), set up to investigate various aspects related to drip irrigated sugarcane production under a fully mechanized condition, has been completed. The objective was to compare the yield response of four varieties (*M1400/86*, *R 579*, *M 2502/99* and *M 1176/77*) planted in single row and dual row under drip irrigation. Cane was planted at 1.80 m spacing for both single and dual rows, and spacing between each pair of cane rows was 0.5 m in the dual rows. Drippers used were 1Lha<sup>-1</sup> pressure compensated. The trial was harvested in plant cane after a growing period of 17 months and thereafter every 12 months for the ratoon crops. The data collected for the three seasons were analyzed as a split plot design with planting methods (dual and single rows) as the main plots and varieties as the sub plots.

The pooled results of the plant cane, 1<sup>st</sup> and 2<sup>nd</sup> ratoon crops show that a slightly higher cane productivity was obtained in the single row plots than in the dual rows, irrespective of variety. IRSC was significantly higher in the dual rows than in the single row plots and a variety x planting method interaction was also observed. Since there was little difference in cane yields among the varieties and between the two planting methods, the difference in IRSC has translated into higher sugar yields in dual row compared to single row in vars *M 1400/86*, *M 2502/99* and *M 1176/77*. For var *R 579*, similar sugar yield was obtained for both planting methods.

Differences in cane productivity and IRSC between the two planting methods can be attributed to dripline position. In single row, dripline placement just underneath cane rows favoured cane development and produced more cane than in dual row, but this also caused the cane to lodge heavily in windy conditions, particularly during the plant cane crop. However, single row dripline placement also proved to be unfavourable for sucrose accumulation, as more moisture remained in the root zone, even though drying off was conducted in the same manner for the two planting methods. These two factors led to lower IRSC in all varieties under single row. The observed variety/planting method interaction also suggests a difference in the comparative response of var *R 579* to dripline placement and the magnitude of the difference in IRSC may be linked to a more humid environment not conducive for ripening in single row and less lodging in dual row for that particular variety.

Overall, the trial has shown that mechanical installation and placement of dripline was satisfactory for dual row planting, whereas the thickness of the dripline (0.35 mm) appears to be satisfactory for dual row, but not for single row, where some pinching was observed due to the dripline position. Burying one dripline in the middle of the dual rows was not detrimental to germination and early crop development when compared to one dripline underneath the cane row in the single row planting. Also, all varieties responded well to drip irrigation regardless of planting methods. Finally, dripline placement in

the single row favoured cane growth and yield, but resulted in lower IRSC, so that sugar yields were generally better in dual row compared to single row.

The study to optimize use of limited irrigation water supplies at Terra was completed. This trial aimed at benchmarking drip irrigation of variety *R 579*, compared to a non-irrigated (rainfed) plot. The pooled results of the plant cane, 1<sup>st</sup> and 2<sup>nd</sup> ratoon crops showed that on average a net amount of seasonal irrigation of 584 mm was applied, while average effective rainfall was calculated to be 649 mm for the irrigated and 836 mm for the rainfed plots. Total crop water use therefore amounted to 1,233 mm for the irrigated cane compared to 836 mm for the rainfed condition, equivalent to a crop water satisfaction of 92% and 60% respectively. Average cane yield was 121tha<sup>-1</sup> for the irrigated cane compared to 85tha<sup>-1</sup> for the rainfed crop, and sugar yield was 12.5tha<sup>-1</sup> for the irrigated crop compared to 9.4tha<sup>-1</sup> for the rainfed condition. Water use efficiency (WUE) was 98 kg ha<sup>-1</sup> mm<sup>-1</sup> for the irrigated crop and 104 kg ha<sup>-1</sup> mm<sup>-1</sup> for the rainfed one. Irrigation water use efficiency (IWUE) was calculated to be 61 kg ha<sup>-1</sup> mm<sup>-1</sup>. The study has also enabled the establishment of a production function to benchmark cane yield (TCH) based on the level of crop water satisfaction (CWS). The production function is:

$$TCH = (1.2 \times CWS) + 13$$

There were consistent cane and sugar yield increases observed in favour of the irrigated crop. Depending on the crop season and rainfall occurrences, yield increases from irrigated to rainfed ranged from 26 to 46tha<sup>-1</sup> and 2 to 4tha<sup>-1</sup> for cane and sugar respectively. It can therefore be concluded that there is a good response to irrigation in the region.

For the 2018 harvest season, total harvested area was 33 427 ha for corporate planters. Varieties occupying the largest areas were *R 579*, followed by *M 2593/92*, *M 1400/86* and *M 1176/77*, making up some 59% of the area harvested. Corporate planters had on average 52% of their sugarcane crop younger than 6<sup>th</sup> ratoon, though the tendency was to delay replanting (<8 % of total harvested



area was replanted) and to maintain older ratoons. The best performer was the newly released variety M 1989/99 with an average sugarcane yield of 93  $\text{tha}^{-1}$  throughout its crop cycle across the island, followed by M 2256/88, and M 2502/99, which averaged around 80  $\text{t ha}^{-1}$ . Worst performers were M 3035/66, M 695/69, M 1692/90, and M 703/89, with an average inferior to 60  $\text{tha}^{-1}$ . No replanting of this group of varieties was noted, indicating that they were being slowly phased out.

Corporate planters were involved in various land use activities other than sugarcane, such as agricultural activities like tree planting, horticulture and animal rearing, to non-agricultural activities such as quad biking and artisanal rum production. Non-sugarcane agricultural activities accounted for almost 1,700 ha, mainly vegetable/food crop production. Derocking and land planning activities were still on-going, although abandoned (1,939 ha) and fallow (651 ha) land were also important.

In collaboration with FSA, the latest recommendations for varieties have been made on a locational basis, to update the previous variety recommendations. These recommendations, which are based on factory areas and annexed villages, have been published in the form of booklets and distributed to all stakeholders involved in the sugarcane production, especially the FSA and local sugarcane planters. This publication, using GIS, will help small planters in their choice of varieties according to their location. An example is given in Fig.18.

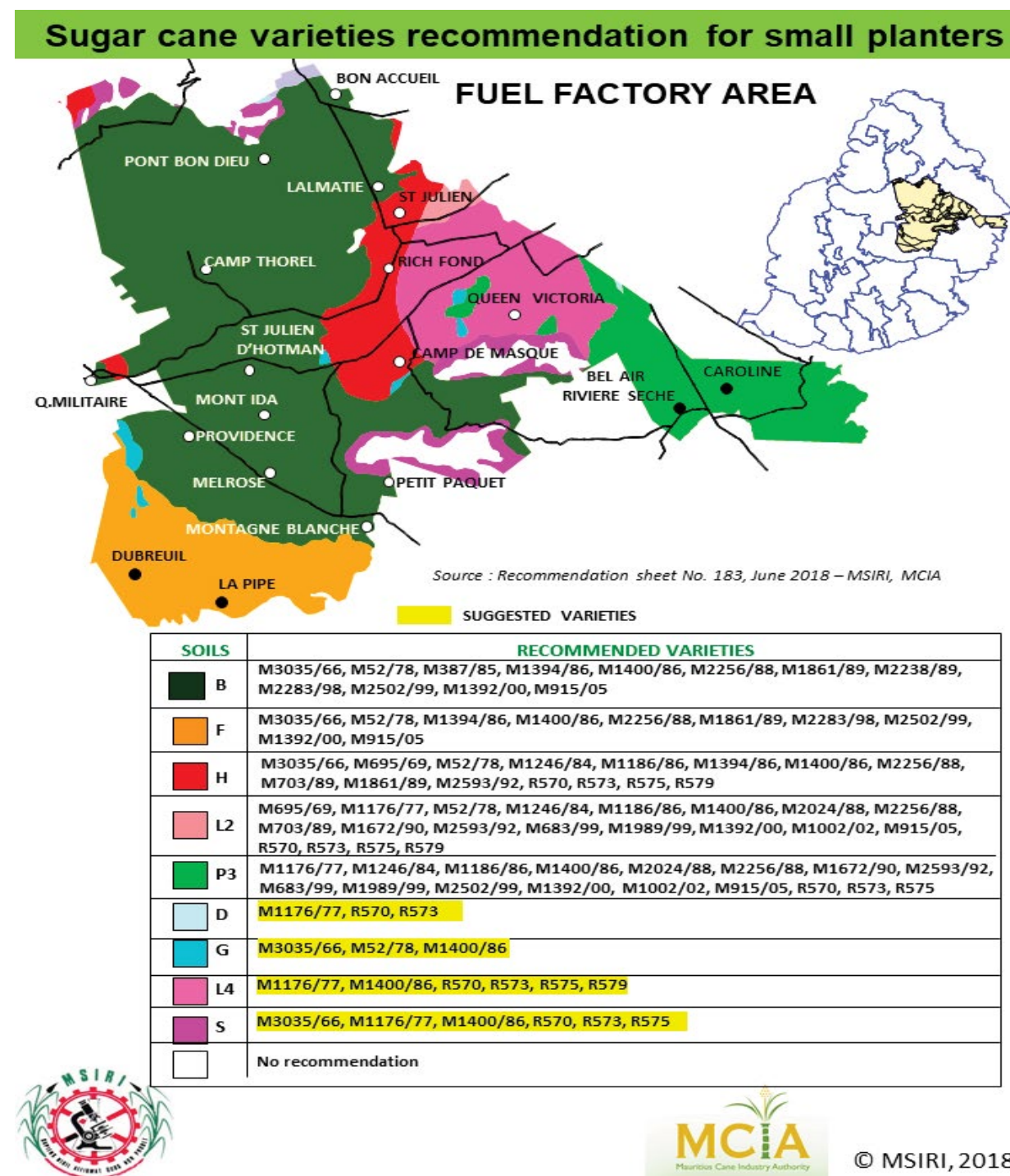


Fig 18. Sugarcane varieties recommendation for small planters

## Sugar Technology

Cane harvested in 2019 were processed in three factories, namely Terra, Alteo, and Omnicane as compared to 2018, when Medine was also in operation. A general overview of data for Crop 2019 with respect to total cane crushed, sugar

production, and number of crushing days are presented in Table 29 and compared to those obtained during crop 2018. The number of crushing days was extended further in 2019 in order to cope with the cane emanating from Medine Sugar Estate.

Table 29. General milling statistics for Crop 2019 as compared to 2018										
Total cane crushed (tonnes)		Sugar (tonnes)		Number of crushing days						
				Medine	Terra		Alteo		Omnicanne	
2018	2019	2018	2019	2018	2018	2019	2018	2019	2018	2019
3 152 695	3 403 343	323 406	331 326	98	131	155	160	170	124	154

Irrespective of milling site, a substantial decrease in the average content of the sucrose % cane (richesse) was noted for crop 2019 as compared to 2018. The decrease in this characteristic of sugarcane supplied to the mills may be explained by less favourable weather during the maturation phase. Similarly, the average fibre content of the cane supplied in 2019 at Alteo and Omnicanne was found to be lower than that recorded in 2018; but the reverse was noted for Terra Milling.

The island average for the Preparation Index of cane was 91 for crop 2019, similar to the average obtained in 2018. Although the average crushing capacity has increased significantly in 2019 due the closure of Medine sugar milling, pol % bagasse, water % bagasse and reduced mill extraction were almost similar to those recorded in 2018.

The average Clerget purity for 1st mill juice and mixed juice has slightly decreased during crop 2019 compared to crop 2018. However, the reducing sugars/sucrose ratio has increased during the crop 2019, which may be attributed to the lower quality of the cane delivered and processed by the sugar factories, and also due to the lengthening of the crop season.

The clarification and filtration processes are reflected by the quality and weight of the scums produced. A decrease in weight of scums % cane is indicative of the good performance in both the clarification and filtration processes.

The Boiling House Recovery decreased in 2019 as compared to 2018. This resulted in a slight increase in the Clerget purity of the molasses, the total sugars in molasses % Brix, and the average weight of molasses % cane.

The overall performance of the sugar factories may be expressed in terms of overall recovery (OR), which averaged 85.6 % in 2019 as compared to

86.4% in 2018. The reduced overall recovery (ROR), which integrates the performance of the milling department (standardised on a fibre % cane of 12%) and the boiling house department (standardised at a mixed juice purity of 85%), is used to compare factory performances. The average ROR in 2019 was slightly lower compared to 2018, and this has resulted in a decrease of about 0.5% in the average sugar extraction % cane in 2019 compared to 2018.

Services were provided for laboratory audits in the three sugar factories and the CAD laboratories found at each site. The aim of laboratory audits is to ensure that good practices are maintained in terms of product sampling and to ensure that analytical procedures described in the Official Methods are followed diligently.

A Ring Test was conducted in September for the three sugar factory laboratories. The main objective of Ring Tests on mixed juice is to monitor the performance of the laboratory analysts and also to ensure that analytical methods used, are standardised.

In October 2019, six laboratory technicians from Omnicanne Sugar Milling were provided with a training programme on lead-free analysis of sugar factory products on-site, in the sugar factory laboratory, and the training was completed in the Sugar Technology Laboratory. The main objective of the training programme was to develop and enhance practical skills for routine analysis of sugar factory products with emphasis on NIR Polarimetric analysis by ICUMSA Method GS7-31 (2011), namely Clerget sucrose analysis of juice and molasses by NIR Polarimetry and analysis of reducing sugars of juice and molasses. In view of the BRC Certification exercise for Special Sugars in August 2019, a refresher course on ICUMSA Methods of Analysis of Special Sugars was conducted at Alteo Milling.

## D SERVICE TO FARMERS (EXTENSION & TRAINING)

### Objectives

- (i) Ensure that essential services are available to planters.
- (ii) Promote the setting up of cane nurseries and the supply of cane setts to planters.
- (iii) Facilitate the adoption of modern and efficient agricultural practices by planters.

### Functions

- (i) Provide technical advice, assistance and training to planters on cane cultivation, harvesting and transport of cane and post-harvest operations.
- (ii) Manage agricultural land and, in particular, abandoned fields in FORIP or such other similar projects.
- (iii) Enter into management contracts on behalf of planters.
- (iv) Devise agricultural credit schemes in consultation with financing agencies.
- (v) Ensure that arrangements are made so that cane of small planters are harvested at their optimal sucrose content.
- (vi) Assist cooperative societies in benefitting from the Fair Trade initiative or such other similar projects.

### Operations of the Farmers Service Agency

The Farmers Service Agency provides services to sugar cane planters through the six FSCs at Saint Felix, Rose Belle, Saint Pierre, Unité, Bon Accueil and Solitude. The one-stop service available at these FSCs allows planters to take advantage of extension services, provision of inputs for their crop, apply for incentive schemes and for land preparation services.

Each member of the 28 front line extension staff operates within a specific sugar cane zone delimited in a factory area, where he plans his extension activities targeting sugar cane planters in that zone.

Following a policy decision by the Ministry of Agro-Industry and Food Security, arrangements are being made for the re-opening of FSCs at Rivière du Rempart and Beau Champ which ceased operations in 2012.

### Field Visits

For year 2019/20 some 28,390 field visits were done out of which some 72.5% targeted projects such as Sugarcane Regrouping Project (SPRP) and Agricultural Land Management System (ALMS) Cane Replantation Schemes. It is to be noted that as from FY 2019/20, the SPRP has been discontinued.

Table 30. Field Visits		
Field Visits		
Year	2018/19	2019/20
FORIP/SPRP	14,512	20,587
Non-FORIP	5,351	7,803
<b>Total</b>	<b>19,863</b>	<b>28,390</b>

### Planters Productivity Improvement Programme (PPIP)

Under this programme, specific extension activities are geared towards sugar cane planters with below average cane yields. A total of 48 group meetings and 1,823 field visits were carried out. A total of 54 demonstrations as well as 24 conducted tours on various topics such as new cane varieties, good management practices as well as proper fertilizer application and weed control were held. Some 174 planters (178.6 ha) were encouraged to join the ALMS – Cane Replanting Scheme.

### Demonstrations

Some 72 demonstrations on various aspects of sugarcane cultivation were established in small planters' cane fields. Performance for newly released cane varieties and appropriate herbicide mixes respectively represented 56.9% and 31.9% of the total.



Table 31. Demonstrations

Year	No of Demonstrations	
	2018/19	2019/20
Herbicide Mix*	17	23
One Eye Setts	6	1
Variety**	39	41
Good Management Practices	0	4
Operations***	1	3
<b>Total</b>	<b>63</b>	<b>72</b>

\* New Herbicide mix: Dinamic and Krismat, Goal, Starane, Escort, Torpedo (Diclosulam) and Mesotrione as replacement herbicide for Atrazine.

\*\* Newly released varieties: M2283/98, M1392/00, M683/99, M915/05, M1002/02, M1989/99, M2502/99, M1256/04, M216/02 compared with M3035/66 and R570.

\*\*\* Mechanical harvest, earthing up and planting

### Conducted Tours

Twenty-three conducted tours were organized and attended by 306 growers. The objective of the guided tours was to show them the results of the demonstrations established.



Fig 19. Conducted Tours

### Surveys

#### (i) Orange Rust

In collaboration with the Plant Pathology section of the MSIRI, FSA staff carried out follow-up

surveys to assess the status of orange rust disease on sugar cane in small planters' fields in the North and South.

#### (ii) Electronic Data Management System (EDMS)

As a follow-up action under this project, FSA field staff have carried out ground truthing exercise for some 56,352 plots over the whole island and their current land use i.e. to categorize the status of abandoned cane lands into:

- (a) abandoned
- (b) under cane
- (c) other crops
- (d) infrastructure



Fig 20. Surveys

This exercise was completed in October 2019 and served as a basis for mapping and input on a web-based EDMS with Geographic Information System (GIS) capabilities.

### Group Meetings

A total of 73 group meetings were organized and were attended by some 632 growers. Subject matters discussed were as follows:

Table 32. Group Meetings

Topic	2018/ 19	2019/20
Regrouping/Cane Replantation Scheme	17	10
Productivity Improvement	3	18
Cane Fire Mitigation	1	6
Cane Harvest	20	21
Good Management Practices	5	5
Fertilization in Sugarcane	0	4
Planters' Schemes	8	9
<b>Total</b>	<b>54</b>	<b>73</b>

### Info Sheets

Eighteen information sheets were distributed to 719 growers. The topics concerned mainly cane fire prevention and management, importance of good harvest practices, new herbicide recommendations as well as appropriate fertilizer application rates.

### Soil Sampling

FSA field staff collected a total of 89 soil samples from small planters' fields at land preparation stage, which were sent to the MSIRI Soil Chemistry Laboratory. Fertilizer application rates with or without soil amendments were communicated to the planters concerned.

### Field Days

Four field days were organized at Olivia, La Queen as well as Union St Aubin for sugar cane planters.

The objective was to see two types of cane harvesters ("coupeuse pei" and a whole stalk harvester) in operation.

### Visit by Planters to FSC

A total of 11,160 planters visited the Farmers Service Centres for technical advice, supply of seed cane, as well as to apply for schemes such as ALMS-CRS, Advance Supply of Fertilizers.

### Liaison Meetings

Eight liaison meetings were held with main stakeholders of the sugar cane sector at FSC level.

### Seed Cane Supply

Seed cane supply remains one of the main activities of the FSA. For FY 2019/20 6,593t of planting material of twelve sugar cane varieties out of which seven were newly released ones were supplied.

Table 33. Seed Cane Supply

Variety	Seed Cane Supply	
	2018/19 (tonnes)	2019/20 (tonnes)
R 570	3,449	2,779
M 1400/86	954	1,412
M 3035/66	471	551
R 579	399	684
M 1176/77	83	6
M 387/85	13	-
M 2283/98	388	68
M 683/99	431	784
M 1002/02	94	-
M 915/05	91	126
M 1989/99	74	90
M 1392/00	62	68
M 1256/04	4	24
M 216/02	3	1
<b>Total</b>	<b>6,515</b>	<b>6,593</b>



Whilst the most popular cane varieties were still R570, M1400/86, M3035/66 and R579, growers tend to increasingly appreciate new cane varieties released since 2015. New varieties constituted 17.8% of total seed cane supply to planters.

### Nurseries Established

During the year 2019/20, the total area under cane nurseries stood at 37.9 hectares under ten sugar cane varieties including seven newly released ones.

Variety	Area (ha)	
	2018/19	2019/20
R 570	10.4	7.3
M 683/99*	15.3	7.5
M 2283/98*	3.9	3.4
M 1256/04*	0.4	0.6
M 1392/00*	3.8	3.3
M 1002/02*	5.8	-
M 915/05*	6.4	6.9
M 3035/66	19.8	-
R 579	6.4	1.9
M 1400/86	11.9	5.4
M 1989/99*	3.2	1.4
M 1176/77	0.4	-
M 216/02*	0.5	0.2
M 1698/02*	0.1	-
<b>Total</b>	<b>88.4</b>	<b>37.9</b>

\*Newly released sugarcane varieties by the MSIRI

It is to be noted that newly released cane varieties constitute some 61% of the total area under nurseries. Moreover some 95 commercial sugar cane fields on an area of 118 ha were converted into nurseries.

### Sugarcane Planters Regrouping Project (SPRP)

As from FY 2019/20, the SPRP project has been discontinued. The status of SPRP in 2018/19 stood as follows:

Sector	Year 2018/19	
	Area Contracted (ha)	Area Completed (ha)
North	56.35	54.7
East	151.54	151.54
Centre	117	114.8
South	122.7	121.3
<b>Total</b>	<b>447.59</b>	<b>442.34</b>

A total of 98.8% of the works under this project have been completed. It is expected that all outstanding works would be completed by the end of June 2021.

### Agricultural Land Management System

For FY 2019/20, contracts were signed for a total area of 688.6 ha concerning 932 planters. Some 61.4% of cane replanting (422.9 ha) has been completed. Delays in execution of works were due to unfavourable climatic conditions prevailing during period December to March 2020 and due to the COVID-19 lockdown period.

Sector	Year 2019/20	
	Area Contracted (ha)	Area Completed (ha)
North	149.4	77.2
East	267.2	166.2
Centre	99.2	56.3
South	172.8	123.2
<b>Total</b>	<b>688.6</b>	<b>422.9</b>

It is also to be noted that contracts signed in FY 2018/19 over an area of some 41 ha were still outstanding for reasons stated above. It is expected

that all outstanding works would be completed by June 2021.

### Planters Fund

During financial year 2019/2020, some 2.855 km of field access roads were repaired mainly through laying of rough stones followed by compaction. Some 320 planters in four factory areas benefitted from this scheme.

Factory Area	Field Access Roads (km)	No of Planters
Beau Champ	0.555	11
Riche en Eau	1.200	300
Saint Felix	0.300	3
Constance	0.800	6
<b>Total</b>	<b>2.855</b>	<b>320</b>

Three projects involving construction of reinforced concrete slab and upgrading of drain in the St Félix Factory Area and excavation of drains in the Highlands Factory Area were completed for a total value of MUR149,430 during the year.

### Planters Harvest Unit

The implementation of the Planters Harvest Unit (PHU) was continued for Crop 2019. Seventeen planters in the regions of Bois Madras, Melrose and Sebastopol agreed for harvest and transport services to be offered by an SME hired by the MCIA. A total of 6,380.62 t cane was harvested at the cost of MUR490/t cane over an extent of 97 ha. The total amount spent was recouped from the planters concerned.

### Advance Supply of Fertilisers

In September 2019, Government decided to waive 50% of the advance of fertilizers provided to planters cultivating up to 100 ha for Crop 2019 and also announced that the same scheme would be implemented for Crop 2020. Thus, 218,903 bags of fertilizer (25 kg) were supplied to 8,108 planters

who collected their fertilizer entitlements from twelve approved suppliers.

It is to be noted that the processes involved in the scheme for e.g. signing of contract agreement, issue of vouchers, as well as processing of claims from suppliers were computerized.

Action has been initiated for recouping of the cost through CCS and MSS from sugar proceeds of planters for Crop 2019.

### Radio Talks

The following radio talks were broadcasted during year 2019/20:

Topic	Date
Short Season Cane Replanting	Jul 19
Weed Control in Plant Cane	Aug 19
Control of Difficult Weeds and Vines	Sept 19
Fairtrade Initiatives	Oct 19
New Herbicide Formulations	Nov 19
Safe Handling of Pesticides and Container Management	Dec 19
Effective Spraying Techniques	Jan 20
Long Season Cane Replanting	Feb 20
Control of Difficult Weeds	Mar 20
Advantages of Separate Sucrose Content Test	April 20
Cane Fire Prevention Measures	May 20
Best Practices for Sugarcane Harvest	Jun 20

The Agricultural Radio Programme is of 15-minute duration in Bhojpuri and Creole on the Radio Mauritius (AM) and Cool FM channels respectively. It is featured on the third Wednesday of each month.

### TV Programmes

The FSA organized a TV programme "Mati Ke Mol" on climate change and its effect on sugar cane production. "Mati Ke Mol" is a 26-minute agricultural programme broadcast on the Bhojpuri channel and is sponsored by the Small Farmers Welfare Fund.

## Events

The FSA participated in a planters' gathering at Rivière du Rempart FSC yard on Saturday 14 December 2019. Services offered by the FSA were showcased. This event was organized by the Ministry of Agro-Industry & Food Security in collaboration with FAREI.

## Human Resource Matters

Mr Banookumar Johaheer, Project Officer retired on 5 March 2020 after 36 years of service. As Project Officer, he was mainly responsible for all projects being implemented under the Planters Fund and the maintenance of buildings of the FSA and other departments of the MCIA.

Mr Raj Kamal Soniah, former Director at FSA was appointed Chief Executive Officer of the MCIA on 20.09.2019. He retired on 25 March 2020 after 44 years of service. Mr R.K. Soniah joined the Farmers Service Corporation as Assistant Manager where he spent most of his career as a fine sugarcane Extensionist. He has also played an instrumental role for the creation of the MCIA in 2012.

Mr Yashwantsingh Ramdharee, Manager at FSA was appointed Ag Director, FSA as from 15 November 2019.

## Committees

The following staff represented MCIA on the following committees:

Table 39. Committees		
Name	Post	Committee
R.K. Soniah	Director	Mount and Beau Plan Planters Fund
Y. Ramdharee	Ag. Director	Mount and Beau Plant Planters Fund (as from 15.11.2019)
A. Awotarowa	Manager	Standards Committee, Mauritius Qualifications Authority Sectoral Committee, HRDC

## E. SERVICE TO FARMERS (AGRICULTURAL AND MECHANISATION)

### Services to the Planting Community

The Agricultural Mechanisation Unit of the Mauritius Cane Industry Authority manages a fleet of agricultural machines and equipment consisting mainly of Crawler Tractors, Pneumatic Tractors, Excavators, Bell Loaders, Rollers, as well as various equipment and accessories. Table 40 shows the different types and numbers constituting the fleet.

### Objectives and Functions

- To maintain a pool of machinery for agricultural purposes
- To hire the agricultural machinery of the Authority to such persons and on such terms and conditions as the Board may determine.

Table 40. Services to the Planting Community Types and numbers constituting the fleet			
DESCRIPTION	TYPE	CAPACITY	QTY
Crawler Tractor	'D6'	165 - 185 HP	22
Crawler Tractor	'D7'	220 HP	9
Crawler Tractor	'D8'	300 HP	3
Excavator	PC - 350	35 Tonnes	2
Bell Loader	1250 Cane Loader	38 HP	5
Roller	3410P	130 HP	1
Wheel Tractor	-	90 HP	1
Wheel Tractor	-	175-185 HP	12
Wheel Tractor	-	250 HP	1

The Unit undertakes land preparation works for various categories of hirers. The types of service provided consist mainly of:

Approximately 80% of work performed by AMU machines is for sugarcane plantation and approximately 15% is for food crop planters.

- Land Clearing
- Derocking
- Levelling
- Furrowing
- Road tracing and road-making
- Cane Loading

## Main Categories of Hirers

### 1. Small Sugarcane Planters

This category of planter consists mainly of small sugarcane planters and constitutes approximately 75% of the AMU's workload. More than 85% of planters found in this category have land of less than 1 ha while more than 65% have less than 0.5 ha. These planters benefit from highly subsidized tractor rates.

### 2. Sugar Estates

Some sugar estates also hire the machines of AMU for their sugarcane land preparation. They benefit from subsidized tractor hire rates but at a slightly higher rate.

### 3. Small non-sugar planters

This category consists mainly of food crop growers. The demand for land preparation services is increasing and represents approximately 16% of the total hours work done by AMU's tractors.

### 4. Revenue

Table 41. Revenue

Planters/Category	July 2017- June 2018		July 2018-June 2019		July 2019-June 2020	
	Effective hours	Revenue (MUR)	Effective hours	Revenue (MUR)	Effective hours	Revenue (MUR)
Small Sugar Cane Planters	25,224	14,364,372	23,012	13,368,835	27,542	15,915,250
Sugar Estates	2,318	1,488,000	2,455	684,840	201	184,770
Large Planter	3,616	4,035,540	1,536	1,511,970	2,332	2,236,650
SPRP	8,664	27,028,696	10,243	31,723,618	1,908	5,804,110
Ministry /Parastatal	1,858	6,093,259	1,105	3,503,308	1,001	3,318,637
Small Non-Sugar Planters	3,953	5,166,508	8,586	11,379,179	5,678	7,100,081
Others	1,143	3,575,772	2,278	7,574,578	88	238,613
<b>Total</b>	<b>46,776</b>	<b>61,752,147</b>	<b>49,215</b>	<b>69,746,328</b>	<b>38,750</b>	<b>34,798,111</b>

## F. CANE MILLING ARBITRATION AND CONTROL

### Role and Functions

The Control and Arbitration Department (CAD), formerly known as the Cane Planters and Millers Arbitration and Control Board is a Department of the Mauritius Cane Industry Authority (MCIA) since the proclamation of the MCIA Act No.40 of 2011 on 19 March 2012.

The CAD is managed by a Director who is responsible for the execution of the policy of the Control and Arbitration Committee (CAC) and the day-to-day business of the department. In the discharge of his functions, currently the Ag. Director is assisted by two Sugar Technologists.

#### Vision:

To provide effective service to planters, millers and other institutions of the sugar industry in order to promote and sustain social stability among partners of the Sugar Industry.

**Mission:** To control milling activities, arbitrate disputes and determine the quantum of sugar and by-products accruing to growers.

### Functions and Powers of the Control and Arbitration Committee include:

- Arbitration of disputes between planters and millers;*
- Control of the milling of canes and the manufacture of sugar;*
- Determination of the quantity of sugar and co-products accruing to planters and millers;*
- Determination of Refund of Transport Cost;*
- Registration of Cane Contracts;*
- Delimitation of Factory Areas*

## Composition of the Control and Arbitration Committee

The composition of the Control and Arbitration Committee during period 01 July 2019 to 30 June 2020 was as follows:

Table 42. Composition of the Control and Arbitration Committee 2019-2020

Chairperson	
Mr. Dheerendra Kumar Dabee, G.O.S.K, SC	
Members	
Mrs.Damyantee Takoory	Representative of the Ministry of Agro-Industry and Food Security
Mr. Jean Li Yuen Fong	Representative of millers
Mr. Soobas Muniah	Representatives of small planters
Mr. Vhinaye Dookhony P.M.S.M	Representatives of small planters
Mr Amal Kumar	Representative of the MCIA Board
Mohabeer Mungur	
Vacant	Independent member

During period 1July 2019 to 30 June 2020, the Committee held eleven meetings. The attendance of each member is as follows:

Table 43. Attendance for period 1 July 2019 to 30 June 2020

Mr. Dheerendra Kumar Dabee, G.O.S.K, SC	11
Mrs.Damyantee Takoory	10
Mr. Jean Li Yuen Fong	11
Mr. Soobas Muniah	10
Mr. Vhinaye Dookhony P.M.S.M	11
Mr Amal Kumar Mohabeer Mungur	9

## Arbitration of disputes and handling of grievances

During period July 2019 to June 2020, no formal dispute was reported to the Committee for arbitration. However, seven complaints have been registered and successfully addressed by the management of the CAD during that period. The number of complaints has decreased compared to last year where twenty one complaints were registered.



## Registration of Cane Contracts

Section 28 of the MCIA Act relating to Cane Contracts provides that cane contracts between planters and millers shall be entered into for any crop year on or before 31 May and forwarded to the Committee for registration not later than 15 June of that crop year.

For crop 2020 no one-stop-shop service was offered to planters due to the pandemic of COVID-19 and lockdown during the month of May. As such the Ministry together with MCIA decided that all cane contract agreements would be automatically renewed for those planters who were registered for crop 2019 and who have no changes in their harvest area.

For Crop 2019, a total of 6,408 cane contracts were registered and 143 late permits issued.

## Start and End of Crop 2019

The milling of canes started on 10 June 2019 at Alteo factory and ended at Omnicane on 16 January 2020 with a crop duration of 170 crushing days. The start and end of milling activities at each sugar factory are provided in Table 44 below:

Factory	Date receiving estate canes	Date receiving planters' Cane	Date start crushing	End of Harvest	Crushing days
Terra	27 June	27 June	28 Jul	10 Jan	155
Alteo	01 June	04 June	05 June	11 Jan	170
Omnicane	02 July	02 July	03 Jul	16 Jan	154

## Canes Milled

Following the closure of Medine Sugar Mill as from Crop 2019, three factories were in operation namely Terra, Alteo and Omnicane. A total of 3,405,250t of canes were supplied to the mills, out of which 3,403,310t were milled while the remaining 1,940t were lost during transportation between

the cane transit sites and the receiving factories. Figure 21 illustrates cane crushed by the three sugar factories:

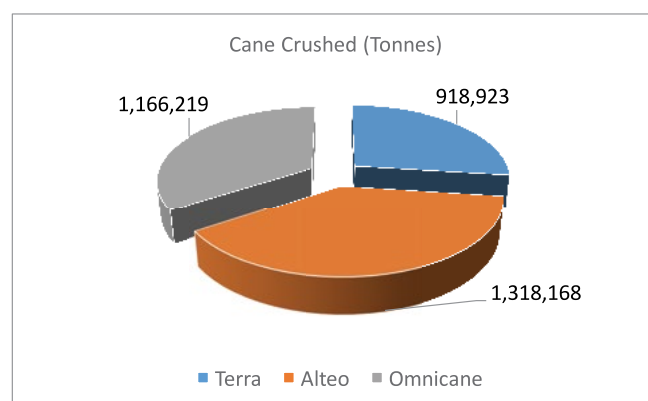


Fig 21. Cane Crushed per Factory - Crop 2019

## Sucrose Content Tests

During the harvest season, the Control and Arbitration Department carries out sucrose content tests on the canes of planters at the various CAD Laboratories.

As in the previous years, any planter (or group of planters) having an amount of 300 t of canes was allowed to apply for a separate sucrose content test in case he wanted his canes to be assessed separately for Crop 2019. As at the closing date of 15 March, four new separate tests, seven cancellations with low tonnage of canes and five amendments to existing tests were approved by the Committee.

During Crop 2019, four laboratories namely at Terra, Alteo, Medine and Omnicane were in operation. In all there are seven InfraCana Cane Analysers for the analysis of cane samples. Each laboratory has two InfraCana Cane Analysers except Medine where there is only one. The InfraCana is used to analyse cane samples for the three parameters of Brix, Pol% and Fibre%. These parameters are subsequently used to determine the sugar accruing to each region and each separate test. Table 45 below gives the number of valid tests obtained at each laboratory that have been used for the determination of the final assessment of sugar and molasses for Crop 2019 and their corresponding amount of canes.

Laboratory	Canes received (tonnes)	Valid number of tests
Terra	893,306	31,181
Alteo	1,319,150	41,273
Medine	26,275	1,864
Omnicane	1,166,519	32,005
<b>Total</b>	<b>3,405,250</b>	<b>106,323</b>

## Sugar Production

The final sugar production at 98.5° pol for crop 2019 was 333,177t compared to 325,983t for Crop 2018.

The average sucrose extracted percent cane (extraction) for Crop 2019 was 9.64% and was inferior to that of Crop 2018 (10.25%). Similarly, the sucrose percent cane (Richesse) of 11.27 for Crop 2019 was found to be lower than the richesse of 11.86 recorded during Crop 2018.

Factory	Planter		Miller		Sugar@ 98.5 pol	
	Sugar Kg	kg sugar per ton cane	Sugar Kg	kg sugar per ton cane	Average Efficiency	Produced
<b>Terra</b>	75,003	81.56	20,586	22.39	96,091	95,589
<b>Alteo</b>	97,381	73.82	27,731	21.02	124,124	125,111
<b>Omnicane</b>	88,109	75.63	24,367	20.89	112,933	112,476
<b>Total/mean</b>	260,493	76.50	72,684	21.34	333,147	333,176

The amount of sugar produced by each mill is shown in Fig 22.

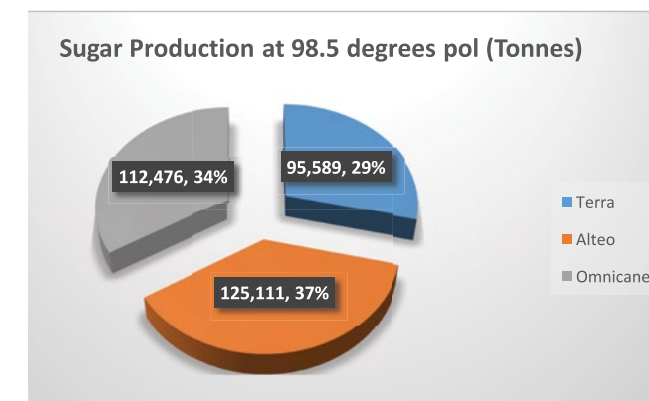


Fig 22. Sugar Produced at 98.5° pol per factory - Crop 2019

## Assessment of sugar and molasses

The final assessment of sugar and molasses for crop 2019, was approved by the Control and Arbitration Committee on 26 February 2020. Table 46 illustrates the division of sugar and Table 47 assessment of molasses:

Factory	Brix of molasses	Molasses % Cane	kg Molasses per tonne of cane @ 86° Brix
<b>Terra</b>	81.165	3.449	32.551
<b>Alteo</b>	87.302	2.940	29.841
<b>Omnicane</b>	85.184	4.001	39.633

## Assessment of scum

The Final Assessment of Scum for Crop 2019 based on the average quantity of scums produced during the preceding crop year by each factory per ton of canes milled and at specified moisture content were approved by the Control and Arbitration Committee on 27 May 2020 as shown in Table 48.

**Table 48. Final Assessment of Scum for Crop 2019**

Factory	Moisture % scum	Kg scum per tonne cane
Terra	68.54	30.50
Alteo	71.91	49.60

Since Omnicane factory produces a limited amount of scums every year, planters of that factory area are entitled to 7 tonnes of scums per acre of land during replantation only as per a previous decision of the Committee taken on 30 May 2013.

## Final Road Rate for Crop 2019

In accordance with section 40 of the MCIA Act, sugarcane growers are entitled to a refund of the transport cost of their canes where the distance over which the canes are transported to a factory or a cane transit site is greater than 6.4 km.

In practice, small planters supplying up to 100 tonnes of cane benefit from a special rate (+ 10%) as they pay a higher cost of transport due to the poor state of roads leading to their fields and lower bargaining power as compared to big planters who benefit from economies of scale due to larger production.

Alternatively, where the transport is undertaken by the miller, the latter is refunded a fixed cost and the cost of transport over the first 6.4 km only.

The recommended rates applicable where the transport cost was undertaken by the planter are provided in Table 49.

**Table 49. Rate of refund for transport cost in excess of 6.4 km**

Type of Planters	Crop 2018 Rate/tonne/km (MUR)	Crop 2019 Rate/tonne/km (MUR)
Planters supplying more than 100 t of canes	6.92	7.04
Planters supplying up to 100 t of canes (+10%)	7.62	7.75

Where the transport cost was undertaken by the miller, the variable cost is the same as per Table 49 whereas the fixed cost applicable is as follows:

Fixed cost to be refunded to the miller by a planter per tonne of cane for the first 6.4 km

For Crop 2018: MUR 24.82

**For Crop 2019: MUR 25.24**

## Determination of Price of Molasses

Pursuant to Section 39(2)(c) of the MCIA Act, where a planter has opted to receive the molasses to which he is entitled wholly or partly in cash, the value of the molasses shall be determined, where the molasses are sold by a miller or otherwise, on the average price of the molasses.

For Crop 2019, a total of 115,468 t of molasses at 86° Brix was produced by the three factories. An amount of 514t was delivered in kind to planters while 111,401t were sold to local distilleries and 4,067t to livestock breeders.

The prices applicable to each category of users and the Final Price of Molasses for Crop 2019 at 86° Brix were as follows:

- (1) Sale Price to Livestock Breeders: MUR2,500/t
- (2) Deemed FOB price of molasses to distillers producing alcohol destined for exportation: MUR 2,147.18/t
- (3) Price to distillers producing potable alcohol for the domestic market: MUR 3,500/t

- (4) Average Blended Price of Molasses /t: MUR 2,347.24

is payable by those using more than 10t of canes yearly.

- (5) Final Price of Molasses payable to planters per tonne of molasses at 86° Brix inclusive of Distiller/ Bottler Contribution: MUR 3,717.13

For period July 2019 to June 2020, the CAD has renewed 23 permits.

## Closure of weighbridges

In accordance with Section 36 of the MCIA Act, a miller may apply to the Control and Arbitration Committee for the closure of a weighbridge receiving less than 500t of canes per day for the preceding 3 consecutive crop years.

For Crop 2020, Bel Ombre and Reufac weighbridges have been closed down and planters of those two factory areas are required to deliver their canes at St Felix and Mon Desert Alma cane transit sites respectively against payment of a uniform package for planters.

## Staff matters

### Seasonal employees

For Crop 2020, as in previous years, the CAD recruited 60 seasonal employees in the grade of Supervisor/Operator, Sampler/Cleaner and Helper/Cleaner to work at the various laboratories and cane transit sites. Additionally, the CAD also recruited one lorry driver and one lorry helper to work in the Department's lorry fitted with crane which is used for the calibration of weighbridges.

In August 2019, three Technical Officers have been recruited by the MCIA to assist the Sugar Technologists/Senior Sugar Technologists and work at the CAD laboratories during the harvest season.

## Weighbridge Calibrations and Checks

In compliance with Section 32 of the MCIA Act, the CAD regularly calibrates and checks the weighbridges located at the sugar factories, cane transit sites, refineries and Sugar Storage Units of the MCIA.

For this purpose, the CAD possesses two lorries equipped with cranes and forty-five 1-tonne standard weights which are calibrated by the Legal Metrology Division of the Ministry of Commerce and Consumer Protection prior to the start of the harvest season.

The number of cane and sugar weighing platforms in operation for 2019 was 43 and a total of 3,377 accuracy checks have been performed on those weighbridges as at 30 June 2020 by the officers of the CAD (as shown in Table 50 below).

**Table 50. Weighbridge calibration and Accuracy checks**

Types of Checks	Number of Checks
Calibration/Recalibration	50
Taring	123
Daily weighbridge accuracy checks	3,204
<b>Total</b>	<b>3,377</b>

## Value Added Products

Subject to section 24 (4) of the MCIA Act, a planter may with the authorisation of the Control and Arbitration Committee deliver canes to a person engaged in the production of fresh juice for direct consumption. A yearly fee of MUR2000 is applicable for permit holders using less than 10t of cane annually while an amount of MUR10,000



Table 51 - Summary of Crop 2019

Factory	Crushing Period		Crushing days	Canes (tonnes)			Richesse (Sucrose % Cane)	Extraction (Sucrose Extracted % Cane)	Sugar Produced (tonnes)				Molasses Produced tel quel (tonnes)
	Start	End		Received	Crushed	Loss in Transit			Tel Quel	Produced @ 98.5	Average Efficiency	Diff	
Terra	27-Jun <i>2-Jul</i>	10-Jan-20 <i>5-Dec</i>	155 <i>131</i>	919,580 <i>751,475</i>	918,923 <i>751,122</i>	657 <i>353</i>	11.85 <i>12.32</i>	10.25 <i>10.65</i>	94,711 <i>80,481</i>	95,589 <i>81,243</i>	96,091 <i>81,716</i>	-502 <i>-473</i>	31,694 <i>25,145</i>
Alteo	10-Jun <i>4-Jun</i>	11-Jan-20 <i>13-Dec</i>	170 <i>160</i>	1,323,335 <i>1,158,668</i>	1,318,168 <i>1,157,790</i>	982 <i>878</i>	10.86 <i>11.37</i>	9.35 <i>9.87</i>	124,953 <i>115,438</i>	125,111 <i>115,990</i>	124,124 <i>115,301</i>	987 <i>689</i>	38,749 <i>32,242</i>
Medine	10-Jul <i>3-Nov</i>		98	329,871	329,776	95	11.94	10.3	34,126	34,494	34,677	-183	11,271
Ommicane	2-Jul <i>3-Jul</i>	16-Jan-20 <i>6-Dec</i>	154 <i>124</i>	1,167,449 <i>914,502</i>	1,166,219 <i>914,009</i>	300 <i>493</i>	11.27 <i>11.82</i>	9.5 <i>10.16</i>	111,441 <i>93,361</i>	112,476 <i>94,256</i>	112,933 <i>94,288</i>	-457 <i>-32</i>	46,664 <i>34,112</i>
Total				3,410,364 <i>3,154,516</i>	3,403,310 <i>3,152,697</i>	1,939 <i>1,819</i>	11.27 <i>11.86</i>	9.64 <i>10.25</i>	331,105 <i>323,406</i>	333,176 <i>325,983</i>	333,148 <i>325,982</i>	29 <i>1</i>	117,107 <i>102,770</i>

Note: Figures in italics relate to Crop 2018

**G(1) SUGAR STORAGE AND HANDLING UNIT (SUGAR TERMINAL)****Introduction**

The Sugar Storage and Handling Unit (Ex-Mauritius Sugar Terminal Corporation) is located on a piece of reclaimed land having an area of 10.93 ha at Les Salines, Port Louis.

Initially, at its inception in 1980, the main activities at the Terminal were to receive, store and bulk load into ships the raw sugar produced by the sugar factories. The terminal is equipped with receiving facilities, accurate weighing equipment, two-storage sheds of bulk capacity of 175,000 t each and an efficient out-loading station with a loading rate of 1440 t/h.

Following the dismantling of the sugar protocol and the cessation of raw sugar production and exportation, the activities of the Sugar Storage and Handling Unit are mainly the sugar receipt, storage and delivery of both Plantation White sugar (PWS) and Non-Originating Sugars (NOS) to the two refineries of the island.

**Receiving Station**

Sugar is transported in trucks from the sugar factories (PWS) or from the Terminal Quay (NOS) to the receiving station. Fully computerized weighbridges ensure accurate weighing of the sugar lorries at the receiving station. The sugar boxes are then tipped using electro-mechanical equipment to unload the sugar onto conveyor belts which is then conveyed to the storage sheds.



Fig23. Unloading sugar boxes



Fig 24. Storage of Non Originating Sugar (NOS) and Loading of trucks





Fig 25. Transport by trucks

### The Storage Sheds

Two storage sheds, each having a storage capacity of 175,000 t harbours in bulk the plantation white sugar as well as the non-originating sugar. The infrastructures are so designed to resist cyclonic winds of 300 km/h. The storage sheds are protected against any fire outbreak through a state of art fire detection and firefighting system.

Since 2009, Shed No. 2 is dedicated to the storage of special sugars in 1-t bags destined for exportation.



Fig 27. Storage Shed

### Unloading of Non-Originating Sugar at the Terminal Quay

The unloading of sugar vessels is carried on a 24-h basis which may last between 6 to 8 days.



Fig 26. Grabs filling chute

The operations are complex with several operators within the port sector working simultaneously and converging towards the same goals and objectives. Thus, proper coordination, cooperation, communication and control are key factors for successful end results. The unloading rate is approximately 4000 t per 24 h with some 2000 trucks involved in the to and fro movement from the wharf to the receiving station for the whole operations.

### Delivery of Sugar to Refineries

Plantation White Sugar (PWS) and Non-Originating Sugar (NOS) from shed number one are delivered through a new conveying system (C14) inside the shed. The lorry is positioned under discharging hoppers where an operator triggers the pneumatic gate to load the sugar boxes.



Fig 28. Delivery of sugar from Shed No.1

The lorry is then weighed at the receiving station and directed to the refineries namely Alteo and Omnicane.

Delivery of NOS is also done through the out-loading conveyors and reclaimed at the return bin of the sugar quay.



Fig29. Delivery of sugar from return bin of quay

### Staff Matters

#### Health and Safety Committee

The Health and Safety Committee met regularly to discuss matters relating to the health and safety of the employees.

All provisions of the Occupational Safety and Health Act 2005 were complied with and all the equipment at the Sugar Storage and Handling Unit are inspected by a Registered Machinery Inspector.

#### Meetings with Staff Associations

The management had regular meetings with the Mauritius Sugar Terminal Corporation Employees Union (MSTCEU) and the Mauritius Sugar Terminal Corporation Staff Association (MSTCSA) to discuss establishment problems, including those relating to the terms and conditions of service and the maintenance of good industrial relations.

### Maintenance and Repairs

All equipment and machineries undergo rigorous maintenance phases based on a pre-planned preventive maintenance programme and coupled

to that, critical equipment are routed to a conditioned-based monitoring cycle.

Most of the maintenance and repair works are carried in-house except for big projects which are outsourced. The workshop is equipped with specialized tools and equipment and among others this include a lathe, a milling machine, a hydraulic press, welding equipment both arc and gas, heavy duty drilling machine. Two mobile cranes facilitate transportation of heavy loads, tarring of weighbridges, maintenance of sugar boxes and working at heights with the man-platform attachment.

In view of the geographical position of the terminal and being exposed to the saline environment, the whole structure which is made of steel and aluminium cladding are subject to adverse environmental impacts. Coupled to that, the ageing of the terminal escalates the maintenance and repairs works. The total built-up area is approximately 43,000 m<sup>2</sup>.

### Sugar Movements

#### Plantation White Sugar Received for Year 2019

A total of 7,058.790 Mt of PWS was received at the Terminal during the 2019 sugar cane crop. A breakdown of the quantity of sugar received from the sugar estates is shown below.

Table 52. Sugar Received at the Sugar Storage and Handling Unit for Year 2019

(16.07.19 – 27.12.19)	
Sugar Estates	Plantation White Sugar (PWS) (MT)
Terra Milling Ltd.	6,756.200
Omnicane Milling Operations Ltd	75.380
Alteo Ltd	227.210
<b>Total</b>	<b>7,058.790</b>

## Plantation White Sugar Delivered for Year 2019

Table 53. Delivery of Plantation White Sugar for Year 2019 (30.01.19 – 15.10.19)	
Omnicanne Milling Operations Ltd	3,802.820 MT
Alteo Ltd	13,281.190 MT
<b>Total</b>	<b>17,084.010 MT</b>

## Non-originating Sugar Delivered for Year 2019

Table 54. Delivery of Non-originating Sugar for Year 2019	
Omnicanne Milling Operations Ltd (25.03.2019)	39,507.350 MT
Alteo Ltd (27.12.2019)	23,478.620 MT
<b>Total</b>	<b>62,985.970 MT</b>

## G(2) SUGAR STORAGE AND HANLDING UNIT (BAGGED SUGAR)

### Transfer of the Operations of the Bagged Sugar Storage and Distribution Co Ltd to MCIA

In the context of the rationalization of the service providing institutions to improve cost effectiveness, quality services and optimal use of human resources, Cabinet, at its meeting on 22nd August 2014, had agreed to the transfer of the operations of the Bagged Sugar Storage and Distribution Co Ltd to the Mauritius Cane Industry Authority. The employees of the Company, who are on a permanent and pensionable establishment would be redeployed to the Mauritius Cane Industry Authority.

The Bagged Sugar Storage and Distribution Co. Ltd has been removed from the Register of Companies, under Section 309(1)(d) of the Companies Act 2001, on 31st December 2014. All assets and liabilities have been transferred to the Mauritius Cane Industry Authority with effect from 1st January 2015.



Fig 30. Bagged Sugar Storage

### Principal Activities

The principal activity of the Bagged Sugar Unit comprises of the receipt, storage and distribution of bagged sugar as follows:

- Special Sugars are received from sugar estates for export markets
- White Refined / Raw Sugars are received from sugar estates for local market
- Imported Sugars were received from overseas suppliers for local market and bottlers up to year 2012.

The sugars are received from Terra Milling Ltd, Alteo Milling Ltd and Omnicanne Milling Ltd in 25 kg, 50 kg and 1-tonne bags.

To this end, the Unit operates two warehouses held on operating lease at the following locations:

- (a) MCIA Shed No 2
- (b) Caudan

The sugar weight received for the past 8 years are as shown in the Table 55 below:

Table 55. Weight of sugar								
Crop Year	2012	2013	2014	2015	2016	2017	2018	2019
<i>Sugar Received from Sugar Estates (t)</i>	142,772	121,042	126,714	104,172	134,566	87,457	93,990	96,183
<i>Imported Sugar (t)</i>	8,000	-	-	-	-	-	-	-
	<b>150,772</b>	<b>121,042</b>	<b>126,714</b>	<b>104,172</b>	<b>134,566</b>	<b>87,457</b>	<b>93,990</b>	<b>96,183</b>



**General**

Directors are responsible to present financial statements of the Authority that give a faithful representation of the financial position as at the end of the financial period and of the results of its operations for the period then ended. It is responsible for the integrity of these financial statements and for the objectivity of any other information presented therein.

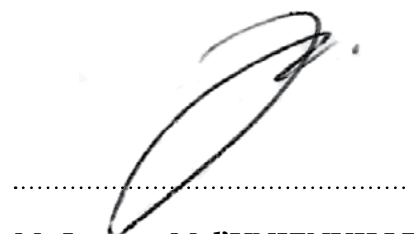
The Directors confirm that, in preparing these financial statements, they have ensured that proper accounting records which disclose with reasonable accuracy at any time the financial position of the Authority; the assets of the Authority have been safeguarded by maintaining appropriate internal control systems and procedures; reasonable steps have been taken for the prevention and detection of fraud and other irregularities; the financial statements have been prepared on the going concern basis; judgments and estimates have been made that are reasonable and prudent; and accounting policies have been selected in accordance with International Public Sector Accounting Standards (IPSASs) and have been applied consistently.

**Internal Control**

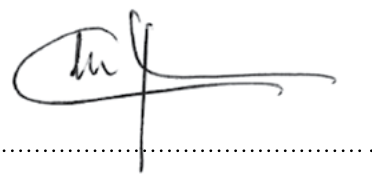
The Directors have overall responsibility for taking such steps, as are reasonably open to them, to safeguard the assets of the Authority and to prevent and detect fraud and other irregularities. The internal control system has been designed to provide the Directors with such reasonable assurance. Such systems ensure that all transactions are authorised and recorded and that any material irregularities are detected and rectified within a reasonable time-frame. The Authority has an established internal control system which assists management in effectively discharging its responsibilities. The internal control system is reviewed on an ongoing basis to ensure its effectiveness.

**Risk Management**

The Authority does not have a specific Risk Management Committee. However, all risky issues are considered by the Audit and Risk Committee. The Board is also responsible for taking appropriate action to mitigate risks, if any, using such measures, policies, procedures and other controls that it deems fit.



Mr Jacques M d'UNIENVILLE, G.O.S.K  
Board Member



Medha GUNPUTH  
Senior Chief Executive  
Ministry of Agro-Industry and Food Security  
CHAIRPERSON

**I. INDEPENDENT AUDITOR'S REPORT**





# NATIONAL AUDIT OFFICE

## REPORT OF THE DIRECTOR OF AUDIT TO THE BOARD OF DIRECTORS OF THE MAURITIUS CANE INDUSTRY AUTHORITY

### Report on the Audit of the Financial Statements

#### Opinion

I have audited the financial statements of the Mauritius Cane Industry Authority, which comprise the statement of financial position as at 30 June 2020 and the statement of financial performance, statement of changes in net assets/equity, statement of cash flow and statement of comparison of budget and actual amounts for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In my opinion, the accompanying financial statements give a true and fair view of the financial position of the Mauritius Cane Industry Authority as at 30 June 2020, and of its financial performance and cash flows for the year then ended in accordance with International Public Sector Accounting Standards (IPSASs).

#### Basis for Opinion

I conducted my audit in accordance with International Standards of Supreme Audit Institutions (ISSAIs). My responsibilities under those standards are further described in the 'Auditor's Responsibilities for the Audit of the Financial Statements' section of my report. I am independent of the Mauritius Cane Industry Authority in accordance with the INTOSAI Code of Ethics, together with the ethical requirements that are relevant to my audit of the financial statements in Mauritius, and I have fulfilled my other ethical responsibilities in accordance with these requirements. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

#### Key Audit Matters

Key Audit Matters are those matters that, in my professional judgment, were of most significance in my audit of the financial statements of the current period. These matters were addressed in the context of my audit of the financial statements as a whole, and in forming my opinion thereon, and I do not provide a separate opinion on these matters. I have determined that there are no key audit matters to communicate in my report.

#### Emphasis of Matter

I draw attention to note 22 of the financial statements regarding the accumulated deficit of Rs 1,038,868,800 as of 30 June 2020. The deficit stood at Rs 461,499,479 as of 30 June 2019.

My opinion is not modified in respect of this matter.

#### Other Information

Management is responsible for the other information. The other information comprises the information included in the annual report of the Mauritius Cane Industry Authority, but does not include the financial statements and my auditor's report thereon.

My opinion on the financial statements does not cover the other information and I do not express any form of assurance conclusion thereon.

In connection with my audit of the financial statements, my responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or my knowledge obtained in the audit or otherwise appears to be materially misstated. If, based on the work I have performed, I conclude that there is a material misstatement of this other information, I am required to report that fact. I have nothing to report in this regard.

#### Corporate Governance Report

My responsibility under the Financial Reporting Act is to report on the compliance with the Code of Corporate Governance disclosed in the annual report and assess the explanations given for non-compliance with any requirement of the Code. From my assessment of the disclosures made on corporate governance in the annual report, the Mauritius Cane Industry Authority has not disclosed and has failed to satisfactorily explain the reasons for non-compliance with some requirements of Principle 1 "Governance Structure" and Principle 4 "Director Duties, Remuneration and Performance".

#### Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with International Public Sector Accounting Standards and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Mauritius Cane Industry Authority's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management intends to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible of overseeing the Mauritius Cane Industry Authority's financial reporting process.

#### Auditor's Responsibilities for the Audit of the Financial Statements

My objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes my opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISSAIs, will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are



considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with ISSAIs, I exercise professional judgement and maintain professional scepticism throughout the audit. I also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Mauritius Cane Industry Authority's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Mauritius Cane Industry Authority's ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify my opinion. My conclusions are based on the audit evidence obtained up to the date of my auditor's report. However, future events or conditions may cause the Mauritius Cane Industry Authority to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

I communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I identify during my audit.

I also provide those charged with governance with a statement that I have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on my independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, I determine those matters that were of most significance in the audit of the financial statements of the current period and are therefore the key audit matters. I describe these matters in my auditor's report unless law or regulation precludes public disclosure about the matter or, when, in extremely rare circumstances, I determine that a matter should not be communicated in my report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

## **Report on Other Legal and Regulatory Requirements**

### ***Management's Responsibilities for Compliance***

In addition to the responsibility for the preparation and presentation of the financial statements described above, management is also responsible to ensure that the Mauritius Cane Industry Authority's operations are conducted in accordance with the provisions of laws and regulations, including compliance with the provisions of laws and regulations that determine the reported amounts and disclosures in an entity's financial statements.

### ***Auditor's Responsibilities***

In addition to the responsibility to express an opinion on the financial statements described above, I am also responsible to report to the Board of Directors whether:

- (a) I have obtained all the information and explanations which to the best of my knowledge and belief were necessary for the purpose of the audit;
- (b) the Statutory Bodies (Accounts and Audit) Act and any directions of the Minister, in so far as they relate to the accounts, have been complied with;
- (c) in my opinion, and, as far as could be ascertained from my examination of the financial statements submitted to me, any expenditure incurred is of an extravagant or wasteful nature, judged by normal commercial practice and prudence;
- (d) in my opinion, the Mauritius Cane Industry Authority has been applying its resources and carrying out its operations fairly and economically; and
- (e) the provisions of Part V of the Public Procurement Act regarding the bidding process have been complied with.

I performed procedures, including the assessment of the risks of material non-compliance, to obtain audit evidence to discharge the above responsibilities.

I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my qualified opinion.

### ***Statutory Bodies (Accounts and Audit) Act***

I have obtained all information and explanations which to the best of my knowledge and belief were necessary for the purpose of my audit.

As far as it could be ascertained from my examination of the relevant records:

- (a) the Mauritius Cane Industry Authority has complied with the Statutory Bodies (Accounts and Audit) Act; and
- (b) no direction relating to the accounts has been issued by the responsible Minister to the Mauritius Cane Industry Authority.

Based on my examination of the records of the Mauritius Cane Industry Authority, nothing has come to my attention that causes me to believe that:

- (a) expenditure incurred was of an extravagant or wasteful nature, judged by normal commercial practice and prudence; and
- (b) the Authority has not applied its resources and carried out its operations fairly and economically.

### ***Statutory Bodies Pension Funds Act***

Section 3 of the Statutory Bodies Pensions Fund requires that every statutory body shall be administered by State Insurance Company of Mauritius Limited.

The retirement benefit obligations of the Mauritius Cane Industry Authority as at 30 June 2020 stood at Rs 1,232,379,564 and comprised of Rs 370,814,667 and Rs 861,564,897, representing the obligations for the Ex-Mauritius Sugar Industry Research Institute and other Ex-Service Providing Institutions respectively. As at 30 June 2020, the pension fund of the Ex-Mauritius Sugar Industry Research Institute has still not been transferred to State Insurance Company of Mauritius Limited, which is contrary to Section 3 of the Statutory Bodies Pension Fund Act.

### ***Public Procurement Act***

In my opinion, the provisions of Part V of the Act have been complied with as far as it could be ascertained from my examination of the relevant records.



**C. ROMOOAH**  
Director of Audit

National Audit Office  
Level 14,  
Air Mauritius Centre  
PORT LOUIS

12 August 2021

## **J. FINANCIAL STATEMENTS**



	<b>PAGES</b>
Report of the directors	1
Statement of financial position	2
Statement of financial performance	3
Statement of changes in net assets/equity	4
Statement of cash flows	5
Statement of comparison of budget and actual amounts	6
Notes to the financial statements	7- 32

1. The Directors have the pleasure to submit the financial statements of the Mauritius Cane Industry Authority (MCIA) for the year ended 30 June 2020.

2. State of affairs and review of activities

The Statement of financial position as at 30 June 2020 is set on page 2 and the Statement of financial performance for the year then ended on page 3.

The main activity of the Mauritius Cane Industry Authority, is unchanged since 30 June 2019.

3. Statement of Directors

The Directors state that :

- Suitable accounting policies are selected and applied consistently.
- Judgements and estimates made are reasonable and prudent.
- Applicable accounting standards are followed subject to any material departures, disclosed and explained in the financial statements.
- Financial statements are prepared on the going concern basis, given the Board presumes that the Authority will continue its activities.



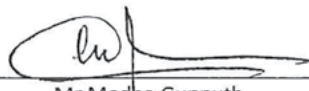
**CHAIRPERSON**  
**MCIA Board of Directors**

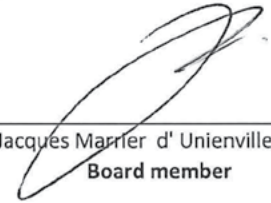
STATEMENT OF FINANCIAL POSITION  
AS AT 30 JUNE 2020

2

	Notes	30 Jun 2020 MUR	30 Jun 2019 MUR
<b>ASSETS</b>			
<b>Current assets</b>			
Cash and cash equivalents	9	314,809,512	784,200,123
Trade receivables	10	148,361,590	295,018,332
Loans receivable	11	11,101,885	11,199,997
Inventories	12	49,180,611	51,800,499
Prepayments		1,588,000	1,272,545
		<u>525,041,598</u>	<u>1,143,491,496</u>
<b>Non-current assets</b>			
Trade receivables	10	25,417,957	25,987,376
Loans receivable	11	26,236,224	32,754,479
Investment in financial assets	13	402,950	548,300
Property, plant and equipment	14	2,414,806,614	2,124,656,591
Investment property	15	8,880,000	6,820,000
Intangible assets	16	5,325,531	2,307,137
		<u>2,481,069,275</u>	<u>2,193,073,882</u>
<b>Total assets</b>		<u><b>3,006,110,873</b></u>	<u><b>3,336,565,378</b></u>
<b>LIABILITIES</b>			
<b>Current liabilities</b>			
Trade payables	17	68,255,730	479,892,805
Short term borrowings	18	1,512,486	1,362,302
Short term employee benefit provisions	19	28,000,000	25,200,000
Other short term provisions	19	700,000	1,300,000
		<u>98,468,216</u>	<u>507,755,107</u>
<b>Non-current liability</b>			
Trade payables	17	4,652,387	2,139,980
Long term borrowings	18	15,657,438	15,442,804
Long term employee benefit provisions	19	160,664,625	162,665,292
Other long term provisions	19	2,519,530	2,500,000
Retirement benefits obligations	20	1,232,379,564	858,145,682
		<u>1,415,873,544</u>	<u>1,040,893,758</u>
<b>Total Liabilities</b>		<u><b>1,514,341,761</b></u>	<u><b>1,548,648,865</b></u>
<b>Net Assets</b>		<u><b>1,491,769,113</b></u>	<u><b>1,787,916,513</b></u>
<b>NET ASSETS/EQUITY</b>			
Contributed capital	21	300,000,000	300,000,000
Revaluation reserve		2,230,372,713	1,949,005,443
Fair value reserve		265,200	410,550
Accumulated surplus/(deficit)	22	(1,038,868,800)	(461,499,479)
<b>Total Net Assets/Equity</b>		<u><b>1,491,769,113</b></u>	<u><b>1,787,916,513</b></u>

Approved by the MCIA Board of Directors on 16 July 2021.

  
 Mr Medha Gunpath  
 Chairperson

  
 Mr Jacques Marrier d'Unienville, G.O.S.K  
 Board member

The notes on pages 7 to 32 form an integral part of these financial statements.

STATEMENT OF FINANCIAL PERFORMANCE  
FOR THE YEAR ENDED 30 JUNE 2020

3

	Notes	Year ended 30 Jun 2020 MUR	Year ended 30 Jun 2019 MUR
<b>Revenue</b>			
<b>Non - Exchange Transactions</b>			
Cess and Grants	24	1,054,650,494	1,077,413,116
Levy on sale of sugar	25	124,812,491	119,180,449
Other non-exchange income	26	1,138,154	3,249,505
		<u>1,180,601,139</u>	<u>1,199,843,069</u>
<b>Exchange Transactions</b>			
Hire of tractors and trailers	27	35,895,275	73,850,053
Other exchange income	26	31,351,720	35,093,277
		<u>67,246,995</u>	<u>108,943,330</u>
<b>Expenses</b>			
Salaries and salary related expenses	28	(486,731,063)	(411,000,810)
Administrative and general expenses	29	(157,912,824)	(379,985,957)
Ex- dockers pensions	30	(114,068,661)	(114,333,385)
Depreciation of property, plant & equipment	14	(131,175,279)	(121,841,105)
Depreciation of investment property	15	(370,000)	(440,000)
Amortisation of intangible assets	16	(1,319,090)	(1,028,481)
FORIP expenses		(51,982,607)	(74,697,131)
Planters fund expenses		(19,376,282)	(55,702,714)
ALMS expenses		(49,840,938)	(30,304,390)
Sugar cane sustainability expenses	31	(570,622,311)	(596,045,135)
Finance costs		(448,888)	(360,257)
Increase in retirement benefits obligations	20	47,972,657	(43,678,668)
		<u>(1,535,875,285)</u>	<u>(1,829,418,032)</u>
<b>Deficit for the year</b>		<u><b>(288,027,151)</b></u>	<u><b>(520,631,633)</b></u>

The notes on pages 7 to 32 form an integral part of these financial statements.

STATEMENT OF CHANGES IN NET ASSETS/ EQUITY  
YEAR ENDED 30 JUNE 2020

	Contributed Capital	Accumulated Surplus/(Deficit)	Fair Value Reserve	Revaluation Reserve	Total
	MUR	MUR	MUR	MUR	MUR
<b>As previously stated at 01 July 2019</b>	300,000,000	(461,499,479)	410,550	1,949,005,443	1,787,916,514
Transfers	-	132,864,369	-	(132,864,369)	-
Deficit for the year	-	(288,027,150)	-	-	(288,027,150)
	300,000,000	(616,662,260)	410,550	1,816,141,074	1,499,889,364
Actuarial losses on defined benefit pension plans	-	(422,206,540)	-	-	(422,206,540)
Decrease on investment revaluation	-	-	(145,350)	-	(145,350)
Increase on revaluation of non current assets	-	-	-	414,231,639	414,231,639
<b>As at 30 June 2020</b>	300,000,000	(1,038,868,800)	265,200	2,230,372,713	1,491,769,113

*Car Loan Fund of MUR 30,417,987 representing money obtained by MSIRI from ex MSA to be used as a revolving fund. As it is no more used for the intended purpose, it has been transferred to Accumulated Fund in 2015.*

*Car Loan Interest fund of MUR 51,112,351 representing interest earned on car loans to MSIRI officers transferred to Accumulated Fund on 30 June 2017.*

	Contributed Capital	Accumulated Surplus/(Deficit)	Fair Value Reserve	Revaluation Reserve	Total
	MUR	MUR	MUR	MUR	MUR
<b>As previously stated at 01 July 2018</b>	300,000,000	(9,384,405)	555,050	2,029,258,274	2,320,428,919
Transfer - excess depreciation on revaluation	-	80,252,831	-	(80,252,831)	-
Deficit for the year	-	(520,631,633)	-	-	(520,631,633)
	300,000,000	(449,763,207)	555,050	1,949,005,443	1,799,797,286
Actuarial losses on defined benefit pension plans	-	(11,736,272)	-	-	(11,736,272)
Decrease on investment revaluation	-	-	(144,500)	-	(144,500)
<b>As at 30 June 2019</b>	300,000,000	(461,499,479)	410,550	1,949,005,443	1,787,916,514

The notes on pages 7 to 32 form an integral part of these financial statements.

STATEMENT OF CASH FLOWS  
YEAR ENDED 30 JUNE 2020

	Notes	Year ended 30 Jun 2020	Year ended 30 Jun 2019
		MUR	MUR
<b>Cash flows from operating activities</b>			
Cash absorbed in operations	35.1	(463,405,727)	39,190,225
Interest paid		(269,276)	(279,645)
<b>Net cash used in operating activities</b>		<b>(463,675,003)</b>	<b>38,910,580</b>
<b>Cash flows from investing activities</b>			
Capital expenditure		(13,169,903)	(12,449,318)
Disposal proceeds		576,043	5,039,916
Interest received		1,607,541	7,958,315
Dividend received		19,960	28,460
<b>Net cash generated from/(used in) investing activities</b>		<b>(10,966,359)</b>	<b>577,373</b>
<b>Cash flows from financing activities</b>			
Staff loans recovered		13,757,420	16,075,280
Staff loans granted		(7,141,053)	(14,758,778)
Repayment of loans		(1,365,616)	(1,342,435)
<b>Net cash flow generated from financing activities</b>		<b>5,250,751</b>	<b>(25,933)</b>
<b>Net Increase/ (Decrease) in cash and cash equivalents</b>		<b>(469,390,611)</b>	<b>39,462,020</b>
<b>Movement in cash and cash equivalents</b>			
		MUR	MUR
As at 01 July 2019		784,200,123	744,738,103
Increase / (Decrease)		(469,390,611)	39,462,020
As at 30 June 2020	35.3	<b>314,809,512</b>	<b>784,200,123</b>

The notes on pages 7 to 32 form an integral part of these financial statements.



## STATEMENT OF COMPARISON OF BUDGET AND ACTUAL AMOUNTS

	YEAR ENDED 30 JUNE 2020			REMARKS
	ORIGINAL BUDGET MUR	ACTUAL MUR	VARIANCE MUR	
<b>RECURRENT EXPENDITURE</b>				
Salaries, Salary related expenses and Travelling	359,627,700	337,752,825	21,874,875	Savings in overtime due to lockdown & non publication of PRB report.
Pension and Insurance of employees	62,123,700	141,557,683	(79,433,983)	MUR 87.8M injected into MCIA Pension Fund.
MSS Ex- Dockers Pension	119,289,300	113,494,776	5,794,524	COLA paid lower than expected and reduced number of pensioners.
Rent, Rates and Utilities	22,204,700	16,517,419	5,687,281	Rent unpaid at year end.
General Office Expenses	7,630,400	8,064,163	(433,763)	
Maintenance and Insurance	81,499,500	73,507,680	7,991,820	Savings in Vehicle Running expenses due to lockdown.
Welfare and Health & Safety	3,265,000	2,613,857	651,133	Cost saving.
Finance Cost	400,300	425,108	(24,808)	
Mission	300,000	-	300,000	No mission undertaken.
Field Experimentation	50,000	125,981	(75,981)	
Publication and Advertisement	400,000	356,102	43,898	
Training & Support Services	300,000	77,000	223,000	
Security	18,095,000	13,129,874	4,965,126	Security costs for April - June 2020 unpaid at year end.
Air Pollution Monitoring Expenses	-	1,763,082	(1,763,082)	Expenses not budgeted.
Research & Development	11,850,000	8,471,274	3,378,726	Cost saving.
	<b>687,035,600</b>	<b>717,656,834</b>	<b>(30,621,234)</b>	
<b>CAPITAL EXPENDITURE</b>				
Non Current Assets	9,915,000	11,530,210	(1,615,210)	
Repayment of Loans	1,426,600	1,365,616	60,984	
	<b>11,341,600</b>	<b>12,895,826</b>	<b>(1,554,226)</b>	
<b>TOTAL EXPENDITURE</b>	<b>698,377,200</b>	<b>730,552,660</b>	<b>(32,175,460)</b>	
<b>REVENUE</b>				
MSS Warehouse for Special Sugars	2,101,300	-	(2,101,300)	Not received.
Hire of Tractors & Trailers	73,000,000	35,895,275	(37,104,725)	Reduction in SPRP land preparation works.
Co - financing from Government	391,921,500	958,133,029	566,211,529	Actual results include Sugar Cane Sustainability and other grants.
Grant from MSS	80,600,000	80,600,000	-	
Levy on sale of sugar on local market	131,350,000	95,336,422	(36,013,578)	Significant receipt after year end.
Air Pollution Monitoring Income	-	3,686,500	3,686,500	Income not budgeted.
Others	19,404,400	15,565,122	(3,839,278)	
	<b>695,377,200</b>	<b>1,189,216,348</b>	<b>490,839,148</b>	

Both the budgeted and the actual figures are prepared on a cash basis.

The notes on pages 7 to 32 form an integral part of these financial statements.

## NOTES TO THE FINANCIAL STATEMENTS

## YEAR ENDED 30 JUNE 2020

## 1 REPORTING ENTITY

The Mauritius Cane Industry Authority (**The Authority**) is a body corporate established under the Mauritius Cane Industry Authority Act 2011 which was proclaimed on 19 March 2012 to take over the activities of the following ex- Service Providing Institutions (SPIs):

- Mauritius Sugar Authority
- Mauritius Sugar Industry Research Institute
- Mauritius Sugar Terminal Corporation
- Farmers' Service Corporation
- Sugar Planters Mechanical Pool Corporation
- Cane Planters and Millers Arbitration and Control Board

MCIA took over the activities of BSSD Co. Ltd as from 1 January 2015. The audited financial statements of the company as at 31 March 2015 have been consolidated with those of MCIA.

The Authority's registered office is situated at 1, Moka Road, MSIRI Complex, Reduit.

The objectives of the Authority include:

- Monitoring, overseeing and coordinating all the activities relating to, and ensuring a fair, efficient and effective administration and operation of the cane industry.
- Promoting and supporting the sustainable development, efficiency and viability of the cane industry.
- Formulating and implementing policies, strategies, plans, programmes and schemes in relation to the cane industry.
- Promoting and facilitating the sustainable development of the cane cluster in Mauritius and in the region.
- Monitoring and coordinating the activities of the cane industry, including planting, milling, processing, transport, bulk handling and marketing.

The assets and funds of every former SPI have been vested in the Authority and all rights, obligations and liabilities subsisting in favour of or against a former SPI continued to exist under the same terms and conditions in favour or against the Authority. Consequently, the Authority has incorporated in its financial statements all the assets, liabilities and funds of the ex-SPIs which were reclassified and consolidated. Depreciation policies have been standardised to achieve consistency and uniformity in reporting.

## 2 REPORTING DATE AND COMPARATIVES

The financial statements cover a period of 12 months ending 30 June 2020 and are presented in accordance with International Public Sector Accounting Standards (IPSASs)

The Authority applied IPSASs for the first time in the financial year ending 30 June 2018 and elected to not prepare comparative information. An opening accrual basis statement of financial position at 1 July 2017 was prepared and presented. As a first-time adopter, the Authority also elected not to adopt the Three Year Transitional Relief.

## 3 REPORTING CURRENCY

The financial statements of the Authority are presented in Mauritian rupees (MUR).

## 4 MEASUREMENT BASE

As from financial year ending 30 June 2018, the Authority adopted International Public Sector Accounting Standards (IPSASs), issued by the International Public Sector Accounting Standards Board (IPSASB) which is a Board of the International Federation of Accountants (IFAC), as appropriate for the measurement and reporting of the financial position and financial performance on an accrual basis.



YEAR ENDED 30 JUNE 2020

**5 ADOPTION OF IPSASs****5.1 Non-application of IPSASs**

Certain new standards, amendments and interpretations to existing standards have been published that are mandatory for the accounting periods beginning after 1 July 2020 or later periods but which have not been early adopted. These new standards, amendments and interpretations are either not relevant to the MCIA's operations or are not expected to have a material effect on the accounting policies and disclosures.

5.2 Below is a list of amendments to IPSASs issued in July 2020 which are mandatorily effective for annual financial statements covering periods beginning on or after 1 January 2021 but which allow early application.

- IPSAS 5 Borrowing Costs
- IPSAS 13 Leases
- IPSAS 17 Property, Plant, and Equipment
- IPSAS 21 Impairment of Non- Cash-Generating Assets
- IPSAS 26 Impairment of Cash-Generating Assets
- IPSAS 30 Financial instruments: Disclosures
- IPSAS 33 First-time Adoption of Accrual Basis International Public Sector Accounting Standards
- IPSAS 40 Public Sector Combinations

**5.3 Use of estimates and judgement**

Where relevant, the Authority is still evaluating the effect of these Standards, amendments to published Standards and Interpretations issued but not yet effective, on the presentation of its financial statements. The preparation of financial statements in conformity with the International Public Sector Accounting Standards requires the use of certain critical accounting estimates. It also requires management to exercise its judgement in the process of applying the Authority's accounting policies. The areas involving a higher degree of judgement or complexity, or areas where estimates and assumptions are significant to the financial statements are disclosed in **note 8**.

**6 SIGNIFICANT ACCOUNTING POLICIES**

The principal accounting policies adopted in the preparation of these financial statements are set out below.

**6.1 Basis of preparation**

The financial statements have been prepared on the historical cost basis except for non current assets and financial instruments that are measured at revalued amounts or fair values at the end of each reporting date.

**6.2 Statement of Compliance**

The financial statements have been prepared in accordance with International Public Sector Accounting Standards (IPSASs). Where an IPSAS does not address a particular issue, the appropriate International Financial Reporting Standards (IFRSs) and International Accounting Standards (IASs) issued by the International Accounting Standards Board (IASB) are applied.

**6.3 Property, plant and equipment**

Assets, liabilities and funds of all ex-SPIs have been vested into the MCIA at the commencement of the MCIA Act 2011 and transferred at their book values. Assets and liabilities of BSSD Co. Ltd have been transferred at their book values at 01 January 2015.

Non-current assets are stated at their revalued amount, based on periodic valuations, by external independent valuers, less subsequent depreciation for buildings. Any accumulated depreciation at the date of revaluation is eliminated against the gross carrying amount of the asset and the net amount is restated to the revalued amount of the asset.

All property, plant and equipment transferred are stated at their carrying amount. Historical cost includes expenditure that is directly attributable to the acquisition of the items. Subsequent to initial recognition, property, plant and equipment are measured at fair value. Gains and losses arising from changes in the fair value of property, plant and equipment are included in equity in the period in which they arise.

YEAR ENDED 30 JUNE 2020

Subsequent costs are included in the assets carrying amount or recognised as a separate asset as appropriate, only when it is probable that future economic benefits associated with the item will flow to the Authority and the cost of the item can be measured reliably.

Increases in the carrying amount arising on revaluation are credited to revaluation reserve. Decreases that offset previous increases of the same asset are charged against the revaluation reserve; all other decreases are charged to the statement of financial performance.

Each period the difference between depreciation based on the revalued carrying amount of the asset charged to the statement of financial performance and depreciation based on the asset's original cost is transferred from revaluation reserve to accumulated surplus/(deficit).

Depreciation is calculated on the straight line method to write off the cost or revalued amounts of the assets to their residual values over their estimated useful lives as follows:

	Annual rate
Buildings	2% - 20%
Plant, Machinery and Motor Vehicles	2.85% - 100%
Fixtures, Furniture and Fittings & Office Equipment	3.33% - 100%
Computer & Associated Equipment	6.67% - 50%
Laboratory Equipment	16.67% - 100%

Land is not depreciated.

Tractors are depreciated based on the number of effective hours. Tools are written off in the year of purchase.

Full provision for depreciation is made in the year of purchase and nil in the year of disposal.

The assets' residual values and useful lives are reviewed and adjusted if appropriate, at the end of each reporting period.

Where the carrying amount of an asset is greater than its estimated recoverable amount, it is written down immediately to its recoverable amount.

Gains and losses on disposal of plant and equipment are determined by comparing proceeds with carrying amount and are included in the statement of financial performance.

**6.4 Investment property**

Investment property, which is building held to earn rentals and not occupied by the Authority, is carried at cost less impairment losses. Depreciation is calculated at 5% of the cost of the building. Subsequent to initial recognition, investment property is measured at fair value. Gains and losses arising from changes in the fair value of investment property are included in equity in the period in which they arise.

**6.5 Intangible assets**

Computer Software

Acquired computer software licences are capitalised on the basis of costs incurred to acquire and bring to use the specific software and are amortised using the straight line method over their estimated useful lives. Subsequent to initial recognition, computer software are measured at fair value. Gains and losses arising from changes in the fair value of computer software are included in equity in the period in which they arise.

Costs associated with maintaining computer software are recognised as an expense as incurred.

**6.6 Inventories**

Inventories are valued at the lower of cost and net realisable value.



YEAR ENDED 30 JUNE 2020

**6.7 Financial instruments****6.7.1 Financial assets**

The Authority classifies its financial assets as loans and receivables and available-for-sale financial assets. Management determines the classification of its financial assets at initial recognition.

**(i) Loans and receivables**

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. They arise when the Authority provides money, goods or services directly to a debtor with no intention of trading the receivable. They are included in current assets when maturity is within twelve months after the end of the reporting period or non-current assets for maturities greater than twelve months.

**(ii) Available-for-sale financial assets**

Available for sale financial assets are non-derivatives that are either designated in this category or not classified in any of the other categories. They are included in non-current assets unless Management intends to dispose of the investment within twelve months of the end of the reporting period.

Purchases and sales of financial assets are recognised on trade-date, the date on which the Authority commits to purchase or sell the asset. Investments are initially measured at fair value plus transaction costs for all financial assets.

Financial assets are derecognised when the rights to receive cash flows from the investments have expired or have been transferred and the Authority has transferred substantially all risks and rewards of ownership.

Available-for-sale financial assets are subsequently carried at fair value.

Investments in equity instruments that do not have a quoted market price in an active market and whose fair value cannot be reliably measured are measured at cost.

The Authority assesses at the end of each reporting period whether there is objective evidence that a financial asset or a group of financial assets is impaired. In the case of financial assets classified as available-for-sale, a significant or prolonged decline in the fair value of the security below its cost is considered in determining whether the securities are impaired.

If any such evidence exists for available-for-sale financial assets, the cumulative loss, measured as the difference between acquisition cost and the current fair value, less any impairment loss on that financial asset previously recognised is removed from equity and recognised in the statement of financial performance

**(iii) Long term receivables**

Long term receivables with fixed maturity terms are measured at amortised cost using the effective interest rate method, less provision for impairment. The carrying amount of the asset is reduced by the difference between the asset's carrying amount and the present value of estimated cash flows discounted using the effective interest rate. The amount of loss is recognised in the statement of financial performance. Long term receivables without fixed maturity terms are measured at cost. If there is objective evidence that an impairment loss has been incurred, the amount of impairment loss is measured as the difference between the carrying amount of the asset and the present value of estimated cash flows discounted at the current market rate of return of similar financial assets.

YEAR ENDED 30 JUNE 2020

**(iv) Other receivables**

Other receivables are recognised initially at fair value and subsequently measured at amortised cost using the effective interest method, less provision for impairment. A provision for impairment of other receivables is established when there is objective evidence that the Authority will not be able to collect all amounts due according to the original terms of receivables.

The amount of the provision is the difference between the asset's carrying amount and the present value of estimated future cash flows, discounted at the effective interest rate. The amount of provision is recognised in the statement of financial performance.

**6.7.2 Financial liabilities**

Financial liabilities are classified as borrowings, payables and other financial liabilities.

**(i) Borrowings**

Borrowings are recognised initially at fair value being their issue proceeds net of transaction costs incurred.

Borrowings, except bank overdraft, are classified as current liabilities unless the Authority has an unconditional right to defer settlement of the liability for at least twelve months after reporting date.

**(ii) Other payables**

Other payables are stated at their fair value and subsequently measured at amortised cost using the effective interest method.

**(iii) Other Financial Liabilities**

They are recognised at fair value, net of any assets provided as guarantee to the financial institution issuing the loans.

Other financial liabilities are offset with financial assets to the extent that the liabilities and the assets are linked.

**6.7.3 Cash and Cash Equivalents**

Cash and cash equivalents include cash in hand, cash at bank, bank overdrafts and deposits.

**6.7.4 Retirement benefit obligations****(i) Defined benefit plans**

A defined benefit plan is a pension plan that defines an amount of pension benefit that an employee will receive on retirement, usually dependent on one or more factors such as age, years of service and compensation.

The Authority contributes to a defined benefit plan for its employees. The cost of providing benefits is determined and the regular cost is spread over the service lives of employees in accordance with the advice of qualified actuaries who carry out a full valuation of plans every year using the Projected Unit Method.

The retirement benefit obligation recognised in the statement of financial position represents the present value of the defined benefit obligation as adjusted for unrecognised actuarial gains and losses and unrecognised past service cost, and as reduced by the fair value of plan assets.



YEAR ENDED 30 JUNE 2020

### (ii) Defined contribution plans

A defined contribution plan is a pension plan that defines an amount of pension benefit that an employee will receive on retirement, dependent on the amount of contribution by the employee and the employer made to the plan.

A defined contribution plan is implemented for new entrants in the Authority after 1 January 2013 as recommended in the PRB report 2013.

### (iii) Gratuity on retirement

For employees who are not covered by the above pension plan, the net present value of gratuity on retirement payable is calculated by qualified actuaries and provided for. The obligations arising under this item are not funded.

## 6.8 Impairment of assets

At each reporting date, the Authority reviews the carrying amounts of its assets to determine whether there is any indication that those assets have suffered an impairment loss. An impairment loss is recognised for the amount by which the carrying amount of the asset exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell and value in use. For the purposes of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows (cash-generating units).

## 6.9 Revenue recognition

Revenue is measured at the fair value of the consideration received or receivable.

Revenues earned by the Authority are recognised on the following bases:

### (i) Revenue from Non - Exchange Transactions

- Cess - Cess on sugar proceeds, receivable from the Mauritius Sugar Syndicate, is accounted for in the same accounting period in which it is received on a financial year basis rather than on crop year basis.
- Capital grant - Capital grant received to finance acquisition of property, plant & equipment is recognised in the period in which it is received.
- Grant - Grant from the Mauritius Sugar Syndicate to finance BSSD expenditure, is accounted for in the same accounting period in which the related expenditure is incurred.
- Levy on sale of sugar - Levy on sale of sugar is recognised when imported & locally produced sugar is delivered for sale on the local market.
- Anchorage dues - Anchorage due from Mauritius Ports Authority is recognised when vessels berth at the Sugar Terminal wharf.
- Berthing dues - Berthing due from Central Electricity Board (CEB) is recognised when vessels berth at Sugar Terminal wharf to upload heavy fuel oil product from Fort Williams depot for CEB in Rodrigues.
- Cane juice application fee - When application is received for the production of cane juice for direct consumption.

### (ii) Revenue from Exchange Transactions

- Hire of equipment - Upon completion of work at the invoiced value for hire of equipment. No value added tax is charged.
- Interest income - Interest is recognised on a time-proportion basis that takes into account the effective yield on the asset.
- Dividend income - Dividend income is recognised when the Authority's right to receive payment is established.
- Royalties - Royalty is recognised as they are earned in accordance with the substance of the relevant agreement.
- Sales of cane - Sale of cane is recognised when goods are delivered and title has passed.
- Cash advance to and contribution from planters - Cash advance is recognised when it is probable that economic benefits will flow to the Authority.

## 6.10 Provisions

Provisions are recognised when the Authority has a present or constructive obligation as a result of past events and when it is probable that an outflow of resources that can be reliably estimated will be required to settle the obligation.

## NOTES TO THE FINANCIAL STATEMENTS

YEAR ENDED 30 JUNE 2020

## 7 FINANCIAL RISK MANAGEMENT

### 7.1 Financial Risk Factors

The Authority's activities expose it to a variety of financial risks.

#### 7.1.1 Market risk

##### (i) Currency risk

The Authority has limited exposure in respect of foreign currency risk.

##### (ii) Price risk

The Authority holds an investment of only MUR 402 950 (at fair value on 30 June 2020) in equities and no investment in bonds or other securities. Accordingly, it has minimal exposure to price risk.

##### (iii) Credit risk

The Authority has limited concentration of credit risk in relation to car loans, and has policies in place requiring loan refund to be deducted directly from employees' salary. A 'gage sans déplacement' is created in favour of the Authority on vehicles acquired through MCIA loans.

Credit risk associated with advances made to planters under the FORIP Scheme is, however, more significant. Despite cash advance to planters is subject to contractual obligations, the recoverability is highly dependent on government policy. Decision to enforce repayment rests upon the Ministry of Agro-Industry and Food Security.

##### (iv) Liquidity risk

The Authority manages its liquidity risk by maintaining sufficient cash and also by ensuring the availability of funds through committed credit facilities.

The table below analyses the Authority's financial liabilities into relevant maturity groupings based on the remaining period at the end of the reporting period to the contractual maturity date.

	Due within 12 months	Due after 1 year	Total
	MUR	MUR	MUR
<b>At 30 June 2020</b>			
Borrowings	1,512,486	15,657,438	17,169,924
Trade Payables	68,255,730	4,652,387	72,908,117
	<b>69,768,216</b>	<b>20,309,825</b>	<b>90,078,041</b>
	MUR	MUR	MUR
<b>At 30 June 2019</b>			
Borrowings	1,362,302	15,442,804	16,805,106
Trade Payables	479,892,805	2,139,980	482,032,785
	<b>481,255,107</b>	<b>17,582,784</b>	<b>498,837,891</b>

##### (v) Cash flow and fair value interest rate risk

As the Authority has no investment in significant interest-bearing assets, the Authority's income and operating cash flows are substantially independent of changes in market interest rates.



**7.2 Fair value estimation**

The nominal value less estimated credit adjustments of other receivables and payables are assumed to approximate their fair values.

**7.3 Capital risk management**

The Authority manages its capital to ensure that it will be able to continue as a going concern. Its overall strategy remained unchanged from 30 June 2019. The capital structure of the Authority consists of accumulated surplus/(deficit), revaluation reserve and other reserves.

**8 CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS**

Estimates and judgements are continuously evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances.

**8.1 Critical accounting estimates and assumptions**

The Authority makes estimates and assumptions concerning the future. The resulting accounting estimates will, by definition, seldom equal the related actual results. The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are discussed below.

**8.2 Impairment of available-for-sale financial assets**

The Authority follows the guidance of IPSAS 26 on determining when an investment is other-than-temporarily impaired. This determination requires significant judgement. In making this judgement, the Authority evaluates, among other factors, the duration and extent to which the fair value of an investment is less than its cost, and the financial health of and near-term business outlook for the investee, including factors such as industry and sector performance, changes in technology and operational and financing cash flow.

**8.3 Pension benefits**

The present value of the pension obligations depend on a number of factors that are determined on an actuarial basis using a number of assumptions. The assumptions used in determining the net cost (income) for pensions include the discount rate. Any changes in these assumptions will impact the carrying amount of pension obligations.

The Authority determines the appropriate discount rate at the end of each year. This is the interest rate that should be used to determine the present value of estimated future cash outflows expected to be required to settle the pension obligations. In determining the appropriate discount rate, the Authority considers the interest rates of high-quality corporate bonds that are denominated in the currency in which the benefits will be paid, and that have terms to maturity approximating the terms of the related pension obligation.

**8.4 Revaluation of property, plant and equipment**

The Authority measures property, plant and equipment, investment property and intangible assets at revalued amounts with changes in fair value being recognised in equity. Independent valuation specialists were engaged to determine fair values.

**8.5 Asset lives and residual values**

Property, plant and equipment are depreciated over its useful life taking into account residual values, where appropriate. The actual lives of the assets and residual values are assessed annually and may vary depending on a number of factors in reassessing asset lives, factors such as technological innovation, product life cycles and maintenance programmes are taken into account. Residual value assessments consider issues such as future market conditions, the remaining life of the asset and projected disposal values. Consideration is also given to the extent of current profits and losses on the disposal of similar assets.

**8.6 Depreciation policies**

Property, plant and equipment are depreciated to their residual values over their estimated useful lives. The residual value of an asset is the estimated net amount that the Authority would currently obtain from disposal of the asset, if the asset was already of the age and in condition expected at the end of its useful life.

The directors therefore make estimates based on historical experience and use best judgement to assess the useful lives of assets and to forecast the expected residual values of the assets at the end of their expected useful lives.

**9 CASH AND CASH EQUIVALENTS**

	30 Jun 2020 MUR	30 Jun 2019 MUR
- Deposits with MSS	-	-
- Bank account with SBM Ltd- FORIP Account	81,809,939	171,889,470
	<b>81,809,939</b>	<b>171,889,470</b>
- Bank account with Maubank	189	988
- Bank account with SBM Ltd- Main Account	131,688,518	524,893,548
	<b>213,498,647</b>	<b>696,784,006</b>
- Other bank balances	101,161,472	87,273,601
- Cash	149,393	142,516
	<b>314,809,512</b>	<b>784,200,123</b>

The effective rate of interest on bank overdrafts at the reporting date is 8.25 %.

**10 TRADE RECEIVABLE**

10.1	30 Jun 2020 MUR	30 Jun 2019 MUR
Receivables - Exchange transactions	138,303,478	264,339,628
Receivables - Non-exchange transactions	35,476,069	56,666,080
	<b>173,779,547</b>	<b>321,005,708</b>
<i>analysed as follows:</i>		
	MUR	MUR
Current		
Exchange transactions	112,885,521	258,942,182
Non - exchange transactions	35,476,069	36,076,150
	<b>148,361,590</b>	<b>295,018,332</b>
Non Current		
Exchange transactions	25,417,957	5,397,446
Non - exchange transactions	-	20,589,930
	<b>25,417,957</b>	<b>25,987,376</b>
<b>TOTAL</b>	<b>173,779,547</b>	<b>321,005,708</b>



YEAR ENDED 30 JUNE 2020

10.2 Receivables consist of:	MUR	MUR
Planters - Hire of tractors	10,759,124	22,070,767
Planters funds	12,000,000	23,589,930
MSS - Levy on sale of sugar	29,476,069	33,076,150
Analytical & Agronomic Services	10,556,648	6,042,842
Air Pollution Monitoring Unit	1,960,500	2,076,000
Rodrigues Assembly	231,459	102,732
Planters - Fertilizers Scheme - Crop 2019	26,092,528	51,345,283
Rentals - University of Mauritius & Others	4,521,853	1,350,400
MSIRI Support Staff	326,633	604,794
MPA, CEB and Others	364,401	1,151,780
MCAF	101,444	190,712
Blychem	73,200	146,400
Platinum Farms Ltd	60,000	-
Other Rentals	362,330	-
Planters - Fertilizers Scheme - Crop 2020	38,422,027	-
GoM - Fertilizers Scheme - Crop 2020	38,388,570	-
Ministry of Agro-Industry	-	179,060,400
Others	82,762	197,518
	<u>173,779,547</u>	<u>321,005,708</u>

10.3 The carrying amount of receivables approximate their fair value. Receivables do not contain impaired assets. The maximum exposure to credit risk at the reporting date is the fair value of each class of receivable mentioned above.

10.4 Receivable-non exchange transactions comprises of amount due by MSS with respect to levy on sale of sugar.

11 LOANS RECEIVABLE	30 Jun 2020 MUR	30 Jun 2019 MUR
11.1 Staff loans		
Car loan	35,416,160	41,836,414
Motorcycle loan	1,831,899	1,951,861
Personal loan	90,050	166,200
	<u>37,338,109</u>	<u>43,954,475</u>
<i>analysed as follows:</i>	MUR	MUR
- Current	11,101,884	11,199,997
- Non-current	26,236,224	32,754,478
	<u>37,338,108</u>	<u>43,954,475</u>

11.2 Movement in Staff Loans	Car Loan MUR	Motorcycle Loan MUR	Personal Loan MUR	TOTAL MUR
Opening balance	41,836,414	1,951,861	166,200	43,954,475
New loan	6,296,431	548,622	296,000	7,141,053
Repayment	(12,716,686)	(668,584)	(372,150)	(13,757,420)
Closing balance	<u>35,416,160</u>	<u>1,831,899</u>	<u>90,050</u>	<u>37,338,108</u>

YEAR ENDED 30 JUNE 2020

11.3 Car loans are issued to employees at concessionary rates of 4% to 8% interest per annum and are refundable over a period of five to seven years. Personal loans are interest free.

A 'gage sans déplacement' is created in favour of the Authority on vehicles acquired.

The effective rate of interest on bank overdrafts at the reporting date is 8.25%.

## 12 INVENTORIES

	30 Jun 2020 MUR	30 Jun 2019 MUR
Cost of spare parts and consumables		
SSHU	22,629,984	26,478,717
AMU	26,251,842	25,129,687
MSIRI	298,785	192,095
	<u>49,180,611</u>	<u>51,800,499</u>

Inventories are valued at the lower of cost and net realisable value.

Net realisable value is estimated to approximate cost of inventories.

The recoverable amount of some items of inventories is estimated to be less than their carrying amount. Impairment loss is debited to the statement of financial performance.

## 13 INVESTMENT IN FINANCIAL ASSETS

Investment represents .

- 74,000 shares in Sugar Investment Trust
- 85 000 ordinary shares in SBM Ltd

## Fair Value

	30 Jun 2020 MUR	30 Jun 2019 MUR
SIT	74,000	74,000
SBM Ltd	328,950	474,300
	<u>402,950</u>	<u>548,300</u>

## Cost

Available-for-sale financial assets  
At 30 June 2020

	<u>222,750</u>	<u>222,750</u>
--	----------------	----------------

NOTES TO THE FINANCIAL STATEMENTS  
FOR THE YEAR ENDED 30 JUNE 2020

14 PROPERTY, PLANT AND EQUIPMENT

14.1

COST OR VALUATION

As at 01 July 2019

Revaluation adjustment

Additions

Disposal

As at 30 June 2020

DEPRECIATION

As at 01 July 2019

Revaluation adjustment

Charge for the Year

Disposal

As at 30 June 2020

NET BOOK VALUE

As at 30 June 2020

As at 30 June 2019

	LAND & BUILDINGS	PLANT, MACHINERY & VEHICLES	FFF & OFFICE EQUIPMENT	COMPUTER & ASSOCIATED EQUIPMENT	LABORATORY EQUIPMENT	TOTAL
	MUR	MUR	MUR	MUR	MUR	MUR
As at 01 July 2019	1,934,027,500	718,556,428	8,189,751	7,868,318	21,608,165	2,690,250,162
Revaluation adjustment	78,005,500	(226,583,606)	22,174	(1,150,812)	(5,426,165)	(155,132,909)
Additions	-	6,098,727	498,814	1,095,799	4,279,147	11,972,487
Disposal	-	(477,212)	(242,700)	(39,150)	-	(759,062)
As at 30 June 2020	2,012,033,000	497,245,552	8,468,038	7,774,156	20,461,146	2,545,981,892
As at 01 July 2019	260,283,280	277,845,381	5,716,551	5,688,863	16,059,496	565,593,571
Revaluation adjustment	(260,283,280)	(277,845,381)	(5,716,551)	(5,688,863)	(16,059,496)	(565,593,571)
Charge for the Year	69,267,354	53,727,704	1,602,554	2,092,904	4,484,763	131,175,279
Disposal	-	-	-	-	-	-
As at 30 June 2020	69,267,354	53,727,704	1,602,554	2,092,904	4,484,763	131,175,279
As at 30 June 2020	1,942,765,646	443,517,848	6,865,484	5,681,252	15,976,384	2,414,806,614
As at 30 June 2019	1,673,744,220	440,711,046	2,473,200	2,179,455	5,548,670	2,124,656,591

NOTES TO THE FINANCIAL STATEMENTS

YEAR ENDED 30 JUNE 2020

14.2 Property, plant and equipment, investment property and intangible assets of the Authority have been revalued at 30 June 2019 by Strategos Co. Ltd. Strategos Co. Ltd hired the services of Mr. Vyas S. Ramphul, MRICS, Chartered Valuation Surveyor.  
The income capitalisation approach has been used as basis for valuing investment property, sales comparison approach and depreciated replacement cost basis for land and buildings and for plant, machinery and motor vehicles.

On 01 July 2019, the revaluation surplus was credited to revaluation reserve.

15 INVESTMENT PROPERTY

	30 Jun 2020 MUR	30 Jun 2019 MUR
15.1 COST OR VALUATION		
As at 01 July 2019	8,800,000	8,800,000
Revaluation adjustment	450,000	-
Additions	-	-
As at 30 June 2020	9,250,000	8,800,000
DEPRECIATION		
As at 01 July 2019	1,980,000	1,540,000
Revaluation adjustment	(1,980,000)	-
Charge for the year	370,000	440,000
As at 30 June 2020	370,000	1,980,000
NET BOOK VALUE		
As at 30 June 2020	8,880,000	6,820,000

15.2 The following have been recognised in the statement of financial performance:

	30 Jun 2020 MUR	30 Jun 2019 MUR
Rental income	300,000	300,000
Direct operating expenses arising from investment property that generates rental income	29,887	32,182

16 INTANGIBLE ASSETS

	30 Jun 2020 MUR	30 Jun 2019 MUR
<u>Computer software</u>		
COST OR VALUATION		
As at 01 July 2019	6,182,775	4,972,175
Revaluation adjustment	(2,185,875)	1,210,600
Additions	2,647,721	-
As at 30 June 2020	6,644,621	6,182,775
DEPRECIATION		
As at 01 July 2019	3,875,638	2,847,157
Revaluation adjustment	(3,875,638)	-
Charge for the year	1,319,090	1,028,481
As at 30 June 2020	1,319,090	3,875,638
NET BOOK VALUES		
As at 30 June 2020	5,325,531	2,307,137



YEAR ENDED 30 JUNE 2020

## 17 TRADE PAYABLES

	30 Jun 2020	30 Jun 2019
	MUR	MUR
17.1 Payables	72,908,117	482,032,785
17.2 analysed as follows:		
	MUR	MUR
- Current	68,255,730	479,892,805
- Non-current	4,652,387	2,139,980
	72,908,117	482,032,785
17.3	MUR	MUR
Rose Belle	1,327,580	1,567,580
Ex- dockers pensioners	5,640,032	5,189,565
Planters	11,683,578	11,842,248
Mauritius Revenue Authority	1,669,911	1,307,273
Scomat Ltee	347,916	1,761,632
University of Mauritius	722,400	722,400
MSS - Sugar Cane Sustainability Fund	19,322,382	436,288,787
Vivo Energy & Total Ltd	3,325,974	3,714,451
CEB , CWA and MT	1,179,722	981,676
MCA Employees	1,946,307	2,075,436
RSL Security Services	5,992,568	2,641,502
National Audit Office	1,000,000	900,000
ABC Coach	865,950	-
NVision IT	3,108,868	-
Mauritius Port Authority	4,092,000	-
Strategos Ltd	1,012,480	-
Swan Life Ltd	2,556,429	-
Queensland University of Technology	2,683,584	-
Ministry of Agro-Industry	-	7,000,000
Drone Expert Services Ltd	-	1,629,504
AWL Trading	-	86,250
Others	4,430,436	4,324,481
	72,908,117	482,032,785

## 18 BORROWINGS

	30 Jun 2020	30 Jun 2019
	MUR	MUR
Loans		
- EDF loan	17,090,982	16,699,850
- Australian aid loan	78,942	105,256
	17,169,924	16,805,106
Repayable as follows:		
- Within one year	1,512,486	1,362,302
- Within two to five years	5,997,317	5,422,895
- After five years	9,660,121	10,019,909
	17,169,924	16,805,106
analysed as follows:		
- Current	1,512,486	1,362,302
- Non-current	15,657,438	15,442,804
	17,169,924	16,805,106

Loans are unsecured and repayable by annual instalments. The rate of interest ranges from 1 to 4 %.

The carrying amount of borrowings are not materially different from their fair value.

EDF loan is denominated in Euro and is translated at closing rate.

Exchange loss of MUR 1,730,434 is recognised on translation of the EDF loan.

## 19 PROVISIONS

Provisions are recognised when the Authority has a present legal or constructive obligation as a result of past events, it is probable that an outflow of resources will be required to settle the obligation, and a reliable estimate of the amount can be made.

Provisions are reviewed at each reporting date and are adjusted to reflect the current best estimate.

Employees entitlement to bank of sick leave and vacation leave as defined in the PRB 2013 Report are recognised as and when they accrue to employees. An accrual is made for the estimated liability for bank of sick leave and vacation leave.

All provisions made are present obligations of uncertain timing or amount.

Movement in provisions is shown below.

	Sick Leave	Passage Benefit	Vacation Leave	Rental & Other Services	Legal Cost	TOTAL
	MUR	MUR	MUR	MUR	MUR	MUR
Balance as at 01 July 2019	81,634,160	22,373,390	83,857,742	2,650,000	1,150,000	191,665,292
Earned	13,461,791	10,350,129	5,577,796	-	-	29,389,716.00
Increased / (Decreased)	(556,624)	(465,132)	1,164,991	414,753	(368,600)	189,388
Paid	(14,265,482)	(8,632,701)	(5,835,435)	(545,223)	(81,400)	(29,360,241)
Balance as at 30 June 2020	80,273,845	23,625,686	84,765,094	2,519,530	700,000	191,884,155
analysed as follows:						
Current	13,000,000	9,000,000	6,000,000	600,000	100,000	28,700,000
Non-Current	67,273,845	14,625,686	78,765,094	1,919,530	600,000	163,184,155
	80,273,845	23,625,686	84,765,094	2,519,530	700,000	191,884,155

Current Liabilities	MUR
Employee benefit provision	28,000,000
Others	700,000
Non-Current Liabilities	
Employee benefit provision	160,664,625
Others	2,519,530
	191,884,155



YEAR ENDED 30 JUNE 2020

## 20 RETIREMENT BENEFITS OBLIGATIONS

## 20 A 30 JUNE 2020 - DEFINED BENEFIT PENSION SCHEME

20 A.1 (i) The Authority operates a defined benefit pension scheme. The scheme is a final salary scheme which provides benefits to employees in the form of a guaranteed pension payable for life. The level of pensions depends on the employees' length of service and their salary at the date of retirement.

(ii) IPSAS 39 figures are computed by qualified actuaries - Feber Associates Limited for MSIRI pension liabilities and SICOM Ltd for the other ex-Service Providing Institutions.

(iii) IPSAS 39 *employee benefits* requires estimating the amount of liability that the employer has to recognise in its financial statements with respect to employees who are going to retire at normal retirement age.

Under IPSAS 39, liabilities refer to the liability of the employer at the reporting date, in respect of retirement benefit obligations. They represent estimates of the future stream of retirement benefit obligations which have been discounted to its present value.

The fair value of plan assets represents the value at the reporting date of the investment fund that shall be used to cover the liabilities as and when they become due.

(iv) The three components of the defined benefit plan are accounted as follows:

- Service cost and net interest components accounted for in the statement of financial performance. Service cost component includes current and past service costs and net interest component relates to the change in measurement in both the plan obligation and plan assets arising from the passage of time.
- The remeasurement component which comprises actuarial gains and losses made on obligations and the difference between the actual investment return and the expected return on assets during the reporting period. Remeasurements are accounted for in net assets/equity.
- Plan obligations and plan assets reported in the statement of financial position.

## 20 A.2 Amounts recognised in statement of financial position

	MSIRI 30 Jun 2020 MUR	OTHER SPIs 30 Jun 2020 MUR	TOTAL 30 Jun 2020 MUR
Defined benefit obligation	870,927,630	1,195,776,795	2,066,704,425
Fair value of plan assets	(500,112,963)	(334,211,898)	(834,324,861)
	<u>370,814,667</u>	<u>861,564,897</u>	<u>1,232,379,564</u>

## 20 A.3 Amounts recognised in statement of financial performance

<b>Service cost:</b>			
Current service cost	14,377,193	30,752,590	45,129,783
Past service cost	-	-	-
Employee contributions	(3,872,117)	(6,867,917)	(10,740,034)
Other contributions - redeployed members	-	(45,540)	(45,540)
Fund Expenses	1,372,299	485,340	1,857,639
Net Interest expense/(revenue)	6,887,001	25,872,209	32,759,210
<b>Charge to statement of financial performance (Note 20 A.7)</b>	<u>18,764,376</u>	<u>50,196,682</u>	<u>68,961,058</u>

YEAR ENDED 30 JUNE 2020

<b>Remeasurement:</b>			
Liability (gain)/loss	255,195,930	184,596,182	439,792,112
Assets (gain)/loss	(398,396)	(17,187,177)	(17,585,573)
<b>Remeasurement recognised in net assets/equity</b>	<u>254,797,534</u>	<u>167,409,005</u>	<u>422,206,539</u>
<b>Total</b>	<u>273,561,910</u>	<u>217,605,687</u>	<u>491,167,597</u>

## 20 A.4 Movements in liability recognised in statement of financial position

At start of period			
- As previously reported	111,112,891	747,032,791	858,145,682
- Effect of restatement	-	-	-
- As restated	111,112,891	747,032,791	858,145,682
Amount recognised in statement of financial performance	18,764,376	50,196,682	68,961,058
Past service funding	-	(87,800,000)	(87,800,000)
Actuarial reserves transferred in	-	-	-
Employer contributions and direct benefits	(13,860,134)	(15,182,429)	(29,042,563)
Other contributions - redeployed members	-	(91,152)	(91,152)
Amount recognised in net assets/equity	254,797,534	167,409,005	422,206,539
Effect of curtailment	-	-	-
At end of period	<u>370,814,667</u>	<u>861,564,897</u>	<u>1,232,379,564</u>

## 20 A.5 Reconciliation of the present value of defined benefit obligations

Present value of obligation at start of period	598,544,102	1,017,337,844	1,615,881,946
Restatement	-	-	-
Current service cost	15,749,492	30,752,590	46,502,082
Interest cost	34,751,755	36,115,494	70,867,249
Benefits paid	(31,941,350)	(73,025,315)	(104,966,665)
Fund Expenses & Life Insurance	(1,372,299)	-	(1,372,299)
Effect of curtailment	-	-	-
Expected present value of obligation at end of period	615,731,700	1,011,180,613	1,626,912,313
Liability (gain)/loss	255,195,930	184,596,182	439,792,112
Actual present value of obligation at end of period	<u>870,927,630</u>	<u>1,195,776,795</u>	<u>2,066,704,425</u>

## 20 A.6 Reconciliation of fair value of plan assets

Fair value of plan assets at start of period	487,431,211	270,305,053	757,736,264
Restatement	-	-	-
Expected return on plan assets	27,864,754	10,243,285	38,108,039
Employer contributions	17,732,251	15,125,879	32,858,130
Employee Contributions	-	6,867,917	6,867,917
Other employer contributions - redeployed members	-	91,152	91,152
Other employee contributions - redeployed members	-	45,540	45,540
Funds Expenses & Life Insurance	(1,372,299)	-	(1,372,299)
Past service funding	-	87,800,000	87,800,000
Benefits paid + other outgo	(31,941,350)	(73,454,105)	(105,395,455)
Expected fair value of plan assets at end of period	499,714,567	317,024,721	816,739,288
Asset gain/(loss)	398,396	17,187,177	17,585,573
Actual fair value of plan assets at end of period	<u>500,112,963</u>	<u>334,211,898</u>	<u>834,324,861</u>



# NOTES TO THE FINANCIAL STATEMENTS

YEAR ENDED 30 JUNE 2020

24

20 A.7 Amounts recognised in the Statement of financial performance regarding retirement benefits obligations are as follows:

	MUR
<i>Included in Salaries and salary related expenses</i>	
Contribution to MSIRI Pension fund	6,047,127
Contribution to SICOM - MCIA employees	22,938,886
Contribution to SICOM - Ex MSA employee	56,550
Contribution to SICOM - Cash injection	87,800,000
Contribution to SICOM - Redeployed employees	91,152
	<b>116,933,715</b>
<i>Other decrease in net retirement benefits obligations</i>	(47,972,657)
<i>Total charge to Statement of financial performance</i>	<b>(note 20 A.3) 68,961,058</b>

## 20 B 30 JUNE 2020 - DEFINED CONTRIBUTION PENSION SCHEME

A Contributory Defined Contribution (DC) Pension Scheme is implemented for new entrants in the public sector after 1 January 2013 as recommended in the PRB report 2013.

Total contributions with respect to employees appointed after 2013 amount to MUR 1,904,549 (MUR 2,057,649 for 2019).

## 20 C 30 JUNE 2019 - DEFINED BENEFIT PENSION SCHEME

### 20 C.1 Amounts recognised in statement of financial position

	MSIRI 30 Jun 2019 MUR	OTHER SPIs 30 Jun 2019 MUR	TOTAL 30 Jun 2019 MUR
Defined benefit obligation	598,544,102	1,017,337,844	1,615,881,946
Fair value of plan assets	(487,431,211)	(270,305,053)	(757,736,264)
	<b>111,112,891</b>	<b>747,032,791</b>	<b>858,145,682</b>

### 20 C.2 Amounts recognised in statement of financial performance

<b>Service cost:</b>			
Current service cost	8,796,271	26,640,093	35,436,364
Past service cost	-	-	-
Employee contributions	(4,187,186)	(6,803,665)	(10,990,851)
Other contributions - redeployed members	-	(54,384)	(54,384)
Fund Expenses	1,103,240	448,296	1,551,536
Net Interest expense/(revenue)	7,668,662	41,942,023	49,610,685
<i>Charge to statement of financial performance (Note 20 C.6)</i>	<b>13,380,987</b>	<b>62,172,363</b>	<b>75,553,350</b>
<b>Remeasurement:</b>			
Liability (gain)/loss	(45,374,142)	26,084,245	(19,289,897)
Assets (gain)/loss	26,777,363	4,248,806	31,026,169
<i>Remeasurement recognised in net assets/equity</i>	<b>(18,596,779)</b>	<b>30,333,051</b>	<b>11,736,272</b>
<b>Total</b>	<b>(5,215,792)</b>	<b>92,505,414</b>	<b>87,289,622</b>

# NOTES TO THE FINANCIAL STATEMENTS

YEAR ENDED 30 JUNE 2020

25

## 20 C.3 Movements in liability recognised in statement of financial position

At start of period			
- As previously reported	132,940,501	669,790,241	802,730,742
- Effect of restatement	-	-	-
- As restated	132,940,501	669,790,241	802,730,742
Amount recognised in statement of financial performance	13,380,987	62,172,363	75,553,350
Actuarial reserves transferred in	-	-	-
Employer contributions and direct benefits	(16,611,818)	(15,154,000)	(31,765,818)
Other contributions - redeployed members	-	(108,864)	(108,864)
Amount recognised in net assets/equity	(18,596,779)	30,333,051	11,736,272
Effect of curtailment	-	-	-
At end of period	<b>111,112,891</b>	<b>747,032,791</b>	<b>858,145,682</b>

## 20 C.4 Reconciliation of the present value of defined benefit obligations

Present value of obligation at start of period	628,274,712	963,104,562	1,591,379,274
Restatement	-	-	-
Current service cost	9,899,511	26,640,093	36,539,604
Interest cost	38,299,192	58,749,378	97,048,570
Benefits paid	(31,451,931)	(57,240,434)	(88,692,365)
Fund Expenses & Life Insurance	(1,103,240)	-	(1,103,240)
Effect of curtailment	-	-	-
Expected present value of obligation at end of period	643,918,244	991,253,599	1,635,171,843
Liability (gain)/loss	(45,374,142)	26,084,245	(19,289,897)
Actual present value of obligation at end of period	<b>598,544,102</b>	<b>1,017,337,844</b>	<b>1,615,881,946</b>

## 20 C.5 Reconciliation of fair value of plan assets

Fair value of plan assets at start of period	495,334,211	293,314,321	788,648,532
Restatement	-	-	-
Expected return on plan assets	30,630,530	16,807,355	47,437,885
Employer contributions	20,799,004	15,097,450	35,896,454
Employee Contributions	-	6,803,665	6,803,665
Other employer contributions - redeployed members	-	108,864	108,864
Other employee contributions - redeployed members	-	54,384	54,384
Funds Expenses & Life Insurance	(1,103,240)	-	(1,103,240)
Actuarial Reserves Transferred In	-	-	-
Benefits paid + other outgo	(31,451,931)	(57,632,180)	(89,084,111)
Expected fair value of plan assets at end of period	514,208,574	274,553,859	788,762,433
Asset gain/(loss)	(26,777,363)	(4,248,806)	(31,026,169)
Actual fair value of plan assets at end of period	<b>487,431,211</b>	<b>270,305,053</b>	<b>757,736,264</b>

YEAR ENDED 30 JUNE 2020

20 C.6 Amounts recognised in the Statement of financial performance regarding retirement benefits obligations are as follows:

	MUR
<i>Included in Salaries and salary related expenses</i>	
Contribution to MSIRI Pension fund	8,126,012
Contribution to SICOM - MCIA employees	23,583,256
Contribution to SICOM - Ex MSA employee	56,550
Contribution to SICOM - Redeployed employees	108,864
	<u>31,874,682</u>
<i>Other increase in net retirement benefits obligations</i>	43,678,668
<i>Total charge to Statement of financial performance</i>	<u><u>(note 20 C.2) 75,553,350</u></u>

## 21 CONTRIBUTED CAPITAL

The initial capital of ex-Mauritius Sugar Terminal Corporation is MUR 300M, made up as follows:

	MUR
- Proceeds from cess levied on the sugar crop for years 1974 and 1975	109,440,675
- Interest accrued on amount of cess levied above	17,077,540
- Contribution by Government	173,481,785
	<u><u>300,000,000</u></u>

## 22 RECONCILIATION OF ACCUMULATED SURPLUS OR DEFICIT

	30 Jun 2020 MUR	30 Jun 2019 MUR
<b>22.1 Accumulated Surplus / (Deficit)</b>		
As at 01 July 2019	(461,499,479)	(9,384,405)
Transfer of revaluation reserve	132,864,369	80,252,831
Deficit for the year	(288,027,150)	(520,631,633)
Actuarial losses on defined benefit pension plans	(422,206,540)	(11,736,272)
As at 30 June 2020	<u><u>(1,038,868,800)</u></u>	<u><u>(461,499,479)</u></u>

### 22.2 Car and Motorcycle Loans Interest Fund

Car Loan Fund of MUR 30,417,987 representing money obtained by MSIRI from ex MSA to be used as a revolving fund. As it is no more used for the intended purpose, it has been transferred to Accumulated surplus / (deficit) in 2015.

Car Loan Interest fund of MUR 51,112,351 representing interest earned on car loans to MSIRI officers transferred to Accumulated surplus / (deficit) on 30 June 2017. Henceforth, interests earned on car loans are recognised as income for the year to which they relate.

The fund represents mainly the interest element on car and motorcycle loans to employees.

YEAR ENDED 30 JUNE 2020

## 23 RECONCILIATION OF NET ASSETS / EQUITY

	30 Jun 2019 MUR	Movement MUR	30 Jun 2020 MUR
Contributed Capital	300,000,000	-	300,000,000
Accumulated Surplus / (Deficit)	(461,499,479)	(577,369,321)	(1,038,868,800)
Fair Value Reserve	410,550	(145,350)	265,200
Revaluation Reserve	1,949,005,443	281,367,270	2,230,372,713
<b>TOTAL</b>	<u><u>1,787,916,514</u></u>	<u><u>(296,147,401)</u></u>	<u><u>1,491,769,113</u></u>

## 24 CESS AND GRANTS

24.1 Cess is levied at the rate of 4% of sugar proceeds at ex MSS price.

Cess money is recognised when there is reasonable assurance that the cess will be received and all attaching conditions will be complied with.

Government grants are received to finance the Authority's operating deficit and all related conditions are fulfilled.

### 24.2 Cess on sugar proceeds

Following the impact of reform in the EU Market, the main export market of the sugar industry, together with the response of the market to surplus supply of sugar, the price of sugar has experienced a substantial decrease. Ex MSS estimated price fell drastically. Ministry of Agro-Industry informed MCIA of the decision to suspend cess for crop year 2017. Grants from the Parent Ministry were received to meet MCIA's operational costs as from January 2018. The decision has been extended to crop year 2020.

### 24.3 Grants

	30 Jun 2020 MUR	30 Jun 2019 MUR
Government of Mauritius - Co-financing	280,833,000	355,000,000
MSS - BSSD expenditure grant	80,600,000	81,010,000
MOAFS - Sugar Cane Sustainability grant	662,300,029	439,000,000
MOAFS - Harvesting Equipment	15,000,000	-
Medine - Closure grant	15,917,465	15,000,000
MOAFS - Sequencer and Genetic Analyzer	-	4,167,600
MOAFS - Trainee Engineers	-	696,005
MOAFS - Fair Trade Certification Fee	-	2,868,011
MOAFS - Agricultural Land Management System grant	-	11,892,800
MOAFS - Sugar Planters Regrouping Project grant	-	57,778,700
Government of Mauritius - Additional Support to Planters	-	55,000,000
SIFB - Additional Support to Planters	-	55,000,000
	<u><u>1,054,650,494</u></u>	<u><u>1,077,413,116</u></u>



YEAR ENDED 30 JUNE 2020

## 25 LEVY ON SALE OF SUGAR

A contribution of MUR 3.70 per kg of sugar is levied on the sale of imported sugar on the local market to meet pensions payable to ex-dockers from ex-MSTC.

	30 Jun 2020	30 Jun 2019
	MUR	MUR
Levy earned during the period:		
- Received	95,336,422	86,104,299
- Receivable	29,476,069	33,076,150
	<u>124,812,491</u>	<u>119,180,449</u>

## 26 OTHER INCOME

	30 Jun 2020	30 Jun 2019
	MUR	MUR

### Non - Exchange Transactions

Anchorage dues	333,728	312,839
Berthing dues	390,000	680,000
Stale cheques written back	346,426	321,615
Cane juice application fee	68,000	59,000
DBM - SPES decrease in liabilities	-	1,876,051
	<u>1,138,154</u>	<u>3,249,505</u>

### Exchange Transactions

Interest & dividend received	19,960	6,308,059
MRC grant	1,623,263	1,430,895
Air Pollution Monitoring income	5,647,000	7,499,800
Sale of cane	3,546,266	1,524,201
Interest on car/motorcycles loans	1,607,541	1,678,716
Rent received	10,610,279	9,408,612
Analytical & agronomic services	4,151,449	4,507,667
Sale of varieties	163,078	1,045,982
Rental of sugar boxes	32,000	64,000
Refund of medical expenses	164,247	295,830
SICOM - refund for damages & accidents	580,600	211,723
Loading of non originating sugar	622,150	312,750
Accountant General	45,500	14,000
Exchange gain	1,249,235	508,170
Revenue from recycled oil	5,050	5,400
Auction sale	46,342	10,160
IAEA grant	236,054	-
MOAFS - Engineers training	375,202	-
Sale of VRS land	600,000	-
Weighbridge calibration	-	79,000
Flora fascicles income	-	102,767
Others	26,504	85,545

31,351,720 35,093,277
**TOTAL** 32,489,874 38,342,782

YEAR ENDED 30 JUNE 2020

## 27 HIRE OF TRACTORS AND TRAILERS

	30 Jun 2020	30 Jun 2019
	MUR	MUR
Hire of tractors	34,358,810	72,085,803
Hire of trailers	1,536,465	1,764,250
	<u>35,895,275</u>	<u>73,850,053</u>

## 28 SALARIES AND SALARY RELATED EXPENSES

	30 Jun 2020	30 Jun 2019
	MUR	MUR
Salaries and salary related expenses consist of:		
Salaries & wages	261,185,369	260,881,627
Overtime	21,618,952	26,744,671
Travelling	28,130,519	30,406,247
Uniforms	1,597,928	1,355,392
Pension - Ex-MSIRI	499,162	793,576
Pension contribution - SICOM	** 112,699,985	25,697,455
Pension contribution - MSIRI Pension Fund	6,047,127	8,119,079
Insurance of Employees - AMAS	79,490	99,354
National Savings Fund	2,977,799	2,796,125
National Pension Scheme	1,180,673	998,714
Family Protection Scheme	3,562,447	3,619,464
Civil service FPS	59,795	106,401
HRDC Training Levy	331,979	591,723
Sick leave	13,551,591	14,019,648
Vacation leave & retirement gratuity	5,657,405	8,869,108
Passage benefits	10,419,592	10,642,894
Insurance of employees - GPA & others	8,042,366	5,842,747
Medical expenses	8,945,649	7,083,035
Increase in provision	143,235	2,333,550
	<u>486,731,063</u>	<u>411,000,810</u>

\*\* This includes a cash injection of MUR 87.8M made during the period into the MCIA Pension Fund administered by SICOM Ltd.

YEAR ENDED 30 JUNE 2020

## 29 ADMINISTRATIVE AND GENERAL EXPENSES

29.1	30 Jun 2020 MUR	30 Jun 2019 MUR
Audit Fees	550,000	500,000
Board & Committee Fees	1,325,840	1,821,219
Consultancy Fees	1,299,500	94,500
Legal & Professional Fees	526,375	401,428
Subscriptions	422,040	409,091
Cleaning	1,451,924	1,434,844
Maintenance & Repairs	7,915,304	9,268,458
Security	19,350,857	15,076,389
Computer Maintenance	644,739	587,077
Remote Connection	193,200	193,200
Computer Supplies	481,830	565,578
Software licences	1,152,787	1,287,127
Field Experimentation Expenses	127,981	73,386
Other Office Expenses	149,695	3,643,262
Welfare	949,781	884,464
Advertisement	202,774	247,833
Maintenance of Office Equipment	310,717	332,361
Printing , Photocopy , Postage and Stationery	763,923	937,318
Health & Safety	1,829,963	1,666,810
Publications	180,670	137,795
Rent	8,156,247	8,156,247
Rates	28,900	23,333
Electricity	9,351,320	9,661,575
Water	1,731,072	1,268,982
Telephone , Internet & E-Mails	2,275,712	2,410,870
Research & Development	8,593,973	11,124,774
Running Expenses - Tractors & Cranes	64,645,548	81,348,931
Running Expenses - Other Vehicles	5,633,812	6,920,642
Training	408,200	169,365
Increase In Provision	46,153	1,157,816
Insurance of Building and Equipment	1,533,326	1,464,007
Other Funds Expenses	3,580,659	2,303,899
Air Pollution Monitoring Unit Expenses	313,454	525,389
Assets written off	11,601,530	207,188,443
Inventories written down	-	3,973,440
Missions	-	46,034
Loss on disposal	183,019	2,680,071
	<b>157,912,824</b>	<b>379,985,957</b>

## 30 EX-DOCKERS PENSIONS

- (i) The Authority has a legal obligation to provide and pay pension to ex-dockers who became redundant as a result of the coming into operation of the Bulk Sugar Terminal in 1980. The pension is currently funded by a contribution levied on sale of imported sugar on the local market. The number of pensioners as at 31 December 2019 was 1604. (December 2018: 1643)

- (ii) Charge to Statement of financial performance is made up of the following:

	30 Jun 2020 MUR	30 Jun 2019 MUR
Paid during the period	113,494,776	114,890,546
Add Pension due at end	5,640,032	5,189,565
	<b>119,134,808</b>	<b>120,080,111</b>
Less Pension due at start	(5,066,147)	(5,746,726)
	<b>114,068,661</b>	<b>114,333,385</b>

YEAR ENDED 30 JUNE 2020

## 31 SUGAR CANE SUSTAINABILITY EXPENSES

Sugar Cane Sustainability expenses consist of support provided to small planters and is made up of the following:

	30 Jun 2020 MUR	30 Jun 2019 MUR
GOM - Assistance to planters for Crop 2019	570,622,311	436,288,787
GOM - Additional support to small sugarcane planters	-	55,000,000
SIFB - Additional support to small sugarcane planters	-	55,000,000
MCIA - Additional support to small sugarcane planters	-	49,756,348
	<b>570,622,311</b>	<b>596,045,135</b>

## 32 FINANCIAL COMMITMENTS

	30 Jun 2020 MUR	30 Jun 2019 MUR
Financial commitments relating to goods and services already contracted for	<b>13,900,300</b>	<b>7,345,984</b>

## 33 RELATED PARTY TRANSACTIONS - COMPENSATION OF KEY MANAGEMENT PERSONNEL

	30 Jun 2020 MUR	30 Jun 2019 MUR
Remuneration paid during the period to and on behalf of executive and non-executive Directors, including pension contributions.	<b>12,926,250</b>	<b>15,740,553</b>

The aggregate remuneration for key management personnel and the number of individuals receiving remuneration was as follows:

Chairperson of MCIA Board of Directors and Committees	3	3
MCIA Board and Committee Members	18	35
Chief Executive Officer	1	1
Directors	4	4

The Authority has made no contribution to any defined contribution plan for its key management personnel.

## 34 IMPAIRMENT OF ASSETS

The Authority carries out annual impairment test for its assets. The carrying amount of the assets is compared with its recoverable amount. Any impairment loss is then recognised in the financial statements in accordance with IPSAS 21 *Impairment of Non Cash Generating Assets*.

At 30 June 2020, no impairment loss for the Authority's assets is noted.



## 35 STATEMENT OF CASH FLOWS NOTES

	Year ended 30 Jun 2020	Year ended 30 Jun 2019
	MUR	MUR
<b>35.1 Cash absorbed in operations</b>		
Deficit for the year	(288,027,151)	(520,631,633)
Adjustments for:		
Depreciation on property, plant and equipment	131,175,279	121,841,105
Depreciation on investment property	370,000	440,000
Amortisation of intangible assets	1,319,090	1,028,481
Loss /(Profit) on disposal	183,019	2,680,071
Exchange Loss/(Gain)	1,504,675	(3,154)
Loan written off	-	150,510
Interest paid	269,276	279,645
Interest received	(1,607,541)	(7,958,315)
Dividends received	(19,960)	(28,460)
Actuarial loss	(47,972,657)	43,678,668
<b>Operating deficit before working capital changes</b>	<b>(202,805,970)</b>	<b>(358,523,082)</b>
(Increase) / decrease in accounts receivables (excluding car loans)	147,451,920	(62,698,406)
(Decrease) / increase in accounts payables	(410,574,973)	452,950,339
(Decrease) / increase in financial liabilities	-	(1,876,051)
Increase / (decrease) in provisions	218,863	9,155,788
Decrease / (increase) in inventories	2,619,888	148,308
(Increase) / decrease in prepayments	(315,455)	33,329
<b>Cash absorbed in operations</b>	<b>(463,405,727)</b>	<b>39,190,225</b>

## 35.2 Non cash transactions

The principal non cash transactions are the adjustments for depreciation and amortisation, interest received, exchange loss and actuarial loss.

## 35.3 Cash and cash equivalents

Cash and cash equivalents include the following for the purpose of the statement of cash flows:

	30 Jun 2020	30 Jun 2019
	MUR	MUR
Cash in hand and at bank	314,809,512	784,200,123
Bank overdraft	-	-
	<b>314,809,512</b>	<b>784,200,123</b>

## K. LIST OF ABBREVIATIONS

ABI	<i>Applied Biosystems</i>
ACP	<i>African, Caribbean and Pacific</i>
ADEME	<i>Agence de L'Environnement et de la Maitrise de l'Energie</i>
AFD	<i>Agence Francaise de Développement</i>
ALMS	<i>Agricultural Land Management System</i>
AMCO	<i>Alcohol and Molasses Company</i>
AMU	<i>Agricultural Mechanization Unit</i>
ASM	<i>Assessment Module</i>
ASSAF	<i>Academy of Science of South Africa</i>
AUF	<i>Agence Universitaire de la Francophonie</i>
BMP	<i>Best Management Practices</i>
BSSD	<i>Bagged Sugar Storage and Distribution</i>
CAC	<i>Control and Arbitration Committee</i>
CAD	<i>Control and Arbitration Department</i>
CaMV	<i>Cauliflower Mosaic Virus</i>
CEB	<i>Central Electricity Board</i>
CIRAD	<i>Coopération Internationale en Recherche Agronomique pour le Développement</i>
CLG Co Ltd.	<i>Constance La Gaiete Company Ltd.</i>
COMESA	<i>Common Market for Southern and Eastern Africa</i>
CWA	<i>Central Water Authority</i>
DNA	<i>Deoxyribonucleic Acid</i>
EDMS	<i>Electronic Data Management System</i>
EIA	<i>Environmental Impact Assessment</i>
ERS	<i>Early Retirement Scheme</i>
ETU	<i>Extension and Training Unit</i>
EU	<i>European Union</i>
FOB	<i>Free on Board</i>

FORIP	<i>Field Operations Regrouping and Irrigation Project</i>
FSA	<i>Farmers Service Agency</i>
FSC	<i>Farmers Service Centre</i>
FTIR	<i>Fourier-Transform Infrared Spectroscopy</i>
GIS	<i>Geographical Information System</i>
HMU	<i>Heavy Mechanical Unit</i>
HRDC	<i>Human Resources Development Council</i>
IAEA	<i>International Atomic Energy Agency</i>
ICAC	<i>Independent Commission Against Corruption</i>
ICUMSA	<i>International Commission for Uniform Methods of Sugar Analysis</i>
IPP	<i>Independent Power Producer</i>
ISO/IEC	<i>International Organization for Standardization and the International Electro-technical Commission</i>
ISSCT	<i>International Society of Sugarcane Technologists</i>
IWUE	<i>Irrigation Water Use Efficiency</i>
Ktoe	<i>Kilotonne of Oil Equivalent</i>
LCR	<i>Land Conversion Rights</i>
LEI	<i>Landbouw Economist Institute</i>
LOI	<i>Letter of Intent</i>
LMM	<i>Linear Mixed Models</i>
MAAS	<i>Multi Annual Adaptation Strategy</i>
MAST	<i>Mauritius Academy of Science and Technology</i>
MCIA	<i>Mauritius Cane Industry Authority</i>
MEPU	<i>Ministry of Energy and Public Utilities</i>
MMCO	<i>Mauritius Molasses Company Limited</i>
MoAIFS	<i>Ministry of Agro Industry and Food Security</i>
MSIRI	<i>Mauritius Sugarcane Industry Research Institute</i>
MSPA	<i>Mauritius Sugar Producers' Association</i>
MSS	<i>Mauritius Sugar Syndicate</i>
MSTC	<i>Mauritius Sugar Terminal Corporation</i>

MSTCEU	<i>Mauritius Sugar Terminal Corporation Employees Union</i>
MSTCSA	<i>Mauritius Sugar Terminal Corporation Staff Association</i>
MUR	<i>Mauritian Rupees</i>
NIR	<i>Near Infrared Spectrometer</i>
NOS	<i>Non Originating Sugar</i>
OMOL	<i>Omnicanne Milling Operations Ltd</i>
PBB	<i>Programme Based Budgeting</i>
PCR	<i>Polymerase Chain Reaction</i>
PPIP	<i>Planters' Productivity Improvement Programme</i>
POC	<i>Phasing out of Camps</i>
PSU	<i>Permanent Sampling Unit</i>
PWS	<i>Plantation White Sugar</i>
R&D	<i>Research and Development</i>
RDA	<i>Road Development Authority</i>
SADC	<i>South African Development Community</i>
SASRI	<i>South African Sugarcane Research Institute</i>
ScBV	<i>Sugarcane Bacciliform virus</i>
SIE	<i>Sugar Industry Efficiency</i>
SIFB	<i>Sugar Insurance Fund Board</i>
SPRP	<i>Sugar Planters' Regrouping Project</i>
SSHU	<i>Sugar Storage and Handling Unit</i>
VRS	<i>Voluntary Retirement Scheme</i>
WB	<i>World Bank</i>
WeF	<i>with effect from</i>
WUE	<i>Water User Efficiency</i>





**Farmers Service Agency**

**Agricultural Mechanization Unit**

**MSIRI**

**Control & Arbitration Department**

**Sugar storage & Handling Unit ( Sugar Terminal )**

**Sugar storage & Handling Unit ( Bagged Sugar )**



**Mauritius Cane Industry Authority**  
Moka Road, Reduit 80835  
Tel: (+230) 454 1061 - (+230) 464 5345  
[cs@mcia.mu](mailto:cs@mcia.mu)