SCIENCE, TECHNOLOGY AND INNOVATION SECTOR

SEMI-ANNUAL BUDGET MONITORING REPORT

FINANCIAL YEAR 2019/20

APRIL 2020

Ministry of Finance, Planning and Economic Development
P.O. Box 8147, Kampala
www.finance.go.ug

MOFPED
#DoingMore

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ABBREVIATIONS

BIRDC	Banana Industrial Research and Development Centre
EU	European Union
GoU	Government of Uganda
ISO	International Standards Organization
IUEA	International University of East Africa
JIBP	Jinja Industrial and Business Park
KMC	Kiira Motors Corporation
NARO	National Agricultural Research Organization
NDP II	National Development Plan II
NSTEISP	National Science, Technology Engineering and Innovation Skills Enhancement Project
MMISC	Manufacturing, Machining and Industrial Skilling Centre
MEMD	Ministry of Energy and Mineral Development
MFPED	Ministry of Finance, Planning and Economic Development
MoSTI	Ministry of Science, Technology and Innovations
PIBID	Presidential Initiative on Banana Industrial Development Project
STI	Science, Technology and Innovations
UEDCL	Uganda Electricity Distribution Company Limited
UIRI	Uganda Industrial Research Institute
UNBS	Uganda National Bureau of Standards
UK	United Kingdom
UNCST	Uganda National Council for Science and Technology

FOREWORD

The Government strategy this Financial Year 2019/20 is to promote import substitution and export promotion, and incentivize private sector development. It is envisioned that this will be achieved through industrialization anchored on agriculture and agro-industrialization, manufacturing, and mineral potential. This will also ensure inclusive growth and the creation of jobs, while promoting development of other key primary growth sectors.

According to findings shared by the Budget Monitoring and Accountability Unit (BMAU), majority of the sectors monitored got over 50% of their budget releases, however fair performance was noted in terms of service delivery. This is attributed to the persistent challenges of delayed procurement and poor planning which must be dealt with as the country moves to implement the third National Development Plan.

This report is produced at time when the whole world is affected by the novel coronavirus disease (COVID-19). It is prudent that the sectors devise cost effective means to ensure that their stakeholders will still benefit from the government programmes/projects.

Keith Muhakanizi

Permanent secretary and Secretary to the Treasury

EXECUTIVE SUMMARY

Introduction

The Science, Technology and Innovations (STI) Sector coordinates all activities and programmes relating to research, science, technology and innovation. The sector has two Votes and three subventions (Vote 023: Ministry of Science, Technology and Innovations; Vote 110: Uganda Industrial Research Institute (UIRI), and the subventions of: Uganda National Council for Science and Technology (UNCST), Kiira Motors Corporation (KMC) and the Presidential Initiative on Banana Industrial Development (PIBID - Banana Industrial Research and Development Centre (BIRDC).

This report presents the annual implementation and achievement of set targets by 31st December, 2019 for the various programmes in the sector. The findings were generated from review of quarterly reports and physical monitoring of the programmes, sub-programmes and outputs within the votes.

Overall Performance

The STI sector performance was fair at 60.6%. The sector budget for FY2019/20 was Ug shs193.251billion, of which Ug shs143.348billion (74.2%) was released and Ug shs133.842billion (91.7%) expended by 31st December, 2019. Overall sector release was good, while expenditure was very good.

The MoSTI had good release performance owing to the National Science, Technology Engineering and Innovation Skills Enhancement (NSEI-SE) Project. Most of the recurrent sub-programmes especially those under Finance and Administration exhibited good performance, while the development component performed fairly. The Science Entrepreneurship and Industrial Research Programmes performed better than other programmes. The Research and Innovation Programme had the least performance rated at 21%.

Highlights of Sector Performance

The Regulation Programme

Bio-economy resources and bio-fortified products were catalogued nationally, and three planning meetings for the National Biosafety Conference were conducted. A concept and terms of reference (ToRs) for the National Science Mentorship Programme were developed. ToRs for the feasibility study for research and development in indigenous knowledge were generated. Consultative meetings with universities on the National Space Programme were conducted. Staff under the Bio-safety and Bio-security sub-programme were trained in genetically modified organisms.

Research and Innovation Programme

A concept for the National Research Agenda was developed. Researchers in the 10 districts of Teso sub-region were profiled, artisans and innovators in agro-technology and food value addition in the central region were trained. A comparative study on the establishment and journey of Science and Technology Parks was conducted. The STI infrastructure profiling was conducted in key research and development centres and institutions of higher learning. Five innovation and intellectual property clinics and trainings were conducted, 10 innovators were supported to develop intellectual property rights, and 50 innovators were profiled.

Under the Uganda National Council for Science and Technology (UNCST), the ToRs for the environmental and social impact assessment and monitoring plans for National Science, Technology Engineering and Innovation Skills Enhancement Project (NSTEIP) were developed. The project steering committee was constituted and draft communication and dissemination plan developed. The construction of the Technology Innovation Business Incubation Centre under the NSTEIP is likely to be delayed due to land related encumbrances at the proposed site in Sanga, Kiruhura District.

Good progress was observed under Kiira Motors Corporation with the construction of the Vehicle Assembly Shop at 20% progress. Construction of the Kira Vehicle Plant Warehouse was at 75% progress. Construction of the circular roads (6.4km) in the industrial park was estimated at 50% physical progress. Two hybrid buses and two charging kits were built. The buses were undergoing testing at Nakasongola workshop. A statement of requirements for the Kayoola Bus Seat Engineering, production samples and KMC bus warranty plan were developed.

The Banana Industrial Research and Development Centre (BIRDC) was registered as a company in fulfillment of the strategy for operationalization of the Presidential Initiative on Banana Industrial Development. Efficiency optimization studies for the primary processing of bananas were ongoing. The company was in the final process of acquiring a UNBS quality distinctive mark. Marketing of the products was ongoing within and outside the country. Due to increased prices of raw materials (*matooke*) in October, November and December, production of raw *Tooke* flour was stayed. The peeling machine and a sugar mill were installed. However, the Board of Directors were not constituted. It was observed that the approved supplementary budget for the company during FY 2018/19 was not realized leading to accumulation of arrears and cash flow constraints.

The Sericulture Technologies and Innovations Project in Sheema District established and maintained 116 hectares of experimental mulberry gardens. The project provided agronomic support to farmers in 10 districts to maintain their gardens. The construction of silkworm rearing houses had not resumed due to changes that have to be made in architectural designs to include sanitation facilities and electrical works.

Under **Science Entrepreneurship Programme**, consultative meetings with district local governments on technoprenuership were conducted. Technopreneurship skills meetings to commercialize shea butter technologies and innovations were conducted. Trainings on laundry bar soap making in Iganga District were conducted. The programme supported the following events geared towards promoting innovation; Bunyoro Youth Innovations Awards in Masindi District, Top 100 SMEs Award Program in Kampala, TVET skills competition in four regions of Uganda and commemoration of the World Science Day.

The Industrial Research Programme; production of enzymes; cellulose, xylanase, α-amylase and cutinase was done at laboratory scale and possibilities of large scale production are underway. The UIRI conducted a pediatric study on the performance of the Electronically Controlled Gravity Feed (ECGF) system and data analysis is ongoing. Partnerships with Fraunhofer Gesellschaft Institute for technical support and mass production of the ECGF unit are ongoing. The UIRI produced 5,000,000 doses of Kukustar Newcastle vaccine and analyzed 112 laboratory samples.

The construction and installation of equipment at the Manufacturing, Machining and Industrial Skilling Centre (MMISC) at the Kampala Industrial and Business Park-Namanve was completed and commissioned on 14th January 2020. The institute was yet to develop a training curriculum. Recruitment of trainers and instructors for the facility was delayed due to inadequate budget. The UIRI also commissioned the Pineapple Juice Processing Plant in Itojo, Ntungamo District on 6th January 2020. By February 2020 the

plant was not operational due to technical and human resource related constraints.

In conclusion, it was observed that the STI Sector performance is still average especially under the Research and Innovation Programme. The low performance is hinged to; poor prioritization of key STI interventions, delayed initiation of procurements, land related encumbrances on the proposed NSTEIP site in Sanga-Kiruhura, and infrastructure gaps to commercialize science and technology innovations.

Recommendations

i. The MoSTI should develop a research dissemination strategy and enhance public engagements to appreciate the role of STI in National development.

ii. The MoSTI should enhance capacity of implementing agencies/subventions to avoid project delays.

iii. The STI Sector Working Group and Ministry of Finance, Planning and Economic Development (MFPED) should prioritize funding for development activities for KMC, UIRI and BIRDC.

iv. The MoSTI, UNCST and Uganda Land Commission should clarify the land ownership of the proposed NSTEIP site in Sanga, Kiruhura District to avoid further delays.

CHAPTER 1: BACKGROUND

1.1 Introduction

The mission of the Ministry of Finance, Planning and Economic Development (MFPED) is, "*To formulate sound economic policies, maximize revenue mobilization, and ensure efficient allocation and accountability for public resources so as to achieve the most rapid and sustainable economic growth and development*". It is in this regard that the ministry gradually enhanced resource mobilization efforts and stepped up funds disbursement to Ministries, Departments, Agencies and Local Governments in the past years to improve service delivery.

Although some improvements have been registered in citizens' access to basic services, their quantity and quality remains unsatisfactory, particularly in the sectors of health, education, water and environment, agriculture, ICT and roads. The services being delivered are not commensurate to the resources that have been disbursed, signifying accountability and transparency problems in the user entities.

The Budget Monitoring and Accountability Unit (BMAU) was established in FY2008/09 in MFPED to provide comprehensive information for removing key implementation bottlenecks. The BMAU is charged with tracking implementation of selected government programmes or projects and observing how values of different financial and physical indicators change over time against stated goals and targets (how things are working). This is achieved through semi-annual and annual field monitoring exercises to verify receipt and application of funds by the user entities. Where applicable, beneficiaries are sampled to establish their level of satisfaction with the public service.

The BMAU prepares semi-annual and annual monitoring reports of selected government programmes and projects. The monitoring is confined to levels of inputs, outputs and outcomes in the following areas:

- Accountability
- Agriculture
- Infrastructure (Energy and Roads)
- Industrialization
- Information and Communication Technology (ICT)
- Social services (Education, Health, and Water and Environment)
- Public Sector Management; and
- Science, Technology and Innovation

1.2 Sector Mandate

The Science Technology and Innovations (STI) Sector was created in FY 2018/19 to coordinate all activities and programmes relating to research, science, technology and innovation. The sector has two Votes and three subventions namely; Vote 110 - Uganda Industrial Research Institute (UIRI); and Vote 023 - Ministry of Science, Technology and Innovations (MoSTI). Kiira Motors Corporation (KMC), the Uganda National Council for Science and Technology (UNCST), and the Presidential Initiative on Banana Industrial Development (PIBID) are subventions under Vote 023.

1.3 Sector Objectives

The STI Sector is guided by four strategic objectives as provided in the second National Development Plan (NDP II):

- To enhance the integration of science, technology and innovation into the national development process.
- To increase transfer and adaptation of technologies
- To enhance research and development in Uganda and,
- To improve the science, technology and innovation legal and regulatory framework.

CHAPTER 2: METHODOLOGY

2.1 Scope

This report reviews progress of programmes and projects implemented by the sector agencies during FY 2019/20 for the period 1st July to 31st December 2019.

Table 2.1: Scope of Semi-Annual Monitoring FY 2019/20

Vote	Programme/Sub programme
Vote 023, Ministry of Science, Technology and Innovations (MoSTI)	Regulation Research and innovation programme 1. Kiira Motors Corporation (KMC), 2. Uganda National Council for Science and Technology (UNCST). 3. Presidential Initiative of Banana Industrial Development project (PIBID) Science entrepreneurship
Vote 110 Uganda Industrial; Research Institute (UIRI)	Industrial Research Programme 1. Support to UIRI

Source: Author's Compilation

2.2 Methodology

Physical performance of projects and outputs was assessed through monitoring a range of indicators and linking the progress to reported expenditure. Across all the projects and programmes monitored, the key variables assessed included: performance objectives and targets; inputs and outputs.

2.2.1 Sampling

All programmes, and sub-programmes were monitored. Priority was given to monitoring outputs that were physically verifiable.

2.2.2 Data Collection

Data was collected from various sources through a combination of approaches:

- Review of secondary data sources including: Ministerial Policy Statements for FY2019/20; National and Sector Budget Framework Papers; Sector project documents and performance reports from the Programme Budgeting System (PBS), Sector Quarterly Progress Reports and work plans, Budget Speech, Public Investment Plans, Approved Estimates of Revenue and Expenditure, and data from the Budget Website.

- Review and analysis of data from the Integrated Financial Management System (IFMS) and Quarterly Performance Reports from implementing agencies.
- Consultations and key informant interviews with project managers in implementing agencies both at the Central and Local Government level.
- Field visits to project areas for primary data collection, observation and photography.
- Call-backs in some cases to triangulate information

2.2.3 Data Analysis

The data was analyzed using both qualitative and quantitative approaches. Comparative analysis was done using the relative importance of the outputs and the overall weighted scores.

Relative importance (weight) of an output monitored was based on the amount of budget attached to it; thus the higher the budget the higher the contribution of the output to the sector performance. This was derived from the approved annual budget of each output divided by total annual budget of all outputs of a particular programme/project. The weight of the output and percentage achievement for each output were multiplied to derive the weighted physical performance. The overall programme/project performance is a summation of all weighted scores for its outputs. On the other hand, the overall sector performance is an average of individual programme performances that make up the sector.

The performance was rated on the basis of the criterion in Table 2.2.

Table 2.2: Assessment guide to measure performance of projects monitored in FY2019/20

SCORE	COMMENT
90% and above	**Very Good** (Most of the set targets achieved and funds absorbed)
70%-89%	**Good** (Some core set targets achieved and funds absorbed to 70%-89%)
50%- 69%	**Fair** (Few targets achieved and funds absorption is 50%-69%)
Less than 50%	**Poor** (No targets achieved and or funds absorption is less than 50%)

2.3 Limitations of the report

The preparation of this report was constrained by a number of factors namely:

- Lack of detailed quarterly work plans and targets for some programmes/projects/outputs.
- Lack of disaggregated financial information for some outputs which might have affected the overall weighted scores and performance.
- Inadequate sampling of beneficiaries due to limited field time, given the large number of programmes monitored.
- Some of the beneficiaries had little information on scope of works, project costs, contract periods particularly on projects contracted and implemented by some Votes.
- Insufficient financial information at output level from the votes affected the performance rating of the sector.

CHAPTER 3: SECTOR PERFORMANCE

3.1 Overall Sector Performance

The overall sector performance was fair (60.65%). Most of the recurrent sub-programmes exhibited good performance, while the development component performed fairly. Table 3.1 shows the sector overall performance by 31st December 2019.

Table 3.1: Science, Technology and Innovation (STI) Sector Performance by 31st December 2019

Programme	Performance (%)
Regulation	69.64
Research and Innovation	21.90
Science Entrepreneurship	73.91
Industrial research	77.16
Average Performance	60.65

Source: Author's compilation

Financial performance

The STI Sector budget for FY2019/20 was Ug shs193.2billion, of which Ug shs143.3billion (74.2%) was released and Ug shs 133.8billion (93.4%) expended by 31st December, 2019. Overall sector release was good, while expenditure was very good. The sector realized a 56.7% release of the development component from GoU. The MoSTI and KMC had a very good release performance.

Table 3.2: Overall Financial Performance of the STI Sector by 31st December, 2019

Institution	Budget	Release	Expenditure	% Release	% Spent
MoSTI	179,021,102,780	136,147,386,072	127,068,031,244	76.1	93.3
UIRI	14,230,000,000	7,201,000,000	6,774,000,000	50.6	94.1
TOTAL	193,251,102,780	143,348,386,072	133,842,031,244	74.2	93.4

Source: IFMS, MDAs

Vote performance

3.2 The Ministry of Science, Technology and Innovation (MoSTI)

The Ministry of Science, Technology and Innovation (MoSTI) was created in June 2016. The MoSTI's mandate is to: *Provide policy guidance and coordination on matters of Scientific Research, Development and the entire National Innovation System in the country*.

The Ministry executes its mandate through the programmes of; i) (STI) Regulation, ii) Research and Innovation, iii) Science Entrepreneurship, and iv) General Administration and Planning.

The Presidential Initiative on Banana Industrial Development (PIBID), Uganda National Council for Science and Technology (UNCST), and Kiira Motors Corporation (KMC) are subventions under the Vote.

The approved budget FY 2019/20, for the MoSTI was Ug shs179.021billion, of which Ug shs136.147billion (76.1%) was released, and Ug shs127.068billion (93.3 %) spent by 31st December 2019. Both release and expenditure performance were good.

3.2.1 Regulation Programme

The Programme is responsible for: Coordination of matters pertaining to STI standards, development of policies, plans, programmes and regulations on physical, chemical and social sciences; Bio-sciences and Bio-economy. It is also responsible for strengthening collaboration and cooperation on matters of bio-economy and bio-security/safety, and coordinate implementation of policies, plans and programmes pertaining regulations in STI.

Programme planned outputs FY2019/20 are: Policies and regulations for physical, chemical, social sciences, bio-sciences, and bio-economy developed and monitored; 5th National Annual Bio-safety Forum organized and hosted, Inventory of institutions and laboratories undertaking biotechnology, bio-safety and bio-security activities established and respective research profiled; Collaboration and cooperation strengthened for STI standards and regulations; and Safety regulations in STI research developed and procedures revised.

Performance of the Regulation Programme

The programme budget for FY2019/20 is Ug shs 4.62billion, of which Ug shs 1.20billion (26%) was released and Ug shs 0.84billion (69.7%) spent by 31st December, 2019. Release performance was poor whereas expenditure was good. Detailed performance is provided in table 3.3.

Table 3.3: Performance of the Regulation Programme by 31st December, 2019

Sub-programme	Output	Annual Budget (Ug shs)	Cum. Receipt (Ug shs)	Annual Target	Cum. Achieved Quantity	Physical performance Score (%)	Remark
Physical, chemical and social sciences	Development of the National space science program initiated; Formulation of chemical processes regulation of health and safety initiated; Formulation of a policy on involvement of people with special needs and marginalized groups in ST&I activities initiated; Guidelines for integration of ST&I in MDAs & LGs development process developed; Research in physical chemical and social sciences strengthened; Research mentorship and standards in physical chemical and social sciences strengthened	1,580,000,000	400,000,000	6.00	0.80	18.01	MoSTI conducted consultative meetings with academic institutions on the proposal to have the National Space Programme. Project concept for the programme developed and approved by the Development Committee of the Ministry of Finance to proceed to the project profile stage. TORs for feasibility study R&D in Indigenous knowledge were produced. TORs developed and Adhoc Task force established for profiling laboratories.
Biosciences & Bio economy	Collaborations, partnerships and networks in Biosciences and Bio-economy established and strengthened; Implementation of policies, regulations, standards and	1,540,000,000	390,000,000	6.00	1.00	21.94	A catalogue of Bio-economic resources, Bio-fortified products and researchers was developed. ToRs for a feasibility study on

Sub-programme	Output	Annual Budget (Ug shs)	Cum. Receipt (Ug shs)	Annual Target	Cum. Achieved Quantity	Physical performance Score (%)	Remark
	priorities coordinated; Integration of Bio-economy in the country promoted; National Bio-economy policy developed; Production and consumption of bio-fortified products supported nationally; Utilization of bio-waste promoted						waste management were developed. Three meetings towards the development of the bio-economy policy were conducted and taskforce constituted.
Bio-safety & Bio-security	5th National Annual Bio safety Forum organized and hosted; Awareness on Biotechnology, Biosafety and Biosecurity legislation implementation and enforcement among stakeholders created; Capacity building of staff and stakeholders on biotechnology, biosafety and biosecurity undertaken; Collaborations for capacity building in biotechnology, bio safety and bio security established; Inventory of Institutions and Laboratories undertaking biotechnology, bio safety and bio security activities established & respective research profiled;	1,500,000,000	410,000,000	8.00	2.00	29.70	MoSTI staff were trained in genetically modified organisms and held consultative meetings with zonal agricultural research offices and universities (KIU,Muni, Gulu and Lira), on Biotechnology, Biosafety and Biosecurity legislation. Held three planning meetings for the National Biosafety conference.

Sub-programme	Output	Annual Budget (Ug shs)	Cum. Receipt (Ug shs)	Annual Target	Cum. Achieved Quantity	Physical performance Score (%)	Remark
	National, Regional and International partnerships and networks in biotechnology, biosafety & biosecurity established and strengthened; Policies, Laws, Regulations, Guidelines and standards on Biotechnology, biosafety and biosecurity enforced						
Programme Performance (Outputs)			69.64				Fair performance

Source: IFMS, Progress reports, and field findings

Conclusion

The programme overall performance was fair (69%) against received funds, however, most of the activities were not implemented due to inadequate funding and poor release (26%). Most of the planned activities were at initial phases of implementation.

3.2.2 Research and Innovation Programme

The programme is responsible for: Coordination of multi-sectoral research and innovation activities, overseeing the development and implementation of research and innovation technology clusters, platforms, and programmes. It also facilitates technology generation, assessment, transfer and adaptation, intellectual property acquisition and management and demonstration and piloting of new innovations and emerging technologies.

The programme planned outputs for FY2019/20 are: Research and development supported and jointly undertaken; Indigenous innovations and technologies documented and promoted; Emerging technologies rationalized; Partnerships among artisans and other scientific knowledge interlocutors; knowledge generators (researchers) knowledge transformers (industrialists and entrepreneurs) and end users (consumers) developed; Methodologies for exploitation of IPRs developed; STI Regional Centres of Excellence established: and Infrastructure development projects undertaken and coordinated.

Performance of the Research and Innovation Programme

The programme budget for FY2019/20 is Ug shs 129.676billion, inclusive of the supplementary (Ug shs 91.820billion) for the NSTEIS project. Ug shs 114.086billion (88%) was released and Ug shs111.783billion (98%) spent by 31st December, 2019. The release and expenditure were very good.

The programme through MoSTI established partnerships and collaborations with Soroti University, National Semi-Arid Resources Research Institute and district local governments in West Nile sub-region. Revised concept note for establishment of Science and Technology Parks (STPs) was submitted to the Development Committee.

An Infrastructural Needs Assessment was conducted for artisanal miners and local mineral industrialists in the districts of Namayingo, Busia, Moroto, Mubende, Isingiro, Buhweju, Ntungamo and Kabale. Stakeholder engagements were held in Lira, Otuke, Gulu, Kitgum and Soroti districts on the establishment of shared infrastructure for extraction of shea butter. More information is outlined in table 3.4.

Table 3.4: Performance of the Research and Innovation Programme by 31st December, 2019

Sub-programme/ project	Output	Annual Budget (Ug shs)	Cum. Receipt (Ug shs)	Annual Target	Cum. Achieved Quantity	Physical performance Score (%)	Remark
Research and Development	Research and Development Partnerships and collaborations initiated and fostered; Indigenous knowledge and technologies documented, supported and promoted; National Research agenda/ strategy developed; Policy on Research Registration and clearance reviewed; R&D progress and trends registered, monitored and evaluated; R&D database developed	1,490,000,000	430,000,000	7.00	1.00	0.53	Concept and ToRs for the National Research Agenda were developed; researchers in 20 districts in the Teso and West Nile sub-regions were profiled. Advertisement and procurement of a consultant to develop the National Research Agenda not done.

Sub-programme/ project	Output	Annual Budget (Ug shs)	Cum. Receipt (Ug shs)	Annual Target	Cum. Achieved Quantity	Physical performance Score (%)	Remark
Technology Development	An online platform and interactive platform for R&D created; Capacity building and technical support rendered to technology developer and innovators; Comparative studies on technology development and transfer conducted; National Policy and strategy for Technology Development and Transfer developed; Partnerships and collaborations within the technology development domain established; Technology Needs Assessment (TNA) conducted	1,500,000,000	360,000,000	7.00	1.00	0.64	Participated in the 20th East African Community Jua Kali Exhibition and conference Kigali-Rwanda; AUTM Asia Technology Transfer Conference in Jerusalem, and the Global Sustainable Technology and Innovation Conference (GSTIC) in Brussels. ToRs for the TNA were developed and submitted, awaiting approval. Artisans and innovators in central region involved in agro-technology and food value were trained. Research and development infrastructure in key research and development centres and institutions of higher learning was profiled.

Sub-programme/ project	Output	Annual Budget (Ug shs)	Cum. Receipt (Ug shs)	Annual Target	Cum. Achieved Quantity	Physical performance Score (%)	Remark
Innovations and Intellectual Property Management	Capacity building in the innovation and IP value chain undertaken; collaborations and partnerships established; Innovation and IP awareness campaigns conducted nationally; Innovations profiled; IP registration and exploitation supported; Policies, guidelines and standards for innovation and IP within the STI sector developed	1,530,000,000	390,000,000	5.00	1.00	0.86	10 Innovators were supported for the development of IPRs. 50 Innovators in the West Nile region were profiled. Ten (10) IP Policy Regimes in Public Universities conducted. 5 Innovations and IP Clinics training's conducted
STI Infrastructure Development	Capacity Building; Comparative analysis on Science and Technology Parks undertaken; STI infrastructure master plan developed; Feasibility on Science and Technology Parks undertaken; Stakeholder engagements on establishment of S&T Parks	1,470,000,000	370,000,000	6.00	1.20	0.84	Comparative study report on the establishment and journey of STPs in Korea prepared and submitted. Infrastructure profiling conducted in key R&D centres and institutions of higher learning in Northern and Central Uganda and report compiled. Project concept for establishment of ST parks revised.

Sub-programme/ project	Output	Annual Budget (Ug shs)	Cum. Receipt (Ug shs)	Annual Target	Cum. Achieved Quantity	Physical performance Score (%)	Remark
Kiira Motors Corporation	Construction of Kiira Vehicle Assembly Shop Closures; Electrical and Mechanical Installations Progressed	11,925,578,172	11,925,578,172	100.00	40.00	3.41	50% first floor slab for the assembly building cast, 45% concrete block casting for walling done, first floor columns casting at 25% progress. Plant warehouses: Bases and columns for the foundation were cast, stone plinth wall built, and structural steel members and trusses erected. Road network: 5/6.4 km circulation roads opened up, dual carriage principal and classified road top soil removed at 40%, fill and compaction was at 44% and excavation of the side drains was at 31%. The heavy rains in 2019 affected progression of works.
	Draft automotive industry development policy	218,485,000	218,485,000	1.00	0.70	0.11	Draft policy developed, draft monitoring and evaluation frameworks developed.

Sub-programme/ project	Output	Annual Budget (Ug shs)	Cum. Receipt (Ug shs)	Annual Target	Cum. Achieved Quantity	Physical performance Score (%)	Remark
	Electric buses and charging stations assembled and deployed	3,127,495,261	3,127,495,261	4.00	3.00	1.68	Two buses built and road tested. Two charging kits procured and one installed at GMACH Victoria, Kampala industrial area. Deployment of the buses along the Entebbe Expressway awaits tax discussions with URA. Kayoola EVS airport transfer service proposal drafted. Five trademarks issued by URSB to KMC
	Kayoola bus seat engineering and production samples developed	407,883,126	407,883,126	100.00	40.00	0.12	Capabilities assessment of the seat conducted at Victoria Engineering limited and Luweero industries limited.
	General Office Administration	4,320,558,441	2,703,710,841	100.00	50.00	2.47	SOP, systems and process for materials handling, occupational safety and health and vehicle standards for manufacture and assembly developed. Applied for the national vehicle identification number system. KMC warranty plan developed. Staff salaries, rent and utilities paid

Sub-programme/ project	Output	Annual Budget (Ug shs)	Cum. Receipt (Ug shs)	Annual Target	Cum. Achieved Quantity	Physical performance Score (%)	Remark
National Science, Technology, Engineering and Innovation Skills Enhancement Project	Government Buildings and Administrative Infrastructure	1,500,000,000	-	4.00	0.00	0.00	ToRs for environmental and social management and monitoring plans developed; Framework for engineering manpower surveys developed; Civil Works Management Team; Project Steering and Inter-Ministerial Committees constituted; Project Implementation Plan developed
Presidential Initiative on Banana Industrial Development	Research and Development	102,300,000,000	93,612,390,780	100.00	10.00	8.00	Money for construction of NSTEIC at Namanve and TIBIC at Sanga was advanced to the contractor. Land at Sanga has encumbrances and a new title has to be issued.
	Purchase of Specialized Machinery & Equipment	420,000,000	-	8.00	0.00	0.00	

Sub-programme/ project	Output	Annual Budget (Ug shs)	Cum. Receipt (Ug shs)	Annual Target	Cum. Achieved Quantity	Physical performance Score (%)	Remark
	Operationalization of the BIRDC model and recruitment of adequate human resource	5,800,000,000	2,908,000,000	100.00	30.00	2.48	BIRDC company registered and a taskforce to operationalize the BIRDC model constituted. Parts of the funds were used to settle arrears accrued in FY2018/19.
	Commercialization of banana pilot plant and certification of the processing and laboratory framework, continuous product development and research	3,143,000,000	1,563,000,000	12.00	1.50	0.57	Uganda National Bureau of Standards (UNBS) and ISO certification ongoing. Research on development of banana crisps ongoing. Delays in release of funds in Q1 affected supply of raw materials (green beans).
	Global supply chain development and operationalization and continuous local market development	557,000,000	279,000,000	4.00	1.00	0.20	Established tooke clubs in primary and secondary schools.
Programme Performance						21.90	Poor performance

Source: IFMS, MDAs

3.2.2.1 National Science, Technology, Engineering and Innovation Skills Enhancement Project (NSTEI-SEP)

The goal of the Project is to ensure Ugandans design, implement and manage key infrastructural projects and create globally competitive businesses. The project will support: Scientists and innovators, Ugandan graduates, craftsmen, technicians and engineers to participate in the development and establishment of national infrastructure projects. The objectives of the Project are to:

1. Establish the National Science, Technology and Engineering Skills Enhancement Centre (NSTESEC) and Technology Innovation and Business Incubation Centre (TIBIC) to enhance STEI Skills development and promote STEI based enterprise development among graduates, craftsmen, technicians, engineers as well as other scientists and innovators.
2. Re-tool graduates, craftsmen, technicians and engineers and equip them to undertake various infrastructural works (electricity distribution, water drilling and distribution, road construction, building construction, pipeline construction, light railway construction, etc.) to promote local content, generate employment and create wealth.
3. Establish technology, innovation and business incubation facilities including workspaces and common-user facilities for scientists and innovators to help them further develop their technologies and business models.

The five year project was anticipated to start in FY2016/17 to FY 2020/21 and financing was expected in FY2018/19 with a loan from the China Exim Bank and counterpart funding from GoU development, however, the project effectively started in FY 2019/20.

Performance

The project budget for FY2019/20 is Ug shs 104,220,000,000, of which Ug shs 93,612,390,780 (90%) and Ug shs 92,051,099,033 (98%) was spent by 31st December, 2019. Most of the received funds were advanced to the contractor for civil works advance payment, supply of equipment and loan insurance.

The project steering and inter-ministerial committees were constituted. The project draft communication and dissemination plan was developed. The ToRs for environmental and social management and monitoring plan were developed and the framework for equipment and machinery surveys were developed.

By 31st December 2019, civil works had not started at the proposed sites. The project experienced delays in constituting a management team and procurement of a consultant for the environment social impact assessment. The land at Sanga for construction of the TIBIC had encumbrances that are likely to further delay implementation of the civil works.

3.2.2.2 Kiira Motors Corporation (KMC)

Established in 2014, Kiira Motors Corporation (KMC) intends to set up the first automotive manufacturing plant in Uganda. The KMC investment is thus poised to catalyze innovations and industrialization leading to savings in foreign exchange; economic diversification; attraction of foreign direct investment and development of skills relevant for developing a sustainable automotive value chain in Uganda. In 2018, Cabinet approved a disbursement plan for the commercialization of the Kiira Electric Vehicle project over a period of four years as follows: Ug shs 24billion for FY 2018/19, Ug shs 44billion for FY2019/20; Ug shs43billion for FY2020/21 and Ug shs 32.7billion for FY 2021/22.

During FY2019/20, the approved budget for Kiira Motor's Corporation is Ug shs 20billion, of which Ug shs 18,383,152,400 (91.9%) was released and Ug shs 16,686,916,773 (90.8%) was spent by 31st December 2019. Both release and expenditure performances were very good.

Physical performance

Construction of the Kiira Vehicle assembly shop and plant start-up facilities-Phase I and plant offices was ongoing and the following achievements were made during the period under review: All the ground floor columns and roof trusses were complete. Fabrication of structural steel columns was complete and 42 of the 63 columns were hoisted. Lift shaft and staircases were cast to first floor slab level. 50% first floor slab for the assembly building cast (140/280 sqm) and 45% of concrete block casting complete.

Construction of the Kiira Vehicle Plant Warehouse: all the bases and columns for the foundation were cast, stone plinth wall built, and structural steel members and trusses erected.

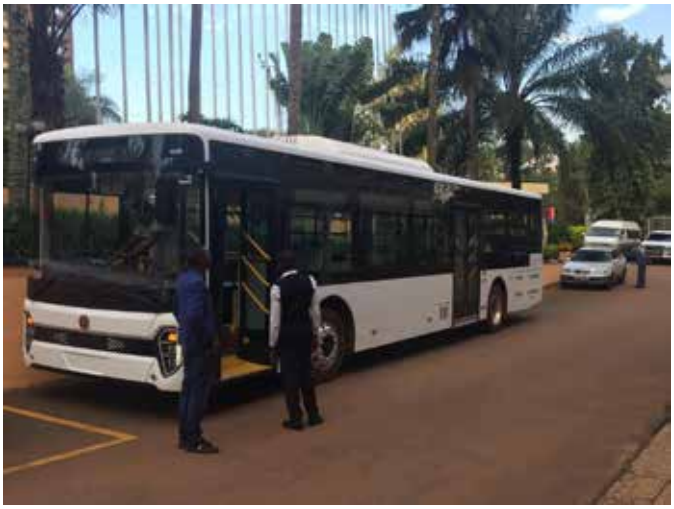
Five kilometers of the 6.4km of the plant circulation roads were opened. Construction of the 2.79km dual carriage principal and classified road was at 36% progress, that is: removal of top soil was at 40%, roadbed compaction at 16%, fill and compaction to improve subgrade layers was at 44% and excavation of open side was at 31%.

Two Kayoola Electric buses (EVS) and two charging stations were built. Development of the assembly manual and knitting plan was completed. KMC partnered with Britam Insurance Company Limited for the comprehensive insurance cover of the Kayoola EVS. KMC was engaging URA for a better tax treatment for the buses under Research and Development. KMC submitted a proposal for the Kayoola Airport Transfer Services in joint venture with GMACH-Victoria.

Five trademarks were issued by the Uganda Registration Service Bureau (URSB) to KMC and these include; Kiira EV, Kiira EVS, Kayoola EVS, KMC and Kiira Plant. KMC submitted applications to URSB for the industrial design for Kiira EVS and utility model for 8+ seat for the Kayoola bus. KMC applied to International Society for Automotive Engineers for a Uganda World Manufacturer's Identifier (vehicle identification number) system.

KMC got clearance from MFPED for a multi-year contract with CHTC Motors Co Ltd. All the KMC stock was transferred from UDC to the Ministry of Science, Technology and Innovation (MoSTI). The MoSTI was in the process of constituting a Board of Directors for KMC. The overall project performance was good, though it was behind schedule.

L-R: Vehicle assembly shop plant offices and warehouse under construction at Jinja Industrial Business Park (JIBP)




L-R: Part of the opened road in Jinja and one of the Kayoola EVS bus at Hotel Africana in January 2020

Challenges

- The heavy and prolonged rains in the latter part of 2019 extended into 2020 affected progress of construction works.
- Under funding in relation to the approved roadmap for KMC

Recommendation

- The KMC and MoSTI should enhance stakeholder engagement to appreciate the roadmap and the associated timelines for the commercialization of the Kiira Electric Vehicle project and vehicle assembling plans.

3.2.3 Banana Industrial Research and Development Centre

Formerly known as the Presidential Initiative on Banana Industrial Development (PIBID). The Agency started in 2005 as a pilot project of the Government of Uganda whose underlying theory is that rural farmers with access to science led processing and value addition enterprises will be able to rapidly access profitable market chains, that supply local, regional and international markets; resulting into increased household incomes. It was anticipated that the project would be a catalyst for socio-economic transformation through research based crop value addition. Over Ug shs 154billion has so far been injected in the project since inception.

The project is in tandem with the Governments' priority economic strategies in the Second National Development Plan (NDP II), which among others include; value addition to agricultural products and agro-processing through Research and Development (R&D).

During FY 2019/20, the project was expected to transit into a Banana Industrial Research and Development Centre (BIRDC), acquire the International Standards Organization (ISO) and UNBS certification, install additional equipment, operationalize the laboratories, and commercialize *Tooke* products, map production capacities of farmers and undertake countrywide soil resource testing among others.

Performance of the BIRDC

The agency budget for FY2019/20 is Ug shs 9.5billion, of which Ug shs 4.75billion (50%) was released, and Ug shs 4.71billion (99%) spent by 31st December, 2019. The agency however had unaudited arrears amounting to Ug shs 8.9 billion. A total of Ug shs 1.359billion (28.6%) of the released funds was used to clear some of the arrears accrued from supply of raw materials to the pilot plant.

The Banana Industrial Research and Development Centre (BIRDC) was registered as a company in fulfillment of the strategy for operationalization of the PIBID. Efficiency optimization studies for the primary processing of bananas was ongoing. The company was in the final process of acquiring a UNBS quality distinctive mark. Marketing of the products was ongoing within and outside the country. Due to increased prices of raw materials (*matooke*) during the months of October to December 2019), production of raw *Tooke* flour was stayed. The peeling machine and a sugar mill were installed. However, the Board of Directors had not been constituted. It was observed that the approved supplementary budget (Ug shs 8.9billion) for the company during FY 2018/19 was not realized leading to accumulation of arrears and cash flow constraints.

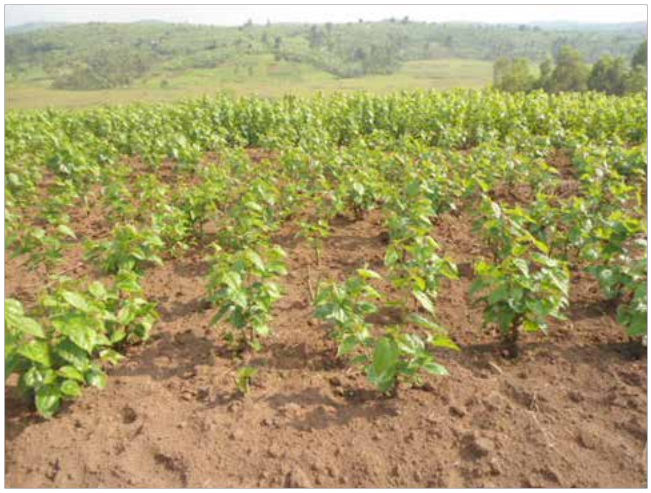
Part of the finances released to BIRDC during the period under review were used to settle arrears accumulated in FY2018/19. It was observed that most of the planned activities were not implemented due to inadequate funds and poor prioritization.

Some of laboratory equipment and consumables at BIRDC stores yet to be installed

3.2.4 Sericulture Project

Located in Sheema District, the project aims at increasing production of silk and promotion of sericulture technologies in Uganda. The intervention is a subvention under the MoSTI that had previously been supported under the Innovation Fund. During the period under review, the project received Ug shs 2.125billion from MoSTI for research and completion of rearing houses.

By 14th January 2020, construction of the silk worm rearing houses had not resumed due to design reviews to include sanitation facilities and electrical works. The baseline assessment of the current sericulture ecosystem (institutions, farmers and infrastructure) in the country was undertaken in Sheema, Pallisa, Mukono, Bukedea, Bulambuli, and Iganga districts. A total of 450 farmers who had been silk farmers were followed up and their needs identified. A total of 1,203 farmers were trained in various sericulture technologies and innovations. On-farm commercialization of sericulture technologies is ongoing on 91 farms.




L-R: Incomplete silkworm rearing houses and maintained mulberry gardens

Conclusion

The programme performance was poor at 21.9%. This was attributed to the low delivery on the NSTIE project which constitutes 74% of the programme budget. The PIBID reportedly accrued unverified arrears in the previous financial year and part of the released funds were used to settle the arrears thus affecting execution of planned activities.

3.2.5 Science Entrepreneurship Programme

The programme facilitates Science, Technology and Innovation skills development for artisans, innovators and researchers. It is responsible for creating a critical mass of highly trained and skilled Science, Technology and Engineering (STE) professionals to drive industrialization and economic growth. It facilitates establishment of product development facilities and innovation hubs, liaison with financial intermediaries for technology acquisition and access to credit for STI based SMEs, and Fostering linkages and partnerships between STI institutions (Universities, Technical and Vocational) and industrialists as well as Public sector (Ministries, Departments and Agencies).

The planned outputs for FY2019/20 include: Needs based assessment, comparative analysis and adoption of appropriate models for technological enterprise development undertaken spin off and start up technology enterprises supported; Technology uptake, adoption and diffusion initiatives supported; Skills development on technology uptake, commercialization and enterprise development undertaken; ST&I business mentorship undertaken; Frameworks, policies and guidelines for Technology adoption, diffusion and commercialization developed and Public and private sector collaborations and investment in ST&I Commercialization strengthened.

Performance

The programme approved budget for FY2019/20 is Ug shs 4.56billion, of which Ug shs 1.63billion (36%) was released and Ug shs 1.25billion (77%) spent by 31st December, 2019. The release was poor, while expenditure was good. Detailed performance is provided in table 3.5.

Table 3.5: Performance of the Science Entrepreneurship Programme by 31st December, 2019

Sub-programme/ project	Output	Annual Budget (Ug shs)	Cum. Receipt (Ug shs)	Annual Target	Cum. Achieved Quantity	Physical performance Score (%)	Remark
Technology Uptake Commercialization and Enterprise Development	Technological enterprise developed; Technology uptake adoption and diffusion initiatives supported; Industrial Skills Development and capacity Building; Support Scientific and innovations	1,850,000,000	380,000,000	3.00	0.30	18.08	The programme conducted technopreneurship consultative meetings with innovators and entrepreneurs, and profiled commercially viable technologies in Sheema Municipality, Masaka, Ssembabule, Nakaseke, Bushenyi and Mubende DLGs. Entrepreneurial skills meetings to commercialize shea butter technologies and innovations were conducted in Pader, Agago, Nebbi and Moyo districts.
STI skills development	Industrial Skills Development and capacity Building; Support Scientific and innovations	1,601,444,000	410,000,000	5.00	1.00	25.11	Bunyoro youth innovation and top 100 SMEs awards were supported. Participated in the 20th EAC Jua-Kali exhibition in Kigali, Rwanda. Supported TVET skills competition in four regions of Uganda. Skills gap and needs assessment for scientists and innovators in the informal sector were conducted in the districts of kabale, Rukungiri, Kabarole, Hoima, Kapchorwa, Busia, Arua, and Moyo. Training on laundry bar soap making conducted in Iganga District.

STI Advancement & Outreach	Annual National Science Festival (NSF) Conducted; Collaborations and Cooperation on STI Advancement established; Improved Human Capital for STI Integration and popularization of STI enhanced and strengthened; STI Exhibitions Conducted at National, Regional & International level.	1,530,000,000 - -	380,000,000 - -	4.00	1.00	30.71	World Science Day commemorated and National STI Conference conducted. Collaborations and partnerships established for STI Advancement with Italian Embassy, UNESCO, YIYA, Solutions, E2 young engineers and KPMG.
Programme Performance						73.91	Good performance

Source: IFMS, MoSTI progress report and field findings

Conclusion

The overall programme performance was good, rated at 73.91%.

3.3 Uganda Industrial Research Institute (UIRI)

3.3.1 Background

The Uganda Industrial Research Institute (UIRI) is the lead agency for the promotion of Industrialization in Uganda. The institute is an agency under the Science, Technology and Innovations Sector. The UIRI traces its roots to the East African Federation of the 1970s, as a precursor of the then East African Research Organization (EARSO) which was headquartered in Nairobi and served as a regional Research and Development (R&D) institution for Kenya, Tanzania and Uganda. Upon the collapse of the East African Federation, the EARSO was disbanded in 1997, and later transformed into the Kenya Industrial Research and Development Institute. The establishment of UIRI was at the behest of GoU negotiations with the Chinese Government which offered a grant to build and equip the institute.

Objectives

UIRI's primary objectives are:

- To carry out applied research for the development of products and provide platform for innovations, application of science and technology.
- To develop and acquire appropriate technologies in order to create strong, effective and competitive private sector.
- To promote value addition activities so as to transform local raw materials into competitive marketable products.
- To bridge the gap between academia, government and the private sector and to enhance commercialization of R&D.

The approved budget for UIRI, FY 2019/20 is Ug shs14.23billion, of which Ug shs 7.20billion (50.6%) was released and Ug shs 6.774billion (94.1%) spent by 31st December, 2019. Both release and expenditure performance were very good.

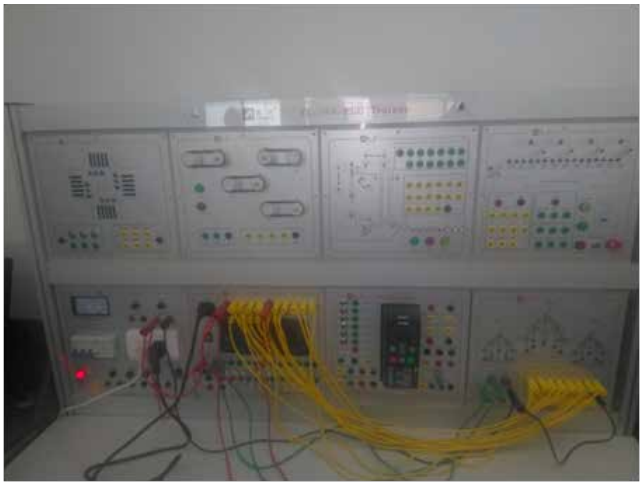
Planned outputs for FY 2019/20

The planned deliverables for UIRI during FY2019/20 include: undertake skills development of industrialist, design and develop hardware and analyze prototypes, purchase office equipment and specialized machinery, produce and market Newcastle vaccines, support incubation activities at headquarters and satellite facilities, and construction, equipping and operationalization of the Machining Manufacturing Industrial and Skilling Centre (MMISC) in Namanve.

3.3.2 Industrial Research Programme

Development and testing of the *Wendi* mobile application aimed at easing public transport was ongoing. The UIRI conducted a pediatric study on the performance of the Electronically Controlled Gravity Feed (ECGF) system. Formation of partnerships with FraunhoferGesellschaft Institute for technical support and mass production of the units was ongoing. The UIRI developed a method for production of lactic acid from cassava. The UIRI also developed several enzymes; cellulase, xylanase, alpha amylase and cutinase through bio-prospecting at laboratory scale and is exploring means to produce at large/industrial scale.

The construction of the **Machining and Skilling Centre (MMISC) at the Kampala Industrial and Business Park - Namanve** with a US$30 million grant from the People's Republic of China was completed and commission in January 2020. Installation of equipment and high voltage line was ongoing. The facility is expected to provide practical training to a total of 200 students (technicians) in standard machining, robotics, and Programmable Logic Control (PLC) among others. However, counterpart funding for recruitment of staff, trainers and facility maintenance had not been realized from government of Uganda.

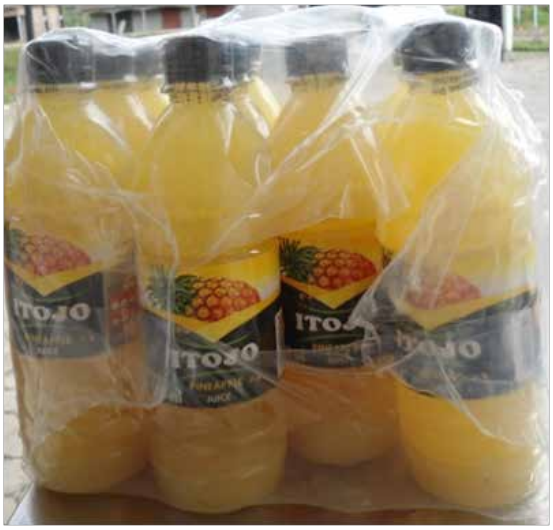



Some of the equipment installed in the mechanical and robotics laboratory at MMISC-Namanve

Pineapple Juice Processing Plant-Ntungamo

The UIRI constructed and equipped a pineapple juice processing plant at Itojo, Ntungamo District in order to add value in the predominantly grown pineapples in the area. The land was donated by Itojo Town Council and the management of the plant by Nyakihanga Fruit and Vegetable Growers' Cooperative Society. The facility has a production capacity of 500l/hr. UIRI signed an MoU to provide technical assistance and maintenance of the facility for three years whereas the Cooperative Society is to supply raw pineapples and manage the plant.

The plant was commissioned in December 2019, and the UIRI provided user training for the operators for one week after commissioning. By February 2020, processing of juice by the facility was halted due to technical and operational challenges. The management of the facility cited; faulty capping machine, swelling of the product on shelf and electrical surges.



Juice processing equipment installed at Itojo Pineapple Juice Plant and processed ready to drink juice

3.3.3 Headquarters

At UIRI headquarters, 17 staff were recruited and a number of facilities were undergoing renovation. Construction of the container platform for wine production was ongoing. A total of 5,000,000 doses of Newcastle vaccines were produced and marketed across the country. A total of 112 food, beverage, cosmetic and plant samples were analyzed. The UIRI trained 33 students from Uganda Christian University-Mukono in value addition; 35 female farmers from Kalungu District in dairy processing; and 26 people from Kampala were trained in tailoring, knitting and embroidery.

Table 3.6: Performance of the Industrial Research Programme by 31st December, 2019

Sub-programmes	Out put	Annual Budget (Ug shs)	Cum. Receipt (Ug shs)	Annual Target	Cum. Achieved Quantity	Physical performance Score (%)	Remark
Headquarters	Administration and support services	11,880,000,000	5,830,000,000	100.00	40.00	68.05	Paid staff salaries and medical insurance. Recruited 17 scientists and officers.
	Arrears	788,206,175	788,206,175	100.00	100.00	5.54	All arrears accrued were cleared
Uganda Industrial Research Institute	Research and development	150,000,000	8,675,950	100.00	1.00	0.18	Wendi mobile application development and testing was ongoing, trained 26 people from Kampala in tailoring and embroidery; delivered textile machinery for UIRI textile centre in Shema District; method for quantification of lactic acid from cassava developed; produced four enzymes from local materials; trained private sector in MIG wielding, shearing and rolling; produced 5,000,000 doses of kukustar.

Sub-programmes	Out put	Annual Budget (Ug shs)	Cum. Receipt (Ug shs)	Annual Target	Cum. Achieved Quantity	Physical performance Score (%)	Remark
	Government Buildings and Administrative Infrastructure	500,000,000	82,409,193	100.00	5.00	1.07	Repairs for the Pineapple juice plant backyard at Itojo done; construction of the container platform for wine production; installation of a high power voltage line at MMISC ongoing
	Purchase of Office and ICT Equipment, including Software	150,000,000	101,859,600	3.00	0.50	0.26	Repaired 4 printers and 103 computers; installation of machinery at the proposed animals feeds facility is ongoing
	Purchase of Specialized Machinery & Equipment	762,000,000	394,255,257	5.00	1.00	2.07	Test runs for the pineapple juice plant at Itojo done; equipment repairs and maintenance done for the meat plant and rotary oven at UIRI; installation of equipment at MMISC done.
Programme Performance						77.16	Good performance

Source; IFMS, MDAs

Challenges

i. Lack of counterpart funding for the MMISC at Namanve and inadequate funding for research and development across agencies.

ii. Low technology transfer, value addition, and commercialization of innovations.

iii. Supply of faulty equipment to Itojo Pineapple Juice Plant and low technical capacity of the operators to run the plant.

iv. Intermittent and poor quality power supply in most of the offsite facilities.

Recommendations

i. The UIRI, MoSTI and MoFPED should prioritise funding to Research and Development and counterpart funding for operationalization of the MMISC.

ii. The UIRI should continuously engage with stakeholders and the public about the innovations and services offered.

iii. The UIRI should provide comprehensive technical and quality control training to the operators of the Itojo Pineapple Juice Plant.

CHAPTER 4: CONCLUSION AND RECOMMENDATIONS

4.1 Conclusion

The STI mission of providing leadership, an enabling environment and resources for scientific research and knowledge-based development for industrialization, competitiveness and employment creation, leading to a sustainable economy, is in tandem with the country's Vision 2040 and NDP II. If well facilitated, the STI sector is capable of contributing to the Industrialization of Uganda.

The STI Sector performance was fair at 60.65%. Under the Uganda National Council for Science and Technology (UNCST), the ToRs for the environmental and social impact assessment and monitoring plans for National Science, Technology Engineering and Innovation Skills Enhancement Project (NSTEIP) were developed. The project steering committee was constituted and draft communication and dissemination plan developed. The project experienced delays in fulfilling the loan conditions. The construction of the technology innovation business incubation centre under the NSTEIP was delayed due to land related encumbrances at the proposed site in Sanga, Kiruhura District.

Good progress was observed under Kiira Motors Corporation with the construction of the Vehicle Assembly Shop at 20% progress (roofing stage). Two Kayoola EVS buses and two charging kits were built and tested.

The Banana Industrial Research and Development Centre (BIRDC) was registered as a company in fulfillment of the strategy for operationalization of the Presidential Initiative on Banana Industrial Development. The construction and equipping of the Manufacturing, Machining and Industrial Skilling Centre (MMISC) at the Kampala Industrial and Business Park-Namanve was completed. Recruitment of trainers and instructors for the facility was delayed due to inadequate budget. This implies that the centre will remain underutilized in spite of being commissioned.

The UIRI commissioned the Pineapple Juice Processing Plant in Itojo, Ntungamo District on 6th January 2020. By February 2020, the plant was not operational due to technical and human resource related constraints.

It is important to note that the sector is faced with poor prioritization of key STI interventions and delayed implementation of projects. The Sector Working Group should rationalize the limited resources to the most critical requirements of the sector and work with MFPED to identify alternative sources of funding so as to meet the objectives.

Other hindrances to service delivery included lack of counterpart funding to leverage the support from donors, and inadequate development budget for some projects like UIRI- MMISC, KMC, BIRDC; infrastructure gaps to undertake STI from research to commercialization; low uptake of scientific research findings and lack of entrepreneurship skills; poor planning and inadequate appropriation on the sector development budget for FY 2019/20; low preparedness to implement development projects; and intermittent and low quality power especially in Western Uganda.

4.2 Recommendations

i. The STI Sector and MFPED should prioritise counterpart funding for research collaboration and infrastructure developments in the sector.

ii. The STI Sector Working Group should prioritize funding for development activities for KMC, UNCST, UIRI and BIRDC.

iii. The MoSTI should develop a Research Dissemination Strategy and enhance public engagements to appreciate the role of STI in national development.

iv. The MoSTI should enhance capacity of implementing agencies to avoid project delays.

v. The MEMD through the UETCL and UEDCL should ensure consistent and stable supply of electricity to enable manufactures cut down on costs of production and loss of equipment.

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