UGANDA

EDUCATION MANAGEMENT INFORMATION SYSTEMS (EMIS) NORMS AND STANDARDS FOR THE EAST AFRICAN COMMUNITY

EMIS PEER REVIEW REPORT 2016
EMIS NORMS AND STANDARDS
FOR THE EAST AFRICAN COMMUNITY

UGANDA EMIS PEER REVIEW REPORT 2016
JANUARY 2017
# TABLE OF CONTENTS

**PREFACE** .................................................................................................................................................. 1

**ACKNOWLEDGEMENTS** ........................................................................................................................ 3

**GLOSSARY** ............................................................................................................................................... 4

**ABBREVIATIONS** ...................................................................................................................................... 7

**INTRODUCTION** .................................................................................................................................... 9

**CHAPTER 1: INTRODUCTION** ............................................................................................................ 11

**CHAPTER 2: EMIS PEER REVIEW APPROACH AND METHODOLOGY** ............................................ 21
  2.1 Approach ....................................................................................................................................... 21
  2.2 Methodology ................................................................................................................................. 21
  2.3 Terms of Reference for the EMIS Peer Review ............................................................................. 21
  2.4 The Review Questions .................................................................................................................. 21
  2.5 The Review Process ...................................................................................................................... 21
  2.6 Limitations of the Review exercise .............................................................................................. 22

**CHAPTER 3: EMIS PEER REVIEW FINDINGS** ...................................................................................... 23
  3.1 Legal and Policy Framework ......................................................................................................... 23
  3.3 Statistical Processes ....................................................................................................................... 28
  3.4 Education Information Reporting .................................................................................................. 32

**CHAPTER 4: CONCLUSIONS** .............................................................................................................. 37
  4.1 General Conclusions ..................................................................................................................... 38
  4.2 Conclusions on Overall Compliance with EAC EMIS Norms and Standards ......................... 38

**CHAPTER 5: RECOMMENDATIONS** .................................................................................................... 40
  5.1 Communication and Dissemination Strategy ................................................................................ 40
  5.2 Review the current budget to incorporate EMIS activities and critical Statistical operations...... 40
  5.3 Develop a sustainable financing strategy for EMIS development .................................................. 40
  5.4 Expand the current staff establishment of the statistics section to include technical staff for EMIS Requirements ................................................................................................................. 41
  5.5 Formulate a Sustainability strategy for EMIS ................................................................................. 41
  5.6 Operationalize the four dormant EMIS modules (i.e. Human Resource, Financial Management, School Inspection and School Outcome) ......................................................................................... 42
  5.7 Formulate a comprehensive Sector Policy on EMIS ..................................................................... 42
  5.8 Strengthen the current Legal Framework to address the specific needs of EMIS ......................... 43

**APPENDIX 1: FEEDBACK MEETING WITH PERMANENT SECRETARY** ........................................... 44

**APPENDIX 2: STAKEHOLDERS INTERVIEWED** .................................................................................. 45

**APPENDIX 3: REFERENCES** .................................................................................................................. 49
PREFACE

Education Management Information System (EMIS) is an IT based tool for data management. It integrates personnel, technology and organizational procedures/practices to produce management information required for strategic planning and decision making (at all levels of the education system), to facilitate the development of the education system in a country.

Education Management Information System (EMIS) initiatives were first instituted by a number of AU member states in the 1990s to improve the management of their education systems. The main objective of these reforms was to address the dual challenge of declining quality of education in the face of institutionalized budget constraints. However, the AU led assessment of the EAC EMIS status (2012), concluded that existing EMIS in a majority of member states was weak and bedeviled with multiple challenges (mainly attributed to poor financing as well as inadequate skills and policies). This assessment among others recommended prioritization of strengthening EMIS as a major development goal across Africa (as a necessary first step towards the creation of a sustainable and reliable production systems for education statistics and information management). A robust EMIS would guarantee the availability of reliable and relevant educational statistics and management information across the continent.

Consequently, the AU’s Strategy for the Second Decade of Education for Africa (2006-2015), placed EMIS as priority number seven (7) with a stated goal …. “to reverse the current phenomenon of data blanks and facilitate planning based on sound information; and rigorous monitoring and evaluation of the performance of education systems. The availability of well-functioning and sustainable EMIS, at continental, regional and national levels is a necessity for this function”. The role for the implementation of this priority was given to the Regional Economic Communities (RECs).

As one of the major steps in the implementation of EMIS priority, the AU adopted the Strategy for the Harmonization of Statistics in Africa (SHA), in 2010. The aim of this strategy was to strengthen national capacities for generation of timely, reliable and harmonized statistical information (which integrates all aspects of political, economic, social and cultural sectors at a continental level). The development of this strategy led to a push by AU member states for the use of national data for planning (both in the country and for regional education development goals such as the Global Agenda 2063 and African Agenda 2063), as well as the direct involvement of National Statistical Offices in the provision of this information.

Subsequently, the African Union (AU) in 2011 launched the EMIS initiative in the East African Community Region (during an AU EMIS Technical Committee meeting held in Kampala in November 2011). This was in recognition of the importance attached by the East African Community to the role of EMIS in “.......... facilitating sectorial planning and policy making based on sound information and rigorous Monitoring and Evaluation of the performance of the Education sector”. At the end of the workshop, it was resolved among other things that EAC member countries should:

i. Immediately undertake an assessment of their EMIS systems to determine current status, existing capacities and challenges (Peer Review).

ii. The Association for the Development of Education in Africa (ADEA) will spearhead the peer review and provide the Technical Assistance (TA) for this assessment

iii. The East African Community Secretariat (Education Division) will be responsible for the coordination of the initiative.
At the regional Economic Group level, the East African Community (EAC) launched its 4th Development Strategy (2011-2016), with Priority Area 7 dedicated to EMIS. The objectives of the strategy, among others, included:

iv. Creation of effective national capacities for EMIS (i.e. strengthening of M&E systems, harmonization of statistical procedures and practices as well as establishment of the EAC Statistics Bureau).

v. Ensuring that all partner countries are able to effectively report on all sets of statistics and indicators.

vi. Facilitation of cross-country comparisons.

vii. Establishment of a minimum set of Norms and Standards to guide countries in the development / improvement of their national EMIS. These norms are intended to facilitate harmonization of education management information systems to contribute towards the development of regional and continental EMIS networks.

As part of the broader framework for the development and harmonization of the Education Management Information System within the African Union, ADEA was commissioned to assess the status of the existing Education Management Information Systems with a view of harmonizing them both at the Continental and Regional Economic Group levels. The assessment was based on agreed Norms and Standards that each Regional Economic Community was required to adopt.

Against this backdrop, the EAC Education Division, together with ADEA's Working Group on Education Management and Policy Support (WGEMPS), formulated / adopted the EMIS Assessment Framework for use in the peer review exercise. This framework contains a set of 17 criteria and measures (based on best practices), for benchmarking member countries’ EMIS Systems (in terms of capacities to produce relevant, accurate, timely and comprehensive education statistics and information). Compliance with all the 17 Norms and Standards ensures countries will have sustainable, comprehensive and appropriate education management information systems in harmony with international and regional systems and practices.

Within the East African Region, Uganda was selected as the first country to undertake the EMIS Peer Review. This trail blazing exercise was conducted from 26th – 29th July 2016. Its main outcome was a draft Uganda EMIS Peer Review Report, which was validated on 13th & 14th December 2016.

Within the framework of the AU Second Decade of Education for Africa (2006-2015) and the EAC 4th Development Strategy (2011-2016), therefore, this Uganda EMIS Peer Review Report has been prepared collaboratively by the EMIS Peer Review team (spearheaded by ADEA WGEMPS) and Ugandan EMIS Technical team. The Report documents the status of Uganda’s EMIS based on the norms and standards contained in the EMIS Assessment Framework. The information contained in this report will contribute to enhancing policy dialogue on how to redevelop Uganda’s EMIS in tandem with the both the AU and EAC strategic objectives. The report also contains practical implications for investing in EMIS.

Aloysius Chebet  
EAC Secretariat (Education Division)
ACKNOWLEDGEMENTS

The production of the Uganda EMIS Peer Review Report is a combined effort of organizations and individuals drawn from various institutions which played a role in the EMIS Peer Review Exercise.

At the continental level, we wish to thank the African Union Commission Human Resources, Science and Technology and Economic Affairs Divisions and ADEA. It was the AU strategic vision and leadership (expressed through the AU 2nd Decade Plan of Action for Education in Africa) that underscores the pivotal role of EMIS in the Development of Education and initiated the agenda for EMIS review in the continent.

At the Regional Economic Group Level, we wish to thank the East African Community (EAC) Secretariat for not only prioritizing EMIS in its 4th Development Strategy (2011-2016) but also taking full responsibility for initiating the peer review process in the region as well as providing technical resources for its coordination. It is the EAC that worked with ADEA in the design of the Assessment Framework as well as assembling the EMIS Peer Review Team. We wish to specifically acknowledge the role played by Mr. Aloysius Chebet from the EAC Education Division for coordinating all the processes leading to the peer review exercise itself, as well as participating in it.

Our Special thanks go to East African Community Member States that nominated their national EMIS experts to the EMIS Peer Review Team. These countries included Kenya (Mr. Martin Kungania), Tanzania (Mr. Petro Makuru), South Sudan (Mr. Thomas Dhaal), Burundi (Mr. Oscar Bazikamwe) and Uganda (Mr. Joseph Eilor, Ms. Lubega Irene Namatovu, and Mr. Boniface Philip Mavuya)

At the country level, our special thanks go to both the outgone Permanent Secretary (Dr. Rose Nassali Lukwago for authorizing the peer review exercise) and the incoming Permanent Secretary (Mr. Alex Kakooza for overwhelming support to the EMIS Peer Review Report Validation Exercise). We also wish to thank both the Under Secretary (Mr. Aggrey Kibenge) and the Commissioner Education Planning and Policy Analysis Department (Mr. Godfrey Arnold Dhatemwa) for their positive remarks during the validation exercise. Above all, we are indebted to the MoES EMIS technical team (Mr. Joseph Eilor, Ms. Lubega Irene Namatovu, Mr. Boniface Philip Mavyuva, Mr. Edson Tusiime and Ms. Patricia Nambafu Madaya) for the excellent organization of both the Peer review and validation exercises.

Above all, we are indebted to ADEA for providing the much needed technical support for the design of EMIS Peer Review Norms and Standards and coordinating the Peer Review Exercise itself. It also provided technical staff that included Mr. Brighton Mutasa and Ms. Chemwi Mutiwanyuka, whose role was invaluable to the success of the exercise.
GLOSSARY

**Accessibility (of data):** The ease with which statistical outputs can be obtained and availed to the users. It is the ease with which the existence of information can be ascertained, as well as the suitability of the form or medium through which the information can be accessed.

**Accuracy (of data):** The degree to which the output correctly describes the phenomena it was designed to measure.

**Administrative Data:** The set of units and data derived from an administrative source.

**Administrative sources:** Refers to data and statistics generated internally by Government.

**Aggregated data:** The result of transforming unit level data into quantitative measures for a set of characteristics of a population.

**Benchmark:** A recognized standard, or a reference point, that forms the basis for assessment or comparison.

**Clarity (of data):** The quality of being clear and easy to understand.

**Coherence:** The degree to which statistics can be successfully brought together with other similar statistical information from different sources within a broad analytic framework and over time. It is the extent to which differences between two sets of statistics are attributable to differences between the estimates and the true value of the statistics.

**Comparability (of data):** The ability to compare statistics on the same characteristic between different points in time, geographical areas or statistical domains.

**Comprehensiveness (of data):** The extent to which a sampling frame includes all the elements of the target population.

**Confidentiality (of data):** Obligation or responsibility to uphold the privacy of data/information provided by the respondent to avoid unauthorized disclosure.

**Consistency (of data):** Valid according to all defined rules, including constraints, cascades, triggers, and any combination thereof.

**Cost effectiveness:** Good value for the amount of money paid / spent.

**Data Dictionary:** Refers to a reference book on the standardized concepts, definitions and classifications used by the Ministry in the production of its education statistics.

**Data providers:** Refers to all bodies and agencies that produce statistics. These include education and training institutions, households, enterprises, administrations and other respondents.

**Education and training institutions:** Refers to schools, colleges, universities, centres or any formal and non-formal education and training provider that occupies an institution and provides a recognized education programme.

**EMIS:** Refers to a System for collection, processing, analysis, publication, dissemination, and rendering of Information services for the management of educational resources and services.

**EMIS Norms:** EMIS level to be complied with or reached.

**EMIS Peer Review:** Process of subjecting education sector management information systems to the scrutiny of others who are experts in the same field.
**EMIS Standards:** A level of quality or attainment (includes ideas or things used as a measure or model in comparative evaluations).

**Guidelines:** Directions or principles used in the development, maintenance and application of rules. They may or may not be mandatory, but are provided as an aid to interpretation and use of rules.

**Impartiality:** (Also called evenhandedness or fair-mindedness) is a principle of justice holding that decisions should be based on objective criteria, rather than on the basis of bias, prejudice, or preferring the benefit to one person over another for improper reasons.

**Imputation:** Refers to the process of identifying missing data from a census survey and taking steps to adjust or modify the data accordingly.

**Individuality:** A single person or institution.

**Integration (of data):** Combining data residing in different sources and providing users with a unified view of these data.

**Integrity:** The values and related practices that maintain user’s confidence in the agency producing statistics and ultimately in the statistical product. It requires the statistical system to be based on principles of objectivity in collection, compilation and dissemination of data to ensure unbiased statistics which are not subject to confidentiality breaches or premature releases (United Nations (UN) principles of official statistics).

**Learner:** Refers to any pupil or student or person enrolled in an education and training programme.

**Metadata:** Is information on the underlying concepts, definitions, and classifications used, the methodology of data collection and processing, and indicators or measures of accuracy of the statistical information.

**Methodological Soundness:** The application of international, national or peer-agreed standards, guidelines, and practices to produce statistical outputs. Application of such standards fosters national and international comparability.

**Methodology:** A description of how something will be done. It describes a set of analytical methods, procedures and techniques used to collect and analyze information appropriate for evaluation of the particular programme, component or activity.

**Ministry of Education:** The singular term “Ministry of Education” is used synonymously with its plural form “Ministries of Education” to include all those government Ministries responsible for the various levels of education and training in a country.

**Objectivity:** Impartiality, absence/lack of bias, absence/lack of prejudice, fairness, fair mindedness, neutrality, even handedness, justice, open-mindedness.

**Preliminary data:** Results that have not been verified sufficiently to be published.

**Protocols:** Is a set of guidelines or rules.

**Punctuality (of data):** Being able to complete a data production process before or at a previously designated time.

**Quality of data:** Quality is defined as fitness for purpose. Statistical quality is the degree to which a set of inherent characteristics in the statistical data fulfils user requirements; measured in terms of the prerequisites and dimensions/requirements/criteria of quality, namely: relevance, accuracy, timeliness, accessibility, interpretability, comparability and coherence, methodological soundness and integrity.
**Registration of Institutions:** The process of authorizing and recognizing institutions officially.

**Relevance (of data):** The degree to which the data meet the real needs of clients. It is concerned with whether the available information sheds light on the issues that are of great importance to users.

**Reliability (of data):** Consistency and dependability of data collected through repeated use of a scientific instrument or data collection procedure under the same conditions.

**Reporting Accountability:** An obligation to work in compliance with agreed rules and standards or to report fairly and accurately on performance results against the availed resources, mandated roles and plans.

**Respondent burden:** The effort in terms of time and cost, required for respondents to provide satisfactory answers to a survey.

**Respondent Fatigue:** This occurs when respondents are disinclined to give appropriate answers to an interviewer, or gradually lose interest to participate due to lengthy research projects which may lead to invalid responses.

**Scope:** The extent or range of view of what is to be observed. In relation to data production, it is the total membership or population of a defined set of people, objects or events.

**Secondary data:** Refers to data collected by someone other than the user. Examples are data obtained from research, studies and surveys produced outside of the Ministry of Education.

**Special needs:** Refers to learners under difficult conditions that are vulnerable, marginalised and/or with disability.

**Statistical Authority:** Shall mean, at national level, the national or Central Statistical Office (CSO, NSDS, or Statistical authority) and other statistical bodies in charge of producing and disseminating African statistics.

**Statistical Procedures:** A method of analyzing or representing statistical data; a procedure for calculating a statistic.

**Statistical Value Chain:** Refers to the statistical process from the source of data to the final statistical output. For example, it concerns the collection of information in school records, the compilation of an annual census survey, the collection and verification at lower levels of governance (circuit, district, regional, provincial), the inputting of the data, the data cleaning and imputation and the generation of statistical tables and reports.

**Structures:** Refers to various sub-units of the Ministry responsible for education administration by area of specialization and geographic distribution.

**Sub-Sectors:** Pre-primary education, Primary education, Secondary education, Technical and Vocational Education, Teachers’ Training Education, Non-Formal Education, Higher and Tertiary education.

**Timeliness (of data):** The delay between the reference point to which the information pertains and the date on which the information becomes available. Timeliness also addresses aspects of periodicity and punctuality of production activities within the statistics production cycle.

**Validity:** Correctness and reasonableness of data - findings truly represent the phenomenon you are claiming to measure.

**Verification:** Authentication processes through provision of objective evidence that specified requirements have been fulfilled or the process where data accuracy and inconsistencies are checked.
ABBREVIATIONS

ADEA | Association for the Development of Education in Africa
AfDB | African Development Bank
EAC | East African Community
EMIS | Education Management and Information Systems
GDP | Gross Domestic Product
ICT | Information and Communication Technology
NFE | Non-Formal Education
UIS | UNESCO Institute for Statistics
UNESCO | United Nations Educational, Scientific and Cultural Organization
UNICEF | United Nations Children’s Fund
USE | Universal Secondary Education
UPE | Universal Primary Education
UPPET | Universal Post Primary Education and Training
UPOLET | Universal Post O-level Education and Training
UNEB | Uganda National Examinations Board
NCHE | National Council for Higher Education
NCDC | National Curriculum Development Centre
UNATCOM | Uganda National Commission for UNESCO
### Basic facts

<table>
<thead>
<tr>
<th>Country</th>
<th>Uganda</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area (in sq.km)</td>
<td>241,550.7</td>
</tr>
<tr>
<td>Year of Independence</td>
<td>1962</td>
</tr>
<tr>
<td>Sub Region</td>
<td>East Africa</td>
</tr>
<tr>
<td>Regional Economic Community</td>
<td>East African Community</td>
</tr>
<tr>
<td>GDP per capita</td>
<td>432.39 USD</td>
</tr>
<tr>
<td>Total Population</td>
<td>38.8 million</td>
</tr>
<tr>
<td>Population growth rate</td>
<td>3.26%</td>
</tr>
<tr>
<td>Official Language</td>
<td>English and Kiswahili</td>
</tr>
<tr>
<td>Poverty rate</td>
<td>19.7%</td>
</tr>
<tr>
<td>Human Development Index</td>
<td>0.48</td>
</tr>
<tr>
<td>Gender inequality index</td>
<td>0.54</td>
</tr>
<tr>
<td>Life expectancy</td>
<td>63.3; 62.2 male 64.2 female</td>
</tr>
<tr>
<td>GDP growth rate</td>
<td>5.4%</td>
</tr>
<tr>
<td>Literacy rate</td>
<td>69.6%; 77.4% males, 62.4% females</td>
</tr>
<tr>
<td>Gini coefficient</td>
<td>0.395 (2012/13)</td>
</tr>
<tr>
<td>Per capita income</td>
<td>US $801 annually (2016)</td>
</tr>
<tr>
<td>Total Fertility rate</td>
<td>5.8% (2014)</td>
</tr>
</tbody>
</table>

### Education System

#### Subsectors

<table>
<thead>
<tr>
<th>Pre-primary; Primary; Secondary; BTVET, Tertiary, Higher Education</th>
</tr>
</thead>
</table>

#### Number of Schools/Institutions by subsector in the EMIS (Official) database (2016)

<table>
<thead>
<tr>
<th>(i) Pre-Primary – 6,801</th>
<th>(ii) Primary – 18,888</th>
</tr>
</thead>
<tbody>
<tr>
<td>(iii) Secondary- 3,048</td>
<td>(iv) Post-Primary - 265</td>
</tr>
<tr>
<td>(v) Non – Formal - 214</td>
<td></td>
</tr>
</tbody>
</table>

#### Total Enrolment by subsector (2016)

<table>
<thead>
<tr>
<th>(i) Pre-Primary – 477,123</th>
<th>(ii) Primary – 8,264,317</th>
</tr>
</thead>
<tbody>
<tr>
<td>(iii) Secondary – 1, 284, 008</td>
<td>(iv) BTVET – 129,599</td>
</tr>
</tbody>
</table>

#### Institutional arrangements

<table>
<thead>
<tr>
<th>(i) National Level: Ministry of Education and Sports Headquarters (Comprised of 11 Departments and 10 affiliate organizations)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(ii) Local Government Level: 112 district Education Departments and 42 municipal authorities located in the Local Governments</td>
</tr>
<tr>
<td>(iii) School/institutional level</td>
</tr>
</tbody>
</table>
SUMMARY AND CONCLUSIONS

INTRODUCTION

Education Management Information Systems (EMIS) is one of the key reforms embraced by African countries in the 1990s to improve the management of their Education Systems. It is an Information Technology (IT) based tool that integrates personnel, technology and organizational procedures/practices for data management. Its purpose is to generate management information for evidence based decision making. As a result of its pivotal role, the African Union (AU) prioritized it in its strategy for the Second Decade of Education for Africa (2006-2015). This strategy was geared (among other things), to strengthen capacity for effective statistical processes and nurture the culture of rigorous monitoring of the performance of the Education System.

One of the main outcomes of the AU strategy was the creation of an EMIS assessment framework. This framework contains a set of 17 criteria and measures (based on best practices) for benchmarking member countries’ EMIS systems. The benchmarking focuses on assessing each individual country’s capacity to produce relevant, accurate, timely and comprehensive education statistics and information. Compliance with all the 17 norms and standards means that a country has a sustainable comprehensive and appropriate EMIS that generates quality data in a timely manner. It is also an indication that such an EMIS system has institutionalized international and regional systems and best practices.

As part of its implementation, the EMIS Framework is adopted to the specific needs of the Regional Economic Communities. In this regard the East Africa Community (EAC) was responsible for the adapting of the EMIS Peer Review assessment framework to satisfy the needs of the East African member states. Uganda became the first country to undertake the EMIS Peer Review in the EAC. The purpose of the Peer Review exercise in Uganda was to assess the country’s compliance with EMIS norms and standards.

Chapter 1 provides an introduction to the EMIS Peer Review exercise. It outlines the origins of the Peer Review exercise, the country context, Uganda’s education system and Uganda’s EMIS.

Chapter 2 is devoted to the EMIS Peer Review approach and methodology. It also articulates the Peer Review Process, the Evaluation team, composition and the limitations of the exercise.

Chapter 3 is the most important chapter of the report and presents the findings. The findings are presented on the four categories of the Norms and Standards (i.e. Legal and Policy Framework, Resource availability and utilization, Statistical processes and Education Information Reporting). Each norm is scored based on the scale of 1.0 to 4.0. An average score of 4 implies that the EMIS system produces quality statistics in a sustainable manner. A score of 2.6 to 3.3 means the country is producing acceptable statistics. Any score below 2.6 means that the EMIS system is producing questionable or poor statistics.

Chapter 4 summarizes the Peer Review teams conclusions based on evidence gleaned from documentary analysis of official documents on EMIS; key informant interviews (among departments of MoES, the Local Education Groups and districts), and observations during visits to the departments and districts. The Peer Review conclusions are presented in two broad categories - General conclusions and Conclusions based on overall performance against EAC Norms and Standards.

Chapter 5 is the last chapter of the report. The EMIS Peer Review team puts together a set of recommendations that MoES will consider putting in place to have good quality statistics. These recommendations were classified into two: General Recommendation to MoES and individual recommendations under each of the Norms and Standards.
CONCLUSIONS

The general conclusions by the EMIS Peer Review Team are that:

(i) The current EMIS has not achieved its objective (due to lack of investment in its development coupled with weak legal and policy framework).

(ii) Out of five modules targeted at inception 18 years ago, only one module is operational (i.e. the basic statistics module).

(iii) A majority of EMIS end users have unrealistically high expectations on EMIS which are not supported by the reality on the ground as reflected in (i) above.

(iv) The current EMIS is a vendor locked-in system with limited accessibility (only accessible via LAN at MoES headquarters); web-enabled but not web-based; and with limited utilization (despite existence of access points in all departments). In addition, the District Education Management Information System (DEMIS) is dysfunctional.

(v) There are misconceptions about EMIS that are injurious to its visibility and operational capacity in the sector. These include apparent mix-up of the role of EMIS and that of the CIM Division, interchangeability of EMIS and Statistics (which affects the activities that are funded), the perception that EMIS is poorly performing and yet it’s overfunded (while the contrary is true), and that EMIS is nonfunctional (and yet the system is producing the basic data required by the sector for resource allocation).

(vi) The total dependence of MoES on donors for EMIS development makes the system unsustainable.

(vii) The establishment of the statistics section only caters for statistical operations and not for EMIS technical operations.

(viii) Both the Legal and Policy Frameworks for EMIS are weak.

With regard to the AU/EAC EMIS Norms and Standards, the Peer Review Team concludes that:

(i) The overall average score for Uganda EMIS against EAC Norms and Standards is 2.8, which suggests that the system produces Acceptable Statistics.

(ii) The Uganda EMIS has a lot of room for improvement to reach the desired level of a system that produces quality statistics in a sustainable manner.

(iii) The Peer Review exercise provided good learning experience for the EAC member states that participated in it.

(iv) The Education Planning and Policy Analysis Department of MoES should be applauded for keeping EMIS functional amidst a myriad of challenges.

Finally, the Peer Review Team has proposed a number of recommendations. These include:

i. Strengthen the current Legal Framework to address the specific needs of EMIS;
ii. Formulate a comprehensive Sector Policy on EMIS;
iii. Develop a sustainable financing strategy for EMIS development;
iv. Review the current budget to incorporate EMIS activities and critical statistical operations;
v. Expand the current staff establishment of the statistics section to include technical staff for EMIS requirements;
vi. Communication and Dissemination Strategy; and
vii. Operationalize the four dormant EMIS modules (i.e. Human Resource, Financial Management, School Inspection and School Outcome).
CHAPTER 1: INTRODUCTION

1.1 Background to EMIS Peer Review in Africa

1.1.1 The vision of the African Union (AU) is “an integrated, peaceful, prosperous Africa driven by its own people to take its rightful place in the global community and the knowledge economy.” The success of this vision is predicated on the development of human resources across the continent. The vehicle for Human Resource Development is education. The role of the education sector in the attainment of this vision cannot, therefore, be overemphasized.

1.1.2 Evidently, the performance of the education sector directly determines the pace, quality and quantity of development. Education is so far the most important and viable vehicle for the development of human resource base in Africa, including improving knowledge, attitudes and appropriate skills levels in the continent. It constitutes a foundation for scientific and technological development, as well as innovation (which are critical for harnessing Africa’s vast development potential).

1.1.3 In recognition of the fundamental role of education, the AU has so far implemented two major strategic Plans of Action (popularly known as the 1st and 2nd Decade of Education in Africa) designed to respond to the challenge of Human Resource Development in Africa. The 1st Decade of Education for Africa (1997-2006) focused on four priority areas (i.e. equity and access to basic education; quality, relevance, and effectiveness of education; complementary learning modalities, and capacity building). The 2nd Decade of Education for Africa (2006-2015), had eight (8) priority Areas (i.e. Gender and Culture; Education Management Information Systems; Teacher Development; Tertiary Education; Technical and Vocational Education and Training, including education in difficult situations; Curriculum, Teaching and Learning Materials; Quality Management and Early Childhood Development).

1.1.4 Both Plans of Action acknowledge the unavailability of quality data as a major constraint to their implementation. They also underscore the need for establishment of robust data management systems that are capable of delivering quality data (in terms of timeliness, relevance, comprehensiveness, reliability and consistency). Consequently, EMIS became a focus area number 2 out of the eight (8) focus areas of the AU’s Second Decade of Education for Africa (2006 – 2015). Indeed, the goal of the 2nd Decade of the Education Plan of Action, with regard to EMIS, was “to reverse the current phenomenon of ‘data blank’ and facilitate planning based on sound information; and rigorous monitoring and evaluation of the performance of education systems. The availability of well-functioning and sustainable EMIS, at continental, regional and national levels is a necessity for this function.”

1.1.5 The rationale for prioritizing of EMIS development included the following:-

(a) Most African states continue to face challenges in producing quality statistical data in a regular and timely manner;

(b) Absence of continental and regional data networks;

(c) Lack of comprehensive data that is comparable across AU member states (which made harmonization and integration difficult);

(d) Inadequate institutional and individual expert capacities for the development and maintenance of EMIS;

(e) Urgent need for production of reliable statistical data;

(f) Inadequate effective analysis and use of data for monitoring and policy development.
1.1.6 The responsibility for the implementation of the 2nd Decade of Education for Africa was given to Regional Economic Communities (RECs). The precursor to the implementation of the AU Action Plan on EMIS in the East African Sub region was the launch of the EAC 4th Development Strategy (2011-2016). This strategy underscored the importance of strong and integrated EMIS in member states as a basis for integration at the regional level. The strategy, in part, stated that “while there will be various sources of data, the responsibility of ensuring that relevant data and information is collected, analyzed and disseminated will be of both the EAC Secretariat and Partner States.”

1.1.7 To facilitate the implementation of the EMIS related priorities, the EAC EMIS Technical Committee was established to:

(i) Enhance regional networking and sharing of experiences on EMIS;
(ii) Ensure timely and regular publication of statistical yearbooks and;
(iii) Facilitate adoption of a regional EMIS Norms and Standards.

1.1.8 The Technical Committee met in Kampala in November 2011 to launch the AU EMIS initiative in the East African Region. It works closely with ADEA, the African Union’s Education Observatory (IPED) and Member States.

1.1.9 One of its activities was the 2012 assessment of EMIS status in EAC Member states (which confirmed the AU’s earlier findings that EMIS was faced with critical challenges that are institutional, organizational, human resource and technical in nature). This was followed by the AU Outlook on education assessment for the EAC member states (2014), which confirmed earlier findings on inconsistencies of data and prevalence of data blanks (i.e. data gaps particularly on quality and higher education) on education sector within member states. It also highlighted the generally low status of development of EMIS across the region, which had resulted in its low impact in terms of visibility and inadequate outcomes. Other significant actions of the EMIS Technical Committee included the EMIS capacity assessment survey (which reviewed Partner States’ policies, EMIS structures, information coverage and areas of capacity development needs). Its findings informed the development of a regional capacity building strategy, which became the foundation for the development of customized EAC EMIS Norms and Standards as well as its Assessment Framework.

1.2 The Country Context

1.2.1 Located in the East Africa sub region, Uganda (which is relatively high altitude plateau), lies astride the equator (between 10 29’ South and 40 12’ North latitude, 290 34 East and 350 0’ East longitude.), with a total land area of 241,551 square kilometres (of which the land area covers 200,523 Sq. Km and fresh water bodies and wetlands covering about a third of the area). It has a mild equatorial climate with plenty of rain and sunshine moderated by high altitude. As a result of the high altitude, mean temperatures range from 18 to 28 degrees centigrade. This favorable climate gives the country a wide natural resource base. The country is bordered by Kenya in the East; South Sudan in the North; the Democratic Republic of Congo in the West; Tanzania in the South; and Rwanda in the South West.

1.2.2 Uganda was a British colony and gained its independence from Britain on the 9th of October, 1962. Its first post-independence election was held in 1962; since then, the Country has had at least seven Presidents, including Idi Amin Dada (1971-1979), whose eight year reign led to the loss of an estimated 300,000. Following the fall of Idi Amin, Uganda was ruled briefly by the two short-lived transitional governments of Professor Yusuf Lule and Godfrey Lukongwa Binaisa (QC). Milton Obote, took over power again in 1980. Guerrilla fighters, opposed to Obote’s second Government, launched attacks that continued under the brief rule of the Lt. Gen. Tito
Okello, who had ousted him in 1985. Yoweri Kaguta Museveni and the National Resistance Army (NRA), the armed branch of the National Resistance Movement (NRM), took over power in 1986 and remains the current President.

1.2.3 In terms of governance, Uganda is governed under the 1995 constitution (the fourth constitution of Uganda since independence), as amended in 2005 (to allow for re-introduction of a multiparty political dispensation). This constitutional amendment abolished Presidential term limits.

1.2.4 Administratively, Uganda is divided into 121 districts, 39 Municipal authorities and one City. The districts are further subdivided into Counties, Sub Counties and Parishes. The role of these local governments is to implement and monitor government programmes at the respective levels. Overtime, the administrative units have been sub-divided with the aim of easing administration and improving service delivery. Every Local Government or authority has an Education department.

1.2.5 Uganda has an estimated population of about 38.8 million people, 51% of which are female. At 3.2%, Uganda has one of the highest population growth rates in the world. The country has a relatively young population with about 60 per cent below 18 years of age. Primary Education school going age children (6-12years) constitute 87%; Secondary school age (13-18years) constitute 73%.

1.2.6 In the early years of Uganda’s independence, the economy was registering impressive economic growth and development. In particular, during the early post-independence period (1962-1966) the economy grew at an average rate of 6.7 percent per annum. By the end of the 1960’s, commercial agriculture accounted for more than one-third of Gross Domestic Product (GDP), and industrial output had expanded to nearly nine percent of GDP. However, the 1970s and early 1980s witnessed a persistent decline in the economy as a result of political instability, poor governance and economic mismanagement. During that period, the economy experienced hyperinflation partly due to scarcity of consumer goods and a depreciating shilling. This left Uganda among the world’s poorest and least developed countries.

1.2.7 Since 1996, Uganda’s economic outlook has improved. Between 1986 and 1990, the country experienced an average Gross Domestic Product (GDP) growth rate of 6.1 per cent. From 1999 to 2000, there were major reforms that resulted in a continued average growth rate of 6.3 per cent. Between 2010 and 2015, the growth rate has averaged 5.4 per cent, with the highest recorded at 9.7 per cent in 2011. GDP growth rate has slightly increased to 5.3 per cent in 2016 from 5 per cent in 2015.

1.2.8 As a result of the improved economic outlook, per capita income grew at 6.3 per cent over the 1990s. It accelerated to 7.0 per cent in the 2000s. Per capita income also increased from US$ 665 in 2009 to US$ 801 in 2015, which was still much less than the Saharan average of US$ 1,127. This means per capita income almost doubled over the last two decades. The strong growth was underpinned by strong economic fundamentals, including a prudent fiscal policy, responsive private investment, stable prices, and a liberal economic environment. While the economic prospect remains favourable, the low rate of private sector investment growth and the limited degree of transformation from low to higher productivity activities threaten to constrain the acceleration and maintenance of the high growth rates that are necessary to enable the country to achieve middle-income status.

1.2.9 Despite this, Inflation rates are now in single digits and negative growth rates have been reversed. The strong performance of the economy is based on the rebounding agriculture sector, which employs over 70 percent of the working population. Agricultural exports account for nearly 50 percent of the total export earnings, with coffee, tobacco and fish being the main export earning commodities.
1.2.10 The other main driver of the positive growth is the rise in industry and services sectors. The Information and Communication Technology (ICT) subsector, and particularly telecommunication, has registered impressive growth in the country. Growth has also been a result of an increase in public infrastructure investment, especially in energy and roads.

Social services have also expanded, particularly in education and health, as a result of Government’s policy of universalization of access to primary and secondary education.

1.2.11 In the last three decades, therefore, Uganda’s economy has moved from recovery to growth based on short-to-medium term planning, which was underpinned by the implementation of a number of strategic policy initiatives including the Structural Adjustment Programs (SAPs), Economic Recovery Program (ERP) and the Poverty Eradication Action Plan (PEAP). As a result, the GDP growth has since 2002 been sustained at an average of 6.4 per cent. The macro-economy has remained relatively stable, with inflation rates maintained at single digit level, while public finance and monetary policies have been well managed. The macro-economic policy and development framework is constituted by the National Development Plan (NDP II), intended to propel the economy towards middle income status by 2020 in line with the Vision 2040. The NDP II is implemented through Sector Investment Plans (SIPs) and Local Government Development Plans.

The current National development challenges include rapid population growth (3.3%); household poverty and ignorance (particularly in the north and east of the country); HIV / AIDS; and persistent income inequality. The country also hosts a large number of refugees.

1.2.12 Uganda has a diverse cultural context which encompasses religious and tribal traditions and beliefs, as well as value systems and languages. This is because Uganda’s society is made up of different ethnic groups with unique customs and norms which play a significant role in shaping the national outlook. In recent decades, some of these values have, however changed or are in the process of changing as a result of migration and/or intermarriages. Cultural groupings are headed by traditional kings or chiefs, who are not politically elected but have an indirect role in community governance and moral build up, also exist.

1.2.13 While English is the official language, there are a number of other languages spoken. However, Swahili is being promoted as a second official language in the spirit of regional integration within the East African Community (EAC). Uganda’s constitution allows freedom of worship. There are various religious groupings in the country.

1.3 The structure of Uganda’s formal education system is a four tier structure that is modeled along a 7-4-2-3 year progression pattern: Seven years of Primary education, followed by four years of lower secondary or ordinary level (O level), two years of upper secondary or advanced level (A level) and three to five years of tertiary education. In parallel, there is an alternative technical and vocational transitioning route consisting of a wide variety of training programs that follow immediately after primary education and three or four year post-secondary technical/vocational programs (see figure 1.1). Each level is nationally examined and certificated, and constitutes a basis for admission to the next level. Education is offered by both public and private institutions.
1.1 Uganda's Current Structure of the Education System

Legend:
- Bus. Educ = Business Education
- Cert. = Certificate
- TC = Technical college
- H.Sec = Higher Secondary
- NCBS = National College of Business Studies
- NTCs = National Teachers' Colleges
- PLE = Primary Leaving Examinations
- Priv. = Private
- Tech = Technical
- Tech/Voc = Technical/Vocational
- UJTC = Uganda Junior Technicians' Certificate
- UCE = Uganda Certificate of Education

1.3.1 Uganda also offers informal education to serve those persons who did not receive or only partially received formal education. Under the informal system, a range of practical/hands-on skills are imparted. These mainly focus on Functional Adult Literacy (FAL) programme (under Ministry of Gender, Labour and Social Development) and marketable skills areas for the local economy.

1.3.2 The current policy framework of the Education and Sports Sector is based on the Government White Paper on Education (GWP 1992) and complemented by the Education and Sports Policy as well as international commitments on education (particularly Sustainable Development Goals-SDGs and Second Decade of Education for Africa MDGs and Education for all Goals). It also deals with key cross-cutting issues that influence education service delivery (i.e. School Inspection, HIV&AIDS, Gender, Guidance and Counselling, Special Needs Education. The central government is responsible for policy development, Planning, Management, Support supervision as well as Monitoring and Evaluation. The Education sector policies are operationalized through the Education Sector Strategic Plans, Annual Ministerial Policy Statements and sub-sectorial strategic plans (particularly for Secondary Education and BTVET – Skilling Uganda) as well as flagship programmes which currently include Universal Primary Education (UPE) and Universal Secondary Education (USE) and implementation of Skilling Uganda Strategic Plan (intended to impart employable skills required by the national economy).

1.3.3 Education service delivery is done through tiers that include the ministry headquarters, the district local governments/municipal authorities and the schools. The Ministry of Education and Sports in Uganda consists of 4 Directorates, 11 Departments and 10 affiliate bodies. The political leadership is headed by the Hon. Ministry of Education and Sports, supported by three state ministries (Primary Education, Higher Education and Sports respectively). The Permanent Secretary, as the technical head, is the chief executive of the Ministry. Directorates are headed by Directors and Departments by Commissioners and affiliates by statutory heads designated by the law.

These Departments under four Directorates are Directorate of Basic and Secondary Education, Directorate of Higher, Technical, Vocational Education and Training, Directorate of Education Standards and the Directorate of Industrial Training. There are also affiliated institutions such as Education Service Commission, Uganda National Examination Board (UNEB), and other examination bodies including Uganda Business and Technical Examination Board, Uganda Allied Health Examination Board, Uganda Nurses and Midwives Examination Board, National Council for Higher Education (NCHE), National Curriculum Development Centre (NCDC), National Council of Sports, and Uganda National Commission for UNESCO (UNATCOM). The Education Planning and Policy Analysis Department is responsible for Sector Planning, Development Budgeting, Project Formulation, Research, Monitoring and Evaluation and Data Management. The institutional mandate includes EMIS operations and management.

The Local Governments are responsible for frontline service delivery. They are in-charge of operational planning, management, support supervision and formative monitoring & evaluation of educational programmes under their jurisdiction. Schools/ Institutions constitute the service delivery point for actual teaching and learning.

1.3.4 The main challenges of the education system include an obsolete policy framework (current policy framework is over 20 years old), budget constraints, the dynamic environment, capacity gaps (particularly in public universities where staffing levels are below 50%, and at the Local Government levels), rapid population growth estimated at 3.5%, plethora of reforms which are creating policy overlaps, glaring policy gaps in policy in critical areas like EMIS (that have resulted in poor funding of data collection activities), lack of M&E sector policy (that has led to creation
of parallel systems). Other challenges included inadequate teacher motivation; unacceptably high rates of absenteeism among head teachers, teachers and pupils, and high levels of attrition among teaching staff at all levels.

1.4 **Overview of Uganda’s EMIS**

1.4.1 Education Management Information System (EMIS) was conceived as part of the Primary Education Reform Program (PERP, launched in 1993), to enhance the management capacity of the sector in the areas of Planning, Budgeting, Policy development, Monitoring and Evaluation.

1.4.2 EMIS is an ICT-based tool for data collection, storage, integration, analysis, and reporting. It is the single most important ICT based management tool on education in the country. It was launched in 1999 as both a management tool (for management information), and an efficiency measure for generation of accurate, timely, reliable, and complete data on Education and Sports Sector. EMIS is thus envisaged as a one-stop center for management information on education and its role is to support senior management in evidence–based decision making.

1.4.3 At inception, EMIS was conceptualized to comprise 4 basic modules (functionalities) that include Basic Schools Statistics; Personnel (excluding payroll); Financial Management; and School Outcomes. Additional modules were to be added as and when needed. Figure 2 demonstrates the conceptual framework of EMIS at inception.

1.4.4 Key Milestones in the Development of EMIS in Uganda include:

The EMIS peer review team noted that EMIS was launched in 1999 and its development has mainly been in three broadly definable phases (i.e. 2000 – 2005; 2006 – 2009 and 2008-2014)

1.4.5 Operationalization of EMIS in the first 5 Years (2000 – 2005): was by a US-based Company - Academy for Education Development (AED) with funding from USAID and the World Bank. During this phase EMIS was operationalized as a computer-based automated solution using the ED-ASSIST software (replacing the hitherto manual statistical operations). However, the ED-Assist software was heavily biased towards the education statistics module. It neither created an interface with UNEB nor operationalized personnel module. The ED-ASSIST was also limited in its single-year design which reduced the ability for multi-year reporting and longitudinal analysis. This impacted the ability to generate some of the key indicators.

One of the greatest disappointments of the first 5 years of EMIS was that AED had exclusive rights to ED-ASSIST software. This held MoES hostage to AED decisions since the software could be switched off by AED from Washington, leaving MoES incapacitated.

1.4.5.1 For the second 5 years of EMIS (2006–2009), the UNESCO system was implemented at the MoES headquarters. It was designed to be accessed via the intranet so that individual MoES personnel could use the system for M&E, management and planning. Although it had the benefits mentioned above, UNESCO EMIS solution was not as user-friendly, as it did not have a reports module for easy access of information.

1.4.5.2 The third phase of EMIS development (2008-2014) focused on addressing the decentralization needs of education management in the country. A new EMIS solution (funded by USAID), and designed to link data between MoES and districts, was introduced in 2008. It was conceptualized as an integrated solution to enable all stakeholders at MoES to access management information via the Local Area Network. It also integrated other innovative enhancements that include GIS functionality. Consequently, a Decentralized Education Management Information System (DEMIS) was designed and installed in 134 Districts and Municipalities. Unfortunately for MoES, funding was withdrawn by USAID before the decentralized EMIS became fully operational. Furthermore, the source code remained owned by the developer.
1.4.6 Current Status of EMIS

1.4.6.1 The current EMIS solution was conceptualized as a centralized (located in MoES headquarters), and decentralized solution (devolved to local governments and authorities), with a multi-tier database structure. The system was envisaged to be web-enabled, integrating Geographical Information System (GIS) and mobile telephony platforms. It was expected to link data between MoES headquarters and districts (via a WAN) so that districts have the same key performance indicators and other related information. Furthermore, this solution was expected to operationalize at least 5 modules (i.e. Financial Management, Basic School Statistics, Human Resource, School Inspection and School Outcome).

Operationally, the EMIS system was expected to be web-enabled with functionalities that include data capture, storage and processing; production of robust aggregated and dis-aggregated multi-year GIS integrated reports on all key performance indicators; user friendliness; linkage between EMIS & DEMIS; data Import & Export; questionnaires tracking and integration of SMS smartphone and school based platforms.

1.4.6.2 The current EMIS is Vendor Locked-in (meaning that the ministry does not have the intellectual property rights and capacity to carry out any modification or enhancements to the system without the Vendors’ legal authorization and access to the source code). Out of the target 5 modules that were planned, EMIS currently has only one module operational (Basic School Statistics module). The decentralized EMIS is non-functional (mainly due to lack of budget and man power). The WAN was not operationalized.

At the National level, although EMIS is operational at the Ministry headquarters its access is limited (i.e. to only departments connected to the Ministry’s Local Area Network); all the affiliate organizations under MoES are not connected.
The EMIS infrastructure has not only become inadequate but is in a state of disrepair (i.e. worn out LAN equipment and accessories). Eighty five per cent of the DEMIS equipment is dysfunctional (on account of a lack of budgetary resources & skilled manpower).

The available EMIS server hardware is inadequate to support effective system operations. EMIS security is also compromised (due to lack of onsite and offsite backup equipment for data and power, up to date anti-virus).

1.4.7 Institutional arrangement

1.4.7.1 Operationally, EMIS is housed within the Statistics section (Statistics Monitoring & Evaluation Division (SME) of the Education Planning and Policy Analysis Department (EPPAD). The Assistant Commissioner SME is the line manager of EMIS while the Principal Statistician (P/STAT) is the technical head responsible for the day-to-day operations of EMIS. At the time of the Peer Review, the team noted that the P/STAT was being supported by 5 statisticians and an EMIS Technical Specialist (on contract). The Technical Specialist is responsible for operational maintenance of EMIS (i.e. back-end and front-end management).

1.4.8 Financing of EMIS

Information gleaned from records indicates that EMIS development depends entirely on donor funding. Since inception, the main donors have been USAID and the World Bank.

Government of Uganda (GOU) resources are exclusively dedicated to operations (mainly data collection and processing) and limited maintenance (in terms of payment of salary for the EMIS technical specialist on contract) related to the Annual School Census and head count activities. There is no provision for development.

Reliance on donor funding for EMIS development has three main shortcomings;

(i) Donor funding comes with a lot of strings attached, intended to ensure that the interest of the donor are prioritized rather than those of the MoES. For instance, the past and current EMIS initiatives supported by USAID are usually implemented by a US contractor (i.e. a US registered company) and as a result of this; about ¾ of the resources promises are actually spent to cover the operational costs of these contractors.

(ii) Secondly, Donor supported initiatives tend to be technology biased yet a functional EMIS must be founded upon three pillars that include technology, the people and organizational procedures / practices.

(iii) Leveraging on donor funding to develop EMIS as an efficacy measure may not be attainable after donor funding is withdrawn, as has happened since 2014.

Lessons learnt from other countries’ with regard to other countries’ EMIS suggest that donor funding cannot be exclusively relied on by the country.

Under these circumstances, MoES strategic goals of truly using this as an efficiency measure and leveraging on it to address persistent issues such as that of ghost schools, teachers, and learners is compromised.
Table 1: Summarizes the main EMIS constraints and challenges.

<table>
<thead>
<tr>
<th>S/n</th>
<th>Constraints</th>
<th>S/n</th>
<th>Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Low GoU commitment to EMIS development.</td>
<td>1</td>
<td>Poor funding of EMIS as a result of overdependence on donors whose objectives are not aligned to the strategic interest on the country.</td>
</tr>
<tr>
<td>2</td>
<td>Narrow establishment for EMIS technical operations which leads to low capacity for EMIS with only 5 statisticians and 1 contracted technical specialist. Key skills are not available.</td>
<td>2</td>
<td>Unreliable Local Area Network</td>
</tr>
<tr>
<td>3</td>
<td>Lack of key Functionalities such as Web-Based function</td>
<td>3</td>
<td>Proprietary Lock-in of EMIS software hindering modification to the system.</td>
</tr>
<tr>
<td>4</td>
<td>Non-Operational Modules thus creating an impasse in integration with other legacy systems</td>
<td>4</td>
<td>Non-operational modules (GIS, finance, HR, Inspection, &amp; school outcomes). This derails the efforts in making EMIS a one-stop center for management information in the sector.</td>
</tr>
<tr>
<td>5</td>
<td>Poor network &amp; data Security</td>
<td>5</td>
<td>Non-operational functionalities (i.e. the decentralized structure of EMIS-DEMIS is a stand-alone system at the district and with no active linkage to the National EMIS), therefore preventing exchange of data between the two systems.</td>
</tr>
<tr>
<td>6</td>
<td>Limited equipment to allow for onsite and offsite backup</td>
<td>6</td>
<td>No Installation Software. In other words, if a computer breaks down, or software malfunctions, re-installation cannot be performed for either EMIS or DEMIS.</td>
</tr>
<tr>
<td>7</td>
<td>Attitudes: Prevailing attitudes however suggest that most of the stakeholders perceive EMIS to be a concern of the Statistics Section and EPPAD.</td>
<td>7</td>
<td>Lack of standardized procedures and practices (code of conduct, guidelines for data requests)</td>
</tr>
<tr>
<td>8</td>
<td></td>
<td>8</td>
<td>Lack of Policy and enforced legal framework for EMIS.</td>
</tr>
<tr>
<td>9</td>
<td></td>
<td>9</td>
<td>Existence of parallel data sub-systems supported by donors that undermine each other, resulting into duplication of efforts and an increase in transactional costs for data management in the sector;</td>
</tr>
</tbody>
</table>
CHAPTER 2: EMIS PEER REVIEW APPROACH AND METHODOLOGY

2.1 APPROACH

The EMIS Peer Review exercise adopted a collaborative approach which involved a peer review team led by ADEA WGEMPS and the Ministry of Education and Sports EMIS Technical team.

2.2 METHODOLOGY

Peer Review exercise used the following methodologies: Review of Documents (which included various policies documents and reports), Meetings with Key Education Stakeholders, Key informant Interviews; Focus Group Discussions and Field Visits. Field visits were made to only few selected primary and secondary schools within Kampala City Council Authority (KCCA) and Wakiso District.

2.3 TERMS OF REFERENCE FOR THE EMIS PEER REVIEW

The Terms of Reference of the peer review team included the following:

(i) In country EMIS assessment and review;
(ii) Assessment of country EMIS policy development and coordination;
(iii) Assessment of EMIS Policy Conformity to the Regional and International Norms and Standards Assessment framework;
(iv) Verification of the country self-assessment report prepared by the national EMIS technical team; and,
(v) Preparation of report on the EMIS Peer Review Exercise.

2.4 THE REVIEW QUESTIONS

In addition to questions found in the EMIS Norms and Standards Assessment Framework, supporting questions directed to the Uganda Bureau of Statistics, Local Government Authorities and the Local Education Group were also asked. These questions were organized according to Norms and Standards. Sample questions can be found in annex.

2.5 THE REVIEW PROCESS

The EMIS Peer Review process commenced in 2012 with EAC Partner States producing an EMIS Norms and Standards Assessment Framework document. This was followed by a pilot of the framework and validation in 2013. As a preparatory activity for EMIS peer review for Uganda, in 2016, MoES was requested to undertake a self-assessment using the EAC EMIS Norms and Standards Assessment Framework two weeks prior to the arrival of the main peer review team. This was followed by review and discussion of the national team self-assessment reports.

During the in country peer review exercise, the following processes were observed:-

(a) Courtesy calls to: the Permanent Secretary for Ministry of Education and Sports, Commissioner, Education Planning and Policy Analysis Department, Commissioner, Human Resources and Under Secretary- Finance and Administration
(b) Meeting with key stakeholders which included, among others, the Uganda Bureau of Statistics, Education Development Partners (EDPs), Inter-Ministerial Task force, M&E Working Groups,
(c) Report Preparation and validation.
2.6 LIMITATIONS OF THE REVIEW EXERCISE

The main limitation of the assessment was that it relied mainly on the review of documents and country self-assessments, with very minimal primary data collection (limits the usefulness of the framework). To come out with a clear picture of EMIS status and obtain an in-depth understanding of challenges of the system would have called for a comprehensive qualitative survey into this issue. However, this was not possible due to the time limits of the review exercise.

The second limitation is that due to the time limit of the review exercise, only few schools and stakeholders were selected for site visits and discussions. Hence, there was limited engagement with the consumers of the statistics in this assessment. An assessment of this nature would have required a comprehensive review of cases and other legacy systems across the country in order come up with number of ideas and good practices that can be adopted to improve EMIS in Uganda.

As regards the framework itself, a single-valued aggregate data quality measure is subject to all the deficiencies associated with widely used indexes where many of the variables and implicit weightings are likely to be subjective. Also, the framework may not sufficiently take into account the specific country or institutional contexts which may make it difficult for some countries to meet the ideal standards outlined under Quality Level 4.

Due to the fact this was the 1st EMIS Peer Review Exercise in the East African Community States, the review was construed by limited or no prior lesson learnt to inform the review process.
CHAPTER 3: EMIS PEER REVIEW FINDINGS

This chapter presents findings from the EMIS Peer Review Exercise jointly conducted by the EMIS peer review experts and the EMIS Technical team Uganda. EMIS design, development implementation, maintenance and sustainability is a multidimensional, labour and capital intensive, and a very expensive investment that needs a balance between policy, processes, resources and reporting that embraces the importance of quality. Findings of the review exercise in this section are therefore, presented around these 4 thematic areas.

3.1 LEGAL AND POLICY FRAMEWORK

Under Legal and Policy framework, the Peer Review exercise assessed MoES compliance with the 6 norms that included

i Mandate for data collection
ii Quality commitment
iii Statistical Confidentiality
iv Reporting accountability
v impartiality and objectivity
vi Registration of institutions.

The findings are reflected under

3.1.1 NORM 1: MANDATE FOR DATA COLLECTION

a) The Legal framework for data collection in education is very weak

(i) There is no explicit law mandating MoES to collect education data. The current legal basis for data collection in the Education and Sports Sector is based on the UBOS Act (1998). This Act delegates authority for data collection to Ministries (MoES inclusive), Lead Agencies and Departments of Government within their jurisdiction on behalf of UBOS. This data subsequently integrated into the UBOS database (as stipulated by law), to constitute the national database.

(ii) Although section 29 of the Uganda Bureau of Statistics Act of 1998 provides for disciplinary measures in instances of violations of the law relating to the collection of data, the legislative legal environment does not support the MoES access to basic administrative data in the private sector in cases where the information has been withheld.

“any person who— (a) hinders or obstructs an authorized officer in the lawful performance of any duties or in lawful exercise of any power imposed or conferred on him or her under this Act; or (b) refuses or neglects— (i) to complete and supply, within such time as may be specified for the purpose, the particulars required in any return, form or other document left with or sent to that person; (ii) to answer any question or inquiries put to or made of him or her, under this Act; (c) knowingly or negligently makes in any return, form or other document completed by him or her under this Act or in any answer to any question or enquiry put to or made of him or her under this Act, any statement which is untrue in any material particular, commits an offence and is liable on conviction, to a fine not exceeding thirty currency points or imprisonment not exceeding six months, or both.”

(iii) Additionally, the Education (Act 2008), has a general proviso for collection of Statistics in Education; however this appears rather weak especially in areas of compliance, enforcement of compliance,
falsification of data, code of conduct and ethics of key actors in the data collection and management process;

(iv) In the process of data collection, MoES has no legal provision to reprimand the defaulting schools and institutions. This results in low response rates by private sector schools and institutions (particularly secondary schools), currently estimated at around 65 per cent. Non-response by private sector owned institutions represents a significant loss of data to the official Education sector database (as the private sector accounts for more than double the number of public schools at secondary level).

Due to the absence of clear legal and policy framework, the EMIS Peer review team noted that various institutions within the sector independently collect, analyze and publish data creating a parallel data collection system (creating a second set of statistics on Education sector), which often challenge official EMIS figures when discrepancies occur. Furthermore, data from this parallel system often creates confusion (within ministry departments and among other education stakeholders), as it is sometimes cited in official documents.

b) The Policy Framework

i. At the sector level, UBOS guidelines (for data collection by sectors), the macro-economic policy framework (that prioritizes efficiency and effectiveness in service delivery); Government White Paper on education (1992) and the Sector Wide approach which collectively constitute the policy framework for data collection in the Education and Sports Sector, therefore, derives its policy for data collection based on provisions from these documents.

However, the team noted that this policy framework is not fully responsive to the statistical needs and challenges of the Education and Sports Sector.

c) Operationalization of the policy

MoES has adopted a number of strategies to operationalize this policy as follows;

i. Plan for National Statistical Development (PNSD) and Strategic Plan for Statistics in the Education Sector.

It was observed by the team that it has two plans, the PNSD and the Strategic Plan for Statistics in the Education Sector. These constitute the basis for operationalization of the Statistics policy in the Education Sector. The current PNSD covers the period 2013/14-2017/18 and focuses on enhancing statistical generation across the National Statistical System. The Strategic Plan for Statistics in the Education sector, on the other hand focuses on improvement of statistical development of the sector and also covers a period 2013/14-2017/18 and. These two plans underscore the importance of integrating the existing EMIS with other systems such as that of the Uganda National Examinations Board (UNEB) for ease of use.

ii. Establishment of Inter-Ministerial Task Force.

This taskforce draws representation from Key Ministries, Departments and Agencies of Government. These include Ministry of Public Service, Ministry of Local Government, National Planning Authority, Uganda Bureau of Statistics, Office of the Prime Minister and Ministry of Education and Sports.

The Peer Review team noted that in recent years, the Ministry of Education and UBOS have worked closely within the framework of the inter-ministerial taskforce to address the urgent issues of data collection in the Education sector. The taskforce handles the issue of integration of data from other sectors (located in other ministries and organizations) that deal with Education and Training. The Uganda Bureau of Statistics is a primary stakeholder institution for statistical matters on this task force. Through this platform, the Annual School Census questionnaire is reviewed and approved.
iii) Annual data collection strategy

The review team noted that MoES develops an annual strategy for comprehensive data collection. This strategy articulates the scope of the national data collection exercise; main activities; approach and methodology and timelines. In addition, the strategy clearly spells out the roles and responsibilities of different stakeholders and education institutions plus the structures in data collection, compilation, distribution and sharing of educational information with users. It outlines administrative guidelines which clearly define structures in the statistical value chain i.e. (conception of instruments, collection, compilation, distribution and sharing of educational information) and the procedures in the information production cycle as stipulated by UBOS. This strategy is usually submitted to UBOS before it is approved for implementation.

The Peer Review team noted that one weakness in the MoES data collection strategy is that it lacks measures to ensure effective information sharing across sub-sectors, government agencies and the civil society and the general public. Consequently, information sharing in this sphere is done on a somewhat ad hoc basis (i.e. upon request). Furthermore, there are no stipulated turnaround times for data requests, although some education stakeholders have expressed satisfaction with the ability of the education planning department to fulfill requests for information. Where specific requests for data are made by external stakeholders, the ability to respond is determined by whether that particular data is available.

3.1.2 NORM 2: QUALITY COMMITMENT

The quality of statistics is gauged based on eight dimensions, namely, relevance, accuracy, timeliness, accessibility, interpretability, coherence, methodological soundness and integrity. These are explored in more detail in subsequent norms.

The main findings by the EMIS Peer Review team under this norm were:

a. **UBOS provides quality assurance for MoES statistical operations.**

It was noted that UBOS conducts annual quality assurance assessments and provides feedback on education data to the Ministry. These quality checks, however, are affected by the fact that data is only collected once a year and the data cycle takes as long as 8 months, leaving only 4 months in a year for any additional quality assurance processes.

b. **Data Quality Standards**

The team observed that the quality standards are derived from multiple sources that include; The UBOS Act 1998; the Uganda Standard (US 942:2012 - Code of Practice for Official Statistics); the Uganda Standard (US 943:2012 – Guidelines for production of quality Statistics) and Uganda Standard (US ISO 3534-2 – Statistics –Vocabulary and Symbols). These provide the national legal framework for ministries to ensure quality statistics.

c. **Budgetary resource constraints**

The EMIS Peer review team noted that the MoES EMIS unit experiences perpetual resource constraints, which make it impossible for it to implement the required protocols for quality data.

Consequently, EMIS unit lacks approved standardized procedures and practices (that articulate authorized processes, calendar of events, technical approaches and methodologies etc.).
3.1.3 NORM 3: STATISTICAL CONFIDENTIALITY

The EMIS Peer Review findings indicate that:

a. **The UBOS Act 1998 provides the framework for data confidentiality.**

It explicitly binds ‘any’ persons found to be violating the tenets of data confidentiality. The Ministry supplements this legislative provision with administrative protocols which guide the access to statistical data by external users. These protocols include, among others, clearance from the Permanent Secretary, and the Commissioner of the Planning and Policy Analysis Department. A draft Statistical Policy Guideline also clearly articulates data confidentiality.

b. **Reliance on Donor Support compromises confidentiality**

The main challenge the Ministry faces with data confidentiality is that for more than a decade, the ministry has been relying on donor support, (especially USAID and the World Bank) for EMIS development. These donors prefer the use of US-based contractors (i.e. a US registered company) in supporting EMIS development. These firms own the system source codes and hence EMIS is vendor-locked, limiting access to the system and subsequently national data. There are no safe guards to keep these firms from turning the system off remotely.

3.1.4 NORM 4: ACCOUNTABILITY IN TERMS OF THE PRODUCTION AND PUBLICATION OF STATISTICAL REPORTS

The EMIS Peer Review team confirmed that the MoES EMIS Unit annually produces and publishes statistical reports and other publications. The main statistical reports observed by the EMIS Peer Review team include; Annual Education Statistical Abstract, Fact sheets, Headcount Reports, Annual Compendium of key performance indicators (for writing of the Annual sector performance report and meeting reporting obligations to other stakeholders) and the Draft Master List of Primary and Secondary Schools. The latest publications witnessed by the team at the time of the peer review were for 2015.

It was brought to the notice of the peer review team that the publications for 2016 were still being compiled. The team was further informed that the delay in production of the 2016 statistical abstract occurred as a result of delayed disbursement of funds for the Comprehensive Sector data collection exercise. The team, however, noted that:-

(i) **The Education Act (2008) does not specify any obligation on the part of the MoES or any other party to produce and publish analytical reports on the performance of the sector annually.**

It was noted that the Act is vague regarding the responsibility for reporting on Education sector data. In Part 8, section 46, it appears to give the mandate for this to the Directorate of Education Standards and yet the institutional mandate for data lies with the Education Planning & Policy Analysis Department.

(ii) **MoES is obliged under the Sector wide Approach (SWAp) and the Joint Assessment Framework adopted in 2008, to prepare the Education Sector Annual Sector Performance Report (ESSAPR) for review and integration of the Government Annual Performance Report. This report provides an analysis on the education sector performance towards achieving the broad objectives in the Financial Year under review;**

3.1.5 NORM 5: IMPARTIALITY AND OBJECTIVITY

With regard to impartiality and objectivity, the EMIS Peer Review team’s findings were that:-
The compilation of education statistics is generally done scientifically and in accordance with existing best practices (i.e. UNESCO Institute of Statistics);

Errors and Omissions discovered in published statistics are usually corrected as a Standard Operating Procedure within the EMIS Unit. However, the team noted that the corrected versions are rarely publicized. The explanation given to the team was that this was on account of lack of budgetary resources for dissemination (the EMIS budget is mainly for data collection).

Annually, the EMIS Unit publicizes the methodologies used primarily through the MoES website and all its publications. The peer review team found this evident in the Universal Post Primary Education & Training (UPPET/USE) reports in which a whole chapter was devoted to the methodology and procedures of the exercise.

The EMIS cycle is not adhered to on account of late releases of funds for the data collection process. Consequently, while it is required that statistical releases and statements be made to the public through the media, the Ministry only publishes information and announcements on the annual data collection exercises. Actual dates and schedules for education statistics official releases are not pre-announced as completion of data processing is subject to budgetary availability.

The affiliate organizations of MoES which collect, analyze and publish their own data (i.e. NCHE), appear not to publicize their methodologies and data collection processes, including procedures they follow. In addition, these methodologies, processes and procedures are also never approved by UBOS. Unfortunately, this information is sometimes used for official decision making in the sector.

3.1.6 NORM 6: REGISTRATION OF INSTITUTIONS

Under this norm, the findings of the EMIS Peer review team include:

The Education Act (2008) provides the legal framework for the registration of Private Educational Institutions. It is a legal requirement that a school must be registered before it begins to operate.

Registration of schools is a decentralized function to the District Local Governments. However, the MoES has a fully-fledged Department in charge of private institutions (i.e. nursery, primary, secondary and BTVET) to coordinate this function.

The process of registration of private schools and institutions begins with issuance of a provisional license (which is valid for two years). After two years, the school is inspected and those meeting the Basic Requirement and Minimum Standards (BRMS) are issued with a certificate of registration. However, if a school fails to meet BRMS, its provisional license can either be extended or withdrawn.

The registration of schools is authenticated by the issuing of a Unique Identification Number (which is commonly known as EMIS Number) and this number is as well used as the Uganda National Examinations Board number;

However, it was brought to the knowledge of the Peer review team that the existing registration regulatory framework is weak due to lack of enforcement. This implies that a significant number of schools and institutions (all private) were said to be operating without registration. In this case, a majority of the private schools are operating without registration.

As a result of (iv) above, The MoES experiences a significant non-response rate to its Annual School Census from (private schools and institutions). Consequently, MoES experiences incomplete data particularly on Secondary schools and institutions.
3.1.7 NORM 7: REGISTRATION OF LEARNERS

An effective and efficient education system must be able to account for all its learners in terms of age, gender and location. One effective way to be able account for age of pupils and students is to present their birth certificates during registration. However in Uganda, the peer review team noted that:

(i) There is no law or policy in place to compel learners to submit/present their birth records to educational institutions during registration. It is only private schools that insist on birth certificates as an admission requirement. Unfortunately, issuance of Birth certificates is optional in Uganda i.e. one may have it or not have it. In the absence of birth certificates, schools that insist on proof of age mostly rely on Immunization Cards, Baptism cards and verbal explanation from parents/guardians as a means to authenticate/confirm birth dates. However, immunization cards are mainly acceptable in nursery and primary 1 entry level and not at post primary school levels.

(ii) The MoES lacks a mechanism for verification or validation of birth dates of learners to ensure their validity. It is necessary to put such a system in place to safeguard age specific indicators from distortions.

(iii) There is neither Pupil Identification Number (PIN) nor Student Identification Number (STIN). The school admission books and classroom registers constitute the most important source of the head teachers’ records and the MoES Annual School Census exercise.

Table 3.1: summaries of average scores under the Policy and Legal Framework standards based on EMIS peer review findings

<table>
<thead>
<tr>
<th>Focus Area A: Policy and Legal Frameworks</th>
<th>Norm Average Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Norm 1: Mandate for Data Collection</td>
<td>1.2</td>
</tr>
<tr>
<td>Norm 2: Quality Commitment</td>
<td>3.3</td>
</tr>
<tr>
<td>Norm 3: Statistical Confidentiality</td>
<td>3.1</td>
</tr>
<tr>
<td>Norm 4: Reporting Accountability</td>
<td>3.3</td>
</tr>
<tr>
<td>Norm 5: Impartiality and Objectivity</td>
<td>2.8</td>
</tr>
<tr>
<td>Norm 6: Registration of Institutions</td>
<td>3</td>
</tr>
<tr>
<td>Norm 7: Registration of Learners</td>
<td>1.8</td>
</tr>
<tr>
<td>Focus Area Average</td>
<td>2.6</td>
</tr>
</tbody>
</table>

3.2.1 NORM 8: ADEQUATE

This norm requires that MoES is committed to ensure that adequate resources commensurate with the needs of EMIS are allocated to facilitate key activities that include data collection and processing, personnel, procurement and maintenance of facilities and equipment, technology, as well as capacity development.

The peer review findings on budgetary resources accorded to EMIS were that;
(i) MoES budgetary resources to EMIS is skewed in favor of collection of basic statistics (student enrolment, sanitation facilities, teachers on pay roll, instructional materials etc.), data capture and production of Annual Statistical Abstract.

(ii) The core functions of the statistics section (i.e. quality assurance, statistical analysis, monitoring learning achievements, monitoring of statistical indicators, development of data frames, validation, operational reviews etc.), capacity development and EMIS software development as well as EMIS software development and maintenance are not funded. This state of affairs compromises the operations of the EMIS Unit and has negative knock-on effects on the quality and timeliness of EMIS outputs.

(iii) In terms of human resources, the structure for the statistics section has never provided for critical positions such as programmers and system analysts. Since the late 1990s, the unit has depended on externally sourcing critical skills (mainly financed by donor funding and until recently by MoES). Consequently, the skills base in the EMIS unit is largely skewed towards statistics. The peer review team noted that MoES has only attempted to bridge this gap through the employment of an ICT specialist on a contractual basis to perform certain key EMIS functions.

(iv) While there is a capacity development plan for the EMIS unit, there is no funding for its implementation. The training that has taken place in the EMIS unit is mostly donor funded and donor driven. The participation of EMIS staff in regional, international conferences, workshops is very limited, mainly on account of lack of funding. The EMIS staff only attend those that are fully funded by the organizers.

(v) The main focus of donor support to EMIS in the past is overly skewed towards technology (mainly supply of hardware, software, accessories and development). Despite this, the peer review team observed that EMIS equipment remains inadequate and in key education offices, particularly in districts, is mostly dysfunctional and inadequate. At the MoES headquarters, most of the equipment supplied in 2013/14 is already becoming obsolete. The EMIS is also not well maintained (due to lack of funding). Perhaps of great significance was the observation that while donor investment in EMIS has been quite extensive in some regards, it has not yet translated comprehensively into actions which reflect the real needs of the EMIS functions across education sector.

(vi) The current software in use is vendor-locked (limiting the Ministry’s ability to make adjustments to allow for the collection of new data or removal of obsolete variables). Being web-enabled and not web-based has aggravated the situation, resulting in limited accessibility of the system. These limitations confine the system at the head office, and restrict communication with the District level system.

3.2.2 NORM 9: COST EFFECTIVENESS

This norm is intended to assess the efficiency in the utilization of available resources (i.e. budgetary, human and material resources). The peer review findings with regard to this norm were as follows:

(a) Budgetary resources

(i) GOU budget contains budgetary allocation for data collection and processing. These funds, though inadequate, are specifically used for the activities they are meant for and absorptive capacity for these funds is optimal.

(ii) The GoU budget is skewed in favor of data collection and processing and not for the development and maintenance of EMIS.

(iii) Since its inception in 1999, EMIS Development has remained donor driven. The dominant donor has been USAID but its support is not only skewed towards technology but also much of it is spent on Technical Assistance provided by US Firms. Others include World Bank and UNESCO in
that order. World Bank support was a small component of the Secondary Education Development project (APL1). UNESCO, on the other hand, only provides Technical Assistance.

(iv) Financial utilization under EMIS is monitored through the Integrated Financial Management Information System (IFMIS) under the Ministry of Finance, Planning and Economic Development (MoFPED).

b) **Human Resources**

(i) The current skills set in the EMIS Unit are skewed towards statistics. While statistics staff fully satisfy the requirements of their positions, the peer review team however noted that, it appears that these staff are circumstantially forced to fulfil the requirements of positions that they are not trained for (i.e. EMIS front-end and back-end management, ICT support among others).

(ii) The peer review team also noted that MoES not only lacks EMIS Policy but has not also invested in EMIS Security.

c) **Material Resources**

(i) EMIS operations are not fully automated (mainly on account of lack of strategic investment). The Peer review Team noted that data collection was largely manually done (with each school filling out three copies of the Annual School Census forms). As a result, data collection is both time and space consuming (not very cost effective). Information and Communication Technology (ICT), which is the most critical infrastructure for EMIS, is only optimized for essential operations in the statistical value chain (such as data capture, generation of district summaries using an ICT tool, analysis, report generation and storage).

(ii) There is no specific replacement and maintenance plan for EMIS equipment (its treated like any other equipment in the ministry and takes on the average one year to get it serviced).

Table 3.2 below provides summaries of average scores under the Resource Availability and Utilization standards.

**Table 3.2: summaries of average scores under the Resource Availability and Utilization standards**

<table>
<thead>
<tr>
<th>Focus Area B: Resources Availability and Utilization</th>
<th>Norm Average Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Norm 8: Adequate Resources</td>
<td>2.6</td>
</tr>
<tr>
<td>Norm 9: Cost Effectiveness</td>
<td>2.7</td>
</tr>
<tr>
<td>Focus Area Average</td>
<td>2.7</td>
</tr>
</tbody>
</table>

3.3 **STATISTICAL PROCESSES**

Statistical processes norm covers two main standards. These are sound methodology and appropriate statistical procedures; as well as non-excessive burden on respondents. Sound methodology underpins quality statistics and, therefore, requires appropriate statistical procedures throughout the entire statistical value chain. In addition, the reporting burden should be proportionate to the needs of the users and the burden on the respondents (i.e. the burden should not be excessive). MoES is expected to monitor the response burden and set targets for its reduction over time.
3.3.1  NORM 10:  SOUND METHODOLOGY AND APPROPRIATENESS OF STATISTICAL PROCEDURES

Regarding sound methodology and statistical procedures, the findings of the peer review team are presented below:

(a) Sound Methodology & appropriateness of Statistical Procedures

(i) The EMIS Unit exhibited a high degree of understanding and appreciation of sound methodological and statistical procedures. Evidence shows that International procedures and best practices, particularly UNESCO methodologies for the treatment of data, UBOS ISO certified standards for the entire statistical value chain; and, the EAC EMIS Norms and Standards, are strictly adhered to;

(ii) MoES lacks a complete data frame / Master list of schools and institutions. Consequently, survey design and sample selection remains a challenge. This state of affairs also makes reliable estimation for non-response and making of projections a tall order;

(iii) The Peer Review Team confirmed that the EMIS Unit has a compendium of terms, concepts and their definitions, metadata dictionary and standardized questionnaires for each subsector (for both formal and non-formal education). This is a good standard Operating Procedure and Best Practice. Without this, the ASC exercise will find it extremely difficult to harmonize the information at the school level since schools only keep class records.

(iv) Data collection tools and standards are not always trial tested/piloted. Likewise, data validation and verification is not undertaken as a standard operating procedure. The reason given for this anomaly was inadequacy of budgetary resources;

(v) The Uganda Bureau of Statistics (UBOS) provides information (i.e. population figures) used in the computation of relevant indicators;

(vi) The MoES technical departments that engage in some data collection activities (i.e. Basic Education, BTVET, Private schools and institutions, Directorate of education Standards) do not make use of standard concepts, classifications as well as definitions. Unfortunately, MoES has allowed these departments to use this information sometimes for critical decision making and strategic planning;

(vii) The printing of the school attendance registers is outsourced to private contractors. This has resulted in variations in the school attendance registers which has had a negative impact on their quality. For instance, in one of the districts the peer review team visited, it was observed that school registers were not properly aligned, making tallying of attendance difficult and ultimately affecting data entry into the ASC Census forms.

(viii) During a visit to two schools, the peer review team observed best practice in the maintenance of school records. Each of these schools had established its own record keeping and management system, with the school registers being a mandatory part of it.

3.3.2  NORM 11:  NON-EXCESSIVE BURDEN ON RESPONDENTS

The aim of this norm is to ensure that the data reporting burden on respondent, is kept to a minimum while at the same time preserving the integrity and quality of data collected. This norm also encourages use of secondary and administrative data (where possible) to avoid redundancy and duplication of efforts.

With regard to this norm, the Peer Review noted that;

(i) MoES conducts three inter-related basic data collection exercises each calendar year under its Comprehensive Sector data collection exercise. These include; Basic Enrolment and Attendance data...
collection exercise (for verifying Universal Primary Education learners); Annual School Census; and the Annual Head Counts (to establish actual beneficiaries of the USE/UPPET/UPOLET programme). In each of these exercises, respondents are required to manually fill three copies of the respective data collection instruments (i.e. questionnaires);

(ii) The ministry also has parallel data collection systems in some departments (i.e. DES), and affiliate organizations under it.

(iii) In addition to the officially known data collection exercises, there are also direct requests to schools for administrative data by technical departments and affiliate bodies.

The above exercises are putting a lot of burden on the respondents (i.e. Head Teachers, Principals, DEOs etc.) because they tend to duplicate each other and are also poorly coordinated.

Table 3 below provides summaries of average scores under the Statistical Processes norm based on the findings of the Peer Review team, as reflected above.

Table 3: summaries of average scores under the Statistical Processes standards

<table>
<thead>
<tr>
<th>Focus Area C: Statistical Processes</th>
<th>Norm Average Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Norm 10: Sound Methodology and Appropriateness of Statistical Procedures</td>
<td>3.3</td>
</tr>
<tr>
<td>Norm 11: Non-Excessive Burden on Respondents</td>
<td>2.9</td>
</tr>
<tr>
<td>Focus Area Average</td>
<td>3.1</td>
</tr>
</tbody>
</table>

3.4 EDUCATION INFORMATION REPORTING

This norm covers a total of 6 standards. These standards include Relevance; Accuracy & Reliability; Timeliness & Punctuality; Coherence; Comparability & Integration; Accessibility & Clarity & Comprehensiveness.

3.4.1 NORM 12: RELEVANCE

The Peer review findings on this standard are presented as follows:

(i) The current education statistics do not explicitly meet the needs of its users. This is partly due to the fact that MoES does not have a complete frame of its data users. The team noted that in 2014, the MoES (with guidance from UBOS) attempted to create this frame. However, this was not finalized and since then no further efforts have been made to complete and update the data frame.

(ii) There are no institutionalized processes for regular consultations between MoES with its data users to identify or agree on the types of data they require from MoES. Whatever consultations done are on an ad hoc basis. Apart from the M&E Working Group arrangement (where technical guidance is sometimes provided on pertinent issues), there is no other forum for the SME division to engage with the Local Education Group (LEG) as well as the wider public in general.

(iii) Within Government of Uganda, the Inter Ministerial Taskforce which facilitates intra-government consultations has been institutionalized (and is a good practice noted by the Peer Review team).

(iv) The current EMIS software is vendor-locked. This means that EMIS cannot robustly respond to emerging data demands by its users. The system unit can, therefore, not effect the required additions or editing on the database.
The team also noted that although the EMIS unit regularly produces feedback reports, they hardly reach the primary respondents and users of the data (i.e. schools and institutions).

3.4.2 NORM 13: ACCURACY AND RELIABILITY

Good quality Education statistics must be accurate, consistent and reliable. While accuracy of data refers to the degree to which available data correctly describes the phenomena it was designed to measure, consistency and reliability on the other hand refer to validity according to all defined rules and consistency and dependability of data collected through the use of scientific instruments or data collection procedure under the same conditions respectively. Accuracy, reliability and consistency are critical criteria for education statistics to satisfy in order to portray reality on what is reported on. Inaccurate/unreliable data usually distorts reality and has wider ramifications, particularly in misleading decision making, policy and investment.

The Peer Review Team noted that there is a general discontent within the departments of MoES and among the Local Education Group (LEG) over the accuracy and reliability of data. The Team, therefore, concluded that inaccuracy of the data is attributed to a combination of factors, the key ones include;

(i) Poor data entry (at point of collection, capture or both), filing wrong returns (due to misunderstanding of data instruments), poor data sources (due to poor record keeping at source), deliberate falsification of data (at the source of collection);

(ii) Weak Quality Assurance mechanisms at the center resulting mainly from underfunding of core statistical operations. Current budget provisions only cater for limited validation and verification exercises using sample-based surveys. These surveys are, however, highly dependent on the budget. Most times, it has been increasingly difficult to conduct validation/verification exercises based on representative samples;

(iii) Lack of complete master school list /Frame which forms a basis for calculating accurate data as well as non-response rates. This renders the data inaccurate since the data generated cannot be used to authenticate the data generated from the Annual School Census exercise.

(iv) Poor enforcement of data collection protocols (Elaborate protocols for checking data accuracy and reliability exist). The team learnt that the main reason for this is because MoES delegates to the District Local Governments and Municipalities the responsibility for enumeration and verification of data based on approved protocols (which in most cases get compromised).

(v) A Strategy for improving the quality and timeliness of data through elimination of ‘ghosts’ and creation of a one-stop center under EMIS for management information is in place but not implemented (due to lack of financing from MoFPED).

(vi) Whereas the Annual School Census has in-built checks to minimize improbable responses for certain age and class categories, physical checks (to ascertain the accuracy and reliability of data from the source-schools / institutions), are limited. The team also confirmed that in some cases, MoES has actually noted incidences where school authorities inflate enrolment figures when submitting data related to capitation grants (under programmes like UPE, USE, UPPET and UPOLET), but lower numbers of enrolment when reporting for other reasons. This is a clear manifestation of reliability challenges in MoES.
3.4.3 NORM 14: TIMELINESS AND PUNCTUALITY

Some of the key objectives of EMIS is to report Timely and Reliable data punctually to end users. This implies that the data should be presented in a clear and understandable form, disseminated in a suitable and convenient manner; as well as available and accessible within the stipulated time frame. Where delays occur, EMIS should have institutionalized mechanisms for informing its clientele about it, including indicating new dates for the availability of data.

The Peer Review Team findings under this norm were as follows:-

(a) Failure to adhere to EMIS cycle

Timeliness, Reliability and Punctuality of data greatly depends on strict adherence to the agreed EMIS Cycle. EMIS Cycle is defined as a series of events or operations on education sector data production and management that recur regularly and usually lead back to the starting period. The Cycle is supposed to commence in November each year (with approval of the strategy for data collection and end in September the following year (with publication of the statistical products). The Peer review Team found that for the last several years in a row, MoES has experienced untimely release of data.

(b) Low levels of EMIS Automation;

In addition to non-adherence to the EMIS Cycle which is the main prime cause in the delay for data releases, untimely data releases are exacerbated by low levels of EMIS automation. This is manifested among others by the reliance on a manual data entry system using Data Entry Clerks. Data Entry Clerks are limited since they can only key-in a specific number of returns per day (on the average, 25). Low levels of automation, therefore, contribute to the time lag between collection of data and its release to end-users (already referred to 3.4.3a above)

(c) Inadequate and late releases of funds for data processes

The EMIS Peer Review Team found that the funds for the approved budget for the sector are not only routinely cut, but are also released late. For instance, the Peer review Team noted that for the last four financial years, the funds for Annual School Census delayed up to July (Four months behind schedule of its cycle). It also observed that while the reason for the release of funds from MoFPED was data collection in the sector, some of these funds were administratively relocated to cater for non-data related activities.

(d) Lack of a communication strategy for data releases

Despite the fact that untimely data releases have become more or less institutionalized, the Peer Review team noted that MoES never informs its data end-users as it lacks a communication strategy for such delays.

3.4.4 NORM 15: COHERENCE, CONSISTENCY, COMPARABILITY, AND INTEGRATION

Quality Education statistics also need to be consistent internally, over time, and comparable between regions and countries; in addition, it should be malleable to further analysis and integration with data from different sources.

On this norm, the Peer review findings indicate that:

i. EMIS data complies with Common and International Standards and is consistent

The MoES statistics are mostly compiled based on common standards, including the International Standards Classification Education (ISCED). The consistency of the statistics to these standards is periodically verified;
ii. EMIS data is comparable Internationally

Errors in statistics are identified and longitudinal comparison of data (over many years) are done routinely. The Team coincided with the exercise of comparison between current statistics and the statistics of the previous year to verify coherence (being done for the two years preceding 2016).

The Ministry of Education and Sport database is composed of more than 10 years’ worth of the data series which has annually been submitted to the UNESCO Institute of Statistics which provides feedback on Coherence, Consistency, and Comparability.

iii. EMIS data is less malleable to national integration

Statistics from other sectors are not easily comparable with education sector statistics with those of EMIS in terms of codes (i.e. Regional, Schools etc.), as well as location coordinates mainly on account of difference in methodologies employed by different sectors. Furthermore, the EMIS code (unique number), is not even shared or used by UBOS. Cross referencing currently only occurs between EMIS and Examination boards (particularly UNEB), where EMIS code is used as an examination center number as well (for both primary and secondary schools).

3.4.5 NORM 16: ACCESSIBILITY AND CLARITY

Good Education statistics must be presented in a clear format and an understandable form. They should also be disseminated in a suitable and convenient manner, available and accessible on an impartial basis and accompanied with supporting metadata and guidance. This is what the accessibility and clarity norm is all about.

Under this norm, the EMIS Peer Review Team findings suggest that whereas education statistics are clearly presented, there is very limited analysis undertaken. With regard to accessibility, the Peer Review Team confirmed that the statistical reports were routinely uploaded on the MoES website as soon as they’re published. Hard copies distributed to a limited number of stakeholders due to limited copies produced on accounts of inadequate budgetary resources. Distribution of hard copies to other end-users is hampered by budgetary constraints, which has become institutionalized in the EMIS unit.

3.4.6 NORM 17: COMPREHENSIVENESS

The comprehensive norm requires that the Education statistics and information covers all the sub sectors of Education and Training.

The Peer Review findings were that:

(i) Statistics are annually reported on all sub-sectors of Education and Training;

(ii) Sector statistics incorporate on learners with Special Educational Needs as well as the Early Childhood Development (ECD) sub-sector.

Table 4 below provides summaries of average scores under the Education Information reporting standards.
Table 4: summaries of average scores under the Education Information reporting

<table>
<thead>
<tr>
<th>Focus Area D: Education Information Reporting</th>
<th>Norm Average Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Norm 12: Relevance</td>
<td>2.1</td>
</tr>
<tr>
<td>Norm 13: Accuracy and Reliability</td>
<td>2.6</td>
</tr>
<tr>
<td>Norm 14: Timeliness and Punctuality</td>
<td>2.4</td>
</tr>
<tr>
<td>Norm 15: Coherence, Consistency, Comparability and Integration</td>
<td>3.0</td>
</tr>
<tr>
<td>Norm 16: Accessibility and Clarity</td>
<td>3.0</td>
</tr>
<tr>
<td>Norm 17: Comprehensiveness</td>
<td>3.5</td>
</tr>
<tr>
<td>Focus Area Average</td>
<td>2.8</td>
</tr>
</tbody>
</table>
CHAPTER 4: CONCLUSIONS

4.1 GENERAL CONCLUSIONS

4.1.1 OBJECTIVES OF EMIS

The objective of EMIS is to generate quality management information for evidence-based decision making in a timely manner. Based on existing evidence, the EMIS Peer Review Team concluded that the Uganda EMIS currently does not achieve this objective. This is on account of a combination of factors which include, among others, lack of strategic investment by GoU in EMIS development (which has been mainly left to donors like USAID and other occasional development partners such as UNESCO), and weak Legal and Policy Frameworks for EMIS. The current funding by GoU is exclusively for statistical operations (i.e. data collection, processing and production).

4.1.2 CONCEPTUAL FRAMEWORK

The Uganda EMIS was conceptualized to comprise 5 modules or functionalities. These modules include (Basic Schools Statistics; Personnel (excluding payroll); Financial Management; and School Outcomes). The EMIS Peer Review Team however noted that since its inception 18 years ago (i.e. 1999), only one module (the basic school statistics module) has been operationalized. This state of affairs suggests that the visibility of EMIS in the allocation of budgetary resources is very low.

4.1.3 EXPECTATIONS ABOUT EMIS

The EMIS end users that the EMIS Peer Review Team talked to (i.e. Departments of MoES and affiliate bodies, Local Education Groups (LEG) and Schools), have very high expectations of EMIS. Some of these expectations are that EMIS should be able to produce sector-wide comprehensive, quality and reliable data in a timely manner. However, the reality on the ground (as noted by the EMIS Peer Review Team) was that while most of the end-users do not know their actual information needs, they are unaware how poorly funded EMIS is.

4.1.4 OPERATIONAL STATUS OF EMIS

The Peer Review Team observed that only one out of five EMIS modules (envisaged at inception), is operational; four are dormant. EMIS is web-enabled but not web-based. EMIS accessibility is limited to MoES headquarters via the LAN. The Decentralized EMIS is non-functional. EMIS software is Vendor Locked-in. Furthermore, whereas EMIS access points exists in all the departments and of MoES, only the Education Planning and Policy Analysis Department actively uses it. The rest of the departments continue to place data requests to the EMIS Unit. Under the circumstances, EMIS utilization is clearly limited.

4.1.5 MISCONCEPTION ABOUT EMIS

The Peer Review Team also noted a number of misconceptions on EMIS. The first misconception pertains to the mix-up of functions and roles of EMIS vis-a-vis that of the Communication Information Management (CIM) Division. EMIS is a planning tool for generation of management information for evidence-based decision making on the sector. CIM division, on the other hand manages MoES communication (within the Ministry and with its clients). CIM is, therefore, responsible among other things for, communication, ICT infrastructure support and maintenance (which EMIS rides on).

The second misconception is the apparent interchangeability of EMIS and Statistics (in MoES, most people perceive EMIS to be equal to Statistics). Statistics pertains to the collection of data while EMIS is a tool for generation of management data.
Thirdly, a number of departments within the ministry perceive that EMIS is over funded; however, the Peer Review Team noted that only the statistics function is funded under GoU budget. EMIS development, since inception, has purely been donor funded.

Fourthly, a number of stakeholders believe that EMIS is not functional. To the contrary, the team noted that EMIS is fully operational at MoES Headquarters. However, its utilization is limited and its further development is hampered by lack of budgetary resources.

These misconceptions are injurious to EMIS development.

4.1.6 FINANCING OF EMIS AND SUSTAINABILITY CONCERNS

The budgetary resources allocated to the statistics section (where EMIS is located) are skewed in favor of collection, capture, and production of basic statistics. There is no provision for EMIS development and maintenance. The Peer Review Team noted that since its inception, EMIS Development has been left to the donors. This has created distortions in EMIS development as most donors prefer to fund only one pillar of EMIS (i.e. Technology) at the expense of two critical pillars (i.e. People and Processes). This limits EMIS effectiveness and sustainability.

4.1.7 HUMAN RESOURCE FOR EMIS

The current structure of the Statistics section provides only for statistical officers. There’s no provision for Programmers, Systems Analysts and EMIS Specialists. During the EMIS Peer Review exercise, it was noted that there was only one EMIS IT specialist on contract. The EMIS Unit additionally requires at least 2 Programmers, 1 EMIS specialist and 1 Systems Analyst to complement the existing capacity. Inadequacy of Human Resources is one of the factors that has negatively affected the operations of the EMIS Unit.

4.1.8 LEGAL FRAMEWORK FOR EMIS

The existing legal framework for EMIS (Constituted mainly by the UBOS Act 1998 and Education Act 2008) is weak as it does not address the real needs of Education Sector statistical processes and EMIS operations. EMIS needs legal backing to strengthen its role as a National Education System. The law needs to address issues such as potential undermining from special parallel systems, ownership, sabotage by contractors and so forth.

4.1.9 POLICY FRAMEWORK FOR EMIS

Like the Legal Framework, the EMIS Policy Framework was found to be extremely weak. The current policy is dependent on isolated provisos contained in various policy documents such as the Government White Paper on Education (1992), the Sector Wide Approach Guidelines and interpretations of Macro-Economic Policy thrusts (particularly on efficiency). There is no Sector Policy on EMIS. The Peer Review Team was surprised to note that EMIS despite being such a strategic system for the Education Sector, is left to operate without any specific policy. As a result, EMIS is susceptible to the influence of external actors (particularly donors and contractors), which may divert it from meeting its National Core objectives.

4.2 CONCLUSIONS ON OVERALL COMPLIANCE WITH EAC EMIS NORMS AND STANDARDS

According to the EAC Norms and Standards Assessment Framework, an overall assessment greater than 3.3 indicate that the country has an EMIS system which produces quality statistics. Similarly, an overall average score of between 2.6 and 3.3 classifies the country as having acceptable statistics. An average score below 2.6 indicates the country has questionable or poor statistics.
Overall assessment of Uganda EMIS (in all the 4 assessment areas), suggest that Uganda’s EMIS is within the range of acceptable statistics (i.e. average score of 2.6 – 3.3). Table 5 provides a summary of Performance of Uganda EMIS.

Table 5: Summary Performance of Uganda EMIS on EAC EMIS Norms & Standards

<table>
<thead>
<tr>
<th>S/N</th>
<th>Assessment Areas</th>
<th>No. of Standards Assessed</th>
<th>Average Score</th>
<th>No. of Standards scored above Average</th>
<th>Overall Performance Rating (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Legal and Policy Framework</td>
<td>7 (see Table 3.1)</td>
<td>2.6</td>
<td>5</td>
<td>65</td>
</tr>
<tr>
<td>2.</td>
<td>Resource availability and Utilization</td>
<td>2 (see Table 3.2)</td>
<td>2.7</td>
<td>2</td>
<td>67.5</td>
</tr>
<tr>
<td>3.</td>
<td>Statistical Processes</td>
<td>2 (see Table 3.3)</td>
<td>3.1</td>
<td>2</td>
<td>77.5</td>
</tr>
<tr>
<td>4.</td>
<td>Education Information Reporting</td>
<td>6 (see Table 3.4)</td>
<td>2.8</td>
<td>4</td>
<td>70</td>
</tr>
</tbody>
</table>

Table 5 above suggests that despite many challenges (which among others include skeletal staff, constrained budgetary resources, manual data collection processes, limited understanding of the role and importance of EMIS among education stakeholders, as well as weak Legal and Policy Frameworks), the Uganda EMIS has institutionalized Norms and Standards for acceptable statistics. The Education Planning and Policy Analysis Department in general, and the Statistics Monitoring and Evaluation Division in particular, must be commended for keeping the EMIS system functional in the midst of a myriad of challenges.

However, given that the best possible average score on the EAC EMIS Norms and Standards Assessment Framework is 4.0, the overall results of the EMIS Peer Review for Uganda suggest that the country has a lot of room for improvement if the country is to move from its current level of acceptable statistics to quality statistics.

Notwithstanding the above, the Peer Review exercise itself has provided a great learning opportunity not only for the Ministry of Education and Sports, its various units and partners, but also for all the participating East African Community Member States (i.e. Burundi, Kenya, South Sudan and Tanzania). The Peer Review Team is confident that lessons learned from the Ugandan exercise will be valuable and shall inform similar exercises in each of the four participating countries. It is also hoped that other countries across Africa will embrace the African Union-East African Community EMIS Norms and Standards Assessment Framework as a basis for periodically benchmarking their own EMIS.
CHAPTER 5: RECOMMENDATIONS

The results of the Peer Review exercise suggest that the Uganda EMIS is currently producing acceptable statistics. However, if the Uganda EMIS is to move to the level of producing quality statistics, the Government of Uganda, through MoES, will have to implement a number of strategic interventions that are critical to the achievement of this noble objective. Based on the findings of the EMIS Peer Review exercise, therefore, the Peer Review team proposes the following recommendations:

5.1 COMMUNICATION AND DISSEMINATION STRATEGY

The EMIS peer review team noted that many end users have very unrealistic expectations of EMIS. In addition, these same stakeholders voiced a lot of misconceptions about the system. These (in the opinion of the Peer Review Team), undermine the credibility and visibility of the system. The Peer review team proposes that MoES should formulate a comprehensive communication and dissemination strategy to manage stakeholder expectations in an institutionalized manner. Once implemented the team believes that it will effectively counter misconceptions about the system as well as how to manage the expectations. Currently, many departments of MoES don’t accurately know what is taking place in the EMIS unit (in the short run). However, the EMIS unit should be required to re-sensitize all departments about EMIS (i.e. its operations and outputs). It should also (at least on a quarterly basis) deliberately disseminate core statistics and information to different departments. The EMIS Specialist in-post should also be deployed to re-train departments on how to access the current EMIS.

5.2 REVIEW THE CURRENT BUDGET TO INCORPORATE EMIS ACTIVITIES AND CRITICAL STATISTICAL OPERATIONS

The Peer review team noted that the current budget in MoES is skewed in favor of data collection and production. There is no budget for EMIS development and maintenance. The team also noted that a project entitled ‘Quick Action Project for improving quality and timeliness of Education and Sports Sector data’, which should have had a significant impact on EMIS development, was not funded (although it was approved by MoFPED). Furthermore, the budget for statistical operations is inadequate and released late.

The EMIS peer review team recommends that:

i. MoES budget be adjusted to incorporate EMIS specific budget lines. These budget lines should include EMIS development, maintenance and capacity development for EMIS.

ii. Increase the current budget for statistical operations to cater for critical activities that include establishment of a data frame/master list, routine piloting of data collection instruments and data validation.

5.3 DEVELOP A SUSTAINABLE FINANCING STRATEGY FOR EMIS DEVELOPMENT

Absence of a financing strategy is perhaps the single most important factor that has undermined EMIS development in the country. While EMIS was embraced as a national macroeconomic reform in late 1990s, financing for its development has depended on donors and other development partners (mainly USAID, World Bank and to a less extent UNESCO). However, the history of EMIS development in Uganda that the team reviewed clearly demonstrates that donor funding cannot be relied upon to ensure a sustainable EMIS in the country. Donors usually have their own objectives to satisfy that are not in alignment with the strategic objectives of the country. In addition, most of them are to the disadvantage of creation of critical capacity in EMIS Unit as well as reform of EMIS procedures and practices (which are key elements of sustainability and funding). On the other hand, development partners like UNESCO develop systems to meet their own demands for information from member countries (which are not necessarily the actual information demands of that country). Such systems also have hidden costs (in terms of budgets and personnel requirements), which manifest themselves long after the system has been handed over. This
was the case with UNESCO solution which was handed to MoES in 2006 free of charge but later proved to be completely unsuitable to the MoES needs.

The EMIS Review team recommends that the financing strategy should constitute part of the EMIS policy.

The EMIS peer review recommends that the financing strategy should address critical areas that include software development; hardware replacement; capacity development for EMIS management and operations (both at MoES Headquarters and districts); EMIS security; Data storage; automation of data collection; EMIS procedures and practices as well as routine maintenance.

5.4 EXPAND THE CURRENT STAFF ESTABLISHMENT OF THE STATISTICS SECTION TO INCLUDE TECHNICAL STAFF FOR EMIS REQUIREMENTS

The peer review team noted that these staff are circumstantially forced to fulfil EMIS skill requirements, which they are not trained for. There is urgent need to expand the current staff establishment structure of the statistics section to provide for at least 3 positions to cater for critical EMIS needs (particularly EMIS front-end and back-end management as well as ICT Support). These positions include EMIS programmers (2), EMIS System Analyst (1) and EMIS system support specialist (1).

5.5 FORMULATE A SUSTAINABILITY STRATEGY FOR EMIS

As reiterated in 5.3 above, EMIS development has entirely depended on donors. This is not sustainable. In addition, the current skill in the EMIS unit set is skewed towards statistics. The strategy should on one hand address the issue of donor dependence (and on how Government of Uganda resources could be tapped for EMIS development), and on the other how the necessary skills for EMIS could be created rapidly and on a suitable manner. Furthermore, the sustainability strategy should also address the critical issue of cost-effectiveness in the key areas of software development, capacity development, data automation, EMIS maintenance, EMIS processes and procedures as well as late release of funds for data collection and production.

The findings of the Peer Review team clearly indicate that reliance on foreign contracts to develop EMIS software has consequences that impeach the cost-effectiveness of the entire investment (more so when you configure the opportunity cost of a vendor locked-in system and the intermittent development of EMIS due to dependence on donors).

The peer review team, therefore, recommends that:

i. EMIS redevelopment should be based on a customized solution that reflects the real needs of Uganda’s EMIS and is in the total control of the Government of Uganda (in terms of ownership).

ii. Use of local expertise in terms of IT solution providers should be prioritized to jointly develop a highly robust system that can fully satisfy the current and emerging Education sector needs. This will greatly contribute to the development of National Capacity for EMIS development and management as well as constitute a critical ingredient for both sustainability and cost effectiveness.

iii. MoES should resist, at all costs, development partner (donor) prescribed EMIS solutions. These solutions are often designed to meet the needs of the donor and not of the recipient country. The peer review team further noted that there are no free things in this world; Recipient countries get hood winked into engaging with firms which later on not only make outrageous demands, but also hold them at ransom. Development partners’ support should be carefully considered and accepted only when the support is meant to strengthen existing or ongoing Government initiatives in that regard.

Consequently, there are hidden costs that only manifest themselves after the donor has withdrawn. Some of these “free” solutions risk damaging the existing ones, leaving recipient countries with...
completely broken or weakened systems, with the only alternative being re-engaging of these contractors (whose costs are unsustainable in the long run) at their terms.

5.6 OPERATIONALIZE THE FOUR DORMANT EMIS MODULES (I.E. HUMAN RESOURCE, FINANCIAL MANAGEMENT, SCHOOL INSPECTION AND SCHOOL OUTCOME)

At inception, EMIS was conceptualized to comprise 5 modules which were deemed to be critical to the generation of management information required by MoES for evidence-based decision making. Unfortunately, 18 years down the road only one module is operational. This has bereft MoES the benefits that could be derived once EMIS is fully operational. The EMIS peer review noted that activating these modules may not require substantial investment. Part of it may just require connectivity with legacy systems (i.e. Ministry of Public Service, MoFPED and other departments in MoES).

Since the current EMIS software is vendor-locked, the team recommends that it should be redeveloped to facilitate the activation of the dormant modules and make it web-based.

In the opinion of the Peer review team, redevelopment will not necessitate the involvement of the former developers as this will perpetuate the current situation where the system is vendor locked.

5.7 FORMULATE A COMPREHENSIVE SECTOR POLICY ON EMIS

MoES currently has no policy on EMIS. It uses UBOS guidelines, the Government white paper and the sector Wide Approach to guide statistical processes in the Sector. Guidance by the Inter-ministerial taskforce established in 2014 and the annual data collection strategies developed by the statistics section to guide its statistical and EMIS operations.

Unfortunately, these have proved inadequate and non-responsive to the statistical operations needs and emerging challenges of the Education sector. Lack of a specific policy is the main reason for poor investment in EMIS and poor compliance to the Annual School Census by private schools and institutions. Other challenges include (among others):

i. Failure to entrench EMIS cycle (mainly through inadequate budget which is released late);

ii. Ineffective information sharing (i.e. which is currently ad hoc and based upon requests for information)

iii. Emergence of parallel data systems (i.e. DES and affiliate organizations);

iv. Existence of multiple quality standards;

v. Inadequate security for Education sector data (in terms of low confidentiality, inadequate accountability by data providers at the Local Governments);

vi. Lack of a complete data frame/master list of schools (due to poor prioritizing in the budget);

vii. Poor coordination among MoES departments with regard to data production and utilization;

viii. Absence of mechanisms for consultation between MoES and its data users, and

ix. Poor dissemination of information

The EMIS Peer review team recommends that MoES develops a comprehensive policy that covers both statistical and EMIS operations in the sector. This policy should utilize the policy guidelines that the ministry formulated years ago to provide guidance in areas to be focused on. The AU-EAC norms and standards should be also used as a key output to the policy.
5.8 STRENGTHEN THE CURRENT LEGAL FRAMEWORK TO ADDRESS THE SPECIFIC NEEDS OF EMIS

There is no explicit law mandating MoES to collect sector data. MoES derives its legal basis for collection of data from the UBOS Act 1998, which delegates data collection to ministries and other organizations. This Act does not adequately support MoES access to basic administrative data, particularly private sector owned schools.

The Education Act 2008, on the other hand, has only a general proviso for collection of statistics in the education sectors. This Act is particularly weak in areas of compliances, enforcement of compliance, falsification of data, code of conduct and ethics on the part of key actors involved in the data collection and management chain. In addition, MoES lacks a legal mandate to reprimand the defaulting schools and institutions. Consequently, MoES experiences a relatively high non-response rate from private schools and institutions (currently estimated at 35%). Also, inadequate data collection in the sector has led to the emergence of independent and parallel data systems which are literally creating a second tier of official statistics on the Education, resulting in confusion and acrimony (particularly when discrepancies in data occur).

The current legal framework for EMIS is thus weak, scattered under different Statues (i.e. UBOS Act 1998, Education Act 2008), and does not address the real needs of EMIS as the national system for Education. Furthermore, EMIS is not legally protected from the actions of contractors, vendors or suppliers that could be injurious or prejudicial to the interests of EMIS as a national system. We propose that the Education Act 2008 be amended to integrate the proviso that specifically deals with Statistics and EMIS.

To address the above, the Peer Review team recommends that the Education Act 2008 be amended to include a specific proviso on EMIS in the Education sector. The amended Act should deal with issues that include enforcement of compliance, falsification of data, code of conduct and ethics of key actors in the data collection and management process.
### APPENDIX 1: FEEDBACK MEETING WITH PERMANENT SECRETARY

<table>
<thead>
<tr>
<th>SN</th>
<th>Name</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Mr. Alex Kakooza</td>
<td>Permanent Secretary (MoES)</td>
</tr>
<tr>
<td>2.</td>
<td>Mr. Aggrey David Kibenge</td>
<td>Under Secretary- F&amp;A (MoES)</td>
</tr>
<tr>
<td>3.</td>
<td>Ms. Lubega Irene Namatovu</td>
<td>MoES (P/Stat)</td>
</tr>
<tr>
<td>4.</td>
<td>Mr. Brighton Barugahare</td>
<td>MoES (AC/PA)</td>
</tr>
<tr>
<td>5.</td>
<td>Ms. Sandra Nambooze</td>
<td>MoES (M&amp;E O)</td>
</tr>
<tr>
<td>6.</td>
<td>Mr. Edson Tusiime</td>
<td>MoES (Stat)</td>
</tr>
<tr>
<td>7.</td>
<td>Mr. Muteekanga George</td>
<td>MoES (PSI/I)</td>
</tr>
<tr>
<td>8.</td>
<td>Mr. Boniface Phillip Mavuva</td>
<td>MoES (EMIS Technical Specialist)</td>
</tr>
<tr>
<td>9.</td>
<td>Ms. Florence Apolot M</td>
<td>RTI/SHRP</td>
</tr>
<tr>
<td>10.</td>
<td>Mr. Martin Kungaina</td>
<td>MoE – Kenya</td>
</tr>
<tr>
<td>11.</td>
<td>Ms. Creed Chingwena</td>
<td>ADEA</td>
</tr>
<tr>
<td>12.</td>
<td>Mr. Aloysius Chebet</td>
<td>EAC Sec</td>
</tr>
<tr>
<td>13.</td>
<td>Ms. Chemwi Mutiwanyuka</td>
<td>ADEA</td>
</tr>
<tr>
<td>14.</td>
<td>Mr. Atwebembeire Isaac</td>
<td>MoES</td>
</tr>
<tr>
<td>16.</td>
<td>Ms. Nambafu Patricia M</td>
<td>MoES (Stat)</td>
</tr>
</tbody>
</table>
## APPENDIX 2: STAKEHOLDERS INTERVIEWED

### MEETING WITH DEPARTMENTS IN MINISTRY OF EDUCATION AND SPORTS

<table>
<thead>
<tr>
<th>Name</th>
<th>Organisation</th>
<th>Designation</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr. Makuru Petro</td>
<td>MoEST-TZ</td>
<td>AD(M&amp;E)</td>
<td><a href="mailto:makurupetro@gmail.com">makurupetro@gmail.com</a></td>
</tr>
<tr>
<td>Mr. Martin Kungania</td>
<td>Education-Kenya</td>
<td>ICT-ED</td>
<td><a href="mailto:mkungania@gmail.com">mkungania@gmail.com</a></td>
</tr>
<tr>
<td>Mr. Aloysius Chebet</td>
<td>EAC Secretariat</td>
<td>P.E.O</td>
<td><a href="mailto:achebet@eacdq.org">achebet@eacdq.org</a></td>
</tr>
<tr>
<td>Mr. Thomas Dhaal Dyany</td>
<td>MoEST-S.S JUBA</td>
<td>Director</td>
<td><a href="mailto:dhaalthomas@gmail.com">dhaalthomas@gmail.com</a></td>
</tr>
<tr>
<td>Mr. Oscar Bazikamwe</td>
<td>Education-BURUNDI</td>
<td>Director of Planning</td>
<td><a href="mailto:oscarbazikamwe@gmail.com">oscarbazikamwe@gmail.com</a></td>
</tr>
<tr>
<td>Ms. Chemwi Mutiwanyuka</td>
<td>ADEA</td>
<td>Program Analyst</td>
<td><a href="mailto:c.mutiwanyuka@gmail.com">c.mutiwanyuka@gmail.com</a></td>
</tr>
<tr>
<td>Mr. G. A. Dhatemwa</td>
<td>MoES-UG</td>
<td>Commissioner – EPPAD</td>
<td><a href="mailto:agodfreydatemwa@gmail.com">agodfreydatemwa@gmail.com</a></td>
</tr>
<tr>
<td>@adeanet.com</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Joseph Eilor</td>
<td>MoES-UG</td>
<td>AC/SME</td>
<td><a href="mailto:eilor@usa.net">eilor@usa.net</a></td>
</tr>
<tr>
<td>Mr. Brighton Mutasa</td>
<td>ADEA WGE MPS</td>
<td>Program Manager</td>
<td><a href="mailto:b.mutasa@adeanet.org">b.mutasa@adeanet.org</a></td>
</tr>
<tr>
<td>Ms. Prudence Ayebazibwe</td>
<td>MoES</td>
<td>Ag. Comm Human Resource</td>
<td><a href="mailto:bcarr@worldbank.org">bcarr@worldbank.org</a></td>
</tr>
<tr>
<td>Ms. Nabirye Martha</td>
<td>MoES-UG</td>
<td>Economist</td>
<td><a href="mailto:marthanabirye19@gmail.com">marthanabirye19@gmail.com</a></td>
</tr>
<tr>
<td>Ms. Nambafu Patricia M</td>
<td>MoES-UG</td>
<td>Statistician</td>
<td><a href="mailto:pemadaya@gmail.com">pemadaya@gmail.com</a></td>
</tr>
<tr>
<td>Mr. Boniface Philip Mavyuva</td>
<td>MoES-UG</td>
<td>EMIS Technical Specialist</td>
<td><a href="mailto:bonny.philip@hotmail.com">bonny.philip@hotmail.com</a></td>
</tr>
<tr>
<td>Mr. Atwebembeire Isaac</td>
<td>MoES-UG</td>
<td>Statistician</td>
<td><a href="mailto:atwebs2@gmail.com">atwebs2@gmail.com</a></td>
</tr>
</tbody>
</table>
### MEETING WITH EDUCATION DEVELOPMENT PARTNERS

<table>
<thead>
<tr>
<th>Name</th>
<th>Organisation</th>
<th>Position</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr. Oscar Bazikamwe</td>
<td>Burundi Minister of Education</td>
<td>Director of Education Planning</td>
<td><a href="mailto:oscarbazikamwe@gmail.com">oscarbazikamwe@gmail.com</a></td>
</tr>
<tr>
<td>Mr. Makuru Petro</td>
<td>MoEST-TZ</td>
<td>Assistant Director (M&amp;E)</td>
<td><a href="mailto:makurupetro@gmail.com">makurupetro@gmail.com</a></td>
</tr>
<tr>
<td>Mr. Thomas Dhaal Dyany</td>
<td>MoEST-S.S Juba</td>
<td>Director Q/A</td>
<td><a href="mailto:dhaalthomas@gmail.com">dhaalthomas@gmail.com</a></td>
</tr>
<tr>
<td>Mr. Martin Kungania</td>
<td>Kenya</td>
<td>Education</td>
<td><a href="mailto:mkungania@gmail.com">mkungania@gmail.com</a></td>
</tr>
<tr>
<td>Ms. Lubega Irene Namatovu</td>
<td>MoES</td>
<td>Principal Statistician</td>
<td><a href="mailto:ilubega@gmail.com">ilubega@gmail.com</a></td>
</tr>
<tr>
<td>Mr. Bernard Carr</td>
<td>World Bank</td>
<td>Education</td>
<td><a href="mailto:bcarr@worldbank.org">bcarr@worldbank.org</a></td>
</tr>
<tr>
<td>Ms. Diana Sekaggya-Bagarukayo</td>
<td>World Bank</td>
<td>Education Specialist</td>
<td><a href="mailto:dsekggya@worldbank.org">dsekggya@worldbank.org</a></td>
</tr>
<tr>
<td>Mr. Aloysius Chebet</td>
<td>EAC Secretariat</td>
<td>P. E. O</td>
<td><a href="mailto:achebet@eacdq.org">achebet@eacdq.org</a></td>
</tr>
<tr>
<td>Ms. Patricia Edith M Nambafu</td>
<td>Statistician</td>
<td>Statistician</td>
<td><a href="mailto:pemadaya@gmail.com">pemadaya@gmail.com</a></td>
</tr>
<tr>
<td>Mr. Boniface Philip M</td>
<td>MoES</td>
<td>EMIS Technical Specialist</td>
<td><a href="mailto:bonny.philip@hotmail.com">bonny.philip@hotmail.com</a></td>
</tr>
<tr>
<td>Mr. Brighton Mutasa</td>
<td>ADEA WGEMPS</td>
<td>Program Manager</td>
<td><a href="mailto:b.mutasa@adeanet.org">b.mutasa@adeanet.org</a></td>
</tr>
<tr>
<td>Ms. Chemwi Mutiwanyuka</td>
<td>ADEA WGEMPS</td>
<td>Program Analyst</td>
<td><a href="mailto:c.mutiwanyuka@adeanet.org">c.mutiwanyuka@adeanet.org</a></td>
</tr>
<tr>
<td>Ms. Agnes Keliki</td>
<td>AfDB</td>
<td>Ag. Liaison</td>
<td><a href="mailto:a.keliki@afdb.org">a.keliki@afdb.org</a></td>
</tr>
<tr>
<td>Mr. Sam Vanuytsel</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ms. Mayanja Sarah B</td>
<td>USAID</td>
<td>Education Specialist</td>
<td><a href="mailto:smayanja@usais.gov">smayanja@usais.gov</a></td>
</tr>
<tr>
<td>Ms. Wooden Jana</td>
<td>USAID</td>
<td>Education Officer</td>
<td><a href="mailto:jwooden@usaid.gov">jwooden@usaid.gov</a></td>
</tr>
</tbody>
</table>
### MEETING WITH LOCAL EDUCATION GROUP

<table>
<thead>
<tr>
<th>SN</th>
<th>Name</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ms. Lubega Irene Namatovu</td>
<td>MoES (P/Stat)</td>
</tr>
<tr>
<td>2</td>
<td>Mr. Edson Tusime</td>
<td>MoES (Stat)</td>
</tr>
<tr>
<td>3</td>
<td>Mr. Martin Kungaina</td>
<td>MoE – Kenya</td>
</tr>
<tr>
<td>4</td>
<td>Ms. Creed Chingwena</td>
<td>ADEA</td>
</tr>
<tr>
<td>5</td>
<td>Mr. Aloysius Chebet</td>
<td>EAC Sec</td>
</tr>
<tr>
<td>6</td>
<td>Ms. Chemwi Mutiwanyuka</td>
<td>ADEA</td>
</tr>
<tr>
<td>7</td>
<td>Mr. Atwebembeire Isaac</td>
<td>MoES (Stat)</td>
</tr>
<tr>
<td>8</td>
<td>Mr. Boniface Phillip Mavyuva</td>
<td>MoES (EMIS Technical Specialist)</td>
</tr>
<tr>
<td>9</td>
<td>Mr. Atwebembeire Isaac</td>
<td>MoES (Stat)</td>
</tr>
<tr>
<td>10</td>
<td>Ms. Patricia Nambafu Edith</td>
<td>MoES (Stat)</td>
</tr>
<tr>
<td>11</td>
<td>Mr. Beyamba Eridad</td>
<td>DIS (Wakiso District)</td>
</tr>
<tr>
<td>12</td>
<td>Mr. Juma James</td>
<td>Education Officer (Lubaga Division)</td>
</tr>
</tbody>
</table>

### MEETING WITH M&E WORKING GROUP

<table>
<thead>
<tr>
<th>SN</th>
<th>Name</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ms. Lubega Irene Namatovu</td>
<td>MoES (P/Stat)</td>
</tr>
<tr>
<td>2</td>
<td>Mr. Brighton Barugahare</td>
<td>MoES (AC/PA)</td>
</tr>
<tr>
<td>3</td>
<td>Mr. Sammy Odongo</td>
<td>MoES (AC/PES)</td>
</tr>
<tr>
<td>4</td>
<td>Ms. Marian Namubiru</td>
<td>MoES (M&amp;E O)</td>
</tr>
<tr>
<td>5</td>
<td>Ms. Lyndah F Lwoyja</td>
<td>MoES (P/A)</td>
</tr>
<tr>
<td>6</td>
<td>Ms. Sandra Nambooe</td>
<td>MoES (M&amp;E O)</td>
</tr>
<tr>
<td>7</td>
<td>Mr. Edson Tusime</td>
<td>MoES (Stat)</td>
</tr>
<tr>
<td>8</td>
<td>Mr. Muteekanga George</td>
<td>MoES (PSI/I)</td>
</tr>
<tr>
<td>9</td>
<td>Mr. Boniface Phillip Mavyuva</td>
<td>MoES (EMIS Technical Specialist)</td>
</tr>
<tr>
<td>10</td>
<td>Ms. Florence Apolot M</td>
<td>RTI/SHRP</td>
</tr>
<tr>
<td>11</td>
<td>Mr. Martin Kungaina</td>
<td>MoE – Kenya</td>
</tr>
<tr>
<td>12</td>
<td>Ms. Creed Chingwena</td>
<td>ADEA</td>
</tr>
<tr>
<td>13</td>
<td>Mr. Aloysius Chebet</td>
<td>EAC Sec</td>
</tr>
<tr>
<td>14</td>
<td>Ms. Chemwi Mutiwanyuka</td>
<td>ADEA</td>
</tr>
<tr>
<td>15</td>
<td>Ms. Nambafu Patricia M</td>
<td>MoES (Stat)</td>
</tr>
</tbody>
</table>
### MEETING WITH INTER-MINISTERIAL TASKFORCE FOR COMPREHENSIVE EDUCATION SECTOR DATA COLLECTION EXERCISE

<table>
<thead>
<tr>
<th>SN</th>
<th>Name</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Ms. Lubega Irene Namatovu</td>
<td>P/Stat (Chairperson)</td>
</tr>
<tr>
<td>2.</td>
<td>Mr. Mulyalya Cartbert</td>
<td>MoES (M&amp;E)</td>
</tr>
<tr>
<td>3.</td>
<td>Ms. Judith Mutabazi</td>
<td>NPA</td>
</tr>
<tr>
<td>4.</td>
<td>Mr. Twesigye Chrintent</td>
<td>MoPS</td>
</tr>
<tr>
<td>5.</td>
<td>Mr. Ediruma Eric Edward</td>
<td>MoLG</td>
</tr>
<tr>
<td>6.</td>
<td>Mr. Namisi Derrick</td>
<td>MoES (EPPAD)</td>
</tr>
<tr>
<td>7.</td>
<td>Mr. Mugisha Brian</td>
<td>MoES (UAHEB)</td>
</tr>
<tr>
<td>8.</td>
<td>Ms. Zulaika Naiga</td>
<td>MoES (GSE)</td>
</tr>
<tr>
<td>9.</td>
<td>Mr. Timothy Ssejjoba</td>
<td>MoES (HET)</td>
</tr>
<tr>
<td>10.</td>
<td>Mr. Ssozi Micheal</td>
<td>MoES (EPPAD)</td>
</tr>
<tr>
<td>11.</td>
<td>Mr. Birungi Musa</td>
<td>MoES (BE)</td>
</tr>
<tr>
<td>12.</td>
<td>Mr. Wilson Nyegenye</td>
<td>UBOS</td>
</tr>
<tr>
<td>13.</td>
<td>Mr. Boniface Mavyuva</td>
<td>MoES (EMIS Technical Specialist)</td>
</tr>
<tr>
<td>14.</td>
<td>Mr. Atwebembeire Isaac</td>
<td>MoES (Statistics)</td>
</tr>
<tr>
<td>15.</td>
<td>Mr. Tusiime Edson</td>
<td>MoES (Statistics)</td>
</tr>
<tr>
<td>16.</td>
<td>Ms. Chemwi Mutiwanyuka</td>
<td>ADEA</td>
</tr>
<tr>
<td>17.</td>
<td>Mr. Martin Kungania</td>
<td>MoE (Kenya)</td>
</tr>
<tr>
<td>18.</td>
<td>Ms. Creed Chingwena</td>
<td>ADEA</td>
</tr>
<tr>
<td>19.</td>
<td>Mr. Aloysius Chebet</td>
<td>EAC</td>
</tr>
<tr>
<td>20.</td>
<td>Mr. William Carew</td>
<td>ADEA</td>
</tr>
<tr>
<td>21.</td>
<td>Ms. Nambafu Patricia Edith M</td>
<td>MoES (Statistics)</td>
</tr>
</tbody>
</table>

### MEETING WITH UGANDA BUREAU OF STATISTICS

<table>
<thead>
<tr>
<th>SN</th>
<th>Name</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Ms. Lubega Irene Namatovu</td>
<td>MoES (P/Stat)</td>
</tr>
<tr>
<td>2.</td>
<td>Mr. Edson Tusiime</td>
<td>MoES (Stat)</td>
</tr>
<tr>
<td>3.</td>
<td>Mr. Martin Kungaina</td>
<td>MoE – Kenya</td>
</tr>
<tr>
<td>4.</td>
<td>Mr. Brighton Mutasa</td>
<td>ADEA</td>
</tr>
<tr>
<td>5.</td>
<td>Mr. Aloysius Chebet</td>
<td>EAC Sec</td>
</tr>
<tr>
<td>6.</td>
<td>Ms. Chemwi Mutiwanyuka</td>
<td>ADEA</td>
</tr>
<tr>
<td>7.</td>
<td>Mr. Atwebembeire Isaac</td>
<td>MoES (Stat)</td>
</tr>
<tr>
<td>8.</td>
<td>Mr. Thomas Rutaro</td>
<td>UBOS</td>
</tr>
<tr>
<td>9.</td>
<td>Ms. Dorcus Halango</td>
<td>UBOS</td>
</tr>
<tr>
<td>11.</td>
<td>Mr. Boniface Phillip Mavyuva</td>
<td>MoES (EMIS Technical Specialist)</td>
</tr>
<tr>
<td>12.</td>
<td>Mr. Atwebembeire Isaac</td>
<td>MoES (Stat)</td>
</tr>
<tr>
<td>13.</td>
<td>Ms. Patricia Nambafu Edith M</td>
<td>MoES (Stat)</td>
</tr>
</tbody>
</table>
APPENDIX 3: REFERENCES


2008. *Education (Pre-Primary, Primary and Post-Primary) Act 2008*, Entebbe, Parliament of Uganda

Education Management Information Systems Norms and Standards Assessment Framework


The Uganda Standard US 943:2012-Guidelines for Production of Quality Statistics

The Uganda Standard US ISO 3534-Statistics – Vocabulary and Symbols

UGANDA EMIS PEER REVIEW REPORT, 2016  49