EAST AFRICAN COMMUNITY (EAC)

Regional Capacity Building Strategy for EMIS

Prepared by ADEA Working Group on Education Management and Policy Support for the EAC Secretariat

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Association for the Development of Education in Africa

ACKNOWLEDGEMENTS

FOREWORD

The Association for the Development of Education in Africa (ADEA) has, since the launch of the African Union's Plan of Action for the Second Decade of Education, aligned its strategic objectives and work efforts with this continental initiative.

ADEA is a Pan-African network organisation formulated out of the need to create forums for development partners (multi and bi-lateral) to engage in policy dialogue on critical education challenges with senior decision makers in government. We have nine Working Groups focusing on key areas in education and training. These include Higher Education, Books and Learning Materials, Early Childhood Development, Non-formal Education, Distance Education, Maths and Science, Teacher Development, Communication for Education and Development and a merged Working Group on Education Management and Policy Support – all of whom work with the AU's Plan of Action in various ways. Governed by the Ministers of the Bureau of the Conference of Ministers of Education of the African Union (COMEDAF) and key development partners, we are proud of our achievements in ensuring that the African Union's priority areas in the Plan of Action are increasingly realized.

The ADEA Working Group on Education Management and Policy Support is the African Union's lead technical agency in assisting the AU Observatory to monitor the implementation of the Plan of Action and facilitating the achievements proposed under the EMIS priority goals, one of which is to build capacity in this field in the regional economic communities, including the EAC region.

The African Union's roadmap for the continent advocates for harmonized and integrated EMIS nationally and regionally. There is a critical need for timely, accurate and reliable education statistics and information which underpins sound policy formulation, evidence-based planning and budgeting and effective monitoring and evaluation. This will help improve Partner States' understanding of the learning outcomes and possible learning barriers. The goal is to enhance the general performance of the entire education and training sector and provide an opportunity to the stakeholders to assess and monitor the progress the continent has made in the sector.

All major achievements are as a consequence of the collaboration and commitment of key technical and financial partners. Under the leadership of the AU Observatory and with full support of the EAC Secretariat's Sectoral Council for Education, Culture, Sport, Science and Technology, ADEA and other development partners such as UNESCO and GIZ have facilitated considerable reflection and agreement on strategies for building EMIS capacities in the EAC Partner States.

I am confident that this EMIS Capacity Building Strategy will inform the development process of stakeholders' and development partners' annual work plans at regional and country levels and assist in identifying potential areas of synergy and collaboration to avoid duplication and wastage of resources.

I therefore take this opportunity to encourage all partners supporting EMIS initiatives in Africa to use this publication as a source of information that guides their interventions.

Ahlin BYLL-CATARIA
Executive Secretary, ADEA

ACRONYMS

ADEA	Association for the Development of Education in Africa
AIDS	Acquired Immune Deficiency Syndrome
ASC	Annual School Census
AU	African Union
AUC	African Union Commission
CIEFFA	Centre for Girls' and Women's Education in Africa
CSO/NSO	Central Statistics Office or National Statistical Office
DQAF	Diagnostic Quality Assessment Framework
EAC	East African Community
ECCE	Early Childhood Care and Education
ECOWAS	Economic Community of West Africa States
EFA	Education for All
EMIS	Education Management Information Systems
FMD	Financial Management Database
GIS	Geographic Information System
HIV	Human Immuno-deficiency Virus
ICT	Information and Communication Technology
IPED	Pan African Institute for Education and Training
ISCED	International Standard Classification system of Education
MIS	Management Information Systems
M&E	Monitoring and Evaluation
MoE	Ministry of Education
NFE	Non Formal Education
PID	Payroll Information Database
PRSPs	Poverty Reduction Strategy Programmes
REC	Regional Economic Community
SACMEQ	Southern and Eastern Consortium for Monitoring Education Quality
TTCs	Teacher Training Colleges
TVET	Technical and Vocational Education and Training
UIS	UNESCO Institute for Statistics
UNESCO	United Nations Educational, Scientific and Cultural Organization

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EXECUTIVE SUMMARY

The African Union's Plan of Action for the Second Decade of Education for Africa (2006-2015) takes into consideration the critical challenges and lessons learnt from the implementation of the First Decade of Education for Africa (1997-2006) where it appears that many of the expected outcomes were not achieved for most African Member States. The evaluation of the previous decade's outcomes indicated that there was a crucial lack of evidence-based data and information to assess the value of achievements made in reaching certain education goals. The current Second Decade of Education for Africa's Plan focuses on eight priorities areas of intervention, one of which is Education Management and Information System (EMIS). It is considered an essential element for improving the quality and effectiveness of management of education and training and, in turn, the learning outcomes (learning achievements) and schooling outcomes (enrolments and attendance). Ministries of the education and training sector are being asked to reverse the "data blank" phenomena which currently typify African education statistics, by setting in place effective and robust EMIS systems which will provide accurate and reliable data and information for supporting planning processes, monitoring and evaluation and policy formulation within national, regional and international frameworks.

Central to the implementation of the AU's EMIS objectives is the leadership and guidance of its associated observatories, in particular the Pan African Institute for Education and Training (IPED), based in the Democratic Republic of the Congo (DRC) and the International Centre for Girls' and Women's Education in Africa (CIEFFA)[1] based in Burkina Faso. The former is responsible for monitoring the implementation of the Plan of Action and reporting on continental and regional performance on all priority goals by producing analytical reports based on statistical indicators. Similarly, CIEFFA monitors the implementation of gender-related goals using national and regional indicators. The building of national EMIS capacities to produce accurate and comprehensive statistics is core to the concerns of these observatories.

Partnership and coordination in supporting the implementation of the AU's Plan of Action

Under the chair of the AU Observatory, IPED, the AU Restricted EMIS Technical Committee plans the roll-out of EMIS capacity building initiatives on the continent. The Committee, which meets annually, consists of representatives of the AU Department of Economic Affairs, Statistics Division, CIEFFA, Analysis Programme of the CONFEMEN Education Systems (PASEC), UNESCO Institute for Statistics (UIS), United Nations Children's Fund (UNICEF), African Development Bank (AfDB) as well as at least two representatives from each of the regional economic communities of the Common Market for Eastern and Southern Africa (COMESA), the East African Community (EAC), the Economic Community for West African States (ECOWAS), and the Southern African Development Community (SADC) and country member EMIs experts. ADEA's Working Group on Education Management and Policy Support acts as the secretariat to the restricted technical committee. This mechanism ensures effective coordination of

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[1] Both IPED and CIEFFA are acronyms derived from the French translation of the names of the two African Union Observatories.

education sector stakeholders' and development partners' efforts in supporting the AU's EMIS programmes at national and regional levels.

The AU EMIS Initiative

The AU EMIS initiative, under the AU Restricted EMIS Technical Committee, has identified and developed 55 indicators for tracking country performance in implementing the Plan of Action. Through its observatory (IPED) and in collaboration with ADEA, the AU has trained countries on the use of the indicators. Biennially, a continental report and individual reports for regional economic communities, including country profiles, are produced for consideration by the Conference of Ministers of Education of the African Union (COMEDAF). These reports, produced by ADEA on behalf of the AU, are based on a continental education statistics database of all African countries, hosted by the AU's Observatory.[2] In order to address "data blanks", the AU EMIS initiative has adopted a three-phased strategy through regional economic community commissions or secretariats, whereby countries' EMIS capacities are assessed through a self- reporting survey which feeds into the development of a strategy for capacity building. Alongside this process, Member States engage in deliberating and customizing a code of practice in terms of EMIS policy, resourcing, statistical processes and information dissemination. This is known as EMIS Norms and Standards. The regional economic communities of SADC, ECOWAS, ECCAS and EAC are at different phases of implementation of the AU EMIS strategy.

EAC education management strategies

According to its 4th Development Strategy (2011-2016)[3], the EAC region's human resource development initiative is being challenged by incomplete reform and harmonization of East African Education systems and a lack of an institutional framework for reforming examinations, certification and accreditation, among other things. The strategic interventions identified include the harmonization of EAC's education systems and training curricula and promoting e-learning in the EAC education system. This process is on course with several technical and policy level meetings already conducted following the conclusion of a regional study on the harmonization of the EAC education systems and training curricula.

The development and harmonisation of regional statistics has been given a specific priority (Priority Area 7) in the Strategy and interventions include harmonizing statistical procedures and practices and establishing the EAC Statistics Bureau. While these strategies may be sound, their full implementation will take time. Also, monitoring and evaluating the implementation of the Development Strategy will require a strong and integrated regional EMIS as the Strategy expresses in its M&E section that "while there will be various sources of data...the responsibility of ensuring that relevant data and information is collected, analysed and disseminated will be of both the EAC Secretariat and Partner States Coordinating Ministries."

Increasingly, EMIS is recognised as critical to a results-based management approach and as a critical tool for financial management, planning, monitoring and evaluation of education

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[2] Statistics largely sourced from UIS and the database customized from UNICEF's DevInfo
[3] EAC DEVELOPMENT STRATEGY (2011/12 – 2015/16): DEEPENIING AND ACCELERATING INTEGRATIION. August 2011. EAC Secretariat

programmes and services as well as learning outcomes. Nevertheless, most EAC Member States still face several challenges in producing accurate and comprehensive education statistics. These challenges are related to institutional, organisational, human, material and technical deficits at all levels and stages. In addition, data coordination and reporting mechanisms remain weak in the context of fragmented education and training sectors involving several ministries.

EAC EMIS capacity building

Based on challenges faced by EMIS Units within the EAC region, and in an effort to revitalize the quality of education by focussing on both the learning and schooling outcomes, this EMIS capacity building strategy has been developed to establish effective mechanisms and strategies to promote EMIS development in the region. This includes creating national and regional cooperation frameworks for addressing EMIS development issues. The proposed regional statistical capacity building strategy has six main components:

1. Policy and legal framework.

2. Statistical processes and methodologies.

3. Sub-sector EMIS development.

4. Data quality improvement and coverage.

5. Resource availability, adequacy and utilization.

6. Education information reporting.

Under the EAC Secretariat's leadership, the implementation strategy will put emphasis on effective partnership, coordination and reporting mechanisms that will allow joint planning and sharing of information on programmes related to EMIS development with all stakeholders and development partners. The EAC EMIS technical committee, comprising EAC Partner States' EMIS experts, will be expected to support the regional EMIS development strategy with respect to the committee's terms of reference agreed to at the 2011 experts meeting in Kampala, Uganda.

A budget summary for implementing the EMIS capacity building strategy is shown below.

Priority Area	Budget per year (USD)					Total (USD)
	Yr1	Yr2	Yr3	Yr4	Yr5	
1. Enabling Environment for EMIS and Monitoring Development Frameworks	69,407	137,000	40,343	38,250	-	285,000
2. Resource Availability and Utilization	26,000	62,000	160,000	34,000	13,000	295,000
3. EMIS Statistical Processes	-	60,000	100,000	120,000	105,000	385,000
4. Education Information and Reporting	-	-	35,000	35,000	10,000	80,000
Yearly totals (USD)	95,407	259,000	335,343	227,250	128,000	1,045,000

The budget figures have been estimated based on the proposed activities matrix under the priority areas listed in the summary for the five-year period 2013 to 2017.

Conclusion

If education interventions and programmes cannot be measured and assessed statistically, it is almost impossible to value their costs and benefits. The African Union, through its Plan of Action for Education in the Second Decade, has put in place a framework that enables such a process to be realized for the continent. The development of EMIS – one of the key priority areas – is crucial to the success of the Plan.

This regional capacity building strategy therefore seeks to strengthen the EMIS capacity and practice in EAC based on adherence to regional norms, expressed in the Norms and Standards Assessment Framework, and international codes of practice in the production and use of quality social statistics that, among others, enhances learning outcomes. Its successful implementation shall be guided by, among others, strong leadership and effective coordination from the EAC Secretariat, commitment and support from the region's Partner States and external partners as well as the mobilization of adequate resources.

INTRODUCTION

The African Union's vision of integration, peace and prosperity in the global economy is predicated on the development of Africa's human resource capital. Education and training is therefore a key factor in achieving this vision and is supported by a number of international policy frameworks such as Education for All (EFA), Millennium Development Goals (MDGs) and the African Union's own Plan of Action for Education in the Second Decade (2006-2015). Education Management Information Systems (EMIS) is one of the eight priority areas of the AU Plan of Action. The Plan specifies that the goal of this strategic area is to "reverse the current phenomenon of 'data blanks' and facilitate planning based on sound information; enhance rigorous monitoring and evaluation of the performance of education systems".[4] At the heart of it is to establish a well-functioning and sustainable EMIS at continental, regional and national levels that also promotes better understanding of learning outcomes and assists in tackling the learning barriers.

On 20th November 2009, the East African Community (EAC) raised the profile of the education and training sector regionally with the adoption of the region's Protocol on the Establishment of the East African Community Common Market by its Partner States.[5] The Protocol commits the Partner States to undertake to, among other things, "mutually recognise the academic and professional qualifications granted, experience obtained, requirements met, licences or certifications granted, in other Partner States; and to harmonise their curricula, examinations, standards, certification and accreditation of educational and training institutions."[6] It also outlines the cooperation actions that Partner States should take to "ensure the availability of relevant, timely and reliable statistical data for describing, monitoring and evaluating all aspects of the Common Market; and for sound decision making and effective service delivery in the Common Market."[7] These include developing and adopting harmonised statistical methods, concepts, definitions and classifications for organizing statistical work while duly observing internationally accepted best practices.

The above actions are in line with the African Union's Plan of Action for Education in the Second Decade regarding the EMIS priority area. In 2011, the EAC Secretariat, through its education desk, committed itself to the AU Plan of Action's initiative on EMIS and called Partner States to a meeting in Kampala, Uganda and later Nairobi, Kenya (2012) to explore strategies to empower this management function. The Kampala meeting established an EAC EMIS Technical Committee and, taking cue from their Secretariat, Partner States called for enhanced regional networking and sharing of experiences on EMIS, timely and regular publication of statistical yearbooks and the adoption of a regional EMIS norms and standards.

Under the African Union EMIS initiative and with technical support of ADEA, EAC embarked on a series of steps to improve their Partner States' information management systems in 2012. The first initiative was to conduct an EMIS capacity assessment survey which reviewed Partner

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[4] AUC. (2006). The 2nd Decade of Education for Africa (2006-2015), p.6
[5] The Protocol was developed pursuant to the provisions of Articles 76 and 104 of the Treaty for the establishment of the East African Community
[6] Article 11 of the Protocol on the Harmonisation and Mutual Recognition of Academic and Professional Qualifications
[7] Article 41 of the Protocol, on Cooperation in Statistics

States' policies, structures, information coverage and areas of capacity development need. The findings of this assessment, validated in the Nairobi experts meeting, form the basis of the EAC Regional Capacity Building Strategy presented here. Parallel to this process, EAC Partner States have begun the process of producing an EMIS Norms and Standards Assessment Framework document, by customizing the one developed for the ECOWAS region, to ensure adherence to regional, continental and international codes of conduct in implementing EMIS. In 2013, the refined framework is expected to be submitted to EAC Ministers in charge of education and training for their validation.

METHODOLOGY

The EAC EMIS Assessment Report produced in 2012 on Partner States' policy framework, resourcing and statistical practices provides the basis for informing this statistical capacity building strategy.

The strategy has integrated elements and issues emanating from the outcomes of initiatives and country consultations that sought to determine the status of EMIS in the EAC region through an assessment survey conducted in 2012 involving four of the five Partner States and using the ECOWAS EMIS norms and standards code of practice as a guide for benchmarking regional progress in EMIS. A regional experts meeting was held in July 2012 in Nairobi, Kenya. EAC EMIS experts met to discuss and develop an EAC EMIS development roadmap and identify capacity gaps and areas of promising practices. This has led to the development of this EMIS capacity building strategy.

The strategy comprises seven chapters grouped into two main parts:

Part I: Strategic Framework which covers:

- Chapter 1 on background information on EAC vision, mission statement and its Protocol on the Establishment of an EAC Common Market;

- Chapter 2 on the conceptual framework of capacity building,

- Chapter 3 on trends in EMIS development in Africa in general as well the status of EMIS in the EAC region and finally the current initiative in EMIS in the EAC region,

- Chapter 4 on EAC EMIS assessment of Partner States and the development of a capacity development response, management, resourcing and monitoring

Part II: Plan of Action 2013-2017 which includes the goals, objectives, expected outcomes, strategies for implementation and a matrix of activities for 2013-2017.

PART 1: STRATEGIC FRAMEWORK

CHAPTER 1: EAST AFRICA COMMUNITY

About EAC

The East African Community (EAC) is the regional intergovernmental organisation of the Republics of Burundi, Kenya, Rwanda, the United Republic of Tanzania, and the Republic of Uganda, with its headquarters in Arusha, Tanzania. The Treaty for establishing EAC was signed on 30th November 1999 and entered into force on 7th July 2000 following its ratification by the original three Partner States – Kenya, Tanzania and Uganda. The Republic of Rwanda and the Republic of Burundi acceded to the EAC Treaty on 18th June 2007 and became full members of the Community with effect from 1sth July 2007.

With a surface area (including water) of 1.82 million km², the region had an estimated population of 133.1 million people in 2011, accounting for 13 per cent of sub-Saharan Africa's population. This makes it one of the least populated regional economic communities in Africa with a GDP per capita of US$ 685 and a market-price GDP of $79.2 billion.[8]

Vision and Mission

The vision of EAC is a prosperous, competitive, secure, stable and politically united East Africa. Its mission is to widen and deepen economic, political, social and cultural integration in order to improve the quality of life of the people of East Africa through increased competitiveness, value added production, trade and investments.

Objective and Core Values

The region's overarching objective is to widen and deepen co-operation among the Partner States in, among others, political, economic and social fields for their mutual benefit. This is underpinned by the core values of professionalism, accountability, transparency, teamwork, unity in diversity and allegiance to EAC ideals.

To this extent the EAC countries established a Customs Union in 2005 and a Common Market in 2010. The next phase of the integration will see the bloc enter into a Monetary Union and ultimately become a Political Federation of the East African States.

EAC Sectoral Council on Education, Sport, Culture, Science & Technology

The Council of Ministers is one of the seven organs of the Community[9] and is the main decision-making institution. It consists of the Ministers responsible for regional co-operation

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[8] Source: EAC Facts & Figures Report (2011) – accessed on 13th December at www.eac.int.

[9] In accordance with Article 9 of the EAC Treaty the EAC, the institutional framework of the Community consists of the Executive, the Legislative and the judicial arms. The Executive arm is composed of the Summit of the Heads of State (playing the broad Vision setting role), and the Council as the policy making organ, the Secretariat which is the executive organ of the Community and EAC Institutions. The Legislative and Judicial arms are made up of the East African Legislative Assembly and the East African Court of Justice respectively. The functions, mandates, and operational frameworks of these Organs and Institutions is set out in the Treaty, Protocols, and Rules of Procedures.

of each Partner State and such other Ministers as each Partner State may determine. Key among its functions is to "establish Sectoral Councils to deal with such matters that arise under the Treaty as the Council may delegate or assign to them". One of the 16 sectoral councils this body has established is on education, sport, culture, science and technology.

Under this council, the main achievements in the education sector include the production of revised criteria in indemnifying Centres of Excellence, carrying out the regional study on the harmonization of the EAC education systems and training curricula and developing protocols and bill establishing the East African Science and Technology Commission. Inadequate capacity building programmes for EAC organs, institutions, ministries and focal points; weak management information systems and monitoring and evaluation systems; inadequate mechanisms for regional collaboration and networking on research and technology development and innovations, incomplete reform and harmonization of East African education systems and lack of an institutional framework for reforming examinations, certification and accreditation are among the key challenges. Specific areas of focus for EAC over the next decade (2011–2020) include improvement of primary education and training, investment in higher education and training and the development technology, in addition to deepening and strengthening the capacity of the EAC organs and institutions. Developing and implementing a web based MIS for monitoring and following up Council and Summit Decisions and directives is one of the strategic interventions outlined in the 4th Development Strategy's action plan. This should result in easy access to online updated quality data for M&E.[10]

Introduction to the Focus of the Strategy

EAC has developed this EMIS capacity building strategy, through ADEA's Working Group on Education Management Policy Support (WGEMPS), in response to the outcome of the regional capacity assessment survey conducted in 2012 and the need to move away from the "easy to collect data" and focus on learning outcomes (without leaving access related issues). The development of the strategy is also in line with the focus areas identified under the EAC's Development Strategy for 2012-2016 and against the backdrop of a request by the EAC Secretariat's representative[11] at the AU Restricted Technical Committee meeting held in Addis Ababa, Ethiopia in December 2012.

CHAPTER 2: CONCEPTUAL FRAMEWORK

Key national sector plans and international policy agendas on development in education shape and enhance the drive for our governments to address statistical capacity and supply in their ministries. The eight Millennium Development Goals – which range from halving extreme poverty to halting the spread of HIV and AIDS and providing universal primary education, all by the target date of 2015 – form a blueprint agreed to by all the world's countries and the entire world's leading development institutions.

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[10] East African Community. (2011). EAC 4th Development Strategy (2011/12 – 2015/16): Deepening and Accelerating Integration. Arusha, Republic of Tanzania.
[11] The representative requested the AU RTC to provide on-site technical support for his office to undertake the roll out of the AU EMIS strategy.

Similarly, the Education For All goals dictate key statistical indicators that ministries of education need to monitor and assess progress on these targets.

Education For All Goals

- Expand early childhood care and education.
- Free and compulsory education of good quality by 2015.
- Promote the acquisition of life-skills by adolescents and youth.
- Expand adult literacy by 50 per cent by 2015.
- Eliminate gender disparities by 2005 and achieve gender equality in education by 2015.
- Enhance educational quality.

More recently, African countries have agreed to the African Union's Second Decade of Education which prioritizes eight areas of country action – one of which is developing capacity in Education Management Information Systems and establishing an observatory on education in Africa.

African Union's Second Decade of Education Plan of Action Priorities

- Culture and Gender
- Education Management Information Systems
- Teacher Development
- Higher Education
- Technical and Vocational Education
- Curriculum and Learning Materials
- Quality Management
- Early Childhood Development

There are also EAC's own regional policy frameworks such as the 4th Development Strategy (2012-2016) which has incorporated key priorities of the AU Plan of Action and guides and informs the implementation of EMIS activities in the region. It lists the following strategic interventions to improve the social sector:

Priority Area 2: Promotion of Education, Science and Technology for a creative and productive human resource:

- Operationalizing the East African Science and Technology Commission (EASTECO)
- Reviving and strengthening all former EAC research institutions
- Developing an EAC education sector HIV/AIDS policy and strategy
- Harmonizing E.A Education systems and training curricula
- Identifying and supporting Centres of Excellence in the region.
- Facilitating the operationalization of the EAC Common Market Protocol
- Promoting e-learning in the EAC education system.
- Facilitating the conduct of both the Tertiary and Secondary level essay writing competitions
- Collaborating with regional and international centres of higher learning
- Facilitating the collaboration with regional and international organizations

The monitoring and evaluation plans are the basis on which data collection is planned and executed. While there are various sources of data, including the EAC Secretariat, Partner State implementing Ministries and public and private sector institutions, the responsibility of ensuring that relevant data and information is collected, analysed and disseminated will be of both the EAC Secretariat and Partner States coordinating Ministries.

The figure below illustrates the principles and systems that will guide data collection, analysis, and reporting and information flow within the EAC. Standard reporting formats will be used to capture performance data.[12]

Figure 1: MIS Data/Information flow within the EAC (source - 4th EAC Development Strategy.
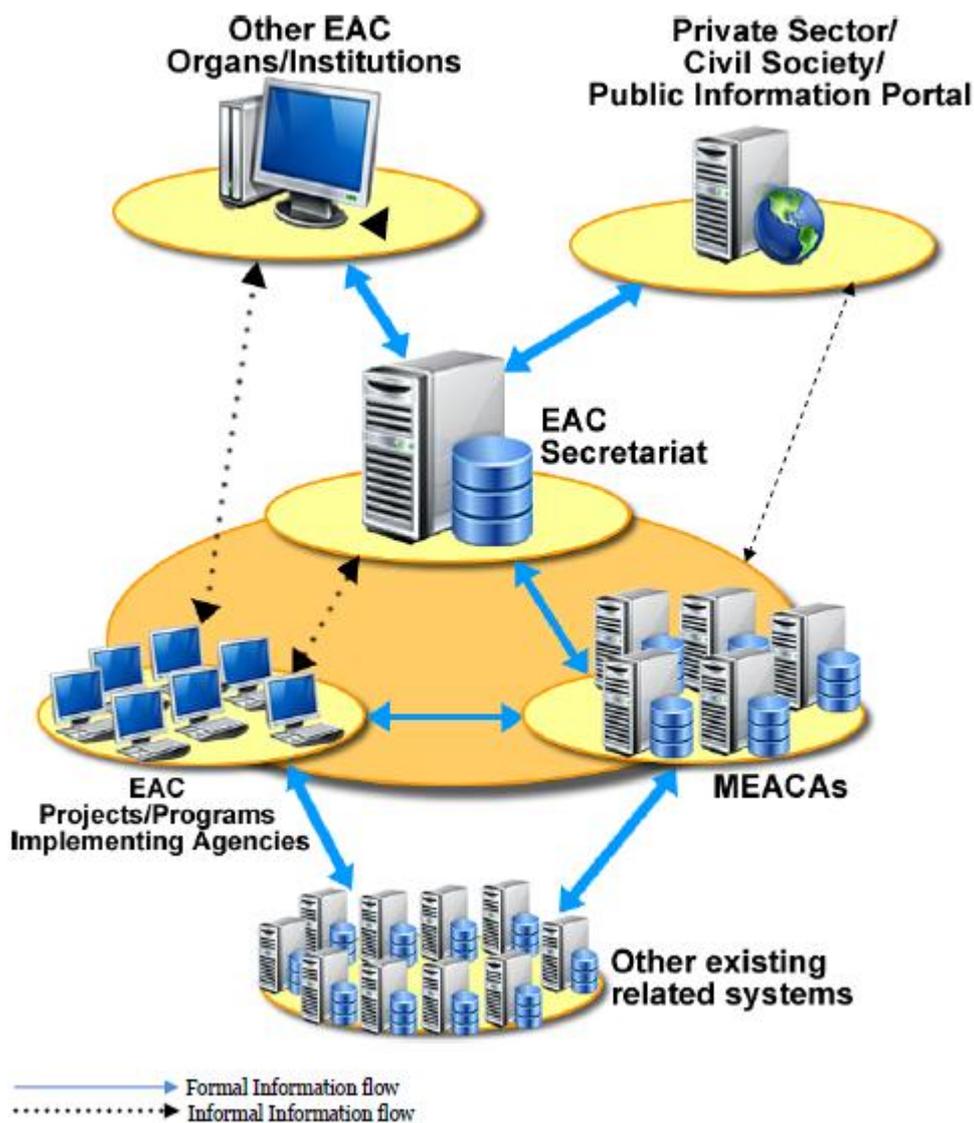
For a reformed EAC education and training sector, the ultimate outcome of these institutional systems and processes should be improved education and training quality, in terms of enhanced learning outcomes and better skilled graduates that contribute meaningfully to the region's economic growth, with intermediate outcomes being effective policy decisions that

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[12] EAC 4th Development Strategy

include decisions on schooling such as enrolment, progression, completion, retention and transitions).

Countries' development agendas are also driven by their national frameworks that outline the plans for the different sectors. EAC ministries of education, as do all regions' and continents' ministries of education, need measures and statistical indicators to monitor and evaluate their progress in implementing these various policy agendas to which they have committed themselves. This calls for the analysis of the existing capacity and the capacity building needs of EAC in EMIS and statistics.

The Role of EMIS

African governments, among other developing regions, and development partners have committed themselves to management for development results. This "results-based management" involves focusing on performance and outcomes. The results-based management approach is data intensive and predicated on the notion that there is both the capacity to demand and effectively use statistics for policy analysis and design (statistical capacity) and the national capacity to produce better statistics on a sustained basis, on a scale and time frame relevant to policy makers (statistical supply). To conclude on this point, Education Management Information Systems (EMIS) is an essential tool for processing information for the management of education resources and services[13] and monitoring learning outcomes.

> "Whether we wish to…pursue macroeconomic convergence in the region, or assess progress in achieving the Millennium Development Goals, accurate, timely, useful data lie at the heart of all these efforts… Achieving the right policies requires the management of trade-offs informed by good statistics." Trevor Manuel, Minister of Finance (South Africa), 2007.

Hua and Herstein (2003) define EMIS as an institutional service unit producing, managing and disseminating educational data and information, usually within a national Ministry or Department of Education.[14] The management functions of EMIS include collecting, storing, integrating, processing, organising, outputting and marketing educational data and statistics in a timely and reliable fashion. Undertaking these functions is an expensive affair that calls for synergies among all stakeholders.

In a culture of data-driven decision making, EMIS should also promote the use of educational data by practitioners who provide the raw data – such as school and college managers – to, for example, diagnose learning barriers at the classroom and school level using data on test scores and enrolment and attendance. Such analysis can facilitate the formulation of strategies to address such barriers. This also necessitates the creation of a system that can enable the practitioners access synthesized data or analyse data in a timely manner. One way of facilitating this is to log onto a web-based system that enables the practitioner or decision

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[13] Tung, K. C. (1999). The Role of Statistics in Policy Review: Mid-production workshop on Education for All 2000 Assessment and Sub-regional meeting on NESIS. Nyanga, Zimbabwe.

[14] Hua. H and Herstein, J. (2003). Education Management Information System (EMIS): Integrated Data and Information Systems and Their Implications In Educational Management. A paper presented at the Annual Conference of Comparative and International Education Society, New Orleans, LA, USA.

maker to input data and then run or request some analysis from the system and get the outputs for subsequent interpretation. Within the framework of the National Strategy for the Development of Statistics (NSDS), all players involved in education and training (government Ministries and departments, other non-government institutions) should collaborate and work closely with the Ministries of Education and the national statistical bureaus to make real-time data analysis a possibility. Implementation of NSDS will ensure that the data collected by other education stakeholders – such as local (ECD) and national examination bodies, health and agricultural training institutions, etc. – are incorporated into EMIS and accessed by practitioners.

Standards in EMIS development

EMIS design, development and maintenance is a complex, challenging, labour intensive and expensive undertaking that requires synergy and a balanced emphasis on policy, processes, resources and reporting issues that also integrate the aspect of quality.

Policy and legal infrastructure

- <u>Existence of policy and legal framework on EMIS</u>: Policy and legal frameworks governing EMIS significantly influence the Ministry of Education's effectiveness and credibility to produce and disseminate education statistics. The Ministry therefore needs a clear mandate to collect information from all education and training institutions and bodies for education statistical purposes.

- <u>Institutional anchoring and accountability</u>: Organisational or institutional structures influence the environment in which EMIS develops and institutions with unclear lines of accountability, redundant responsibility assignments and poor coordination and leadership hinder EMIS development. It is therefore important that the location of the EMIS unit is close to the Ministry's senior decision-makers due to its central role in underpinning policy making, educational planning, budgeting and resource allocation, monitoring, evaluation and policy research and analysis.

- <u>Cross-sectoral mandate to coordinate the collection of statistics</u>: The Ministry of Education requires data from administrations, enterprises and households, and the public at large, for education statistical purposes. In order to strengthen the coordination of EMIS activities, the mandate to request for and obtain such data should be executed by a central coordinating EMIS unit that articulates across other sub-sectors within the Ministry and liaises with other ministries to integrate the data.

- <u>Involvement in monitoring plans and frameworks</u>: EMIS plays a critical role in monitoring and evaluating a country's progress in meeting its educational obligations as outlined in the national development plans and policy frameworks and the regional, continental and international frameworks on education. For this purpose, the EMIS unit should regularly provide the requisite statistical data for all the sub-sectors of education.

- <u>Commitment to quality:</u> The Ministry of Education must commit itself to work and cooperate according to the norms fixed in the quality declaration of its national statistical systems and in other international statistical frameworks.

- Statistical confidentiality: Through appropriate protocols and provisions ensuring the security and integrity of statistical data, ministries of education must guarantee the privacy of data providers, the confidentiality of the information they provide and its use for statistical purposes only.

- Impartiality and objectivity: The Ministry of Education must produce and disseminate education statistics respecting scientific independence and in an objective, professional and transparent manner in which all users are treated equitably.

- Registration of institutions: All education institutions must register with appropriate education Ministries. An accurate and regularly updated list of all public and private institutions should be kept and be publicly available. This will facilitate the monitoring of the registration process and tracking of non-responses from the institutions.

Resource availability and utilisation

- Financing EMIS: Adequate resources and their effective use in EMIS management have a major impact on the quality of education statistics. The Ministry of Education should therefore allocate a ring-fenced percentage of its national education budget for EMIS.

- Staffing: The Ministry of Education should ensure that there are sufficiently qualified personnel in key EMIS positions with access to quality IT equipment and tools; it should promote regular staff upgrading through training programmes to ensure progress and continuity of EMIS work. There has to be a strategy in place to attract and retain specialist staff in areas of scarce skills and staff should be encouraged to attend relevant international training courses.

- Infrastructure and equipment: These relate to the type of infrastructure – availability of electricity, telephones and other communication systems – as well as equipment in place. Measures must be put in place to secure equipment (and hence the data and information) and identify the type of computers and related hardware required; how they will be used, the type of software, database and application development tools needed to use in EMIS development; and the network architecture to use and how it will be supported and maintained, etc.

Statistical processes

- Methodology and procedures as pre-requisites of quality: Sound methodology must underpin quality statistics for effective utilization of data on education. This requires appropriate statistical procedures throughout the entire statistical value chain, including consistent use of standard concepts and definitions, standardization and piloting of questionnaires, standardizing data collection procedures and using the latest survey or census population estimate to calculate education indicators.

- Improving data operations: Linking or merging data from multiple sources (finance, payroll, examinations and school census), multiple years and multiple levels (learners, teacher or school level) is an important EMIS development strategy that adds value to the management of information. Standardized data dictionaries – comprising unique

identifiers, definitions, database structures and coding schema – is one way of facilitating this process.

- Decentralization and automation: Timely production of data and information is guaranteed through an efficient EMIS cycle which can be achieved by decentralizing EMIS operations to sub-national levels, automating most of the processes in the data value chain and working closely with other national statistical units.

- Reducing respondents' burden: By constantly analysing the usage trends of education information and the user needs, it is possible to reduce the burden of reporting for respondents. Ministries of education should therefore monitor this burden and set targets for its reduction over time.

Education information reporting

- Relevance to user needs: Ministries of education should ensure that the statistics they produce are in line with the needs of the users. This entails putting in place processes to regularly consult users, monitor how they use statistics, periodically conducting user satisfaction surveys and incorporating their changing needs in education statistical publications.

- Accurate and reliable information: Education statistics must accurately and reliably portray reality. Achieving this requires the source data, intermediate results and statistical outputs to be assessed, validated and verified; sampling errors and non-sampling errors measured and systematically documented; and studies and analyzes of revisions routinely conducted and the outcomes used internally to inform statistical processes.

- Timely and punctual dissemination: For education statistics from all education and training institutions to be disseminated timely and punctually, they should be published in annual reports within a year of their collection, with the variation of this timeframe taking into account user requirements as much as possible.

- Coherent, comparable and integrated statistics: Education statistics should be consistent internally, over time, and comparable between regions and countries; it should be possible to combine and make joint use of related data from different sources. This calls for compatible databases and meta-data policies that include data dictionaries and information on how the statistics are collected and stored, among other strategies.

- Accessibility and clarity: Education statistics should be presented in a clear and understandable form, disseminated in a suitable and convenient manner, available and accessible on an impartial basis with supporting metadata and guidance. Among the strategies to facilitate this is promoting the use of educational information, establishing information desks and collecting feedback from users and producers of the information.

- Comprehensiveness of information: Education statistics and information should report on all sectors of education and training. This includes integrating information on

learners with specials needs into all national surveys and censuses and reporting the same in annual statistical publications.

Monitoring and evaluation

Monitoring and evaluation systems exist to assess what works and what does not work. Effective evaluation is based on good feedback. In an education system, a routine system evaluation must be put in place and evaluators must design sufficient indicators for this process as well-developed indicators assist in adjusting or re-adjusting the course of educational development and reform. For this reason, EMIS is a prerequisite for monitoring and evaluating activities of the sector.

Conclusion

An EMIS system is only as good as its component parts. To develop an effective EMIS system that provides all-round information-based support and decision-making necessitates having effective tools and political will. Effective policy and advocacy, technology, database tools and technical skills are necessary ingredients in achieving this. It is also important to understand the country-specific challenges while trying to develop EMIS, the above standards notwithstanding. This is because the standards have been in use in some member states that may not have a fully functional EMIS in place, while others may be facing challenges in implementing the standards. An EMIS unit needs a clear vision and must nurture a new management culture that goes beyond establishing a data and information system. The culture of data sharing, information use and organisational management must also be embraced by all. Ultimately, a national master plan on EMIS will ensure its sustainability.

Capacity building/development

Capacity building or capacity development refers to strengthening human capital with desired skills, competencies and abilities to perform a specific task, function or activities in meeting quality product delivery. The process of building human capital should also be viewed holistically at individual and institutional levels for enabling environment and conditions that enhance proper skills and competencies development.

EAC EMIS assessment findings – problems, issues and challenges within countries' education statistics production cycle – are the main inputs for developing the current Capacity Building Strategy document. The countries facing the same challenges are grouped under the same category with a specific set of activities and actions for addressing the issues underscored, with appropriate funding and with support of in-country development partners.

The EAC Secretariat will use this Strategy to develop a reliable fundraising proposal and mobilize technical expertise to address the defined and agreed needs. Partnerships and joint planning mechanisms are key to the implementation of the Strategy –all partners supporting EMIS development in the EAC region should work hand-in-hand in building a critical mass of persons skilled and competent in EMIS, jointly with the EAC Ministries of Education to produce quality education and training statistics.

GOOD PRACTICES IN EMIS

1. Focus on management and institutional issues (not IT)

"Most EMIS interventions – assessment, design, and implementation - tend to focus on technical solutions created by technical teams, and tend to overlook the organizational processes and institutional incentives that drive information use." Crouch, Mircea & Supanc, 1999

2. Focus on information usage (not production)

'Effective EMIS have specific users who demand specific data to inform decisions for which they are held accountable. . .Incentives in developing countries to use objective information tend to be weak. Other criteria (e.g. securing funding, rewarding supporters) may be more important in determining a manager or policymaker's success. Frequently, the absence of reliable data can be to the advantage of the potential user. In most cases, more information is collected than actually analyzed and applied toward decision making. EMIS reform should focus first only on information that directly informs priority decisions..." Crouch, Mircea & Supanc, 1999

3. Nurture a culture of data sharing, information use and organisational management

"The development of EMIS involves nurturing a new management culture more than establishing a data and information system. The process of data collection, integration, analysis, and dissemination is important, but even more critically, it is the culture of data sharing, information use, and organizational management that leads to the effectiveness of the EMIS development. It is important to remember that EMIS development is not IT development." Hua and Herstein 2003

4. Focus on speed (not comprehensiveness)

"EMIS systems tend to be over-designed. Systems with the highest use and down- stream adaptation tend to be simple and modest in scope. Similarly, EMIS design tends to be burdened by unrealistic expectations about the degree of precision "required" without taking into account precision's high costs." Crouch, Mircea & Supanc, 1999

5. Evolution (not revolution)

"Effective systems tend to build-off of existing databases, taking advantage of current data collection routines. Maintaining familiarity while enhancing efficiency builds early wins for a more ambitious, long term effort." Crouch, Mircea & Supanc, 1999

6. Follow sector priorities

"In summary, EMIS design and implementation needs to be informed by and responsive to Government ambitions for sector reform and planning processes and the status of policy and strategy development. . . Early EMIS implementation with a view to ongoing refinement, driven by sector priorities, allows for faster EMIS integration and trust building, rather than pre-implementation system perfection and delayed rollout." Perry and Ratcliffe, 2003

Source: R. Ellison A Practical Guide to Working with EMIS, 2002.

CHAPTER 3: TRENDS IN EMIS DEVELOPMENT

EMIS development in Africa

The general trend in EMIS development in Africa revealed that despite efforts made for reversing "data bank" phenomena underscored during the Africa Union decade, many countries are still in the **basic stage** in terms of EMIS System Capacity which features are characterised by poor statistical infrastructure, little government commitment to and/or use of data, significant gaps in national statistics and a less immediate need for internationally comparable data for national policy purposes. A positive trend has been observed for a group of countries moving toward an **intermediate EMIS system status** which are characterised by having basic data channels in place, some commitment to data use but data are fragmented across ministries; there is also a lack of efficient collaboration among data producers, problems with data coverage and relevance persist, but there is interest in cross-national benchmarks and comparisons. Finally, only few countries can be stated as self-**sustaining EMIS systems** which features are characterized by stable information systems, good links between users and producers of data, responsiveness to relevant policy issues, more complex data demands and international comparisons are widely used (cf. appendix 1).

Assessing EMIS capacity in the EAC region

The majority of the EAC countries are facing challenges within the education statistics production cycle linked to institutional, organisational, human, material and technical deficits at all levels and stages in the education information management process. Some countries have progressively moved toward a decentralized EMIS although this is only possible and effective when there are sufficient resources and person power in place. Most EAC countries lack adequate equipment and ICT infrastructure to effectively decentralize to lower levels. Many EAC countries have effective EMIS in the primary and secondary sectors, less so in pre-primary and relatively weak in the sub-sectors of tertiary, technical vocational education and non-formal education. Substantial work remains to expand and build EMIS systems to ensure countries, and the region, monitor and evaluate regional and international educational goals.

Coordination is an issue that stems from the context of fragmentation of the education and training sector into several sub-sector ministries of education, which does not enhance effectiveness of EMIS for delivering quality education statistics in the region.

The AU/EAC EMIS initiative

The first workshop for EMIS experts in EAC Partner States and development partners was held in Uganda, Kampala in December 2011. Its main purpose was to provide countries with the opportunity to share experiences on EMIS programmes and define a road map for EMIS development for the EAC region, in line with the implementation of the African Union's Plan of Action for the Second Decade of Education for Africa (2006-2015) – whose success depends, to a large extent, on having strong, harmonized and sustaining EMIS. Thus, one of the key workshop decisions was for the EAC Secretariat, with support from ADEA Working Group on Education Management and Policy Support, to undertake an assessment survey to establish the current status of EMIS in the region. In addition, the meeting set up an EAC

EMIS Technical Committee, whose terms of reference were also developed, to act as a technical advisory body on EMIS matters in the EAC region.

The second workshop, which took place in Nairobi, Kenya in July 2012, validated the findings of the EMIS Assessment survey and conducted a ranking exercise for each of country using elements drawn from the ECOWAS norms and standards assessment framework. The Partner State representatives also adopted a communiqué guiding the next steps for strengthening EMIS in the EAC region. The communiqué, which the EAC Secretariat later presented to the Ministers in charge of education and training in September 2012 in Arusha, Tanzania, includes developing a regional capacity building strategy and a norms and standards assessment framework for EMIS based on the one developed by the SADC region.[15]

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[15] The main purpose of the EMIS Norms and Standards is to have a set of criteria and measurements for advocating best practice and benchmarking countries capabilities in being able to produce relevant, accurate, timely and comprehensive education statistics and information.

CHAPTER 4: EAC EMIS ASSESSMENT FINDINGS

The majority of EAC partner states are facing institutional, organisational, human, material and technical difficulties at various levels and stages in the education statistics production process.

Enabling Environment for EMIS and Monitoring Development Frameworks

Comprehensive sector wide statistics on education and training are dependent on the existence of an enabling policy and legal environment which is set up on the basis of promoting transparency, that ensure compliance of all education institutions and sub-sectors to provide their statistics upon the request of the government, and where roles, responsibilities and obligations of all actors guarantee independence, integrity and accountability of statistical authorities. It appears that a positive relationship or correlation is associated with the quality of statistics and appropriate legal environment ensuring compliance of data producers. Thus, the absence, inadequacy or non-enforcement of regulatory and legal frameworks for information production and dissemination has an impact on the quality of education statistics, notably the low response rate on national census surveys, over- or under-reporting, inadequate coverage of all education and training institutions and subsectors, from formal to non-formal education.

Four EAC countries have some form of statutory instrument governing their educational statistical processes and requirements. Regulations on all institutions' obligation to provide information and statistics to the Ministry of Education as stipulated by the statistics law are, however, not adhered to by some schools and institutions, especially private ones, in all four surveyed countries. This is exacerbated by an apparent weak enforcement of the legislation which calls into question the comprehensiveness and quality of statistics collected. In addition, enforcement of existing legislation that makes it an illegality to intentionally over- or under-report data is weak. This affects the completeness and quality of source data. A review of existing legislation is necessary to eliminate loopholes that prevent enforcement, and new policies and legal instruments should also be developed, where none exist, to enhance compliance. It is important for EMIS to study the reasons behind the low reporting by private institutions: is it because they do not have enough motivation for supplying the data as they derive little or no benefit by doing so? Can this situation be reversed if national and regional EMIS implement strategies that emphasize on, and facilitate, the use of education and training data while highlighting potential benefits as incentive to comply with the law?

Three of the four reporting EAC countries have national policies that regulate ICT development and use, and the collection, dissemination and use of EMIS data. All report that, as part of the coordination and harmonization of statistics, national statistics institutions closely collaborate with the planning and statistics directorates of sectoral ministries which are mandated to collect information and statistics on their respective sectors from state and private institutions. The table below highlights the nature of such collaboration as reported by the four countries.

Nature and type of cooperation with the National Institutes of Statistics	
Burundi	Questionnaire reviews and the provision of data for the population projections.
Kenya	EMIS unit receives population projections from the Kenya National Bureau of Statistics (KNBS) for

	computation of indicators; the EMIS unit also shares the enrolment data with KNBS for inclusion into the statistical report and economic survey report. During census, KNBS collects education statistics which are shared and help in refining the administrative data EMIS unit collects from the learning institutions.
Tanzania	Review of questionnaire; providing figures for population projections.
Uganda	Uganda Bureau of Statistics (UBOS) and the National Statistics Office (under the Plan for National Statistical Development – PNSD) support the statistics section. Under this project, the Ministry is guided on how to improve the quality of statistics, availability and accuracy. The National Statistics Office has deployed technical person-power in the Statistics Section to this effect.

In Africa, education and training is often spread across several ministries with fragmented reporting structures and hence EMIS is not sector-wide, which reduces the effectiveness of sector-wide planning. An appropriate and strong institutional framework that coordinates and facilitates quality assurance during the production and dissemination of education statistics sector-wide is important.

Statistical directorates/EMIS units in the four EAC Partner States are closely linked to the planning and management bodies in the ministry of basic education where decisions are made regarding resource allocation, among other things. They seldom have strong institutional links with similar bodies or agencies in other ministries of education. This militates against effective sectoral planning and leads to a fragmented monitoring of various sub-sectors.

African leaders have committed themselves to meeting national, regional and international agenda such as EFA goals, MDGs and the AU Plan of Action. The four EAC countries indicated that they use data for monitoring and evaluation purposes, particularly on the implementation of continental and international frameworks. There is consensus by the EAC Partner States and other regional, continental and international players on the need for capacity building to improve the quality of data and ensure consistent and integrated education planning tools. It is noteworthy that only Tanzania and Uganda contribute, through their statistical departments, to the monitoring and evaluation of HIV and AIDS impact on education and to the education and training needs of the disadvantaged groups and those with special needs.

Resource availability and utilization

Adequate resources and their productive use in managing EMIS have a major impact on the quality and timely delivery of education statistics for supporting effective education planning processes. Essential to the appropriate functioning of a Ministry's EMIS unit is sufficient quality ICT equipment at the central and local levels with adequate resourcing to cater for the recurrent costs attributed to the maintenance of such equipment. Additionally, it is crucial to have a full complement of skilled staff members that include statisticians, programmers, IT and EMIS specialists.

The four EAC countries surveyed reported that their Ministries of Education have neither adequate equipment to perform EMIS functions nor sufficient staff members with the requisite programming, encoding and systems analysis skills to effectively execute the statistics production processes. They have, however, some computers at the central and lower levels reserved solely for use in the school census.

The provisioning of staff varies across the surveyed countries. Qualifications of staff are an indirect proxy of the skill levels found in the units. The assessment findings indicate that the total number of EMIS staff at the central level in four surveyed EAC countries range between five and 34, with the latter attributed to Uganda where there are a significant number (21) of EMIS personnel with first degrees. Burundi, at the other end of this range, has the bulk of its EMIS staff (also 34) at the provincial and lower levels, indicating that 17 of them have diplomas.

To fill some of the gaps, the four reporting countries' staffing requirements is captured in the table below. Additionally, Burundi mentioned also needing a demographist and an economist and Uganda a senior statistician and a statistical assistant.

Additional EMIS staff required (at the central level only)							
Countries	Programmer	Systems Analyst	IT person	Encoder	Data Entry Clerk	Statistician	Planner
Burundi	2	2	1	1	4	2	1
Kenya	1	1	1	1	0	2	2
Tanzania	1	2	1	0	0	2	1
Uganda	0	0	0	0	0	1	0

EMIS statistical processes

Data drives sector-wide planning and the monitoring of progress made in achieving national, regional and international goals and objectives. It starts from sound information requirements identification, through to well-designed and user-friendly data collection questionnaires regularly reviewed to meet new requirements and proper mechanisms for their distribution and collection within the entire education statistical value chain. Protocols and other international standards, guidelines and good practices must be fully observed in
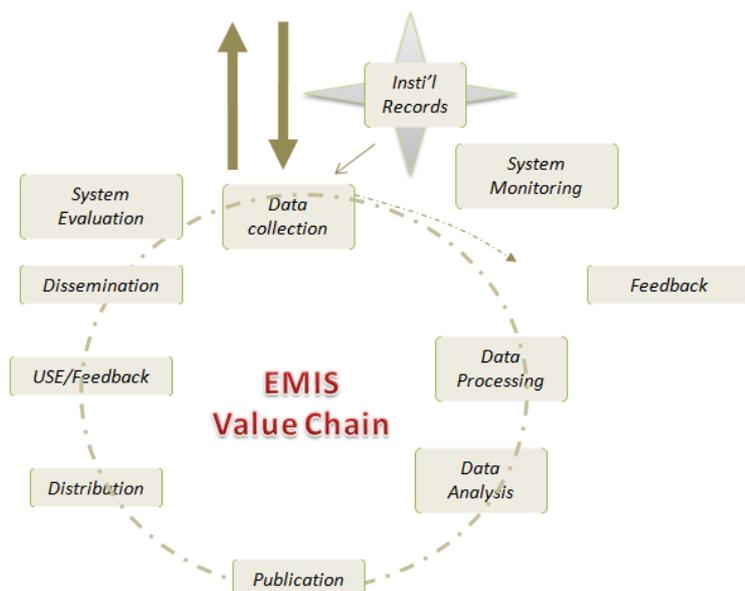
the processes used by Ministries to organize, collect, process and disseminate official statistics. The manner in which the processes are executed is crucial in determining the quality and timely production of statistics.

EMIS IT systems development: EAC countries lack sufficient resources to invest in the complete automation of their EMIS systems. Many of them still rely on manual processes, with the distribution, completion and returning of questionnaires manually executed. Data entry and analysis increasingly use ICT tools and software applications, while publication and dissemination of statistical reports employ manual and automated modes.

Education census coverage: A key feature of any high quality EMIS system is coverage of all education and training subsectors. Apart from Burundi, which reported not having a standard questionnaire for the NFE subsector, the other three reporting countries indicated that they annually survey all the levels of education, from pre-primary to NFE, using standard census questionnaires.

Content of education census: There is better coverage of learner information (enrollment by age, grade and gender as well by type of institution, learners with special needs and OVC) and teacher information (academic and professional qualifications, teaching experience, terms of employment and gender) at the basic education level compared to post-secondary and higher education levels. Monitoring of teacher attendance and learner contact time is, however, weak or non-existent in some countries – the instruments could be improved to capture this and also track the socio-demographic structure of student numbers in public and private schools. Higher education census questionnaires do not capture student enrolment by age in all the reporting countries. There is room for improvement in the monitoring of enrolment levels in areas such as African history, national history and instruction in mother tongue – which are some of the key cultural priorities of the African Union's Plan of Action. Burundi and Kenya indicated they do not collecting financial data on capital and recurrent expenditures by level of education. Generally, availability of comprehensive financial data, especially from private institutions, remains a key challenge.

Distribution of census questionnaires: the distribution of census questionnaires for all the education sub-sectors in the EAC region is currently centralized and the administering role of regional and provincial office is facilitated by the head office of the ministry of basic education. Decentralization of EMIS is, however, gradually taking place, especially in Uganda, Kenya and Tanzania, with support from development partners. This change aims to facilitate the monitoring and evaluation and decision-making on resource allocation at the lower levels.

Census questionnaire review: It is a best practice to regularly review the census questionnaires to ensure they remain relevant to users' needs. Such reviews should, however, not be too different as that makes it impossible to have time series analyses. All four countries surveyed indicated that they annually assess what the new information demands are and incorporate them into their annual surveys. In the case of Kenya, the directorates are supposed to review their specific census questionnaire and recommend any additions or removal of the specific data as their needs change.

Census production process: Sound methodologies, approaches, compliance to administrative rules and efficient statistical processes underpin the development and delivery of credible quality statistics and statistical products. This requires the use of appropriate statistical procedures, definitions and classifications of internationally acceptable practices, among others. Key challenges facing EAC countries in this context include non-integration of EMIS databases with other educational databases (including financial management and payroll information databases) and the unavailability of updated and accurate master lists of all registered public and private educational institutions. An updated directory of education institutions is essential for accurately gauging the totality of the system's education statistics. EAC partner states collect data annually for all the sub-sectors and data entry is increasingly decentralized, especially at the pre-primary and primary education levels. On average, census response rates for registered public education institutions for the primary, secondary and

TVET sub-sectors range between 81% and 100%. Response rates for registered private education institutions range from lower than 50% to between 81% and 100%. In the areas of pre-primary education, higher education and NFE, the response rate is evenly spread across the three percentage ranges (less than 50%, between 50% and 80%, and between 81% and 100%).

Education Information and Reporting

Meeting user needs is a critical requirement in delivering quality statistics. The publication and distribution of relevant education statistics needed by the main internal and external data users should be the focus of an EMIS unit. This requires the EMIS unit to comply with regional and international quality standards that include relevance, accuracy, reliability, timeliness, coherence and comparability of statistics as well as serve the needs of national institutions, governments, research institutes, business concerns, international agencies and the public in general. A system should be in place for identifying, and regularly updating information about, key users of data. It is also important to regularly consult users on their needs, monitor the relevance and practical utility of existing statistics in meeting such needs through user satisfaction surveys and advise on their emerging needs and priorities through feedback reports.

All four EAC countries have functional internet-based emailing systems, permanent internet access for their education statistical departments and functional Ministry intranets. A majority have functional intranets and websites for EMIS with trained staff to maintain these.

The culture of internally producing annual statistical year books is practiced in Burundi, Tanzania and Uganda: the three countries exclusively produced analytical reports on indicators in 2010/11, while Burundi and Uganda also developed statistical leaflets in the same year. There are, however, evidently capacity gaps in the EAC region as none of the reporting countries produced case studies or statistical newsletters and other publications in 2010/11.

EAC countries follow the international practice of identifying their data users and recording both the user requests and user feedback. This process is, however, done on an ad hoc basis with no institutionalized strategy in place. It is important to promote a culture of data utilisation for evidence-based decision making by practitioners, especially at the level of schools and other education and training institutions to monitor the learning and school/institutional outcomes as well as tracking use of resources.

Regarding financing, programs and processes for EMIS in EAC countries, these are largely funded by the national budgets, with external financial support being channeled to equipment and software purchases as well as for capacity building initiatives. The unavailability of sufficient funds for EMIS activities has severely affected the purchasing of software and equipment, undertaking of key capacity building initiatives and the publishing and dissemination of statistical reports.

Identified areas of EMIS capacity in the region

The assessment survey focussed on specific capacity building areas and the EAC countries indicated areas in which they are strong and can share promising practices and experiences,

as well as the areas that need improvement through appropriate capacity building strategies and interventions. In line with south-south cooperation, common and specific EMIS thematic areas of strength have been identified within EAC Partner States for mapping advanced countries which can provide technical expertise to support.

The areas of strength include skills and capacities in managing EMIS at the ECD, primary, secondary and TVET levels; strong management information systems for teacher education, education personnel, examinations and education finance and expenditures; functional school mapping and GIS, reliable methodology for imputing missing data and effective school records management system.

- Burundi, Tanzania and Uganda reported that they have skills and capacities in managing EMIS at the **ECD, primary, secondary and TVET** levels.
- Burundi, Kenya and Tanzania have promising management information systems in **teacher education, education personnel, examinations** and **education finance and expenditures**.
- Burundi, Kenya and Uganda also have adequate procedures in place to ensure **confidentiality** of data.
- Functional **school mapping and GIS**, promising practices in school infrastructure, reliable methodology for **imputing missing data**, capabilities to utilize education **indicators and data analysis** and effective **school records management system** (Burundi and Uganda)
- Sound capabilities to utilize **education indicators and data analysis** (Kenya and Uganda).
- Strong management information system for **NFE** (Tanzania and Uganda).

Countries reported key areas they would assess themselves as needing capacity building. Inadequate skills and experience in having effective EMIS policies and standards, inappropriate procedures for data collection and error tracking and weak models of best practice in the decentralization of information systems featured highly among the EMIS concerns of all the countries. Other significant areas of weakness include the following:

- For Burundi, Kenya and Uganda:
    - Weak mechanism for monitoring **timeliness of statistical abstract production**;
    - Ineffective strategy for **publication release and dissemination**;
    - Inadequate **user consultation** strategy;
    - Not having a strong **web design, web publication and data dissemination** model;
    - Weak strategy for **tracking non-response**;
    - Non-functional mechanism for **new indicator development** and effective **data revision policy**;
    - Non **integration of databases** such as Payroll Information or Financial Management with EMIS.
    - Weak **management information system** for culture, learner performance, quality management, nutrition and environment;

- o Inadequate strategy for **mobilizing resources for statistical services and capacity building**.
- Non-reliable methodology and model for **projections and simulations** (Burundi, Kenya, Tanzania).

Typology of EMIS needs for capacity building by country

Each country selected five key EMIS areas for capacity building, from a list of 23 in the assessment questionnaire. The countries expressed their expectations in the areas that need to be strengthened. The table below shows the countries that selected the EMIS capacity building areas that they shortlisted as their top three priority areas.

	Thematic Area	Country's Priority 1	Country's Priority 2	Country's Priority 3
1	EMIS policy and standards	Burundi, Kenya, Tanzania, Uganda		
2	Models of best practice in decentralization of information systems		Burundi, Kenya, Tanzania, Uganda	
3	Effective web design, web publication and data dissemination model			Burundi, Kenya, Uganda
4	• Strong strategy for mobilizing resources for statistical services • MIS on Higher Education, Learner performance • Reliable methodology and model for projection and simulation.	Burundi, Kenya, Tanzania, Uganda		
5	Efficient strategy for tracking non-response	Kenya, Uganda		
6	Reliable methodology for data reconciliation using secondary data sources like sample surveys		Burundi	
7	Reliable methodology for imputing missing data			Burundi

From the table above, although there is wide variation in the needs of ministries of education for capacity building, ranging from long-term technical fundamental capacities and creating enabling environments to specific methodological techniques, there is a mismatch and gaps, in some instances, between the main areas of weakness indicated and the top priority areas the countries selected or did not select, as shown in the table below.

	Thematic Area	Priority level and country
1	Weak mechanism for monitoring timeliness of statistical abstract production (Burundi, Kenya, Uganda)	None
2	Databases such as for payroll information and/or financial management not integrated with one for EMIS	None

3	Weak data collection and error tracking procedures (all four countries)	5th – Burundi, Tanzania
4	Ineffective strategy for the release and dissemination of education statistical publication (Burundi, Kenya, Uganda).	5th – the three countries
5	Inadequate strategy for user consultation (Burundi, Kenya, Uganda).	4th – Tanzania, Uganda
6	Non-functional mechanism for new indicator development and effective data revision policy	4th – Burundi

In addition, none of the countries chose strengthening their management information system for quality management and nutrition, environment, and culture (except Burundi) were not seen as immediate priorities. Tanzania did not indicate having a weakness in having a strategy for mobilizing resources for statistical capacity building, yet it is one of its top priorities. On the other hand, Burundi did not prioritize the development of a strategy for tracking non-response despite raising it as one of the country's weak EMIS areas. Tanzania and Uganda did not show that their higher education MIS were weak, yet it is among their top priority areas. Uganda also reported challenges with institutionalizing and documenting data revisions but did not see it as an immediate priority. Having a reliable methodology for imputing missing data is Burundi's third priority but the country did not indicate it as a weak area. Burdening respondents with reporting remains a challenge in the EAC Partner States but this did not come through as a significant priority area – it could also explain the low scores on relevance from the norms and standards evaluation.

In view of the above, the action plan for this capacity building has to be more encompassing, incorporating areas not necessarily covered in the top priority list and the challenges identified during the norms and standards evaluation. This should build a solid platform from which the ideal of having strong national and regional EMIS for EAC, that supports the reporting of quality education statistics, can be realised.

Conclusion

This report is an assessment of the institutional, organizational, human, material and technical capacities at all levels and stages in the EMIS cycle so as to develop a harmonized regional capacity building strategy that will advance the technical competencies of the most advanced countries while ensuring that they lend their strengths and skills to those taking their early steps. The report provides valuable information to the process of developing a regional capacity building strategy as well as the framework for monitoring adherence to EMIS norms and standards. The regional building capacity strategy will be developed on the basis of perceived strengths and weaknesses in EMIS thematic areas in the EAC region. It is envisaged that the capacity building strategy will consider interventions for strengthening these weak areas, for the EAC region.

It is hoped that the report will greatly contribute to the harmonization of EMIS systems in the EAC region and feed into activities of both the EMIS Plan on Education and the Action Plan for the implementation of the Second Decade of Education for Africa (2006-2015).

PART 2: EMIS PLAN OF ACTION (2013 – 2017)

Goal, Objectives, Expected Outcomes and Implementation

Overall goal

To develop sustainable education management information systems that support effective evidence-based planning, monitoring and evaluation of education and training delivery, with a focus on learning outcomes and skills development, to meet national and regional human resource development needs.

Objective

The Plan of Action establishes a general framework that is aimed at promoting a sustainable EMIS development within the EAC region to address the current challenges, problems and key findings identified by the EMIS capacity assessment exercise. At national levels, it will provide a reference for strategies and actions aimed at the capacity development of EMIS.

The specific objective is to improve the utilization of current and relevant education data for planning, decision making and monitoring at the national and regional levels through the development of comprehensive, integrated, compatible and functional EMIS networks for all levels of education, including non-formal education and technical and vocational skills development, within the framework of holistic, inclusive and integrated vision of education and training.

Expected outcome

By ensuring that Member States build their EMIS capabilities in terms of statistical methodologies, information dissemination, resource allocation and policy and legal frameworks on EMIS, the EAC region will be in a position to deliver systematic and sector-wide planning, monitoring and management of the education and training sector in the region.

Ultimately, the five EAC Partner States should achieve optimum levels of EMIS development using the Norms and Standards Assessment Framework as a benchmark, in terms of their statistical methodologies, the dissemination of information, the allocation of resources and the implementation of policy and legal framework on EMIS.

Implementation of the Plan of Action

The implementation of the strategy will be effected across regional and national structures under the leadership of the EAC Secretariat and, additionally, will take account of national initiatives and seek the best coordination mechanism between current national processes and the regional ones.

The Plan has been scheduled for a five year period with an activity and performance management framework to regularly assess progress on its implementation. In addition, this framework provides the means of verification, partners involved and a budget breakdown.

Management and coordination mechanisms

All EAC stakeholders involved in supporting the implementation of this EMIS Capacity Building Strategy are expected to bring their contribution within a coherent framework for effective and efficient management and coordination, with key actors' roles and responsibilities clearly identified and agreed upon in terms of technical and financial support.

EAC Secretariat

The EAC EMIS Capacity Building Strategy will be articulated at both regional and country levels. At the regional level, the EAC Secretariat, with the technical and financial support of development partners, will act as central body in the coordination of all activities focused on policy and strategy development, as well as play an advocacy role.

The Secretariat will oversee the overall implementation of the EMIS strategy on behalf of EAC Sectoral Council on Education, Culture, Sport, Science and Technology – to which the Ministers of Education and Training are members – and other stakeholders supporting the initiative. The Secretariat shall seek advice and technical guidance from the EMIS technical committee and, on a regular basis, inform the Sectoral Council and obtain political guidance and policy direction on key issues related to its implementation.

EAC Partner States

EMIS units in charge of education statistics production in collaboration with national bodies working within the framework of the National Strategy for the Development of Statistics (NSDS) are expected to effectively contribute towards managing, monitoring and reporting on the implementation of the strategy at the national level.

At the country level, within the existing EMIS development initiatives for each Partner State and based on the findings from the assessment survey jointly undertaken by EAC and the ADEA Working Group on Education Management and Policy Support, the Strategy proposes that all EAC countries assess themselves in terms of the criteria that will be defined by the regional EMIS Norms and Standards Assessment Framework – a process that should be incorporated in the country EMIS development roadmap aimed at improving the national education indicator production framework. The EAC Secretariat is charged with mobilizing the necessary technical and financial resources to peer review the country assessments.

Composition and role of the EAC EMIS technical committee

The EAC EMIS Technical Committee was created in December 2011 in Kampala, Uganda. It is composed of a Partner State expert from each of the five countries and some technical and financial partners – the African Union (AU), AU Observatories (IPED and CIEFFA), ADEA, AfDB, UNICEF, UNESCO and GIZ. The Committee meets once a year for an ordinary year. It shall, however, have extra-ordinary meetings when there is a need and upon the demand of the Partner States. The Committee is an orientation structure charged with monitoring and evaluation. Its terms of reference include the following:

- Advocate for adherence to the EMIS Norms and Standards
- Seek to harmonize EMIS across the EAC region
- Identify capacity gaps and develop inter-countries support and trainee opportunities

- Encourage sharing of good practices among Partner States
- Comply with the provisions of regional, continental and international frameworks such as the 4ᵗʰ Development Strategy, the Second Decade of Education for Africa, EFA and MDG
- Ensure standardization of education and training data
- Supply the EAC Secretariat with quality education and training data
- Report to the EAC Secretariat and the African Union Education Observatory
- Formulate recommendations to the regional decision making body
- Coordinate various programmes in the education and training sector
- Ensure coordination at country and regional levels

The EAC's key partners listed above, together with others, shall set up collaboration and partnership frameworks at institutional, technical and political level in order avoid duplication and conflict.

Resource mobilization and sustainability

An effective fundraising strategy needs to address both the regional and country level funding gaps. At the EAC Secretariat, the Sectoral Council on Education, Culture, Sport, Science and Technology should oversee the process of mobilizing resources and look at the feasibility of establishing an Education Statistics Trust Fund to support the implementation cost for the five year period of the strategy.

Monitoring and evaluation

The proposed strategy includes benchmark indicators which will monitor the implementation progress in terms of expected outputs or achievements within the agreed timeframe.

A mid-term review should be undertaken with the aim of evaluating the implementation level with regards to the expected goals and objectives in order to give an opportunity for policy makers to provide policy orientations to hand the challenges and key issues faced during the first half time-period.

In addition, periodical financial and activity reports should be produced with the EAC EMIS Technical Committee's support in order to inform the EAC Secretariat on the challenges faced by Partner States within the implementation framework of the strategy's Action Plan. Moreover, a critical outlook of regional and international framework reports on education and training – such as the AU's Plan of Action for Education in the Second Decade, Education for All (EFA), Global Monitoring Report (GMR) and UIS Global Education Digest – with a focus on EAC Partner States in terms of the provision of quality data and statistics at regional and international bodies will inform the progress made in implementing the strategy.

Schedule of activities (2013 – 2017)

Overall Goal: To improve the availability and utilization of current and relevant education data for planning, decision making and monitoring at the national and regional levels of EAC through the development of comprehensive, integrated, compatible and functional EMIS networks.

Strategic Priority Area	Identified thematic areas	Identified activities	Country	Time Y1	Y2	Y3	Y4	Y5	Performance indicator	Verification	Partners	Budget (USD)
1- Enabling Environment for EMIS and Monitoring Development Frameworks	**Objective: To have effective EMIS policies and legal frameworks which significantly influence the effectiveness and credibility of ministries of education to produce and disseminate education statistics.**											
	1.1 Advocacy for political endorsement and effective use of EAC EMIS Norms and Standards Assessment Framework	1.1.1 Customization of the Norms and Standards Assessment Framework by the EAC EMIS Technical Committee	All EAC Partner States	▓					EMIS Norms and Standards Assessment Framework validated by EAC EMIS experts and technical committee	Validation report Customized assessment framework	EAC Ministers of Education, ADEA, AfDB,	30,000
		1.1.2 Political endorsement by the EAC Ministers of Education	All EAC Partner States		▓				Official adoption of EMIS Norms and Standards Assessment Framework by EAC Ministers of Education on behalf of Partner States

Availability of a framework to support advocacy and Policy dialogue around legal mandate of Ministries of Education and Training within Education Statistics production. | Report on formal meeting of EAC Ministers of Education indicating official adoption | | 40,000 |

Strategic Priority Area	Identified thematic areas	Identified activities	Country	Y1	Y2	Y3	Y4	Y5	Performance indicator	Verification	Partners	Budget (USD)
		1.1.3 Publication and dissemination of EAC Norms and Standards Assessment Framework	All EAC Partner States		■				100 copies of EAC EMIS Norms and Standards Assessment framework printed Number of countries where EAC EMIS Norms and Standards Assessment framework disseminated	Reports showing availability, accessibility and tracking of effective use of EAC EMIS Norms and Standards Assessment Framework within the Ministry of Education's Statistics production process		10,000
		1.1.4 Higher level advocacy for national adoption and effective use of regional Norms and Standards	All EAC Partner States		■				At least 80 per cent of EAC Partner States have adopted the EMIS Norms and Standards	Documents indicating the degree of adoption: e.g. a percentage of the norms and standards integrated in the annual work plans.		5,000
		1.1.5 Advocacy for strengthening EMIS policy and legal frameworks to decision-makers - Facilitate the development of sector-wide coverage to include all sectors in the EMIS policy including TVET, NFE and Higher Education	All EAC Partner States		■	■	■	■	Percentage of EAC Partner States effectively using EMIS policy and legal frameworks Census questionnaire return rate for all sectors improved (including NFE and TVET) Questionnaire return rate for private institutions improved Proportion of EAC Partner States (80%) having a coherent EMIS policy covering all the sub-sectors	Annual School Census (ASC) reports showing increments in the number of reporting schools , especially private ones, accurate and updated master lists, timely publication and release of ASC report	EAC Secretariat ADEA AfDB	50,000

Strategic Priority Area	Identified thematic areas	Identified activities	Country	Y1	Y2	Y3	Y4	Y5	Performance indicator	Verification	Partners	Budget (USD)
	1.2 Periodic assessment of EAC EMIS policy development level or status	1.2.1 Regular assessment of EAC Partner States' EMIS policy to track conformity to regional and international standards – Norms and Standards Assessment Framework	All EAC Partner States		■	■	■	■	Percentage of countries assessed by the EAC Norms and Standards Periodic national team assessment reports produced Availability of policy briefs on the status of implementation of the Norms and Standards every two years.	Assessment reports disseminated and recommendations discussed and incorporated in national EMIS work plan EMIS policy briefs produced	EAC Partner States	10,000
		1.2.2 Peer Review exercise : Specific technical assistance provided by EAC Peer EMIS Experts to assess country EMIS policy development 1.2.3 EAC countries under take data quality assessment based on UIS DQAF analysis	All EAC Partner States		■	■	■	■	Number of Countries have had a peer assessment of EAC EMIS Norms and Standards EAC Secretariat issues quality assurance standards of country and peer reviews of the assessments - EAC Secretariat reports progress to Ministers.	Peer Review Assessment reports EAC Ministers of Education are updated on EMIS rankings of partner states. DQAF reports	ECOWAS EMIS experts, ECOWAS Secretariat, ADEA, UIS, AfDB	45,000
	1.3 Educational and training data collection mandate for the Ministry of Education	1.3.1 Advocacy for clarity in the mandate of Ministry of Education to collect data from all institutions and bodies offering education and training for statistical	All EAC Partner States		■				Increased coverage and reporting of all registered education and training institutions (formal and non-formal) in the public and private sectors.	Annual EMIS school/institutional census reports Statistical newsletters Case study reports		5,000

Strategic Priority Area	Identified thematic areas	Identified activities	Country	Time					Performance indicator	Verification	Partners	Budget (USD)
				Y1	Y2	Y3	Y4	Y5				
		purposes.			█							
	1.4 Mandate to Coordinate EMIS processes	1.4.1 Develop an effective mechanism for monitoring timeliness in the production of the annual statistical abstract/yearbook - Develop an EMIS work plan with an agreed calendar of activities and timelines - Develop effective M&E mechanisms for timely delivery of statistical outputs- - Develop an efficient model of providing immediate statistical feedback to education data providers	All EAC Partner States			█	█	█	Improved production and delivery of annual statistical abstract or reports for all levels of education. Produce various profile reports for feedback to lower levels – regions, districts and schools e.g. school report card.	Monitoring reports showing adherence to set schedule. Users' feedback revealing timely delivery of reports. Statistical reports are produced for TVET, NFE and Higher Education from all EAC countries.		50,000

Strategic Priority Area	Identified thematic areas	Identified activities	Country	Time					Performance indicator	Verification	Partners	Budget (USD)
				Y1	Y2	Y3	Y4	Y5				
	1.5 Coordination and collaboration mechanism that ensure comprehensive integration of sector wide education statistics	1.5.1 Establish inter-ministerial coordination mechanisms to manage the fragmentation within the education sector Enhance collaboration between ministries of education and central and national statistical offices) within sub-sectoral EMIS units	All EAC Partner States			▓	▓	▓	Technical coordination mechanism established and functional at ministerial and sub-sector levels Inter-sectoral collaboration mechanism established– e.g. through an MOU / agreement between EMIS and National Strategy for the Development of Statistics (NSDS) framework Reduced number of inconsistencies (less than 5% variation) in the statistics databases between the MoE and CSO/NSO Improved quality of annual EMIS reports.	High level meeting of key statistical producer institutions in the education and training sector Report by UIS on the quality of data transmitted by countries Reports indicating areas of increased collaboration and cooperation within the education statistics production process Reports showing trends of increased level of usage of EMIS reports (proxy for improved confidence in the quality of statistics from EMIS)	CSO/NSO ; AfDB	40,000
Sub total 1												**285,000**
2. Resource availability and utilization	Objective: To put in place strategies that ensure availability of adequate resources and their effective use in managing EMIS.											
	2.1 Strong strategy for mobilizing resources for statistical services	2.1.1 Advocate for national ring-fenced funding allocation (e.g. line budget) for EMIS, including infrastructure and equipment in the	All EAC Partner States		▓	▓	▓	▓	• At least four EAC Partner States have a ring-fenced funding allocation for EMIS • Improved resourcing for EMIS	• Education finance reports		90,000

Strategic Priority Area	Identified thematic areas	Identified activities	Country	Y1	Y2	Y3	Y4	Y5	Performance indicator	Verification	Partners	Budget (USD)
		education budget			▓	▓	▓	▓	• Increased role of EMIS in planning and monitoring - Proportion of budget allocated to EMIS functions expected			
		2.1.2 Undertake research on the minimum level of resourcing for a functioning EMIS	All EAC Partner States		▓	▓	▓	▓	Policy brief developed and disseminated to Ministers	Policy brief Delivery and acknowledgment reports		10,000
	2.2 Adequate resources in equipment for EMIS	2.2.1 Develop advocacy and resource mobilization strategies for the procurement of equipment and put in place adequate infrastructure for EMIS	All EAC Partner States		▓	▓	▓	▓	At least 4 EAC Partner States have developed resource mobilization strategies	EMIS strategy reports Planning and Financial reports		60,000
		2.3.2 Advocate for timely release of financial and human resources for statistics production	All EAC Partner States			▓	▓	▓	Availability of funding to ensure a smooth implementation of the national education census cycle.	Report on financial disbursements for, and staff involved in, statistics production		25,000
		2.3.3 Capacity building on use of EMIS to monitor and evaluate HIV and AIDS impact on education, needs of disadvantaged and special needs groups	Kenya, Burundi, Rwanda			▓	▓		Increased M&E of HIV and AIDS impact on education, needs of disadvantaged and special needs groups Number staff trained.	Statistics outputs with improved analytical coverage on HIV and AIDS impact on education, needs of disadvantaged and special needs groups Workshop/training reports		20,000

Strategic Priority Area	Identified thematic areas	Identified activities	Country	Time Y1	Y2	Y3	Y4	Y5	Performance indicator	Verification	Partners	Budget (USD)
		2.3.4 Capacity building on reporting financial data	All EAC Partner States			■			Improved data coverage with regards to education finance data in four countries Number of staff trained on financial data reporting	EMIS reports Workshop/training reports		10,000
		2.3.5 Build the capacity of EMIS staff in web design, online publication and dissemination of statistical data and information	All EAC Partner States		■	■	■	■	Number of staff trained on web design and maintenance, online data publication and dissemination Increased availability of updated and quality education and training statistical data and information online in at least 3 countries	Workshop/training reports User online accessibility and feedback reports.	AFDB, GIZ BACKUP, ADEA and UIS	50,000
	2.4 Include adequate career development strategy for EMIS staff in EMIS policy	2.4.1 Review and modify existing MoE policy 2.4.2 Advocate for the recruitment of additional EMIS staff in programming, planning, systems analysis, statistics, demography, IT and encoding	All EAC Partner States		■				At least 60% of the countries have reviewed or developed policies addressing the career development for EMIS staff At least 50% of the staff in the relevant areas have been recruited. Reduced engagement of external consultants in these areas/reduced workload on existing staff	New or revised policy documents Register of EMIS personnel. Staff performance evaluation reports		5,000

Strategic Priority Area	Identified thematic areas	Identified activities	Country	Time					Performance indicator	Verification	Partners	Budget (USD)
				Y1	Y2	Y3	Y4	Y5				
	2.5 Models of best practice in decentralization of information systems.	2.5.1 Develop a strategy for putting in place effective decentralized EMIS at the lower levels of governance	All EAC Partner States		▓	▓			Other sectors are integrating best practices on decentralization Synchronized data collection system across levels Improved EMIS work in other sectors and at the lower administration levels Revised/improved structure and coordination within the decentralization process Improved information systems at decentralized levels	Comprehensive ASC reports Reports on resource allocation Reports showing enhanced sectoral and lower level inputs. Decentralization status reports		25,000
Sub total 2												**295,000**
3. EMIS Statistical Processes	**Objective: To improve the credibility of education statistics through well-managed and efficient statistical processes that fully observe EAC's Education Development Strategy, other international standards, guidelines and good practices in the EMIS cycle**											
	3.1 Methodological approaches for a sound education statistics production cycle:	3.1.1 Training on methodological approaches and procedures for EMIS processes (including projection and simulation models, tracking non-response, revision policies for data that is already published,	All EAC Partner States	▓	▓	▓			Number of trained EMIS Experts on best practice for improving EMIS processes Increased proportion of EAC Partner States with harmonized and standardized data collection instruments for TVET, NFE and	Reports of best practices and strategies for improving EMIS disseminated Data collection tools developed. Reports showing effective usage of projection and simulation methodologies in the statistics production	ADEA, AfDB, UIS, GIZ BACKUP	150,000

Strategic Priority Area	Identified thematic areas	Identified activities	Country	Y1	Y2	Y3	Y4	Y5	Performance indicator	Verification	Partners	Budget (USD)
		imputing missing data, verification processes for the annual school census and error tracking mechanisms at various levels and data reconciliation using secondary data sources), including skills Develop skills in developing new indicators and data analysis. Put in place an effective strategy for linking EMIS with external/complementary databases such as finance, examination and personnel							higher education Improved cycle and quality of reporting as exhibited in the annual statistical reports. Number of EMIS best practices produced or used within the EAC region At least 80% of the countries have an effective data revision policy At least 80 % of the countries having a documented model for imputing missing data Methodologies for data collection and error tracking used Sound and reliable methodology for data reconciliation used Effective mechanism for recording user requests and/or feedbacks in place Annual EMIS reports are comprehensive in data coverage	process Methodologies clearly defined or reflected in EMIS / statistical reports Availability of coherent and reliable statistics meeting norms and standards Statistic reports or outputs showing effective estimation of missing data Regular committee reports on prioritized user needs ASC reports show constant revision in response to the changing user needs. Evaluation reports		
	3.2 Strong school records	3.2.1 Build capacity to develop a strong	Kenya, Rwanda						Standardized School and Tertiary Records	Evaluation reports of schools and institutions.	ADEA, GIZ-	

Strategic Priority Area	Identified thematic areas	Identified activities	Country	Time					Performance indicator	Verification	Partners	Budget (USD)
				Y1	Y2	Y3	Y4	Y5				
	management system	school and tertiary records management systems.

3.2.2. Advocate for the use of ICT equipment at school level. | | | | | | | Management System contributing to improved data quality at the national level

Proportion of schools with aligned information definitions across school/education institution, district and levels.

Proportion of functional ICT equipment and records databases at schools/institutional level

Improved return rate of school census questionnaires to between 81% and 100% for private schools | Various reports on the implementation of the norms and standards. | BACKUP | 80,000 |
| | 3.3 Reinforce EMIS in the education and training sub-sectors | 3.3.1 Strengthen the capacity of staff involved in EMIS in the various subsectors, in particular those in sub-sectors outside formal schooling. | All EAC Partner States | | | | | | Data available for all education sub-sectors.

Number of EMIS staff trained | Training reports

Monitoring reports for national plans and international frameworks use EMIS data | ADEA UIS and BACKUP | 30,000 |

Strategic Priority Area	Identified thematic areas	Identified activities	Country	Time Y1	Y2	Y3	Y4	Y5	Performance indicator	Verification	Partners	Budget (USD)
		3.3.2 Enhance the integration of EMIS in the areas or sub-sectors of higher education, culture, learner performance, quality management, school environment and nutrition.	Burundi, Kenya, Uganda		▓	▓	▓	▓	Reports submitted to regional (EAC), continental (AU) and global (EFA, UIS) frameworks show improvement data coverage in these areas Data collection instruments developed or revised for the sub-sectors concerned.	Regional, continental and global reports from the countries concerned Evaluation reports on data collection instruments	Commonwealth of Learning, UIS, UNESCO, ADEA, GIZ, AU, RECs, AfDB, UNICEF,	100,000
	3.4 Integrated Financial Management Information System on Education	3.4.1 Strengthen the capacity of EMIS staff to produce and disseminate statistics on Education Finance	All EAC Partner States		▓	▓	▓	▓	Data coverage includes information on education finance statistics Increased availability and use of education finance statistics for planning - Percentage of EAC countries that regularly complete UIS B questionnaire. - High levels of correspondence between EMIS and Finance departments.	MTEF or other financial technical reports	IIEP, UIS, AFDB, AU Statistics, UNECA, National Statistics Offices and Training Institutes	25,000
Sub total 3												**385,000**

Strategic Priority Area	Identified thematic areas	Identified activities	Country	Time					Performance indicator	Verification	Partners	Budget (USD)
				Y1	Y2	Y3	Y4	Y5				
4. Education information and reporting	**Objective: To publish and disseminate education statistics that comply with national, regional and international quality standards as well as serving the needs of African institutions, governments, research institutions, business concerns and the public in general.**											
	4.1 Effective publication release and dissemination strategy	4.1.1 Review or develop a policy and strategy on publication release and dissemination	Burundi, Kenya, Uganda			■	■		Clear standards and guidelines for frequency of release and release dates developed Countries have reduced publication time Countries have increased the diversity of their modes of dissemination	Publication release and dissemination follow laid down standards and guidelines Paper and electronic copies (CD-ROMs and/or online publishing) available		10,000
	4.2 Effective strategy for user consultation	4.2.1 Undertake regular user satisfaction surveys and other methods	All EAC Partner States			■	■		At least 3 countries have improved their questionnaires based on the outcomes of the user satisfaction surveys or consultations	User satisfaction survey reports or meeting reports Questionnaire review reports		50,000
	4.3 Procedures in place to ensure accuracy, reliability and relevance	4.1.1 Share experiences and adapt best practices from countries with sound standards covering these data quality dimensions	All EAC Partner States		■				Countries have improved mechanisms for data accuracy, reliability and relevance	Reports showing increased usage/consultation of EMIS data.		20,000
Sub total 4												**80,000**
Total budget												**1,080,000**

Budget

Priority Area	Budget per year (USD)					Total (USD)
	Yr1	Yr2	Yr3	Yr4	Yr5	
5. Enabling Environment for EMIS and Monitoring Development Frameworks	69,407	137,000	40,343	38,250	-	285,000
6. Resource Availability and Utilization	26,000	62,000	160,000	34,000	13,000	295,000
7. EMIS Statistical Processes	-	60,000	100,000	120,000	105,000	385,000
8. Education Information and Reporting	-	-	35,000	35,000	10,000	80,000
Yearly totals (USD)	95,407	259,000	335,343	227,250	128,000	1,045,000

The budget figures have been estimated based on the proposed activities matrix under the priority areas listed in the summary for the five year period between 2013 and 2017. Quantification of the financial requirements has considered the following:

- Number of participating Member States and the likely number of staff
- Likely location and type of activity
- Training and learning material – preparation, production and translation
- Resource personnel

CONCLUSION

The success of the implementation of the proposed EMIS Capacity Building Strategy will depend on not only effective coordination of the key stakeholders, in particular the role played by the EAC Secretariat in managing this, but that of mobilizing adequate resources to allow implementation. There is a role for not only external development partners but also Partner States to provide the necessary support and commitment to the process of enhancing the quality and scope of education statistics in the region. If education interventions and programs cannot be measured and assessed statistically, it is almost impossible to value their costs and benefits.

This regional capacity building strategy is looking to strengthen country EMIS capacity and practice based on adherence to regional and international codes of practice and standards with regards to social statistics production in general and EMIS in particular.

APPENDICES

Appendix 1: Typology of EMIS capacity

BASIC EMIS SYSTEMS	INTERMEDIATE SYSTEMS	SELF-SUSTAINING SYSTEMS
Poor statistical infrastructure	Highly centralized statistical infrastructure with some decentralization to lower levels (e.g. provinces, regions, districts) with basic data channels in place	Extensive and stable statistical infrastructure at head office and lower levels that functions relatively effectively.
Little government commitment to and/or use of data	Some government commitment to and/or use of data	High government commitment to and/or use of data
Significant gaps in national statistics, even at Basic Education levels (primary, secondary, pre-primary)	Annual statistics on Basic Education are regularly collected (primary and secondary levels) with some significant gaps in other sub-sectors (pre-primary, tertiary, technical and vocational education, non-formal)	Reasonable statistical coverage of most education sub-sectors.
Data is fragmented across ministries and there is a lack of efficient collaboration among data producers. Data needs of users are sometimes considered	Data fragmented across ministries and lack of efficient collaboration among data producers. Within subsectors data needs of users are reviewed and taken into consideration by EMIS	Good links between users and producers of data. Data needs of users are regularly reviewed.
Problems with obtaining annual statistics on all Basic Education schools (public and private)	Problems with the coverage of all schools persist.	There is good census coverage of all education institutions (public and private)
The relevance of the data collected to policy, planning and budgeting is not clear. Data is often not timely or accurate enough. Census turn-around times can cover more than one year.	Data relevance and responsiveness problems persist. The EMIS cycle can take more than one year turn-around time from questionnaire dissemination to publishing an annual statistical report.	EMIS data is critical to policy, planning and budgeting processes at all levels of the Ministry. Complex data demands are made. Problems with timeliness and relevance persist.
A less immediate need for internationally comparable data for national policy.	There is interest in cross-national benchmarks and comparisons.	International comparison is widely used.