

ACKNOWLEDGEMENTS

This manual was produced on behalf of the East African Community (EAC) by an African Union restricted technical committee made up of experts in Education Management Information Systems (EMIS) from the EAC partner states of Burundi, Kenya, Rwanda, Tanzania and Uganda with the technical support of the ADEA Working Group on Education Management and Policy Support (WGEMPS) under the guidance of Angela Arnott. In addition, we would like to recognize the valuable contributions and support from Mr Aloysius Chebet, Senior Education Officer of the EAC Secretariat, and representatives of the Central Statistics Offices of the partner countries.

Within the context of the harmonization of EMIS in Africa, and in line with the EMIS integration process in EAC, this manual follows the same framework as those that have been developed in other regional economic communities (RECs) of the African Union.

March 2014

PREFACE

A key challenge facing the EAC region's ability to report on its human resource development achievements and challenges is information gaps or "data blanks". In some instances, this is a problem of inadequate data coverage of all education institutions (both public and private) and all sub-sectors within the education system. In other instances, this concerns the structural arrangements for the management of education, characterized by the absence of a policy and norms and standards for the management of education information. Some countries have more than one government Ministry responsible for education and training. Consequently, each Ministry collects its own data and information. Issues of duplication, varying definitions and poor national coordination of sector-wide data arise, thereby affecting the quality and availability of education statistics. These issues are compounded when comparisons of education indicators are made across countries. As a result, few Partner States report comprehensively on all the required global education indicators. This tends to lead to a number of problems in monitoring and evaluating the performance of an education and training sector within countries and across the region.

Ministers of education in the EAC region have placed importance on harmonized education and training systems, in line with the overall regional integration agenda, by prioritizing EMIS to facilitate effective sectoral planning and policy making based on sound information and rigorous monitoring and evaluation of the performance of education systems. To ensure that all partner countries are able to effectively report on all sets of statistics and indicators and to ensure cross-country comparison, a minimum set of norms and standards intended to guide countries in developing or improving national EMIS is essential. In addition, these norms are intended to facilitate harmonization of education management information systems to contribute towards the development of regional and continental EMIS networks.

There are 17 minimum Norms and Standards in the manual, covering policy and legal frameworks, resource availability and utilization, statistical processes, and education information reports. The aim is to assist EAC partner countries in improving the production of education statistics on a regular basis. It also aims to facilitate capacity-building within the Central Statistics Offices and the Departments of Research and Planning of Ministries responsible for education, support better coordination of education statistics, and provide governments and technical and financial partners with a harmonized and solid statistics framework for the planning, financing and development of education policies.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS.....	1
PREFACE	2
ACRONYMS.....	5
DEFINITION OF STATISTICAL TERMS.....	6
1. INTRODUCTION	8
2. PURPOSE OF THE NORMS AND STANDARDS	9
3. QUALITY OF STATISTICS	10
4. USING THE ASSESSMENT FRAMEWORK.	11
Steps to follow in scoring country performance:.....	12
The Process of Engagement.....	13
5. LIMITATIONS OF THE ASSESSMENT FRAMEWORK.....	14
6. THE EMIS NORMS AND STANDARDS ASSESSMENT FRAMEWORK.	15
A. Policy and Legal Framework.....	15
NORM 1. MANDATE FOR DATA COLLECTION FOR THE EDUCATION SECTOR	16
NORM 2: QUALITY COMMITMENT	21
NORM 3: STATISTICAL CONFIDENTIALITY	23
NORM 4: ACCOUNTABILITY TERMS OF THE PRODUCTION AND PUBLICATION OF STATISTICAL REPORTS.....	25
NORM 5: IMPARTIALITY AND OBJECTIVITY.....	27
NORM 6: REGISTRATION OF INSTITUTIONS.....	29
NORM 7: REGISTRATION OF LEARNERS.....	30
B. Resources Availability and Utilization.....	31
NORM 8: ADEQUATE RESOURCES.....	31
NORM 9: COST EFFECTIVENESS.....	35
C. Statistical Processes	36
NORM 10: SOUND METHODOLOGY AND APPROPRIATE STATISTICAL PROCEDURES	36
NORM 11: NON-EXCESSIVE BURDEN ON RESPONDENTS	40
D. Education Information Reporting.....	43
NORM 12: RELEVANCE	43
NORM 13: ACCURACY AND RELIABILITY.....	47
NORM 14: TIMELINESS AND PUNCTUALITY	50
NORM 15: COHERENCE, CONSISTENCY, COMPARABILITY AND INTEGRATION	52
NORM 16: ACCESSIBILITY AND CLARITY.....	54

NORM 17: COMPREHENSIVENESS	56
ANNEXURE A: SCORING MATRIX.....	52
ANNEXURE B: EXTERNAL PEER RATING TEAM AND COUNTRY SCORING MATRIX.....	53
REFERENCES.....	54

ACRONYMS

ADB	African Development Bank
ADEA	Association for the Development of Education in Africa
AU	African Union
CIEFFA	African Union International Centre for Girls' and Women's Education in Africa
CSO	Central Statistics Office
DQAF	Diagnostic Quality Assessment Framework
EAC	East African Community
ENSAT	EMIS Norms and Standards Assessment Team
EMIS	Education Management Information Systems
GIS	Geographic Information Systems
ICT	Information and Communication Technology
ISCED	International Standard Classification system of Education
MDGs	United Nations Millennium Development Goals
MoE	Ministry of Education
MoU	Memorandum of Understanding
NESIS	National Education Statistical Information Systems
NFE	Non Formal Education
NSO	National Statistics Office
OECD	Organization for Economic Cooperation and Development
OVCs	Orphans and Vulnerable Children
REC	Regional Economic Community
TVET	Technical and Vocational Education and Training
UIS	UNESCO Institute for Statistics
UN	United Nations
WGEMPS	ADEA Working Group in Education Management and Policy Support
WGNFE	ADEA Working Group on Non Formal Education

DEFINITION OF STATISTICAL TERMS

1. **Administrative Data**- The set of units and data derived from an administrative source.
2. **Administrative sources** – The organizational units within a country that are responsible for implementing an administrative regulation (or group of regulations), for which the corresponding register of units and the transactions are viewed as a certified source of information and statistical data.
3. **Aggregated data** – The result of transforming unit level data into quantitative measures for a set of characteristics of a population.
4. **Benchmark**- A recognized standard, or a reference point, that forms the basis for assessment or comparison.
5. **Data Dictionary** – Refers to centralized repository of information about data such as meaning, relationships to other data, origin, usage, and format standardized concepts, definitions and classifications used by Ministries in the production of their data.
6. **Data providers** – Refers to all bodies and agencies that produce statistics. These include education and training institutions, households, enterprises, administrations and other respondents.
7. **Coherence** – The degree of validity, accuracy, usability and integrity of data, successfully brought together with other data within a broad analytical framework and over time.
8. **Education and training institutions** – Refers to schools, colleges, universities, centres or any formal and non-formal education and training provider that occupies an institution and provides a recognized education programme.
9. **EMIS** – Refers to a System for collection, processing, analysis, publication, dissemination, and rendering of Information services for the Management of Educational resources and services.
10. **Guidelines** – Directions or principles used in the development, maintenance and application of rules. They may or may not be mandatory, but are provided as an aid to interpretation and use of rules.
11. **Imputation** – Refers to the process of identifying missing data, generally used for the correction of partial non-response from a census or a survey, to adjust or modify the data accordingly.
12. **Individuality** – A single person or institution.
13. **Learner** – Refers to any pupil or student or person enrolled in an education and training programme.
14. **Metadata** – Information on the underlying concepts, definitions, and classifications

used, the methodology of data collection and processing, and indicators or measures of accuracy of the statistical information.

15. **Ministry of Education** – The singular term “Ministry of Education” is used synonymously with its plural form “Ministries of Education” to include all those government Ministries responsible for the various levels of education and training in a country.
16. **Protocols** – A set of guidelines or rules.
17. **Preliminary data** – Results that have not been verified sufficiently to be published.
18. **Scope** – Coverage or sphere of what is to be observed. It is the total membership or population of a defined set of people objects or events.
19. **Statistical authority** – Shall mean, at national level, the national or central statistical office (NSO/CSO, NSDS) and other statistical bodies in charge of producing and disseminating African statistics according to a statistical law.
20. **Statistical Value Chain** – Refers to the statistical process from the source of data to the final statistical output. For example, it concerns the collection of information in school records, the compilation of an annual census survey, the collection and verification at lower levels of governance (circuit, district, regional, provincial), the inputting of the data, the data cleaning and imputation and the generation of statistical tables and reports.
21. **Secondary data** – Refers to data collected by someone other than the user. Examples are data obtained from research, studies and surveys produced outside of the Ministry of Education.
22. **Special needs** – Refers to learners under difficult conditions that are vulnerable, marginalized and/or with disability.
23. **Structures** – Refers to various sub-units of the Ministry responsible for education administration by area of specialization and geographic distribution.
24. **Sub-Sectors** – Pre-primary education, primary education, secondary education, technical and vocational education and training, teacher training education, non-formal education, and higher and tertiary education.
25. **Validity** – Correctness and reasonableness of data - findings truly represent the phenomenon you are claiming to measure.
26. **Verification** – The process whereby data accuracy and inconsistencies are checked.

1. INTRODUCTION

The availability of effective country capacities in Education Management Information Systems (EMIS) is one of the priority areas in the EAC's 4th Development Strategy (2011-2016) and the African Union's (AU's) Plan of Action for the Second Decade of Education for Africa. The region's Strategy gives the development and harmonization of regional statistics a specific priority (Priority Area 7) and interventions include harmonizing statistical procedures and practices and establishing the EAC Statistics Bureau. 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, analyzed and disseminated will be of both the EAC Secretariat and Partner States Coordinating Ministries."

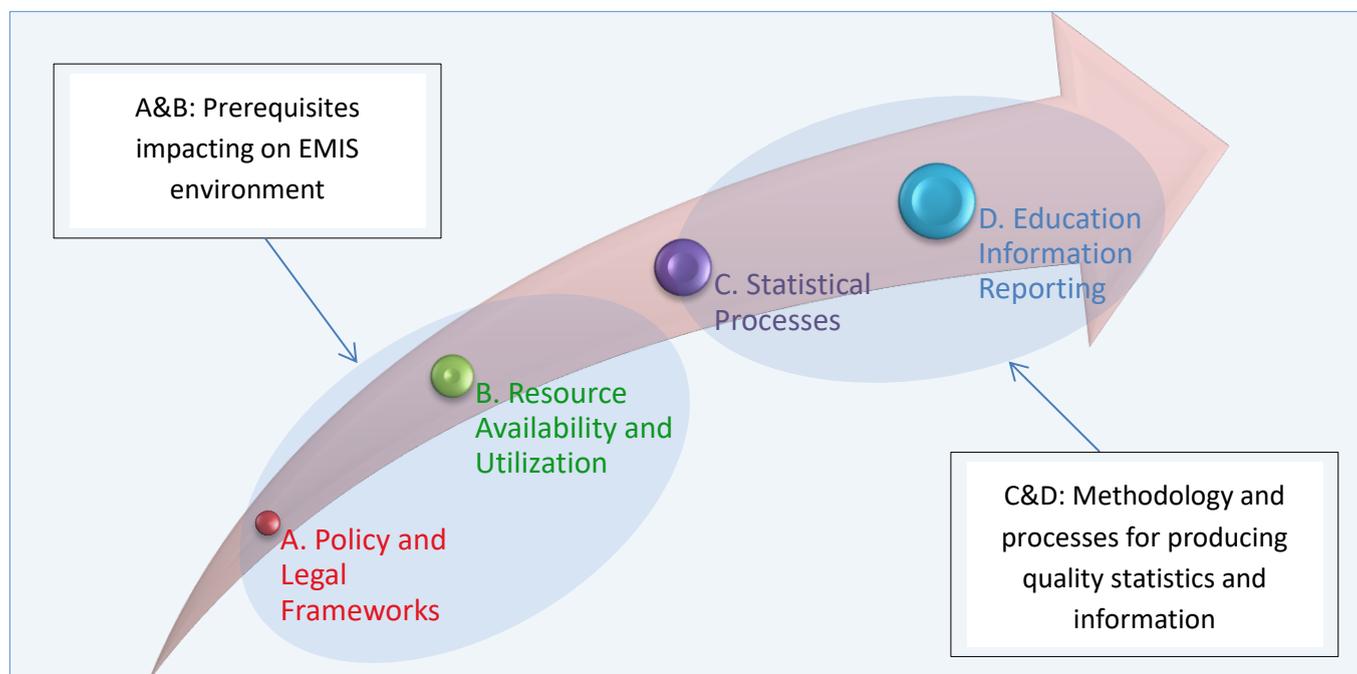
Like their other counterparts, most EAC Partner States still face several challenges in producing accurate and comprehensive education statistics. These challenges are related to policy, institutional, organizational, human, material and technical deficits at all levels and stages. In addition, data coordination and reporting mechanisms remain weak in the context of fragmented education and training sectors involving several ministries. The gaps policy and institutional frameworks are in terms of the legal mandate to facilitate the compliance of education and training institutions in supplying accurate and comprehensive information. Information gaps in the production of relevant statistics for planning, budgeting and monitoring purposes is reflected, on the one hand, in the quality gaps existing within the chain of production chain in terms of common standards, including concepts, definitions, and methodologies, and on the other hand, capacity gaps in terms of both human resources and infrastructure.

In light of these shortcomings, ADEA commenced a process of assessing the EMIS capacities of EAC partner states in 2012, within the framework of the African Union's EMIS initiative that was launched for the region in Kampala in December 2011, aimed at strengthening EMIS to effectively monitor the Second Decade of Education for Africa's Plan of Action. This AU 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, countries 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 and the goal is to address the challenge of benchmarking capacities and evaluating progress towards effective information management systems.

A follow up meeting of EMIS experts held in Nairobi in 2012 validated the EAC EMIS assessment report and initiated the development of a capacity building strategy and the customization of a norms and standards assessment framework for the region. Guided by the EAC Secretariat, ADEA and the EAC EMIS technical committee subsequently finalized the EMIS regional capacity building strategy in 2013 and this

Norms and Standards Assessment Framework in 2014, in readiness for the peer review process for the region.

This EMIS Norms and Standards manual or code of good practice has four areas of focus as shown below:



The first two areas of focus – Policy and Legal Frameworks and Resource Availability and Utilization – are the prerequisites or fundamental conditions that impact on the environment in which EMIS operates. There is the issue of ensuring that the institutional and legal environment, and the availability and use of human, financial and technological resources support a well-functioning EMIS. The next two focus areas – Statistical Process and Education Information Reporting – look at the methodology and processes that need to be in place to produce quality statistics and information, in order to verify the appropriateness and timeliness of the products and outputs produced by the process.

Each area has a set of Norms that that the Ministries commit to abide by throughout the entire process of the production of education statistics. A set of Standards of Good Practice for each of the Norms provides a reference for reviewing the implementation of the code.

2. PURPOSE OF THE NORMS AND STANDARDS

The main purpose of the EMIS Norms and Standards is to have a set of criteria and measures for advocating best practice and benchmarking countries capabilities in being able to produce relevant, accurate, timely and comprehensive education statistics and information. Adopting these Norms and Standards ensures countries will have sustainable, comprehensive and appropriate education management information systems in harmony with international and regional systems and practices.

This Norms and Standards Assessment Framework can be used for:

- Self-assessment by producers of education statistics.
- Advocacy tool in debates for ensuring that the necessary EMIS resources and infrastructure are available to Ministries responsible for EMIS education and training.
- Reviews performed by EAC in assessing regional capacity in the development and coordination of education policies and their consistent reinforcement of/ by EMIS, as well as country compliance with the framework.
- EAC accreditation for quality and acceptable statistics.

3. QUALITY OF STATISTICS

Underpinning the Norms and standards is a principle of the Quality of Statistics which is defined as 'fitness for use'. The Quality of Statistics has eight dimensions; namely, relevance, accuracy, timeliness, accessibility, interpretability, coherence, methodological soundness and integrity.



Five of these eight quality dimensions are also covered in the Data Quality Assessment Framework of the International Monetary Fund (IMF) and the UNESCO Institute for Statistics (UIS).

- The *relevance* of statistical information reflects the degree to which it meets the real needs of users. It is concerned with whether the available information sheds light on the issues of most importance to users.
- The *accuracy* of statistical information is the degree to which the output correctly describes the phenomena it was designed to measure.
- The *timeliness* of statistical information refers to the delay between the point to which the information pertains, and the date on which the information becomes available. It considers the regularity and punctuality of the release of information.
- The *accessibility* of statistical information refers to the ease with which it can be obtained. The cost of the information may also be an aspect of accessibility for some users.
- The *interpretability* of statistical information refers to the ease with which users can understand statistical information through the provision of metadata. This information normally includes the underlying concepts, definitions and classifications used the methodology of data collection and processing, and indicators or measures of the accuracy of the statistical information.
- The *coherence* of statistical information reflects the degree to which it can be successfully brought together with other statistical information within a broad analytical framework and over time. The use of standard concepts, classifications and target populations promotes coherence, as does the use of common methodology across surveys.
- *Methodological soundness* refers to the application of international, national or peer-agreed standards, guidelines, and practices to produce statistical outputs. Application of such standards fosters national and international comparability.
- The *integrity* of statistical information refers to the values and related practices that maintain users' confidence in the Ministry producing statistics and ultimately in the statistical product.

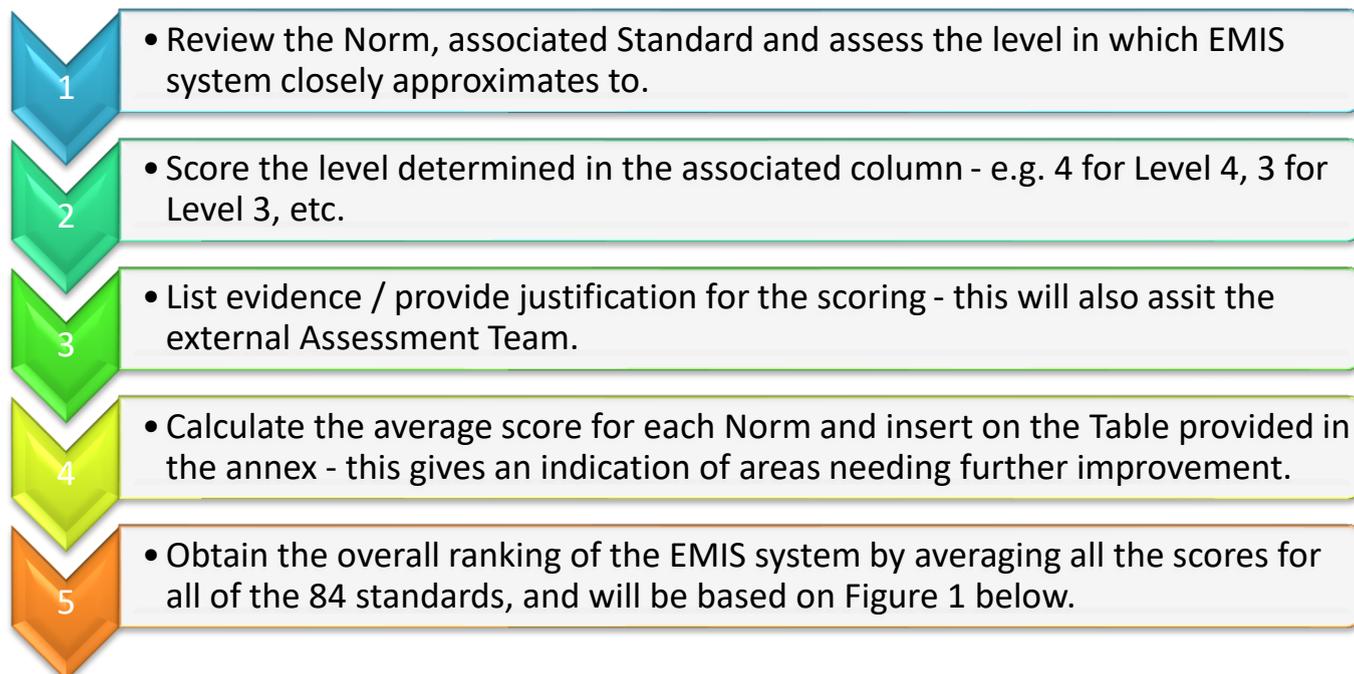
These dimensions of “statistical quality” are overlapping and interrelated. Failure to comply with any one dimension will impair the usefulness of the information.

4. USING THE ASSESSMENT FRAMEWORK.

A key strategy in modern education management is the measuring that includes relevant and targeted planning to support decision-making and efficient investment in programmes. This also acts as an early warning measure of system dysfunction as well as benchmarks against which progress is assessed.

The assessment framework was developed in a manner that makes it possible for country self-assessment and peer ranking. Each of the 17 Norms includes a number of components. Components are high-level descriptors of a number of Standards. The degree of implementation of a Standard associated with a Norm is measured on a 4 point assessment scale. The ideal Standard is embedded in “Quality Statistics” (Level 4). The steps involved in assessing the performance of the region’s partner states are outlined below.

Steps to follow in scoring country performance:

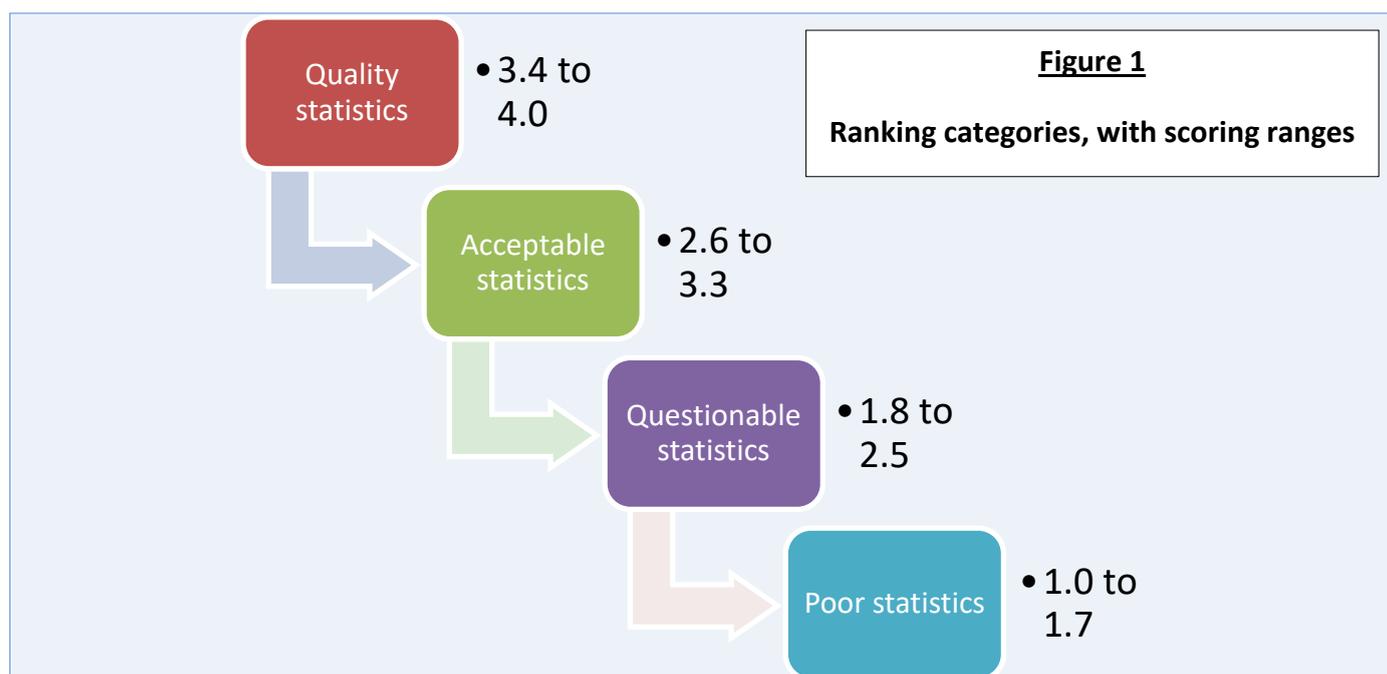


Note:

- It is important to accurately assess the level (Level 4 to 1) that closely approximates the Standard characterized by your EMIS systems. Collect as much evidence as possible, if there is any, for later review by the external Norms and Standards Assessment Team.
- The Standards are independent of each other, making it possible for an EMIS system to be assessed as Quality Level 1 for one standard and to have Quality Level 3 for the next standard.
- Insert the average score on the Table in Annexure A (see page 52).
- Average the score for each of the 4 focus areas:
 - A. Policy and Legal Frameworks
 - B. Resource Availability and Utilization
 - C. Statistical Process
 - D. Education Information Reporting

An overall assessment greater than 3.3 indicates that the country has an EMIS system which produces quality statistics. Similarly, an overall average score of between 2.6 and 3.3 classifies the country as having acceptable statistics. An average score below 2.6 indicates the country has questionable or poor statistics.

Figure 1 below provides the ranking categories, with scoring ranges for each category.



The Process of Engagement

The steps of engaging in this process are as follows:

1. **Formal Application:** The Ministry of Education writes a formal application to the EAC Secretariat expressing their wish to have an EMIS Norms and Standards Assessment. The EAC Secretariat will formally respond outlining the steps and conditions for an assessment.
2. **Peer Assessment Team:** The EAC Secretariat appoints an EMIS Norms and Standards Assessment Team (ENSAT) made up of 3 members (2 of these from other EAC partner states and possibly an external expert). The members of ENSAT will be drawn from the pool of countries with an overall score above 2.6 on their EMIS. This is a Peer Assessment Team.
3. **Training:** The Ministry of Education undergoes training facilitated by the EAC Secretariat on the Assessment Framework.
4. **Internal Review:** The Ministry of Education creates an internal national Review Team. The team undertakes the assessment and produces an Assessment Report. This should not take more than two weeks.
5. **Evaluation of Country EMIS:** ENSAT independently assesses the EMIS system with the evidence provided by the national team. (The external Team will not view the national country assessment at this stage).
6. **Consensus on Results:** The Ministry of Education Team and ENSAT engage in joint discussions and reach a consensus on the scoring of standards. In cases where the country

assessment and the peer assessment differ significantly and no consensus on scoring is reached, the two scores shall be averaged with the country score constituting 40% and the ENSAT 60%.

7. **Finalizing the Report:** ENSAT formulates the final assessment report with scores, findings and recommendations.
8. **Way Forward:** This is shared with the senior officials of the Ministry for their concurrence on measures for improved data quality. A date for the next assessment is agreed upon. The publication of the assessment findings is subject to confidentiality agreements.
9. **Seal of Quality:** The statistics for the Ministry of Education can be published with an EAC seal of quality assurance for an EMIS system that has an overall ranking of Quality Level 4 or Quality Level 3.

5. LIMITATIONS OF THE ASSESSMENT FRAMEWORK

A single-valued, aggregate data quality measure is subject to all the deficiencies associated with widely used indexes like the Consumer Price Index. Many of the variables and implicit weightings are likely to be subjective. There is a perspective that some assumptions in the framework bias the scoring against countries with fragile economies. The framework may not sufficiently take into account the specific country or institutional contexts which may make it difficult for some countries to meet the ideal standards outlined under Quality Level 4.

The methodology which largely rests on country self-assessments may also limit the usefulness of the framework. There is a tendency for the data producer to rate their data quality highly while the consumers of the statistics will perceive the data to be less credible, timely and free of error.

There is not much engagement with the consumers of the statistics in this assessment framework. But if the assumptions and limitations are understood and the “quality index” is interpreted accordingly, such a measure can help countries assess data quality status. From the practitioner’s viewpoint, such an index will help to succinctly communicate the state of data quality to senior management in Ministries and provide comparative assessments over time.

Experience suggests a “one size fits all” set of standards is not a solution. Rather, assessing data quality is an on-going effort that requires full awareness of the fundamental principles underlying the production sound statistics.

6. THE EMIS NORMS AND STANDARDS ASSESSMENT FRAMEWORK.

In these Norms and Standards, the singular term “Ministry of Education” is used synonymously with its plural form “Ministries of Education” to include all those government Ministries responsible for the various levels of education and training in a country. To recap, these norms apply to all levels of education including Early Childhood Education, Primary, Secondary, Tertiary, Non-Formal and Technical and Vocational Education and Training with the recognition that the Ministry managing the Basic Education level has the primary responsibility for coordinating education and training statistics for the sector. These norms and standards must be read and understood taking account of the definitions in the “Definition of Statistical Terms” section (page 7).

A. Policy and Legal Framework

Policy and legal frameworks governing education statistics have a significant influence on the effectiveness and credibility of Ministries of Education to produce and disseminate education statistics. The relevant issues concern a mandate for data collection from all education and training institutions and bodies, clarity on roles and responsibilities, registration of pupils and institutions, commitment to quality, reporting accountability, statistical confidentiality, impartiality and objectivity. All education statistical policy frameworks come under the umbrella of national statistical policy.

NORM 1. MANDATE FOR DATA COLLECTION FOR THE EDUCATION SECTOR

Ministries of Education must have a clear legal mandate to collect information from all education and training institutions and bodies, both public and private, for educational statistical purposes.

Components		Standards	Assessment levels of the quality of statistics				Score	COMMENTS
			Quality Statistics Level 4	Acceptable Statistics Level 3	Questionable Statistics Level 2	Poor Statistics Level 1		
Legal mandate	1.1.1	Legal mandate to collect information for educational statistical purposes. ¹	There is a legal instrument (law, order) on the collection of information, the production and the dissemination of education and training statistics.	There is policy to mandate the collection of information, the production and the dissemination of education and training statistics.	There are official documents (letter, decree) on the collection of information, the production and the dissemination of education and training statistics.	There are no legal instruments or policies or administrative documents on the collection, the production and the dissemination of education and training statistical information.		We're looking for the existence of the law and the kind of documents that support it.
	1.1.2	The coverage of the legal mandate.	The legal mandate is to cover all education and training sub-sectors (+75%).	The legal mandate covers between 50% and 75% all education and training sub-sectors.	The legal mandate covers between 50% and 75% of all education and training sub-sectors.	The legal mandate covers less than 25% of all education and training sub-sectors.		The sub-sectors that are covered
	1.1.3	The application of the legal mandate	The legal mandate is applied to cover all education and training sub-sectors (+75%).	The legal mandate is often or sometimes applied to all education and training sub-sectors.	The legal mandate is rarely applied.	The legal mandate is not applied.		
	1.1.4	Legislation on the accessibility of basic administrative data for statistical purposes	The national legislation allows the Ministry of Education to fully access basic administrative data for statistical purposes.	The national legislation authorizes the Ministry of Education to partially access basic administrative data for statistical purposes.	Legislation is silent on the Ministry of Education accessing basic administrative data for statistical purposes.	There is no legislation in place allowing the Ministry of Education access to basic administrative data for statistical purposes.		

¹ This could be part of any policy document or separate legal document.

	1.1.5	Effectiveness of legislation on the accessibility to basic administrative data for statistical purposes	The application of national legislation, mandating accessibility to basic administrative data for statistical purposes, is effective.	The application of national legislation, mandating accessibility to basic administrative data for statistical purposes, is often effective.	The application of national legislation, mandating accessibility to basic administrative data for statistical purposes, is rarely effective.	The application of national legislation, mandating accessibility to basic administrative data for statistical purposes, is not at all effective.		
	1.1.6	Existence of disciplinary measures in instances of violations of the law	The law provides disciplinary actions in the case of non-compliance.			The law does not stipulate any disciplinary actions for non-compliance. ²		
	1.1.7	Application of disciplinary measures in cases of non-compliance	Disciplinary measures are always applied	Disciplinary measures are often applied	Disciplinary measures are seldom applied	Disciplinary measures are never applied		
Mandate to coordinate EMIS	1.2.1	Mandate ³ to collect and integrate data from the different sub-sectors of education and training and from institutions and bodies under other ministries and civil society.	The Ministry of Education has the mandate to collect and integrate data from the different sub-sectors of education and training, and other institutions and bodies under other ministries and the civil society.	The Ministry of Education has the mandate to collect and integrate data only from the sub-sectors of education and training.	The Ministry of Education has the mandate to collect and integrate data from certain sub-sectors of education and training	The Ministry of Education has no mandate to collect and integrate data from the different sub-sectors of education and training and from institutions and bodies under other ministries and the civil society.		

² Institutions view the process as voluntary and response rates are low as there are no consequences for non-compliance.

³ This could be part of any policy document or separate legal document.

	1.2.2	Strategy for collecting, processing and integrating data.	The Ministry of Education has a strategy t for collecting, processing and integrating data from sub-sectors of education and training and from relevant institutions and bodies under other ministries and the civil society. ⁴	The Ministry of Education has a strategy to collect, process and integrate data only from different sub-sectors of education and training	The Ministry of Education has a strategy to collect, process and integrate data from certain sub-sectors of education and training.	The Ministry of Education has no strategy for the collection, processing and integration of data from other sub-sectors of education and training, and institutions and bodies under other ministries and the civil society.		
	1.2.3	Existence of a strategy of information sharing across the education and training sub-sectors, government agencies and civil society	Existence of a strategy that ensures effective information sharing across sub-sectors, government agencies and the civil society. ⁵			There is no strategy that ensures effective information sharing across sub-sectors, government agencies and the civil society. ⁷		
	1.2.4	Effectiveness of the strategy of information sharing across the education and training sub-sectors, government agencies and civil society	The strategy that ensures effective information sharing across sub-sectors, government agencies and civil society ⁶ is applied.	The strategy that ensures effective information sharing across sub-sectors, government agencies and the civil society is often applied.	The strategy that ensures effective information sharing across sub-sectors, government agencies and the civil society is rarely applied.	The strategy that ensures effective information sharing across sub-sectors, government agencies and the civil society is not applied.		

⁴ Information sharing should be systematic and move across sub-sectors, various directories (HR, Finance), flow right back to the schools as well as information sharing with other Ministries, agencies and departments.

⁵ Information sharing should be systematic and move across sub-sectors, various directories (HR, Finance), flow right back to the schools as well as information sharing with other Ministries, agencies and departments.

⁶ Information sharing should be systematic and move across sub-sectors, various directories (HR, Finance), flow right back to the schools as well as information sharing with other Ministries, agencies and departments.

	1.2.5	Timeliness of information sharing across education and training sub-sectors, government agencies and the civil society.	Timely sharing of information across education and training sub-sectors, government agencies and the civil society.	Timely sharing of information across education and training sub-sectors, government agencies and the civil society.	.	The sharing of information across education and training sub-sectors, government agencies and the civil society does not meet deadlines.		
	1.2.6	MoU between Ministry of Education and the National Statistics Office.	There is a functional MoU between the statistical services of the Ministry of Education and the National Statistical Office on all statistical needs. ⁷	There is a semi-functional MoU between the National Statistical Office and the Ministry of Education.	There is simple collaboration between the Ministry of Education and the National Statistical Office that has not been formalized by an official document.	There is no collaboration between the Ministry of Education and the National Statistical Office.		(MoU between the statistics department of the Ministry of Education and Training and the National Statistical Office)
	1.2.7	Definition of missions and attributions of the EMIS unit within the Ministry of Education and Training.	EMIS missions and attributions are clearly defined in the organic law of the Ministry of Education and Training.	EMIS missions and attributions are partially defined in the organic law of the Ministry of Education and Training.	EMIS missions and attributions are vaguely defined (imprecise) in the organic law of the Ministry of Education and Training.	EMIS missions and attributions are not defined in the organic law of the Ministry of Education and Training.		

⁷ The MoU can be with the Central Statistics Office or any other National Statistical Authority.

	1.2.8	Existence of a Procedure Manual within EMIS structures.	The Procedure Manual exists.			The Procedure Manual does not exist.		Existence of administrative guidelines that clearly define roles and responsibilities of education and training institutions and structures in the statistical value chain (conception of instruments, collection, compilation, distribution and sharing of educational information).
	1.2.9	Use of the Procedure Manual.	The manual is widely used in practice.	The manual is often used in practice.	The manual is rarely used in practice.	The manual is not used in practice.		
NORM AVERAGE								

NORM 2: QUALITY COMMITMENT

The Ministries of Education commit themselves to work and cooperate according to the norms fixed in the quality declaration of its national statistical systems and in other international statistical frameworks.

Components		Standards	Assessment levels of the quality of statistics				Score	COMMENTS
			Quality Statistics Level 4	Acceptable Statistics Level 3	Questionable Statistics Level 2	Poor Statistics Level 1		
Policy and Procedures to ensure quality statistics.	2.1.1	Policy and procedures to ensure quality.	Existence of a policy framework clearly specifying the procedures to be undertaken by the Ministry of Education to promote and ensure quality in the statistical value chain, taking into account national and international quality standards.	Existence of a framework clearly specifying the procedures to be undertaken by the Ministry of Education to promote and ensure quality in statistical value chain, however not taking into account national and international quality standards.		There is no framework to guide the Ministry on how to promote and ensure quality.		
	2.1.2	Processes to monitor and ensure data quality.	Processes are in place (verification, validation, etc.) to monitor and ensure the quality of the data collection, processing, and dissemination of statistics. These processes are fully adhered to. ⁸	Processes are in place (verification, validation, etc.) to monitor and ensure the quality of data collection, processing, and dissemination of statistics. These processes are often adhered.	There are no processes (verification, validation, etc.) to monitor and ensure the quality of data collection, processing, and dissemination of statistics. Though random checks could be made from	There is no outlined process (verification, validation, etc.) to monitor quality of data collection, processing, and dissemination of statistics. There is no quality control at all.		
NORM AVERAGE								

⁸ Results are compared to those from other surveys and there are checks to ensure statistical data is consistent over time.

NORM 3: STATISTICAL CONFIDENTIALITY

The Ministry of Education guarantees the privacy of data providers' identification, the confidentiality of the information they provide and its use for statistical purposes only.

Components		Standards	Assessment levels of the quality of statistics				Score	COMMENTS
			Quality Statistics Level 4	Acceptable Statistics Level 3	Questionable Statistics Level 2	Poor Statistics Level 1		
Statistical Confidentiality	3.1.1	Policy outlining measures to safeguard individual data confidentiality and usage, exclusively for statistical purposes.	Existence of a policy document that ensures that individual data confidentiality and usage for statistical purposes only. ⁹ Statistical confidentiality is strictly adhered to by adequate measures put in	Existence of a policy document that ensures that individual data confidentiality and usage for statistical purposes only, Statistical confidentiality is often adhered to through checks to ensure only aggregated data is made publicly available.	Existence of a policy document that ensures that individual data confidentiality and usage for statistical purposes only Control checks verifying confidentiality are very limited.	Individual data confidentiality is not mentioned anywhere in the policy document.		
	3.1.2	Protocols for external users accessing data.	Existence of necessary protocols which apply all the time to external users accessing statistical data for statistical purposes.	Existence of necessary protocols which apply often to external users accessing statistical data for statistical purposes.	No protocols in place that apply to external users accessing statistical data. Though some efforts are made to safeguard individual data confidentiality.	No protocols in place that apply to external users accessing statistical data. No efforts are made to safeguard the confidentiality of individual data.		Underlining of the existence and the application of the protocol.
NORM AVERAGE								

⁹ Among these measures should be clear procedures on how to archive records, a policy on how long records are kept and a strategy to safely dispose of, or destroy, the records.

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

The Ministries of Education adhere to a policy of timely and accurate production and publication, to the statistical information requirements of national, regional, continental and international education frameworks.

Components		Standards	Assessment levels of the quality of statistics					Score	COMMENTS
			Quality Statistics Level 4	Acceptable Statistics Level 3	Questionable Statistics Level 2	Poor Statistics Level 1			
Statistical reports	4.1.1	Timely production and publication of statistical reports.	Production and publication of statistical reports within a maximum 12 months from the start of data collection.	Statistical reports are produced and published regularly. However, the reports are not published within 12 months of the start of data collection.	Statistical reports are produced but not published.	Statistical reports are not produced.			
	4.1.2	Obligation to produce and publish analytical reports on the performance of the education and training sector annually.	The Ministry has an obligation to produce reports on the situation of the education and training sector in accordance with the education law or policy.	The Ministry's obligation to produce and publish reports is indicated in the document on EMIS the Norms and Standards.	The Ministry's obligation to produce and publish reports is indicated in an administrative document.	The Ministry is not obliged to produce or publish analytical reports.			
	4.2.1	Deadline for availability of required information from international partners and organizations	The country provides statistical information promptly.	The country provides statistical information within an acceptable time frame.	The country provides statistical information late.	The country does not provide statistical information.			

	4.2.2	Responsiveness (completion) of a country to the requests of international organizations and partners	The country supplies comprehensive statistical information on the education and training sector to EAC, the African Union, and other international organizations and partners as per required.	The country submits statistical reports, including most of the required information to international organizations and partners.	Country reports submitted to international organizations are characterized by data gaps	The country does not supply the required information to international organizations and partners.		
NORM AVERAGE								

NORM 5: IMPARTIALITY AND OBJECTIVITY

The Ministries 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.

Components		Standards	Assessment levels of the quality of statistics				Score	COMMENTS
			Quality Statistics Level 4	Acceptable Statistics Level 3	Questionable Statistics Level 2	Poor Statistics Level 1		
Impartiality and objectivity	5.1.1	The compilation of education statistics is based on scientific and statistical considerations only.	Statistics are compiled on a scientific basis guided by statistical considerations.	The compilation of statistics is largely based on statistical consideration but there is a minimal degree of external interference.	The compilation of statistics is largely based on statistical consideration but there is considerable degree of external interference.	The compilation of statistics is largely influenced by other external forces and disregards statistical and scientific considerations. Results are either suppressed or/and manipulated.		
	5.1.2	Corrections of errors are published.	Errors discovered in published statistics are corrected and publicized at the earliest possible date.	In most instances errors discovered in published statistics are corrected and publicized within a reasonable timeframe.	Errors discovered in published statistics are corrected but the corrections are rarely or not timeously publicized or not	Errors in statistics are not corrected.		In cases where data is published without errors, we give the grade 4.
	5.1.3	Data revisions and/or updates are publicized. ¹⁰	Revisions and/or updates of data are always publicized.	Revisions and/or updates of data are often publicized.	Revisions and/or updates of data are rarely published.	Revisions and/or updates of data are not published.		

¹⁰ Publicize means to bring to the public's attention – make something known. This can be done using various forms of media, such as an advert in the newspaper or the use of bulleting boards. 27

	5.1.4	Information on the methods and procedures for statistical production used by the Ministry is publicly available.	Information on the methods and procedures used by the Ministry is publicized and routinely disseminated.	Information on the methods and procedures used by the Ministry is often disseminated.	Information on the methods and procedures used by the Ministry is only made available to the public upon request.	Information on methods and procedures used by the Ministry is not available to the public.		
	5.1.5	The release of statistics is made in an impartial and objective manner.	All statistical releases and statements made in the media are objective and non-partisan.			Statistical releases and statements made in the media tend to be biased and partisan.		
	5.1.6	Staff is aware of professional and ethical conduct.	There are guidelines in place to ensure professional independence and ethical behavior by staff. A clear strategy ¹¹ to ensure staff is conscious of acceptable conduct is in place.	Professional and ethical guidelines exist but lack clarity or/and are not adequately imparted to all staff.	There are no systems in place to guide staff on acceptable ethical and professional conduct. Staff does not engage in irregular practices.	There are no systems in place to guide staff on acceptable ethical and professional conduct. Staff is involved in irregular practices.		
	5.1.7	Conditions under which policy makers can access data before its release are outlined in the dissemination policy.	Conditions under which policy-makers, specifically government, may have access to data that is that is published, adhered to and available for public scrutiny before its release.	Policy makers have access to the data. The conditions, along with the reasons for their access, are published and not adhered to.	Policy makers have uncontrolled access to data, the conditions along with their reasons for their access, are not published.	There are no policy measures preventing policy makers' access to data before its release and publication.		
NORM AVERAGE								

¹¹ Such a strategy may include induction and orientation of new staff, circulating professional guidelines and codes or constantly training on managing professional and ethical questions that may arise.

NORM 6: REGISTRATION OF INSTITUTIONS

All education and training institutions must be compelled to register with appropriate education Ministries if they are to operate as an education and training institution.

Components		Standards	Assessment levels of the quality of statistics				Score	COMMENTS
			Quality Statistics	Acceptable Statistics	Questionable Statistics	Poor Statistics		
			Level 4	Level 3	Level 2	Level 1		
Registration of Institutions.	6.1.1	All public and private education institutions are registered with Ministries of Education or relevant government authority.	More than 90% of institutions are registered with a unique number	Between 80% and 90% of institutions are registered under a unique number.	Between 50% and 80% of institutions are registered under a unique number.	Less than 50% of institutions are registered /under a unique number.		
	6.1.2	Ministries of Education have an up to date directory, updated yearly, of all education and training institutions.	The appropriate education Ministry has a directory of all education and training institutions (public and private) which is thoroughly updated on a yearly basis.	The appropriate education Ministry has a directory of education and training institutions (public as well as private), but it is only partially updated every year.		The appropriate Ministry has a directory of education and training institutions (public as well as private), but it is not updated annually.		
NORM AVERAGE								

NORM 7: REGISTRATION OF LEARNERS

All learners are required to present their birth certificate/records in any given year at any education and training institution.

Components		Standards	Assessment levels of the quality of statistics				Score	COMMENTS
			Quality Statistics Level 4	Acceptable Statistics Level 3	Questionable Statistics Level 2	Poor Statistics Level 1		
Availability of data by age	7.1.1	Learners All education and training institutions group learners according to age, with information provided by birth certificates	The Ministry collects accurate and comprehensive age by grade education statistics for all institutions. ¹²	The Ministry collects comprehensive age by grade education statistics for all institutions but these include some estimates on age data.	The Ministry reports age by grade education statistics for most institutions, some of which may be estimates.	The Ministry does not collect age by grade education statistics for institutions.		
	7.1.2	The Ministry advocated for the drawing up of birth certificates of children who do not have them.	All children registered in their first year have birth certificates.			Some first-year children do not have birth certificates.		
NORM AVERAGE								

¹² Enrolment by age is collected and published.

B. Resources Availability and Utilization

Adequate resources and their effective use in managing an education management information system has a major impact on the quality of education statistics.

NORM 8: ADEQUATE RESOURCES

Ministries of Education ensure that material, human and financial resources (both in terms of quantity and quality) are commensurate with the statistical programmes.

Component	Standards	Assessment levels of the quality of statistics				Score	COMMENTS
		Quality Statistics	Acceptable Statistics	Questionable Statistics	Poor Statistics		
		Level 4	Level 3	Level 2	Level 1		

Finance	8.1.1	Allocation of appropriate budget.	There is a national budget for the production of statistics, covering 100% of the funding requirements of EMIS activities.	The Ministry of Education allocation of its national education budget for the production of education statistics is sufficient to cover most of the EMIS census and is received within a reasonable timeframe. There is an adequate national budget for the production of statistics, which is cost shared between the State (>=80%) and the PTF (=20%).	There is a national budget for the production of statistics, which is cost shared between the State (between 50% and 80%) and the PTF (between 20% and 50%) but which is not adequate.	There is no State budget for the production of statistics, which is largely funded by the PTF (at least 80%).		Data collection methods determine costs. What is the threshold for the efficiency and quality statistics?? Some budget is allocated to cover all your needs. We need a threshold estimate. We need a survey of countries – get best practice to get the % In the interim we can suggest a range of percentage for each Assessment level. For Level 4 there should be 90% of resources
Personnel	8.1.2	There are sufficient qualified personnel in key EMIS positions.	All key EMIS positions are filled by sufficient qualified personnel in; with at the very least, EMIS specialists, education statisticians, system analysts, programmers, education planners, and data capturers at the national level.	Over 80% of the key EMIS positions are staffed with qualified personnel. At a minimum there is a statistician, a programmer, and an EMIS Coordinator.	More than 60% of key posts are filled by qualified staff, including at least one statistician.	Less than 60% of key posts are filled by qualified staff and some functions are outsourced to external partners.		

	8.1.3	The existence And implementation of professional development strategy ¹³ in place for EMIS staff.	The Ministry promotes and implements regular professional development and upgrading through training programmes and on-site technical assistance to ensure progress and continuity of EMIS work. District Officers sufficiently trained to manipulate and analyze their local databases. ¹⁴	There is a plan and strategy in place and there is training taking place in most sub sectors.	There is a plan in place but there is no training taking place.	There are neither training programs nor strategy in place.		
	8.1.4	Existence and implementation of a strategy to retain scarce specialist EMIS skills	Ministries of Education makes use of a motivational strategy to retain scarce specialist EMIS skills, which is fully implemented.	Ministries of Education make use of a motivational strategy to retain scarce specialist EMIS skills, which is partially implemented.	Ministries of Education have a strategy in place to retain scarce specialist EMIS skills but no implementation	Ministries of Education do not have a strategy in place to retain scarce specialist EMIS skills.		

¹³ Internal and external training programmes.

¹⁴ Professional development initiatives are across all sub-sectors.

	8.1.5	Participation And interaction with international networks of EMIS experts.	Relevant EMIS personnel annually participate in all conferences and working groups (production, forums, publication...) at the regional and international level.	Relevant EMIS personnel participate occasionally in annual conferences and working groups (production, forums, publication...) at the regional and international level.		Relevant EMIS personnel do not participate in annual conferences and working groups (production, forums, publication...) at the regional and international level.		
Equipment	8.1.6	Sufficient availability of adequate information technology equipment and communication tools and other necessities.	EMIS unit has access to quality ICT equipment in adequate number, at all administrative tiers. ¹⁵	The EMIS staff has access to adequate ICT tools and equipment, but only in key posts.		EMIS unit has inadequate access to quality ICT tools and equipment, particularly in key posts.		
NORM AVERAGE								

¹⁵ Head Office, Region, Provinces and Districts.

NORM 9: COST EFFECTIVENESS

Resources must be effectively and efficiently used.

Components		Standards	Assessment levels of the quality of statistics				Score	COMMENTS
			Quality Statistics Level 4	Acceptable Statistics Level 3	Questionable Statistics Level 2	Poor Statistics Level 1		
Monitoring of resource utilization.	9.1.1	Existence and implementation of internal and external mechanisms for the monitoring of EMIS resource utilization	Ministries of Education have fully implemented internal and external mechanisms in place to monitor the use of EMIS resources.	Ministries of Education have partially implemented internal and external mechanisms in place to monitor the use of EMIS resources.	Ministries of Education have unimplemented internal and external mechanisms in place to monitor the use of EMIS resources.	Ministries of Education do not have any internal and external mechanisms in place to monitor the use of EMIS resources.		
Technology	9.2.1	Utilization of ICT.	ICTs re optimized for all operations in the statistical value chain. ¹⁶	ICTs are optimized for essential operations in the statistical value chain.	ICTs are not optimized for essential operations in the statistical value chain.	ICTs are not used productively.		
EMIS Human Resources Management	9.2.2		EMIS staff used in line with their job descriptions.	EMIS staff does not fully satisfy the requirements of their positions.		EMIS personnel are not used in line with their job descriptions.		
Finance	9.2.3	Utilization of EMIS Funds	Funds allocated to EMIS are used specifically for EMIS activities and absorption capacity is optimal.	Funds allocated to EMIS are used specifically for EMIS activities but absorption capacity is limited.		Funds allocated to EMIS are diverted to other programmes.		
NORM AVERAGE								

¹⁶ Some processes are automated. The productivity potential of ICT is being optimized for data collection, processing and dissemination. Active use of websites, CDs, email, etc.

C. Statistical Processes

EAC's Protocol on Education, specific international standards, guidelines and good practices must be fully observed in the process used by Ministries to organize, collect, process and disseminate official statistics. The credibility of the statistics has been enhanced by a reputation for good management and efficiency on statistical production processes. The relevant aspects are sound methodology, appropriate statistical procedures, definitions and classifications of internationally acceptable practices and non-excessive burden on respondents.

NORM 10: SOUND METHODOLOGY AND APPROPRIATE STATISTICAL PROCEDURES

Sound methodology must underpin quality statistics. This requires appropriate statistical procedures throughout the entire statistical value chain.

Components		Standards	Assessment levels of the quality of statistics				Score	COMMENTS
			Quality Statistics Level 4	Acceptable Statistics Level 3	Questionable Statistics Level 2	Poor Statistics Level 1		
Data processing and publication of educational statistics	10.1.1	Methodology follows international /national standards or peer agreed standards.	Standardized methodology used which includes a data collection and processing methodology; monitoring of the statistical chain, definitions of terms and concepts are documented; a standard system for data processing; and necessary user and technical manuals are available.	Standard methodology to most areas of the statistical value chain are in place but not documented.	Standard methodology to some areas of the statistical value chain are in place but not documented.	Methodologies do not follow accepted standards.		

	10.1.2	T Testing of tools	Data collection tools, data entry forms and database structures are tested before use.	Data collection tools, data entry forms and database structures are, most of the time (but not always), tested before being used.	Testing may occur but changes are seldom incorporated.	Data collection tools, data entry forms and database structures are not tested before use.		
	10.1.3	Verification processes	Data verification processes are systematically implemented at every stage of the statistical value chain.	Data verification processes are systematically implemented at most stages of the statistical value chain.	Data verification processes are implemented occasionally, at most stages of the statistical value chain.	Data verification processes are not implemented at different stages of the statistical value chain.		
Specialized survey methodology	10.2.1	Survey designs	Survey designs, sample selections and weights follow standard methodology and are properly documented.	Survey designs and sample selections are used but there is no proper documentation.	Survey designs, sample selections are occasionally used but there is no documentation.	No survey designs or sample selections used.		
	10.2.2	Definition of standard concepts and terms are available, documented and used.	Standard concepts, definitions and classifications are consistently applied in the statistical value chain and documented,	Standard concepts, definitions and classifications are mostly documented and used.	Standard concepts and definitions are occasionally documented.	No documented concepts and definitions exist.		
	10.2.3	Availability of questionnaires for sub-sectors	Ministries have a standard questionnaire (data collection instrument) for each subsector (formal and non-formal education)	Ministries have a standard data collection instrument for most subsectors (at least 4).	Ministries have a standard data collection instrument only for some subsectors.	Only ad-hoc data collection instruments are used.		

Record Systems	10.3.1	Harmonization of school records and compatibility with school censuses.	Standardized ¹⁷ institutional records ¹⁸ are compatible with the information needs of the Education Census.	School records are standardized but often not compatible with the information needs of the annual education census instrument.	School record keeping covers a few areas of school management. It is not compatible with the annual education census.	Institutional records are not standardized and not compatible with the Annual Education Census.		
	10.3.2	Imputation of missing data	Appropriate automated editing and scientific imputation systems are used and regularly revised as required.	Manual scientific methods are used to calculate some of the missing data.	Nonscientific methods are used to calculate the missing data.	There is little effort to calculate the missing data.		
	10.3.3	Data Revisions	Revisions follow standards, and well established and transparent procedures.			Revision methods used do not follow accepted standards, sets of guidelines or transparent practices.		
	10.3.4	Source of population statistics. ¹⁹	The latest survey or census population estimates and projections obtained from the Statistical authority (CSO/NSO) are used to calculate education indicators.		The latest population figures and age breakdown, sometimes obtained from Statistical authority (CSO/NSO) and other times from international sources outside of Statistical authority.	Population estimates are obtained from unauthorized sources.		
NORM AVERAGE								

¹⁷ Standardized in terms of uniformity and quality; there has to be a glossary of standard concepts.

¹⁸ This includes all institutions – schools, training colleges, universities, etc.

¹⁹ This is to make sure that there is one source of population statistics – the central statistics office.

NORM 11: NON-EXCESSIVE BURDEN ON RESPONDENTS

The reporting burden should be proportionate to the needs of the users and should not be excessive for respondents. Ministries of Education should monitor the response burden and set targets for its reduction over time.

Components		Standards	Assessment levels of the quality of statistics				Score	COMMENTS
			Quality Statistics	Acceptable Statistics	Questionable Statistics	Poor Statistics		
			Level 4	Level 3	Level 2	Level 1		
Essential minimum	11.1.1	Core information needs.	The range and detail of education statistics demands is limited to what is essential.	The range and detail of education statistics collected exceeds their demand by users.		Education statistical surveys are overloaded with detail or do not address the minimum needs of users.		
	11.1.2	The burden of response.	The burden of responding to questionnaires is spread as widely as possible over survey populations through appropriate sampling techniques in instances where a census of education institutions is not being undertaken.			No sampling is done other than census.		Debate focused on level 1

	11.1.3	Sources of data.	Administrative sources ²⁰ and secondary data are used whenever possible to avoid duplicating requests for information.	Secondary data and administrative records are used sometimes.		No secondary or administrative records are used.		Everyone goes to the school asking for the same data. Administrative sources include EMIS census data. An example is payroll data from Human Resource Department. The issue of ghost teachers is an issue. EMIS is more accurate. In Burkina they have 4 sources of data for teachers – each provides different information!
	11.1.4	Collaboration on education surveys.	The Ministry's EMIS unit is the coordinating and registering body of internal education surveys in collaboration with the national statistical office. This ensures that they arbitrate the quantity, quality and standards of surveys undertaken in education and training institutions.	Most of the time, EMIS monitors all internal educational surveys. The EMIS unit collaborates with all producers of education surveys.	Sometimes EMIS monitors educational surveys.	EMIS does not monitor other education surveys except education surveys by the Ministry.		Problem is that this might be the function of the national bureau of statistics - However, countries agreed that this is the role of EMIS in education. It should be coordinated by EMIS. We must ensure that EMIS is in the loop of all surveys even those coordinated by the NSO.
NORM AVERAGE								

²⁰ This includes EMIS data.

D. Education Information Reporting

Published and disseminated education statistics must meet users' needs and comply with international quality standards in order to serve the needs of African institutions, governments, research institutions, business concerns and the public generally. Important issues concern the extent to which the statistics are relevant, accurate and reliable, timely, coherent, comprehensive, comparable, over time, across regions and countries and readily accessible by users.

NORM 12: RELEVANCE

Education statistics must meet the needs of users.

Components		Standards	Assessment levels of the quality of statistics				Score	COMMENTS
			Quality Statistics Level 4	Acceptable Statistics Level 3	Questionable Statistics Level 2	Poor Statistics Level 1		
User needs	12.1.1	User identificatio n of data.	Key users ²¹ of data have been identified with their most recent contact details. Existence of a comprehensive and updated list or inventory.	Key users have been identified with some of the contact details not up to date. The most recent update was conducted more than two years ago. This is not the updated list.	Attempts have been made to create a user list. Some user data and their contacts are known, but no proper list exists. The list is incomplete or not regularly updated.	No attempt has been made to create a user list.		

²¹ Data needs for school records keeping, district and regional performance reports and head office needs for diverse directories are taken into account.

	12.1.2	Consultation processes with data users	Processes ²² are in place to regularly consult users regarding their needs, evaluate the relevance and practical utility of existing statistics in meeting their needs, and advise on their emerging needs and priorities. ²⁴	Processes are in place but users are sometimes not consulted. Institutional processes are in place but users are only consulted in 80% of cases.	Processes are in place but consultations are on an ad hoc ²⁵ basis. There are no institutional processes in place.	No consultations or processes on user needs in place.		
	12.1.3	Addressing of needs expressed by users in data collection processes	Identified needs are addressed in more than 95% of cases	Identified needs are addressed in 80% to 94% of cases	Identified needs are addressed in 50% to 79% of cases	Identified needs are addressed in less than 50% of cases		
User and internal producer feedback	12.2.1	Feedback reports.	Institutional data reports are sent back to all institutions and different administrative levels for feedback and to allow schools to	Institutional data reports are sent back to all institutions and different administrative levels for feedback. There is sometimes follow-up.	Institutional data reports are sent back to some institutions and some administrative levels. There is little or no feedback.	There is little or no feedback provided to the institutions or administrative levels.		

²² Include responding to priorities in a register of user requests, having a memorandum of understanding between users and producers, conducting annual user satisfaction surveys on publications, annually engaging key stakeholders in refining of census questionnaires – at least two of these processes should be in place to score quality statistics.

Feedback collection	12..3.1	A User Satisfaction Survey is conducted.	Follow-up is conducted. Existence of a survey to assess user satisfaction or and all other formal measures used annually to collect feedback from users and producers of the information, in particular those institutions who are involved in the collection, compilation and production of reports on educational information.	No User Satisfaction Survey exists but there are other informal arrangements in place to collect feedback.		No User Satisfaction Survey or other arrangements are place.		
	12.4.1	EMIS Strategic Plan	There is an EMIS strategic plan in place that covers sub-sectors and addresses the Ministry's policy imperatives. ²³	The EMIS strategic plan exists but only covers a few sub-sectors.	There are annual Ministry plans that include EMIS but no separate Strategic Plan for EMIS. This only concerns some education sub-sectors.	No plans in place.		

²³ Existence of a documented strategy

	12.4.2	Indicators in Annual Statistical publications	Key indicators are analyzed and tracked to measure performance of the entire education system. International and regional comparison of indicators is widely used.	Analysis of indicators in annual statistical publications largely allows for the levels of some sub-sectors of the education system to be measured. Regional and international comparisons are occasionally made.	Indicators are used to measure the performance of the education system. Indicators are limited to the measurement of national objectives, with poor international comparisons.	Analysis and tracking of statistical indicators are infrequent. No effort is made to make comparisons with internationally comparable indicators.		
Data utilization	12.5.1	Primary users are trained in effective data utilization.	Annual training programmes are conducted.	Few training programmes are undertaken.	. An ad-hoc arrangement for participation in other training programmes is in place.	No training programmes are in held.		
	12.5.2	Effective use of data	Data is widely used	Data is often used	Data is rarely used	Data is not used		
NORM AVERAGE								

NORM 13: ACCURACY AND RELIABILITY

Education statistics must accurately and reliably portray reality. The accuracy of the statistical information is the degree to which the output correctly describes the phenomenon it was designed to measure.

Components		Standards	Assessment levels of the quality of statistics					Score	COMMENTS
			Quality Statistics	Acceptable Statistics	Questionable Statistics	Poor Statistics			
			Level 4	Level 3	Level 2	Level 1			
Assessment of coverage of data collection in comparison to the target population	13.1.1	Coverage of the school census.	There is a comprehensive and updated list of schools, which is used to determine the size of the target population. All public and private schools are listed and updated annually	There is a complete list of public schools which has been updated within the year. The list of private schools is less reliable as updating is more difficult.	There is an incomplete national list of public and private schools which was last updated over a year ago. Comparisons are made with the size of the previous year's population.	There is an incomplete national list of schools which is updated irregularly on an ad hoc basis.			
	13.1.2	Coverage of census of post-secondary institutions (non-tertiary)	There is a comprehensive and updated list of schools, which is used to determine the size of the target population. All public and private schools are listed and updated annually	There is a complete list of public schools which has been updated within the year. The list of private schools is less reliable as updating is more difficult.	There is an incomplete national list of public and private schools which was last updated over a year ago. Comparisons are made with the size of the previous year's population.	There is an incomplete national list of schools which is updated irregularly on an ad hoc basis.			

	13.1.3	Coverage of census of higher education and tertiary institutions	There is a comprehensive and updated list of schools, which is used to determine the size of the target population. All public and private schools are listed and updated annually	There is a complete list of public schools which has been updated within the year. The list of private schools is less reliable as updating is more difficult.	There is an incomplete national list of public and private schools which was last updated over a year ago. Comparisons are made with the size of the previous year's population.	There is an incomplete national list of schools which is updated irregularly on an ad hoc basis.		
Assessment of response rates to the census	13.2.1	Response rate to the school census.	There is a response rate of over 95% from both private and public institutions in returning their census questionnaires. Response rates and the assumptions on missing institutions are clearly indicated in statistical reports.	There is 80-94% response rate from public and private institutions in returning their questionnaires. Response rates are sometimes reported.	There are between 50 - 79 % of institutions responding to the census questionnaire. Response rates are not published with the statistical reports.	There are fewer than 50% of institutions responding to the census questionnaire. Response rates are not reported annually.		
	13.2.2	Response rate to census of post-secondary institutions (non-tertiary)	There is a response rate of over 80% from both private and public institutions in returning their census questionnaires. Response rates and the assumptions on missing institutions are clearly indicated in statistical reports.	There is 60-79% response rate from public and private institutions in returning their questionnaires. Response rates are sometimes reported.	There are between 40 - 59 % of institutions responding to the census questionnaire. Response rates are not published with the statistical reports.	There are fewer than 39% of institutions responding to the census questionnaire. Response rates are not reported annually.		

		Response rate to census of higher education and tertiary institutions	There is a response rate of over 95% from both private and public institutions in returning their census questionnaires. Response rates and the assumptions on missing institutions are clearly indicated in statistical reports.	There is 80-94% response rate from public and private institutions in returning their questionnaires. Response rates are sometimes reported.	There are between 50 - 79 % of institutions responding to the census questionnaire. Response rates are not published with the statistical reports.	There are fewer than 50% of institutions responding to the census questionnaire. Response rates are not reported annually.		
Non sampling errors	13.3.1	All non-sampling errors are calculated. ²⁴	There are no non - sampling errors.	There are minimal non-sampling errors.	There are numerous non-sampling errors.	Data unusable.		
Sampling Errors	13.3.2	Measures of sampling errors for key variables are calculated e.g. Standard error, coefficient of variation	Measures of sampling errors must be calculated for the main variables. They must be available for the other variables on request	Measures of sampling errors are published for the main variables. Measures of other variables are not available even on request	Measures of sampling errors are available on request for the main variables only	Measures of sampling errors are not calculated		
Triangulation of Data	13.5.1	Data consistency.	Annual Education Census data is regularly compared with other sources of data - Household Survey data and other data sources.	This occasionally happens when you identify a possible error.	This seldom happens.	This never happens.		
NORM AVERAGE								

²⁴ E.g. Poor responses to survey questionnaires either deliberately or due to lack of comprehension or poor conceptualization by the surveyors

NORM 14: TIMELINESS AND PUNCTUALITY

Education statistics must be disseminated in a timely and punctual manner.

Components		Standards	Assessment levels of the quality of statistics				Score	COMMENTS
			Quality Statistics Level 4	Acceptable Statistics Level 3	Questionable Statistics Level 2	Poor Statistics Level 1		
Publication of statistics	14.1.1	An annual statistical report is published.	Annual statistical report is published during the academic year of collection.	Annual statistical report is published within 2 years.	Annual statistical report is published in more than 2 years.	Annual statistical report is not published at all.		
Calendar of data publication	14.2.1	Guidelines on the frequency and release dates for data in place.	Clear guidelines are in place stating the frequency of releasing statistics, and setting out a time frame for their release.	Guidelines on frequency exists but are only adhered to in some instances, with some release dates unspecified or missed.	Though guidelines on frequency and release dates are in place, they are often disregarded.	No guidelines exist for the frequency of release and release dates. Most of these decisions are left at the discretion of the relevant directorate/ department head.		
Punctuality of release	14.3.1	Guidelines on the frequency and release dates for data in place.	Clear guidelines on the frequency and release of statistics and the establishment of a schedule for their release are adhered to.	Guidelines for frequency exist but are not adhered to in some instances, with release dates unspecified or missed.	Though guidelines on frequency and release dates are in place, they are often disregarded.	There are no guidelines on the frequency and release dates for data. Most of these decisions are left at the discretion of the relevant directorate/ department head.		

	14.3.2	The public is informed of delays in the dissemination schedule.	The public is informed of any disruption to the dissemination schedule. Explanations are given and a new date is set.	The public is occasionally notified in advance of delays in the dissemination schedule.	Notification of delays is rare.	There is no clarity in terms of release dates and no justification is provided for delays with data publication.		
	14.3.3	Preliminary data is disseminated in accordance with the set time frame.	Guidelines for the release of preliminary data are in place. Quality preliminary data is disseminated in accordance with the recommended time frame.	Guidelines for the release of preliminary data are in place. Preliminary data is disseminated but the suggested time frame is not adhered to.	No guidelines in place for the release of preliminary data. Ad-hoc preliminary data can be made available on request.	Preliminary statistics are not made available to users.		
NORM AVERAGE								

NORM 15: COHERENCE, CONSISTENCY, COMPARABILITY AND INTEGRATION

Education statistics should be coherent and consistent over time, and comparable between regions and countries; it should be possible to combine and make joint use of related data from different sources.

Components		Standards	Assessment levels of the quality of statistics				Score	COMMENTS
			Quality Statistics Level 4	Acceptable Statistics Level 3	Questionable Statistics Level 2	Poor Statistics Level 1		
Coherence²⁵ and consistency²⁶ of data	15.1.1	Statistics are compiled on the basis of fixed common standards.	Statistics are always compiled on the basis of common standards. Information on statistical procedures and data dictionary are available. ²⁷	Statistics are mostly compiled on the basis of common standards.	Statistics are occasionally compiled on the basis of common standards.	No consideration is given to the compilation of statistics on the basis of common standards.		
	15.1.2	Statistics are consistent over time.	Statistics use the same principles and procedures over time. ²⁸	The consistency of the statistics is verified often in comparison with base statistics, including missing data. There are minimal errors and errors are published.	The consistency of the statistics is sometimes verified. Errors are identified, comparing longitudinal base data (over several years).	The consistency of the statistics is rarely verified and published.		

²⁵ It reflects the degree to which data sets are logically connected and complete; the degree to which statistics can be brought together with other information.

²⁶ The same definitions and procedures are used over time.

²⁷ With respect to scope (same parameters such as institutional profile, facilities, teacher and learner information, etc.), definitions, units of measure and official classifications in the different surveys and sources.

²⁸ Refer to accounting consistency which is reconciliation across years (missing data are taken into account) and arithmetic consistency is where sub-totals add up to totals.

	15.1.3	Statistics are coherent over time.	Statistics are coherent or compatible over a maximum of five years.	Statistics for the year in progress are comparable to the statistics for the previous year in most cases. The statistics are coherent.	Statistics for the year in progress are compared to the statistics for the previous year to verify coherence. Coherence is acceptable.	Statistics for the year in progress are hardly compared to the statistics for the previous year to verify coherence. Notary discrepancies are identified.		Comparability is the issue. If you change definitions then it is difficult to make comparisons.
Compatibility	15.2.1	Statistics from different ministries can easily be compared based on Regional codes, Schools codes, location coordinates, etc.	Statistics are compatible with other government databases (such as central statistical office and other government ministries) through unique identifiers.	Statistics from different sources can and are, in some cases, compared.	Statistics from different sources can be compared, but with great difficulty as it is seldom done.	Only statistics on administrative entities can be compared. Databases are stand alone and have little or no links.		
Comparison with other systems	15.3.1	Statistics are compared with other statistical systems.	Comparisons are made with household surveys when necessary. Cross national comparability of the data is ensured through frequent comparisons with other international statistics (UIS, AU Outlook Database) and regional assessments of country statistics.	National statistics are occasionally compatible with other national surveys and involved in international and regional comparisons	National statistics are rarely compared with other statistical systems.	National statistics are compared with other statistical systems at no time.		
Interpretability	15.4.1	One set of data to allow for robust interpretation.	Five years' data is available for robust interpretation.	Two years' data is available for robust interpretation.		Lack of available data makes robust interpretation difficult.		
NORM AVERAGE								

NORM 16: 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.

Components		Standards	Assessment levels of the quality of statistics				Score	COMMENTS
			Quality Statistics Level 4	Acceptable Statistics Level 3	Questionable Statistics Level 2	Poor Statistics Level 1		
Clarity of education statistics	16.1.1	The statistics are presented in a clear and understandable manner.	Statistics are analyzed and presented in a form that facilitates proper interpretation and	Statistics are clearly presented but with limited analysis.	Statistics are clearly presented but without analysis.	Statistics lack clarity and are not analyzed.		
Dissemination	16.2.1	Annual Statistical reports disseminated utilizing various methods.	Dissemination services use modern information and communication technology tools ²⁹ and traditional hard	Statistical reports are distributed using modern technology mainly with hardcopy reports in limited numbers.	Limited distribution using modern information and communication technologies and hardcopy reports.	Statistical report not disseminated.		
	16.2.2	1. Regular dissemination strategy in place.	The Ministry establishes an information desk to cater for users and customizes its dissemination of annual publications to meet the needs of different target groups.	Most of the time there is an arrangement to provide information to users but the dissemination is seldom customized to their needs.	There is no established arrangement to provide information to users. However, it is common to cooperate and provide information.	There is no arrangement to provide information other than distribution of annual statistical reports.		

²⁹ Websites, internal shared drives, online storage sites, CDs and email.

	16.2.3	Users are informed about the statistical processes and outputs.	Users are kept informed through provision of metadata on the methodology of statistical processes and the quality of statistical outputs.			Users are not informed about the statistical processes and statistical outputs.		
	16.2.4	Analytical reports provided to lower structures.	Lower levels ³⁰ of government structures receive official or published annual summary statistics (both actual and indicator statistics) appropriate to their area.	Lower levels of government structures receive annual summary statistics most of the times.	Lower levels of government structures receive annual summary statistics some times.	Lower levels of government structures do not receive annual summary statistics		
	16.2.5	Regular training given for EMIS personnel at lower levels on analytical reporting.	Annual training on analytical reporting is provided to all EMIS personnel at all levels.	Annual training on analytical reporting is provided to all central and lower level EMIS personnel.	Ad hoc training on analytical reporting is provided to some levels.	No training on analytical reporting is provided.		
Metadata	16.4.1	Documentation of metadata ³¹ exists.	Documentation of meta-data exists on the database. This documentation includes a data dictionary and information on how the statistics are collected, produced and stored.	An acceptable level of documentation of metadata exists. But documentation is incomplete.	No formal documentation on statistical processes and the database but this can be explained verbally by EMIS personnel.	No metadata is documented and no explanation is available.		
NORM AVERAGE								

³⁰ Regions, provinces, districts and schools

³¹ Metadata is a description of the statistics, its database structure, terminology and the methodological procedures being followed.

NORM 17: COMPREHENSIVENESS

Education statistics and information are published on all sectors of education and training.

Components		Standards	Assessment levels of the quality of statistics					Score	COMMENTS
			Quality Statistics Level 4	Acceptable Statistics Level 3	Questionable Statistics Level 2	Poor Statistics Level 1			
Comprehensive statistics	17.1.1	Education statistics collected on all education sub-sectors are reported on.	Statistics are reported on all sub-sectors ³² of education and training.	Statistics are obtained for sub sectors under Ministries of Education but not from sub-sectors of other ministries ³⁰ that provide education and training.	Statistics are collected on most sub-sectors of education but the tendency is not to cover private-sector institutions.	Statistics are obtained only on one or two sub-sectors.			
	17.1.2	There are statistics on quality indicators ³³ in the annual Statistical reports.	Statistics within education and training institutions that impact on the quality of education are reported annually.	The annual statistics report(s) include some statistics on quality ³¹ .	The annual statistical reports include very few statistics on quality.	The annual statistical reports include hardly any statistics on quality.		Many reports focus on education access and not on the quality. In Burkina –the completion rate, promotion rate, repetition rate, dropout rates, pass rate, teacher pupil ratio, textbook pupil ratio are indicators used to measure the quality of education.	
	17.1.3	Statistics are split by gender.	Gender is disaggregated across all levels of education	Distinctions are made by gender in most levels of education but not all.	Gender disaggregation occurs only in basic education and not in the other levels.	No gender disaggregation is found			

³² Pre-primary, primary, secondary, post-secondary, tertiary, non-formal education, literacy and technical and vocational education and training

³³ Quality indicators are debatable but, at the minimum, should include graduation rates and at least three other indicators of efficiency – completion rate, promotion rate, repetition rate, dropout rate, pass rate, educator-learner ratio and textbook-learner ratio, disaggregated by gender.

Statistics on learners with special educational needs³⁴	17.2.1	1. Statistics on learners of special needs education is integrated with other education statistics.	Statistics on learners with special needs is collected exclusively in all education sub-sectors. . These are reported in annual statistical publications.	Statistics on learners with special educational needs are collected for primary and secondary sub-sectors and published in annual statistical reports.	Statistics on learners with special educational needs are collected for some sub-sectors but are not published in annual statistical reports.	Statistics on learners with special educational needs are rarely collected and published.		
Statistics on rural/urban characteristics	17.3.1	Statistics can be split between urban and rural settings.	Distinctions are made between rural and urban characteristics (as defined by national statistical offices) of learners and institutions where possible.	Distinctions are made between urban and rural. However, this is not in accordance with national statistical office.	Separate statistics on urban and rural are only collected occasionally.	Distinct statistics on urban and rural are not collected.		
NORM AVERAGE								

³⁴ Learners who are either gifted or have physical and/or mental challenges to learning

ANNEXURE A: SCORING MATRIX

Country.....

Date of Assessment.....

Please Tick where appropriate:

External Peer Team Assessment

Country evaluation

Other

Focus Area A. Policy And Legal Framework	Norm Average Score
Norm 1: Mandate For Data Collection	
Norm 2: Quality Commitment	
Norm 3: Statistical Confidentiality	
Norm 4: Reporting Accountability	
Norm 5: Impartiality And Objectivity	
Norm 6: Registration Of Institutions	
Norm 7: Registration Of Learners	
Focus Area Average	

Focus Area B. Resources Availability And Utilization	Norm Average Score
Norm 8: Adequate Resources	
Norm 9: Cost Effectiveness	
Focus Areas Average	

Focus Area C. Statistical Processes	Norm Average Score
Norm 10: Sound Methodology And Appropriate Statistical Procedures	
Norm 11: Non-Excessive Burden On Respondents	
Focus Area Average	

Focus Area D. Education Information Reporting	Norm Average Score
Norm 12: Relevance	
Norm 13: Accuracy And Reliability	
Norm 14: Timeliness And Punctuality	
Norm 15: Coherence, Comparability And Integration	
Norm 16: Accessibility And Clarity	
Norm 17: Comprehensiveness	
Focus Area Average	

Overall Average of all Standards

Add each score per standard and divide by 84 (total number of standards)

Overall Score	
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ANNEXURE B: EXTERNAL PEER RATING TEAM AND COUNTRY SCORING MATRIX

The Ministry of Education and Peer Review Team engage in joint discussions and reach a consensus on ranking. In cases where the country assessment and the peer assessment differ significantly and no consensus on scoring is reached the two scores shall be averaged with the country score constituting 40% and the Peer Review Team 60%.

Focus Area A. Policy And Legal Framework	Country Score	Peer Review Team Score	Average Score
Norm 1. Mandate For Data Collection			
Norm 2: Quality Commitment			
Norm 3: Statistical Confidentiality			
Norm 4: Reporting Accountability			
Norm 5: Impartiality And Objectivity			
Norm 6: Registration Of Institutions			
Norm 7: Registration Of Learners			
Focus Area Average			

Focus Area B. Resources Availability And Utilization	Country Score	Peer Review Team Score	Average Score
Norm 8: Adequate Resources			
Norm 9: Cost Effectiveness			
Focus Areas Average			

Focus Area C. Statistical Processes	Country Score	Peer Review Team Score	Average Score
Norm 10: Sound Methodology And Appropriate Statistical Procedures			
Norm 11: Non-Excessive Burden On Respondents			
Focus Area Average			

Focus Area D. Education Information Reporting	Country Score	Peer Review Team Score	Average Score
Norm 12: Relevance			
Norm 13: Accuracy And Reliability			
Norm 14: Timeliness And Punctuality			
Norm 15: Coherence, Comparability And Integration			
Norm 16: Accessibility And Clarity			
Norm 17: Comprehensiveness			
Focus Area Average			

REFERENCES

Code de Pratique des Statistiques Européennes

Leo L. Pipino, Yang W. Lee and Richard Y. Wang (2002) Data Quality Assessment, Communication of the ACM April 2002 Vol 45 No 4ve, web.mit.edu/tdqm/www/tdqmpub/PipinoLeeWangCACMApr02.pdf Accessed October 2010

Principles Governing International Statistical Activities.

Statistics Finland. Guidelines of Professional Ethics.

Statistics South Africa (2008). South African Quality Assessment Framework (SASQAF). First Edition. National Statistical System. Republic of South Africa.

Statistics South Africa (2010). South African Quality Assessment Framework (SASQAF). Second Edition. National Statistical System. Republic of South Africa.

Statistics South Africa (2010). South African Quality Assessment Framework (SASQAF). Operational standards and guidelines. First Edition. National Statistical System. Republic of South Africa.

Statistics Norway. Ethics and Statistics .

Statistics UK. National Statistics Code of Practice.

UNESCO Institute of Statistics (2008). Data Quality Assessment Framework (DQAF). Unpublished.



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