YEMIS - Yemen Education Management Information System

Policy guidelines and proposed way forward

January 2022

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Acronyms

EiE: Education in Emergency

CSO: Central Statistical Organisation

DBMS: Data Base Management System

DEO: Directorate Education Officers

DPs: Development Partners

DQA: Data Quality Assessment

DQAF: Data Quality Assessment Framework

GD: General Department

GEO: Governorate Education Officers

GIS: Geographical Information System

HDP: Humanitarian and Development Partners

HR: Human Resources

IDPs: Internally Displaced People

IT: Information Technology

LAN: Local Area Network

MoE: Ministry of Education

M&E: Monitoring and Evaluation

SDG4:   Sustainable Development Goals (No 4 – Education)

SC: Steering Committee

TC: Technical Committee

TO: Technical Office

UPS: Uninterruptible Power Supply

1. Brief summary

The current grant from the GPE is targeting the most vulnerable children by improvement access and quality of education in 13 governorates, while at the same time, strengthening the institutional capacity of the Ministry of Education (MoE) in planning, implementation and monitoring at the central level. One of the primary intervention is to develop the Education, Management, and Information System (EMIS) for improved data collection and analysis that contributes to supporting decision-making, policy-analysis and formulation, planning, monitoring and management at all levels of the education system overall. UNESCO was entrusted to assess the needs, develop policy guidelines, develop and install the EMIS software, pilot it in approximately 50 schools, and build capacities of the MoE personnel.

This document aims at presenting some of the progresses made in implementing this pilot project and developing a medium-term approach for an EMIS functioning and sustained in full autonomy by the MoE. It includes a brief summary of the needs assessments, a description of the pilot EMIS solution as well as policy guidelines and an action plan to accompany the MoE in its willingness for expansion at the national level. A way forward towards additional EMIS decentralization and enhanced functionalities is finally presented.

2. YEMIS project quick overview

The main purpose of the YEMIS project, is to support the MOE in Aden establish the EMIS system and build the institutional capacity in this area. The intervention is aimed to provide technical support and build the capacity of MoE to collect, analyse and utilize accurate data to inform the decision making processes and sector planning.

The implementation strategy is built on an action plan, which includes, but is not limited to, the following:

- An EMIS assessment study intended to provide a comprehensive situational analysis, risks and mitigation measures for the development of the pilot EMIS software and organisational solution
- The design and development of a short-term EMIS solution
- The development of Policy guidelines that will guide short, medium and long-term developments
- Capacity building activities targeting all staff involved in making the EMIS functioning and used for evidence-based planning and decision making

3. Current progresses in implementation

A. Needs assessments

In order to inform the design of the future EMIS and its appropriation by the MOE, a needs assessments has been undertaken that led to a situation analysis and recommendations for EMIS solution.

The needs assessment is a good starting point for national policy-makers to reach consensus on what to do to make the EMIS more effective, to make it serve country needs in the education sector and beyond, as well as to generate momentum for reforms.

Situation analysis

Surveys and meetings with Technical Office's personnel in Aden and Sanaa as well as documents review were conducted in the period from August to October 2021. The key findings are summarized as follows:

Technical Capacity, Human Resources and Legal Framework

Based on the findings, the EMIS technical capacity of human resources at the level of the MOE, governorates, directorates and schools can be rated as low and with an insufficient number of personnel. Staff however appear to be in place (at the different levels of administration) as a potential technical team to be empowered on a solution that they can support and maintain. However, there is no documented legislation regarding data collection. The lack of a structured organization and jobs definition must be addressed.

A well-targeted capacity building plan needs to be tailored to the existing capacities and designed for building an ownership around an EMIS solution that takes into account the ground reality.

The legal and institutional framework has to be put in place and the responsibilities of the different EMIS functions to be officially assigned.

Physical infrastructure

The nationwide power and connectivity infrastructure is unstable. It is inexistent in remote areas and in most schools. At central level, access to Internet is erratic. The official means of communication between the Ministry of Education and the governorates are written letters in hard copies. Only a few employees use their personal email addresses for communication; however, they are not considered as official correspondence.

A data centre is being installed and secured with the support of WFP and each directorate/governorate is equipped with a computer and a printer.

Based on the findings, the unavailability and weakness of connectivity prevents the adoption of a web-based EMIS solution. The absence of electricity and IT devices at the school level prevents the automation of data collection from the source.

Data Architecture

The Ministry of Education did not generate any statistical report since the academic year 2015-2016 due to war and political instability. It seems however that examinations data are being produced regularly. The current school level data collection exercise conducted with the support of UNICEF is based on utilization of paper forms filled at school level and captured at directorate/governorate level through a Kobo form into a database. This data collection exercise covers a selection of districts in five governorates and is not expected to be expanded.

B. Short-term EMIS solution / Pilot phase

Based on the situational analysis described in the needs assessment, a consulting company has been hired to support UNESCO in designing, developing, testing, and rolling out an EMIS solution for Yemen, in liaison with the MoE and other implementing partners in 50 public schools in Yemen. The assignment includes training MoE staff and other relevant stakeholders on the management of the overall solution organisational methodology and software tools and documenting the whole process so that it can be scaled up to the whole country in the near future.

To date the below proposal has been submitted to the MoE. Final decision is still opened to discussion.

Objectives of the solution

The solution goal is to establish a performing system that will allow collecting sufficient data to compute the most important education indicators, including indicators necessary to address the needs of an education system in a situation of emergency. The solution is also aimed at facilitating the Ministry of Education's data collection and analysis work, by proposing an **easy-to-use** through **easily scalable system** to serve as a basis for further EMIS enhancement in the years to come. In that perspective, the proposed solution must take into account the following requirements:

- The approach should be **resilient** to challenges. This means that it should be unsophisticated, easily understandable by everyone involved and that it provides room to adapt to changes in circumstances.
- The approach, methodology, logistics and software must allow the Yemen education census to be **evolutive** with limited efforts. Should the MoE decide to add sections to the questionnaire, collect data for a different type of schools or compute new indicators, this should be made as easy as possible, given resources at the Ministry or resources that can easily be found in the region.

Data collection methodology

The data collection methodology has been proposed based on the situation analysis and considering in particular that no recent detailed school data is available for the majority of Yemeni schools, and the lack of connectivity, IT infrastructures and skills at the school level. The proposed solution is based on a school census approach, using paper form questionnaires in all schools and a kobo-based electronic form in a few eligible schools during the pilot phase. At a later stage, electronic data collection can be gradually introduced, district by district, to more schools who have the necessary equipment and qualifications.

The below figure, extracted from the company proposal, synthesises the census process including the training sessions planned for the pilot phase.
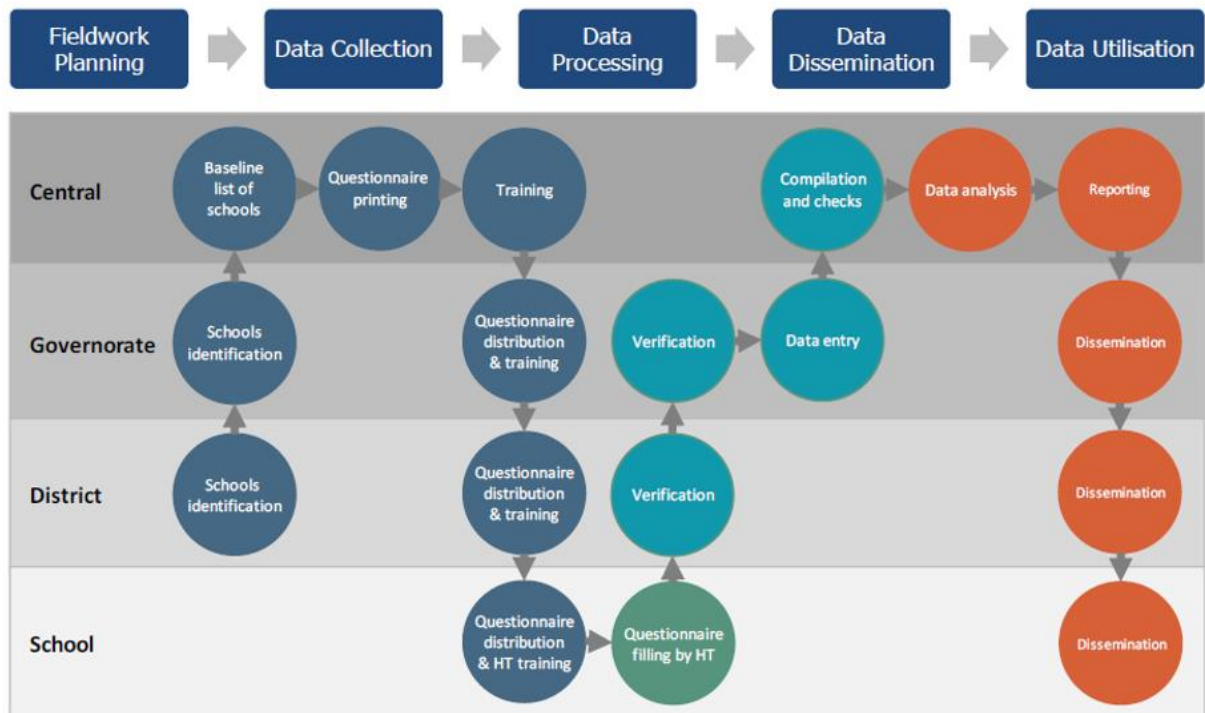

Figure 1: Proposed school census workflow for pilot phase

Questionnaires will be pre-filled (using stickers with school identification details stuck onto the front of the questionnaire) to facilitate questionnaire distribution monitoring.

After head teachers fill in the questionnaires, they ship them back to the district where there are verified and submitted to governorate level. The proposal suggests that data entry takes place at governorate level or be split in two or three governorate teams.

Once data is entered and verified at the governorate level, databases are then shipped to the MoE in Aden to be aggregated into a single database for data analysis and reporting.

Software solutions

The decision to be made in terms of software solution, especially in the context of education in emergency in which Yemen finds itself, must be guided by the necessity to rapidly produce quality data for fuelling policy dialogue rather than by technological choices. In other words, such decision owns to highest authorities and not to IT specialists.

It seems important here to recall that the last statistical report available dates from before the conflict (academic year 2015-2016) and that there is an urgent need to change this situation. Investing in a state of the art system is obviously counterproductive in the current context and is likely to put at risk, rather than contributing to, the strategic objective of the MoE to design and implement education development policies based on evidence.

The EMIS solution, should build on rather simple but robust tools that will allow the technical team to concentrate on data production and interpretation, rather than investing time in handling sophisticated systems. An easy-to-maintain solution should be considered as an operational

prototype making it possible to achieve the final objective of data production while avoiding technological pitfalls in this recovery phase.

Moreover, such a prototype can then be used as detailed specifications with tested procedures and reliable data base structure that, in parallel, in a second phase, the IT specialists would use to guide the development of a more elaborated web based system.

4. EMIS and data quality - Fundamental principles

One important expected output of the YEMIS project is the provision of "**EMIS Policy Guidelines for EiE**".

Prior to presenting these guidelines, it is necessary to develop a common understanding of what is an EMIS and data quality principles that we will use as fundamentals for structuring the guidelines.

A. What is an EMIS?

In this report we will be guided by the following EMIS definition provided by UNESCO:

"An EMIS is a sub-system of an education system aimed at collecting, storing, processing, analyzing and disseminating education-related data and information. UNESCO promotes a rounded and broad understanding of EMIS, which goes beyond the physical components or software used for the collection, management and analysis of data. EMIS is understood to be education sector-wide, including, but not limited to, administrative data from school censuses, financial data and learning assessment data. In essence, EMIS encompasses the entire 'data eco-system' at all levels of a national education system."[1]

From an operational point of view, such an EMIS could be represented as follows:

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[1] https://en.unesco.org/news/why-we-need-better-data-and-evidence-education-emergencies
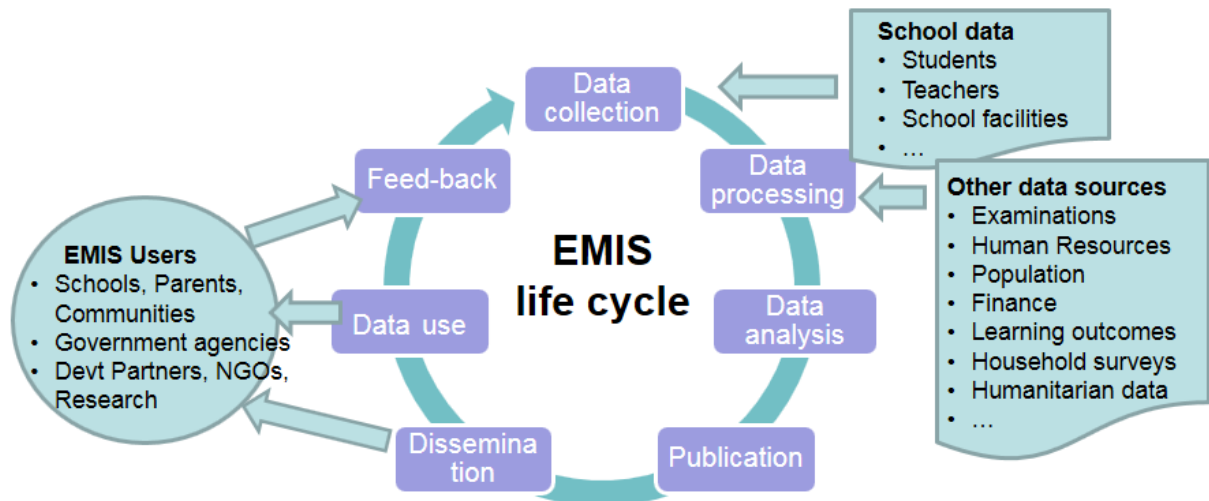
Figure 2: EMIS life cycle

The above graphical representation of the EMIS life cycle concept illustrates the different phases required to get the data from the field (through punctual school surveys or/and yearly school census, learner registration tracking system or/and school management system), process it, and take the results back to the users. This is a chained together procedure where any break, any weaknesses in the middle affect the final result.

Although each country has its specificities depending on how data is collected, processed and disseminated (levels of decentralisation, use of electronic devices, etc.), the EMIS life cycle is a useful template to describe and verify that all procedures are in place to produce quality and useful data.

The EMIS life cycle demonstrates that an EMIS is more than a simple annual school census or a school management system. The scope of the datasets used goes indeed beyond administrative data. The system uses different data sources to help assess the pertinence of education policies and the performance of institutions. In the case of Yemen, in addition to those mentioned in the above figure, "Other data sources" should include, for instance, education sector report, Yemen Education Cluster (YEC) database, community participation reports, girls education reports, GD of school feeding program, etc. – (See below Data relevance). It will be important to discuss these data sources with relevant stakeholders and identify strategies to refocus data collection within the school census to avoid duplication of efforts and to reduce burden on respondents at school level.

Ultimately the information produced by the system is provided back to the respondents (e.g. schools) to be reviewed for improvement and used for local management thus improving data quality and system efficiency.

EMIS is also the main source of education data for evidence based decision making and user itself of the data it produces. EMIS is one of the data sources for national and international official statistics, part of the National Statistical System (NSS). In that regard, it must be guided by the UN fundamental principles of official statistics (UNSD 2014) and data quality.

B. What is data quality?

To ensure data produced by the EMIS can effectively be used for evidence planning, policy decision making and research, the overall system design and its operationalization at all administrative levels must follow recognized quality standards.

Verification of compliance with these standards is often used as part of an ex post evaluation exercise to provide data producing organizations with recommendations for improvement. They can also be used in the context of a **quality assurance framework**[2] formulated under policy guidelines that should be followed to guarantee better data quality and hence better evidence for policy making. This is the approach we use here in addition to an adaptation to Yemen Education in Emergency (EiE) context.

Since the initial development of the Data quality Assessment Framework (DQAF) by the IMF[3] to assess the quality of economic data, different methodologies were designed, developed and tested in the perspective of an application to education data production and use / EMIS.

The "Ed-DQAF"[4] developed by UIS, the World Bank "SABER-EMIS tool"[5] and the "EMIS Norms and standards"[6] by ADEA are the most documented ones. Of these three types of education data quality assessment frameworks, the UIS Ed-DQAF is the most widespread (UNESCO-UIS 2020-1).

The E-DQAF is constituted of **nine dimensions of quality** covering the enabling environment, the data production processes and the data dissemination and use. It can be represented as follows:

Enabling environment	Data production	Data dissemination & use
Legal and institutional framework	Concept and definitions	Periodicity & timeliness
Resources	Scope and coverage	Consistency
Data relevance	Accuracy and reliability	Accessibility and clarity

Figure 3: The Ed-DQAF

NB: A similar data quality framework is used in UNESCO publication "Strengthening Education Management Information Systems (EMIS) and data for Increased resilience to crisis: a synthesis of case studies" (UNESCO-2021).

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[2] https://unstats.un.org/unsd/methodology/dataquality/
[3] https://unstats.un.org/unsd/dnss/docs-nqaf/IMF-dqrs_factsheet.pdf
[4] http://uis.unesco.org/sites/default/files/documents/training-workshop-manual-data-quality-assessment-framework-2017-en_0.pdf
[5] https://documents1.worldbank.org/curated/en/947771496404522835/pdf/115466-wp-public-SABER-EMIS-Training-Manual-August2015.pdf
[6] https://www.adeanet.org/clearinghouse/en/emis-education-management-information-systems-norms-and-standards-assessment-framework-sadc-region

5. Policy guidelines for short, medium and long-term EMIS developments

On top of this quality assurance framework and drawing lessons from the Yemen Transitional Education Plan (Yemen MoE 2019), we develop here practical policy guidelines that we recommend to be followed as minimum fundamental requirements for a successful design, implementation and use of EMIS in Yemen. Some recommendations are global for long-term EMIS sustainability and other recommendations are specific to short and medium-term action plan implementation. For the short-term, these guidelines are relevant for the specific data collection that will be organised using the organisational and technical solution presented above.

The whole of these recommendations should be turned into action plan and stipulated into a manual of EMIS procedures (See Annex A: Manual of EMIS procedures).

A. Enabling environment

The Enabling Environment captures the general settings necessary for an EMIS to operate efficiently. It covers a number of prerequisites of quality to be verified / implemented in priority.

Legal and institutional framework.

The statistics Act No 28 / 1995[7] clearly specifies that the Central Statistical Organization (CSO), the **umbrella agency** in terms of statistical production has the **overall responsibility** for approving statistical information produced by side ministries after checking for its reliability and permitting its dissemination. The **CSO is the custodian for national official statistics**. This statement is in line with the UN fundamental principles of official statistics (UNSD 2014).

Similarly, a legal or policy framework should exist mandating **EMIS as the custodian of education data** (UNESCO-UIS 2020-2).

We recommend that:

- A meeting is organized with CSO Yemen[8] (or current administration responsible for national statistics). The necessity to update the statistics Act will be discussed, in particular the coordination mechanisms between CSO and side ministries.
- The statistics act (or amended version of it) is shared with decision makers in the MoE and humanitarian and development partners.
- The 1992 Education Act No 45 (or amended version of it) is updated to ensure that:
  o The collection, processing, and dissemination of education statistical data by the MoE is the sole responsibility of the "Planning department"[9] (General Department of Planning and Statistics or any other unit that will be identified as responsible).

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[7] https://unstats.un.org/unsd/dnss/docViewer.aspx?docID=358#start : "*7. The Central Statistical Organization undertakes the technical supervision over the statistical units and administrations in the ministries and government departments so that to ensure unification of the technical methods of collecting of the statistical data.*"

[8] https://www.cso-yemen.com/

[9] We will call here "Planning department" the structure in charge of the EMIS and its different functions

- o Data collection exercises outside the yearly school census is to be organized in collaboration with the Planning department. This includes learning assessment surveys or any data collection conducted in the context of EiE.
  - o The master list of schools (see below Scope and coverage) is to be maintained by the Planning department in collaboration with the "Office of the Education Registra" (or any other unit that will be mandated as responsible for schools registration). In the absence of such unit, it should be created or a coordination mechanism with other concerned departments is to be put in place.
  - o It compels all educational institutions to report data as requested by the Planning department.
- The updated Education Act is shared with humanitarian and development partners with special attention to Planning department responsibilities and mandate in terms of data collection as well as the necessary observance of it by all stakeholders.
- Invitation is systematically addressed to Humanitarian and Development Partners (HDP) to participate in data needs identification, norms and standards harmonization.
- In addition to the Education Act, the organigram of the MoE is to be updated (see Human resources below) and published. It will clarify the organization of the EMIS across the different organizational units and departments.

NB: Annex B presents an English version of the current **MoE organigram** that was gathered during interviews conducted for the Needs assessments study (See above).

Expected results:

- Data is validated by the umbrella agency which verifies whether statistical norms and standards are applied by the MoE. Data sharing, transfer of competences and coordination are institutionalized. Consistency of methods and results is observed.
- Duplication of data collection exercises is avoided reducing burden on respondents.
- When parallel data collection cannot be avoided, statistical outputs are consistent and coherent under the authority of the Planning department.
- A unique master list of schools is maintained guaranteeing better accuracy and reliability (See below Scope and coverage)
- Linkages between EiE-related policy and planning and EMIS are strengthened.

In the case of the EMIS solution planned to be implemented in the short term (See above Short-term EMIS solution / Pilot phase), as well as in the way forward (See below Way forward for a human resource management module) detailed teachers data will be collected. When collecting individual data, **confidentiality** must be guaranteed and widely known.

We recommend that:

- Formal provisions clearly state that individual responses are to be treated as confidential, and shall not be disclosed or used for other than statistical purposes. This formal provision will be included in the education act, in the paper form census form as well as in all statistical publications.
- Measures are taken to **secure the computer systems and their premises** to prevent unauthorized access to individual data.

EMIS Organizational Structure discussion

- In terms of logical framework, one can identify three main functions which closely interact to form the overall EMIS: The IT function, the data gathering and reporting function (commonly called the statistical function) and the Monitoring and Evaluation (M&E) function in charge of identifying data needs and producing data analytics to inform policies and decision making.
- This logical framework can be implemented under different hierarchical organizations. In most cases, the three functions are structured into organizational units under a Planning department. However, with increasing needs for development of IT solutions, the IT function takes a more important place in the organigram and it rapidly becomes a department in itself with "IT correspondents" in different units at central level and, "EMIS correspondents" (with developed IT and statistical capacities) at the level of the decentralized administrative structures.

We recommend that the Technical Office (TO) structure be rapidly adjusted (according to the below figure or any other), with identified staff mandated to specifically work on these three functions while collaborating towards the functioning of a strong EMIS.
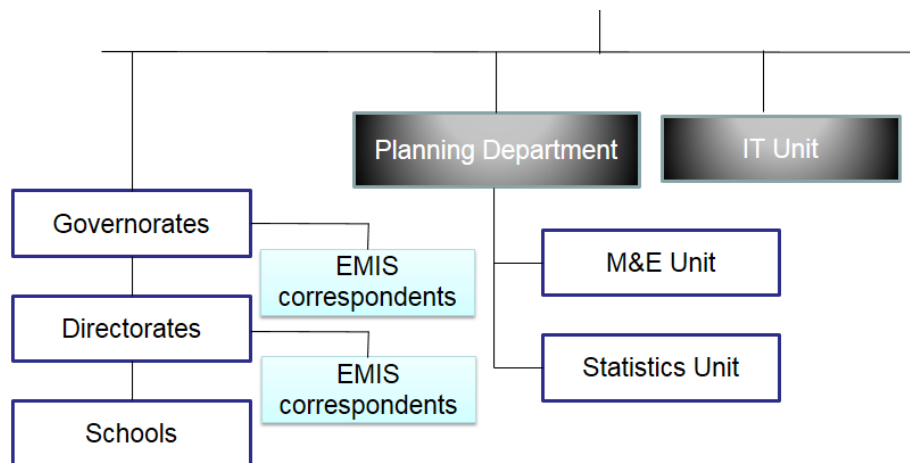
Figure 4: Suggested Organizational Structure

Steering Committee (SC)

The existing SC may however be kept in place at least during this period of EMIS reconstruction. This is an instance of decision and M&E dedicated to the development of the EMIS itself, not to its operational functioning.

- It may however be necessary to clarify its role and members, and define at what stages external partners involved or with experience in EMIS in the country should be involved (e.g. HDP, LEG members etc.).

NB: Technical and functional solutions should be designed taking into account users' needs (and capacities). Users are internal to the MoE (departments and decentralized structures) and external (parents, HDP, CSO, etc.). They can possible be constituted under a **users' advisory committee**.

Resources

Adequate available resources demonstrate the **political will** for evidence based planning. It is essential that (technical, financial, human and infrastructure) resources are commensurate with EMIS needs for individuals and institutions to perform appropriate functions effectively, efficiently and sustainably. The needs assessment report paints a worrying picture of the situation. Although resources may not be available for conducting properly EMIS functions, it is essential that the needed resources are precisely assessed and specified in adequate frameworks.

Human resources

Based on the technical and organizational scenario of the pilot phase (See below Short-term EMIS solution / Pilot phase) and with the short-term objective of deploying such a system which is managed and maintained in full autonomy by the MoE, we recommend, at a minimum, that the following positions be filled:
- At central level:
  - 2 planning officers
  - 3 statistical officers
  - 3 IT officers
- In all Governorates
  - 1 EMIS correspondent
- In all Directorates
  - 1 EMIS correspondent

This staff will be permanently assigned in support to EMIS with clear job descriptions. Additional staff (from within or from outside the MoE) will be made available, after relevant training, for specific and punctual activities related to EMIS (data collection and gathering, data capture, fieldwork, etc.). These additional resources will be quantified in a yearly updated school census plan and budget (See below Financial resources).

While wages must of course be paid in due time, incentives must also be commensurate to efforts requested in particular in period of rush. Any issues impacting staff motivation will be reflected in data quality and timeliness of expected outputs.

On the short-term and based on a skills appraisal, a capacity building program will be tailored to the existing EMIS team and the potential planned recruitment. Such a plan will be rolled up through different delivery modalities:
- Targeted trainings across the school census exercise from head teachers to data analysts, through GEO and DEO;
- Short IT trainings on software solution use and administration;
- Longer IT trainings on software maintenance and evolutivity;
- Distance training for planners;
- Trainings on data quality assurance and data control;
- Strategic workshops for decision makers;
- Specific modules to be included in teachers training colleges programs;
- etc.

With the envisaged evolution of the EMIS (see below Way forward), strategic choices (outsourcing, sub-contracting or in house capacity) will have to be made to respond to the increasing workforce needs.

Frequent coordination meetings, gathering the whole team involved in EMIS operations will be held to develop a **culture of information sharing and communications** at MoE, GEO and DEO levels and across these entities.

Periodic reviews of working processes will be undertaken (following the manual of EMIS procedures) ensuring procedures are well applied. A DQA will be conducted after the first year of implementation of the medium-term action plan and then regularly every two or three years.

Financial resources

An EMIS action plan will be annually elaborated and costed. The recurring EMIS budget will be submitted to decision makers and discussed with Ministry of Finance and potential DPs. This budget allocation must be **secured** and made available at once at the beginning of the school census exercise. It is indeed essential that the financial resources are **available on time** at each of the different phases of the annual action plan so that its execution does not suffer from prohibitive delays.

The budget will include current and investment costs (see Annex C for suggested expenditure items and budget structuration).

Infrastructure

The hardware and equipment must be commensurate with the organisational and technical solution.

In the Yemen context of EiE, power outages, limited internet performance, issues of transport, and security, in particular at decentralized level, must be considered in the design of the EMIS plan.

The proposed Medium-term action plan is based on a generalisation of the pilot phase. The first year, data processing centres will be deployed in each of the Governorates and progressively, the IT hardware resources will be dispatched from Governorates to Directorates.

- **Adequate premises** will have to be built/rehabilitated, secured, equipped with air-conditioning and, where necessary, autonomous power supply solution.
- **IT equipment** will include at minimum:
  - Central level: Server upgrade, LAN, DBMS upgrade, software security solutions, etc.
  - Governorates: one computer and UPS per district, 2 printers, 1 LAN kit (either Wi-Fi or mobile cabled), 1 scanner + 1 computer, UPS and printer for data entry supervision and data archival.

NB: in order to keep the data entry within an acceptable time-frame, the number of computers may need to be augmented in districts with important number of schools. A simulation model is given in Annex D to help estimates.

Data relevance

It is essential that periodic consultations (with MoE departments, HDP and other stakeholders) take place, to review the usefulness of existing statistics and to identify emerging data requirements. Such consultations will aim to inform decisions on data needs priorities in the Yemen context of EiE and to identify and improve relevant data sources that could address these needs.

Annex E provides a methodological tool (in the form of an Excel file) to support this endeavour following the below four-step approach:

1. Relevant strategic policy documents (TEPP, Yemen TEP and SDG4 indicators framework) are first analysed to extract the related indicators – other policy documents may of course be analysed.
2. For each of these indicators, the potentially necessary data sources (or data sets within the school census data source) are then identified – relevance of indicators can be discussed.
3. When crosschecking the selected indicators and related data sources, the status (existing or not, to be improved, etc.) of the required data items is analysed.
4. Finally, comments and suggestions are made for each data set / data source to improve EMIS coverage and data relevance.

This tool will be useful to help discussions and decision making in the context of workshops to be regularly organised by the MoE. These workshops will aim to take stock of data needs and to integrate them into school census forms and other data sources such as household surveys or learning assessment surveys..

In addition to the Excel file methodological tool, Annex E provides a first analysis and recommendations for improvement of the main identified data sets.

B. Data production

Concept and definitions

Documentation on concepts and definitions is to be included in the annual yearbook and possibly in the MoE website. This includes indicators definitions and calculation, concepts definition (schools status, education system organisation, etc.), scope of institutions and learners covered by the publications, school census response rate, missing data, methodology used for learners' age, etc.

The description of the overall data collection – processing – reporting process should also be part of this documentation.

NB: Particular attention should be given so that concepts and definitions used are in accord with standard statistical frameworks. In that regard, UIS published a glossary for education data concepts and definition (UNESCO-UIS 2020-3).

Scope and coverage

EMIS should encompass all sub-sectors under MoE responsibility (pre-basic, basic, general secondary and literacy and adult education). It should cover all public and private schools and literacy centres throughout the national territory and all type of learners (including refugees and IDPs).

When implementing EMIS, it may not be realistic to decide embracing such an exhaustive scope as a start. The extension of the scope towards a full coverage of institutions and learners types must be progressive as the resources become available and the security context improves. This data scope extension is suggested to be included from the second year of the medium-term action

[plan for expansion](#) (See below). The decided scope must be clearly defined and mentioned in all EMIS publications and documents (see above [Concepts and definitions](#)).

Coverage

The school coverage is the extent to which all existing schools, within the defined scope, are considered within the data collection exercise. The difficulty resides in the fact that some schools may exist but are not identified. This is typically an issue related to the "master list of schools" maintenance.

NB: The TEP document ([Yemen MoE-2019](#)) mentions the *"% of schools participating in the annual school census is 100% during every year of TEP"*.

We recommend that:

- The latest available master list of schools is used and updated;
- An exercise of schools identification is organized in all directorates covered by the envisaged schools census and consolidated through the governorates up to the central level. Humanitarian and development organizations present on the field can collaborate on such exercise.
- The master list of schools is regularly updated in collaboration with the dedicated organizational unit in charge of schools registration. Procedures are put in place to avoid duplicates, confusion in naming and to ensure robustness of administrative school code.

Missing data

Some data sets from the school census happen to often not be reported or misreported (e.g. financial data, furniture, etc.). It is important to calculate and publish the percentage of missing data for these different datasets in order to inform data users about the data quality level.

In case of a high level of missing data, we recommend that the reasons behind are investigated, that remedial measures are taken and/or that alternative data sources are identified for the concerned datasets.

Accuracy and reliability

Accuracy and reliability can be improved through different procedures to put in place all along the EMIS life Cycle.

The master list of schools maintenance is one important element that will improve data accuracy and reliability of the school census. Out of it, a school census **response rate** is calculated indicating the percentage of school census forms that was received by schools, filled, transmitted to the relevant directorate and was finally transformed through electronic support into a database. This response rate must figurate in the statistical publications (See above [Concepts and definitions](#)).

Mechanisms must be in place to ensure that **standardised school registers** (including learners and teachers details) are maintained, assessed and used.

The rigor in the way **learners' age data as well as population data** are reported impacts heavily on several education indicators accuracy. A great attention must be given when collecting the number of learners by education level and age. The census form must include a detailed procedure that will be applied evenly over the whole data scope. The methodology used to

produce the number of learners by education level and age must be reconcilable with the one used for the population dataset provided by the CSO. We recommend that:

- The methodology is agreed with the CSO and documented on the census form;
- A "national school census day" is officially declared as "the reference day" for data collection;
- Using the learner record in the school register, the age of each learner present at school is then calculated in number of years completed at the day of the census.
- As far as possible, the date of birth in the learner record should be based on legal documents.

It will also be useful to verify that **geographical boundaries** used in EMIS (education directorates / governorates boundaries) are aligned and reconciled with statutory boundaries (those used by the CSO for population data).

The issue of the codification (for schools as well as for teachers) has already been mentioned. The structure of these (unique) codes is essential to ensure data verification and thus accuracy and reliability but also for **interoperability** purpose. Indeed, it allows databases to communicate with each other and to combine information from different data collection operations. This stands of course for interoperability with MoE data sets (examinations, learning assessments, teacher colleges database) but also with other national data systems like public servant management systems, population database or health data systems and with emergency data. Here again, the MoE and Planning department in particular must be recognized as custodian for all education data by all stakeholders.

In the medium-term, we recommend that **data audits** be regularly audited to check the accuracy of source data (e.g. **head count of sample schools**).

In case of missing data or non-response, the use of **data imputation** is recommended to allow better accuracy of published data. The methodologies used for these imputations can be presented and discussed in the context of the foreseen capacity building plan (see Medium-term action plan – Activity 2) and must be documented. Collaboration with HDP may also help in reaching non-respondent schools.

The **census forms** must be designed in a way that makes them easy to complete and to verify and are appropriate for computer processing (the software interface must be as WYSIWYG[10] as possible). The planned pilot phase of the short-term EMIS solution will allow improving the form design as well as the data capture / data control interface.

C. Data dissemination and use

The main issue here is to put in place procedures that aims at ensuring that EMIS outputs meet users' needs. The important concerns are periodicity, timeliness, consistency, accessibility and clarity.

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[10] An acronym for **What You See Is What You Get**. It is a software interface which displays an electronic form similar to the paper form used to capture or to print data.

Periodicity & timeliness

Periodicity

One main output of the medium-term action plan will be the publication of the first statistical yearbook produced since 2015-2016. One priority of the EMIS will then be to ensure that this publication is regularly produced every year. In that regard, resources must of course be available in time but also, [...*everyone involved needs to comply with individual deadlines to efficiently conduct the school census*] (World Bank 2017).

Progressively, with the development of capacities within the MOE, publications that are more frequent may be envisaged like monthly reports on school feeding programs, biannual school infrastructure reconstructions or quarterly learners' scores for instance. Learning achievement surveys will be regularly conducted according to a multi-year periodicity responding to the country monitoring needs.

Timeliness

A timely report is one that is released at the right and useful time. A Statistical yearbook, to be useful, should be published and disseminated within twelve months after the start of the school year. **The right time is the one that is pre-announced**. It is essential that a school census calendar is developed including planned publication date and is shared among all stakeholders involved in the EMIS at central and decentralised levels.

Here again, with the development of capacities within the MoE and the crisis exit, it will be possible to reduce the publications timeframe.

Consistency

Quality released data must be consistent within a dataset and over time, and with other major datasets obtained through other surveys and data sources (UNSD 2014).

We recommend that consistency checks are conducted:
- among data aggregates: enrolments, repeaters, drop-outs, and demographic data;
- over time: this will only be possible, in a medium-term, after a chronological data series is available;
- and, when possible, with those obtained through other surveys and data sources: examinations, scholarship, learning assessments, population census, household surveys, humanitarian data systems, etc.

Here also, the methodologies used for these consistency checks can be developed in the context of future capacity building exercises and must be documented.

Accessibility and clarity

Both yearly publication as well as the underneath datasets (database or spreadsheets) should be made available to all users. The still available Yemen CSO's website is a rather good example of good practice in that matter. It is accessible at https://www.cso-yemen.com/content.php?lng=english&id=690. Education data (aggregates at Governorates level) are available for school year 2016-2017. However, in terms of **clarity**, data analysis on one side and detailed data (at school level) on the other side, would have been useful.

For the medium-term, we recommend that be prepared and made available:
- A concise publication (dashboard type) with data aggregates at governorates level and commented graphical analysis (in paper form and published on the MoE website);
- Detailed data at district level, accessible for download from the MoE website;
- School level data (for researchers use) available on demand from the MoE.

In a longer term, more sophisticated decision-making oriented tools can be imagined like GIS and interactive dashboards.

6. Medium-term action plan for expansion at national level

A. Overall purpose and expected results

The main purpose of this action plan is to support the MoE in Aden in its willingness to scale up the pilot EMIS at national level. It includes a first decentralisation step at governorate level and a progressive decentralisation at district level.

The main expected results are the following:
- A district level decentralised EMIS is in place with multi-year historical database;
- Strong capacities are developed to maintain and sustain the overall system;
- The yearly production of quality statistical year book is back on track;
- Strong capacities are developed to analyse the education data and to inform policies.

The above EMIS guiding principles as well as the lessons learnt from the pilot (learning from what worked and what did not work) will guide the implementation of the action plan.

B. Action plan summary

This action plan is organised over a two-year implementation period. The same "school census workflow" than the one proposed for the pilot phase (see figure 1 above) will be followed, through deployment to all governorates on Year T and progressive decentralisation to directorates on Year T+1.

1st year strategy

Activity 1: Legal and institutional framework enhancement – an enabling environment – including legal texts, communication, human resources and detailed budget - is ready to ensure EMIS sustainability

Outputs:
- Legal texts are developed / reshuffled;
- All levels of MoE administration, related ministries and stakeholders are informed of the project through a communication plan - including MoE website revision with a specific chapter on EMIS developments;
- Coordination with main stakeholders is established;

- The required work force is in place through jobs description, capacity building plan validation and technical experts recruitment;
- The infrastructure and equipment purchase and installation plan is developed and validated;
- A detailed budget is elaborated for the 1st year national school census preparation and roll out.

Activity 2: Capacity building at central and governorates levels (IT, planning, statistics, project management)
- for IT specialist: software and LAN installation and administration, ACCESS and reporting tools, web site publications;
- for statisticians and planners: project management, data analysis and reporting;
- for governorates and district EMIS correspondents: installation, using data capture, data control, database manipulation software functionalities and problem solving.

Output:
- The capacity building plan is executed and assessed

Activity 3: Central and Governorates data centres – with secured and functional premises, LAN and IT equipment.

Output:
- The infrastructure and equipment purchase and installation plan is executed and assessed

Activity 4: School census preparation – including data needs expression for policy relevance, census form (and its user manual) design and validation, software interface and underneath database design, development and tests, master list of school establishment, manual of EMIS procedures development, data collection instruments printing and identification (unique school stickers).

Outputs:
- The census forms and user manuals are validated, printed and ready to be dispatched up to schools level (in parcels by districts);
- The software (database, data capture interface, data controls and verification) is customized and its user manual is validated;
- The master list of schools is established;
- The manual of EMIS procedures is developed and all concerned actors are informed about their duties and responsibilities.

Activity 5 : School census roll out – including distribution of data collection instruments while training at all levels of the census chain; filling of the questionnaire by head teachers; submission to districts with verification / return to school; submission to governorates for data capture / control / supervision and monitoring; databases compilation and transfer to central level; final compilation; incorporation of external data sources; data verification / imputation; data analysis, year book production and validation (by main stakeholders and final by CSO); year book printing and publication on the web site; communication plan.

Outputs:
- 1st MoE national database is available since 2015-2016
- 1st MoE year book is available since 2015-2016

Activity 6: Finalisation phase – including EMIS assessment, recommendations for improvement and action plan development for the second round school census.

Outputs:
- EMIS assessment is conducted with recommendations for improvement;
- Detailed action plan for second round school census is available;
- IT equipment (at central and governorates level);
- School census preparation;
- School census roll-out
  - Incorporation of external data sources: within the MoE (examinations, HR, scholarships, learning assessments, etc.) and outside the MoE (population census, finance data, HSS, humanitarian data systems, etc.).
- Pilot scheme generalised in all Governorates

A proposed planning for the first year of implementation is presented in Annex F.

2nd year strategy

The action plan for the second year of implementation will be similar to the first one with extension to district level and some foreseeable necessary adaptations arising from lessons learnt.

Some of these are listed here:
- The legal and institutional framework should be in place. It will be reinforced;
- The capacity building program will be reviewed and adapted to the needs;
- The scope of school census may be expanded (non-formal education, private sector, etc.) – to be discussed at the end of the phase and when identifying the data needs for revision of the new data collection instruments;
- Premises will be built / rehabilitated and secured in eligible directorates with repatriation of IT equipment from the governorates and acquisition of additional devices (printers, scanners, etc.).

7. Way forward

Relying upon that the Yemen overall emergency situation will soon enter in a phase of recovery and further development phase, and after two years of EMIS functioning as planned, one can expect that the conditions will be met to build a more relevant, useful and resilient EMIS. An EMIS that would enhance MoE management and planning capacities and that would enable a more efficient and equitable education system.

A. Discussing different options

Improving EMIS usefulness must be seen first in terms of level of service that it is capable to offer. The level of technology on which the EMIS is build should only rely on the principle of suitability or "fitness for purpose". In addition, IT development strategies must be realistic and possibly

implemented without dependency on private companies. These elements are to be considered when discussing the way forward for an improved EMIS.

Learning assessments and household surveys

Looking back at the data sets analysis presented in Annex E, one can see that the main data sources that are currently needed to answer most of missing indicators are certainly learning assessment surveys and household surveys. We highly encourage here the MoE to explore ways and means for these type of data sources to be part of the EMIS being set up.

However, although MoE will have an important role to play when discussing education concerns integration in household surveys design, the overall responsibility for the whole process is with the CSO. Concerning learning assessment surveys, and in particular those mostly recognized that include an international comparison orientation, MoE is usually more in a situation of "buying a solution" than in the driving seat for its conception.

Both data sources can be seen as the result of a one shot exercise producing an EMIS component to be acquired and plugged into the overall EMIS system managed and maintained by the MoE. This is why, while insisting again on the importance of this two data sources for the MoE, we will look here into other possible avenues for a possible way forward for further strengthening EMIS after implementation of the proposed two-year action plan presented above.

Learner registration system

One could envisage, for example, as a natural evolution of EMIS, to bring data collection closer to schools by setting up a learner registration system. Let us look here into what this type of system would provide in terms of additional functionalities:

- Tracking of individual students over time and across institutions/activities.
- Performing longitudinal student cohort analysis.
- Integrate functionalities for online registration and online payment of school fees.

These are, in our view, functionalities of little interest for improving the overall education system efficiency, and above all, hazardous to rely upon in a context of education in emergency or in reconstruction. This evolution is indeed clearly guided by a technology-based approach. Engaging on the development of such system, with the necessary huge investments in electronic devices and its maintenance costs, the specific privacy, security, technical and capacity challenges that it implies (managing a database of millions of learner records for instance), is definitely not a realistic option for improving EMIS in the medium-term in Yemen.

Teacher management module

Instead of adding complexity for little return on investment, our proposition will rather be to take advantage of the teachers' database that will have been constituted, after two years of functioning, through the collection of teachers' details.

Indeed the option of collecting individual teacher data – instead of aggregated data - for the production of work force and education quality indicators, allows thinking an EMIS that, in addition to responding to statistical needs, would offer the MoE a powerful management tool for improving the education system efficiency and better respond to crisis situations.

Teachers are at the heart of the learning process. Effective teacher management is therefore essential to the success of any education system. Cost-efficient teacher management is even more important given the fact that teachers account for a significant share of civil service staff and that their wage bill represents over two thirds of public education spending in most countries[11].

A teacher management module, part of a longer term EMIS vision would support the monitoring of teachers' licensing, appointments, placements, transfers, evaluations, promotions, and terminations as well as provide an accurate and timely overview of the teaching workforce in the country. It provides accurate information regarding demand for teachers. Therefore, the MoE will be able to make accurate predictions and plans for training and recruitment. In addition, such system can assist the MoE in teachers allocation, taking into account country needs and teachers wishes.

B. Way forward for a human resource management module

The module will build on the existing teacher database and will avoid collecting information on current teachers each year. Only new entrants will have to be captured (or – should interoperability constraints be addressed - possibly directly obtained from the teachers colleges data system). Then, as needed, the movement of staff from one school to another will be updated. The complete teachers' carrier will thus be archived via the system. Administrative and support staff (at school, directorate, governorate and central level) can also be integrated if required.

Functionalities

Although such a system needs to be contextualised to MoE needs and to Yemen's staff regulations. We can however list here some basic functionalities that it will include:

- **Staff stock management**
  It is about the management of new entrants (recruitments) and leavers. This involves having data on the unemployed (teachers / school leavers) and making it possible to identify vacant positions. This information will allow the implementation of recruitment plans integrated into the system and the monitoring of recruitments.

- **Mobility**
  It includes the transfer of staff from one post to another, its release, suspension, leave, etc. This is the most used functionality

- **Skills and training**
  It concerns the management of teachers' competences, pre-training, on the job training, etc.

- **Career management**
  Disciplinary measures and staff ratings are managed at this level.

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[11] http://www.iiep.unesco.org/en/our-mission/teacher-management

Software considerations

Such a system must allow human resources managers to have access to the central database (via the above functionalities) from different levels of the administration (central departments, governorates, directorates). It will even become necessary to give some type of access to teachers themselves (possibly from their mobile) to update their civil status or to apply for a new position for instance. Therefore, the software platform will need to be developed using a **web-based technology**.

As mentioned earlier, such evolution can be considered only in conjunction with an improvement of the whole internet and communication national level of service. However, it will be possible to allow authorised users to work **offline with an automatic database synchronization modality** when they get access to Internet.

This will be the occasion to give **more flexibility to the whole EMIS.** This can be done **without re-developing the system from scratch**. Indeed, the underneath database structure tested during two years of functioning and the overall system architecture with all algorithms stabilised will constitute a strong foundation for upgrading the short-term EMIS solution to a web-based system without huge development investment.

Interoperability with potentially existing public servants management system, payroll system and teachers training colleges information system will be required.

Confidentiality is an essential element to consider when developing such a type of system handling teachers' personal data. **Secured access with data encryption** will be needed to protect from non-authorised attempt to access the database.

References

UNESCO-UIS 2020-1: Operational Guide to Using EMIS to Monitor SDG 4 - http://uis.unesco.org/sites/default/files/documents/operational_guide_to_using_emis.pdf

UNESCO-UIS 2020-2: Efficiency and Effectiveness in Choosing and Using an EMIS - https://www.globalpartnership.org/sites/default/files/document/file/2020-09-GPE-UIS-EMIS-Guide-EN_0.pdf

UNESCO-UIS 2020-3: UIS Glossary: Education - http://uis.unesco.org/sites/default/files/documents/uis_glossary_education_20200921.pdf

UNESCO-2021: Strengthening Education Management Information Systems (EMIS) and data for Increased resilience to crisis: a synthesis of case studies - https://unesdoc.unesco.org/ark:/48223/pf0000378150?12=null&queryId=bb948039-d59b-45da-8691-fef5a0fdcdc8

UNSD 2014: Fundamental Principles of Official Statistics - https://unstats.un.org/unsd/dnss/hb/E-fundamental%20principles_A4-WEB.pdf

World Bank 2017: Data for Learning : Building a Smart Education Data System - https://openknowledge.worldbank.org/handle/10986/28336

Yemen MoE 2019: Transitional Education Plan 2019/20 – 2021/22 - https://www.globalpartnership.org/sites/default/files/document/file/2020-7-Yemen-ESP_0.pdf

Annexes

A. Manual of EMIS procedures

The manual of procedures is a document which describes in a concrete way, and as precisely as possible, how the EMIS life Cycle is organized and implemented. It is aimed at all those involved in the successful implementation of EMIS activities carried out under the responsibility of the MoE.

The manual of procedures is a working tool that fulfills various functions:
- It is a permanent methodological reference for all those involved in the procedure aimed at harmonizing practices and providing common methodological rules;
- It specifies the role of the various parties involved, as well as the decision making process;
- It constitutes a training tool for new agents of the services called upon to intervene at various stages of the EMIS life cycle;
- It contributes, in particular during its updates, to the development of constructive reflections in terms of organization, efficiency, improvement, reliability of the EMIS life cycle, etc.;
- It is a document which, by constituting a complete, precise and faithful presentation of the work of the departments involved, serves as an information base for any mission of control aimed at evaluating the quality of the EMIS life cycle management and thereby the quality of education data;
- It aims to ensure the greatest rigor and precision in the implementation of the EMIS life cycle.

It includes:
- The legal and institutional framework (all legal documents related to data production, responsibilities, security, etc.);
- The financing scheme of the yearly census and other related data sources production;
- The description of the overall yearly EMIS life cycle with the associated calendar;
- The description of each related activity including who is responsibility for, the methodology used, the planned start and end dates, and potential budget.

This manual will refer to (and will be referred by) other related manuals like the manual of IT security procedures, manual of good practices, etc.

The manual of EMIS procedures will be regularly adapted to any changes in the organization of the EMIS life cycle. A dedicated staff should be mandated to maintain it.

B. MoE organigram

File: Yemen Organizational Chart English.pdf

YEMEN Organizational Chart 2009
Translated (EN)
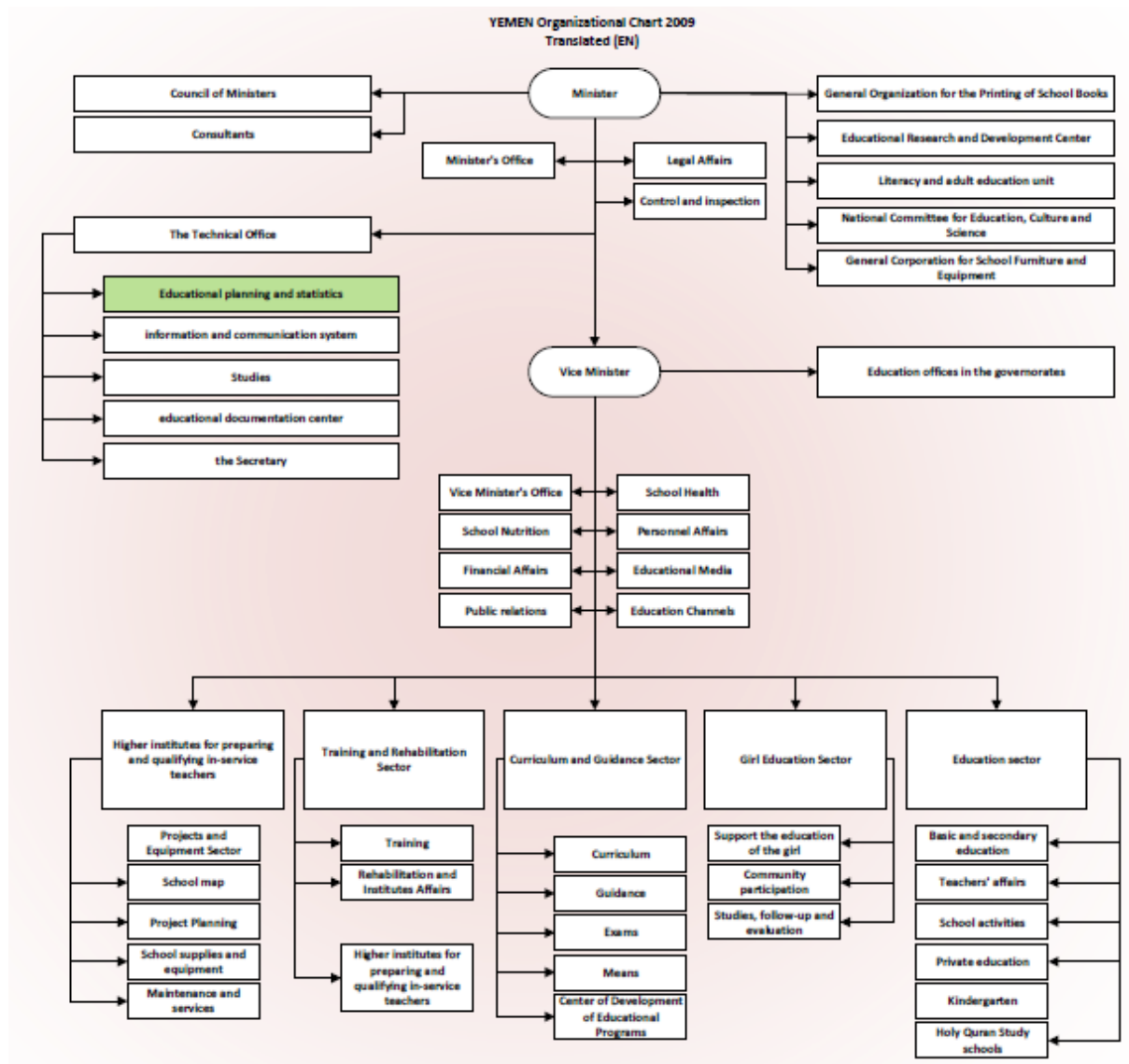
C. Costs of EMIS

When elaborating a budget for an EMIS action plan, current costs and investment should be clearly identified. **Current costs** are those required to maintain functioning the current system from one year to another. **Investments** are required when revamping / strengthening the existing system. It can be scaled over several years.

Within these two categories, the following expenditure items will have to be taken into consideration:

Current cost:

- Printings, running costs (telephone, Internet, …);
- Workshops for dissemination and user feedback should be the only workshop costs to be considered;
- Other workshops costs (refresher trainings on data collection / verification process, data capture) should be included as salary costs and regular administrative budget (fuel and perdiem for meetings). However, mainly because of very low remuneration, staff is often used to consider data production process as source of "incentive";
- Data capture: even when internalised, incentives are to be planned. What works best is a lump sum per verified captured questionnaire.

Investment:

- Training workshops including development of documentation (organizational / institutional memory).
- Training respondents (Head teachers) is highly costly. It should be considered when needed but then mainstreamed in Teacher Training Colleges curricula.
- Software developments and training costs may considerably vary according to the option made. It may be highly costly with no guarantee of sustainability.
- Hardware: Computers, networks, vehicles.

D. Equipment estimation

File: IT Equipment estimation.xls

This annex provides a tool (under an Excel file) to help estimate the number of computers required, for the data entry operation planned within the medium-term action plan.

Depending on the expected number of forms entered per day, the number of days planned to complete the entire data entry operation and the number of schools per district[15], it calculates, for each district, the number of computers required.

NB: The expected number of forms entered per day and the number of days planned to complete the entire data entry operation are available as global variables that can be modified to simulate new scenarios.

An **inventory of existing equipment** will have to be conducted to assess the number of computers to order in line with the estimated needs.

E. Datasets analysis

File: Datasets.xls

This annex analyses three policy documents and identifies relevant indicators in the context of Yemen: Guidelines for Guidelines for Transitional Education Plan Preparation (TEPP)[12], Yemen Transitional Education Plan (Yemen TEP)[13] and SDG4 indicators framework[14].

It provides a methodological tool (in the form of an Excel file) that follows the below four-step approach:

5. Relevant strategic policy documents (TEPP, Yemen TEP and SDG4 indicators framework) are first analysed to extract the related indicators – other policy documents may of course be analysed.
6. For each of these indicators, the potentially necessary data sources (or data sets within the school census data source) are then identified – relevance of indicators can be discussed.
7. When crosschecking the selected indicators and related data sources, the status (existing or not, to be improved, etc.) of the required data items is analysed.
8. Finally, comments and suggestions are made for each data set / data source to improve EMIS coverage and data relevance.

We have analysed the different indicators and relevant data sets and data sources identified in these documents. The joint Excel file identifies, for each indicator, its possible data source.

An "X" in a white cell tells that the item required is available in the data sources; an "X" in a grey cell tells that a comment is provided; an empty grey cell tells that the expected item is not included in the related data source and a blue cell identifies an alternative data source for the related indicator.

The School census data source includes existing data sets (mainly consisting of data items from the "Kobo questionnaire") and additional data sets which data items can be possibly integrated in a revised data collection instrument. This can be discussed during dedicated consultations.

We comment here, for the main identified data sets, a number of issues that can be discussed during such workshop with the aim to improve EMIS coverage and data relevance.

Enrolment Year T (included in the Kobo questionnaire):

- Enrolment by single years of age, by grade and sex (pre-primary, primary and secondary levels)
- Repeaters by grade and by sex (primary and secondary levels)
- Displaced students by grade and sex
- Students with special needs by grade and sex

Together with age specific population data set (from CSO or UNSD national level estimates), this data set allows populating most access and some equity indicators (pupil-textbook and pupil-teacher ratios). However, internal efficiency indicators will require either year T+1 data to calculate transition, repetition and dropout rates or to include specific items in the Year T data collection form to produce proxies.

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[12] https://www.globalpartnership.org/sites/default/files/2016-05-gpe-guidelines-for-tepp.pdf
[13] https://www.globalpartnership.org/sites/default/files/document/file/2020-7-Yemen-ESP_0.pdf
[14] https://unstats.un.org/sdgs/metadata/?Text=&Goal=4

SDG4 indicators cover all education sub-sector and will require collecting data for all school status and for pre-primary education – VET and HE being out of scope for MoE. Parity indexes requirement may necessitate to review type of disabilities/special needs desegregation and conflict-affected area.

Teachers

The data set includes several items pertinent to the Yemen EiE context although not specifically mentioned in the list of indicators required in the Yemen TEP.

Percentage of teachers trained (pre-/in-service) mentioned in the TEPP and SDG4 would need to be addressed.

Teacher attrition is in the list of SDG4 indicators. Year T+1 data and new entrants will be required to calculate it. Metadata mention: "The number of leavers is estimated by subtracting the number of teachers in year t from those in year t-1 and adding the number of new entrants to the teaching workforce in year t. The attrition rate is the number of leavers expressed as a percentage of the total number of teachers in year t-1."

School facilities

Most related quality indicators mentioned in the TEPP can be populated with items in this dataset. TEP 1.1, 3.1 and SDG4 4.a.1 related indicators need to be verified.

TEP 1.2, 1.3, 1.5, related indicators, populated through either community participation reports, education sector reports or YEC database may deserve to be reviewed to discuss relevance of including them in the school census form. Caution must however be observed not to overload the census form.

Learning materials

None of the data items required for related indicators from TEPP, Yemen TEP and SDG4 are present in the data collection form.

Age specific population data

Last available estimated dataset seem to be from 2014[15]. Due to the war and the resulting movements of population, new estimates at Governorates level will be need to produce many access, participation, out of school children indicators and literacy rates. CSO activities recovery will have to be followed.

Population censuses or **Household surveys** (including learning assessments)

These are important data sources for several SDG4 indicators. Here follow up with CSO will be necessary.

Learning assessments

This data source is usually the responsibility of MoE. Yemen participated in TIMSS (Trends In International Mathematics And Science Study) in 2011 and missed 2015 and 2019 rounds of the survey. It will be useful to discuss possibility of participating in the next round (2023).

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[15] http://www.cso-yemen.com/content.php?lng=english&id=690

TEP supported activities

This is a dataset gathering specific items related to TEP indicators that are populated through either community participation reports, education sector reports or YEC database and suggested to be integrated in EMIS.

F. Action plan

File: Medium-term Action Plan – Planning.xls

	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12
Legal and institutional framework enhancement	███	███	███									
Capacity building at central and governorates levels		███	███	███								
Central and Governorates data centres		███	███	███	███							
School census preparation		███	███	███	███							
Data needs identification and inclusion in the census form		░░░										
Data base and software Interface adaptation to the new census form			░░░	░░░								
Master list of school establishment			░░░	░░░								
Manual of procedure establishment				░░░								
Data collection instruments preparation				░░░								
School cencus Roll out					███	███	███	███	███	███	███	
Questionnaire distribution / training on data collection					░░░							
Questionnaire filling						░░░						
Questionnaire submission to Directorate and verification / return to schools						░░░						
Questionnaire submission to Governorate						░░░						
Data entry						░░░	░░░	░░░				
Data compilation and check								░░░				
Data Analysis and reporting									░░░	░░░		
Data dissemination and communication											░░░	
Finalisation phase												███

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