Education Management Information System (EMIS) and Related Activities
Program Inception Report
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Education Management Information System (EMIS) and Related Activities Program

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Acronyms

AED - Academy for Educational Development
AIR - American Institutes for Research
BESSIP - Basic Education Sub-Sector Investment Program
CHANGES - Communities Supporting Health, HIV/AIDS, Nutrition, Gender, and Equity Education in Schools
DDM - ED*ASSIST Data Dissemination Module
DEMIS - District Education Management Information System
DFID - British High Commissioner, Department for International Development
ED*ASSIST - Education Automated Statistical Information System Toolkit
EMIS - Education Management Information System
GRZ - Government of the Republic of Zambia
IDEA - ED*ASSIST Data Entry Application
IRI - Interactive Radio Initiative
MOE - Ministry of Education
PAGE - Program for the Advancement of Girls’ Education
QTS - ED*ASSIST Questionnaire Tracking System
SAS - Statistical Analysis System
SOW - Scope of Work
SPSS - Statistical Package for Social Sciences
UNICEF - United Nations International Children’s Education Fund
USAID - United States Agency for International Development
Introduction

Program Description

In 1999, Zambia’s Ministry of Education (MOE) launched a sector reform program, the Basic Education Sub-Sector Investment Program (BESSIP) for the period 1999-2006. BESSIP seeks to increase enrollment rates and improve learning achievement at the primary school level by enhancing ongoing programs and developing new ones.

As a part of BESSIP, USAID/Zambia’s EMIS program began in January 2002 to improve the MOE’s capabilities to collect, organize, process, store, share, and disseminate education information for informed planning and management of education at all levels. To do so, the program focuses on five tasks:

Task 1: Education Management Information System (EMIS)
Task 2: Capacity Building
Task 3: Assessment
Task 4: Community Data Collection & Use
Task 5: MOE and USAID Monitoring Requirements

Through these tasks, the program will build the MOE’s capacity to obtain, manage, report, use, and/or demand good information for good decision-making, help establish an EMIS platform that provides the MOE at all levels with access to that information, and enable the MOE to use real data to plan and to program needs and resource requirements within the MOE.

Purpose of Inception Report

The inception report serves to provide a fuller understanding of the organization of the MOE and resources available to the EMIS program to complete the work to be done. This inception report:

1. Reviews the current status of the MOE EMIS and verifies the conceptual framework of an improved EMIS.
2. Revalidates the indicative plan—task by task—in accordance with updated, more complete knowledge of existing organizations and resources.
3. Discusses EMIS activities and findings thus far.
4. Proposes revisions to the indicative plan.
5. Outlines the targets to be achieved—deliverables as well as reports and plans.

6. Reports on the level of effort and budget required to complete the five tasks.

7. Sets forth the 2002 Annual Workplan, lists current and potential EMIS partners, and identifies the documents produced so far.
Review of Current Situation

Current Situation

The MOE does not currently have an effective, efficient system to collect, organize, process, store, share, and disseminate education information for informed planning and management of education at all levels. However, the interventions described herein are intended to improve capabilities of the Ministry of Education to collect, organize, process, store, share, and disseminate education information for informed planning and management of education at all levels.

Organization

Most of the information systems within the MOE are not fully computerized and are used to provide unit-specific information. They do not have the capacity to provide complete information, nor can they eliminate the many information gaps within and between MOE units. In addition, the existing information systems are located at the central level and do not feed into systems at the local level. The absence of a uniform database creates significant duplication of effort in data storage and vast inconsistency in data reporting.

Data Processing

The Planning Unit has two servers, and these provide file management services and hold information systems for other workstations. The Planning Unit’s main data collection method is through the Annual School Census. The Ed*Assist system is used for data entry. Statistical analysis is done in SPSS and SAS.

Hardware

The Planning Unit’s computer centre has eight Compaq desktop computers. The Budget and Projects sub-unit of the Planning Unit has two old JDR systems donated by the previous European Technical Assistance. Several of the computers are old and can be justifiably replaced. However the number of computers and their age is not the actual problem at hand. The issue is that the Planning Unit is working with a limited number of staff to complete the work it is undertaking. Though an adequate number of computers is available to the Planning Unit at present. There is not the adequate number of trained staff to make use of the equipment effectively.

Software

The MOE generally uses software that has been pre-loaded by vendors, like Microsoft Office Suite. In light of the availability of software to staff, capacity building training will be conducted to enhance the skill base of the ministry. This in turn will help to improve the effectiveness and efficiency of ministry staff.

Computer Utilization

The majority of users use only word processing and spreadsheet applications for routine work.
Inherent Areas of Concern and Interventions

From the perspective of the EMIS program, the following are some of the most pressing weaknesses in the existing information systems:

- **Lack of Strategy** — The existing systems lack strategy to guide the various users and are fragmented among many information management units. There is no coordination of data collection, processing, and reporting activities. The lack of coordination is particularly apparent in the exchanges of information between the MOE, provinces, districts, and schools. To address this area of concern, the EMIS team working closely with members of the Planning and Information Unit, have developed a detailed workplan that will be used to coordinate work activities among the various units within the ministry.

- **Time Lag** — The system of data collection and analysis is highly centralized. Nevertheless there are considerable delays in collecting, processing, analyzing, reporting, and utilizing information. In most cases, data reaches MOE Headquarters from schools, districts, and provinces 1-2 years behind schedule. Such delays render the information obsolete and misleading to decision makers. To improve from the current situation, a workflow analysis will be completed were by recommendations will be made to correct inefficiencies in collecting, processing, analyzing, reporting, and utilizing information.

- **Lack of Reliability** — The existing information systems do not have adequate methods of data verification and validation. Consequently, the MOE cannot guarantee the accuracy of data it receives and such data should not be used for responsible decision-making. Correcting the reliability of information will be achieved in a broad sense by unifying methods for data collection across different programmes.

- **Data Gaps** — The inefficiency and inadequacy of current information systems leaves significant data gaps in most of the reports generated. The reintroduction of school registers and their active use will help to alleviate data gaps. The EMIS program will help to promote the retention of data at the school level through the use of registries, which in turn will help reduce inefficiency and inadequacy of current information. The EMIS programme will promote the reintroduction of schools registers by helping to redesign the register and modifying the work practice for its use.
• **Data Wastage** — The existing system of data collection, analysis, and presentation is highly labor intensive, costly, and lacks guidelines and strategy. In most cases, the detailed information that has been collected is either ignored or loses significance at one or more stages of aggregation. For example, data from the Annual School Census have been used to produce annual statistical reports, but these reports are not widely used by other units because they are unavailable when needed.

This will be addressed by way of the Planning and Information Unit producing regular statistical bulletins for use by other units when needed. As well as making available raw data for review and use.

• **Data Duplication and Inconsistency** — Different MOE units collect similar data for similar purposes. This results in unnecessary data duplication, which leads to inconsistencies in the data captured. The inconsistencies arise from differing data capture, data analysis, and data reporting methods.

To improve from the current situation, a workflow analysis will be completed to correct inefficiencies in collecting, processing, analyzing, reporting, and utilizing information.

• **Lack of Linkage** — Due to the high level of aggregations in isolated systems, it is not possible to establish interrelationships between variables using core data. This hinders data sharing and inhibits full utilization of data collection efforts.

By regularizing the extraction of information from various centers of education data, it will be possible to build relevant links between Zambian information users and providers that track education data such as organizations with pupil bursary information, education infrastructure information, and school health information.

• **Limited Technical Capacity** — Stakeholders at many levels lack technical expertise and experience necessary to utilize any EMIS.

However, this concern will be addressed by the development and introduction of a sound in-house training program, and the participation in advanced training in various areas identified for development for selected staff.
• **Insufficient Communication** — Many stakeholders were neither involved nor informed of the EMIS program. There is extremely limited understanding of the capacity and scope of the program. Communication between the various stakeholders will be strengthened through the completion of the Common Vision Workshop. This effort will help to define expectations and establish a common way forward with all parties actively included in developments. This also includes promoting partnerships with other ministries and by re-establishing regular contact with MOE units to best coordinate work activates and appropriate support.

This will be achieved through regular communications being sent out from MOE Headquarters giving the current state of affairs of the EMIS programme. Additionally, regularly scheduled meetings will be arranged with various parties to improve communication with the Planning and Information Unit.
Verification of Zambia EMIS Conceptual Framework

NOTE: The Conceptual Framework remains the same as in the scope of work.

As the MOE strives to make headway in its education reform program, the development of an effective institutionalized EMIS at all levels of educational planning and administration is imperative. Addressing the weaknesses outlined above, it must provide timely, accurate, and relevant information for planning, policy-making, and monitoring performance at all levels of the education system. The conceptual framework of any such effective system involves the following components:

- Facilitating intra-organizational dialogue to **determine information needs**, generate institutional investment in EMIS, and address concerns.

- **Defragmenting data** and developing comprehensive databases so that data products—and the resources devoted to them—can be fully utilized.

- Streamlining the data collection, processing, analyzing, reporting, and information utilization processes to **eliminate delays**.

- Producing **relevant, simple indicators** of educational performance to ensure a continuous, unbiased assessment of the education system.

- Providing training to facilitate stakeholder access to the database at all levels of the education delivery system to facilitate **informed, decentralized decision-making**.

- Establishing a **sustainable support system** to address troubleshooting, maintenance, and upgrade requirements in the long term.

The EMIS program advances this conceptual framework through the completion of Tasks 1-5 as outlined in the “Revalidation of Indicative Plan” section of this report.

To ensure success of any EMIS system—no matter how well developed its conceptual framework—several factors must be in place:

- Leadership
- Organizational readiness
- Well-defined, adequate timeline
- Personnel
- Resources
In collaboration with the MOE, the EMIS program will address these needs by:

- Bringing institutional and technological expertise to the EMIS.
- Recommending innovation and change relevant to the organizational environment under the current reorganization of the.
- Defining a realistic timeline through program experience, diligence, and available resources.
- Supply adequate personnel needs through long-term and short-term experts.
- And finally, the program, by its very nature, supplies monetary and technological resources.

Related to the tasks outlined in the SOW, it is intended that the programs interventions will improve the MOE system’s operation and effectiveness through activities in the following areas:

1. ICT infrastructure assessment, refinement and improvement.
2. Human capacity development in the area of IT skills for managers and support staff.
3. Strategic planning.
4. Skills development in assessment theory and practices. Also, curriculum analysis for identifying competencies.
5. Evaluation of data gathering practices and the preparation of data-gathering tools, for improved simple data-gathering procedures of direct, practical utilities to communities. This will provide efficient control and management of community data, allowing for effective usage of data gathered and improved communications between the communities and policy planners.
6. Ensuring that BESSIP’s core indicators become a part of the routine, donor reports generated by ED*ASSIST.
7. Providing accurate, timely, relevant educational data to educational stakeholders, including managers and policy-makers who have need for it.
Revalidation of Indicative Plan: Response to SOW

NOTE: The Indicative Plan remains the same as in the scope of work.

**Task 1: EMIS Platform Framework**

By far, the greatest effort is being directed toward Tasks 1 and 2—establishing an EMIS platform that provides the MOE at all levels with access to reliable, relevant information; building the capacity of the MOE to obtain, manage, report, use and/or demand good information for good decision-making; and planning and projecting information needs and resource requirements within the MOE, based on various best/worst-case scenarios of the future.

Using the Education Automated Statistical Information System Toolkit (ED*ASSIST) approach, the Zambia EMIS program aims to integrate and customize a set of information management tools to help the MOE improve data collection and reporting. The effective implementation of ED*ASSIST is shaping a decentralized, demand-driven EMIS for decision makers, managers and stakeholders at all levels to obtain and use timely, relevant, and reliable education information to make education decisions. The components to be completed as part of the implementation of ED*ASSIST are enumerated below, by year and category.

The strategy for this effort revolves around capacity building and institutionalization. At its root, these themes become effective when those in authority continuously want the information results that EMIS provides. Those in authority and their clients in institutionalized settings desire information when they see how it can affect their well being, and in fact, aid their difficult decisions. The broad steps are:

1. **Create a Common Vision**, and reinforce that continuously throughout the program. The vision will be based on both known short-term and long-term needs.

2. **Needs Assessment and Action Planning**. Several levels of counterparts will be involved with the assessment of needs and in creating a practical plan of action.

3. **Process Reengineering**. Many of the current problems with institutionalizing EMIS relate to old or unstudied practices, including the decline of standards in relation to creation of information. Also, many providers of information seldom see the results or the information in use – hence they lose the connection to their work.

4. **Effective Tools**. EMIS requires robust, reliable, and easy to use tools that work for a variety of people with minimal technical training.
5. **Training.** It is anticipate that training will comprising about 25 percent of allocated program costs and needing to be repeated to account for personnel turnover, lack of continuous practice, and the varying capability of people. Training shall be a “catalytic” activity at the heart of the. Given the high turnover of personnel in Zambia due to the HIV/AIDS crisis and the economic situation where trained MOE personnel might be attracted to higher-paying jobs in the private sector, the program team shall instill a continuing training capacity in the MOE. This will be accomplished through the development and introduction of an in-house training facility. Through such a facility regular IT courses will be offered to all members of staff.

It is anticipated 38 staff from the district offices will participate in training related to the EMIS programme. 4 will be from the provincial offices. 10 individuals total will participate from Western and Northern in an effort build the capacity of staff taking part in accelerated decentralization activities. 10 – 20 staff will have the opportunity to take part in training from MOE Headquarters.

6. **Maintenance Support.** Maintenance must be built into the over-all EMIS development strategy from the outset.

It is planned for a local company in Eastern and Southern be contracted to provide on-site support for provincial and district offices.

7. **Focus on Efficiencies.** Once established, a culture of systematic improvement will be inculcated through training, e-mail groups discussing uses and activities, and a sense of wider involvement in a community of professionals.

These strategies apply whether the EMIS focus is statistical areas, transactional systems, or other areas of technical enhancement.

**Tasks to be completed in year one (1):**

1. Conducting an EMIS Needs Assessment including resource requirements

   Elaboration of both statistical and transactional requirements for EMIS in light of decentralization plans, extent of reengineering, staff capacity, procurement needs, stage of development of School Mapping, and key political timing points. As part of this task, the Contractor will identify the EMIS and information communications technology activities which the Contractor will support with funds or technical assistance and those that must be supported through funds from other sources, e.g. the MOE or MOE partners. This will include working with the Capacity Development and Decentralization Component and focal point, other groups within the MOE (e.g., ICT Working Group and MIS sections/advisors in School Health and Nutrition and HIV/AIDS), the household survey activity, and other related, important activities that are to provide good information to the MOE planners in an organized, useful mode.
2. Importing data and creating reports from backlog of data.

   Assist with creation of reports for BESSIP and the creation of a sound EMIS platform.

3. Providing ED*ASSIST Orientation Training – EMIS for Decision Making

   Intensive, multi-user, hands-on course related to core EMIS principals, key needs, elaboration of outputs, review of timing.

4. Modifying or redesigning Annual School Census questionnaire

   Modify/redesign Annual School Census to reduce problems with the questionnaire and/or accommodate new questions. A core data set will be defined to insure sustainability of core data capturing tool.

5. Determining the data to be included in Output Reports and modifying their formats and reporting sequence accordingly

   Creation of base reports under modified questionnaire environment, adjustment of report sequence and formats based on 2, above. Base reports include those data reports and indicators that are automatically available through ED*ASSIST.

6. Developing Input Programs

   Modification of Data Capture programs for Zambia questionnaires, modification of access points for supporting ministries or agencies (e.g., developing the protocols and schedules for downloading student performance data from the Examinations Council at certain times of the year). Arrangements for such collaboration will be addressed under Task 4.

7. Training relevant personnel on Data Capture software, Questionnaire Tracking System (QTS), and Questionnaire Distribution techniques of the ED*ASSIST Process component.

   This training for survey personnel includes the QTS training for Data Capture software, and Questionnaire Distribution techniques.


   A selected number of Zambian personnel need to be further trained in the Database Software of ED*ASSIST (ACCESS 2000) and then trained in the ED*ASSIST applications. Typically 3 persons are slated for this intensive work.

Operations to match historical and new data, including modification to outputs based on most recent values (e.g., using what we currently know to help fill gaps in past information)

10. Producing Output Reports, EMIS Products

Creation of outputs from ED*ASSIST for the MoE annual statistical report including 20 ED*ASSIST base reports and custom reports, loading of outputs on existing MOE network, ad-hoc publications.

11. Providing Policy/Managerial Level Training

Intensive, hands-on policy/managerial level training using ED*ASSIST with current education data. Relating current Zambian problems to insights from both current and historical data. Multiple classes over several weeks.

12. Adjusting the ED*ASSIST Inputs/Process/Outputs, based on the Policy/Managerial training and other Ministerial inputs.

Modifications based upon Policy/Managerial Training and other ministerial inputs.

13. Preparing and implementing Decentralization of EMIS functions

Coordinate procurement for pilot districts and/or provinces including developing equipment, software, and supply specifications, assisting in the identification of the appropriate vendors, monitoring delivery of supplies and services. Procure equipment, software and maintenance services required for setting up EMIS in the headquarters, two provincial and 19 district sites. This may include closer participation with donor IT representatives in developing the specifications and selecting the procurement mechanisms, not only for sites that are to be covered by this contract but also other provincial and district sites for which the MOE may wish to provide similar equipment and services. In conjunction with the preparations, the Contractor will assist the MOE in scheduling training, confirming action plans, and adjusting software to District needs. (See Appendix A for an illustrative, preliminary list of hardware/software to be procured.) It will also identify other support requirements that will need to be in place to go to full-scale implementation.

It has been determined that Northern and Western provincial offices will take part in the training programme and pilot test the ED*ASSIST system along with Eastern and Southern provinces.

14. Administer activities, both professional and clerical, that meet USAID Zambia
requirements.

In support of USAID information needs.

15. Procure hardware/software required for the EMIS.

Procure information technology hardware/software equipment for the first year of EMIS development activities, in accordance with procurement requirements and needs of the Ministry and that required for the second year of EMIS development activities. Work with the MOE and USAID in setting up a system to verify that goods have been received and have met specifications, a system for logging/registering the inventory to track it from receipt to its installation, and, as appropriate, to the point that it is officially handed over to the GRZ. The contractor will use a pre-designed MS Access database for this purpose and will provide it to the MOE for future use.

16. Develop with the MOE the extent to which the ED*ASSIST platform will interface with other information systems, an efficient system by which MOE planners can have access to information in systems outside of the ED*ASSIST platform, and a training environment where those planners can be oriented and given practice using such a system.

ED*ASSIST is not an enterprise system that can handle every organizational IT requirement, or project data and reporting need. It is specific to tracking (distribution and receipt) of annual school census forms. Also it functions as a capturing and reporting tool of such data. To accomplish the capacity for data exchange, it will be necessary for the MOE to define a core set of data points and formats for people outside of the ED*ASSIST environment to use. This will ensure that data can be exchanged between various systems and programs and made available to the MOE as necessary.

**Year TWO** will focus on the Refinement/Enhancement of the EMIS Platform and Initiating/Implementing Decentralization

**Tasks to be completed in year two (2):**

1. Complete /Update its Transactional Assessment

   To support decentralization, MOE and the GRZ will address modern transactional systems supporting education (e.g., payroll and financial accounting systems). This needs assessment will determine the nature and extent of that support, the options and the implementation cycle needed.

2. Moving Data Gathering for School Year to Early in School Cycle.
Some current problems of information access and accuracy are tied to uneven timing on questionnaires and not having them available and processed early enough in the year. In this step, the cycle will be adjusted to budget and manpower requirements. The Planning and Information Unit has devised a workplan for the department that outlines the schedule for the timely development, distribution, collection, processing and reporting of information from the annual school census.

3. Providing ED*ASSIST Orientation Training for District personnel

Conduct intensive orientation for District leadership; create expectations and outline activities and responsibilities.

4. Creating Stronger Links between ED*ASSIST and Support Agencies

Regularize the extraction of information from National Examinations/Assessments results, Central Statistical Office, Teacher Personnel records, and other centers of education data. Collaborate on a common numbering scheme for all schools linked to School Mapping data and linkage with mapping data through graphical interface. Explore and, if practical, establish linkages with other Zambian information users and providers that track education data such as organizations with pupil bursary information (e.g., Zambia Education Capacity Building Project and the Public Welfare Assistance Scheme), education infrastructure information (e.g., Micro-Projects Unit), and school health information (e.g., the Demographic Health Survey - EdData Module activity or the Health Management Information System).

5. Conducting Additional Technical Training

Provide selected Headquarters, Provincial, and/or District personnel with more advanced technical training to build capacity in their ability to provide ad-hoc reporting required at their various levels. Train personnel to support the full cycle of information gathering. Training will especially be provided to planners at appropriate levels to use the computer modeling system to project future education system needs and resource needs, based on current MOE EMIS data.

6. Modifying Outputs and Processes of ED*ASSIST Core Software to Meet District Needs

Existing core software will be altered for general district needs while still maintaining links to a central software platform at the provincial and national levels.
7. Training personnel at Policy-Making and Managerial Levels in Districts and Retraining for Headquarters Personnel

A modified version of the first year program will be conducted for pilot districts with participation and assistance from Head Office. Selected members of Head Office will be given more intensive training in second and third level analysis and support. District staff will be provided with specific training related to the reporting capacity of the ED*ASSIST system.

8. Administrate activities, both professional and clerical, that meet USAID requirements.

In support of USAID information needs.
**Task 2: Capacity Building Framework**

Generally the capacity building framework will remain the same. However, special note should be given at this point that the MOE has had to bear a considerable amount of the cost associated with providing training. The MOE did not expect to be funding such activities and the contractors’ budget did not include the provision of transportation and subsistence allowances for staff that have to travel from the district and provincial offices to attend training sessions. The MOE has provided funding through BESSIP for the national training of district Education Officers, Statistical Officers, Headmasters, and Senior Teachers. They have also made arrangement to provide funds to complete IT training of EOs and SOs from Eastern and Southern province.

Given the agreed approach of utilizing an in-house training facility, the budget should be adjusted to accommodate for continued training in year two of Eastern and Southern province staff, and including others. This consideration should be in line with the guarantee from the MOE that the in-house training facility will be sustained. The Ministry needs to procure computer equipment for long-term use and assign staff to provided training and administration of the training facility. The Human resources department should handle the scheduling, delivery and administration.

Additionally it should be noted that due to the restructuring exercise the Ministry is currently undertaking, it is important to recognized that some staff who participate in training may not remain in the positions they currently hold. This means that more training of new staff will be required. Also, with the current limited number of staff within the Planning and Information Unit it seems inappropriate to begin training at the present time because of limited number of personnel in the section. Advanced training for selected Planning and Information Unit staff will be initiated in the beginning of 2003. This will give the Ministry time to fill vital positions within the Planning and Information Unit.

The EMIS program is working closely with the MOE and its BESSIP partners to improve the capacities to collect, share, analyze, disseminate, and use information for decision-making at all levels. This capacity building includes personnel training, the procurement of information technology, and technical assistance that build on the specific activities in Task 1.
As a “catalytic” activity at the heart of the program, training is integral to capacity building. It will ensure that the capacity to fully utilize EMIS for decision-making. The program will also instill a continuing training capacity in the MOE to ensure sustainability and investment. Carefully planned training, for the life of the program and beyond, will be conducted for leadership at many levels and technical staff in the forms of:

- Formal training sessions
- Workshops
- On-the-job, routine input
- Self-instructional materials
- Study tours
- In-country and third-country training
- Job aids

Capacity Building tasks associated with training include:

- Conduct a training needs analysis to assure training associated with EMIS is compatible with and/or integrated into the MOE’s overall planning for human resources development;

- Provide the necessary support, e.g., training to ensure that capacity to use EMIS and to make decisions based on EMIS-generated information at all levels is developed. That includes enabling decision-makers and planners to project future needs based on current data and future best- and worst-case scenarios of education system needs and available resources.

- Develop, in close collaboration with the MOE, a variety of programs to develop information management and use capacities, including one or more of the following strategies: on-the-job training, job aids, self-instructional modules, workshops, study tours, and specialized in-country and third-country training.

- Undertake a needs assessment to determine precise hardware and software specifications and needs required to support installation and operation of the EMIS in a phased manner, to provide connectivity among the EMIS operating units at various levels (e.g., computers, internet hookups, solar panels, etc.), and to ensure maintenance and service support for a minimum number of years. Provide estimates of initial and recurrent costs associated with the provision of such support.

- Procure, ship, and assure the orderly receipt and installation of the hardware and software by or on behalf of the designated MOE entities that have met the criteria, provide technical assistance and training to
assure its use and security as intended, and promote maintenance and service support.

- Develop with the MOE the criteria that must be met as a prerequisite to the installation of the hardware and software by or on behalf of the designated MOE entities and provide technical assistance and training to personnel of recipient offices/units to assure equipment use, security, and maintenance as intended and as agreed with the MOE.

- Provide technical assistance in the development of the MOE’s capacity to design, supervise, conduct, and/or disseminate educational information.

- Provide technical assistance to improve the Ministry’s capacity to obtain, manage, report, and use data regarding the impact of HIV/AIDS on basic education.
**Task 3: Assessment Framework**

The EMIS program will collaborate with the Examinations Council and relevant units of the MOE to build and execute a training plan. The subsequent training will enhance the capacity of Examinations Council personnel to further develop, implement, and use competency tests. In particular, personnel in the Examinations Council have expressed interest in sampling design strategies, test construction to better evaluate higher order skills, item analysis, determination and assignment of performance levels to test scores, data analysis and report writing, statistical software for educational and social science research, and aspects of project management.

The program team will work with the ministry to assess and appraise the ECZ’s assessment systems with the assistance of short-term consultants. Assistance will also be planned for the delivery of workshops to examine best practices in assessment. Training, seminar, and workshop activities will focus on the theory and practice (development, administration, analysis and reporting of competency tests and their results) of competency-based and performance assessments. This also includes training, facilitation and workshop planning skills. Additionally, as related to IRI, an assessment strategy would be developed to determine student learning as it relates to achievement of the curriculum competencies.

**Task 4: Community Data Collection and Use**

In addition to the nationally focused tasks outlined above, the EMIS program will collaborate closely with field-based partners to improve the quality of and access to community-based information. The program will work with its partners to develop creative, practical means of helping communities identify information needs, collect such information, and use it to improve the quality of education overall. The focus of such efforts will be information related to participation in education, school health and nutrition, gender equity, HIV/AIDS, and interactive radio instruction. Where possible, community-based efforts should harmonize their data point so that their efforts—particularly for community schools, girl’s education, and HIV/AIDS programs—are included in the EMIS reporting framework.

The program team will work with the ministry, communities, and stakeholders to assist in defining what information is collected and how it is collected. This will ensure that communities are included and become advocates with policy planners and decision-makers. Therefore, it is critical that all relevant stakeholders, including parents and community elders, are engaged from the onset in identifying what information and how information is collected. This information in turn will be relevant and useful when reporting back to the stakeholders to empower communities to increase enrollment, especially disadvantaged groups, to identify problems that deter the provision of a quality education for all, and to ensure accountability to parents and to all of Zambia’s children.
Additionally, the program team working with the ministry will coordinate community-based workshops for key community leaders, educational officers, PTAs, teachers, head teachers and parents. These workshops will involve discussions on the importance of EMIS and serve as a networking forum between the community and policy makers.

**Task 5: Related Information Systems Framework**

Finally, the EMIS program is working closely with the MOE, USAID, BESSIP, and other partners to assure that the collection and use of data occurs on a timely basis, using harmonized systems. Furthermore, the nature of the program is to produce indicators that will allow USAID and the GRZ to monitor the achievements of activity results and performance targets as they progress toward overall the BESSIP’s goals and objectives. The program will produce appropriate deliverables to document the progress thereof. These deliverables are outlined in the following section.

USAID currently uses the following indicators for program monitoring and reporting purposes:

- **Strategic Objective level:** i) Net Admissions Rate to Grade 1 in targeted areas; ii) pupil assessment scores in targeted schools in Eastern Province; iii) girls’ retention in targeted schools; and iv) number of learners in grade 1 in target areas and centers

- **IR 2.1, improved quality of learning environments in targeted areas,** which will be monitored through the use of: i) mean score performance of out-of-school children on assessment of Grade 1 skills acquired through Interactive Radio Learning Centers; ii) number of schools with improved water and sanitation facilities; iii) number of communities with action plans for education in targeted areas; and iv) number of Interactive Radio Learning Centers.

- **IR 2.2, improved delivery of school-based health and nutrition interventions to support pupil learning,** which will be measured by i) number of schools delivering micronutrient and deworming interventions in targeted areas, in accordance with approved guidelines; ii) number of pupils receiving micronutrient and deworming interventions; iii) cognitive function of pupils in targeted area; and iv) number of multisectoral teams established in targeted areas.

- **IR 2.3, improved information for education decision-making processes,** which will be measured by: i) production of Annual School Census statistical report, on time; and ii) number of EMIS units producing periodical reports.
• IR 2.4, *improved capacity of the Ministry of Education to mitigate the effects of HIV/AIDS*, which will be measured by the MOE’s development of a policy on HIV/AIDS.
EMIS Progress

**Preliminary Activities by Task Order**

**TASK 1**
(According to first year sequence of tasks for the EMIS development effort)

1. Conducting an EMIS Needs Assessment including resource requirements

**IT Systems**
During the programs first few months, program staff have examined the new network system and assembled system software and documentation.

**Southern Provincial Office Readiness Assessment**
On March 25, 2002, the Southern Provincial Education Office was assessed for its readiness for implementation of the pilot EMIS. The readiness of the office was also assessed in 2000 as part of the Situational Analysis Report but the most recent assessment covered different criteria. There are currently 7 functional computers and 5 functional printers in the office. Of these, one is located in the Planning Unit and is often used by staff from other units for administrative tasks. Several staff are computer literate and have been trained by a local college in Microsoft Word and Excel. Consequently, the computers are primarily used for letter writing. The Accounts Unit uses spreadsheets, but has no printer. A few staff have been trained to use Microsoft Access and the Provincial Education Officer for Planning (Mr. Hanguwa) has attended an EMIS training in Washington, DC. There seemed to be secure space for additional computers and staff of all levels are eager for training.

**Livingstone District Office Readiness Assessment**
On March 25, 2002, the Livingstone District Education Office was assessed for its readiness for implementation of the pilot EMIS. The readiness of the office was assessed in 2000 as part of the Situational Analysis Report, but the most recent assessment covered different criteria. There is a phone line, one computer, and one printer in the office. All are currently functioning. A single secretary, who handles all requests, uses the computer solely for administrative tasks. There is ample enthusiasm for additional computers and training as well as an appropriate room (currently used by typists) for new equipment. It will need sturdy burglar bars.
Kalomo District Office Readiness Assessment

On March 25, 2002, the Kalomo District Education Office was assessed for its readiness for implementation of the pilot EMIS. The readiness of the office was assessed in 2000 as part of the Situational Analysis Report and this trip confirmed the last report. There is a phone and fax line in use and a single computer (from PAGE) that has been out of order for some time. No one in the office has any computer literacy, but the secretary (typist) and statistician are available for EMIS training. There is an appropriate room for computer setup, but it will need sturdy burglar bars.

2. Importing data and creating reports from backlog of data.

Backwards Compatibility
Reports for 2002 data are being designed with backwards compatibility to be utilized for 2001 data.

Historical Data Assessment
Data from 1996-2000 are being evaluated to determine the best way to make the information accessible.

3. Modifying or redesigning Annual School Census questionnaire

2002 Annual School Census
The 2002 Annual School Census Questionnaires for Basic, Secondary, and Community schools and the accompanying instruction manuals have been reviewed, revised, and reformatted. They are currently being printed for distribution at the training in mid-April, as part of the plan to have “this year’s data, this year.”

2002 Census Questionnaire Training
Plans and budgets for the 2002 Annual School Census Questionnaire Training sessions have been finalized for April 18-19, 2002. PEOs for Planning, DEOs, and EOs will be trained on the completion of the revised census so that they may train the school personnel in their districts to complete the questionnaires accurately and efficiently. The provinces have been split into two geographic regions—one group of representatives will attend the training held in Ndola and the other group will attend the training held in Lusaka.

4. Determining the data to be included in Output Reports and modifying their formats and reporting sequence accordingly

Report Development
The reports being developed for 2001 with backwards compatibility for 2000 are also being developed with an eye to 2002 data. They will require only slight modifications for 2002 data.
5. Developing Input Programs

**Data Collection**
Year 2001 questionnaires are now arriving in large numbers, and data entry is proceeding at a high level.

**QTS (Questionnaire Tracking System)**
QTS monitors the distribution and receipt of the Annual Basic School Census questionnaire and contains a list of all of the schools to which questionnaires were sent. The dates on which the questionnaire was sent to each school and on which the questionnaire was received back from the school are entered into the ED*ASSIST database. Then, when headquarters receives each questionnaire, data entry clerks record the “quick counts” of pupils and teachers and correct the identification information on the first page of the questionnaire. The QTS (both for primary and secondary schools) has been installed and is being used to track 2001 questionnaires.


**Historical Data**
Operations to match historical and new data are progressing as the 2001 reports are developed.

**QTS**
MOE staff have developed a procedure for using most recent values to help fill gaps in past information and eliminate missing data fields.

7. Adjusting the ED*ASSIST Inputs/Process/Outputs, based on the Policy/Managerial training and other Ministerial inputs.

**IDEA**
The IDEA is the software used to enter questionnaire data into the ED*ASSIST database. This software is currently installed on eight computers that are used solely for data entry and these computers are being used to enter data for the 2001 primary school questionnaires.

**DDM**
The DDM is the part of the ED*ASSIST system that generates standardized reports that describe the status of Zambia’s educational system. In 2001, several reports were constructed to produce information about the Basic Education Sub-sector Investment Program (BESSIP) Performance Indicators. These reports included both high-level (strategy/policy) and mid-level (management) indicators. These indicators were calculated using year 2000 data.
Modifications to ED*ASSIST

Last year, prior to the start of the present program, versions of the QTS, the IDEA, and the DDM were developed for use with 2000 data. Recently, modifications were made to the year 2000 versions for use with 2001 data. The 2001 versions were installed in late February and early March, just as schools were starting to return completed questionnaires.

The development work for Zambia versions of the QTS, IDEA, and DDM was done in the US, under the “bridging” contracting that preceded the current contract. Much of the bridging work involved the 2000 questionnaire and data. In a few instances, some modifications were required to the initial 2001 versions, to take into account differences between the 2000 and 2001 questionnaire and to address operational considerations that arose during initial implementation. These modifications included:

1. **QTS Modifications.** For the QTS, modifications were made to the 2000 version to account for the fact that the “quick counts” of teachers and students are now (2001 version) broken down by gender.

2. **IDEA Modifications.** The initial version of the 2001 IDEA program required a few modifications, either to bring it into full alignment with the 2001 questionnaire or to improve the efficiency of data entry operations. In the former case, fields were added to capture data on AIDS books and on the total number of teaching and non-teaching staff by gender. In the latter case, several modifications were made soon after data entry of the 2001 questionnaires began. The major change that was necessitated was the elimination of a number of “cross-table” edit checks (an example of which was given above). The data entry clerks were spending much of their time adding table entries together to try to resolve consistency errors. This was happening to an extent that was significantly slowing the data entry process. It was decided that the data entry clerks should spend most of their time on data entry, not on data validation (edit checking). The edit checks will still be done, but later, after the data are entered, as part of a general edit-checking operation.

8. Preparing and Implementing Decentralization of EMIS Functions

**Policies and Procedures**

The development of a Data Request Form has codified the processes of information request and dissemination. It enables stakeholders to request information as needed and allows the MOE Planning Unit to streamline the production of requested data. The new processes also allow the MOE to track the receipt of requests and the dissemination of data to improve accountability among administrators.
9. AIR will administer activities – both professional and clerical – that meet USAID requirements.

**Program Headquarters**
A headquarters in Room 111 of the MOE has been established. It has been painted, secured with burglar bars, and furnished. A phone line will be installed as soon as possible.

**MOE Communication**
Meetings with leaders of several units have opened the lines of communication to establish working partnerships that will harmonize data collection, analysis, dissemination, and use systems across the MOE.

**Planning Unit Communications**
Several levels of meetings have taken place between program staff and MOE staff to open the lines of communication and facilitate collaboration. The products of these meetings have included the finalization of the Annual School Census Questionnaire, and the development of national training for provincial and district officials as well as school staff responsible for completing the School Census, among other things.

10. The Contractor will procure in hardware/software required for the EMIS.

**IT Procurement**
The IT equipment for the EMIS long-term technical staff at the headquarters office has been procured, delivered, and installed.

**IT Systems**
A new computer network has just been installed at the MOE’s headquarters. This system will link all of the data entry computers together (as well as other computers in the MOE Headquarters). The network includes a new server that will run the Windows 2000 client/server network system. This system will replace the peer-to-peer network system that has been in place for much of the past year. The client/server network will enable a significantly higher level of reliability and security than was possible with the peer-to-peer system.

11. The Contractor will also develop with the MOE the extent to which the ED*ASSIST platform will interface with other information systems.

**Partnerships**
As outlined in the Annexes section of this report, partnerships with MOE Units (Accounting, Exams, and Personnel) and other organizations (BESSIP, CHANGES, DFID, IRI, and PAGE) have been established.
**TASK 2**

**Needs Assessments**  
Conducted as above, see Task 1, number 1

**TASK 3**

**Assessments**  
Preliminary meetings regarding collaboration with the Exams Council and IRI have taken place. Plans for a short-term consultant to assess the methodology and tools utilized by the Exams Council have been made.

**TASK 4**

**Community Data**  
As outlined under Task 1, number 16 above, partnerships have been established and are discussed in the “Current and Potential Partners” section of the Annex.

**Preliminary Findings**

**Matching Historical and Current Data**  
The ED*ASSIST Utilization task of matching historical and new data is a larger task than anticipated. Having committed resources to gather and process data, staff understandably want access to information from 1996-2000. Unfortunately, the old data were not compiled into reports. Because retrieving the data is beyond the training of most staff, they require program assistance to complete the work of past EMIS programs.

**Pilot Provinces and Districts**  
The choice of pilot provinces and districts has changed. Originally, one province and three of its districts were targeted for the pilot. Instead, both Eastern and Southern provinces and all 19 districts therein will be targeted. This change in the pilot will indicate a broader range of provincial and district situations and better anticipate the inputs and outcomes of a national EMIS implementation.

**Human Resources**  
Recent restructuring of the MOE has put human resources at a premium. The organization faces the possibility that staff may leave without being replaced. Furthermore, the general shuffling of human resources increases the need for training and retraining—activities that require significant resources. These circumstances highlight the need for and complicate the implementation of the capacity building components of the EMIS program. Realistically, these circumstances may also affect the products of this program’s collaboration with the MOE. For example, there may be unavoidable delays in data processing and reporting.
Data Collection
As of March 27, 2002, about 60 percent of the schools had returned the questionnaires for the Annual School Census for 2001. It is anticipated that distribution for 2002 Annual School Census will be completed in April via national training workshops for all EOs, SO, Headmasters and Sr. Teachers. It is planned that all completed 2002 returns will arrive at HQ by the middle of June.

QTS
As questionnaires are being returned, QTS is used to produce several reports that summarize the status of the data collection, including summaries of questionnaire distribution and receipt, counts of teachers and students, and lists of “missing schools” – schools that have not yet returned their questionnaires.

IDEA
Initially, some of the “cross-table” edit checks were slowing the data entry process to an unacceptable level (e.g., a check that the total number of students in grade one is equal to the number of new entrants plus the number of repeaters). For this reason, some edit checks were disabled during the data entry process, and will be applied later as part of a general consistency review of the data.

DDM
Since the Annual School Census did not change much between 2000 and 2001, it will be easy to modify the ED*ASSIST system to calculate the BESSIP indicators once 2001 data is entered and available to the system. The significant work that remains is to expand the DDM to include a full set of indicators (in addition to those already programmed for BESSIP/2000) for both 2000 and 2001, and to develop a capability to produce multi-year reports.
Proposed Revisions to Indicative Plan

In light of preliminary program work and findings, we propose implementation adjustments to the indicative workplan, which outlines a two-year program. The suggested modifications and agreed upon timeframe allow for effective capacity building, organizational development activities, and information technology integration. The plan is a sustainable way forward for the following reasons:

1. **Meaningfully capacity building can be achieved at headquarters, provincial and district levels.** Building capacity at these key levels is crucial to the sustainability of the improved EMIS. However, it takes time for computer literacy, advanced technical skills, and procedural patterns to take hold.

   It is proposed that capacity building in the area of IT training at various levels be implemented in the first year for a period of six months, from July to December. Focusing on capacity building for headquarters, provincial and district staff ensures:

   - This year’s data, this year, on the Annual School Census.
   - Knowledgeable staff capable of and invested in sustaining the EMIS.
   - A core of technical skill and experience to support the implementation of the ED*Assist system at the provincial and district levels.

2. **It makes the pilot phase a useful tool to evaluate and redesign EMIS for possible national deployment.** It is being recommended that the pilot phase of the program be initiated at the beginning of the 2003 Annual School Census exercise. Given the period for capacity training, the skill level of headquarters, provincial and district staff will be raised to ensure the effective integration of the EMIS system.

   Furthermore, the first round of provincial and district assessments revealed a lower level of computer literacy and readiness than anticipated. Any meaningful capacity building will, thereby, involve significant training efforts at the most basic level. Such training takes time and practice before computer literacy and technical aptitude reach sustainable levels.

   Finally, moving the first pilot phase to the Annual School Census for 2003 provides ample time and resources to include all districts of Eastern and Southern Provinces. Broadening the scope of the pilot phase increases the likelihood that the pilot is indeed representative and thus increases the reliability of the knowledge gained.
Moving the pilot phase to the beginning of the 2003 Annual School Census exercise ensures:

- A relevant, useful first pilot program from which to learn and implement changes for possible national implementation program.
- A core of technically skilled provincial and district staff to implement and utilize the improved EMIS.

3. **Proper preparedness for possible national implementation.** With a two-year timeline and the expanded one-year pilot phase in 2003, it will be possible to take lessons learned to redesign the implementation program for a national deployment. Such a redesign would come by way of extensive program review of the pilot.

As the districts not included in the pilot phase are likely to mirror the districts in the first pilot phase in terms of computer literacy and readiness, they too will require significant training efforts at the most basic level. And, of course, such training takes time and practice before computer literacy and technical aptitude reach sustainable levels.

Furthermore, the broad scope of possible national deployment complicates the training, procurement, and installation processes. It is essential to have meaningful experience from the first pilot phase to minimize the risk of such a broad implementation at the national level.

Proper review of the pilot program ensures:

- A tested implementation process
- A core of technically skilled provincial and district staff to implement and utilize the improved EMIS.
- Experience with which to implement the EMIS at the broadest levels in the future—smoothly, effectively, and sustainability.

The proposed schedules are illustrated on the following pages. Please note the proposed revisions do not alter the schedule of deliverables outlined in the scope of work.
### 2002 Schedule of Activities

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## Targets to be Achieved

### Schedule of Deliverables

| Available historical data in readily accessible form | Current operating year data, e.g. 2001, available within 11 months of initiation (at 11 months) | November-02 |
| Evidence of major training having been completed | Initial workshop ("common vision") completed for relevant Head Office, Provincial and District personnel (at 3 months) | March-02 Apr-02 |
| | Joint development of 2 Year Action Plan (at 3 months) | March-02 Mar-02 |
| | Ministry will have completed at least 25% of its requirement for skills training including that described in Year 1, Tasks 3, 7, 8, and 11. (at 8 months) | August-02 |
| A working system that will be used for subsequent data collection within 12 months | EA Questionnaire Tracking System in operation (at 6 months). | June-02 Mar-02 |
| | EA Data Capture Programme with Error Trapping in operation (at 8 months). | August-02 |
| | Initial EA Reports from Head Office to all Districts (at 11 months). | November-02 |
| Earlier administration cycle for annual census | Generate next year’s Annual Census documents at end of prior year (at 12 months). | December-02 |
| | Ensure a working School Registry (at 13 months) | January-03 |
| | Publish and abide by a timetable of capture and dissemination activity for Planning Unit (at 13 months) | January-03 |
| Selection/procurement of hardware/software for the first and second years of the programme | Procurement completed during first year with equipment installed and tested in the target sites as scheduled (at 9 months) | September-02 |
| | Procurement completed for second year with equipment installed and tested in the appropriate pilot test sites (at 16 months) | April-03 |
| | District level access, directly, to their own data in target districts | n.d. |
| | For Pilot Districts, ED*ASSIST Zambia data loaded for District and PC accessible in target districts (at 19 months) | July-03 |
| | For non-Pilot Districts, hard copy, detailed, reports available for all Districts—both individual and comparative (at 22 months) | October-03 |
| | Specifications and procurement plans for nation-wide decentralization of EMIS to all districts (at 20 months) | August-03 |
| | Development of Action Plan for years 3-4 (at 22 months). | October-03 |
| Training & capacity building at Headquarters, Provincial and District levels | All present staff, related to EMIS - completed Skills training sequence (at 22 months). | October-03 |
| | All present staff with EA Authorization have completed appropriate training (at 18 months). | June-03 |
| | Selected MOE planners/decision-makers trained to use simulations as well as modeling system(s) based on real data, to plan and to project needs and resource requirements within the MOE, based on various best/worst-case scenarios | n.d. |
| | Provisions for recurrent, in-service training in place (at 23 months). | November-03 |
## Schedule of Reports and Plans

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Level of Effort and Budgets

Budget Revisions

In all, given the adjustment in the implementation plan, the indicative work plan represents an effective investment in the EMIS program by ensuring the capacity level at the MOE necessary to sustain, use, and further develop the EMIS as needed.

Aside from the proposed adjustment in the implementation plan, there are no significant budget revisions.

Personnel Levels

The proposed utilization of host-country national staff has been revised:

- The program will hire a single Program Assistant at month 5 or 6 in lieu of an Administrative Officer, Office Assistant, and Training Coordinator for the whole first year of the program. The Program Assistant will have significant responsibilities and will be compensated with a professional salary commensurate with his or her expertise and experience. Several factors motivate such an adjustment. First, the revision allows for more productive and cost-effective allocation of the human resources budget. Second, it reconciles the discrepancy between budgeted and actual host-country salary levels. Third, it reflects the physical limitations of the program office: additional staff cannot be accommodated in the headquarters space. Fourth, it promotes a streamlined model of organizational efficiency within the MOE.

- The program will not immediately hire a Junior Programmer or Software/Hardware Specialist. In addition to the reasons for personnel level changes noted above, the technical expertise of the long-term consultants is currently sufficient for daily operations.
The Way Forward

General Strategies

1. Introduce more effective policies and procedures related to the collection and dissemination of information for informed planning and management of education at all levels.

2. Establish a solid infrastructure for an EMIS system by way of implementing appropriate information technology to improve the capabilities of the MOE to collect, organize, process, store, share, and disseminate education information accurately and in a timely fashion.

3. Initiate broad training program focused on capacity building related to an EMIS system so that stakeholders can utilize the new EMIS infrastructure and work within the redesigned policies and procedures.

4. Increase the participation of stakeholders in the EMIS development process at the district, provincial, and national levels to decentralize the MOE decision-making process.

5. Improve communication and interactions between implementing partners to develop creative, practical means to identify information needs, collect such information, and use it to improve the quality of education overall.

6. Work collaboratively with staff responsible for assessment and competency testing to build skills, knowledge and tools to enhance the quality of competency tests produced, in-service training delivered to teachers, and test analysis.

Immediate Goals by Task

TASK 1
(According to first year sequence of tasks for the EMIS development effort)

1. Conducting an EMIS Needs Assessment including resource requirements

Common Vision Workshop
Bring together stakeholders at all levels, program staff, donors, and short-term consultants for an EMIS briefing and overview to the ED*ASSIST approach in April 2002. The goal achieved through this activity is the unification of expectations for program stakeholders. Additionally, the EMIS program preliminary workplan will be disseminated and discussed in order to better formulated a common understanding of the programs goals and objectives.
2. Providing ED*ASSIST Orientation Training – EMIS for Decision Making

**Provincial and District Level**
Bring provincial and district level decision-makers and EMIS trainees from the pilot regions to Lusaka for a hands-on introduction to the new EMIS and the ED*ASSIST approach.

**MOE Level**
As part of the Common Vision Workshop, bring together MOE stakeholders for a hands-on introduction to the new EMIS and the ED*ASSIST approach.

3. Determining the data to be included in Output Reports and modifying their formats and reporting sequence accordingly.

**2001**
Complete the development of backward-compatible reports for 2001.

**2002**
Modify 2001 reports as needed for 2002 data so that reports are ready this year.

4. Developing Input Programs

**2001**
Complete input of 2001 data.

**2002**
Prepare to input 2002 data as questionnaires are returned, beginning in May 2002. Update QTS as needed.

5. Training relevant personnel on Data Capture software, Questionnaire Tracking System (QTS), and Questionnaire Distribution techniques of the ED*ASSIST Process component.

**Planning Unit**
This will entail complete training for relevant personnel throughout the 2002 Annual School Census process—distribution, returns, input, and report writing.

6. Producing Output Reports, EMIS Products

**2001**
Reports on the 2001 data will be produced as soon as all of the data have arrived and been input. This will occur between May and September of 2002.

**2002**
Reports on the 2002 data will be produced after the data have arrived and been input. This will occur between September and October of 2002.
7. Providing Policy/Managerial Level Training

**Decision-Maker Training**
As part of the summer emphasis on training, policy-maker/managerial level training will take place throughout the summer, after restructured leadership positions at the MOE are filled.

8. Adjusting the ED*ASSIST Inputs/Process/Outputs, based on the Policy/Managerial training and other Ministerial inputs.

**ED*ASSIST Adjustments**
Adjustments will be made within the context of the policy/managerial level training program as the 2002 annual data collection and input proceeds.

9. Preparing and implementing Decentralization of EMIS functions

**Pilot Training**
Provincial and District decision-makers and EMIS trainees from the first phase pilot regions will be trained as part of the summer training program. The possibility of MOE Headquarters “internships” for provincial and district pilot representatives will be examined more closely.

10. AIR will procure hardware/software required for the EMIS.

**IT Systems**
Implementation of the ED*ASSIST system on the new network is planned for the week of April 2. This implementation will initially involve storing the QTS and consolidated questionnaire data on the server. Next, modifications to the ED*ASSIST system will be made so that data entry is done over the network rather than in a “standalone” mode on each of the eight data-entry computers.

**Training Lab**
Hardware and software for the first phase pilot will be procured and installed in a temporary training lab in June. The lab will bring enough machines together for meaningful hand-on training of stakeholders at all levels throughout the summer before the machines are transferred to the first phase pilot provinces and districts.

11. The Contractor will also develop with the MOE the extent to which the ED*ASSIST platform will interface with other information systems.

**Implementation Partners**
Partnership meeting will progress as scheduled to develop the relationships between EMIS and other information systems.
**TASK 2**

**Training**
In April and May, program staff will be developing a comprehensive training program in computer literacy, office automation, and ED*ASSIST for provincial and district staff as well as for decision-makers and staff from MOE Headquarters. From June onwards, staff will use the training lab to conduct intensive hands-on training.

**Specifications**
Program and MOE staff will meet in April to determine the necessary specifications for EMIS IT equipment as well as the provincial and district readiness requirements (i.e. burglar bars, sufficient space, adequate power, etc.).

**Procurement**
As outlined in Task 1, number 10 above, IT equipment for the pilot phase will be procured and installed in the training lab. This is the second phase of equipment procurement for the EMIS programme. It is planned, that two (2) computers for each district in Eastern and Southern province will be purchased, totaling 38 machines. Each provincial planning office will receive two (2) computers, totaling four (4) machines. At headquarters, the ministry will receive two (2) new servers to further establish its IT infrastructure. This will bring the total number of network servers available to four (4). Additionally, the Directorate of Planning and Information at HQ will receive one (1) computer for its Budget and Projects unit, one (1) computer for the Planning and Research unit, one (1) computer for the Information Systems unit and one (1) computer for the Buildings unit. This brings the total number of new desktop computers to 46, with two (2) new network servers.

The implementation plan for the equipment is in two phases. All of the equipment will arrive at one time. Upon arrival, machines will be installed at HQ and one computer to be issued to the districts will be held and used in the training lab. The other computers to be issued to the districts will be delivered to the respective Provincial offices for distribution and installation at the district. A local computer company will be retained to conduct the installation of computers at the districts. Placing one computer at the districts early will ensure that staff have a means of practicing what is learned during training conducted at HQ. The second part of the implementation plan comes at the end of the initial capacity building training period, January. The computers that will be used in the training lab will be properly configured with the ED*Assist system and other application software to be used during the pilot of the EMIS system. These computers will be delivered to the Provincial offices and a local computer company will be retained to conduct the installation of computers at the districts.
**TASK 3**

**Short-Term Consultant**
Diane Garavaglia, a Senior Research Scientist at the American Institutes for Research (AIR) will arrive in mid-April as a short-term consultant to the Exams Council. She will work with the Council to assess the competency testing methodology and tools they are currently using. Furthermore, she will work to build capacity among Council staff and suggest revisions to the current methodology and tools as needed.

**TASK 4**

**Partnership Meetings**
Meetings with EMIS implementation partners will continue in the effort to harmonize data collection and use systems and to improve data collection and management methodology.

**TASK 5**

**BESSIP Indicators**
EMIS developments will progress with an eye to BESSIP indicators.
## 2002 Annual Workplan

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**Current and Potential EMIS Partners**

The EMIS program is working closely with the MOE, USAID, BESSIP, and other partners to assure that the collection and use of data occurs on a timely basis, using harmonized systems.

**MOE**  
**Accounting Unit**  
The EMIS program will help the Accounting Unit establish connectivity with the MOE client server network and will provide technical consultation as part of the development of standards for accounting data for GRZ. The program will also ensure that data from the Annual School Census on school finances harmonize with the Accounting Unit’s needs for financial data at the school level.

**Exams Council**  
As part of Task 3, the EMIS program will provide technical assistance to the Exams Council in the form of short-term consultancies. These consultancies will assess the Exam Council’s current position on assessment methodology and will facilitate the redesign (if necessary) and implementation of improved methodology and tools.

**Personnel Unit**  
The EMIS partnership with the Personnel Unit will build the capacity of the Unit to independently manage and maintain its own data within the ED*ASSIST system. Beginning with an analysis to establish the Personnel Unit’s data requirements and the data from the Annual School Census, the partnership will build a standard personnel interface to capture data on all MOE staff and staff data. It will involve building a personnel-specific data entry screen training the Unit’s staff to upkeep the personnel records as needed, rather than waiting for the annual data each year.

**HIV/AIDS Unit**  
Initially, the EMIS program is collaborating with the HIV/AIDS Unit in the training of PEOs for Planning, DEOs, and EOs for the Annual School Census and HIV/AIDS school survey. In the next few months, the EMIS program will further develop this partnership.

**BESSIP**  
As the coordinator of donor funds for the MOE, the partnership with BESSIP will be primarily financial in nature. Thus far, BESSIP will fund the training of PEOs for Planning, DEOs, and EOs for the Annual School Census and HIV/AIDS school survey.
**CHANGES**
The EMIS will work with CHANGES to assess community data and community schools data to define appropriate information system structures. In particular, EMIS will assist CHANGES to define the coding of open-ended, narrative survey replies to develop a framework for analysis. Eventually, EMIS and CHANGES will determine to what extent the CHANGES data can be integrated with the ED*ASSIST system.

**DFID (British High Commissioner’s Department for International Development)**
This partnership will be defined in the upcoming months.

**EBS (Education Broadcasting Service) / IRI (Interactive Radio Initiative)**
EMIS will partner with IRI on two levels. First, the EMIS program will provide technical assistance in the design and development of an information system, possibly within the ED*ASSIST system. Second, the program will collaborate with IRI and the Exams Council to develop a single assessment tool for both IRI and mainstream students.

**PAGE (Program for the Advancement of Girls’ Education)**
This partnership will be defined in the upcoming months.
**Chronological List of Program Literature to Date**


Works Cited


