

**Technical Assistance Provided
to the SHN Programme
Ministry of Education, BESSIP**

Final Report

**The Basic Education and Policy Support
(BEPS) Activity**

Contract No. HNE-I-00-00-00038-00

Task Order No. OUT-HNE-I-804-00-00038-00

CREATIVE ASSOCIATES INTERNATIONAL

Prepared by:

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Prepared for:

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List of Acronyms

BEPS	Basic Education Program Support
BESSIP	Basic Education Sub Sector Investment Program
CA	Cognitive Assessment
CboH	Central Board of Health
DEO	District Education Officer
EDL	Essential Drugs List
EMIS	Education Management Information System
Hb	Hemoglobin
IEC	Information Education & Communication
JICA	Japanese International Cooperation Agency
KAP	Knowledge, Attitudes and Practice
LOU	Letter of Understanding
MIT	Management Implementation Team
MOE	Ministry of Education
MOH	Ministry of Health
NFNC	National Food and Nutrition Commission
PCD	Partnership for Child Development
PEO	Provincial Education Officer
PIP	Project Implementation Plan
PTA	Parents Teachers Association
RHC	Rural Health Center
SHN	School Health Nutrition
SI	Successful Intelligence
TDRC	Tropical Disease Research Center
TI	Total Iron
TIBC	Total Iron Binding Capacity
TOT	Training of Trainers
TTI	Teachers Training Institute (or TTC-College)
UTH	University Teaching Hospital
UNZA	University of Zambia
WFP	World Food Program
ZIPH	Zambia Integrated Health Program
ZNTB	Zambia National Tender Board

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**Technical assistance to the Zambian School Health and Nutrition Programme
Dr. Paul J Freund**

Period covered Sept. 5-Nov. 16, 2000

Summary of Products and Processes initiated and/or completed (see page 33 for complete listing)

- Visited a wide range of stakeholders including partner Ministeries (Ministry of Health, Central Board of Health, Ministry of Community Development and Social Welfare, Ministry of Local Government), NGOs, donors, and organizations to increase awareness of BESSIP SHN activities and to identify areas of shared interests and ways to collaborate.
- Identified collaborators for planned pilot activities in Eastern Province. These included the Tropical Disease Research Center (Ndola), University of Zambia (School of Education, Department of Psychology), University of Zambia Assessment Center, School of Medicine, Department of Pediatrics and Microbiology) and the National Food and Nutrition Commission. All of these will play a key role in the base-line data collection and throughout the program.
- Finalization of the Letter of Understanding between the MOE and CBoH/MOH
- Revision of strategic plan and concept documents
- Identification of Drug procurement procedures and issues
- Draft of School Health card and circulation for comments
- Discussion of SHN indicators and EMIS issues
- Validation of MOE planning data for selected schools and field visit to 81 randomly selected schools in Eastern Province that will participate in pilot
- Preparation of detailed implementation plan for pilot activities in Eastern Province
- Review of EP situation analysis, liason with MEDOF, editing and follow up of issues for presentation of the document and assistance to MOE for symposia preparations
- Preparation with SHN MOE of a HIV/AIDS strategy statement
- Involvement in selection and follow-up regarding recruitment of an IEC specialist

1.0 General description of activities

The purpose of the technical assistance provided was to work with and support the SHN component focal point in planning and implementing activities specifically to detail plans for the pilot test in Eastern Province, assist the SHN focal point in policy/planning activities, assist in organizing a symposium to present a situation analysis findings, and work with the SHN team in developing a HIV/AIDS strategy.

A significant aspect of the work was to build partnership among and between MOE, USAID/Zambia and BEPS, which is key for future BESSIP support and collaboration.

The technical consultant began by addressing some key issues that were identified during an earlier visit of the BEPS team in July. These included: following up progress made in regard to drafting and finalizing the letter of understanding between the Ministry of Education and Health and obtaining the results of the Eastern Province situation analysis conducted by MEDOF Associates. Dr. Lesley Drake who had arrived earlier and who would assist in following up these issues joined the consultant. In addition, Dr. Drake began work on the school sample selection along with Dr. Elena Grigorenko who arrived on Sept 9. Dr. Janet Robb, Creative Associates International, arrived on Sept 11 and also assisted the team and USAID in planning activities.

Discussions with Dr. Robb, Dr. Kent Noel and the SO2 team members identified a number of priority issues that needed to be addressed. They were:

1. Revision of the concept paper by removing USAID specific items and circulating it to the SHN steering committee members for final comments. The document would then be presented to MIT (Management Implementation Team/MOE) for approval.
2. Obtain the situation analysis report, which was long overdue, so it could be circulated, revised and finalized and results presented during the planned symposia.
3. Revisions of the strategic plan document-issues involved were to find a way forward after the document in its present form was presented to MIT.
4. Submission of the protocols for the cognitive assessment and school-based interventions to the University of Zambia Human Subjects Ethics Committee. As this process may require two months this should be done by end November.

After the departure of Drs, Drake, Grigorenko and Robb the consultant continued to follow up these and other issues during the next two months.

2.0 Method of work:

The consultant began by meeting SHN focal point (Catherine Phiri) and her assistant Mrs. M. Tembo who joined the Ministry in July. The SHN focal point discussed her expectations, immediate issues of concern and outlined a plan for activities over the following week. The consultant would work from the SHN office sharing space with Mrs. Tembo. Although there are offices available they cannot be occupied because MOE retirees are still claiming them. This will be an issue to consider when the IEC specialist and IEC expert join the SHN team.

After working in the office it was evident that there were a number of pending issues that needed to be followed up and had been delayed due to staff shortage, competition for time to attend workshops, meetings and conferences. In addition, activities and the ability to work efficiently are constrained by the lack of a direct telephone line, vehicle, E-mail connection, fax facilities and photocopier. The additional pressure during the months of September and October to submit quarterly reports, annual review, MIT meetings, and budget submissions underscored the need to provide assistance for the SHN component.

The SHN focal point left Sept 6 to attend a conference on Life Skills sponsored by UNICEF in New York. During her absence the consultant worked with Marian Tembo and Drs. Drake and Grigorenko to follow up sample selection and arrangements for cognitive assessment preparatory activities. In addition, the consultant visited key stakeholders with Marian Tembo to identify possible areas of future collaboration. The consultant also met with officials in the Ministry accompanied by Marian Tembo including Mr. C. Zulu (Chief Inspector of Schools), Barbara Chilangwa (DPS), Arnold Chengo (BESSIP manager) and Mr. Sichelwe Kasanda (PS). The consultant provided a brief on progress to date and outlined planned activities over the next two months. The consultant met with Mr. Zulu and Mrs. Chilangwa at the end of the first month to provide a progress report particularly findings related to the field visit to Eastern Province.

All activities, appointments and visits were planned with Catherine Phiri and Mrs. Tembo on a weekly basis. Transportation arrangements were made jointly between MOE and the consultant (taxi or MOE vehicle).

3.0 Activities and Progress

3.1 Revision of Concept paper:

Dr. Janet Robb revised the concept paper based on discussion with Dr. Kent Noel. The original document was produced for USAID and included language and references to USAID SO2 reporting, etc. These were removed to make the document more in line with MOE procedures. The revised concept paper was then sent to SHN steering committee members with a covering letter requesting final comments within two weeks. Comments were received and were included in the final document. The

comments concerned the need to reference the PIP, SHN policy, the organizational structure, budget, and rationale for choosing Eastern Province for pilot activities. There were no objections to the approach or interventions proposed. The document was revised by the consultant incorporating the comments received by the MIT and others.

3.2 Situation Analysis report

The consultant visited MEDOF offices twice and they were contacted by telephone several times by the MOE SHN office to inquire into the status of the report. An executive summary was delivered on Sept 10 and a draft document on Sept.12. The consultant reviewed this initial draft and SHN team who provided detailed suggestions for improvements to the document including the need to provide summary tables, corrections of typos and grammatical errors. MEDOF revised the document and provided a second draft on Oct. 16. A meeting of the Situation Analysis sub-committee was organised for Oct. 24 during which the consultants would present their findings and the committee members would review the documents in detail. The committee members generally agreed that the document would benefit from substantial reorganisation to make the information more accessible to the reader. For example, much of the background information could be grouped together and sections relating to the methodological approaches and framework could be placed together. The committee members also suggested that while the information from focus group discussions was very interesting it was hard to derive the real significance or how it related to the problems (health or general). The questionnaires provided as appendices seemed to be well designed and should have succeeded in obtaining the relevant information as required in the terms of reference. However, it does not appear that the information as presented in the document actually allows the reader to relate the problems as described by pupils, parents, teachers or organisations to the conclusions or recommendations. It was also evident that the information on health is comprehensive while that for education is weak (enrolment rates, number of schools in Eastern Province, absenteeism, etc.). After a follow-up meeting of the sub-committee on Oct. 26 it was agreed that much of the information required was contained in the document but will need to be reorganised. The document would be resubmitted in 10 days and will be reviewed again.

Symposia: to discuss outcomes of SHN situation analysis

Plans for a Symposium to disseminate the findings of the Eastern Province situation analysis were modified to expand the agenda to include presentations of the SHN policy, strategy, LoU, and to introduce the planned pilot activities. It would also be an occasion to involve Eastern Province district and provincial officials and other stakeholders who will be directly involved in planned SHN pilot activities. The idea was introduced to the situation analysis sub-committee who tentatively agreed to hold the symposia on Nov. 27-28 (1 ½ days) and that an estimated 50 people would be invited. The venue and other details would be worked out with the SHN team and a

working group chosen from the sub-committee members. The consultant will assist in preparatory activities such as developing the agenda, list of participants and developing a checklist of activities that need to be accomplished before the symposia (who will open and close the symposia, speeches, presentations, etc.)

3.3 Revision of strategic plan

The strategic plan derived from a workshop held in February was drafted by Dr. Irene Sinyangwe. The draft was then presented to MIT for review and comment. Because of the nature of the organization and unclear referencing of the plan to policy, and PIP activities it was rejected as unsuitable as a strategic plan. After discussion with USAID (Kent, Peggy, and Winnie) who agreed to provide an example of a strategic plan for guidance the consultant worked intensively with the SHN team to develop a new strategic plan. By using some elements of the draft, writing new sections based on information obtained since the workshop, incorporating elements of the concept paper and rearranging sections and referencing the PIP, Policy and other relevant documents a new version was produced. (Appendix D) This was circulated for comments within the MOE and the Dr. Singyangwe and Dr. Nosa Orabaton (ZIPH).

3.4 Protocols for the University of Zambia Research Ethics Committee

A draft protocol was written by the consultant incorporating sections from Dr. Lesley Drake. The document (see Appendix E) addresses issues of data collection, nature of samples taken from pupils, how they will be collected, by whom and how they will be used. A parental consent form is included as required. In addition, the document addresses quality control, supervision, collaboration of various organisations and institutions, and a matrix of the types of interventions planned. A cover letter will be attached from the DPS MOE and submitted to the ethics committee on behalf of the SHN component.

Letter of Understanding (MOE/CboH/MOH)

The draft letter of understanding was followed up with the CboH/MOH planning unit (Mr. V. Musowe and Mr. N. Chikwenya). Meetings were held with the MOH to discuss technical issues, design and formatting of the document. A meeting of CboH/MOH and the SHN team was held on October 23rd to review the draft and make corrections and amendments. All remaining issues relating to the format and technical concerns were resolved by November 13th and a final LoU, with a covering letter, was prepared for signature by MOH/MOE officials. (See Appendix C)

4.0 Building Partnership between the BEPS team and MOE. (including visits to key stakeholders)

Substantial progress has been made toward achieving this objective. The consultant has established close working relationships with the SHN team and within the MOE.

The consultant has placed a strong emphasis on the importance of building partnerships and ownership whenever briefings and discussions were held with stakeholders and MOE officials.

The consultant and the SHN focal point organized a meeting at the University of Zambia of Lecturers, department heads, Special Education, Assessment Centre that may wish to be involved in the cognitive assessment activity. A meeting with the Acting head of psychology and Head of Educational Psychology to discuss the cognitive assessment (CA) and ways the university could be involved. The larger meeting served as a forum for Dr. Elena to present the plans and to outline the steps for the cognitive assessment. The consultant also presented an overview of SHN issues and the importance of collaboration by the University. One of the purposes of the meeting was to identify specific people to participate in the cognitive assessment. Paula Kapungulya had been previously identified as someone who had some involvement and interest in participating as a research assistant/coordinator on a short-term basis (2 months). She has recently completed a Masters degree program in psychology, has a public health nursing background and experience in cognitive psychology. After discussions with Dr. Janet Robb, USAID, UNZA, MOE/SHN (C. Phiri) she was hired to work with Dr. Elena and the Yale Successful Intelligence group in preparatory activities in Zambia. She would visit Yale to continue work on development of instrument items and to participate and organize pilot testing in Lusaka area schools. Paula left for Yale on October 24th. The consultant facilitated arrangements and assisted Paula in communicating with Dr. Elena.

The acting head of the UNZA Education department indicated that the CA pilot would be an excellent opportunity for students in educational psychology to be involved and that it would be an excellent field practice site for the department.

The SHN MOE has received CVs from students attending the meeting at UNZA that will be kept by the office for future reference.

Meetings were also held with the Exams Council organized by Mr. Joseph Kanyika. The BEPs team (Dr. Elena, Dr. Drake, Dr. Freund) and Mrs Tembo attended the meeting to present activities related to the SHN and the pilot activities as well as the planned CA. The Exams Council would be a collaborating partner for the CA particularly in the areas of data analysis and monitoring.

A meeting was organized with representatives and researchers from the Department of Microbiology University Teaching Hospital/UNZA. The meeting was attended by the Head of the Department, Dr. J. Mwansa, Dr. L. Mubila, and two researchers currently involved in studies related to micro-nutrients, bilharzia and Vitamin A. The UTH/UNZA Microbiology Department and laboratories have the capacity, equipment and personnel to participate both in the analysis and in data collection process. They also expressed a desire for collaboration of the SHN programme through their bilharzia study group and in other areas of common interest as well. In several follow

up meetings with Drs. Mwansa and Mubila a budget was provided for the collection and analysis of urine samples and parasitology.

The consultant and Dr. Drake visited the department of Pediatrics and children's ward (UTH) and discussed SHN issues with the research team (Drs Bhat and Kankasa) who have been conducting research on HIV/AIDs, perinatal mother/child transmission and malnutrition. The research team would like to be involved in the SHN programme particularly in the development of height and weight standards validation for Zambian children, assisting in field work, training of health workers, supervision of field data collection and anthropometric assessments.

Soon after C. Phiri's return from New York workshop the consultant and Dr. Drake visited the National Food and Nutrition Commission to review progress since our July visit and plans for pilot activities. The acting director Priscilla Likwasi agreed that the NFNC should be involved at two levels, planning and in the field assisting in the data collection (height and weight measurements, supervision of data collection and training). She continued to express concern regarding the safety of the interventions particularly the administration of iron tablets to children in a malaria endemic area. The issue is that some research has shown that iron supplementation increases malaria susceptibility. However, the majority of evidence and research demonstrates that it is safe and actually reduces morbidity and mortality and lessens the severity of anaemia. We agreed that we would address these concerns and monitor the safety of the interventions throughout the process.

A meeting was held with JICA during which C. Phiri presented an overview of SHN activities and the planned pilot. The consultant presented additional details on the pilot and listed areas that JICA could collaborate. JICA representatives agreed that they would welcome working in areas of mutual concern particularly from their experiences with the Lusaka Area school health project and water/sanitation activities. Additional areas included use and design of School health cards, deworming drugs-procurement and logistics, and training.

During the visit of Drs. Drake and Grikorenko data for the Eastern Province Schools was obtained from the planning department (MOE) and accessed through the computer database (Garden House, Lusaka). Rough data was obtained which included schools by district, grade level, enrolment by grade and gender. The data was then sorted by the following criteria:

1. Grades 3-7 taught
2. At least 10 in each grade
3. Not catering to special needs children (i.e. Blind, deaf)
4. Accessible throughout rainy season
5. Not more than 3 hours drive from district centre

The resulting list of 40 intervention schools and 40 controls was shared with the SHN focal point. The data was validated during an eleven-day field visit by the consultant and C. Phiri. (See Appendix F)

The consultant, C. Phiri and Mrs. Tembo visited World Vision, DFID, Central Statistical Office, Ministry of Local government, ZamSIF (Zambia Social Investment Fund-formerly Micro projects), and the World Food Programme. ZamSIF operations and technical officers were eager to participate with SHN as they already have plans for interventions targeted to schools including water/sanitation, feeding, school electrification and IEC campaigns. The World Food Programme is interested in providing support through feeding programs targeting vulnerable children. A follow up meeting with a WFP representative and USAID and MOE/SHN concerned issues regarding potential funds available through a US presidential initiative. Concerns were expressed by SHN and USAID on whether flexibility of the funds available and their use, sustainability of the initiatives, and questions such as; How will communities be involved? Is nutrition education included? How will local food production and food security issues be addressed? The SHN programme agreed to continue discussions and collaboration with the WFP to resolve some of these issues and to obtain more details on how the proposed funds will be delivered and used.

Contact was made with representatives from the Society for Family Health, The Family Health Trust, Dannida, Care and FAO.

The consultant made contacts within the MOE including Gender, PAGE, Child to Child programme coordinator, HIV/AIDS, and planning.

On October 5-6 the consultant traveled to Ndola with C. Phiri to visit the Tropical Diseases Research Centre (TDRC) to determine their capacity to conduct laboratory analysis of Iron levels and Vitamin retinal. Discussions were held with Dr. E. Kafwembe (head of laboratories) and David Mwandu (Senior researcher). TDRC has extensive experience in Vitamin A research, surveys, data collection and clinical studies. They prepared a budget based on a projected analysis of 3,000 samples for iron levels (TI, TIBC, HB) and Serum retinal Vitamin A. They would also be responsible for data collection as this is critical in maintaining the integrity of the samples as Vita A is heat and light sensitive. Their field team will work simultaneously with the HWs collecting stool/urine/blood and the antropometric assessment team. Approximately 10% of the sample will be sent to South Africa for analysis to ensure quality control.

In general the range and variety of stakeholders and possibilities for collaboration is extensive and exciting. The challenge will be to continue their involvement. A method that can be used in addition to personal visits is the use of a newsletter from the SHN/MOE that can serve to publicize activities of stakeholders, research results, meetings, workshops and activities of the SHN/MOE. Such a newsletter can also be circulated to provincial and district education officers for distribution to teachers and other interested parties and can serve as an important advocacy tool.

A complete list of stakeholders identified to date is included as a matrix listing areas of current involvement, potential role in SHN and contact name.
(See Appendix B)

5.0 Drug Procurement Issues (SHN)

The procurement of drugs and Medical supplies is divided into three areas: Health Centre drug kits including rural health centre kits and community health worker kits, essential drugs and medical supplies for use in districts, general, specialist and central hospitals, and other drugs and medical supplies for epidemics and other special programmes (e.g. UCI, vaccines).

Drug kits are procured centrally and funding is provided by donors (Sweden until 1999) and currently by the Netherlands government. Each RHC kit contains 63 drugs and 26 sundry items (e.g. bandages, swabs, etc.). Community health worker kits contain seven drugs and seven sundry items. The items and quantities in the kits were calculated based on Zambian disease patterns and prevalence. Drugs were selected using the Zambian National Formulary and WHO essential drugs list. One HC kit caters for the first 1,000 attendances and is allocated on first attendance statistics of each health centre per month. In addition, there are 16 Essential bulk drugs supplied outside the kit. CHW kits are intended to last for two months. Procurement of kits is done annually and stocks should last one year as procurement takes one year.

The availability of essential drugs at present in rural health centres is relatively good. However, supplies of some drugs are erratic. Our investigation of Eastern Province schools and interviews of teachers and RHC workers revealed that drugs like Chloroquine, Praziquantel, and anti-helminths were insufficient for the demand.

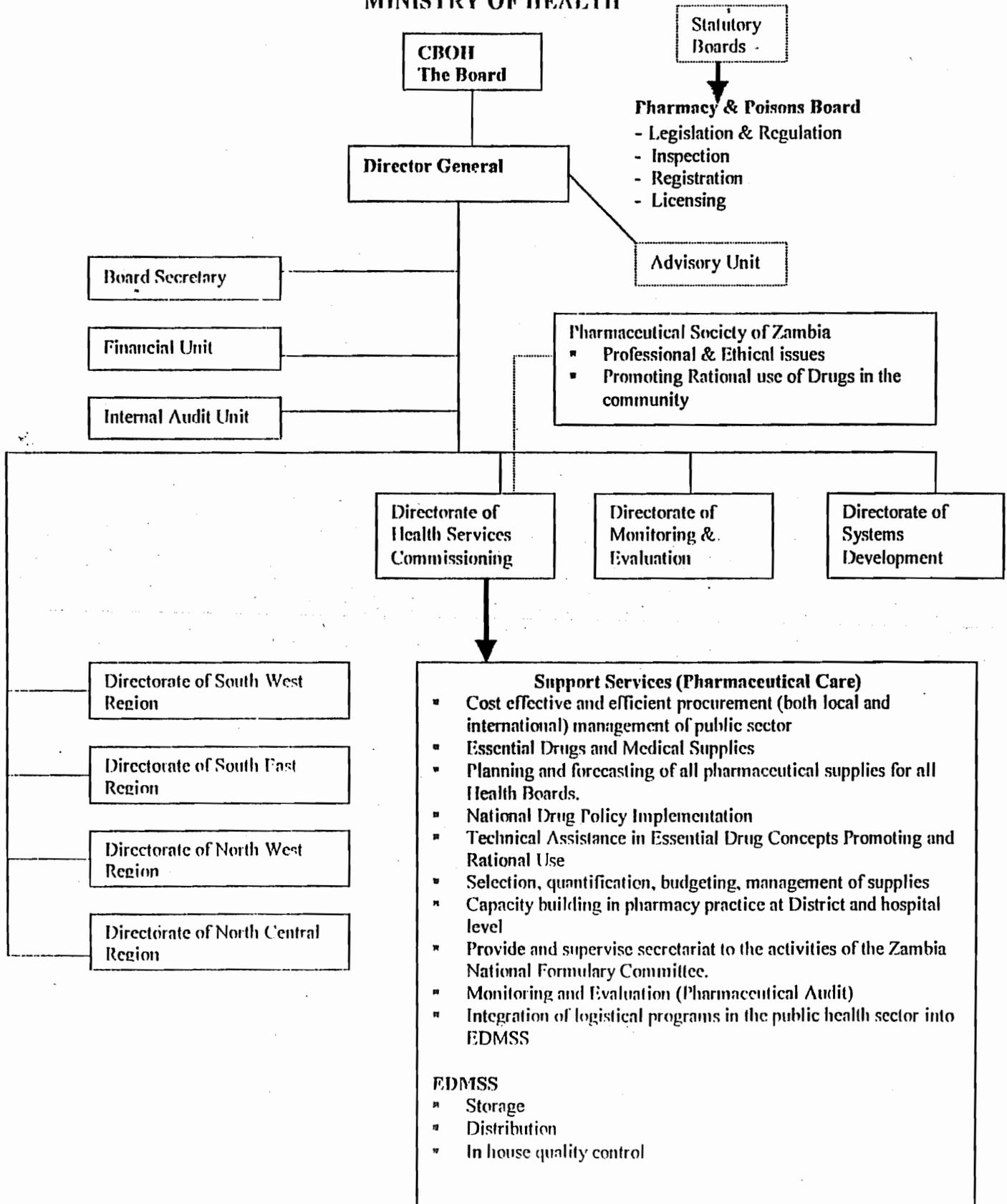
The kit system is a push system in that every month a RHC receives kits depending on the number of the first 1,000 attendances. If the number of attendances exceeds 1,000 the number of kits is increased based on returns sent to the central level. The average cost of a treatment episode at a RHC is \$0.33 (each kit cost \$320).

Systems and Procedures for drug procurement

Currently the MOH has a threshold to procure goods and services up to K325 million with resort to the Zambia National Tender Board. For the small supplies of drugs required for the SHN at least in the pilot it will not be necessary to go through the ZNTB for procurement.

The specific guidelines provided for the SHN drugs by the Pharmaceutical Regulatory Department (Under the Drug and Poisons Board) follow WHO Essential Drug guidelines and include the following:

MINISTRY OF HEALTH



- The drugs are to be handled in the normal way as all other drugs (i.e. they will be delivered to Medical Stores Ltd. for proper storage and performance of the usual Quality Control procedures before distribution.
- The drugs/medical supplies should be labeled in English
- The label should contain at least the International Nonproprietary Name (INN or generic name) of the drug.
- The label should contain the batch number, the dosage form, strength, expiry date, quantity in the container, storage conditions and name of the manufacturer.

In terms of Quality assurance and shelf life

- The drugs should comply with quality standards in the country of manufacture
- The drugs should arrive in Zambia remaining with at least one and half year shelf life.
- No drug that has been issued to patients and then returned to the pharmacy or elsewhere, or that were given to health professionals as free samples should be donated.

Storage and distribution of drugs and medical supplies is done by Medical Stores (EDMSS). Medical Stores Ltd. under contract with the MOH has developed a distribution schedule in which each district is served by a Medical Stores truck at least once a month.

Upon receipt of drugs and medical supplies each district fills in a GRN (goods received notice). The items are then transferred to the store or pharmacy where BIN cards or stock control cards are updated with the new stock.

The SHN drugs to be used in the Pilot are the following:

Drug	Dose/frequency	Availability	Shelf life
Vitamin A capsules (Retinyl palmitate)	200,000 IU annually	Supplied in 1,000	2 years
Ferrous sulphate	200 mg/weekly for 10 weeks	Sugar coated, donations from World Bank to CboH, supplied in units of 1000, used only for pregnant women not as supplement by RHCs	2 years
Praziquantel	Tablet, 600mg Dose calculated as 40/mg /kg body wt.	Limited	2 years
Albendazole*	400 mg/twice yearly	Not EDL, limited to private pharm, available in flavored tablets.	2 years

The current procedure for ordering these drugs is through the CBoH. The CBoH will evaluate the order in terms of quality and quantity and pass the order to Essential Drug and Medical Supplies Store (EDMSS).

More specific guidelines for SHN will be worked out with CBoH.

The key contact persons in the MOH and CBoH who are familiar with USAID rules and regulations regarding drugs and American suppliers and have worked with donor drug supplies before are:

Mr. R.M. Kampamba, Principal Pharmacist, Pharmacy and Poison Board, Lusaka

Mrs. R. M. Andala, Pharmacy technician, CBoH

Mr. Oliver Hazemba, formerly Senior Pharmacist, MOH, Dept. of Pharmaceutical Services, now with ZIPH, logistics and procurement section.

Mr. C. Mulele, Health promotions specialist, CBoH.

Calculation of Drug requirements:

SHN drug	Dosage/freq	One year supply	Two year supply
Albendazole*	2x /yr	20,000	40,000
Vitamin A	2x/yr	20,000	40,000
Praziquantel	Determined after prevalence survey		
Ferrous sulphate	200mg x 10 x 10,000	100,000 tab.	200,000 (tbd) depending on expansion and enrolment data
Iodised oil caps	-	-	-

Costs Issues

Drugs ordered through the EDMSS will incur a 15% FOB, cost added. The MOH pays for transport, repackaging at district level. In the case of SHN the LoU includes a statement that MOE will pay the customs, clearance charges for the drugs.

Transport often adds significantly to the cost of drugs intended for peripheral health facilities. For example, the costs of Albendazole used in the JICA Lusaka area school project was estimated at \$1.30 per dose. However, experience from Tanzania (PCD, Health Policy and Planning, 13:384-396) cost for Albendazole was only \$0.33 by using more efficient methods are used. Transport to Health Centres and to teachers obtaining the drugs from HCs, which in most cases are fairly close to schools, will not add substantially to the costs. Therefore, the drug can be affordable which is an issue for long-term sustainability.

Albendazole* vs. Mebendazole

The issue of including Albendazole as a drug of choice arose shortly after a meeting with MOH/CBoH to review the final draft of the letter of understanding (LoU). The Chief Pharmacist was asked to provide guidelines for the donation of drugs and medical supplies to be included in the LoU and which would be used for the SHN programme pilot interventions.

The guidelines included quality control procedures, payment of local clearing fees and supervision of drug administration. These were agreed to and included in the LoU. The one issue that remains is the selection of the drug of choice for de-worming Albendazole. The Chief Pharmacist objected noting that Albendazole is not on the Zambian Essential Drugs List (EDL) and has not been used in government health facilities. Mebendazole has been supplied in the RHC drug kits for the past ten years. The other reasons for continuing with the use of Mebendazole is that health workers do not have experience in the use of Albendazole and the higher cost of Albendazole. The SHN team visited the CboH, MOH to discuss this issue and outlined the advantages of using Albendazole and reasons for including it in the LoU.

- Albendazole is a broad spectrum de-worming drug
- Albendazole has fewer side effects
- Albendazole results in better compliance as it is available in flavored form and is a single dose (usually given 2x a year)
- Albendazole is recommended in the WHO school health guideline
- Albendazole has been successfully used in the context of SHN programs by PCD in other countries (Ghana and Tanzania).

Furthermore, we pointed out that in 1995 InterChem, a Zambian Pharmaceutical Company, conducted a trial in Lusaka area schools to compare Albendazole and Mebendazole and recommended Albendazole. The SHN focal point (C. Phiri) was present at the presentation of results meeting at that time. JICA has also used Albendazole in their Lusaka Primary School Project.

While it is true that Albendazole is more expensive much of the cost is added transport and this cost can be reduced to as little as \$0.20 for the drug. There are admittedly broader policy implications for switching to Albendazole as all previous training and production of IMCI materials promoted the use of Mebendazole.

Discussions regarding this issue continued with the MOH/Cboh and others. From the SHN team perspective if we wish to develop a model programme we need to promote and use the most effective drug for de-worming-available. It is also important to note that the EDL is subject to review and change as new and more effective drugs become available and have been quality tested.

On November 8 the CboH/MOH agreed that the LoU can go ahead and that the alternative suggested namely stating Albendazole/Mebendazole as the drug(s) of choice is acceptable.

Details on Mebendazole:

Used in the treatment of Whipworms, pinworms, threadworms, roundworms and hookworm

Available in 100mg chewable tablets,

Dose once and retreatment after 2 wks if re-infection occurs

6.0 SHN/EMIS

6.1 Needs assessment for SHN-EMIS

The current EMIS situation is similar to that which existed for the health information system. The information you have you do not need, is of questionable reliability or arrives too late to be of any use. And the information you need you cannot get In Sept. 2000 the EMIS concept paper (ED-ASSIST) paper described the current system as highly centralized which does not feed into systems at the local level. Moreover, the current

systems for collecting, analyzing, and using information are inadequate. The factors that contribute to this are; lack of strategy, time lag (delay of up to two years from schools to central level), lack of reliability (no data verification and validation), data gaps, data wastage (labor intensive to produce annual statistical reports that arrive too late to be of use), data duplication and inconsistency, and lack of linkages (not possible to establish inter relationships between variables in the analysis).

Clearly, the problems of the current system are numerous and create frustrations particularly for planners and managers who need simple, current data in order to assess strengths and problems in the educational system. The data deficiencies are also evident when designing and developing programmes like school health and nutrition. The current information gap as the concept paper notes between the schools, communities, districts, provinces and central management must be overcome.

The proposed SHN MIS is designed to capture, manage and report on specific data relevant to undertaking impact and programmatic evaluations of the planned SHN programmes. The need for the system is necessitated by the fact that the current EMIS does not provide or accommodate the data types required for managing and evaluating the proposed SHN programme.

For example, while the current EMIS is designed to capture Schools, Staff, and Pupil data, including information on physical impairment, provision for collecting data on health indicators, at both the Institution and Child levels, relevant to the proposed primary-school-based deworming and nutrition interventions (such as sanitation and water accessibility of schools and nutritional and parasitological status of individual children) is lacking.

The capture and tracking of data on pupil health by the proposed SHN-MIS can thus play an important complementary role in the current provision of information on primary school education and health in Zambia. More specifically, by combining the school health information gathered through the SHN-MIS (at district level) with the data on education indicators collected by EMIS, there is a great potential for provision of a very comprehensive information base for integrated education and health planning for primary schools at the district level. Currently, the EMIS proposes to collect and process data on primary schools at the district level, each district populating and maintaining its own primary school database built using Microsoft Access. Each primary school database is linked to the relevant Province server, and data on schools from districts in each province can then be expected to be linked to the EMIS national server at the Ministry of Education, to enable specific decision-making at each administrative level. Since the SHN-MIS will also be based on Microsoft Access and will essentially follow a similar connectivity framework from data capturing, processing and reporting at the district level to monitoring and evaluation of programmes at the Provincial level, integration of the SHN-MIS data within the EMIS will be readily facilitated for example by (1) using the same school coding formats by both systems and (2) adding a querying module within EMIS for accessing data from compiled SHN-MIS Access tables. The Access tables from the SHN-MIS could either be incorporated physically within the district primary school

EMIS database or since the SHN-MIS will be web-enabled, accessed by the district EMIS over the web. The captured data can then be analysed and reported to the district planning units or even transmitted upwards to provincial or central planning units as required following the EMIS connectivity structure as noted above.

Data level	Aggregation	Data Use
Central Hdqtrs	Data entry, analysis report, currently 1996 backlog	Reported statistics, indicators, planning, annual report, usually 2 years delay
Provincial	Data entry, aggregated by district, excel spreadsheets	Provincial reports Planning
District	One copy filed, no data entry one sent on to province	Limited use in planning
School/Community	Data collection on pupils, staff, no analysis	Currently no use of data for local level
Data pupil (proposed) By grade	Data to be collected on individual pupils via health card, summary data to district, and data for each school (facilities, water, sanitation, etc.	To be used by district for planning, entry and analysis by district resource centres, Accessed by HMIS and other organisations, data use in targeting interventions and evaluating impact of interventions.

Within the context of the SHN programme the following data types will be collected:

Data to be collected from surveys:

Vitamin A levels, Iron levels, Malaria/Anaemia, Worm infestations

Observational studies of hygienic practices, behavior changes and KAPs of students and teachers on such issues as sanitation, hygiene, nutrition, and other SHN issues.

Data to be monitored and collected by teachers and sent to district:

Height of pupils by grade and gender- % stunted by grade or school by gender Height for age

Weight of pupils by grade and gender- % underweight by grade or school by gender- Weight for age

Data to be collected proposed referral to health facilities and orphans (single, double) by school to be reported on annual basis. (After discussions with Kurt Moses-SHN team)

6.2 The School Health Card

The need for a school health card was recognised by all the stakeholders visited as a necessary step in the design of a school health programme. There is no information at present on the health status of school aged children that is routinely collected. The information that is available comes from specific surveys (Vitamin A, bilharzia, nutrition) or local projects (e.g. JICA-Lusaka School Project). It is also generally acknowledged that the health of school children has been deteriorating due to a combination of poor nutrition, parasitic worm infestations, malaria and micro nutrient deficiencies.

A Ministry of Health school health card was in use in Zambia throughout the 1970s. (MF-71). The card for each individual pupil was kept by clinics that conducted visits to schools in their catchment areas at the start of each term. The card included physical screening information (eyes, hair, hearing, weight, height). It also included vaccinations and treatments received.

Following the decline in health service delivery standards throughout the 1980s and 90s visits by clinic staff to conduct health services became more and more infrequent. The focus on under fives and child survival programmes also diverted attention and resources from school health services.

Fortunately there has been an increasing realisation by the Ministry of Health and Education that this trend cannot be allowed to continue and that school health needs to be accorded a high priority. There has also been more attention to the inter relationship between poor health and low academic achievement. As evidence mounts showing that

School Health Programs can be implemented successfully and cost effectively there will be increasing demands for information on health problems of pupils and on developing monitoring systems to gauge the impact of intervention programmes.

An essential step in this data collection process is the use of a school health card to be maintained by teachers and which would include information from basic screening of pupils by teachers as well as records of weight and height measurements. In addition, the card would include a space for visiting health staff to record vaccinations, drugs and treatments administered to the child. Currently, as we observed in a number of schools visited in Eastern Province health workers visit schools provide vaccinations, sometimes screen pupils, give treatments for ailments like bilharzia, malaria and scabies but the information is recorded only in a clinic out patient register which is kept at the clinic. Occasionally clinic staff record in the school visitors book that they treated X number of pupils and provided X number of BCG or TT vaccinations. Therefore, the data on each pupil is not easily available nor is it possible to track all of the pupil's health problems over time from grade to grade.

The school health card designed (See Appendix I) includes basic identifying data (Date of Birth, parent/guardian, distance between home and school, address of parent/guardian, height and weight, and basic physical screening information per grade, an assessment of general academic performance each term/per grade. In addition, measurements of height and weight will be recorded each term by grade. Finally, space is provided for recording treatments, drugs and vaccinations. The card is a combination of similar cards used in Tanzania and the JICA Lusaka based school health project. The card includes basic screening data that can easily be performed by teachers after training. For example, the examination that begins with hair, skin, nails, eyes provides yes/no options and space to record type of rash observed and infection. The physical exam also includes eyesight, hearing, speech and posture that teachers can learn to do easily. Identification of these types of problems/difficulties early through the screening process is very important so that the pupils can be referred for follow up. Measurements of height and weight also require training and use of appropriate scales and height poles. If we wish to use an indicator like % of pupils per grade stunted (which is a common indicator for SHN programs in other countries) teachers will need to complete a summary form that indicates whether the child was normal (Ht/Age) or below the standard. Similarly, weight/age can be indicated as normal or below standard and % of children per grade can be summarized.

Obtaining accurate birth dates may be a problem for some children and many parents are unable to provide this information. In urban schools children must produce an Under five card before they are allowed to register. However, in rural schools this is not adhered to and obtaining accurate birth dates will be problem that will affect height/weight calculations.

One of the purposes of the school health card will be to relate pupil's health status to academic performance. This can be done only indirectly from information on the card. For example, if problems (eyesight, hearing, significant weight loss and stunting are

observed and recorded and the teacher also notes a generally poor academic performance a suspected relationship can only be inferred. Specific measures of cognitive performance and precise medical investigations are necessary to establish the relationship with more certainty. Nevertheless, the recording of physical examinations, and height and weights and drugs given by teachers is important for a number of reasons. The teacher who has been trained in these skills, and SHN issues will be able to identify problems in pupils that affect learning and that often go unrecorded and untreated for years. It can also be extremely helpful for health workers to have access to such information as it will increase the number of appropriate referrals, link health workers and schools by strengthening the relationship and link community health workers and neighborhood health committees to schools.

The development and use of a cognitive assessment instrument will be tested in Eastern Province and will be administered by teachers. This will provide teachers with a more precise measure of intellectual performance of pupils. This score can also be included on the card during the pilot.

6.3 Flow of the information and use of the data

The school health card has obvious value and use for schools and clinics. It is intended to be kept in schools and used by pupils through grades 1-7. It should also be taken by a pupil to the clinic when referred for treatment or follow up of a problem.

Data aggregation will be required by teachers to provide summary tables on the number or percentage of pupils by gender and by grade who are below height standards/age or stunted or below normal weight/age standards. This summary table would be sent to district level (DEO or District resource centres) for analysis. The information can be used to allow comparisons among schools in a district or compare districts in terms of this indicator. Currently, there is no analysis at district level of routine data sent (enrolment by sex and grade). An EMIS/SHN needs assessment to provide more precise information on how information from health cards will be used at district level and the capacity for analysis and use of the data in planning needs to be conducted. (This is currently proposed by PCD).

The proposed school health card has been designed by the SHN team and circulated for comments to CBoH, MOH, ZIPH and others. It is a preliminary draft and will undoubtedly require many revisions (see Appendix I).

A number of good comments have already been received and will be incorporated in the revised card: they include need to include dental caries, need to add presence of children's clinic card and vaccination information, extend space on back of card for recording Iron supplementation, Vitamin A, and other treatments provided the space available now will be insufficient to last from Grade 1-7. The card will continue to be circulated by the SHN team for comments.

7.0 SHN HIV/AIDS Strategy Statement

The HIV/AIDS strategy outlined here was drafted by the SHN team taking into account the MOE statement on HIV/AIDS, the recently developed HIV/AIDS workplan and discussions with the HIV/AIDS component team

Meetings were held with the HIV/AIDS component team (Mr. Alfred Sikazwe, Mrs. Irene Malambo) to present a strategy statement from the SHN team. This meeting was held immediately after the HIV/AIDS Workplan presentation and programme launch. The statement was read by the HIV/AIDS component team and they have agreed to the points outlined. Moreover, they will circulate the statement among other interested parties. The statement was incorporated in the revised concept paper. The statement is subject to revision following comments received.

The SHN HIV/AIDS statement

The main ideas of the strategy are intended to reinforce and integrate HIV/AIDS approaches and will be reflected in the SHN workplan as an activity but requiring no separate budget.

The HIV/AIDS pandemic poses serious challenges to the education system. While the prevalence rate in Zambia is 20% there is a "window of hope" in the largely unaffected 5-14 year age-ranges and it is in this group that interventions need to be targeted.

The consequences of HIV/AIDS includes a growing number of orphans, estimated to be over 6000,000 by 2,000 (CBoH, 1997). As the death of parents means that children will leave school to engage in some kind of employment.

The epidemic also affects teachers and statistics now indicate that over 1,300 died in 1998. This has serious consequences for the ability of the MOE to maintain a supply of manpower to replenish an already devastated workforce (Kelly, 1999).

At the governmental level a national HIV/AIDS council and HIV/AIDS secretariat to support an expanded multi sectoral response has been formed. Although the MOE document "Educating our Future" (1996) does not provide a policy statement it does list a number of strategies for how the MOE should deal with HIV/AIDS. These strategies include addressing HIV/AIDS in the context of health education programmes, development of life skills, Anti Aids clubs, counseling of teachers and integration of HIV/AIDS awareness into in-service programmes. The BESSIP programme strategy includes close collaboration with the Ministry of Community Development to identify vulnerable children, orphans, and work with out of school youth. The IEC strategy will also use a broad-based strategy to address HIV/AIDS in communities. Teachers will work through existing programmes such as "Child to Child", Anti Aids clubs, etc.

The policy also recognises the relationship between health and education and the fact that HIV/AIDS exacerbates the impact of many health problems. Clearly, HIV/AIDS affects the educational system on a number of different levels.

The impact of HIV/AIDS is serious and devastating for education resulting in reduced capacity in the management levels, teacher absenteeism, reduced familial resources for schooling, fewer children able to attend school and orphans.

Therefore, HIV/AIDS must be addressed as a multi-sectoral, cross cutting issue requiring strategic planning. The HIV/AIDS component under BESSIP has recently developed a workplan (September 2000) which includes four major activities; advocacy/sensitisation, curriculum material development, human resource (training of teachers, counselors, and counseling of pupils and teachers in peer education) and HIV/AIDS EMIS.

In general the SHN strategy in regard to HIV/AIDS will be to reinforce and integrate with existing programmes and components in BESSIP. The emphasis will be on the importance of informing and educating (Grades 1-7) and teachers at every available opportunity to increase their knowledge and skills to become confident and successful in dealing with HIV/AIDS.

Specifically the activities suggested follows closely those areas defined by the programme as likely areas of opportunity for disseminating information about HIV/AIDS and for providing training to increase skills. These areas are:

- Use of HIV/AIDS materials/modules in the planned training of teachers at the Teachers Training College (Chipata), Training of Teachers (TOTs) and teachers involved in Pilot activities in Eastern Province.
- Reinforcing existing HIV/AIDS curricula material used by teachers by increasing teachers' technical understanding of the subject.
- Training of teachers to be able to act as peer counselors and as a general source of information to their fellow teachers and to the community.
- Strengthen links between health workers and teachers especially in areas of mutual goals and in provision of effective health education.
- SHN will develop a wide network of partners and stakeholders in overlapping areas of concern such as sexual/reproductive health, adolescent health, HIV/AIDS.
- Awareness and advocacy for the SHN programmes through effective public relations and use of newsletters, and spreading the word through contacts with NGOS, donors, organisations is an important activity that will be pursued.
- The IEC specialist supported by Smith Kline Beecham will develop media strategies for SHN that will include HIV/AIDS. Approaches will include use of popular theatre as a way to spread messages at the community level (groups working in Eastern province will identify community concerns and priorities which likely will include

HIV/AIDS and develop dramas around the issue). Other strategies will include use of local radio, newspapers, and print media.

- Because much of the available material is targeted to adults or adolescents the SHN will focus attention on Grades 1-7. This window of hope is a chance to form behaviors rather attempting to change established behavior patterns.
- The SHN programme will also work closely with its partner The Ministry of Community Development to identify and assist vulnerable children and orphans. The SHN programmed will assist in the identification of out of school youth and linking them with organisations providing support.

8.0 Other related activities/meetings attended/field visits

- During a visit to the Tropical Diseases Research Centre (TDRC) in Ndola C. Phiri and the consultant met with the PEO and DEO Ndola and organized visits to two basic schools and a community school. One basic school visited (Pamodzi model school) had a successful production garden. The excess produce was sold and some maize and vegetables were used to feed pupils. A community school “barefoot” provided breakfast and lunch to children attending who were largely orphans and vulnerable children from nearby villages. The school seemed successful with a committed staff of teachers and well maintained facilities. (Appendix G)
- Participated in the selection process for the Zambian IEC specialist to join the SHN team with support from Smith Kline Beecham. Served on interview panel and acted as liaison between the SHN and Smith Kline Beecham, Mr. Mike Murray.

8.1 Eastern Providence Field Trip (Summary) Trip report attached as Appendix F

A field trip to Eastern Province was undertaken with Mrs. C. Phiri, SHN Focal Point, from October 9-21. The purpose of the trip was to validate data collected from the Ministry of Education, Planning Unit (1998 census) to select schools for the SHN pilot programme in Chipata and Chadiza districts. In addition, the trip had a number of specific objectives:

- Visits to Provincial Education Officer, District Education Officer’s offices to discuss issues related to the proposed pilot and general SHN issues.
- Visiting of the 80 selected schools (40 intervention, 40 controls) in Chipata, Chadiza to evaluate accessibility and interviewing of teachers using a short questionnaire.

- Visit to seven schools in Chama district to assess special logistic and operational problems that may affect inclusion of the district at a later stage of the pilot.
- To collect maps and additional information needed for planning of data collection and coordination of survey team activities.

We were able to visit 81 schools in the eleven-day period and more than 120 teachers were interviewed. We also met with district and provincial education officials, rural health centre staff, a Peace Corps Volunteer, and had a formal audience with Chief Tembwe in Chama. We were able to validate the selection of schools and obtained data on enrolment. In general the enrolment figures obtained from the schools corresponded to the data from the planning unit MOE. Two schools failed to meet the enrolment criteria (of at least 10 pupils in each grade) and will be replaced by re-running the random selection computer programme. One school was dropped because it catered for disabled children. Access to each school was evaluated in terms of road conditions and distance. If there were particular difficult sections of the road we investigated as to whether the road was accessible during the rainy season. The majority of schools were accessible and should present no difficulties during pilot activities. When reaching the school we observed the physical condition of the school buildings, presence and type of pit latrines, water source, and production gardens.

We interviewed headmasters and/or senior teachers when they were available and other teachers when they were not. Many teachers were away working as census enumerators. The interview schedule included questions on water sources and sanitation. Water problems were being experienced by the majority of schools both rural and urban in all districts. It was evident that water problems and use of untreated water were a major contributing factor to the high incidence of water borne diseases. Diarrhea, intestinal parasites, bilharzia were cited as common health problems.

We investigated issues related to community participation as it would affect pilot activities. Community participation was felt to be very good in the opinion of the majority of teachers interviewed. There were some situations that resulted in less than ideal community involvement and led to teachers experiencing difficulties in mobilizing support. These were in areas with transient farm workers, resettlement schemes and border areas (Malawi, Mozambique). In one case there was financial mismanagement of PTA funds by previous teachers that resulted in mistrust by the community. The current teachers said they were attempting to rebuild community trust.

Village populations in school catchment areas ranged from 800-to over 10,000 with some dispersed homesteads but usually village clusters. Some teachers had catchment area maps available or lists of villages. When they were not found teachers were asked to have them available to aid the baseline survey teams and popular theater groups who will begin work in January or February 2001.

The presence of production units was also investigated. The majority of schools had production units but few used the produce for feeding of pupils. The schools were encouraged to revitalize production units and to use the produce to give pupils small snacks like sweet potatoes, maize, bananas and groundnuts.

Health problems of pupils included malaria, bilharzia, eye infections, worms, skin rashes, and diarrhea. Rural Health Centre staff visited 20 of the schools to provide immunizations (Grade 1 and 7). Some even screened for bilharzia and provided treatment. Currently many teachers feel that they should keep out of the way when RHC staff visit. The training planned for teachers in health issues, screening, etc should give teachers the technical skills and confidence to participate actively when RHC staff visit and strengthen the links between the RHC and schools.

Overall the schools selected seemed to be a good representation of schools in the districts. The schools included a newly rehabilitated African Development Bank school, badly deteriorated schools with few teachers, and challenging areas, both urban and rural.

- Attended USAID review results presentation Intercontinental Hotel Oct. 4 and participated in SHN-Education working group.

Eastern Province Pilot activities detailed implementation Plan

A preliminary draft of an implementation plan for pilot activities was developed by the consultant and Dr. Lesley Drake. The plan was expanded and put in matrix form by the consultant with the SHN team. The detailed plan includes Policy/Planning, Training, Cognitive Assessment activities, School-based interventions, IEC and Community-based activities. The first draft was developed using a time line that assumed an early January project start date. If this is delayed until end January or later then the time line will need to be adjusted. The plan has been circulated to a few people within MOE (Appendix H).

9.0 Lessons learned

9.1 Lessons related to Stakeholder involvement

For the School health and Nutrition Programme to be a national priority, it is necessary for advocates and policy makers to reach a common understanding of the issues involved, consensus on direction and goals, resources required and benefits to be achieved. The process of creating political support for SHN policy is a critical step requiring creative advocacy efforts creating a strategic plan involves forming alliances with key stakeholders. However, this not an easy process and as one MIT member remarked assuming that all potential stakeholders will be open and willing to cooperate is utopian and unrealistic. Stakeholder involvement must be cultivated and will require more than an occasional visit or brief meetings during larger meetings. It means that stakeholders should be involved in planning meetings on SHN issues. The use of a newsletter can be very effective both as an advocacy tool for SHN and as a way of sharing ideas, information on activities, research findings, notice of

conferences and workshops. The newsletter can be distributed to a wide range of NGOs, teachers, managers, donors, and other interested parties. NGO coordination committees also suffer from the fact that interest in them and active participation wanes quickly.

Another essential element in the process of developing a SHN program is the creation of mechanisms at all levels that are charged with the responsibility to transform policy into action. These coordinating mechanisms provide direction, guidance, monitoring and linkages to the key players. Some have already been established such as the SHN steering committee and the appointment of district and provincial SHN focal points. However, they need to be engaged in activities. As several focal points remarked during our field visits “we appointed people and formed committees long ago but there has been a long silence from headquarters”.

District level stakeholders also need to be actively involved. While SHN focal points have been appointed SHN activities and issues need to be defined and the roles of the focal points clarified. For example, at a meeting at the District Resource Centre in Chadiza the DEO emphasized the need for continuity in programmes. This requires full acceptance by teachers to ensure that activities will be continued. The DEO was speaking about WASHE activities that needed more effective coordination.

In Eastern Province there are a number of stakeholders involved directly or indirectly in SHN issues including (LWF- Lutheran World Federation, Africare, Plan International, ZIPH, World Vision, ADRA). However, there were frequent complaints by district management and teachers that their efforts are not coordinated. Even knowledge of infrastructure support is not well known by Headquarters. The Central Ministry is appreciative of such support and would like to acknowledge it but lacks information on what is being done because neither the organization nor the DEOs office provides this information to Hdqtrs.

Involvement at the school and community level is very good as evidenced during our field visit to EP schools. Participation at that level should not pose a problem for SHN activities.

Schools and communities are natural partners in health promotion and disease prevention. Schools can utilize community resources for learning about and practicing health habits. Communities can provide key support to schools for the critical role they play in promoting health specifically:

- The community provides a good setting for students to understand and practice what they learn in the classroom.
- School-community projects can be designed to involve and inform and facilitate the education of parents, family and others in the community.

- Headmasters can play a key role in stimulating these interactions such as the creation of a health committee at the school level.

It was very evident during our visit to Eastern Province schools that teachers do understand the relationship between health and learning and many have taken initiatives to promote better health, sanitation and nutrition. However, their resources are very limited and they lack the skills, training and training/teaching materials to deal with these issues effectively. There was also abundant evidence that communities are participating in helping schools (self help projects-active PTAs) including brick molding, pit latrine construction, etc. even through the general level of poverty is a real constraint for families, schools and communities. The inability to pay even minimal school fees because of poverty was mentioned by almost all school staff we interviewed.

The full participation of teachers will also be constrained by their generally poor living conditions (pay, accommodation). For example, during our survey more than 43 teachers in Chadiza and 100s in Chipata were away assisting with the census. Teachers were able to earn the equivalent of several months pay in a short time working as census enumerators. The general deterioration of schools and poor water supply contributes to poor environmental standards, ill health and will pose real challenges for the pilot activities.

The capacity of various Ministeries particularly at the district level to participate in the SHN programme is variable. The Ministry of Community Development has a provincial office and one officer with little capacity at the district level. In Chipata and Chadiza they work through other organizations like Plan International, Africare, and World Vision. District health management boards in Chipata and Chadiza are also constrained by a shortage of personnel. Many RHCs are operating with one or two staff and have a large catchment area. District Teachers Resource Centres in Chipata and Chadiza seem fairly well organized with personnel but need clear direction on what they should be doing. Equipment is also breaking down (Photocopiers, etc.). If they are going to be used for training and other SHN activities their capacity needs to be assessed more critically.

9.2 Lessons related to participating institutions/beneficiaries

SHN is unique in the sense that it lends itself to an interministerial, integrated and multi-organisational involvement. In fact the most successful SHN programmes have involved a wide range of participating institutions. However, in spite of a long history in Zambia of attempts to promote integrated programmes coordinated activities among diverse organisations they have not been successful. A major complaint during our visits to stakeholders, organizations is the current lack of coordination. Moreover, this extends to district level. In Chadiza for example, the DEO complained of the fact that organizations called school meetings and workshops without involving the DEOs office. In addition, the DEO noted that

there were often conflicting messages from donors, NGOs and Lusaka headquarters (MOE) regarding what was expected from the district and what district officials were supposed to do.

The lack of coordination often leads to fragmentation and duplication of activities. For example, DWASHE selects schools for activities that are different than those selected by the SHN program. If we want an integrated program with sustained involvement of water/sanitation, health education, training and school-based interventions then they need to be coordinated from central level to provincial and district and ultimately to teachers who will have responsibility for many of the actions. Schools need to be involved in planning at the community level and links to be developed between health workers and teachers. Above all lines of communications and roles and responsibilities need to be very clear from the Central to the district. This will be critical in the SHN programme as activities will be piloted in Eastern Province with directives coming from the central level. The programme should be able to learn valuable lessons regarding coordination and communication from the ZIPH programme that maintains an office in Chipata.

Coordination at the community level is also important given the diverse issues such as nutrition, food production, water/sanitation, vulnerable children, orphans, health problems, HIV/AIDS, etc. The school as a focal point as a source of information, a model and organizer needs to be strengthened. They need to be armed with skills, materials and motivation to link these diverse issues. In spite of the serious overall constraints that exist (general poverty and malnutrition) much can be done particularly by tapping resources from agriculture and organisations already working in the area.

9.3 Lessons related to technical results

Generally, there have been no objections related to the technical approaches to the SHN planned pilot activities in Eastern Province. The reservations expressed related to whether teachers can be trained to conduct simple physical screening of pupils, conduct height/weight measurements and administer drugs. Included within these reservations were sentiments related to overburdening teachers with a lot of new responsibilities when they are often short-staffed and underpaid. Other issues include: How will communities accept the fact that teachers will provide school-based interventions? and Will pupils and parents accept the interventions (drugs provided)? All are legitimate causes of concern and points to the importance of training and awareness building. Communities and parents need to be sensitised to SHN issues and accept the teachers in their new role and clearly understand the reasons for using them to administer drugs and that they are not taking over the role of health workers. Most of these issues can be adequately addressed through the activities proposed in the pilot including training of teachers, adequate technical supervision, community sensitization and appropriate preparatory actions taken prior to drug administration.

Discussions with TDRC, the bilharzia research/study group, UTH, and teachers during our field visits indicated that teachers and pupils should actively participate. There should be few problems provided adequate information is provided to districts and schools and communities. Because the programme provides for sufficient sensitization, awareness building period this should alleviate problems. However, it is inevitable that some rumors will circulate in communities leading to problems during the baseline survey period. These need to be anticipated and strategies developed for dealing with them. (i.e. The survey teams need to know how to respond to questions, and problems in the field to defuse issues as they arise).

An issue brought out during the situation analysis review was the difficulty in obtaining accurate birth dates for school children in order to calculate Ht/Age and Wt./age. This will present problems for the pilot baseline assessments and for teachers who will be asked to provide height and weight measurements.

9.4 Lessons related to the strategic approach/methodology (activity planning and implementation)

A lesson in terms of the SHN planning is the need to have a clear policy in place from which other key documents derive such as guideline, concept paper, strategy, LoUs, etc. Although the process from cabinet office submission to approval by Parliament can take a long time this does not need to delay preparation and finalisation of other key documents. Not having a policy at least at the cabinet office stage will delay and confuse management decisions so that the program cannot move forward.

The strategic approach and methodology outlined in the concept paper has been circulated for comments to SHN steering committee members, NGOs, and other organisations. The comments received have concerned organizational, budget and administrative details. There have been no challenges to the general approach and strategy. While many appreciated the participatory approach used to develop the concept and strategy of the SHN programme it will be important to continue active dialogue within the ministry, among other BESSIP components, partner Ministries and other stakeholders. The Public relations officer and other advocacy efforts for SHN will be very important to maintain this dialogue.

Eastern Province Pilot activities detailed implementation Plan

A preliminary draft of an implementation plan for pilot activities was developed by the consultant and Dr. Lesley Drake. The plan was expanded and put in matrix form by the consultant with the SHN team. The detailed plan includes Policy/Planning, training, Cognitive Assessment activities, School-based interventions, IEC and Community-based activities. The first draft was developed using a time line that assumed an early January project start date. If this is delayed until end January or later then the time line will need to be adjusted. The plan has been circulated to a few people within MOE (Appendix G).

10.0 Challenges and Constraints for SHN

10.1 Central

- Personnel shortages, ability to work in Ministry constrained by lack of transport, direct telephone line, fax, and e-mail connection.
- Acceptance and support of SHN, needs for advocacy and demonstration of real activities
- IEC person needs to be officially selected and working as part of the SHN team

10.2 District

- Personnel shortages, need for awareness building, role of district resource centers need to be clarified
- Representation of the Ministry of Community Development is only through other organizations
- Ability of District resource centres needs to be assessed as districts vary in capacity, availability of personnel and working equipment.

10.3 School/Community level

- Some problems in community participation in border areas, resettlement and migrant farm areas
- General poverty, lack of financial support, inability to pay school fees, purchase school uniforms and basic requisites.
- Birth dates not known by pupils or parents- not available from records for rural area schools, urban areas require under-five cards to register.
- Water and sanitation levels poor and results in many water borne diseases also constrains production unit.

11.0 Next Steps

11.1 Policy/Planning

- Significant progress has been made toward completion and finalisation of key SHN documents. However a number of issues remain which need to be followed. A meeting of MIT should be called to present the revised concept paper, strategy paper, and implementation plan for pilot activities.
- Completion of activities begun during the recent SHN Policy workshop held at Pre-Cem Nov. 8-10. Development of guidelines begun during the workshop working group.(Appendix I)
- As suggested by the USAID SO2 team a meeting of MIT should be called to present all the documents including (concept paper, guidelines, LoU, strategy, implementation plan for pilot activities).
- Organisation of a Symposia to present results of the Situation Analysis and SHN (activities, strategy, pilot) (40-50 invitees)

11.2 Stakeholders

- Need to continue active cultivation of key stakeholder identified and identify new partners. At the Provincial and district levels the Ministry of Community Development needs to actively involved and aware of planned pilot activities, organisations already in EP like Plan International, Africare, World Vision, etc need a coordinating mechanism to share ideas and experiences to avoid duplication of effort.
- Consider the use of a newsletter as a mechanism to share ideas among stakeholders- in collaboration with public relations officer, IEC persons and other BESSIP components.

11.3 Drugs/other technical issues

- Continue dialogue with CBoH, Medical Stores, active preparation for placing drug orders and involvement of MOE-MEDSU.

11.4 EMIS/Health Card

- Situation analysis of EP-Pilot data information situation in terms of data requirements, flow of information, analysis capacity, etc. as proposed by PCD.
- Continue circulation of School health card for comments, revision.

11.5 Pilot activities

- Determine organisational structure and write SOWs for technical personnel.
- Validation studies in Lusaka area schools, planning for CAI through Paula and
- UNZA, SI (Yale) and UNZA, NFNC for height and weight standards validation, design of template for height pole, using local carpenters.
- Office set up and key personnel on board. Organisation of team i.e. collaborators in baseline data collection. Contractual arrangements with UNZA, Exams Council, TDRC, Popular theater groups.
- Team composition with roles and responsibilities defined, logistic planning for investigations in 40 schools selected for 1st year pilot activities.
- Organisation and planning for community sensitisation activities underway with popular theater groups identified and method of work clarified and agreed to.
- Meetings with key Provincial and district officials including teachers from 40 identified schools, other important relevant officials regarding planned activities.
- Identification of teachers to be trained, selection of modules to be used and organization of the training (venue, dates, phased groups of teachers as available during breaks).
- Planning for the four teams to begin baseline survey data collection. Contractual arrangements with TDRC and UNZA regarding costs etc need to be finalized and the team composition decided. Logistics and team training to begin in January.
- Contact with Districts and Provincial officials regarding planned pilot activities and baseline. All teachers in the selected schools need to be informed

12.0 Summary of Accomplishments/Activities

- Visits to a wide range of stakeholders including NGOs, partner Ministries and government departments, and organisations to increase awareness of SHN activities, identify areas of shared interests and ways to collaborate. Identification of collaborators for pilot activities (TDRC, UNZA, Assessment Centre, School of Medicine, NFNC) that are critical to baseline data collection.
- Finalisation of the Letter of Understanding between the MOE and CboH/MOH
- Identification of drug procurement procedures and issues
- Draft of School Health Card and circulation for comments
- Discussion of SHN indicators and EMIS issues with consultants, MOE planning, etc.
- Preparation of a HIV/AIDS SHN strategy statement and meetings with HIV/AIDS BESSIP component team.
- Validation and visits to control and intervention schools in Eastern Province (81 schools in Chipata, Chadiza and Chama districts)
- Revision of documents including concept paper and strategy paper
- Wrote proposal for submission to UNZA Human Subjects Ethics Committee
- Preparation of detailed Implementation Plan for pilot activities in Eastern Province with SHN team for presentation to MIT
- General assistance to SHN focal point in terms of preparation of annual reviews, revision of documents, memos, editing of letters, preparatory activities for meetings and reviews etc.
- Involvement in selection and other work related to IEC specialist recruitment.
- Review of Eastern Province Situation analysis, liaison with MEDOF, follow up of issues for presentation of document, extensive editing and comments, etc.
- Represented SHN at meetings such as the Luapula Situation Analysis presentation, JICA, Public relations, and other visitor to office
- Follow up of technical issues with Successful Intelligence (Yale University) and PCD (Oxford) regarding pilot area activities.

- Organised meetings at UNZA for Department of Pediatrics, research, Department of Microbiology to establish collaboration and preparatory validation studies in Lusaka and for planned pilot activities (sampling issues, etc.) Meetings with Exams Council and UNZA (related to CAI) activities.
- Meetings with other BESSIP components to develop shared strategies and identify areas of collaboration e.g. HIV/AIDS, gender, Child to Child, etc.
- Assisted in evaluation of research proposal submitted to MOE/SHN from School of Medicine.
- Participant in SHN policy workshop (Nov. 8-10) to revise draft policy document for presentation to Cabinet Office.
- Liaison and contact with USAID and with Creative Associates International

List of Contacts

MOE

Mrs. B. Chilangwa, Deputy Permanent Secretary
 Mr. S. Kasanda, Permanent Secretary
 Mr. C. Zulu, Chief Inspector of Schools
 Mr. A. Chengo, BESSIP manager
 Mr. E. Silanda, Director of Planning
 Mr. S. Hakilima, Director of Procurement and Supplies Unit
 Mrs. Irene Malambo, HIV/AIDS, component
 Mr. A. Sikawze, HIV/AIDS focal point, deputy inspector of schools
 Mr. D. Bowas, Principal Inspector of Schools
 Mr. I. Wamulwange, Principal Inspector of Schools (TTCs)
 Mrs. B. Mwangwagwa, Data analyst, Planning Unit
 Mrs. M. Chibale, Senior Inspector of Schools, Director of Child to Child Programme
 Mr. M. Songiso, Principal Inspector of Schools
 Ms. M. Mwamba, Assistant Equity and Gender Focal Person

CDC

Mr. G. Sililo, Director
 Mr. J. Christian, Dannida consultant

Examinations Council of Zambia

Mr. P.E. Machona, Deputy Director
 Mr. J. Kanika, Senior researcher
 Mrs. B. Shakubaza, Information technology department
 Mr. T. Nakazwe, research officer
 Mr. Sakala, Head of research and testing

Academy of Educational Development (AED)

Dr. Kurt Moses, Director and Vice President

University of Zambia (School of Medicine)-University Teaching Hospital

Prof. Chintu, Dean of the School of Medicine
 Dr. G.J. Bhat, Associate Professor, Department of Paediatrics and Child Health
 Dr. Kankasa, research, Department of Pediatrics, UTH

University of Zambia

Dr. Lwangala, School of Education
 Dr. Kalabula, Dean of the School of Education, Acting
 Dr. Irene Sinyangwe, lecturer and head of gender HSS
 Ms. Paul Kapungulya, SDF, EPSSE
 Dr. Likezo Mubila, Senior Lecturer in Parasitology

Mr. Imed Mumba, Lecturer in Home Economics, School of Education
 Ms. Beatrice Matfwali, Assessment Centre
 Mr. Kalima Kalims, Assessment Centre
 Ms. Gertrude K. Mwape, lecturer
 Mr. Ignatio Bwalya, lecturer
 Mr. Kelly Mulenga, Lecturer and Coordinator of Assessment Centre
 Mr. M. Chilala, Lecturer in Home economics. Institute of Special Education
 Mr. Oswell Chakulimba, Lecturer
 Mrs. Anitha Menon, Lecturer, Psychology Department.
 Ms. Nambula N. Changala, lecturer home economics, Institute of Special Education

Smith Kline and Beecham (London)

Mr. Mike Murray, Public Relations, Program development

UNZA (Department of Microbiology)

Dr. J. Mwansa, Head of Microbiology
 Dr. Lekizo Mubila, Lecturer, Parasitology
 Ms. Mbiko Faith Nchito, Parasitology
 Mr. Sandie Sianongo, sectional head, parasitology and microbiology

JICA

Mr. Satoshi Nakamura, Technical Advisor in Education
 Ms. Naomi Toyoshi, Project Formulation Advisor
 Dr. Mami Hirota Shields, Public Health Expert

Department for International Development

Mr. Tony Paisley, Technical Assistant, Human Resources Development and Management

EU (ZECAB)

Mr. A.W. Sail, Education Planning Adviser, MOE

USAID

Dr. Kent Noel, Education Advisor, USAID/Zambia
 Dr. Peggy Chibuye, Senior Public Health Specialist, USAID/Zambia
 Ms. Winnie Chilala, Education Specialist, USAID/Zambia
 Mr. Fred Mugandi, USAID, Information Technology Specialist, USAID/Zambia

KIT (Royal Tropical Institute) Amsterdam

Dr. Joost Hoppenbrouwer, AIDS Coordinator Bureau

TDRC (Tropical Disease Research Centre)

Dr. Emmanuel Kafwembe, Acting Director, head of Laboratories
Mr. David Mwandu, Senior researcher

ZamSIF

Mr. Edward E. Mwale, Operations Coordinator
Mr. Wedex Ilunga, Technical Services Manager

CSO

Mrs. Tembo, statistician

NFNC (National Food and Nutrition Commission)

Mrs. P. Likwasi, Director
Mrs. Enstina Mulenga-Besa, Acting Head, Nutrition Education and
Communications
Ms. J. Mubanga,

Ministry of Community Development and Social Services

Mrs. Masisini, Deputy Director of Social Welfare
Mrs. C. Harland, PWAS, Project officer, Public Welfare Assistance
Management Unit
Mr. Enock Banda, Senior Planner

Ministry of Local Government

Mr. Cledwin Mulambo, Senior Engineer, Water and Sanitation, WASHE

ZIHP (Zambia Integrated Health Programme)

Dr. Nosa Oroboton, Chief of Party
Mrs. M. Kaoma, Training
Mr. Oliver Hazemba, logistics, drug procurement
Mrs. J. Nyambe, Coordinator, Child Health, Zambia Integrated Health
Programme (ZIPH).

WFP

Mrs. R. Mulenga, Programme Officer
Mrs. A. Rudakubana, Programme Officer
Mr. M. Neilson, project officer

CBoH

Mr. V. Musowe, Director of Planning
 Mr. C. Mulele, Health Promotions specialist
 Mr. N. Chewenya, Planning officer
 Mr. H. Mwale, Human resources specialist
 Mrs. R. Indala, Drug logistics, pharmacy technician
 Mr. R.M. Kampamba, principal pharmacist
 Mrs. J. Nyirenda, Child Health and Nutrition
 Mr. Machona, Health Education and Promotion

Lusaka District Health Management Board

Mr. D. Mpaka, (Kanyama Clinic) consultant to Lusaka Board

DIFID

Mrs. Mpongwe Ndebele-Shawa, Program assistant, Health

World Vision

Mrs. Zulu, Health Project Officer

Society for Family Health

Family Health Trust

Mr. Mwape Chalowandya, Programme officer

UNICEF

Mr. Peter De Vries, Project Officer, Education

Provincial Education Officer, Eastern Province, Mr. Nhkata
 Ndola, Mr. Luo

District Education Officers, Chipata, Chadiza, and Chama

(More than 110 teachers and others during Eastern Province field trip)

LIST OF APPENDICES

- A. Scope of Work
- B. Matrix of Stakeholders for the SHN Program-MOE
- C. Letter of Understanding Between the MOE and the MOH on SHN
- D. Revised Strategy Document
- E. Proposal for School-based SHN Interventions in Eastern Province (Cognitive Assessment and Baseline Sample Collection)
- F. Field Trip Report to Eastern Province (with List of Intervention and Control Schools)
- G. Field Trip Report to Ndola's Tropical Disease Research Centre (TDRC-Ndola) and Schools
- H. Implementation Plan Eastern Province Pilot Activities
- I. School Health Card
- J. Draft of National SHN Policy Document
- K. School Health and Nutrition Program: Eastern Province Pilot Program- Selected Schools
- L. Zambia SHN Program: Cognitive Assessment Instrument (CAI) Development

**Scope of Work (SOW) for
Technical Assistance to the Zambian School Health and Nutrition Program**

Background:

As the Ministry of Education's (MOE) plan for educational reform, the Basic Education Sub-Sector Investment Program (BESSIP) is organized to achieve the goals of improving access, quality and relevance of education in eight key, mutually reinforcing areas of intervention: program management, infrastructure, teacher development, educational materials, equity and gender, curriculum development, capacity building and school health and nutrition (SHN).

Since inception, the MOE SHN program has developed a strategic plan and raised SHN to a high level of collaborative interest, with support and motivation among key stakeholders. Within a consortium of supportive donors, USAID/Zambia has taken the lead in responding to the need for technical assistance and seed capital required to support the SHN agenda. As part of this initiative, the Basic Education and Policy Support (BEPS) activity was identified as a potentially ideal strategic pathway for rapid mobilization and deployment of USAID/Zambia technical assistance to the SHN program.

A recent visit to Zambia by the BEPS design team resulted in the submission of a concept paper, "*A Program to Improve Learning Through School-based Health and Nutrition Interventions*", to USAID/Zambia. This proposal gained approval by the Mission and has now been submitted for further approval and review by the Ministry of Education.

To ensure that the proposed implementation timeline is achieved, there is a recognized need for the immediate deployment of technical assistance to the MOE SHN focal point, Mrs. Catherine Phiri. It is also recognized that the development of the cognitive assessment instrument be initiated with similar urgency. Here we propose to utilize the BEPS mechanism to rapidly mobilize short-term technical assistance to support the SHN program.

Objective:

The Mission has supported various preparatory activities, including a the provision of a team of consultants to develop a concept document that describes the kinds of activities, outcomes, and costs of a USAID-supported program for the Ministry of Education's school health and nutrition component. While the Ministry of Education considers and refines that with USAID/Zambia and its other partners, the Mission wishes to provide short-term technical assistance to work with the SHN Component focal point in planning and implementing activities of the school health and nutrition component during the next three months. Planning activities include detailing plans to pilot test SHN interventions in Eastern Province, assisting with headquarters policy and planning, assisting in organizing a symposium to present SHN situation analysis findings, and

working with the SHN focal point and a Ministry team in developing the HIV/AIDS strategy for the SHN component.

The objectives of the consultancy are outlined below. Greater detail is provided under the Statement of Work.

- A. To provide short-term technical assistance to the SHN Focal Point within the Ministry of Education.
- B. To initiate the first stage of development of the cognitive assessment instrument.
- C. To build the essentials of partnership among and between MOE, USAID/Zambia and BEPS, required for future BESSIP support and collaboration.

Statement of Work

- 1) The purpose of this task order is to obtain technical services from the Basic Education Policy Support (BEPS) project (936-5862).

The SHN conceptual framework contains five reinforcing developmental stages – training, community-based sensitization, community interventions and advocacy, school-based interventions, and outreach and impact. These are not necessarily sequential in their development and implementation and are often overlapping in occurrence. The activities described in this proposal are primarily scientific validation and developmental processes principally concerned with the implementation design of the school-based intervention and outreach and impact stages. However, it is important to note that these activities will be undertaken within the wider context of the SHN program and will focus upon community participation and partnership building. It is anticipated that these initial activities will provide the basis from which to launch the participatory approach to the Zambian SHN program.

Objective A: To provide short-term technical assistance to the SHN Focal Point within the Ministry of Education.

A senior consultant specializing in SHN program planning and implementation design will work with the SHN focal point within the MOE for a period of 3 months, beginning September 5, 2000.

The consultant will work closely with the MOE, USAID/Zambia, BEPS manager and other key stakeholders and assist with general SHN practical planning and implementation tasks for the Eastern Province pilot activity. These tasks are likely to include, but are not limited to the: (i) establishment of school selection criteria; (ii) validation of implementation tools, (iii) understanding and identification of procurement, distribution and storage lines required for school-based interventions, (v) a needs assessment for the SHN-MIS, (vi) finalization of the content of school health cards for pupils, (vii) the design and reporting of meetings to gain information from key stakeholders and/or provide information to stakeholders and/or build partnerships for school health and nutrition, and (viii) developing a plan with the

Ministry's HIV/AIDS and SHN leaders and teams to address HIV/AIDS as part of a school health and nutrition component plan.

Objective B: To initiate the first stage of development of the cognitive assessment instrument.

The first stage of the development of the cognitive assessment instrument will include: (i) the design specifications of the assessment; (ii) an item development plan. (iii) the identification of Zambian consultants to be involved in each of the development phases; (iv) the establishment of their job descriptions and; (v) and the identification of the number and location of pupils and teachers to be involved in each of the instrument development stages.

Objective C: To build the essentials of partnership among and between MOE, USAID/Zambia and BEPS, required for future BESSIP support and collaboration.

It is imperative that a strong cohesive alliance be formed between the BEPS implementation team and MOE, in addition to USAID/Zambia. The proposed BEPS Project Manager for the *Program to Improve Learning Through School-based Health and Nutrition Interventions*, along with the lead technical experts from PCD and SI will be actively involved in this short-term technical assistance activity. This involvement may include consultative visits to MOE and other key stakeholders, and liaison activities in preparation for the additional work required in community involvement in both Eastern and Southern Province.

Appendix B

Matrix of Stakeholders for the SHN Program-MOE

Name	Current area of involvement in SHN	Potential role and interest in SHN activities	Contact person/address
WFP (World Food Program)	Provides food, feeding programs for identified malnourished, nutrition monitoring system	Can be involved in targeting poor, provide emergency feeding, will cooperate with SHN in nutrition education, community-based nutrition, local food production in collaboration with FAO	Angeline Rudakubana Mark Neilson Robina Tel:253845 Box 31966
FAO	Direct involvement in BESSIP planning/design, school curricula, teacher training, conducted situation analysis in Luapula-local food production, nutrition education, technical assistance, production of school materials	Will continue to be involved in provision of TA, collaboration with Min of Agriculture, local food production, food security issues, nutrition education and surveys	Mr. Charles Chilaeaya Tel:252277
WASHE (N and D)	Programs involved in community activities to promote improved water supply and sanitation, education, community-based involvement, boreholes	Activities and program will be transferred to the Ministry of Local Government who will develop a proposal as a basis for solicitation of donor support	Mr. Mbosha Mr. Cledwin Mulambo Ministry of Local Government Tel:251128 Box 50027
UNICEF	Policy development-assists in planning and implementation of nutrition	Projected involvement-\$50,000 over 2-5 yr. School sanitation	Peter Mc Dermott Seko Phiri Peter De Vries Tel:253621

	activities, MCH, immunization, water/sanitation, HIV/AIDS, health education, gender issues through PAGE, Child to Child program, 13 districts for water/sanitation support	and health education, community schools support, continuing water/sanitation, PAGE and WASE support.	
CARE	Involved in community-based projects, collaboration in SPH planning and design of program	Continued work in communities, sexual-reproductive health, nutrition	Mark Vandervort Anderson Chibwa Elizabeth Mbewe Mr. Daphetone Siame Tel:265901
Christian Childrens Fund			Mr. Godfrey Mwelwa Tel: 290354 Box 32882
Dannida	Curricula materials development, technical support, CDC, teacher training, planning	Continued support for CDC, materials development, teacher training	Mr. Christensen (CDC) Mr. Peter Rasmussen (health)
FINNIDA	Planning, material and logistic support, teacher education, infrastructure	Continued support for infrastructure, teacher education, materials	Mr. Fred Brooker M OE/Hdqtrs.
Society for Family Health	Activities in Eastern Province, malaria control, Bednets-8 schools in Chipata, 4 teachers trained, started anti-malaria clubs 15/students per school	Will expand bednets, and integrated malaria initiative into Chama, Powernet, using poems and drama	In EP-Kelvin Ngoma Progress Mudla Tel:286332 #39 Central St.. Jesmondine
WHO	Provides technical assistance and materials to CBoH support through NFNC	Support for materials and NFNC, C BoH, technical assistance as needed	Dr. E.T. Maganu Resident representative Tel:223251
JICA	Long-term technical support, UTH,	Continued long-term technical	Naomi Toyoshi-project coordinator

	MOE, School health PHC/Lusaka project, water sanitation	assistance, material support, possible work to support SHN-water and sanitation or other areas	Nakamura Satoshi- education advisor Tel:254536
ADRA	Involved in Chipata and Chadiza districts, malaria control, nutrition, control of diarrhea, immunization, HIV/AIDs, neighborhood health committees, support for RHCs, reporting systems for TBAs and CHWs, health education through Dorcus mothers and health education clubs in schools, child to child reports	Project to be expanded to north Chipata, health education clubs in schools to expand-	Miriam Chipumbu, project director, Ron Ringrose, country director
FAWEZA	Promotion of girls education, gender equity	Continued collaboration with SHN component	Delphine Chimuka Tel:229693
USAID	Policy planning support SHN support for BESSIP under BEPs will include pilot activities in EP, IEC, long-term and short-term technical assistance	Supprt of SHN through BEPS, including all components of pilot activities in EP. and girls education in Southern Province	Mr. Kent Noel Winnie Chilala Peggy Chibuye Tel:254893
GTZ	Support for water and sanitation in EP	Will continue water and sanitation	Great East Road Tel:290340
DFID	Support for Department of Community	Willingness to collaborate and serve on committees	Anthony Daly Zambia Health and Population Sector

	Medicine, Sexual and reproductive health, HIV/AIDS, support for human resources and for CBoH	for SHN issues, will continue involvement in School of Medicine and CBoH	Aid Coordinator
ZIHP	Zambia Integrated Health Programme working in EP through neighborhood health committees, training, health education, HMIS, nutrition and disease control activities	Office in Chipata, active in working in villages and RHCs throughout Eastern, malaria control, child survival, HMIS, and other disease control activities. Will collaborate actively with BEPS and SHN/MOE program on various issues.	Dr. Nosa Orabaton Mary Kaoma Josephine Nyambe Oliver Hazembe
World Vision	Working in Southern and Eastern Provinces, in agriculture, nutrition projects, community-based also HIV/AIDS, some infrastructure for schools in EP	Will continue nutrition project but will focus on integrated approach	Dr. Nimo, regional health advisor Ms Zulu, health officer Lusaka
Plan International	Working in Eastern Province and supporting community schools in Chadiza	Office in Eastern Province, supporting schools, some training, infrastructure.	Emmanuel Chama M.B. Phiri Patrick Chabwe Tel:295410
ZAMSIF	Provides financing of sub-projects in communities, targeting of vulnerable groups, IEC component, nutrition	This is a new programme that will be a substantial resource and supporter of SHN activities, particularly in areas of community-based projects, nutrition, IEC, training, SHN EMIS, surveys, HIV/AIDS, gender issues, local	Mr. Edward Mwale, Ops Coordinator Mr. Wedex Ilunga, Technical services manager Tel:252519 Box 50268 At CSO

		production gardens, water and sanitation, provide solar power to schools and wind up radios, community-based information systems, promotion of radio listening clubs.	
IRELAND AID	Working in Northern Province, providing support for schools, training	Support for	Ms. Edna Kalaluka, Programme executive Tel:291124 Development Cooperation office at embassy
YWCA	Lusaka area projects, sexual and reproductive health, HIV/AIDS, material design and production, working in several provinces.	Sexual and reproductive health issues in several provinces.	Tel:252726 Box 50115
WORLD BANK	BESSIP support, global support for school health programmes	Continued support BESSIP, global SHN programmes, technical advice and material	Mr. Clement Siamotowa Social Sector Officer
Family Health Trust	Supports HIV/AIDS for in and out of school youth through Anti AIDS clubs, children in distress, orphan support	Will continue support in HIV/AIDS, materials support, IEC, counseling Orphans, and distressed youth.	Mr. Mwape Chalowandya Tel: 223589 Pvt. E243 Makishi Rd. Plot 5232
AFRICARE	Water and sanitation projects.	Office in Eastern Province, malaria control, water and sanitation, community-based	Tel:293634 Or 293534 Box 33921 Mwambula Road Lusaka

UNESCO	HIV/AIDS, IEC materials, curriculum development support	Continued support for IEC materials production, HIV/AIDS	Cecilia Barbieri, Basic education expert
Netherlands	HIV/AIDS, teacher education, community schools, materials support, RHC, CHW drug kits.	HIV/AIDS, drug kits support, community schools.	Dr. Rik Peeperkorn Tel:253819
PEACE CORPS	Community Action for Health Project (CAHP) working in 6 provinces and 22 districts, work with neighborhood health committees, RHCs, develop action plans, help in wide variety of issues, nutrition, PHC, TBA training, income generation, water/sanitation and health education One volunteer placed with ZIHP.	New volunteers for HIV/AIDS, volunteers placed in villages and will expand to more districts, collaboration with WFP, HEPs distribution	Henrietta Koulouda Health Coordinator Lusaka

Government collaborators and other organizations:

Ministry of Health

Ministry of Community Development and Social Services

NFNC-National Food and Nutrition Commission

CSO-Central Statistical Office

UNZA-School of Education, Psychology and Assessment center

UNZA-School of Medicine

Exams Council,

CDC-Curricula Development Centre

TDRC-Tropical Disease Research Centre-Ndola

Ministry of Local Government

Zamcom, Zambia communication

Organizations to be involved in SHN activities at district and community level

Girl Guides

Boy Scouts

Anti Aids clubs

Red Cross

Local Women's groups

Village Development Committees

District Development Committees

PTA

TBA, CHWs

Traditional healers

Agricultural extension workers

Provincial, District and Community Social Welfare Committees

Appendix C

LETTER OF UNDERSTANDING BETWEEN THE MINISTRY OF EDUCATION AND THE MINISTRY OF HEALTH ON SCHOOL HEALTH AND NUTRITION

1.1.1 PREAMBLE: - The Ministry of Education and Health are committed to reviving School Health and Nutrition services for the benefit of school going children aged between 0 – 18 years old.

Whereas: The Government of Zambia (GRZ) is committed to improving the social status of its nationals through economic and public sector reforms. The Ministry of Education (MOE) is implementing Basic Education Sub-Sector Investment Programme (BESSIP) as a national education programme. The main objectives of BESSIP are increasing enrolment and improving learning achievements. Under BESSIP there are seven components contributing to the achievement of these two objectives. These are:

- Infrastructure
- Teacher Development, Deployment and Compensation
- Education Materials
- Equity and Gender
- School Health and Nutrition
- Curriculum Development
- Capacity Building and Decentralization

In its 1996 Education Policy Document, “Educating Our Future: National Policy on Education”, the goal for education provision is to provide quality education to all Zambian children;

Whereas: At independence in 1964, the Ministry of Health (MOH) provided comprehensive School Health and Nutrition (SHN) services including physical examination, referral and treatment of ailments when necessary, inspection of immunization scars (e.g. Bacillus Calmette Guanine-BCG) and micronutrient supplementation through food supplements, mainly milk and buns. In 1978 the MoH deployed public health nurses in many districts to strengthen maternal and child health as well as school health services.

Whereas: In 1985, the MoE adopted the Child-to-Child Programme as a tool that gives health information directly to school going children and through them, indirectly to the community. The MoE also re-introduced production units in schools to enable children to learn about food production as well as benefit from the products of their work. The impact of these programmes has been mixed. Some schools seemed to be doing well while rural schools benefited little from the two programmes. Teachers previously provided support of good sanitation and hygienic

practices of children through regular checks, however this now infrequently done.

Whereas: In the last two decades, SHN services have declined in terms of access, availability and quality. Rarely are school children physically examined, referred and treated. Food supplementation ceased in the early 1970s due partly to an insufficient understanding and appreciation of the role that health and nutrition contributes to learning achievement. This decline has been exacerbated by a misconception that SHN is the prerogative of the MoH alone rather than being regarded as a multi-sectoral development issue;

Generally, the health and nutrition status of school children has continued to deteriorate;

2.0 PROBLEM STATEMENT:

Whereas: The problems that school children face as they go to school are many and varied. The integrated school curriculum together with the teaching and learning materials do not adequately address the quality and relevance of health and nutrition issues for behavior formation and change of individuals. Pupils are often placed in a poor physical environment as infrastructure in a significant number of schools has deteriorated through heavy use and lack of maintenance. Furniture is often in a bad state of repair or is absent. In addition, lack of a school health and nutrition policy, harmful traditional practices, and poor sources of water and sanitation compound this problem;

Whereas: As a result of food insecurity and high levels of poverty in the country malnutrition has increased among school children as manifested by Protein Energy Malnutrition (PEM) and micronutrient deficiencies. The most common micronutrient deficiencies are Vitamin A, Iron and Iodine. According to the Demographic Health Survey (DHS) (1997) malnutrition contributes to over 50% of all infant and child deaths in Zambia. A recent study (Luo, et. al. 1999) found that out of 1427 children screened, 14.5% were severely anemic and 22.2% had malarial parasitaemia. It was also stated that iodine deficiency ranges between 50% and 80% of the general population and Vitamin A deficiency is endemic in most children;

Whereas: Malnutrition levels are worsened in school children by the increase in parasitic infestations due to unsafe drinking water and poor sanitation. Parasitic infections in children can result in diarrhea, anorexia and general malaise. When children are heavily burdened with worms they eat even less when food is available and their absorption and retention of certain nutrients is impaired. Consequently, this diminishes children's learning

capacity and their ability to pay attention and to concentrate. Growth and cognitive development also diminish;

Whereas: Environmentally related diseases such as malaria, cholera and dysentery are also widespread in school communities. These pose a challenge for environmental health and hygiene in relation to clean, safe drinking water and good sanitation practices;

Whereas: The current HIV/AIDS situation adds to the complexity of health issues in education. Although the rate of HIV/AIDS among school children is low compared to those of adults, girl children suffer disproportionately as victims. Increasingly, induced abortions, alcohol and drug abuse have become common;

Whereas: The impact of HIV/AIDS is devastating to children and touches all aspects of their life. Specifically children will experience psychosocial distress, increased malnutrition, loss of health care including immunization, fewer opportunities for schooling and education, exposure to HIV infection, homelessness, starvation and crime. A further dimension of the HIV/AIDS problem is the fact that teachers fall within the age groups that are most vulnerable to infection;

Whereas: Children suffer from health, communicable and nutritional problems due to micro-nutritional deficiencies, unsafe water supply and poor sanitary conditions. This has been accentuated by the lack of a SHN policy, strategies and regulations not only to ensure good nutrition in school children but also to reinforce the need for good sanitary environments;

Whereas: A health and nutrition programme supported by policy and strategies is critical in improving not only the health and nutrition of school children but also to enhance academic achievement and acquisition of life skills.

The Parties now therefore agree as follows:

Clause One

OBJECTIVES:

Parties agree that the objectives of this LOU are to:

- I. Improve collaboration between the two ministries.
- II. Revamp SHN activities.
- III. Guide the implementation of the programme using the LOU.
- IV. Clarify the roles of the MoE and MoH/CBoH in the implementation of SHN strategies.

Clause Two

IMPLEMENTATION:

- **The parties agree that the Management Implementation Team (MIT) in the MoE shall work under the supervision of a programme coordinating committee. The committee shall work under the guidance of the Joint Steering Committee (JSC), which is composed of representatives from MoE, MoH and cooperating partners.**
The provision of integrated health and nutrition interventions shall be implemented jointly by MoE/School Health and Nutrition Component of BESSIP and MoH/CBoH.
- The administration of the interventions will commence in January 2001 in 80 (40 intervention and 40 control) pilot schools. Gradually the interventions will be expanded to other schools throughout the country.
- This LOU will be effective from the date of signing but subject to the continual search for improved partnerships, information flows and mutual trust.

Clause Three

Collaboration:

The Parties agree that:

- a) **The Ministry of Education:**
Shall strengthen its links with MoH by addressing health and nutrition problems to improve the education, health and nutrition outcomes of school children. Collaboration shall be linked through structures existing at each level as follows:
 - (i) **Central Level:**
MoE/SHN Focal Point will provide policy direction of the programme in liaison with CBoH/Health Promotions Specialist (Public Health and Research).
 - (ii) **Provincial Level:**
The SHN team at provincial level will be responsible for policy translation and implementation. The MoE SHN Provincial Focal Point shall be liaising with the CboB Provincial Director of Health.
 - (iii) **District Level:**
MoE/SHN Focal Point in liaison with the District Director of Health will be responsible for programme implementation.

(iv) School Level:

- The classroom teachers and SHN Focal Point at School level will be responsible for programme implementation in liaison with health workers from health centers in the catchment area.
- Class teachers shall always inspect personal hygiene of children before starting any lessons.
- Class teachers shall be administering deworming drugs, micronutrient supplements and the cognitive assessment instrument.
- Class teachers shall maintain health record cards.

b) **The Ministry of Health** shall strengthen links with the Ministry of Education to achieve School Health and Nutrition outcomes through the Central Board of Health and its structures throughout the national health system as follows:

A. (i) Central Level:

The School Health and Nutrition Programme shall be a core-shared responsibility between the Ministry of Education and Health. The Health Promotion Specialist under the guidance of the Director Public Health and Research in the Central Board of Health, will provide policy direction of the programme on behalf of the MoH/CBoH in liaison with relevant Specialists in the programme area such as pharmacy, Child Health and Adolescent health Specialists.

(ii) Provincial level:

The School Health Promotion Team at provincial level will work closely with the MoE Provincial SHN Focal Point to plan, implement and co-ordinate school health promotion and education programmes in the province. The Provincial Director of Health or delegated officer shall be liaising with the MoE Provincial SHN Focal Point on all SHN activities.

(iii) District Level:

The School Health Promotion Team at district level through the District Director of Health or a delegated officer will collaborate with the MoE district SHN Team to plan and implement district-wide school health services and Nutrition services.

B. (iv) Community Level:

Health Centre staff shall work together and be responsible for programme implementation in liaison with SHN focal points at school level. Local health staff will visit schools in the catchment area to conduct physical examination, supervise the de-worming and micro-nutrient administration days, provide basic treatment

and for referral of sick pupils, conduct immunisation and support school health education.

Ministry of Health and Central Board of Health will be involved in training and monitoring teachers on administration of drugs and other health related activities.

Clause Four

Drug administration:

The parties agree that:

- The drug to be used for Helminthes infections (Parasitic Worm Infections) shall be **Albendazole/Mebendazole and Praziquantel**. Albendazole shall be administered to all the children in the intervention pilot schools twice in a year. **Praziquantel** shall be administered only to the children who are infected with bilharzia worms.
- All the children in intervention schools shall be administered Vitamin A capsules twice in a year and Iron tablets as appropriate.
- An assessment and screening of all children will be conducted by classroom teachers before administration of drugs.
- SHN drugs will be handled as all other drugs (i.e. delivered to Medical Stores LTD for proper storage and performance of quality control procedures before distribution). The drugs will then be distributed to various District Stores from where they will be repackaged and issued to respective schools. The District health Officers will supervise the administration of the drugs to pupils.
- Payment of local clearing and management fees to be incurred at Medical Stores LTD will be covered by MoE.
- Guidelines on repackaging and handling of SHN drugs by the District Health Office will be developed by CBoH in collaboration with MoE.

Clause Five

Responsibilities of MoE and MoH:

Parties agree that the MoE shall:

- In collaboration with MoH supervise planning, implementation, monitoring and evaluation of all SHN activities and ensure that all activities support SHN programme goals and are approved by the Inter-sectoral Steering Committee.
- Provide funding of SHN activities as described in the SHN component action plan.
- Prepare programme implementation plans and annual work plans.

- Establish SHN/MIS at national, provincial, district and school levels.
- Coordinate, monitor and evaluate activities using agreed MoE and CBoH indicators.
- Disseminate guidelines for various interventions under SHN.
- MoE shall provide policy direction and coordination of SHN activities in BESSIP.

The MOH shall

- fund activities contributing to health outcomes such as immunizations.
- Provide Technical support on the implementation of core health and nutrition activities including procurement of drugs, physical examination (screening), immunization, referral and treatment of ailments.
- Ensure that the Public Health Act and other relevant health regulations are enforced.
- MoH shall provide policy direction and coordination of activities in CBoH, DHMT and Health centres.
- In collaboration with MoE participate in planning, implementation, monitoring and evaluation of all SHN activities.

Clause Six

VI. Reporting system and format:

Parties agree that the reporting system and format shall be as follows:

- Each class teacher shall maintain a health card for each individual child in his or her class. This will also include records of referral cases to health centres and counseling of any social, psychological or economic problems.
- Health workers from health centres shall keep records of all referrals and treatment.
- MoH at central level in collaboration with MoE shall procure, distribute and store all the drugs until such time they are needed at the schools.
- The DEOs shall keep all Health and Nutrition records in their districts for their own use and for use by other stakeholders.
- The DEOs shall submit regular reports to the MoE Management Implementation Team.
- Head teachers and class teachers shall monitor attendance, health and nutrition status and general educational performance.
- Other stakeholders from central, provincial and district levels from both MoE and MoH shall be involved in the monitoring of the programme.

- An independent team shall be constituted to evaluate the impact of the programme.

Clause Seven

VII. AMENDMENTS:

Parties agree that any amendments of this LOU shall be by mutual agreement at a round table. These shall immediately become effective upon signing the amended LOU.

SIGNED BY:

SIGNED BY:

Dr Sichalwe M. Kasanda
Permanent Secretary
MINISTRY OF EDUCATION

Dr Kashiwa M. Bulaya
Permanent Secretary
MINISTRY OF HEALTH

DATE: _____

DATE: _____

WITNESSED BY:

WITNESSED BY:

Mr Christopher E. Zulu
Chief Inspector of Schools
MINISTRY OF EDUCATION

Dr Gavin B. Silwamba
Director General
CENTRAL BOARD OF HEALTH

DATE: _____

DATE: _____

Republic of Zambia



MINISTRY OF EDUCATION

**School Health and Nutrition (SHN)
Strategic Plan**

**Improved Learning, Health and
Nutrition of School Children**

Revised September, 2000

Appendix D Revised Strategy Document

1.0 INTRODUCTION:

BESSIP which emanates from the 1996 national policy on education "Educating Our Future" is the cornerstone plan for educational reform. The Basic Education Sub-Sector Investment Programme (BESSIP) is organized to achieve the goal of improving access, quality and relevance of education in eight key, mutually reinforcing areas of interventions: Programme Management, Infrastructure, Teacher Development, Deployment and Compensation, Education Materials, Equity and Gender, Curriculum Development, Capacity Building, and School Health and Nutrition (SHN). Further, BESSIP is intended to optimize the use of resources and reinforce the decentralization of education system management to local delivery points.

Ensuring that children are healthy and able to learn is an essential component of an effective education system. This is especially relevant to efforts to achieve "Education For All" in the most deprived areas, as now more of the poorest and most disadvantaged children have access to school, many of whom are girls. It is these children, who are often the least healthy and most malnourished, who have the most to gain educationally from improved health.

Good health and nutrition are not only essential inputs but also important outcomes of basic education of good quality. On the one hand, children must be healthy and well nourished in order to fully participate in education and gain its maximum benefits. Thus, programmes which improve health and nutrition can enhance the learning and educational outcomes of school children. On the other hand, quality education, including education about health, can lead to better health and nutrition outcomes for children and especially through the education of girls, for the next generation of children as well.

The strategic approach being advocated here will incorporate the global initiative "FRESH", promoted by WHO, UNICEF, UNESCO and WORLD BANK. FRESH, which stands for Focusing Resources on Effective School Health also recognizes the synergistic effect of good health, good nutrition and appropriate education. The FRESH approach which was launched at the Education For All Conference in Dakar, Senegal 2000 focuses on four components:

1. School health policies
2. Safe drinking water and sanitation facilities
3. Skills based on health education
4. Health and nutrition services in schools

2.0 BACKGROUND:

The Government of Zambia (GRZ) is committed to improving the social status of its nationals through economic and public sector reforms. This includes strategies for improving the quality of life through effective and efficient health and education programmes. Both the education and health sectors are undergoing reform to achieve Government's development goals. School Health and Nutrition (SHN) services in their current form, are inadequate, failing to provide pupils with basic health requirements.

2.1 Past SHN Situation:

At Independence in 1964, the Ministry of Health (MoH) provided comprehensive SHN services including physical examination, referral and treatment of ailments when necessary, inspection of immunization scars (e.g., Bacillus Calmette Guerin) and micronutrient supplementation through food supplements, mainly milk and buns. The MoH also deployed public health nurses in many districts to strengthen the school health services in addition to maternal and child health.

2.2 Present SHN Situation:

In the last two decades, SHN services have declined in terms of access, availability and quality. Rarely are school children physically examined, referred and treated. Food supplementation ceased in the early 1970s due to insufficient understanding and appreciation of the role that health and nutrition contribute to learning achievement. This decline has been exacerbated by the misconception that SHN is the prerogative of the MoH alone, as opposed to a multisectoral development issue. Although some health-related activities still occur in some schools (e.g., anti-AIDS clubs), the majority of those initiatives have been promoted by NGOs.

In 1985, the Ministry of Education (MoE) adopted the Child-to-Child Programme as a tool that gives health information directly to school-going children and, through them, indirectly to the community. The MoE also re-introduced production units in schools to enable children to learn about food production as well as benefit from the products of their work. The impact of these two programs is mixed. Some schools seem to be doing well but the majority, particularly rural schools, have benefited little from the two programmes. Generally, the health and nutrition status of school-going children has continued to deteriorate.

2.3 BESSIP SHN Component:

In its 1996 policy document, "Educating Our Future: National Policy on Education," the Government committed to providing equitable access to quality education and life skills training. It recognizes that the health of pupils is an essential pre-requisite to effective pupil learning and is working closely with the MoH, the Central Board of Health (CBoH) and other agencies in promoting the personal health and well-being of school pupils.

Recognizing that good pupil, community and societal health is dependent on a healthy environment, the MoE has endorsed the role of the school in promoting the health and nutrition status of pupils and through them, the community. In early 1999, the MoE began implementing components of BESSIP, a programme to improve access, quality and efficiency of basic education for children of Zambia. School health and nutrition is one of seven key components for improving the access, quality and efficiency of basic education in Zambia. The MoE, in collaboration with its cooperating partners, has developed an SHN Results Framework, which supports the Zambian vision for education reform. Under BESSIP, key elements of the SHN strategy are to develop a SHN policy, pilot test health and nutrition interventions, train teachers to effectively deliver health and nutrition messages and skills, and to create health promoting school and community environments.

PROBLEM STATEMENT:

Poor health and malnutrition are important underlying factors for low school enrollment, absenteeism, poor classroom performance, and early school dropout and same grade repetition.

C. Major Health Problems of School-Age Children

Much of the disease burden derives from the poor environmental conditions in which children live, including exposure to biological, chemical and physical hazards in the environment and a lack of resources essential for human health. As is common across most of Sub-Saharan Africa, parasitic infections and disease are highly prevalent amongst the school-age population in Zambia.

School age children are heavily infected with *parasitic worms*. Infections are estimated to account for over 12% of the total disease burden in girls aged 5 to 14 years and over 11% of the burden in boys making this the single largest contributor to the disease burden of this group. These infections have been shown to cause iron deficiency anemia (particularly hookworm infection), reduce growth and may negatively affect cognition (Stoltzfus et al., 1997).

Malaria is estimated to account for between 10-20% of mortality and is an important cause of morbidity in school-age children in Sub-Saharan Africa. Malaria is also an important cause of absenteeism from school and accounts for between 13-50% of all school days missed because of preventable medical causes. There is also evidence that brain insult, as a consequence of cerebral malaria in early childhood, may have an effect on a child's cognitive and learning ability (Brooker, et al, 2000). In a recent study conducted, on the prevalence and aetiology of anemia in Zambia, it was found out that out of 1427 children screened, 14.5% were severely anemic and 22.2% had malaria parasitaemia (Luo et al Feb. 1999).

The World Health Organization (WHO) estimates that 3.3 million children die from intestinal infections such as cholera, typhoid or infectious hepatitis every year. Approximately 90% of the *diarrhea disease* burden is related to environmental factors of poor sanitation and lack of access to clean water and safe food.

Although *human immunodeficiency virus* (HIV) and *acquired immunodeficiency syndrome* (AIDS) and other *sexually transmitted diseases* (STDs) constitute a relatively modest portion of the burden of disease in school-age children, there is growing evidence that HIV/AIDS constitute a severe threat to the future health and well-being of sexually active school-age children. Although there are no studies in Zambia on the prevalence of HIV in children aged 13-18 years there is sufficient concern to focus HIV/AIDS education programmes at school-age children to reduce the very high risk of mortality associated with HIV-related diseases ((Kinsman et.al., 1999).

The exploding numbers of orphans due to AIDS poses further problems in the education system. Currently the number of orphans in Zambia is alarming. A 1997 publication of the Central Board of Health estimated Zambia will have over 600,000 orphans by the year 2000. Increases in HIV/AIDS, related illnesses and death will cause a decline in school attendance as declining household incomes put pressure on children to help meet the need for labour and income. A study by World Bank in Tanzania suggested that HIV/AIDS may reduce the number of primary school children by 22% as a result of increased infant and child mortality as lower attendance.

The impact of HIV/AIDS is devastating to children and touches all aspects of their life. Specifically children will experience psychosocial distress, increased malnutrition, loss of health care including immunization, fewer opportunities for schooling and education, exposure to HIV infection and homelessness, starvation and crime. A further dimension of the HIV/AIDS problems is the fact that teachers fall within the age groups that are most vulnerable to infection.

As a result of food insecurity and high levels of poverty in the country malnutrition had increased among school-aged children and is manifested as Protein Energy Malnutrition (PEM) and micro-nutrient deficiencies. According to the Demographic Health Survey (DHS)

As a result of food insecurity and high levels of poverty in the country malnutrition has increased among school-aged children and is manifested as Protein Energy Malnutrition (PEM) and micro-nutrient deficiencies. According to the Demographic Health Survey (DHS) (1997) malnutrition contributes over 50% of all infants and child deaths in Zambia. The probability of many of the nutritional and health problems afflicting under 5 children persisting through the school years is very high given these prevailing social and economic problems. School going children are greatly most affected by nutritional problems due to the high demand for nutrients required for growth and development. Additionally, these children are prone to many infections such as diarrhea, measles and respiratory infections through which important nutrients necessary for their growth and mental development may be lost. An examination of available data shows that

malnutrition rates are very high and that there has been little or no improvement in nutrition indicators since the early 1970s.

Malnutrition levels are also worsened in school children by the increase in parasitic infestations due to unsafe drinking water and poor sanitation. Other than malnutrition, parasitic infection in children can result in diarrhea, anorexia and general malaise. When children are heavily burdened with worms they eat less even when food is available and their absorption and retention of certain nutrients is impaired. Consequently, this diminishes children's learning capacity and their ability to attention and concentration. Growth and cognitive development also diminish. Environmentally related diseases such as malaria and cholera are also widespread in school communities. These pose a challenge for environmental health and hygiene in relation to clean, safe drinking water and good sanitation practices

Micro-nutrient deficiencies are endemic in most parts of Zambia. The most common are Vitamin A Deficiency (VAD), Iodine Deficiency Disorders (IDD) and Nutritional Anemia. Overall, for the three micro-nutrients i.e. Vitamin A, iodine and iron there is lack of information on the magnitude of the problem (i.e. deficiency) regarding school age children. However, it is well known that iron deficiency affects almost all children. It is also estimated that iodine deficiency ranges between 50% and 80% of the general population and Vitamin A deficiency is endemic in most children. Nutritional deficiencies impede children's capacity and motivation to learn and further contribute to delayed and low enrolments, same grade repetitions, dropouts and pushouts, high absenteeism rates and poor education performance.

The current HIV/AIDS situation adds to the complexity of health issues in education. Urbanization and the transition from traditional to modern culture have given rise to new patterns of sexual behaviour in adolescents leading to unprotected premarital sex, which often leads to early pregnancies. Increasingly, induced abortions, STIs/HIV/AIDS including alcohol and drug abuse have become everyday news. Although the rate of HIV/AIDS among school children is low compared to those of adults, girl children suffer disproportionately as victims of HIV/AIDS.

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Stunting (low height-for-age) and *underweight* (low weight-for-age) can reflect a broad range of insults such as prenatal under-nutrition and deficiencies of macronutrients and micronutrients. The cause of stunting is widely believed to occur mainly in early childhood, but an area of debate is whether stunted children can 'catch-up' growth in later years if their health and diet improve. These conditions are common in the school-age population throughout most of Sub-Saharan Africa.

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D. Vision Statement

“To provide improved learning, health and nutrition of school children in Zambia”.

E. Mission Statement

“Improved learning and equity among attending basic education through integrated health and nutrition interventions in collaboration with community and intersectoral partners.

F. Strategic Statement

The main strategic approach of the SHN component is to promote healthy and well-nourished children in basic education and their capacity to learn. Through activities and interventions such as policy development, capacity building, intersectoral collaboration, community participation and school-based interventions. These are entirely consistent with those activities outlined in the PIP (1998).

Four main strategic objectives were agreed to by participants during a strategic planning workshop.

1. Establish and strengthen organization and management of SHN programmes through capacity building at all levels.
2. Develop strategic partnerships with key stakeholders among government agencies, cooperating partners, NGOs, Private sector and communities.
3. Develop a sustainable and cost-effective SHN IEC strategy by
4. Establish integrated SHN interventions in basic schools to improve attendance and performance of all school children.

Priority Issues

The issues that have been determined to be priorities for the SHN programme have been reviewed by the MIT core team. These priority issues are also consistent with the elements of the draft SHN policy.

1. Adopt SHN policy (draft policy was prepared in June 1999 and circulated to relevant stakeholders for comments. Comments have been received and will be incorporated before submission to Permanent Secretary. Before this it will be circulated for final comment.
2. Cooperation arrangements between MOE and other key stakeholders such as MOH/CBOH needs to be finalized as quickly as possible. In particular, the Letter of Understanding (MOU) with MOE/MOH which will outline responsibilities of each ministry, in regard to SHN issues such as drug administration to pupils, screening and role of health workers.
3. To identify shared SHN concerns and issues with stakeholders so that partnerships can be forged for more effective implementation.
4. Capacity building at all levels, such as training, SHN development, material support, assessment tools developed, manuals and guidelines developed and development of integrated life skills-based curriculum.

5. Provision of integrated SHN interventions such as deworming, micronutrient supplementation, hygiene education, grants monitoring, screening and referral.
6. Promote community involvement in SHN activities as fundamental to the success and sustainability of any school improvement process.
7. Revitalize 'Child to Child' and School Food Production Units that have been useful approaches in the past. These are also advocated as strategies in the PIP (1998).

Immediate Priority areas SHN must address:

1. Adopt SHN policy.
2. Letter of understanding between MOH and MOE signed.
3. Validate cognitive assessment instrument and develop test battery.
4. Proposal sent to Ethics committee (includes cognitive assessment and school-based interventions – pilot).
5. Validate height and weight standards for Zambian children prior to implementing in EP pilot.
6. Identify training resource persons to form core TOT team.
7. School sample selection and site visit to validate data reliably and suitability of schools for pilot.
8. Situation analysis completed and presented at a symposium. Then finalized and disseminated.
9. IEC specialist selected (to work with S K and B supported Expatriate IEC expert).
10. Train trainers in life skills.
11. Identify drug procurement procedures in collaboration with MOH.
12. Design school health cards and circulate for comments prior to school-based interventions (pilot)
13. Community-sensitization conducted in catchment areas of the selected pilot schools.
14. Field Implementation Team (HW, CD officer, DEO) trained.

As an aid to understanding the possible constraints a SHN programme may face a SWOT Analysis was carried out as an activity during the planning workshop. The results are presented in the following table. In general, although a number of weaknesses and threats exist they can be overcome and SHN is in a good position for success provided there is continuing motivation and commitment.

SWOT ANALYSIS

Strengths		Weaknesses	
1.	Commitment of the Ministry of Education	1.	Organizational structure of programme unclear management needs to be strengthened.
2.	Support of other stakeholders	2.	Need for improved communication among managers at all levels – general need to share information.
3.	Support of MOH, which would supply technical inputs.	3.	Lack of trained staff in SHN.
4.	Support from major donors, such as USAID and UNICEF, USAID is providing needed capital for activities, UNICEF supplying water, sanitation and health education (see donor, NGO matrix).	4.	Inadequate staff particularly in rural areas. MOE needs to be careful not to overload managers and teachers to implement SHN.
5.	Draft SHN policy awaiting final comments and cabinet approval.	5.	Lack of financial commitment by MOE.
6.	Letter of understanding between MOE and MOH) drafted and circulated for comments and approval.	6.	Need to involve community and avoid top down approach.
7.	Infrastructure and personnel available and some financial resources available through BESSIP.	7.	Lack of teaching and training materials.
8.	Technical assistance and other inputs from SmithKline and B. available for IEC design and development.	8.	General poverty conditions and continuing high malnutrition.
9.	Potential for capacity building for programme implementers and managers at all levels.	9.	Shortage of community development officers at district level needed for field implementation.
10	Working with schools and using teachers to implement SHN is cost effective	10.	Providing advocacy for SHN in communities so teachers and parents accept the intervention may be difficult (e.g. cultural factors, practices may hinder acceptance).
		11.	Lack nationwide data on current SHN situation.
		12.	Lack of child level data on health status (need for School Health and Nutrition and feed into EMIS.)
Opportunities		Threats	
1.	Existence of some school health programmes (need to share lessons).	1.	General poverty of the country.
2.	Need to learn from MOH health reform experiences (i.e. logistics of implementing).	2.	Donor dependence with low government budget allocation to SHN.
3.	SHN programme will benefit children, teachers and the community – when pupils share what they have learned with parents and the A and N messages should have a wider effect.	3.	Possibly that communities will reject programme due to cultural beliefs and practices. Therefore there is need to provide sensitization regarding programme goals.

4.	Involvement with other relevant ministries and programmes – the fact that the strategy is intersectoral and interministerial (WASHE, Ministry of Community Development and Social Welfare, Ministry of Agriculture (MAFF) and should contribute to sustainability.	4.	HIV/AIDS pandemics, threatens the programme on a number of different levels (shortage of teachers, community workers, orphans).
5.	Existence of programme like PAGE and HIV/AIDS, Infrastructure, Teacher Education, Curriculum Development, EMIS development, and Nutrition programmes (NFNC, FAO).	5.	Retirements, transfers and tendency for teachers to prefer working in urban areas.
		6.	Lack of gender sensitivity – (e.g. attitude lowered female teachers).
		7.	Lack of collaboration with stakeholders.

Key Milestones	Timing
1. Policy/planning ❖ Draft policy finalized ❖ Letter of understanding signed	December 2000 December 2000
2. Identification of common SHN issues with stakeholders to forge partnerships. ❖ Develop mechanism (i.e. committee for NGOs and donors, organizations to share lessons learned.)	End December 2000
3. Capacity Building ❖ TOT for pilot activities (Lusaka) ❖ Training of teachers at school level.	November/December 2000 January 2001
4. School based interventions. ❖ Sample selection and site visits ❖ Drug procurement procedures delimited with MOH.	October 2000 November 2000
5. Promotion of community involvement in SHN. ❖ Formation and having of field implementation team.	January/February 2001

Narrative Summary of key SHN Components

Policy/Planning

A School Health and Nutrition policy statement was drafted by a working group with Representatives from different ministries, organizations, and interested parties. The draft was circulated for comments and will be revised and finally submitted for to cabinet office.

Other activities include a letter of understanding between the Ministry of Education and Health to clarify their respective roles and responsibilities, planned activities for school-based interventions and common goals.

A concept paper by Creative Associates International and the SHN/MOE supported by USAID/Zambia was developed an interministerial, integrated approach to implementing pilot activities in Eastern Province that includes, IEC media campaigns, training at all levels and cadres, community sensitization, a cognitive assessment school-based interventions (deworming, micronutrient supplementation, anthropometric assessment).

The SHN programme has also used advocacy and sensitization to increase awareness of the importance of the issues through Television, symposia, and involvement of a wide range of stakeholders.

Finally, other preparatory activities including increasing the IEC capacity of SHN, planning and validation of the instruments to be used for pilot activities, finalization of policy and strategic document and workplans. And agreement on the support mechanism prior to implementation of Eastern Province activities.

Partnerships

An important element of the strategic approach for the SHN programme will be the promotion of partnerships with key stakeholders including other ministries, donors, NGOs, and organizations. Therefore, the programme will identify and visit all relevant stakeholders to discuss their areas of involvement in SHN activities and interest in future collaboration. The programme will seek to establish a mechanism to keep these stakeholders involved and informed regarding SHN activities and to allow a sharing of ideas and lessons.

The strategy includes close collaboration with the Ministry of Community Development Headquarters and those to be appointed at provincial district and school levels.

Training

Within the SHN Programme, training is viewed as the critical pathway to building awareness, participation, capacity and action. Training is understood as broadly inclusive of a diverse range of educational strategies and methods which lead to positive changes in knowledge, attitudes and behaviours in support of SHN Programme goals and activities. Illustrative training methods include workshops, mentoring, coaching, meetings, focus groups, training classes, media and communications. Training will occur continuously and at all levels of the SHN Programme.

- ❖ At the *national/central level*, training will include special meetings and training workshops of ministry officials and other key stakeholders to build awareness, knowledge, skills and commitment to SHN Programme activities.
- ❖ At the *provincial level*, teachers at teacher training colleges will be instructed in SHN issues, health education methodologies, learning materials development and effective utilization. Teacher trainers and community development worker trainers will be trained in appropriate skills and methodologies so as to enhance their capacity. The end result being a sustainable way to continue both pre- and in-service training for future teachers and field workers.
- ❖ At the *district level*, district managers and field workers (school inspectors, resource center coordinators, community development workers, and community health workers) will be trained in collaboration methodologies, community education and mobilization strategies, group participation techniques, rapid assessment tools, health and nutrition education methods, advocacy and management skills;
- ❖ At the *community level*, training will include meetings of formal and informal community leaders, community members and government field workers to discuss, analyze and respond to child health issues and problems;
- ❖ At the *school level* teachers will be training children in proper health and nutrition knowledge and practices; and
- ❖ At the *child level*, children will be sharing information and training their peers and families in appropriate health and nutrition practices.

Community-Based

Experience in community involvement and mobilization has emphasized the importance of this practice in creating ownership, acceptance, and involvement of parents and communities in school-based programmes. Likewise, experience in implementing school-based programmes has confirmed the practical benefits of the school-based approach. The main conclusions that have been reached: (i) simple, safe and effective health services can be provided by schools; (ii) with minimal training, teachers can feel positive about providing health care to children, as long as the task does not take up too much of their, and (iii) parents are willing to accept and support school-based interventions if they are aware of them and understand their need and anticipated outcome.

Experience has shown that for a school health program to succeed the participation and commitment of parents/guardians, teachers and the community as a whole are imperative. Achieving this level of commitment required community sensitization and advocacy sensitization to understand the health status of their children and the circumstances and practices that contribute to such, and advocacy to facilitate their understanding of activities they can undertake and promote in order to increase the health status of their children. Through regular contact with communities, field workers can facilitate the process to identify key groups and subgroups within the community and identify possible social/cultural barriers to good health and nutrition interventions. While this process requires personnel and time, it is necessary first step to assuring community acceptance, eventual ownership and sustainability of identified interventions. Moreover, the process is intended to be ongoing and self-reinforcing, which ultimately will be internalized by the community without the necessity for further outside initiation or direction.

The various steps in the community-based sensitization process will be carried out by team of field workers consisting of representatives from the three key SHN Programme ministries – Education, Health, and Community Development and Social Welfare. Having been trained in community participation methodologies and relevant health and nutrition concerns, these field workers will facilitate activities that help to support the overall SHN programme goals. Initially the community-based activities will take place in all communities being serviced by the selected pilot schools.

It is important to note that the community-based sensitization component of this SHN Programme is intentionally collaborative. It is anticipated that no single field worker will initiate or implement the process without the presence of their colleagues from both of the other key ministries. This is intended to demonstrate and model a behaviour of joint collaboration and cooperation and to illustrate that school health and community issues are not isolated concerns, but are closely linked.

Emphasis is placed on working through existing committees within communities such as PTAs, neighborhood health committees, women's groups, and area development committees to develop plans of action that will identify key health and nutrition interventions to be undertaken by the community. The development of these action plans will ensure that the community, as a whole, has a plan to follow, target dates to meet, and recognition of who is responsible.

As communities are diverse the range of activities identified in action plans will vary. The activities and interventions may include such activities as: food production units, school cleanliness programmes, organization of health clubs, school open days, community peer counselling, popular teacher and local radio broadcasts.

The interventions identified and carried out by the community will be incremental and will form part of the dynamic process out of which will arise new challenges and opportunities. The community mobilization and community interventions lead to capacity building and empowerment.

Moreover, the approach puts decision-making in the hands of the communities by allowing them to set priorities and develop their own solutions. Equally important to ensuring programme acceptance and eventual ownership by the community are the partnerships developed through the field outreach team and with the community.

Cognitive assessment

Work beginning in the early part of this century has shown an association between parasitic infection, under-nutrition and poor mental development resulting in low achievement. Multiple research studies have indicated that children with heavy infections and severely undernourished children display marked improvement in cognitive development following treatment. To monitor the impact of the SHN intervention on the children's cognitive development (and, subsequently, educational achievement) of the children, the Cognitive Assessment Instrument (CAI) will be developed.

The CAI will be characterized by construct validity, face validity, ease of administrative, technological simplicity, low cost, noninvasiveness, ease and objectivity of scoring, short duration, cultural appropriateness, acceptability to the community, ease of creating parallel forms, flexibility across grade levels, and efficiency of measurement.

The CAI will provide indicators of most child-proximal dynamics in cognitive performance. In other words, indicators of educational achievement are susceptible to the influence of many factors (e.g., quality of teaching, availability of textbooks, quality of school building, availability of teachers, number of children in a classroom), so that the child's health is only one of these factors (overpowering the influence of other factors when the child is in very poor health, contributing to the impact of other factors when the child is in poor health, and having no impact when the child is in good health). To separate the variance in educational performance that is attributable to the health status of the child, the outcome indicators should be much more proximal to the child's individuality than measures of educational achievement (i.e., those assessed by the CAI).

The CAI is curriculum and competencies-free. In other words, the CAI will be designed to be sensitive to changes in basic psychological functions relevant to learning (e.g., memory span, attention). The SHN interventions will strengthen these functions (e.g., expand memory span and improve attention), and that will result in gradual accumulation of knowledge and rising achievement. The SHN, however, will not override teaching as a factor contributing to educational

achievement. Even when the child is in perfect health, high-quality teaching is necessary to result in educational improvements.

School-based Interventions

As is common across most of Sub-Saharan Africa, parasitic infections and disease are highly prevalent amongst the school age population in Zambia. The mass delivery of anthelmintics (deworming medication) and micronutrients are the most cost-effective, simple and safe school-based health and nutrition services that can be delivered by trained teachers (PCD, 1998). In addition, exhaustive operations research has identified cost-effective procedures for implementing all the above interventions (PCD, 1998, 1999). In addition, teachers can be taught simple *illness recognition* skills. The ability to recognize simple physical signs of disease (e.g. overt signs of malnutrition) will help identify children with specific problems who can be referred to the local health centre for specialist treatment.

EMIS

A recent EMIS concept paper (September 2000) MOE noted that in the highly centralized system of data collection and analysis is of great concern to all education planners and managers, there are considerable delays in the data collection, processing, analyzing, reporting and information utilization process. The EMIS assessment goes on to emphasize the need for the collection of simple indicators to ensure a continuous and unbiased assessment of the strengths and weaknesses of the education system.

The MOE is currently engaged in a school mapping exercise to update registry information and physical locations of schools will eventually included in GIS. These are important activities that will lay the groundwork for the EMIS. However, information on the health status of pupils is lacking. A school health card will be designed and used to monitor and evaluate the school-based interventions.

IEC

The design and development of effective media campaign and use of print materials will be vital to achieving success in the SHN programmes. The programme envisions the use of a broad-based media approach using radio, T.V., local language newspapers, popular theatre, printed materials and social marketing to disseminate key SHN messages. The design and development of printed materials will be pretested in the pilot areas using schools and communities in the targeted schools. The IEC effort will be supported by SmithKline Beecham who will fund the position of a Zambian IEC specialist and an expatriate IEC advisor.

The approach to health education will be skills-based and focuses upon the development of knowledge, values and life skills needed to make and act on the most appropriate and positive health-related decisions. Health in this context extends beyond physical health to include psycho-social and environmental health issues. Changes in social and behavioural factors have given greater prominence to such health-related issues as HIV/AIDS, malaria prevention, early pregnancy, accidents, violence and substance abuse. These factors that not only influence lifestyles, but also hinder education opportunities for a growing number of school-age children and adolescents. The development of attitudes related to gender equity and respect between girls and boys, and the development of specific skills, such as dealing with peer pressure, are central to effective skills-based health education and positive psycho-social environments. When individuals have such skills they are more likely to adopt and sustain a healthy lifestyle during schooling and for the rest of their lives. The development of *peer counselling skills* facilitates communication between children, peers, siblings and parents. This can lead to a promotion of a community-wide impact of the school health message. Peers also identify and respond to each other. This can lead to productive, informed counselling discussions.

The programme will utilize existing information, IEC materials available in order to avoid duplication of effort.

HIV/AIDS

The HIV/AIDS epidemic poses serious challenges to the education system. While the prevalence rate in Zambia is 20% there is a "window of hope" in the largely unaffected 5 – 14 year age ranges and it is this group that interventions need to be targeted.

The consequences of HIV/AIDS include a growing number of orphans, estimated to be over 600,000 by 2000 (CBOH, 1997). As the death of parents means that children will leave school to engage in some kind of employment.

The epidemic also affects teachers and statistics now indicate that over 1,300 died in 1998. This has serious consequences on the ability of the MOE to maintain a supply of manpower to replenish an already devastated workforce.

The MOE has developed strategies to address HIV/AIDS and the strategies outlined for the SHN component are consistent with these. They include addressing HIV/AIDS in the context of health education programmes, development of life skills, Anti-Aids clubs, counselling for teachers and integration of HIV/AIDS awareness into in-service programmes. The training programmes planned for teachers will include HIV/AIDS awareness and the programme strategy includes close collaboration with the Ministry of Community Development to identify vulnerable children, orphans and work with out of school youth. The IEC media strategy will also use a broad-based strategy to address

HIV/AIDS in communities, teachers and will work through existing programmes such as “child to child”, anti aids clubs, etc.

Finally, as the MOE policy statement suggests the SHN component will collaborate with the appointed HIV/AIDS focal point at Headquarters and those to be appointed at provincial, district and school levels.

Water/Sanitation

An essential component of SHN is the provision of safe water and adequate sanitation. The inclusion of this component is justified because of the potential high risk of disease transmission if facilities are either non-existent, in a poor state of repair or incorrectly used. Moreover, it has been shown that school-aged children can provide effective links with peers and the community in communicating important hygiene messages as well as promoting improved sanitation. The FRESH approach noted earlier includes as one of its four components safe drinking water and sanitation facilities and also emphasizes a participatory approach to hygiene promotion. Similarly, the proposed strategy will use an integrated participatory approach in the interventions proposed. Collaboration with WASHE activities, Ministry of Local Government, UNICEF, NGOs involved in water/sanitation, (JICA, Africare and GTZ). Teaching, materials, training and IEC components will also include water, sanitation, hygiene education. Teachers will provide education on water sanitation issues through teaching life skills, encouraging the maintenance of a healthy school environment, construction and use of sanitary facilities, awareness through songs, involvement in popular theatre, posters or art contests, and other activities.

Scaling up

It is anticipated that the pilot activity and interventions conducted in the Eastern Province will yield important lessons in a wide range of areas related to effective community-based approaches, SHN/EMIS system data flow, media campaigns, operational problems of drug distribution, training, integrated and intersectoral approaches, behavioural change, class-room based SHN education, monitoring and evaluation of school health programs, use of different approaches for water/sanitation promotion, and testing of different community approaches.

In general the pilot activity will either confirm the effectiveness of using teachers as a conduit to implement drugs and other interventions or demonstrate that it is not a good approach. In either case it will undoubtedly yield information that can be applied to other districts, other provinces and inform the central level MOE, SHN. As the programme develops some valuable lessons can be applied and used immediately while others should await more long-term piloting. The decision to apply lessons, expand the programme and the speed of scaling up will depend on MOE decisions and the resources available.

1. Strategic Objective: Establish and strengthen organization and management of SHN programmes through capacity at all levels

Objective	Activities	Inputs	Responsible Agency/Person	Timing	Indications	Critical Assumptions
1. Strengthen SHN Management at all Levels.	1. Recruit/appoint SHN managers at all levels	Personnel	Potential Partners	Sept. 2000	Managers in peace	Resources available
	2. Finalize SHN policy and submit to Cabinet Office	Personnel	MOH, MOE	By end of Nov. 2000	Signed policy document	Working group to discuss
	3. Orient and train managers to SHN programme.	Personnel	MOE	Jan. – 2000	Trained Managers	Personnel available
	4. Develop SHN Management guidelines at all levels.	Supplies	MOE		Guidelines available	
	5. Provision of logistic and material support for SHN	Funds, transport,	MOE, USAID		Minutes available	Support received under BESSIP and donors
	6. Strengthening SHN Steering Committee.	Personnel	MOE/Stakeholders Members	Periodic Meetings	Reports	
	7. SHN data base EMIS					
	8. School health card designed and tested in pilot schools of E.P.	Funds for printing & distribution	MOE	Oct 2000-Feb 20001	Reports	
	9. SHN data integrated in district and other levels of EMIS		MOE/province District	End 2001	Evidence of data collection and use	Data flow from schools to districts

2. Strategic objective: Establish strategic partnerships with key stakeholders amongst government agencies, cooperating partners, NGOs, private sector and communities.

Objective	Activities	Inputs	Responsible agency/persons Potential partners	Timing	Indicators	Critical assumptions
1. Partnerships at national level with key stakeholders and cooperating partners, formalized	1. Letter of understanding between MOE/ MOH drafting	TA	Responsible Agency/persons Potential partners MOE/MOH	By end of Nov. 2000	Signed letter	❖ Agreement by both parties to elements of SHN and issues related to drug use, screening, of children.
	2. Identification of stakeholders and collaborating partners	Transport Personnel	MOE	Nov. 2000	List of Stakeholders	Willingness of Stakeholders and Commitment
	3. Establish mechanism for stakeholders to share SHN issues and lessons learned	Funds Stationery HR	MOE/stakeholders	Dec. 2000 Dec. 2000	Plan available awareness by stakeholders SHN issues, plans.	Enabling environment Stakeholders interested In contributing to SHN Programme goals
	4. Dissemination of strategic plan to stakeholders.	Personnel	MOE	Nov. 2000	Committee minutes Newsletters produced	Approval by MIT
	5. Symposia to Present SHN policy, Strategies, pilot Test, situation Analysis findings	Funds, includes EP Officials	MOE/cooperating Ministries, donors Provincial and District officers	Nov. 2000	Document of Symposia	
	6. MOE SHN steering committee mobilizing resources from donors, etc.	Personnel	MOE	Ongoing		Support and commitment - donors ❖ Adequate resources available.

2. SHN Programme involvement of partners at provincial and district levels.	1. Identify district stakeholders involved in SHN activities or related services.	Transport Funds Human Resources	MOE	Nov.-Dec. 2000	List of Stakeholders available	Willingness and commitment of stakeholders
	2. Hold launch of SHN in EP for Stakeholders Provincial/ District, schools and communities.	Workshop funds	MOE	Nov. 2000	Meeting/launch held Report and Minutes available	Funds made available
	3. Form district SHN committees, focal points appointed district and provincial levels	Personnel	Province and District officials	Dec.2000	Progress reports Minutes of Meetings	

2. Establish strategic Partnerships with Key stakeholders amongst government agencies, cooperating partners, NGOs, private sector and communities						
Objective	Activities	Inputs	Responsible agency/persons Potential partners	Timing	Indicators	Critical assumptions
3. Communities participating in SHN activities.	1. Identify stakeholders producing SHN and related Services to Communities (existing local structures, etc.)	Transport	MOE, MOH, MCDSS	Jan. – Mar. 2001	Documentation	Field teams formed
	2. Hold public community meeting organised by core field implementation team – (DEO, CDO, and health workers.	Communities	MOE Core field team	Jan. – Mar. 2001	Minutes of Meetings	Active community Participation
	3. Communities identify priorities and action plans.	Community Mobilized	District core Implementation Teams	Feb. - 2001 6	Action plans Available	- “
	4. Sensitization process continues, meetings, media, core team visits, etc.	“	Core field team District staff	Feb. - 2001		“

3. Develop sustainable and cost-effective SHN, IEC strategy						
Objective	Activities	Inputs	Responsible and potential partners	Timing	Indicators	Critical assumptions
IEC and advocacy materials available and used in pilot schools by 2001	1. Hiring of SHN IEC specialist to work with MOE.	S K & B	MOE	Oct. 2000	Person hired in place	Funds, available
	2. IEC expert supported by SmithKline and Beecham in country.	Office space material and logistic support fax computer office equipment	S K & B, MOE	Jan. 2001	Person and space available, funding	Commitment of funds
	3. IEC KAP rapid assessment in the pilot district			Feb./Mar. 2001		
	4. Workshop for audience analysis and segmentation, channel, media strategies and level of teaching, learning and promotional materials (HIV/AIDS water, sanitation, SHN issues, Nutrition)	Funds, Materials	IEC specialist	April 2001 May	Workshop held	IEC specialist and expert hired. Resources available
	5. Pretest of the materials to different target audiences communities and groups.			May 2001	Pretesting occurs results document available	"
	6. Meeting to discuss pre-test.			May 2001		

3. Develop a sustainable and cost effective SHN IEC strategy						
Objective	Activities	Inputs	Persons/organisation responsible	Timing	Indicators	Critical assumptions
	7. Run 2 nd pre-test	In focus groups	IEC team and other district communities, schools	June 2001	Pre-test results	“
	8. Finalising materials	15 people				
	9. Orientation on use of SHN materials to teachers and communities.	Funds for Distribution & training				
	10. Popular theatre groups organisation, developing of inputs.	Funds		Mar. 2001 +		Groups hired, accepted and trained. Contracts signed.
	11. Popular theatre working in communities, research, community presentations in communities in target schools catchment areas.	Funds for theatre group	District and SHN staff, pilot area staff	April 2001 +		“
	12. Other media campaigns, radio running local newspaper in parallel.	Funds	IEC/Lusaka SHN/MOE District	April 2001 +	Media radio programmes local newspapers available	Funds available
	13. Printing and distribution of materials.	Funds for printing			Material posters, leaflets available and distributed to schools	
	14. Monitor use of materials.	Transport	Districts and IEC/staff			

4. Establish SHN interventions in basic schools to improve attendance and performance						
Objective	Activities	Inputs	Persons/organisation responsible	Timing	Indicators	Critical assumptions
1. School Health and Nutrition services Provided or Strengthened in Pilot schools.	1. Conduct situation analysis E P.	Funds	MEDOF, MOE, MOH, USAID	Sept. 2000	Report	USAID support for activity.
	2. Review and finalise document, disseminate results.	"		Nov. 2000	"	
	3. Select sample schools for pilot and controls E P.	Consultants	BEPS Support USAID SHN/MOE	Oct. 2000	Sample & criteria available, listing	Data available
	4. Preparatory activities for cognitive assessment.	Personnel	BEPS, Successful Learning, Yale	Oct. – Dec. 2000	Report	USAID support
	5. Validation of instruments for height/weight standards for Zambian children.	Personnel Stationary, Transport	BEPS, Yale group SHN (MOE)	Dec. – Jan. 2000 2001	Results of validation	"
	6. Validation and cognitive instrument battery	"	MOE, SHN, district	Jan. – 2001		
	6. Identification of teachers and HWS & CDO to be trained as core team & trainers.	Personnel			Documentation	Instrument pretested & ready.
	7. Testing of cognitive instrument.	Funds, transport	District, MOE/SHN	Jan. - 2001	Documentation pilot	USAID, BEPS programme signed
8. Begin community sensitization process. Meetings with community & local leaders, identification of local structures & groups HWCs, neighborhood health committees, etc.						

4. Establish SHN interventions in basic schools to improve attendance and performance						
Objective	Activities	Inputs	Persons/organisation responsible	Timing	Indicators	Critical assumptions
	9. Meetings to develop priorities – community briefing on SHN issues.		Core district and community	Jan – 2001	Meetings held minutes available	“
	10. Regular contacts by field implementation teams from districts.					
	11. Action plans developed by communities.	Personnel	Field team, communities	Feb./Mar. 2001	Action plans available	Meetings held and communities agree to participate.
	12. Drug procurement underway and issues Related to storage and Distribution resolved.					
	13. Micronutrients and deworming drugs available & distributed by teachers in pilot intervention schools.	Deworming pills, scales, & height poles in place in schools		June 2001	Drugs delivered	Teachers trained & willing.
	14. School health cards available in schools to record health status & monitor pupils	Cards available in schools	MOE/MOH	March 2001		“

4. Establish integrated SHN interventions in basic schools to improve attendance and performance						
Objective	Activities	Inputs	Persons/organisation responsible	Timing	Indicators	Critical assumptions
2. Teachers trained in SHN interventions To provide conducive Learning Environment	15. Identification of teachers training by trainers from TCC Zonal resource, CD colleges.	Personnel	District, pilot implementation team Central MOE	Jan. 2001	Teachers identified, training schedule developed	Programme in place E P. Consensus on number to be trained.
	16. Training materials, modules designed, available teachers trained in basic screening, SHN drugs, micronutrients to be used, school health cards, weight & height measurements. Nutrition issues, health education, life skills, "Fresh approach".	Funds for modules develop	MOE/SHN, district teams, teachers, Teacher and community development colleges.	Feb/Mar. 2001	Training materials available modules available	Training materials available and used Teachers trained

4. Establish integrated SHN interventions in basic schools to improve attendance and performances.						
Objective	Activities	Inputs	Persons/organisation responsible	Timing	Indicators	Critical assumptions
2. Health workers orientation, training on SHN issues. Scaling up/expansion Activities	Identification of HWS for training, catchment area, pilot EP	Trainers, materials	Trainers from TOT core team and resource persons, MOE, MOH			Cooperation of HUS from HCS District Health Board
1. Training of teachers and HWs	1. On service training for each district at district/provincial levels. 2. Conduct at least two supportive supervisory visits per year to all trained implementers. 3. Conduct at least two refresher courses per year for trained implementers.	Funds, personnel Personnel, transport “	MOE/SHN, District District team and MOE/Central MOE Districts Provinces	2 x year start 2 x year	Documentation	Resources, Personnel & funds available to expand to districts and provinces. “
2. Five SHN peer educators trained per school.	1. Form team to develop peer education materials. 2. Develop peer education materials. 3. Each SHN implementing school to train five peer educators every year.	“ “	“ “			“

Proposal for School-based SHN interventions in Eastern Province (Cognitive Assessment and Baseline Sample Collection)

Appendix E

1. BACKGROUND:

As the Ministry of Education's (MOE) cornerstone plan for educational reform, the Basic Education Sub-Sector Investment Programme (BESSIP) is organized to achieve the goal of improving access, quality and relevance of education in eight key, mutually reinforcing areas of intervention: programme management, infrastructure, teacher development, educational materials, equity and gender, curriculum development, capacity building, and School Health and Nutrition (SHN). Further, BESSIP is intended to optimize the use of resources and reinforce the decentralisation of education system management to local delivery points.

Within Zambia, SHN research has been scarce, interventions localized, and coordination lacking. Limited available data suggest that school age children are burdened with chronic micronutrient deficiencies, protein-energy malnutrition, helminth infection, malaria and HIV infections which, in turn, are associated with low academic achievement. Confidence that cost-effective interventions such as deworming and delivery of micro-nutrients to children through schools could reverse current trends has resulted in increasingly higher levels of governmental attention to development and implementation of an MOE/SHN strategic plan.

The five-year (2000-2005) MOE/SHN Draft Strategic Plan is based on solid research that links improvements in health and nutritional status to improvements in cognitive function and school achievement. Within this plan, the MOE/SHN overall program goals are to improve pupil learning and equity through implementation of targeted health and nutrition interventions that:

- (a) result from and are delivered through inter-sectoral collaboration and community involvement;
- (b) are holistic and systemic in approaches and methods, treating the pupil through multiple and reinforcing activities both within the school and broader family and community environments; and
- (c) directly improve and maintain health and nutritional status.

A letter of understanding between the MOE and MOH/CBOH has been developed, debated, revised and agreed to by both parties through a collaborative process.

Development of policy implementation guidelines to provide details to the draft policy document already developed has taken place.

Finally, a strategy document outlining how the SHN will deal with issues like training, collaboration, information system, etc IEC development, proposed pilot activities, gender, HIV/AIDS has been finalised.

All of these documents are crucial and necessary, steps in developing a sound SHN programme.

2. THE RATIONALE:

Ensuring that children are healthy and able to learn is an essential component of an effective education system. This is especially relevant to efforts to achieve "Education For All" in the most deprived areas, as now more of the poorest and most disadvantaged children have access to school, many of whom are girls. It is these children, who are often the least healthy and most malnourished, who have the most to gain educationally from improved health.

Good health and nutrition are not only essential inputs but also important outcomes of basic education of good quality. On the one hand, children must be healthy and well-nourished in order to fully participate in education and gain its maximum benefits. Thus, programmes which improve health and nutrition can enhance the learning and educational outcomes of school children. On the other hand, quality education, including education about health, can lead to better health and nutrition outcomes for children and especially through the education of girls, for the next generation of children as well.

2.1 Major Health Problems of School-Age Children:

Much of the disease burden derives from the poor environmental conditions in which children live, including exposure to biological, chemical and physical hazards in the environment and a lack of resources essential for human health. As is common across most of Sub-Saharan Africa, parasitic infections and disease are highly prevalent amongst the school-age population in Zambia.

School age children are heavily infected with parasitic worms. Infections are estimated to account for over 12% of the total disease burden in girls aged 5 to 14 years and over 11% of the burden in boys making this the single largest contributor to the disease burden of this group. These infections have been shown to cause iron deficiency anemia (particularly hookworm infection), reduce growth and may negatively affect cognition (Stoltzfus et al., 1997)

Malaria is estimated to account for between 10-20% of mortality and is an important cause of morbidity in school-age children in Sub-Saharan Africa. Malaria is also an important cause of absenteeism from school and accounts for between 13-50% of all school days missed because of preventable medical causes. There is also evidence that brain insult, as a consequence of cerebral malaria in early childhood, may have an effect on a child's cognitive and learning ability (Brooker, et al., 2000).

2.2 Major Nutritional Problems of School-Age Children:

As a result of food insecurity and high levels of poverty in Zambia, malnutrition has increased among school-aged children and is manifested as protein energy malnutrition (PEM) and micronutrient deficiencies. The 1996 Demographic Health Survey (1997) states that malnutrition contributes to over 50% of infant and child death in Zambia.

Stunting (low height-for-age) and underweight (low weight-for-age) can reflect a broad range of insults such as prenatal under-nutrition and deficiencies of macronutrients and micronutrients. The cause of stunting is widely believed to occur mainly in early childhood, but an area of debate is whether stunted children can 'catch-up' growth in later years if their health and diet improve. These conditions are common in the school-age population throughout most of Sub-Saharan Africa.

Inadequate intake of nutrients and a high incidence of infectious diseases are the major contributory factors to micronutrient deficiencies in Zambia and other developing countries. The most common are: (i) Vitamin A deficiency (VAD) that can lead to various forms of eye damage, ranging from night blindness to full blindness. It also contributes to retarded physical growth and impaired resistance to infection; (ii) iodine deficiency disorders (IDD) which can lead to mental retardation, and in severe cases, cretinism and impaired development and; (iii) iron deficiency anemia (IDA) which can lead to impaired cognitive function, lethargy and reduced resistance to disease (Drake L., 2000).

There is a lack of information of the magnitude of the problem regarding school-age children in Zambia. However, it is well known that iron deficiency affects almost all children (Ministry of Education, Zambia, 1999). A recent survey of 1427 Zambian Children showed that 14.5% were severely anemic and 22.2% had malarial parasitaemia. It is also estimated that IDD affect between 50% and 80% of the general population and Vitamin A deficiency is endemic in most children (Ministry of Education, Zambia, 1999).

3. IMPLEMENTATION:

3.1 Pilot Approach:

The pilot approach described here is accepted by MOE/BESSIP and is included in the Programme Implementation Plan (PIP). Moreover, the pilot activities are described in the SHN strategic plan, concept document and are consistent with the MOE/SHN policy.

Because of the uniqueness of the approach that is using teachers to screen and provide micro-nutrients supplements to pupils the MOE has appropriately agreed to a pilot. This will allow testing of the acceptability of the approach by communities, teachers and, identify operational constraints, monitor the safety of the interventions and evaluate the value and impact of the interventions before scaling up to other areas.

3.2 School-Based Health and Nutrition Services:

As is common across most of Sub-Saharan Africa, parasitic infections and disease are highly prevalent amongst the school age population in Zambia. The mass delivery of anthelmintics (deworming medication) and micronutrients are the most cost-effective, simple and safe school-based health and nutrition services that can be delivered by trained teachers (PCD, 1998). In addition, exhaustive operations research has identified cost-effective procedures for implementing all the above interventions (PCD, 1998, 1999). In addition, teachers can be taught simple illness recognition skills. The ability to recognize simple physical signs of disease (e.g. overt signs of malnutrition) will help identify children with specific problems who can be referred to the local health center for specialist treatment.

3.3 Cognitive and Achievement Tests and Health Assessment:

A study will be conducted to assess the impact of the SHN programme on the health and nutritional status of the children and on their learning capabilities. The research will be conducted during the first three years of the programme targeting a total of 80 schools. In the first year, pupils from 20 schools will serve as the intervention group that will receive SHN treatment, while those from another 20 will be used as a control group. In the second year, the pupils from 20 schools that constitute the control group will become part of the intervention group, thus receiving SHN interventions. Meanwhile, an additional cohort of pupils from 20 new schools will constitute the new control group. In the third year, the latest control group will join the main intervention group and another 20 school will be added as control.

Information on the two key variables (health and nutritional status; and learning capabilities) will be collected from a sub-sample of pupils from Grades 1 – 7 in both control and intervention groups at the beginning of each year, prior to interventions.

The instruments and tools to be used include some that already have been developed, such as those used to monitor and evaluate the school-based interventions (anthropometric and biochemical) which will provide a means to measure improvements in child health and nutrition status.

A cognitive assessment tool is in the process of development and will be tested and validated. This tool will provide data on the cognitive ability of students administered before and after the school health interventions and will enable the programme to assess the relative success of the interventions on pupils' learning ability. Data from the National Assessment examination (Grade 5) will also be used for measures related to net admission rates by gender and increase in pupil assessment scores by gender.

3.4 School Based Data Collection:

The collection of baseline data prior to the training of teachers, community sensitization and administration of deworming treatments and micronutrients will consist of blood samples (approximately 3,000 from grades 1-7 in 20 intervention and 20 control schools selected by a computer programme and visited to determine accessibility and suitability for inclusion in the pilot. Experienced field teams will collect urine and stool samples as well as administer

a finger pin prick for a sample to be analyzed by a haemaglobometer in the field, teachers will be informed of the process and fully involved in organizing and assisting the field data survey teams. Parental consent will be obtained as per attached form and all samples collected will be anonymous. The survey will use the data samples solely for the purposes outlined that is to determine prevalence levels of bilhazia (necessary prior to implementing a treatment strategy), determine height/weight measurements in order to calculate iron supplementation and levels of stunting or underweight children, to determine anemia levels and malarial parasitaemia, and to determine presence and type of worms.

The cognitive instrument currently being developed will be used to assess cognitive ability of pupils and will be a measure of the relative success or impact of the school based interventions. The data will be analyzed by the National Examinations Council and the instrument modified to enable teachers to administer it and to expand its use.

4. PARTNERSHIP AND COLLABORATION:

4.1 Partners:

The proposed pilot activities as well as the on going interventions over the next three years will involve a wide range of government, NGOs, and other organizations. The following will participate in the preparatory activities and pilot interventions.

- (a) University of Zambia (School of Education and Psychology Department)**
Students and lecturers involved in cognitive assessment instrument design, development and validation. Meetings held and preparatory activities already begun. (Mr. Phiri, Mr. Nkumbula among others).
- (b) University of Zambia (assessment centre)**
Will collaborate in all aspects of the cognitive assessment validation, pilot, and administration. Contact (Paula Kapungula, Kelly Mulenga).
- (c) University of Zambia (School of Medicine)**
Will be involved in height and weight validation, pilot in Lusaka, research, supervision of data collection team. Students to be involved in on going research. (Contacts Dr. G. Bhat, Dr. Kankasa).
- (d) University of Zambia (UTH) Department of Microbiology**
The department will be involved in data collection, stool/urine samples, analysis, research, will also collaborate through Schistosomiasis study group. (Dr. J. Mwansa, Dr. Likezo Mulilo)
- (e) Tropical Disease Research Centre (TDRC)**
Will conduct field data collection for iron levels, Vitamin A (serum retinal) quality assessment, Dr. E. Kafembe and Mr. D. Mwandu.

- (f) **Examination Council of Zambia**
To participate in data analysis of cognitive assessment instrument (Paul Machona, Joe Kanyika and others)
- (g) **National Food and Nutrition Commission (NFNC)**
Will be involved in pilot validation, height pole design, manufacture, data collection, supervision, training data collection (Priscilla Likwasi and staff).
- (h) **Ministerial Partners (Ministry of Health, Central Board of Health, Ministry of Community Development, Ministry of Education)**. Contact has been made with more than 30 donors, NGOs and organisations in Lusaka and Eastern Province to find mutual areas of concern for SHN and specifically to develop a network of stakeholders to ensure success of the programme. New partnerships will be identified and cultivated as the programme matures.

4.2 **Research Opportunities:**

In addition, because of the relatively long-term nature of the proposal pilot it is anticipated that there will be ample opportunities for psychology students to use the pilot area as a field site for practicum's and research. Similarly post graduate medical students will also be able to conduct small research projects. These possibilities have already been discussed by the parties concerned at the University and School of Medicine.

5. **BASELINE DATA COLLECTION:**

5.1 **Data/Sample Collection:**

The baseline survey data will be collected by four teams who will be brought together to plan the logistics of the collection phase so that the exercise can be carried out in the most cost effective and efficient manner. The teams and their responsibilities are:

- **Cognitive Assessment:**
Using modified, translated and pre-tested battery of items administer the cognitive instrument to 20 intervention and 20 control (Grades 1 – 7), (Successful Intelligence Group and UNZA Assessment Centre).
- **Anthropometric:**
Weight and height measurements using (NFNC, UTH PCD) height poles developed after Lusaka pilot and validation of Zambian standards.
- **Vitamin A and Iron**
to collect blood samples, storage and transport to Ndola for analysis, iron analysis done on some samples. Pin prick for analysis by haemoglobometers in field – iron status anemia (urine analysis for iodine) (TDRC, local staff PCD)
- **Parasitology**

(UTH/UNZA, Microbiology laboratories) (PCD) – To collect urine and stool samples for examination for bilharzia and microscopy for worms. Analysis in the field.

6. ADMINISTRATION AND MANAGEMENT:

6.1 Management:

Overall Management, coordination, supervision, quality control, technical assistance and data analysis will be the responsibility of the SHN team (MoE), Partnership for Child Development (PCD), Successful Intelligence (SI), and BEPS.

6.2 Funding:

The funding for the proposed pilot interventions will be provided through USAID of the SHN Component of BESSIP. Sub contractual arrangements have been made under BEPS (Basic Educational Programme through Creative Associates International with the Partnership for Child Development (Oxford) and Successful Intelligence (Yale University) to implement specific programme activities.

6.3 Personnel:

The personnel for carrying out the proposed pilot interventions in Eastern Province will include the Lusaka MoE/MoH/PCD and SHN team, provincial and district personnel, health workers, teachers, community leaders, pupils and the communities at large. Training for all of these levels of personnel will be provided. It is important to note that training of provincial, district personnel, teachers and health workers and sensitization of the community will occur as a necessary precondition before the delivery of any drugs.

The baseline surveys proposed here will provide key information on prevalence/levels of anemia, bilharzia , operational constraints, logistic difficulties, and community acceptance. The cognitive assessment results will also provide essential data on which to gauge the impact of the proposed school-based interventions.

6.4 Coordination of activities and Reporting:

SHN activities as a BESSIP Component are currently coordinated at the central level by Mrs. C. Phiri (focal point in the MoE). A SHN steering committee also exists consisting a wide representation of government ministries, donors, NGOs, and university. A sub-committee has been formed to deal with technical issues of the programme. The programme also reports to the MIT who monitors proposed activities in relation to the Project Implementation Plan and agreed MoE policies and strategies.

SHN has also begun the process of putting in place focal points at provincial and district levels.

6.5 Quality Assurance Issues:

The data collection will be undertaken by highly trained, experienced field teams from TDRC, UNZA, UTH, NFNC. All activities will be closely monitored and supervised by technical experts from SHN/MoE, Partnership for Child Development, Successful Intelligence Group as well as District staff and senior members of UTH Departments of Microbiology and School of Medicine and National Food and Nutrition Commission. A 10% sample of Vitamin A and Iron specimens will be sent to South Africa by TDRC for a quality check as per WHO recommendations.

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List of Appendices

- A. Time line of activities
- B. Parental Consent Form
- C. Summary of clinical test
- D. Matrix summary of interventions
- E. Sample survey forms

TIME LINE FOR ACTIVITIES RELATED TO COGNITIVE ASSESSMENT AND BASELINE FOR SCHOOL BASED INTERVENTIONS

	Preparatory Activities	Responsible	Timing	Comments
1.	Collaborators (UNZA, Examinations Council of Zambia, NFNC, TDRC)	SHN	November 2000	Workshop held, guidelines available, policy sent to Cabinet Office for approval.
2.	Letter of Understanding MoE, CBoH/MoH signed.	SHN Team/MoE/MoH/CBoH	November 2000	Letter available
3.	Strategic Plan finalized	SHN Team	November 2000	Plan submitted approved by MIT
4.	SHN policy/guidelines developed	SHN, Policy Committee	November 2000	Approved by Committee
5.	Cognitive assessment protocols submitted to Human /subjects Committee.	SHN/MoE	On-going	
6.	Collection of background data.	SHN	October 2000	Background data collection completed prior to visiting Yale
7.	Design of survey forms, field visit to all schools in Eastern Province.	UNZA CA Research Coordinator	October/November 2000	
8.	Cognitive -research coordination visits US Yale to assist in developing of battery of test items.	UNZA/Yale		
9.	Pilot testing/validation of height poles and cognitive instrument in Lusaka area schools.	UNZA CA Research Coordinator, UTH collaborator, SHN Team	December/January 2000	Pilot/validation schools identified and study carried out
10.	Data analysis, design, production of height poles, computer model of Zambian weight standards, refinement of protocol.	PCD/NFNC/SHN	December 2000	Height template developed PCD visits Zambia to coordinate, design and producing of poles, weight standards developed and available.

TIME LINE FOR ACTIVITIES RELATED TO COGNITIVE ASSESSMENT AND BASELINE FOR SCHOOL BASED INTERVENTIONS

Data Collection Phase

Cognitive Assessment		Responsible	Timing	Comments
1.	Preparations for cognitive assessment in Eastern Province.	UNZA CA Research Coordinating Yale SI Group.	November – December	Preparations include testing and refinement of test items, data/document collection.
2.	Develop of logistic plan, and training of surveyors.		December	
3.	Conduct CA in 40 schools 20 Intervention – 20 Controls	Research team (UNZA, district and others identified)	February 2001	In Eastern Province schools selected from 80 – visited earlier in October by SHN
4.	Data analysis	UNZA, Yale SI group, Exams Council	March – April 2001	
5.	Modification and further validation of test items.	“ “ “	May 2001 – on going	-Will be modified and refined after initial collection and throughout pilot to facilitate ease of administration by teachers.
	School-based Survey	“		
1.	Identification of collaborators for the survey team/baseline data collection.	SHN/PCD	September – December 2000	Key collaborators as listed and technical experts to assist in baseline survey and data analysis. Goal is to develop coordinated team effort to avoid unnecessary confusion and collect data in the most efficient cost effective manner.
2.	Develop detailed logistic plan according to teal activities/location of schools, (stool/urine, blood, height/weight). Three teams + supervisions involvement of teachers and health workers.	SHN/all teams including TDRC, HUS, District, UNZA (School of Medicine, Microbiology, NFNC)	January 2001	
3.				

<p>4.</p> <p>5.</p> <p>6.</p>	<p>Training of survey teams – develop coordinated plan for data collection.</p> <p>Samples collected to UTH and TDRC to begin analysis. H/W anthropometry to Oxford and UTH for analysis</p> <p>Analysis of data & quality checks completed.</p> <p>Survey research available</p>	<p>SHN/Training teams/supervisors identified (UNZA, NFNC, TDRC)</p> <p>Data collection teams</p> <p>TDRC, UTH</p>	<p>January – February 2001</p> <p>February 2001</p> <p>March 2001</p> <p>April, May 2001</p>	<p>Samples stores in Health Centres and other identified sources before transport to UTH and TDRC</p> <p>Reports available and disseminated</p>
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APPENDIX C

Summary of clinical tests to be performed

	Tests	Sample needed
Vitamin A	Serum retinal levels	Venous blood sample
Iron levels	Total iron, total iron binding capacity Presence of malaria	Iron and malaria tests to be done on same sample as above
Anaemia	Hb-haemoglobin levels	Pinprick in field, analyzed by use of haemaglobimeter instrument
Bilharzia	Urine/multistick diagnostic	Urine sample-in field
Parasitology	Microscopy/diagnostics Kato/Katz	Stool sample-analyzed in field
Iodine level*	-	Urine sample-laboratory testing at UTH or TDRC (TBD)

*Necessity of test to be determined

APPENDIX D

MATRIX SUMMARY OF INTERVENTIONS

Intervention Activity	Nature of Intervention	Collection and supervision	Data analysis and use	Comments
Cognitive Assessment	<p>Pilot testing of test items in Lusaka area schools (2-3)</p> <p>Administration of instrument in 20 pilot intervention schools/eastern province and 20 controls</p> <p>Monitoring of the instrument and retest at periodic intervals throughout the pilot</p>	<p>UNZA team, assessment centre, YALE, SI group</p> <p>UNZA team, assessment centre, YALE, SI group and teachers.</p> <p>UNZA team, assessment centre, YALE, SI group and teachers</p>	<p>To validate test battery, and adapt and modify as necessary</p> <p>Analysis by National Exam Council, Yale SI, used as baseline to monitor impact of UNZA involvement through psychology department and Assessment Centre</p>	<p>Planned for Jan/Feb 2001, Preparations underway</p> <p>Arrangements made with N E C Planned for Jan. 2001</p>
School-based Interventions	<p>Pilot test in Lusaka simultaneously with CA above, validation of height and weight standards, design of height pole.</p> <p>Sample specimen collection in 40 pilot schools (20-I and 20-C)</p> <p>Type of specimens and analysis include Vitamin A, Iron, bilharzias and examination for other worms. Nature of samples required are detailed in Appendix C:</p> <p>Ht. Measurements will be performed twice on each pupil to confirm accuracy. Weight will be done using scales by trained workers.</p>	<p>UTH (School of Medicine, NFNC, PCD, HWs, SHN/MOE</p> <p>PCD, TDRC, UNZA, Depart. Of microbiology, SHN/MOE</p> <p>PCD, TDRC, UNZA, Depart. Of microbiology, SHN/MOE</p> <p>Field team, PCD, local HWs (district)</p> <p>UTH (lab team) HWs local district supervisors and SHN team and teachers</p> <p>NFNC, UTH school of Medicine</p>	<p>To be used for input-computerized program for Wt. And Ht. For correct iron tab.calcul.</p> <p>To establish baseline prior to admin. of drugs-analyzed by UNZA, TDRC</p> <p>To establish prevalence and use of WHO guidelines to begin mass treatment for worms of various types. To establish Vit.A levels -Estab. Iron levels, anaemia, all samples identified by serial number only Establish baseline prior to deworming To establish baseline to establish impact monitoring intervals of 1-2 yrs.</p>	<p>Contracts, budgeted logistical plan to be worked out in Dec./Jan.</p> <p>If prevalence levels are greater than 20% mass deworming will be carried out</p> <p>Determination of levels of urine iodine not yet confirmed as necessary</p>

Scaling up/expansion						
Objective	Activities	Inputs	Persons/organisation responsible	Timing	Indicators	Critical assumptions
3. SHN MIS integrated data base in schools reporting to districts			Schools, Districts, Provinces, Central	From 2002 +	SHN/MIS Functioning as integrated system	Systems and school cards adopted and available schools
4. Access and retent. of children especially girls in schools increased by 2005.		Funds for Workshop	“	From 2002	Annual Review Progress reports	
5. Evidence of [“Child to Child”] methodology being accepted and used – teachers in SHN activities by year.	1. Child to Child materials review and development workshop.		“	“	Documents Annual Review	
6. Children develop this knowledge and skills in health & nutrition for behaviour change by year 2005		Personnel logistic support	“	“		
7. Schools have healthy conducive learning environment by year 2005.	SHN programme full range of Interventions/activities.		All levels	By 2005	Funds and resources available	

Scaling up/expansion						
Objective	Activities	Inputs	Persons/organisation responsible	Timing	Indicators	Critical assumptions
8. Production Units supplement community efforts in producing food for children in schools.		Cooperation with agriculture, FAO etc.				
9. Regularized reporting on children's health & nutrition status compiled & updated at least once a year.	<ol style="list-style-type: none"> 1. Identity M/E information to be collected. 2. Develop M/E instruments and protocols. 3. Develop a database. 4. Collect & report data regularly. 	Funds Personnel “ “	All levels Schools	Once per year	Reports Progress Services	
10. Minimum physical requirements in place in all SHN implementing schools.	<ol style="list-style-type: none"> 1. Coordination with school mapping exercise & GIS – EMIS. 2. Develop list of minimum physical requirements by managers MOE/MOH. 3. Conduct physical check conduct school mapping 	Cooperation with supporting consultants, donors, planning & statistics units.				

Appendix F. FIELD TRIP REPORT TO EASTERN PROVINCE

A field trip to Eastern Province was undertaken with Mrs. C. Phiri SHN Focal Point from October 9 – 21. The purpose of the trip was to validate data collected from the Ministry of Health, Planning Unit (1998 census) to select schools for the SHN pilot programme in Chipata and Chadiza Districts. In addition the trip had a number of specific objectives:

- Visits to Provincial Education Officer, District Education Officer's offices to discuss issues related to the proposed pilot and general SHN issues.
- Visiting of the 80 selected schools. (40 intervention, 40 controls) in Chipata, Chadiza to evaluate accessibility and interviewing of teachers using a short questionnaire (see attached).
- Visit to seven schools in Chama District to access special logistical and operational problems that may affect inclusion of the district at a later stage of the pilot.
- To collect maps and additional information needed for planning of data collection and coordination of survey team activities.

METHOD OF WORK

Soon after arrival in Chipata we visited the office of the Provincial Education Officer (Mr. Nkhata) to provide a briefing of the purpose of our visit. We then visited the District Education Officer to provide similar briefings and to request a person familiar with the location of the schools to be visited to accompany us. Mr. Phiri, the examinations office (DEO) was assigned and began developing a logistic plan for the most efficient travel to the schools.

A total of 10 days were spent visiting 40 intervention and 40 control schools and seven schools in Chama. Upon arriving at each school we met with headmasters, senior teachers, or teachers. After describing the purpose of our visit a short questionnaire was administered which lasted approximately 20 – 30 minutes (see attached). In addition, we observed the general surroundings, buildings, state of repair, road conditions, water sources, pit latrines, and production units. We also visited a Rural Health Centre, Chief Tembwe (Chama), a peace corps volunteer working in Chama and other officials during the course of our visits to schools.

The selection criteria that were used and which were validated included the following:

- Not more than 3 hours' drive from the District Centre
- Accessible throughout rainy season
- Grades 3 – 7 taught
- At least 10 children in each grade
- Not catering to special children (i.e. blind, deaf, etc.)

On the basis of these criteria one school (catering to disabled children, and special needs (St. Annes Chipata) was dropped. In general, most of the roads were satisfactory and schools were accessible. A few schools would present some access problems during the rainy season when passing through dambos and areas with broken or no bridges. Some of these areas did have alternative routes. One school did not meet the enrolment criteria of 10 per grade and another

failed this test for one grade due to most Grade 1 pupils going to a recently opened community school because it was free. The school concerned was confident that the situation would change after intervention by the Provincial Education Officer, District Education Officer and discussions with the PTA and community. It appears that there is a lot of misunderstanding regarding the role and function of community schools which will require awareness raising by officials and communities.

Specific Findings

Enrolment/absenteeism/ dropout – A total of 81 schools were visited 60 Chipata, Chadiza 14 Chama 7. Enrolment data was collected from each school for grades 1-7 by sex. A list of intervention/control schools is provided in the attachment. The total number of pupils in Grades 1 – 7 was 21628 averaging 360 in Chipata, 308 in Chama and 277 in Chadiza. In general data collected from the MOE data base were fairly close to current figures.

There was significant drop out observed in all districts from Grade 1 to Grade 7 particularly for girls which was frequently 60% or more. The general reasons cited for drop out rates which are most marked from Grade 4 –7 were poverty, low value placed on education by parents, and school fees. The most frequent reason for drop out by girls was early marriage. For boys joined the traditional Nyau society at Grade 5 and rarely returned to school because they were told that the society teaches them all they needed to know. While some teachers said they frequently discussed this problem with parents and the community at large it has had little impact. Another reason cited for dropout of boys was cattle tending. The common practice was that boys at age 7 – 12 tended cattle for 3 – 4 years and would be given a calf as payment. The calf would form part of a bride price payment when the young man decided to marry.

The reasons listed for absenteeism were; withdrawing children to perform work in the fields, taking maize for grinding, selling produce at the market, illness, a lack of shoes, uniforms or other school requisites.

Teaching Staff

The number of teachers were 576 Chipata, 79 Chadiza and 72 Chama. In 30 schools the staff interviewed complained of a teacher shortage. These schools had 2 – 4 teachers and may have been acutely aware of the problem as many of the teachers were away assisting in the Census.

Water/Sanitation

A large percentage of schools in all three districts were experiencing water problems (26/60 Chipata, 43%, 7/14 50% Chadiza and 4/7 57% in Chama). Many of the water difficulties were due to the drying up of wells, broken hand pumps, lack of a bucket, rope for windlass. Even urban schools were experiencing difficulties with an erratic water supply and in several cases threatened with water shut off due to non payment to the Water and Sewerage Department.

Approximately 65% of the schools used wells often unprotected and untreated water. Only a few said they treated the water with Chlorine (available for K500.00)

Thirty per cent of the schools had VIP latrines and an additional ten per cent were in the process of constructing them. While the majority had traditional latrines there was evidence of increased awareness of water/sanitation issues due to the influence of Washe activities. In Chipata we found that hand washing buckets were placed outside of the pit latrines and pupils were observed using them. However, in some cases the buckets were being kept inside the Headmasters offices.

It was evident that water problems and use of untreated water area is a major contributing factor to the high incidence of water borne diseases. Moreover, the situation in some schools in Chipata was also a major concern to city officials who brought the problem to the attention of the Provincial Education Officer while we were debriefing on our school visits in the district.

Organizations Assisting Schools

We found eight schools that had been rehabilitated by the Lutheran World Federation. The rehabilitation included the construction of teacher's houses, and pit latrines.

Two schools had been rehabilitated by World Vision. Other organisations providing assistance included ADRA (Health education, 'child alive' project, screening for iodine deficiencies and other health problems, Peace Corps Volunteers providing health education on such topics as HIV/AIDS, hygiene and nutrition, UNICEF , Pownet – Malaria and YWCA).

We found that 80% of schools visited were busily engaged in various self help projects such as molding bricks, construction of pit latrines, rehabilitation of teachers houses, digging and repair of wells. Many had far surpassed the 20% input required to gain assistance through Micro Projects. In all of these activities there was active community participation. In addition, PTAs were key to the successful mobilization of community assistance.

Community participation was felt to be very good in the opinion of the majority of teachers interviewed. There were some situations that resulted in less than ideal community involvement and led to teachers experiencing difficulties in mobilizing support. These were in areas with significant transient farm settlement populations and border areas. One Chadiza school for example, is close to Malawi and Mozambique and teachers often faced difficulties in payment of school fees and enlisting of support for school projects.

Villages and populations of the catchment areas of schools ranged from 800 to over 15,000 settlement patterns ranged from dispersed to large concentrated village groups to resettlement schemes. One school was located within a National Service Camp and catered to camp children and to the surrounding area.

Catchment area maps were available in 12 schools and lists of villages in 6. The teachers interviewed were requested to make a map and have a list of villages available to assist in the planned sensitization and baseline data collection activities in January.

Questions were also asked regarding the presence of various committees in the school, at nearby rural health centres and in the communities. All schools reported PTAs and the majority were active. Area development committees (ADCs) were present in 14 and were currently being formed in five schools as ward councilors had recently been promoting the. Neighborhood health committees are present in many areas and work closely with Rural Health Centres. Teachers were generally aware of them and in most cases knew of the work of Community Health Workers. Twenty teachers were able to list the names of the Community Health Workers working in the communities. Community development assistants (or social welfare workers) were less well known only in a few cases were teachers aware of such workers. However, 30 teachers did know of the various Social Welfare Committees at District DWAC, Provincial PWAC, Community CWAC. Six schools had active CWACs and had identified vulnerable children and received bursary assistance from PWAs (Public Welfare Assistance Scheme). Guidelines for the formation of these committees were found in several schools.

Production Unit

The vast majority of schools had production units but few used the produce for feeding of pupils. When the produce was used for pupils it was for special events or sporting activities. The types of crops grown were maize, groundnuts and cotton. Most were sold to generate money for purchasing materials for the school rather than to provide food for students.

Those schools that did not have production units or gardens explained that the reasons were that the plots were destroyed by animals, vandalized by villagers or they lacked sufficient water. In one case the headmaster said that the production unit could not be made because there was no chief in the area to allocate land.

In one school in Chipata we found students preparing 'Thobwa', an unfermented drink, using maize given to the school as payment in kind for school fees. This is an excellent start and other schools were encouraged to take similar initiatives from produce from production units or received from communities. It is important to start slowly by providing a snack of groundnuts, maize, sweet potatoes and expanding as the production unit is more successful. Longer term ideas such as the starting of orchards using fruit trees from seedlings produced through the Ministry of Agriculture was encouraged. Teachers were also urged to spread the message of the need for parents to give their children something to eat before coming to school and to carry a snack to school. Many pupils walked long distances without food and then were expected to be alert and perform in the classroom. Moreover, expecting pupils to work in the production units without themselves receiving any benefit is not what the original purpose of production units when they were promoted in the 1980's.

Health Problems

The major health problems experienced by students were malaria, bilharzia, diarrhea, eye infections, worms and skin rashes. There was also recent outbreak of measles in a few areas. Bilharzia was cited by a majority of teachers interviewed and often related to the many polluted water sources, dams and dambos where the students wash and swim.

We were pleased to find that twenty teachers reported that Rural Health Centre staff visited their schools. Twelve came once per year, 6 twice per year and two each term. The Rural Health Center most commonly provided immunizations for Grade 1 (BCG) and Tetanus Toxoid for (Grade 7). Some provided screening of children for bilhazia and provided parazquential treatment. In two cases pupils were advised to purchase the drug when the Rural Health Centre was out of stock.

When teachers were asked what the health workers did during their visits some said that just kept out of the way so that the health workers could do their work. This points to the fact that teachers need to understand more about school health issues to gain confidence and become involved in the process rather than standing back. Stronger linkages need to be forged between RHC staff and teachers and this should be an important goal for pilot activities. Teachers now feel that they should have no part in the health services provided to students and that they are two separate spheres of activity. Teachers will become more involved if they are trained and become more aware of the inter relationship of good health, nutrition and learning. Health workers also need to involve teachers as allies in their work and inform them of their activities, describe what they are doing and work together with teachers.

While it was disheartening to see the physical deterioration of some schools, lack of school requisites, water problems, and difficult circumstances of teachers it is encouraging what teachers have been able to accomplish with self help projects and community participation. It is clear that teachers require only a little encouragement and motivation. Many teachers are taking initiatives to improve their schools and health of the pupils and communities. For example, we found one school that had started a tree nursery to propagate trees that they had learnt was a good source of Vitamin A as derived from the seeds and leaves. Teachers were also very interested to learn of new agricultural methods and techniques and were willing to cooperate with the Ministry of Agriculture and other departments to improve their school. Clearly, they are eager to learn, hungry for more knowledge/information and willing to try new ideas given the opportunity.

LIST OF SCHOOLS	
Intervention	Control
Chipata	Chalumbe
Chamanda	Chawa
Chamasongwe	Chikungu
Chikando	Chingazi
Chipangali	Chiparamba
Dzoole	Chipata
J. M. Cronje	Chipikula
Kalunga	Chiwoko
Kanzutu	Chiziye
Kapatamoyo	Kanyanja
Kapoko	Kapara
Katambo	Kaphinde
Katandala	Kapita
Katawa	Kasenengwa
Katopola	Lunkhwakwa
Kasenga	Lutembwe
Kawambe	Magwero
Kawawa	Mkanire
Langa	Mkoma
Lukhalo	Mnoro
Maguya	Mshawa
Mambwe	Mtaya
Mchenja	Muziwa
Mnukwa	Mwasanka
Mwami	Mwita
Nkhalikali	Nthombimbi
Nkhoto	Nyakatali
Ngongo	Nyakutwa
Nyahzi	Sairi
Nyaviombo	Shamombo
Nyongo	Sisinje
Vizenge	* St. Annes (drop)
	Tamanda

LIST OF SCHOOLS	
Chadiza	
Intervention	Control
Chamandala	Bwanunkila
Chanida	Chankhandwe
Kazionele	Chanjowe
Mbande	* Kabvumo (drop)
Naviwiri	Kalembe
Zemba	Taferansoni
Vubwi	Taferadziko
Nsadzu	

LIST OF SCHOOLS	
Chama	
Intervention	Control
Kalovya	
Chama	
Kapalakonje	
Chitheba	
Mundalanga	
Katete	
Kambombo	

** Not visited

* To be dropped and replaced

G. Data for Eastern Province-Schools-Pilot activities

Name of School _____

District _____

Person(s) Interviewed _____

Date _____

Enrolment by Grade and Sex

	Males	Females
Grade 1	_____	_____
Grade 2	_____	_____
Grade 3	_____	_____
Grade 4	_____	_____
Grade 5	_____	_____
Grade 6	_____	_____
Grade 7	_____	_____

Total =

Teaching Staff _Number _____ Males

Teaching Staff -Number _____ Females

Infrastructure/facilities: Water supply _____ Wells/Rivers/etc.

Pit latrines _____ Water source _____ Electricity _____

Borehole _____ Washing facilities near the pit latrines _____

Where is the nearest health facility? _____ Distance walking to clinic (hours, minutes) _____

Does the facility have a refrigerator for storing samples? _____

Does the RHC staff come to the school to screen children and provide treatment? _____

Is there a teacher trained in first aid? _____

Do you provide school meals to any pupils _____

Villages in catchment areas _____ Is there a map or list available? _____ Population estimate of catchment area _____

Presence of other NGOs, organizations, working in area _____

Presence of Area/Village Development committees, Neighborhood Health committees, PTAs, CHWs, Community development assistants,

Distance from main road _____ Location –relative ease of access _____

Production units in the school? _____

Major health problems of pupils _____

How is the community participation and relations with the community?

Reasons for absenteeism and dropout? _____

Other comments and information: _____

Appendix G FIELD TRIP TO NDOLA – TROPICAL DISEASE RESEARCH CENTRE (TDRC) AND SCHOOLS (PAUL J. FREUND WITH MRS. C. PHIRI, SHN FOCAL POINT, MOE)- October 5-6

The general purpose of the trip was to visit the Tropical Disease Research Centre (TDRC) Ndola, to identify areas that the SHN could collaborate and to assess their capacity to carry out analysis of Vitamin A – serum retinal and iron levels.

At TDRC we met with Dr. Emmanuel Kafwembe (head of laboratories and acting Director) and Mr. David Muandu Programme Officer and Researcher. We discussed TDRC's areas of expertise, previous experiences in Vitamin A, survey capacity, and laboratory capacity. TDRC has extensive experience in Vitamin A research, data collection, field surveys, data analysis and quality assurance techniques. The analysis that would be required included:

Vitamin A (venous sampling) serum retinal
Iron levels (serum iron, hemoglobin, total iron binding capacity). These same samples can be tested for malaria parasites.

TDRC has a data collection team that would collect the samples required and be responsible for cool boxes, cold storage and transport of the samples in liquid nitrogen. This aspect is important to ensure the integrity of the samples and to protect Vitamin A from heat and light.

The number of samples to be collected is approximately 3,000 40 from 7 grades x 40 intervention schools, 3,000 from control schools.

A sub sample would be sent to South Africa for quality assurance testing (10% sample).

The budget for the analysis would include per diems of data collectors, transport, and equipment required.

Vitamin A = \$10 per sample
Iron = \$5

TDRC provided a budget for 3,000 samples (40 schools 20 Intervention and 20 control) (subject to change) at a cost of \$58733. A contract would be drawn up between TDRC and MoE to outline payment schedules, responsibilities and time frame. The budget will be discussed further by the SHN/PCD/and followed up.

OCTOBER 6

We visited the Provincial Education Officer Ndola office (Mr. J. C. Luo) to provide a briefing on our visit, to discuss general SHN issues and to arrange a visit to nearby schools with the District Education Office. We also met Mr. J. B. Chalaba (Deputy Provincial Education Officer) and Mr. M. Limbambala (Senior Inspector). We were informed that SHN focal points have been appointed and some committees formed.

At the District Education Officers office we met with Mr. S. F. Sakala (focal point for SHN) District Inspector of Schools and who accompanied us to Pamodzi Model School. We interviewed Mr. Zimba regarding various school activities, visited the production unit and talked with pupils. The school has an active production unit producing maize, tomatoes, onions, and cabbage. The crops are sold and some is provided for students for food. The school also has an active drama club and has received support for vulnerable children. Other activities include child to child, self help construction of pit latrines and a planned bore hole. When interviewing children we found that only 4 out of 10 had taken breakfast before coming to school.

We then visited Yengwe Upper Primary School near Ndola. The teachers interviewed had started a feeding programme and noted that they did see more alertness among the pupils. They also had a production garden with tomatoes, onions, maize, potatoes and rape. However, most of this produce was sold and only in the case of maize (ground) was it fed to pupils during sporting events. The school was giving expired baby food received from local groceries as a donation. While the jars of food was probably safe for a time after expiry we warned of the dangers of such a practice for long expired food and questioned the nutritional appropriateness of giving baby food for adolescents.

The school had experienced a fall in enrolments soon after the opening of a nearby community school "Chisankano" or "Barefoot". This was due to the fact that parents wanted to send their children to a free school which provided meals, shoes, blankets, etc. There is a misunderstanding by the community of the purpose of community schools. The community school was intended to cater for orphans and vulnerable children not all children in the area. This problem has been discussed by the PTA, District Education Officer's office and community and children are now coming back to the government school (Yengwe).

Yengwe school was visited by staff from a nearby health centre who provided deworming treatment including ringworm. The visit was in conjunction with Inter Care/PPAZ who used the opportunity to talk about family planning. Unfortunately, the team who visited concluded their work and left without briefing the teachers on what they had done. The teachers were upset about this and the fact that they were not involved in the exercise. While some teachers would prefer to stay out of the way of health workers some are eager and willing to participate in the process. This is an important lesson for the pilot activities. Teachers need to be informed, involved and aware of SHN at every stage of the process. Teachers should not simply be observers but they need to be involved as participants. As long as teachers receive training on SHN issues they will feel more comfortable when health workers come and engage in the activities.

We visited a community School started by a volunteer Mrs. Dackebury called "Barefoot" and also as Chisankano. The school was located within a short walking distance from the government primary school Yengwe.

The school had new buildings, a carpentry shop, an area for preparing and serving food, and a fenced garden. The school was intended for orphans and other vulnerable children in the surrounding community. Currently there are 150 pupils in 3 levels, roughly half are orphans.

The school provided breakfast and lunch for all pupils and some necessities such as shoes, clothing, etc. Because of the misunderstanding that arose regarding who should attend the school more than 40 pupils from nearby Yengwe enrolled in the community school because it was free and provided meals.

Following discussions with the District Education Officer, the community, PTA and staff of both schools the pupils are returning to the government school.

Appendix H. Implementation Plan-Eastern Province Pilot Activities

Activities	Time	Responsible	Means of Verification
Policy and Planning			
Draft School Health and Nutrition policy	Nov. 2000	SHN/MOE team Policy working group	Policy document finalized submission to cabinet office-guidelines available
Strategic Plan finalized	Nov. 2000	SHN/MOE	Final document
Letter of Understanding agreed and signed by MOE/MOH	Nov 2000	MOE/MOH/CboH	
Design of School-health card and circulation for comments	Nov. 2000	SHN/MOE/MOH	Signed letter
Develop school-based intervention data collection forms	Nov. 2000	SHN/MOE team	Design circulated and presented to symposia and technical committee
Cognitive assessment and School-based interventions protocol submitted to ethics committee	Nov. 2000	SHN/MOE	Forms available
Revised concept paper approved by MIT	Sept. -Dec 2000	SHN/MOE	Document submitted approval anticipated in 2 months
Visit key stakeholders to identify areas of cooperation and interest in SHN issues	ongoing	UNZA/SI/MOE/SHN	Paper approved, minutes of MIT
Cognitive	Oct.-Nov. 2000	SHN/MOE	Report and list of stakeholders
	Oct. 2000	PCD/UNZA/School of Medicine, NFNC	RA visit and report on activities

<p>assessment research assistant to collect background data and visit Yale SI group to begin work on test battery</p> <p>Field visit to selected EP schools to validate data and facilities, discussions with district and provincial officials</p> <p>Pilot testing and validation of height poles and cognitive instrument in Lusaka area schools</p>	<p>Jan. 2001</p>		<p>Field trip report</p> <p>Template produced and weight standards for Zambian children available</p>
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<p>Implementation plan for Eastern Province Pilot developed and circulated</p>	<p>Oct. 2000</p>	<p>SHN/MOE</p>	<p>Plan available</p>
<p>Situation analysis of EP finalized</p>	<p>Nov. 2000</p>	<p>MEDOF</p>	<p>Report available</p>
<p>Symposia to present the SHN programme, situation analysis findings, strategy, school health card.</p>	<p>Nov 14 2000</p>	<p>SHN/MOE/Situation analysis sub committee</p>	<p>Symposia report with recommendations and list of participants</p>

Activity	Timing	Persons responsible	Means of verification
Cognitive Assessment	Feb 2001	Successful Intelligence group	
Draft, pretest and revision of core test (100)items for CAI		Yale-Paula Kapungulya, UNZA assessment centre	Report and test battery of items available
Translation and testing in Zambia (150) pupils from Grs. 2-6	Mar. 2001	SI team, UNZA	Data/Report
Draft cognitive assessment procedures manual for teachers	Feb. 2001	UNZA, Assessment Centre, SI	Exam with report and analysis
Pilot test manual and items (grs. 2-6-250 p.)	Mar. 2001	SI, UNZA trainers, teachers	Progress reports
Revision and modification based on pilot test	Apr. 2001	NEC, UNZA, SI	Revised manual available
Workshop to discuss findings	Apr. 2001	NEC, Teachers	Progress reports
Revise manual and CI that can be validated against Gr. 5 Nat. Assessment	May 2001	Districts, teachers, SHN/MOE	Revised manual Available
Validate battery of tests, grades 2-6	May-Jun 2001	UNZA team, SI	Progress reports
TOT for teachers to learn how to administer CI and develop M/E pl.	Jun 2001	SHN/MOE, UNZA team and SI	TOT report
Implement CI in EP	Jul 2001	UNZA team, SI	Reports
Data analysis	Jul. Aug 2001	Exams Council, SI	Data analysis report
	Aug 2001	UNZA team, SI	Reports
	2002 and 2003	Teachers trained, District, UNZA, SI	

<p>administered to grds 5, 6, 7 in control and intervention schools</p> <p>Monitor and retest (2002 and 2003) revise and modify.as needed</p> <p>Expansion of cognitive and SHN interventions, 20 controls become intervention and 20 new schools added as control, year 3 these controls become intervention schools</p>	<p>2002 ongoing</p>	<p>SI, UNZA</p>	<p>Expansion plans ongoing</p>
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School-based Interventions	Timing	Responsible persons	Means of Verification
Identify collaborators for the survey team and baseline data collection.	Nov./Dec. 2000	SHN/MOE, PCD, (TDRC, NFNC, UNZA, UTH, Microbiology depart.)	Reports/agreements reached on roles and responsibilities
Define roles of survey team, develop plan including logistics of the survey to be an integrated team effort carried out in a coordinated most cost-effective and time efficient manner.	Dec. 2000	MOE/SHN	Plan with responsibilities delineated
Drug procurement process begun through Central Medical Stores with guidelines drawn up by MOH. Districts health boards aware of drugs to be used and where they will be delivered and how repackaging will be done.	Jan. 2001	MOE/SHN, MOH, DHMB	Drug plan in place order placed Jan 2001-distribution and storage guidelines worked out
	Jan 2001	SHN/MOE	SHN guidelines collaboration with EMIS activities
SHN/MIS needs assessment (finalization of school-health card)	Jan./Feb. 2001	Teams, District SHN, DMB supervisors	
Baseline data collection carried out by teams (height and weight, blood sample, stool, urine)	Mar. 2001	SHN/MOE	
Stool and Urine			

<p>TDRRC for analysis</p> <p>Baseline results available and drug delivery scheme developed after teacher training & community Sensitization..</p> <p>Administration of drugs and measurements of pupils done by teacher</p>	<p>June/Jul. 2001</p>	<p>Teachers, supervisors, HWs, DHMBs</p>	
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Activity	Timing	Person responsible	Means of Verification
Training			
Identification of Provincial and district level people to be trained and resource persons/facilitators.	Dec. 2000	SHN/MOE team	List of persons to be trained
Materials prepared by PCD and SHN (existing modules) updated.	Jan. 2001	SHN/MOE, PCD, Provincial and district resource, TTI	Reports on workshops
Three day "TOTs" for core team workshop (disease awareness, life skills, participatory teaching methodologies.	Jan. 2001	SHN/MOE, district trainers from TOTs	"
District level training workshops in zonal resource centres on SHN issues, community approaches, recording, (teachers, CHWs, CDWs)	Jan/Feb. 2001	SHN/MOE	"
Plan for training of teachers in SHN issues, use of health card, anthropometric measurements, water/sanitation,	Jan. 2001	District training team	Reports
Training of teachers phased in groups 2-3 day workshops (appro. 200/yr. National level, awareness workshop on SHN issues	From Mar. 2001 and ongoing	Trained district and resource persons	Reports
	Mar. 2001 ongoing	SHN/MOE, resource trainers	Progress reports

<p>through TTI in EP Community level training, through meetings, informal discussions popular theatre, etc. on SHN issues analyze ways to respond to issues and problems/develop action plans</p> <p>School level teacher training and training of pupils on health and nutrition .</p>	<p>Feb. Mar. 2001</p>	<p>District trainers and field teams, teachers</p>	<p>Progress reports</p>
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Activity	Timing	Persons responsible	Means of verification
Community sensitization			
District field team identifies key leaders, individuals, organizations in communities	Jan. 2001	SHN/MOE/District focal points	Progress reports with lists of persons/organ.
Holding of public meetings in villages surrounding school catchment areas	Jan. Feb. 2001	Field team/district supervision /SHN/MOE	Reports
Follow up meetings to develop priorities, simultaneously with work of popular theater groups	Feb. Mar. 2001	“	Progress reports
Contracting of popular theater groups, develop key messages to target and write scripts, develop logistic plan for groups in control and intervention areas	Feb. 2001	EP SHN team, UNZA, MOE/SHN	Progress reports
Popular theater groups begin work in catchment areas	April 2001	Groups selected supervised by EP team	Reports
Monitor work and modify if necessary, script and method of working,	Feb. 2001	EP SHN team, central SHN/MOE	Action plans, minutes of meetings, reports
Training of communities use of meetings, focus groups IFC Media	Mar. 2001	SHN teams	Reports

<p>campaigns, popular theater, etc.</p> <p>Training of district level SHN team will include community approaches and Methodologies.</p> <p>Communities begin interventions as defined by their priorities and action plans.</p>	<p>May-ongoing</p>		<p>Progress reports</p>
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Activity	Timing	Persons responsible	Means of verification
IEC			
Conduct IEC assessment in EP and develop IEC strategy	Jan. 2001	IEC specialist and district SHN team	Report
Develop materials based on priority messages identified	Feb. Mar. 2001	“	Materials- drafts
Pretest draft materials with target audiences in communities, etc.	Mar. Apr 2001	schools in EP, teachers and district team, IEC specialist	Report of pretest results
Develop and modify based on testing results	Apr. 2001	IEC Specialist/printing companies	Printed materials available
Design print and distribute to districts, schools	May 2001	“	Reports
Follow up monitoring of materials	May 2001	“	Evidence of SHN being disseminated through radio and other media.
Develop other media approaches, newspaper, local radio, social marketing, coordination with other projects ADRA Child Alive, Child to Child, Plan International and WV in EP	Apr. 2001 ongoing		

Appendix I- School Health Card

MINISTRY OF EDUCATION
School Health Card



Name of School: _____ District _____
Surname First name

Name of Child: _____ Sex: F M

Date of Birth: ____ / ____ / ____

Address: _____ Distance between Home and School _____

Name of Parent/Guardian _____ Relationship _____

Address of Parent/Guardian _____

Grade 1 Date of Exam: ____ / ____ / ____ Child's Age: ____ Yrs ____ month

Body Weight(Kg)		Eyesight	Normal / Abnormal
Body Height(cm)		Ears: Infection	No / Yes
Hair: Lice	No / Yes	Teeth: Caries	N / Y
Skin: Rash	N / Y()	Hearing	Normal / Abnormal
Nails	Clean / Dirty	Nose: Discharge	No / Yes
Eyes: Anaemia	No / Yes	Speech	Normal / Abnormal
Jaundice	No / Yes	Posture and Gait	Normal / Abnormal
Infection	N / Y()	BCG Scar	No / Yes

	Term one	Term Two	Term Three
General Academic performance, Good, Average, Poor			

Grade 2

Date of Exam / / Child's Age: Yrs month

Body Weight(Kg)		Eyesight	Normal / Abnormal
Body Height(cm)		Ears: Infection	No / Yes
Hair: Lice	No / Yes	Teeth: Caries	N / Y()
Skin: Rash	N / Y()	Hearing	Normal / Abnormal
Nails	Clean / Dirty	Nose: Discharge	No / Yes
Eyes: Anaemia	No / Yes	Speech	Normal / Abnormal
Jaundice	No / Yes	Posture and Gait	Normal / Abnormal
Infection	N / Y()	BCG Scar	No / Yes

	Term One	Term Two	Term Three
General Academic performance, Good, Average, Poor			

Grade 3

Date of Exam / / Child's Age: Yrs month

Body Weight(Kg)		Eyesight	Normal / Abnormal
Body Height(cm)		Ears: Infection	No / Yes
Hair: Lice	No / Yes	Teeth: Caries	N / Y()
Skin: Rash	N / Y()	Hearing	Normal / Abnormal
Nails	Clean / Dirty	Nose: Discharge	No / Yes
Eyes: Anaemia	No / Yes	Speech	Normal / Abnormal
Jaundice	No / Yes	Posture and Gait	Normal / Abnormal
Infection	N / Y()	BCG Scar	No / Yes

	Term One	Term Two	Term Three
General Academic performance, Good, Average, Poor			

Grade 4

Date of Exam: / / Child's Age: Yrs month

Body Weight(Kg)		Eyesight	Normal / Abnormal
Body Height(cm)		Ears: Infection	No / Yes
Hair: Lice	No / Yes	Teeth: Caries	N / Y()
Skin: Rash	N / Y()	Hearing	Normal / Abnormal
Nails	Clean / Dirty	Nose: Discharge	No / Yes
Eyes: Anaemia	No / Yes	Speech	Normal / Abnormal
Jaundice	No / Yes	Posture and Gait	Normal / Abnormal
Infection	N / Y()	BCG Scar	No / Yes

	Term One	Term Two	Term Three
General Academic performance, Good, Average, Poor			

Grade 5

Date of Exam: ___ / ___ / ___ Child's Age: ___ Yrs ___ month

Body Weight(Kg)		Eyesight	Normal / Abnormal
Body Height(cm)		Ears: Infection	No / Yes
Hair: Lice	No / Yes	Teeth: Caries	N / Y()
Skin: Rash	N / Y()	Hearing	Normal / Abnormal
Nails	Clean / Dirty	Nose: Discharge	No / Yes
Eyes: Anaemia	No / Yes	Speech	Normal / Abnormal
Jaundice	No / Yes	Posture and Gait	Normal / Abnormal
Infection	N / Y()	BCG Scar	No / Yes

	Term One	Term Two	Term Three
General Academic performance, Good, Average, Poor			

Grade 6

Date of Exam: ___ / ___ / ___ Child's Age: ___ Yrs ___ month

Body Weight(Kg)		Eyesight	Normal / Abnormal
Body Height(cm)		Ears: Infection	No / Yes
Hair: Lice	No / Yes	Teeth: Caries	N / Y()
Skin: Rash	N / Y()	Hearing	Normal / Abnormal
Nails	Clean / Dirty	Nose: Discharge	No / Yes
Eyes: Anaemia	No / Yes	Speech	Normal / Abnormal
Jaundice	No / Yes	Posture and Gait	Normal / Abnormal
Infection	N / Y()	BCG Scar	No / Yes

	Term One	Term Two	Term Three
General Academic performance, Good, Average, Poor			

Grade 7

Date of Exam: ___ / ___ / ___ Child's Age: ___ Yrs ___ month

Body Weight(Kg)		Eyesight	Normal / Abnormal
Body Height(cm)		Ears: Infection	No / Yes
Hair: Lice	No / Yes	Teeth: Caries	N / Y()
Skin: Rash	N / Y()	Hearing	Normal / Abnormal
Nails	Clean / Dirty	Nose: Discharge	No / Yes
Eyes: Anaemia	No / Yes	Speech	Normal / Abnormal
Jaundice	No / Yes	Posture and Gait	Normal / Abnormal
Infection	N / Y()	BCG Scar	No / Yes

	Term One	Term Two	Term Three
General Academic performance, Good, Average, Poor			

Appendix J. Draft National SHN Policy Document

Republic of Zambia



Draft

National

School Health and Nutrition Policy

Lusaka
November 2000

FOREWORD

The School Health and Nutrition policy is based on National Education Policy entitled "Educating Our Future", which partly states that one of the aims of education is to foster health living, physical coordination and growth. The school health and nutrition programme is the sum total of all health and nutrition activities that go into promoting the physical, social and the mental well being of the child. Poor health, due to diseases among school age children retards their physical and mental development. This leads to absenteeism from school and reduction in active learning capacity.

The guiding principle of this policy is that optimum health and nutritional status of children is a determining factor for effective learning. Therefore, this policy will attempt to address and promote the health and nutrition status of school children through the strategies outlined herein. The outlined objectives and strategies will be subject to regular reviews to keep abreast with new trends in health and nutrition.

Realizing the importance of partner line ministries and other stakeholders in the provision of education services, this policy will promote collaboration with relevant institutions.

Hon. Brigadier General Godfrey Miyanda, MP.
Minister of Education
November 2000

ACKNOWLEDGEMENT

The development of this policy has been a collaborative effort between the Ministries of Education, Health, Community Development and Social Services and other stakeholders.

We acknowledge the contributions made by various experts in health, community development nutrition, education, and other fields.

The commitment and determination of the School Health working group and all those who participated in developing this policy document is greatly appreciated.

We also extend our sincere thanks to our cooperating partners for their support.

Sichalwe M. Kasanda (Dr.)
Permanent Secretary
Ministry of Education

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ACRONYMS

AIDS	Acquired Immune-Deficiency Syndrome
ANC	Ante-Natal Clinics
ARI	Acute Respiratory Infection
BESSIP	Basic Education Sub-Sector Investment Programme
CDC	Curriculum Development Centre
CSO	Central Statistics Office
DHS	Demographic Health Survey
ESSIP	Education Sub-Section Investment Programme
FAO	Food and Agriculture Organisation
GMP	Growth Monitoring and Promotion
HIV	Human Immuno Virus
IDA	Iron Deficiency Anemia
IDD	Iodine Deficiency Disorders
IEC	Information Education and Communication
MCDSS	Ministry of Community Development and Social Services
MCH	Maternal Child Health
MLGH	Ministry of Local Government and Housing
MOE	Ministry of Education
MOH	Ministry of Health
MSYCD	Ministry of Sport, Youth and Child Development
NFNC	National Food and Nutrition Commission
NGO	Non-Governmental Organisation
PEM	Protein Energy Malnutrition
PTA	Parent Teachers association
RH	Reproductive Health
SHN	School Health and Nutrition

STI Sexually Transmitted Infection

VAD Vitamin A Deficiency

INTRODUCTION

School health services began in the pre-independence era. At that time, school health services were mainly for European schools. By 1964 the Zambian government extended school health services to all schools regardless of race. The provision of school health service was not evenly spread around the country. Urban schools were effectively covered by 1972 and later all rural schools were accorded the service. During this time a school health specialist was appointed in the Maternal and Child Health Unit of the Ministry of Health.

Among the services provided by the school health service were the following:

- a) Physical medical examination of children in Grades 1, 7, 9 and 12. This included all children who were lateral entrants from other schools and those referred from other grades by the teachers.
- b) Treatment and referral of those children requiring specialized treatment.
- c) Epidemiological investigations of communicable diseases affecting school children.
- d) Health education on common diseases.
- e) Safety regarding the school environment, accidents and injuries.
- f) Counseling services to children and parents or guardians.
- g) First Aid Kit to cater for children if accidents occurred.
- h) Immunization such as polio and BCG to grade one, tetanus toxoid to all other grades.
- i) Environmental health as regards school location, ventilation and comfort. This included refuse disposal, sanitation, hygiene and emotional environment.
- j) Nutrition to improve the nutritional status of children. This included provision of nutritious meals to pupils.
- k) Medical records to keep the child's health history for a lifetime.
- l) Specialized services for children with disabilities.
- m) Water supply – the Ministry of Health made provision for water wells in schools. (However resource constraints did not effectively permit broader coverage).
- n) Washing facilities – this was important for pupils in boarding schools.

- o) Physical education facilities – these were provided to a few schools due to financial resource constraints.
- p) School gardens were encouraged to provide pupils with agricultural skills and to supplement pupils' meals.
- q) Parent Teacher Associations were involved in child health services.
- r) Drug Kits – all schools were provided with basic drug kits. These were used to provide anti-malaria prophylaxis, deworming and treatment of injuries and other minor ailments.

School health services have been declining since the 1980s due to structural, financial, staffing and resource constraints. In the early 1990s a decision was made to transfer school health services from the Maternal and Child Health Unit to the National Food and Nutrition Commission. The Commission was mandated to coordinate the school health services. However due to technical and logistical problems, the Commission failed to institute the service. A bold decision was made for the Ministry of Education to integrate school health services into the Education Sub-Sector Investment Programme (ESSIP). This meant that teachers would be trained to carry out the service and the Ministry of Health would provide support technical services.

The Child-to-Child programme was transferred to the Ministry of Education in 1985. This was basically a health education and health promotion programme complementing the school health programme. These programmes have not been effective due to various factors. Some of these factors include depletion of staffing levels in health institutions, material and other resource constraints, structural changes due to reforms and lack of support by donors.

CHAPTER 1

1.0 SITUATION ANALYSIS

In 1999 the population of Zambia was estimated at 10.8 million. Children aged 0 – 15 comprised 45% of the total population (CSO: 1996). This implies that Zambia has a significantly young population.

The socio-economic problems largely affect children and mothers as indicated by the deteriorating health status, increasing levels of poverty, malnutrition (42% of children stunted – cite source DHS 1996/Living Conditions Monitoring Survey) and disease burden. The combined effects of these problems lead to reduction in the child's capacity and motivation to learn, delayed enrolments, absenteeism, high repetition rates, dropouts and push outs.

The situation analysis conducted in Zambia on school health and nutrition has highlighted many health and socio-cultural problems affecting school age children.

Among the diseases which were prevalent were Malaria, Diarrhea, ARI, Eye/ear diseases, STIs/HIV/AIDS, Fever, Headache, worm infestations (bilharzia and intestinal parasites), Anaemia (Luo et al. 1999, UNICEF 1997) M.E 2000).

The Nutritional problems included PEM and Micronutrient deficiencies.

Other problems cited were those of poor water and sanitation, socio-cultural problems (early marriages, teen pregnancies, some aspects of traditional practices, child labour, substance abuse), adolescent reproductive health problems and poor school environment.

Although there are no specific surveys on STI/HIV/AIDS among school going children, the magnitude of these problems is high. Data from the sentinel surveillance reports that HIV prevalence among the 15 – 19 year olds is 15 – 16%. This entails that sexuality education programmes for school age children should be promoted in order to reduce the high rate of morbidity and mortality due to STIs and HIV/AIDS (Kinsman et al., 1999).

1.1 Health and Nutrition Problems

1.1.1 Health Status

A large number of children are vulnerable to diseases, which are apparently preventable. Most people believe that children of school going age are healthy. This is because they are a very active group. But this is not true for most children. At the school entry age that is 6 or 7 years children are at a stage of rapid mental, physical and social development. A child at this age is more likely to suffer from several common health problems than an adult. Children of school age therefore may succumb to physical, mental and social health problems that they not be attended to by the health services.

The school environment poses a great risk to child health. This risk could be attributed to the school buildings, sanitary facilities, school grounds, diet, healthy skills, personal hygiene,

communicable diseases, common infections, accidents and injuries to mention but a few. These can strike a child at any given period dividing their interaction with the schooling system.

Many children (50%) are malnourished. This makes them vulnerable to diseases. A lot of children carry parasitic worms, skin infections and many other illnesses. These may not necessarily be acquired on school environment, and they have a great impact on the child's capacity to learn. Various social negative effects affect children in one way or another. These may include negative social problems at home, the social pressures at school, the negative economic pressures and many others. These provide ground for psychological pressures on the child.

It is apparent that more than 80 per cent of school age children do not meet the desirable health status for healthful living. This has a negative impact on the physical, psychological, and social development of the child in Zambia. As children grow, they develop physical, psychological and social needs that need to be addressed. The social changes in Zambia have displaced the child from the intimate traditional systems. The transition from childhood to adulthood is one such problem. The parents and schooling system are ill equipped to handle these traditional childhood changes. Adolescents are therefore more prone to physical, social and psychological health problems.

These have not been attended to for many years. The schooling system does not have the technical and resources to handle the adolescent stage. The health system is not specific in the provision of adolescent services. Besides, there are more primary schools that are far away from health institutions. Therefore the health system may not be the best in handling school age child health. It is therefore vital that the teacher or community volunteers or the pupils themselves be equipped technically to take care of the school age child's health.

1.1.2 Nutrition

School going children are the most affected by nutrition problems due to the high demand for nutrients required for growth and development. Additionally, these children are prone to many infections such as diarrhea, worm infestations, malaria, measles, and respiratory infections through which important nutrients necessary for their growth and mental development may be lost.

Malnutrition is a serious and wide spread socio-economic and public health problem in Zambia. The major nutrition problems are Protein-Energy Malnutrition (PEM) and micronutrient deficiency. Approximately 12% of babies are born with a low birth weight, 53% of children are stunted and 20 – 30% of hospital admissions were due to malnutrition. Hospital records show that 30% of child mortality in 1994 was attributed to malnutrition. About 56% of orphans and 49% of non-orphaned children were stunted. (USAID/UNICEF/SIDA 1999, FAO 2000, UNICEF 2000)

Food insecurity and high levels of poverty in the country, has increased the levels of malnutrition among school children. According to the Demographic Health Survey (DHS)

(1996), malnutrition contributes over 50% of all infant and child deaths in Zambia. This shows a declining trend from 1994 (30%).

(a) Protein Energy Malnutrition (PEM)

Protein Energy Malnutrition is caused by not eating enough nutritious foods. This may also arise from factors such as poverty, infections and diseases like diarrhea, measles and malaria. The effects of PEM on school going children are varied but the most common are poor growth, slow psychomotor coordination, slow learning and poor social development. The most common forms of PEM are: stunting (long term malnutrition)/height for age, wasting (under nutrition)/weight for height and underweight (acute/long-term malnutrition)/for age.

(b) Micronutrient Deficiencies

The main micronutrient deficiencies of concern in Zambia are those caused by lack of Vitamin A, Iron and Iodine. An examination of available data shows that malnutrition rates are very high and that there has been little improvement in nutrition status since the early 1970s.

(c) Vitamin A Deficiency (VAD)

A good vitamin A status promotes the body's defense system against diseases such as diarrhea, measles, and malnutrition and reduces the severity and duration of these diseases. Vitamin A is also necessary for the healthy growth and development of children. Lack of vitamin A in the body causes poor eyesight especially at night (night blindness), which if not corrected early leads to total blindness; a condition that can negatively impact children's learning achievement. Low retinal levels affected 23% of children aged 60 – 72 months and 26% of pregnant women (FAO, 2000). Another study shows that 25 – 50% of children are Vitamin A deficient (UNICEF, 1997).

(d) Iron Deficiency Anemia (IDA)

Inadequate intake of iron results into Iron Deficiency Anemia. IDA contributes to delayed mental development in infants and young children. A contribution and combination of preventable infections and parasitic diseases such as malaria, worm infestations, diarrhea when compounded with poor diet contribute highly to IDA amongst school going children. It should be noted that children aged up to 14 years is estimated at 15% while 50% of pregnant women attend ANC (FAO, 2000).

(e) Iodine Deficiency Disorders (IDD)

The most common Iodine Deficiency Disorder in Zambia is goiter. 32% of children 7 – 14 years old, 46 – 82% of school children are Iodine deficient. Iodine is a nutrient necessary for normal metabolism. Other forms of IDD could result into reduced mental

development, growth retardation and impaired mental function. These problems could lead to delayed enrollment of children, poor attendance, poor performance in class, high repetition and drop out rates in the early years of school. Iodine Deficiency Disorders arise from inadequate intake of iodine. All Zambian foods are deficient in iodine because it is a land locked country. The most important source of iodine is iodated salt.

1.2 Environmental Health

Environmental health and sanitation are real problems in our schools. Inadequate water supply and poor refuse disposal have continued to be a major problem in schools in Zambia leading to several diseases such as scabies and lice infestation, bilharzias, dysentery and cholera.

Diseases such as cholera, dysentery and diarrhea have become major killers in most of the largest urban areas and some rural provinces. Between 1981 and 1991 outbreaks of preventable water borne diseases have shown a steady increase with over 12,000 cases of dysentery and recorded in 1991. It was therefore observed that 51% of all households had access to safe water, and 46% has access to adequate sanitation (GRZ/UNICEF 1994).

1.3 Adolescent Sexual and Reproductive Health

Adolescence is a stage of transition from childhood to adulthood and is characterized by physical and mental development changes. Adolescents are by nature prone to taking risks on the basis of insufficient and incorrect information relating to their sexuality. As a consequence, they are at risk of contracting STI's/HIV/AIDS, teen pregnancies, and are more likely to jeopardize their potential careers. The DHS show that the least knowledgeable group is adolescent girls and boys aged 15 to 19, although boys tended to have more knowledge of STIs than girls. Indulgence in substance abuse has become more common leading to increased risk behaviour existing in absenteeisms, vandalism, violence, and dropping out of school.

The current HIV/AIDS situation adds to the complexity of health issues in education. Urbanization and the transition from traditional to modern culture have given rise to new patterns of sexual behaviour in adolescents leading to unprotected premarital sex, which often leads to early pregnancies and induced abortions. It has been observed that the majority of women in Zambia become mothers before reaching the age of 20. Three out of ten teenagers in Zambia have either already had a child (24%) or are pregnant with their first child (7%). The medium age at first birth for women aged 20 – 49 is 18.7%. On the other hand, only 12% of women 15 + 9 started using contraception before they had a child (ZDHS, 1996). Similarly, large proportions of adolescent youth are sexually active. According to ZDHS (1996), in Zambia 70% of women aged 20 – 49 have had sexual intercourse by age 18 whilst 90% of men aged 22 have had sexual intercourse by age 16.

The exploding numbers of orphans due to AIDS poses further problems in the education system. The number of orphans was estimated at 520,000 in 1999 and is projected to be over 895,000 by 2009 (HIV/AIDS MOH 1999). As at 1996, 64% of orphaned children had a deceased father, 22% had a deceased mother and 14% were double orphans. 13% of all Zambian children were orphans. (Orphans and Vulnerable Children: Situation Analysis Zambia 1999). A high proportion of these orphans are likely to experience low standards of living and high levels of morbidity and mortality. For economic and health reasons, many of them may be unable to attend school. A further dimension of the HIV/AIDS problem is the fact that teachers fall within the age groups that are most vulnerable to infection.

1.4 Communicable Diseases

Children who begin grade one are normally in the age range 6 to 7 years. These children are vulnerable to various infectious diseases whether they were vaccinated or not. Most children are missed during routine immunization, hence are at risk of contracting some of the childhood diseases.

In the past school going children have been victims of preventable diseases. Outbreaks of measles, meningitis, tuberculosis, whooping cough, and other infections have been very common among school age children. Some children were since affected because of late implementation of control measures.

The previous approach to school health service put children at great risk as their access to quality preventive and promotive care were inadequate. In addition, teachers were not fully trained and equipped to undertake tasks. The health care system is inadequate to fully support the school health system. It is vital that a working system be put in place to safe guard the health of the children in school. All children at grade one require BCG vaccination. Those that are in grade 7, 9 and 12 require tetanus toxoid. These are vaccines that can protect the children from specific illnesses.

Furthermore, poor water and sanitation facilities in schools puts children at risk for contracting diarrhea, dysentery, intestinal parasites, balharzia and skin and eye problems.

1.5 Non-Communicable Diseases

Statistics from the Drug Enforcement Commission indicate that over 3,000 people in Zambia are addicted to psychotropic substances. Alcohol consumption is more or less universal in Zambia. Marijuana is consumed and produced in many communities. This has made it difficult for the government interventions to work effectively.

Most school aged children abuse psychotropic substances like alcohol, tobacco, marijuana and other drugs of dependence. Because of the statutes that provide for arrestable offences, children do not report their dependence problems. Only extreme cases are brought to the attention of the class teacher and headmaster. This kind of

scenario poses a great risk for children who are not yet substance dependent because they can easily be hooked to psychotropic drugs through peer pressure. Moreover, appropriate counseling services are often lacking and teachers have no training in how to recognize early signs of substance abuse problems.

The Drug Enforcement Commission and NGOs have initiated clubs at schools. These clubs are not covering all schools. Their impact on child behaviour towards psychotropic substance is not verifiable. The efforts in school interventions are difficult to quantify in terms of impact on children's behaviour towards psychotropic substance dependence. It is therefore necessary that the school health service integrate effective and efficient strategies to control substance abuse among school-aged children.

1.6 Control of Childhood Diseases

Over many years the health care services have tried to make available antigens against common childhood illnesses. The coverage for under fives in most antigens have been in the range of 50 to 80 per cent. This means that 20 to 50 per cent of the Zambian children are not effectively protected against common childhood diseases. It is also evident that 15 per cent of children who are apparently vaccinated will not sero-convert. Cumulatively these children will enter the schooling system without the anti bodies that can protect them from common childhood illnesses. Rampant malnutrition among school going children weakens the body's ability to withstand infections. As a result children are vulnerable to common preventable childhood illnesses. It is apparent that the HIV/AIDS epidemic has also rendered some children vulnerable to preventable childhood illnesses. These factors call for the urgency for children to receive a comprehensive service that limit the child's chances to succumb to preventable childhood illnesses.

1.7 Health Education and Health Promotion

Since independence the education system has strived to provide personal health skills to children who pass through the formal schooling process. This process has benefited a lot of children who have passed through the education system.

During the 1970s and 1980s it was observed that the schooling system had short falls in health education programmes and teacher exposition skills. In a majority of cases teachers were ill equipped to provide effective health education and health promotion to pupils. The Ministry of Health and Ministry of Education collaborated in initiating the Child-to-Child programme. This had instituted the integration of health education and health promotion into the school curriculum. The teacher-training curriculum has also integrated health education. Efforts were made to develop teacher skills for health education. Teacher training lecturers have been trained and sensitized to provide health education to trainee teachers. Post-service seminars were held to provide the necessary skills to teachers in the field. The Child-to-Child approach has been piloted and expanded through out the schooling system. Currently the school health promotion programme has been initiated but is yet to be fully funded.

The impact of various health education and promotion programmes is difficult to quantify. This is due to the fact that behaviour and personal skills take a long time to be visibly apparent. Besides various negative socio-economic factors affect the disposition of children to health behaviour.

It is therefore apparent that a comprehensive system be implemented now that will facilitate health life skills development among school age children. This will facilitate the promotion, sustenance and maintenance of children's healthy living.

1.8 Institutional Framework

The following have been key stakeholders in the provision of school health and nutrition services.

- 1.8.1 MoE – mandated to guide the provision of education for Zambians to enhance acquisition of knowledge, skills, morals and value culminating in holistic development of the child.
- 1.8.2 MoH – mandated to provide cost-effective health care services as close to the family as possible. Among the priorities are child health and nutrition, STI/HIV/AIDS reproductive health services and water and sanitation.
- 1.8.3 MCDSS – Provide social welfare services to the poor and vulnerable, and life coping skills to the Zambian society. MCDSS also attempts to integrate culture into developmental process through literature, drama and fine arts and so on.
- 1.8.4 Ministry of Sport, Youth and Child Development – offers skills training to unemployed youth, provides child advocacy programmes and support systems to ensure the rights and well-being of the child are protected, and fosters the development of sport.
- 1.8.5 NFNC – mandated to provide technical advice and guidelines on issues related to nutrition.
- 1.8.6 Ministry of Local Government and Housing – deals with provision of water and sanitation in urban communities. Also charged with responsibility over environmental safety of nurseries, pre-schools and day care centers.
- 1.8.7 Ministry of Agriculture, Food and Fisheries – provision of inputs and agriculture extension.

However, collaboration and coordination has been weak among key stakeholders.

1.9 Legal Framework

The following pieces of legislation have been used to govern the implementation of the School Health and Nutrition programme:-

- 1.9.1 The Education Act of 1966, Chapter 234 of the Laws of Zambia, Section 47, which state in part that:

“the Minister of Education may by statutory instrument, make regulations:-

for safeguarding the health of pupils attending schools and in particular, providing for closing of school on grounds of health, compulsory medical and dental examination of pupils, and the exclusion of pupils from school on the grounds of health.”

1.9.2 Health Service Act of 1997

1.9.3 Public Health Act of

VISION

“To provide quality and cost effective school health and nutrition to all school children.”

MISSION STATEMENT

The mission of the school health and nutrition policy is to ensure that all pupils are accorded improved learning and equity in basic education through integrated health and nutrition interventions in collaboration with the community and other partners.

CHAPTER 2

2.0 GUIDING PRINCIPLES

The management of this policy and its implementation will be guided by the following principles:

1. Creating an enabling environment for the delivery of school health and nutrition services through effective planning, institutional management, resource mobilization, monitoring and evaluation.
2. Guaranteeing that quality school health and nutrition is instituted in all schools to benefit school age children and to sustain their healthful living.
3. Ensuring that equity of access to school health and nutrition service is accorded to every child of school age without discrimination such as in terms of sex, religious belief, social status or race.
4. Empowering Education Boards to take up an active and dominant role in decision-making on issues related to school health and nutrition programmes.
5. Ensuring that all teachers and other officers dealing with SHN have a high level of professional disposition in planning, implementing, monitoring and evaluating school health and nutrition programmes.
6. Strengthening partnership and community alliances required in the provision of quality school and nutrition programmes.
7. Ensuring equitable allocation and distribution of funds, material, micronutrient supplies, basic drugs and basic equipment necessary for the effective implementation of school health and nutrition service.
8. Take into serious consideration demographic, epidemiological, technological, institutional, cultural and socio-economic changes and their effect on school health and nutrition services.

CHAPTER 3

3.0 POLICIES

3.1 Nutrition

3.1.1 Goal

To improve the nutrition status of school going children.

3.1.2 Objectives

- a) To establish a micronutrient supplementation programme in all schools.
- b) To establish a malnutrition monitoring programme in all schools.
- c) To promote dietary diversification in schools.
- d) To provide nutrition education in schools and teacher training colleges.
- e) To monitor the nutritional status of school children.
- f) To promote the provision of safe and hygienic food service on the school premises.
- g) To promote healthy eating habits among school going children.
- h) To strengthen Community Based Nutrition Activities

3.1.3 Policy Statements

In order to reduce the high levels of micronutrients deficiencies the government through MOE shall ensure that:

- a) There is a procurement, distribution and monitoring system for nutrition supplements;
- b) Teachers and community volunteers on the supplementation programme are trained;
- c) The stakeholders will promote the use of fortified foods and the consumption of micronutrient rich foods;
- d) Health and Nutrition education (topics on the use of fortified foods and consumption of micronutrient foods) are integrated in the school curriculum;
- e) The deworming programme is established;
- f) Vitamin A and Iron Tablets distribution programme promoted;
- g) Home Economics Departments in schools are supported.

3.1.4 Strategies

In order to implement the above policy statements MoE will apply the following strategies:

- a) Develop a procurement, distribution and monitoring system for supplements;
- b) Train teachers and community volunteers on the supplementation programme;
- c) Encourage the involvement of all stakeholders in promoting the use of fortified foods and the consumption of micronutrient rich foods.
- d) Integrate topics on the use of fortified foods and the consumption of micronutrients in nutrition education.
- e) Deworm school going children twice every year.
- f) Provide Vitamin A and Iron Tables according to the prescribed regimen.
- g) Home Economics Departments are supported

3.2 Protein Energy Malnutrition (PEM)

3.2.1 Policy Statements

In order to reduce the high levels of PEM the government through MoE shall:

- a) Facilitate revitalization of food production units.
- b) Encourage community participation in the school feeding scheme.
- c) Establish a malnutrition monitoring programme in all schools.
- d) Introduce a Growth Monitoring and Promotion (GMP) programme for schools.
- e) revitalize school food production units;
- f) institutionalize nutrition education at all levels of the school system;
- g) ensure all food handlers and sellers in schools undergo a medical examination and certified fit;
- h) strengthen links among school and community based groups to promote and support school nutrition related interventions;
- i) establish a malnutrition monitoring programme in all schools.

3.2.2 Strategies

In order to achieve the above objective, MoE will apply the following strategies:-

- a) train teachers and community volunteers in growth monitoring and promotion;
- b) encourage community participation in the school feeding scheme;
- c) develop a system in schools that will allow only nutritious foods to be sold from a central place;
- d) ensure all foods sold in schools are appropriately packaged;
- e) improve quantity and quality of school diets;
- f) encourage supplementary feeding programmes in schools for vulnerable and malnourished children;
- g) train teacher to monitor the weight and height measurement of pupils and record on the School Health Card every term;
- h) develop meals for monitoring the effectiveness of school feeding programmes;
- i) Encourage schools to embark on viable production units and diversification.

3.3 Health Problems

3.3.1 Goal

To promote and maintain the health status of school children and school environment in relation to their holistic development.

3.3.2 Objectives

- a) Establish and promote the physical, emotional, social and mental well being of every school child.
- b) Provide a conducive school environment.
- c) Provide health education at all levels of the school system.
- d) Strengthen Community Based Health activities.

3.3.3 Policy Statements

In order to promote and maintain the health status of school children the Ministry of Education will ensure that:

- a) a regular physical examination and immunization programme is established;
- b) a deworming programme is instituted;
- c) guidance and counselling services are strengthened;
- d) school health and nutrition information system is established;
- e) guidelines for screening, referral and treatment of children with health problems are developed and distributed to all schools;
- f) orientation for teachers to conduct physical examinations, basic treatment, guidance and counseling is provided;
- g) guidelines on the procurement, storage and distribution of basic drugs are developed and distributed to all schools;
- h) children are provided with protective clothing when cleaning and maintaining the school;
- i) adequate physical exercise for the children is promoted;
- j) ensure the provision of adequate facilities for children with special health needs;
- k) links among school and community based groups are promoted and strengthened to support health related interventions.
- l) health education is institutionalized at all levels of the school system; and
- m) collaboration between health services personnel, teachers and other stakeholders in the design and implementation of school health education is strengthened.
- n) promote physical education in schools.

3.3.4 Strategies

- a) examining, treating and immunizing school children.
- b) carrying out deworming exercises.
- c) procuring and distributing drugs to schools.

- d) creating partnerships between the school health service providers and the community.
- e) procuring and providing basic protective materials to school children.
- f) providing facilities for physical education in schools.

3.4 Water Supply and Sanitation

3.4.1 Goal

To promote the provision of clean safe water as well as adequate sanitation in schools.

3.4.2 Objectives

- to promote school sanitation and hygiene education programmes.

3.4.3 Policy Statements

In order to promote the provision of clean safe water and adequate sanitation in schools, the government through MoE shall:

- a) ensure the availability of adequate clean safe water.
- b) conduct regular inspection of school children for good personal hygiene habits and practices.
- c) ensure the availability of clean toilets and latrines by sex as prescribed by the Public Health Act;
- d) ensure that schools provide adequate hand washing facilities;
- e) ensure that schools provide adequate facilities for refuse collection and safe disposal.
- f) ensure that the school surroundings are safe and clean.
- g) ensure that school buildings are adequately ventilated.

3.4.4. Strategies

The following strategies will be used in order to realize the above policy statements:

- a) Provide adequate clean safe water.
- b) Provide appropriate sanitation facilities such as hand washing and refuse collection facilities.
- c) Provide teaching and learning materials for school sanitation and hygiene education.
- d) Facilitate the construction of well-ventilated school buildings.
- e) Promote safe and clean school surroundings.
- f) Conduct and enforce physical examination as regards personal hygiene.

3.5 Reproductive Health

3.5.1 Goal

Promote knowledge on reproductive health and family life/sexuality education for school-aged children.

3.5.2 Objectives:

- a) To equip school going children with basic life saving information and skills such as assertiveness, self-esteem, value clarification and decision making in order to achieve a positive life attitude.
- b) To enable adolescents cope with adolescence related health problems.

3.5.3 Policy Statements

In order to impart knowledge and life skills related to reproductive health in school children the government through MoE shall ensure:

- a) The provision of family life and sexuality education and facilitator.
- b) The acquisition of life skills to school age adolescents and youths to enable them make responsible decisions concerning their lives.
- c) The integration of family life/sexuality education into all education curricula.
- d) Stakeholders strengthen inter-personal communication and counseling services between young people and peer educators involved in promotion of Reproductive Health services for adolescents and youths.
- e) Support the development and implementation of programmes and other initiatives aimed at controlling, preventing and mitigating the spread and impact of STIs/HIV/AIDS on school age children at school and community levels through financial, human and logistical resources.
- f) Promoting provision of family life education and family planning IEC on the importance of prevention of unwanted pregnancies and abortions, so as to promote responsible sexual behaviour.

3.5.4 Strategies

- a) Provision of life and sexuality education materials at school and community levels through financial, human and logistical resources.
- b) Strengthen the counseling of pregnant female pupils and their re-integration into education system following child birth.
- c) Mobilise human, financial and logistical resources for use in the programmes
- d) that will positively impact on the school age children.
- e) Revision of the curriculum to include issues of Reproductive Health and
- f) sexuality education.

3.6 Health Education and Health Promotion

3.6.1 Goal

To promote the acquisition of knowledge and skills on the causes of ill health among school children in order to promote and enhance healthier living.

3.6.2 Objectives

- a) To develop teacher skills in health education and promotion.
- b) To facilitate the development of learning materials for teachers and pupils.
- c) Enhance health education in SHN programmes.
- d) To develop personal life skills among pupils.
- e) To establish school community linkages in health promotion.

3.6.3 Policy Statements

In order to promote knowledge and skills on healthful livings. The government through MoE will:

- a) Train teachers on health education and health promotion.
- b) Institute health-promoting activities in all schools.
- c) Develop and distribute health-learning materials.
- d) Institutionalize counseling services in all schools.
- e) Establish school community linkages on health promotion programmes.
- f) Facilitate pupil to pupil interactive learning for health.
- g) Support school health promoting programmes with material resources.

3.6.4 Strategies

Promote partnership between teachers and health workers.

- a) To provide pre-post service training for teachers and volunteers in SHN issues.
- b) Design, and distribute the health learning materials.
- c) Initiate and conduct school
- d) Establish and institute counseling services for pupils.
- e) Establish school and community linkages through health committees, PTAs, and other community-based institutions.

3.7 Communicable Diseases

3.7.1 Goal

To promote environments and behaviours which reduce the chances of children succumbing to communicable diseases.

3.7.2 Objectives

- a) To ensure that the school health environment is conducive to health.
- b) To take measures that limit the transmission of communicable diseases.

- c) To conduct immunizations for Grade 1 and Grade 7, Grade 9 and 12.
- d) Establish linkages with appropriate health authorities to provide technical support for schools.
- e) Encourage communities to take measures, which will prevent and limit the transmission of communicable diseases.

3.7.3 Policy Statements

In order to prevent and control communicable diseases, the government through MoE will:

- a) Carry out regular vaccinations of school children against preventable diseases.
- b) Institute disease control measures against communicable diseases.
- c) Provide technical skills to teachers to recognize and deal with common communicable disease.
- d) Enhance the knowledge and skills of pupils on how to prevent communicable diseases.
- e) Establish liaison mechanisms with Ministry of Health on how to prevent, control and deal with communicable diseases.
- f) Take any other measures as may be deemed necessary to control communicable diseases.

3.7.4 Strategies

- a) Train teachers on how to recognize common communicable diseases and to refer to health centers when necessary.
- b) Health workers to carry out immunization programmes at schools.
- c) Ensure the safety and promotion of a conducive school environment (e.g. ventilation, physical structure – buildings, overcrowding)
- d) Manage children with communicable diseases to limit the transmission of diseases.
- e) Teachers to collaborate with health services in the management of childhood illnesses and provide physical examination, basic treatment guidance and counseling.
- f) Develop personal life skills among pupils that facilitate the prevention and control of communicable diseases.

3.8 Non-Communicable Diseases

3.8.1 Goal

Promote and enhance knowledge and skills that facilitate the prevention of substance abuse.

3.8.2 Objectives

- a) To train teachers on the control and prevention of substance abuse.
- b) To develop knowledge and skills of pupils on substance abuse.
- c) To take measures that limits the level of substance dependency among school-aged children.

3.8.3 Policy Statements

In order to reduce the supply and demand for psychotropic substances, the government through MoE will:

- a) Intensify school base anti-substance abuse programmes in schools.
- b) Promote substance abuse preventive and control education in schools.
- c) Integrate anti-substance abuse topic in schools and teacher training curricula.
- d) Establish and institutionalize counseling services on substance abuse.
- e) Establish partnerships with DEC and other Stakeholders including communities.

3.8.4 Strategies

- a) Provide counseling services for pupils who have problems related to substance abuse.
- b) Refer children who are abusing substance to appropriate authorities for remedial care.
- c) To establish school community linkages on anti-substance abuse programmes.
- d) Strengthen or establish anti-substance abuse clubs.
- e) Design and disseminate health education messages on substance abuse (e.g. radio, TV, print materials, drama).
- f) Establish partnership with other stakeholders such as Drug Enforcement Commission, Agriculture, and Ministry of Community Development.

3.9 Institutional and Legal Framework

3.9.1 Goal

3.9.2 Objectives

- a) To facilitate the coordination of SHN activities.
- b) To put in place and formalize SHN focal persons.

3.9.3 Policy Statements

In order to ensure that SHN activities are well coordinated and implemented at national, Provincial, District and Community level, Government through the MoE/MoH/MCDSS shall:

- a) Formalize and put in place SHN focal persons at Provincial, District and Schools in the MoE, MoH and MCDSS.
- b) Constitute a steering committee for SHN education comprising key stakeholders.
- c) Formulate and strengthen the positions.
- d) Strengthen the institutionalization of Health and Nutrition Education in schools.
- e) Explore and enact a SHN Act which will provide comprehensive coverage on the relevant legislation for School Health and Nutrition in both public and private schools.

- f) Review the Public Health Act, Education Act and Health Service Act and other relevant pieces of legislation so that issues of school health and nutrition are adequately incorporated.

3.9.4 Strategies

- a) Promote collaboration and linkages among key stakeholders dealing with SHN.

CHAPTER 4

4.0 INSTITUTIONAL AND LEGAL FRAMEWORK

4.1 Ministry Of Education

- 4.1.1 The Directorate of Standards and Curriculum in the Ministry of Education is responsible for policy direction on School Health and Nutrition activities as well as collaborating with other departments in the Ministry of Education line Ministries and Cooperating Partners. It is also responsible for monitoring and evaluating School Health activities at Provincial and District levels. The Directorate has the capacity to carry out this mandate.
- 4.1.2 Provincial Education Office – The Directorate of Standards and Curriculum in the Provincial Education Office, is meant to interpret School Health and Nutrition policies and to facilitate its implementation at the service delivery points. The Directorate is also meant to monitor SHN activities and to collaborate with other stakeholders at the Province. However, the current structure at the Provincial Education Office does not have a focal person whose responsibility would be to undertake such activities. For better implementation of SHN services, this position must be formalized and the roles clarified.
- 4.1.3 District Education Office – The Directorate of Standards and Curriculum at the District Education Office is meant to facilitate the implementation of SHN activities in schools and communities. Again due to the lack of personnel there is no focal person whose mandate would be to carry out these activities.
- 4.1.4 Schools – The schools are meant to provide a conducive learning environment through the services of a School Health Coordinator at that level. However schools do not have specialized personnel to carry out these tasks.

4.2 Ministry Of Health

At Ministry of Health Headquarters the Health Education Specialist is the focal person for SHN. However due to lack of focus on School Health as a result of other commitments, coordination is not adequate. At Provincial and District levels focal persons for SHN do not exist.

4.3 Ministry Of Community Development And Social Services

The Department of Community Development in the Ministry of Community Development and Social Services deals with issues of literacy and nutrition education. However, the focal points for school health and nutrition activities from departmental headquarters to sub-centre levels do not exist.

4.4 Legal Framework

There are pieces of legislation related to SHN in one way or another in Health and Education sector. These include:

- 3.4.1 the Public Health Act (**YEAR**)
- 3.4.2 the Education Act (1966)
- 3.4.3 the Health Service Act (**YEAR**)

DEFINITION OF TERMS

1. **Abortion = termination of pregnancy, expulsion or extraction of embryo or fetus before 22 weeks of gestation or below 500gm weight of fetus.**
2. **Antenatal care = is the care provided to pregnant women from conception to onset of labour.**
3. **Adolescent = a person aged 10 – 19 years.**
4. **Reproductive health is a state of complete physical, mental and social well being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and its functions and processes. Reproductive health therefore implies that people have the capability to reproduce and the freedom to decide if, when and how to do so.**
5. **Reproductive health care is defined as the constellation of methods, techniques, and services that contribute to reproductive health and well being through preventing and solving reproductive health problems. It also includes sexual health, the purpose of which is the enhancement of life and personal relations, and not merely counseling and care related to reproduction and sexually transmitted diseases.**
6. **Morbidity =**
7. **Mortality =**

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SCHOOL HEALTH AND NUTRITION PROGRAM
Eastern Province Pilot Program – selected schools

This report outlines the process of school recruitment to the SHN pilot program in Chipata and Chadiza Districts. Chama District Schools will also be involved in the study but will not be involved in the monitoring and evaluation process. The selection of these schools will occur separately.

Data was collected from the Ministry of Health, Planning Unit (1998 census data) and District Education Offices (Chipata and Chadiza, July 2000).

Methodology

Selection Criteria:

- Accessible throughout rainy season
- Not more than 3 hours drive from District Centre
- Grades 3-7 taught
- At least 10 children in each grade
- Not catering to special needs children (i.e. blind, deaf etc)

Based on the above selection criteria, a total of 125 schools were available for randomisation

Number of schools in Chipata District = 120
 Number of schools excluded = 21
 Number of school available for randomisation = 99

Number of schools in Chadiza District = 35
 Number of schools excluded from study = 09
 Number of schools available for randomisation = 26

NOTE: See appendices 1 and 2 for school details

Randomisation:

80 schools were randomly selected using the random sample generator function of the statistical software package, S-Plus.

The schools were further randomised into 2 groups of 40 schools to form the control and intervention groups.

Results

Control Schools

Serial no.	School		
100	Bwanunkha	Primary	School
1	Chalumbe	Basic	School

104	Chanjowe	Middle	Basic
105	Chankhandwe	Middle	Basic
5	Chawa	Primary	School
9	Chikungu	Primary	School
11	Chingazi	Primary	School
14	Chiparamba	Basic	School
12	Chipata	Primary	School
15	Chipikula	Primary	School
18	Chiwoko	Primary	School
19	Chiziye	Primary	School
107	Chadiza	Basic	School
109	Kalembe	Primary	School
29	Kanyanja	Primary	School
32	Kapara	Primary	School
34	Kaphinde	Primary	School
35	Kapita	Primary	School
37	Kasenengwa	Primary	School
51	Lunkhwakwa	Primary	School
54	Lutembwe	Basic	School
60	Magwero	Standard	School
64	Mkanire	Primary	School
65	Mkoma	Primary	School
66	Mnoro	Basic	School
71	Mshawa	Primary	School
73	Mtaya	Primary	School
75	Mtizwa	Primary	School
79	Mwasauka	Primary	School
80	Mwita	Primary	School
85	Nthombimbi	Primary	School
87	Mpezeni Park	Middle	Basic
88	Nyakutwa	Primary	School
93	Sairi	Primary	School
94	Shamombo	Primary	School
95	Sisinje	Primary	School
96	Hillside	Primary	School
97	Tamanda	Basic	School
120	Taperansoni	Basic	School
121	Tarefadziko	Primary	School

Intervention Schools

Serial no.	School		
2	Chamanda	Primary	School
102	Chamandala	Primary	School
3	Chamasongwe	Primary	School
103	Chanida	Primary	School
7	Chikando	Primary	School
8	Chikoka	Primary	School
13	Chipangali	Primary	School
22	Dzoole	Primary	School
27	J.M.	Cronje	Primary
108	Kadzionele	Primary	School
28	Kalunga	Primary	School

31	Kanzutu	Primary	School
33	Kapatamoyo	Primary	School
36	Kapoko	Primary	School
38	Kasenga	Basic	School
41	Katambo	Primary	School
42	Katandala	Primary	School
43	Katawa	Primary	School
46	Katopola	Basic	School
47	Kawambe	Primary	School
48	Kawawa	Primary	School
49	Langa	Primary	School
50	Lukhalo	Primary	School
59	Maguya	Basic	School
62	Makwe	Primary	School
112	Mbande	Primary	School
57	Mchenja	Primary	School
67	Mnukwa	Basic	School
78	Mwami	Basic	School
118	Navaruli	Basic	School
82	Nkhalikali	Primary	School
83	Nkhoto	Primary	School
84	Nsingo	Primary	School
89	Nyauzi	Primary	School
90	Nyaviombo	Primary	School
91	Nyongo	Primary	School
119	Nzadzu	Basic	School
98	Vizenge	Primary	School
123	Vubwi	Primary	School
124	Zemba	Basic	School

APPENDIX L

Zambia SHN Program
Cognitive Assessment Instrument (CAI) Development

Task Order # 2
(Report)

Task Order # 2 included four tasks:

- (1) The identification of Zambian consultants to be involved in each of the development phases.
- (2) Specification of the item development plan.
- (3) The final design specifications of the cognitive assessment instrument.
- (4) The identification of the number and location of pupils and teachers to be involved at various instrument development stages.

The following activities have been undertaken to meet the tasks specified above.

- (1) To accomplish the first task, Dr. Grigorenko traveled to Zambia in September of 2000¹.
 - (a) Drs. Drake, Freund, Grigorenko and Robb (the project advisory board) interviewed Ms. Paula Kapungulya, a lecturer at the School of Education, UNZA. Ms. Paula Kapungulya was hired for two months at the rate of 4, 494,00 Kwacha per month (the rate was established with the help of Winnie Chilala based on the UN rates for Zambia; Ms. Kapungulya was informed that her salary will be adjusted at a lower rate if she is to be employed after the period of two months). In addition, Paula was also promised a sum of \$50 for transportation expenses and a sum of \$100 for Xeroxing expenses². In September, the advisory board planned a visit for Paula to New Haven, where she was expected to participate in the development and cultural validation of Cognitive Assessment Instrument (CAI).
 - (b) Ms. Kapungulya spent a month at Yale (10/23—11/24), where she was actively involved in the development of the CAI items³.

¹ The related expenses were:

Air travel	\$3,500.00 (JFK-Lusaka-JFK).
Medical Expenses (Insurance, shuts, prophylactic pills)	\$ 389.92
Hotel	
Lusaka	\$ 882.08
Amsterdam	\$ 80.00
Limo (New Haven-JFK-New Haven)	\$ 80.00
Visa	\$ 50.00
Taxi in Lusaka	\$ 100.00
Phone/Internet Expenses in Lusaka	\$ 21.95
Total	\$5,104.67

² Thus, the total amount given to Ms. Kapungulya was \$2,958.00

Total \$2,958.00

³ The relevant expenses were:

Visa and JFK-New Haven-JFK transportation	\$ 168.00
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- (c) Dr. Grigorenko and Ms. Kapungulya have tentatively engaged two groups of people to work on the CAI.
- i. A group of translators (a few individuals who previously worked with Ms. Winnie Chilala and, possibly, Mr. George Nkhowane of the UNZA Press)—to translate the instrument in Nyanja.
 - ii. Selected staff at the School of Education (e.g., Mr. Phiri, The Head of the EPSSE Department and The Assessment Center staff)—to pilot the instrument in the Lusaka province at the beginning of the Year 2001 (first year of the SHN program).

In both cases, tentative arrangements have been made, but no contractual agreements have been reached.

(2) The following CAI development plan has been discussed by the advisory board (Drs. Drake, Grigorenko, and Robb):

- (a) Draft development of the items (October-December, 2000)⁴
 - i. Currently, we have developed about 200 items
 - ii. Ms. Kapungulya brought to Zambia about 140 items, so that some prototype items can be validated on a small group of children (December, 2000).
- (b) USA pilot (the items will be piloted on a sample of American children to check for the internal consistency of the assessment—January, 2001)
- (c) The CAI will be translated in Nyanja in Lusaka (January-February, 2001)
- (d) The CAI will be piloted in the Lusaka District (pilot will be conducted February-June 2001; analyses and CAI draft will be completed by June 31st)
- (e) A draft CAI manual will be produced by April 1, 2001.

(3) The proposed design of the CAI will include the following components:

Tasks	Mode of Instruction	Oral	Written	Graphical
Block Tasks				
Block Patterns		*	*	*
Block Identification		*	*	*
Figure Creation		*	*	*
Block Manipulation		*	*	*

Hotel in Johannesburg	\$ 90.00
Air travel (Lusaka-JFK-Lusaka)	\$3,512.00
Per diem	\$ 930.00
Housing (B&B)	\$1,000.00
Total	\$5,700.00

⁴ So far, the following expenses have been encountered:

Artist	\$ 600.00 (40hrs. @ \$15 per h)
Supplementary material	\$ 200.00
Total	\$ 800.00

Note: Not including the personnel time of Successful Intelligence, LLC.

Block Counting	*	*	
Block Similarities	*	*	
Block for Sounds (Phonology)	*	*	
Paper Folding Tasks	*	*	*
Mazes	*	*	
Connecting Dots	*	*	
Cards Classification	*	*	
Story Tasks (Literacy Tasks)	*	*	
Practical Math Tasks (Numeracy Tasks)	*	*	*
Vocabulary Tasks (Fluency Tasks)	*	*	

The battery will address the following cognitive functions:

(1) memory, (2) attention, (3) reasoning, (4) executive functioning, (5) verbal development (literacy tasks), (6) math skills (numeracy tasks), and (7) ability to learn. All items are designed as in the format of “following instruction” paradigm.

- (4) The following stages and participants have been identified.
- (a) Pre-piloting (the city of Lusaka)
 - i. Participants: < 50 children
 - ii. Administrator: Ms. Kapungulya
 - (b) USA piloting (the city of New Haven)
 - i. Participants: < 100 children
 - ii. Administrator: Successful Intelligence
 - (c) Zambia piloting (Lusaka District)
 - i. Participants: ~ 500 children (100 per grade in grades 3, 4, 5, 6, and 7)
 - ii. Administrator: UNZA staff

At stages (a)-(c) no teachers are to be involved.

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