

Concept Paper for a Program to Improve Learning Through School-based Health and Nutrition Interventions

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Program to Improve Learning Through School-based Health and Nutrition Interventions

I. BACKGROUND

Government of Zambia School Health and Nutrition Initiative

As the Ministry of Education's (MOE) cornerstone plan for educational reform, the Basic Education Subsector 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). Further, BESSIP is intended to optimize the use of resources and reinforce the decentralization 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, is associated with low academic achievement. Confidence that cost-effective interventions such as deworming and delivery of micronutrients to children through schools could reverse current trends has resulted in increasing higher levels of governmental attention to development and implementation of an MOE/SHN strategic plan.

The five year (2000-2005) MOE/SHN Strategic Plan¹ 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.

The BESSIP SHN Focal Point serves to direct and manage all MOE activities related to SHN. As part of the SHN strategic plan, an SHN Cross-sectoral Steering Committee is organized to represent, facilitate and mobilize expertise, resources and synergy across key SHN stakeholders, including government ministries, NGOs and international donor organizations. An SHN Implementation Committee, representative of key government implementing agencies, is, in turn, organized to coordinate and facilitate planning and execution of SHN activities through appropriate governmental programs.

¹ MOE School Health and Nutrition Strategic Plan: Improved Learning, Health and Nutrition of School Children. May 2000.

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. However, BESSIP/SHN has lacked sufficient human and financial resources required to launch solidly conceived and well-planned pilot initiatives in this area which would serve as a clear pathway to scaling up and impact at district, provincial and national levels.

Within the consortium of supportive donors, USAID/Zambia has taken the leadership in responding to the need for technical assistance and seed capital required to support the MOE SHN agenda. The MOE has selected the Eastern Province as the initial target area within which to initiate pilot SHN activities.

USAID/Zambia Support for SHN

Since BESSIP's inception in 1998, USAID/Zambia has been working as an active member among partners collaborating with the MOE to discern the highest levels of need, and correspondingly most appropriate strategies to support the MOE to attain its reform agenda set forth in BESSIP. As a result of insights gained through ongoing dialogues with the MOE and key stakeholders, USAID/Zambia reformulated its Basic Education Results Package² to include a new Strategic Objective #2 : "Improved quality of basic education for more school aged children." The three corresponding Intermediate Results (IRs) that have been developed to contribute towards achieving SO2 are:

- IR 2.1 improved participation of girls and other vulnerable children.
- IR 2.2 improved school-based health and nutrition (SHN) interventions to support pupil learning.
- IR 2.3 improved information for education decision-making processes.

Thus, IR 2.2 forms the core platform through which USAID/ZAMBIA is targeting its support to the MOE BESSIP initiative. USAID/ZAMBIA has identified the Basic Education and Policy Support (BEPS) Activity, a technical assistance and support mechanism funded through the USAID Global Human Capacity Development (G/HCD) Bureau, as a potentially ideal strategic pathway for rapid mobilization and deployment of USAID/ZAMBIA technical assistance to the MOE SHN component. BEPS is designed as a technical mechanism through which a wide range of assistance to USAID missions may be provided in support of USAID's Strategic Objective for Education "Improved and Expanded Basic Education, especially for Girls, Women and Other Underserved Populations." USAID/Zambia's Basic Education Results Package falls within the domain of two (out of three) overall BEPS goals:

- Support educational policy dialogue and reform.
- Improve the quality, efficiency, access and equity of education, particularly basic education.

Thus, USAID/ZAMBIA contacted BEPS about a possible collaboration and extensive dialogue resulted in the issuance of a SOW (see Appendix A) to BEPS to field a team to Zambia during July 4 – 20, 2000 for purposes of designing a SHN interventions activity which could, in turn, serve as a proposal for a potential future BEPS task order. BEPS attached significant importance to this assignment and, as such, rapidly formed and fielded a

² USAID/Zambia's Strategic Objective 2 (SO2): Basic Education Results Package in Support of BESSIP, DRAFT: 30 June 2000.

multi-disciplinary team with extensive expertise appropriate for the mission. Members of this team are:

- **Dr. Donald Graybill, Ed.D.**, Team Leader, International Education, Training and Organizational Development Expert (Basic Education and Policy Support Project Director, Education, Mobilization and Communication Division, Creative Associates International, Washington, DC)
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- **Dr. Lesley Drake, Ph.D.**, Epidemiologist and School Health and Nutrition Program Expert. (Coordinator, Partnership for Child Development, Oxford, England)
- **Dr. Aben Ngay, Ph.D.**, Training and Community Development Expert. (Assistant Country Director, CARE, Lusaka, Zambia)

Prior to arrival, the BEPS team immersed itself in intensive reading of key background documents provided by USAID/Zambia (See Appendix B) to gain an understanding of the current context of the SHN initiative within the MOE and supported by USAID. During the July 5-18 period of their visit to Zambia, the BEPS design team visited and consulted with an extensive array of key stakeholders within government ministries, donor groups and NGOs (See Appendix C). From the earliest dialogues, the team began to formulate a strategic approach and conceptual framework for the proposed SHN activity. This approach was presented and discussions held with senior management officials within MOE, MOH, MCDSS and NFNC. A field trip was conducted by USAID, MOE/SHN, and BEPS team representatives to Eastern Province both for purposes of discussions with key stakeholders and visits to communities and schools to gain insight into local conditions for the pilot initiative (See Appendix D for a copy of the Eastern Province trip report). Special meetings of key international donors and the SHN Steering Committee were convened for purposes of presentation and discussion of the BEPS team strategic approach and conceptual framework. At each stage of presentation and consultation, the BEPS team utilized feedback to further refine the programming approach and model.

The results of this design effort are presented here as the Program to Improve Learning through School-based Health and Nutrition Interventions, herein referred to as the SHN Program. Succeeding subsections of this report will present a summary overview of the rationale, strategic approach, conceptual framework, and supporting management systems and budget proposed for the SHN Program.

II. 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, programs 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.

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*³. 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 cognition⁴ (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 ability⁵ (Brooker, et al, 2000).

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 *diarrhoeal 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. Studies of HIV/AIDS in youth in Uganda estimate that the prevalence of HIV in children aged 13-18 years is relatively low at 2.5% in females and .4% in males. These rates increase rapidly, however, to 19.4% in females and 2.7% in males in the 20-24 year age group. Data suggests a similar profile in Zambia. This amply demonstrates the need to focus HIV/AIDS education programs at school-age children to reduce the very high risk of mortality associated with HIV-related diseases⁶ (Kinsman et. al., 1999).

³ Helminth infections are classified as soil borne: Ascariasis, Trichuriasis, hookworm and strongyloidiasis (also referred to as geohelminth infections and intestinal nematodes) or water-based: schistosomiasis haematobium and schistosomiasis mansoni.

⁴ Stoltzfus, R.J., et.al (1997). J. Nutrition, vol. 1-7, pg. 1099.

⁵ Brooker, et. al. (2000). Parasitology Today, 16, pg. 183.

⁶ Kinsman, et. al. (1999). AIDS CARE, 11, pg. 591.

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 infants and child deaths in Zambia.

Stunting (low height-for-age) and *underweight* (low weight-for-age)⁷ 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 (ACC/SCN, 2000). The most common are: (i) Vitamin A deficiency (VAD) which 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 anaemia (IDA) which can lead to impaired cognitive function, lethargy and reduced resistance to disease^{8 9} (Pollitt, 1993, Drake, 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). In 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).

School-Based Health and Nutrition Programs

Opportunities to reduce the burden of disease and nutritional deficiencies may be provided by school-based health programs, which have been shown to rank amongst the most cost-effective of all public health strategies¹⁰ (World Bank, 1993). Positive experiences by WHO, UNICEF, UNESCO and the World Bank suggest that there is a basic framework that could form the basis for an effective school health and nutrition program upon which to build - the *FRESH* Start approach. This includes four basic interventions: school-based health policies, provision of safe water and adequate sanitation; skills-based health education and; school-based health and nutrition services. These interventions are delivered within an interactive framework of partnerships.

⁷ Stunting and underweight refers to <-2 z.scores of the NCHS reference median for height-for-age and weight-for-age respectively.

⁸ Pollitt E, Gorman KS, Engle PL, et al: Early supplementary feeding and cognition. Monographs of the Society for Child Development 58, 1993.

⁹ Drake, et al (2000). CRC Press (in press).

¹⁰ World Bank, 1993. Oxford University Press.

Indeed, the success of a school health program demands an effective partnership between Ministries of Education and Health, and between teachers and health workers. The health sector retains the responsibility for the health of children, but the education sector is responsible for implementing, and often funding, the school based programs. These sectors need to identify responsibilities and present a coordinated action to improve health and learning outcomes for children.

Promoting a positive interaction between the school and the community is fundamental to the success and sustainability of any school improvement process. Community partnerships engender a sense of collaboration, commitment and communal ownership. Such partnerships also build public awareness and strengthen demand. Within the school health component of such improvement processes, parental support and cooperation allows health messages to be reinforced at home. The involvement of the broader community (the private sector, community organizations and women's groups) broadens and reinforces school health promotion and resources. These partnerships, which should work together to make schools more child-friendly, can jointly identify health issues that need to be addressed through the school and then help design and manage activities to achieve this.

Children must also be important participants in this process, and not simply the beneficiaries. Children communicate with their parents, with other children, with their peers, and with their siblings, promoting a community wide impact of the school health message.

Interventions and Impact

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. Evaluation of large-scale demonstration school health programs in both Ghana and Tanzania has shown that school-based health services can have an impact on a broad range of health and education outcomes. In Tanzania, a significant increase in height (1.5cm over 16months) and haemoglobin levels (4.8g/l) was observed in treated children. Leaving, however, still a large margin for further improvement. Similar effects were observed in Ghana¹¹ (Partnership for Child Development, 1999).

Health education is also an effective and cost-effective intervention--and may even serve to reinforce the effects of specific interventions. There is increasing recognition of the importance of promoting safe hygiene behavior among school children not simply because of its importance in the immediate school environment but also because of the communication opportunities and potential influence on the family. There is evidence that children with appropriate knowledge and motivation can be effective motivators of change in the home. As well as assisting with the construction, maintenance and cleaning of facilities in the school environment, studies reveal that promoting latrine construction through school children can be a successful medium for promoting construction in the wider community¹² (Hubley, 1998).

School malaria prevention programs are a good example of how schools can make a contribution to community health. It is suggested that children can be important agents for change in malaria control programs. Skills-based health education through schools can help

¹¹ Partnership for Child Development (1999). Parasitology Supplement (in press).

¹² Hubley (1998). Personal communication.

promote a community wide understanding of malaria with particular emphasis on the need for community based control measures.

In Tanzania the impact of a school-based HIV/AIDS prevention program has been evaluated one year after implementation. The aim was to increase communication about AIDS, provide information on how students can protect themselves from AIDS and foster restrictive attitudes towards early sexual activity. It was found that the program had substantially increased students knowledge of HIV/AIDS and that students were disseminating this information outside the school environment to their parents, other relatives and to religious leaders. It was concluded that it is both feasible and effective to implement culturally specific HIV/AIDS education to primary school children through trained teachers receiving support from local health personnel¹³ (Klepp et al., 1997).

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 programs. Likewise, experience in implementing school-based programs has confirmed the practical benefits of the school-based approach. The main conclusions that have been reached are: (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 time, 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.

Based on the evidence discussed, the core framework for the Zambian SHN Program will focus on the following strategy.

III. STRATEGIC APPROACH

As a strategic approach, the SHN Program will infuse four core principles throughout all program strategies and activities--participation, communication, partnership, and capacity building.

Participation is both a means and end to creating ownership, channeling resources, and targeting interventions that result in improved child health, nutritional status and learning achievement. Success and sustainability require the continuous active involvement and commitment at all levels of planning, implementation, management and monitoring of the SHN Program. As such, active participation will permeate SHN Program activities – across key public and private stakeholders, spanning all levels of planning, implementation and management (national, provincial, district, and community), including managers, implementers and beneficiaries. Participatory strategies and methodologies will secure ever-deepening levels of commitment and decentralization in SHN management and implementing capacity.

In addition, clear, dynamic, efficient, and transparent **communication** will sustain and characterize all levels of SHN Program activities. Effective communication systems, strategies and methods will build understanding and promote action throughout the SHN Program. Feedback loops at all levels will be established to ensure that communications remain clear, updated and assure continuous learning and coordination. Through the

¹³ Klepp, et al (1997). American Journal of Public Health, 87, pg. 1931.

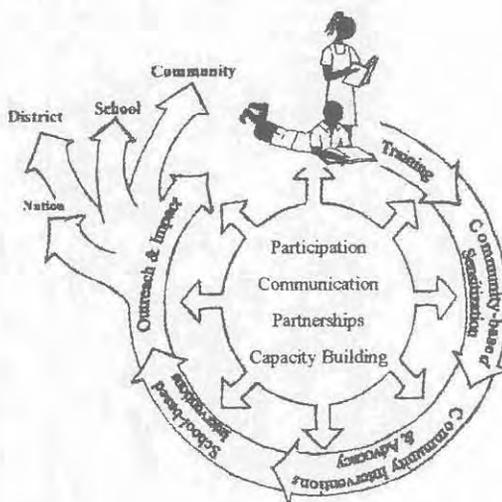
employment of a variety of media and culturally appropriate communication styles, goals, objectives, roles and responsibilities will remain sharply focused. To this end, the SHN Program will support the agreement brokered among SmithKline Beecham (Glaxo SmithKline), the World Bank, and the MOE for the development of a comprehensive IEC SHN scheme. It is hoped that communication, tackled in this way, will create the synergy required for success and will ripple and cascade throughout the project.

Cooperation, collaboration and joint ownership will be best promoted, established, and maintained, across ministries, sectors, and levels of program planning, management and implementation through established **partnerships**. Different modes of partnering will be pursued in order to establish the most effective and sustainable modes of collaboration. These partnerships will be continually monitored and refined so as to keep them vibrant, dynamic and achieving maximum performance goals and standards.

Capacity building--improved knowledge, skills and competencies--will be continually generated throughout the various SHN Program levels and within all developmental phases so that key SHN competencies become embedded within appropriate planning, management and implementation systems and personnel. Education and training strategies will emphasize utilization of active learning methodologies, competency-based planning and instruction, and performance monitoring as an integrated and reinforcing human resource development system. The SHN Program will utilize organizational learning approaches so that capacity permanently resides within the MOE and with key governmental stakeholders.

IV. CONCEPTUAL FRAMEWORK

The SHN Program conceptual framework contains five successive reinforcing developmental stages--training, community-based sensitization, community interventions and advocacy, school-based interventions, and outreach and impact.



The SHN program process is iterative with each action contributing to further actions which collectively and synergistically contribute to ever increasing improvements and maintenance of child health. While illustrated in a cyclical format, these stages are, however, not necessarily sequential in their development and implementation, often overlapping in occurrence.

Each of these aforementioned stages is described in more detail below:

Training

Within the SHN Program, 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 behaviors in support of SHN Program 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 Program.

- 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 Program 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 inservice 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 Sensitization

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 requires 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 a 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 teams of field workers consisting of representatives from the three key SHN Program 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 Program 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 Program 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 behavior of joint collaboration and cooperation and to illustrate that school health and community issues are not isolated concerns, but are closely linked.

Activities facilitated by the field worker teams might include: focus group discussions, informal meetings, household visits, mapping, etc. The community will, in turn, identify situations which they have the capacity to alter using their own resources or some that will require outside assistance and support. For example, establishing a school garden might be well within their capacity. On the other hand, obtaining spare parts for broken hand pumps might require linkages with district officials (e.g. water resources) or NGOs who may assist. Facilitating communities to understand what they can accomplish on their own, as well as linking them to outside resources and information serves to empower them to facilitate change.

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.

Community Interventions and Advocacy

Due to the diversity of communities and the variety of circumstances that contribute to a child's health status, the range of activities identified in the action plans will vary. The activities and interventions will be implemented by community members themselves and may include such activities as:

- School feeding programs
- Food production units
- Building or maintaining latrines
- School cleanliness programs
- Personal and home cleanliness regiments
- Organization of health/youth clubs

- Local newsletters
- School open days
- National immunization days
- Community peer counseling
- Formation of, or participation in, inter-sectoral committees (i.e. DWASHE, PAGE, etc.)
- Activities in promotion of school health interventions
- Popular theater
- Local radio broadcasts

An understanding of the community, building trust and transparency through a community sensitization process, and a community intervention plan of action are essential for program success. Parents need to be advocates of the program by getting their children to school and by supporting teachers. Opinion leaders, health workers, religious leaders and traditional leaders also need to support the program and recognize the value of school-based interventions. The approach described takes into account community diversity by involving subgroups and interest groups within the community (i.e. opinion leaders, traditional leaders, women, vulnerable groups, youth, etc.). 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 program acceptance and eventual ownership by the community are the partnerships developed through the field outreach team and with the community.

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. The community sensitization and interventions should be regarded as the real start of a school health program and are a vital phase of the sequence of events that set the stage for school-based interventions.

School-Based Interventions

The SHN program will embrace interventions that, if delivered within an interactive and supportive framework of government and community partnerships, are considered to form the basis of an effective school health and nutrition program. Indeed, the international inter-agency initiative, *FRESH Start* approach, cites: (i) school-based health and nutrition services; (ii) skills-based health education and; (iii) the provision of safe water and adequate sanitation, as three of the four basic cornerstones of effective programs. The fourth cornerstone--the implementation of school-based health policies--is currently being addressed by the Zambian Ministry of Education.

To effectively monitor and evaluate these school-based interventions, a management information system will be implemented (refer to the Partnership for Child Development, support proposal, Appendix E). The revitalization of the school health card will be the action taken at school level to aid in this implementation process.

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.

Skills-based health education. This approach to health education 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 behavioral factors have given greater prominence to such health related issues as HIV/AIDS, malaria prevention, early pregnancy, accidents, violence and substance abuse. These are 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.

Provision of safe water and adequate sanitation. The school environment may damage the health and nutritional status of schoolchildren, particularly if it increases their exposure to hazards such as infectious disease carried by the water supply. Hygiene education is meaningless without clean water and adequate sanitation facilities. It is a realistic goal to ensure that all schools have access to clean water and sanitation. By providing these facilities, schools can reinforce the health and hygiene messages, and act as an example to both students and the wider community. This in turn can lead to a demand for similar facilities from the community.

Outreach and Impact

First and foremost, the SHN Program is designed to have a positive impact on the health and nutrition of school-aged children, which will, in turn, contribute to improved pupil learning. Efforts to achieve this goal will focus on improvements in the child's physical wellbeing and immediate environmental conditions. The actions designed to support this goal, however, will require contributive actions across the many spheres of organizational and individual support. The SHN Project will be a catalyst for change and, through advocacy and interventions, achieve both direct and indirect impact across the chain of individual lives, management structures and policy environments which shape and determine the quality of the child's life. Both the channels and strategies of outreach, as well as the anticipated impact of SHN Project interventions are described below for each discrete level of action.

Child-level. The child is at the center of thought and action. Outreach to the child will extend through multiple complementary and reinforcing channels. Children will be recipients of beneficial pharmaceuticals that will directly improve their health status. Children will be beneficiaries of health education information which will raise awareness, create positive attitudes, and motivate change and action. Children will be challenged to join with teachers,

parents, and community members in activities that promote improved health for themselves, their families, their friends and their community.

Illustrative examples of child participation and outreach might include: student health committees to monitor and assist in improving health conditions in the classroom and immediate school environments; drama groups formed which create plays focused on health needs; and peer outreach groups to engage out-of-school youth.

Anticipated impacts will cut across child knowledge, attitudes and behaviors. Health and nutritional status of children will improve which, in turn, will increase child cognitive capabilities. This, in turn, will lead to increased child attention, engagement, participation and learning. Children will gain new knowledge about health and nutrition needs, problem solving, and critical thinking. As participants and leaders of interventions, children build capacities in leadership, community organization, and group management. Further, children will improve their abilities to be peer and family educators and counselors. Children will be empowered agents of change, building confidence, self-esteem and motivation to lead and guide interventions which benefit themselves, their peers, their families and communities.

School-level. Within the school, teachers' will conduct a wide range of SHN activities. Teachers will be resilient educators of children, imparting key SHN information, knowledge and skills through improved school curricula, innovative and participatory teaching methods utilizing creative, customized communication tools, materials and visual aids to reinforce instruction. By forming partnerships with key student, parent and community groups, SHN knowledge and behaviors will be reinforced. Teachers will also dispense deworming medicine and nutritional supplements to pupils, monitoring health status and making appropriate referrals as necessary.

The school itself will be an improved, healthy learning environment. Proper sanitation techniques will be practiced by students resulting in a clean school which will minimize health risks. Monitoring systems by teacher and children alike will reinforce the importance of positive health-related behaviors and attitudes. Reinforcing SHN activities will be constant and ongoing, reflected in curriculum, visuals and activities ranging from classroom-based instruction to possible food production and maintenance of sanitary conditions.

Community level. Communities will similarly be used as a target of SHN outreach in seeking acceptance and active support of SHN activities. Community-level field workers from the MOH, MOE and MCDSS will form strategic alliances among and across teachers, key formal, traditional and informal leaders, parent-teacher associations, NGOs, community groups and local businesses, to convene meetings and forums that lead to action focused on improving the conditions within which children live and grow. Local media will be used to impart reinforcing health and nutritional messages. Action plans will be developed and implemented with specific goals, targeted actions and identified persons responsible for achievement. These action plans will be shared and thereby become fora for building awareness and accountability.

Impacts will be diverse and far ranging. Community-based projects that contribute to improving child and community health status will be initiated and maintained. These may range from improved trash collection and water system maintenance to initiation of community campaigns or building key SHN messages and practices within local initiation practices. Community structures will be strengthened through active involvement and

leadership on child health problems and issues. Capacity will be built within local leaders, community members and community groups as problems are tackled and responsive projects implemented. This will, in turn, build confidence, empowerment and forward momentum as other related, and perhaps more complex problems, are confronted.

District/provincial level. District and provincial level activities will be organized and managed, or pre-existing ones revitalized, to contribute to the SHN Program. Inter-sectoral strategic alliances will be formed among MOE, MOH and MCDSS representatives, provincial/district level government officials, and local community development NGOs engaged in current or potential related SHN activities.

Outreach will begin with senior government officials and managers to build awareness, "buy-in," and support for the SHN initiative. In turn, these senior officials will identify appropriate government personnel and district/provincial committees to be mobilized in support of and will participate in joint SHN-related training, sensitization and planning activities. These alliances will catalyze and forge synergy and commitment through joint sharing of local resources such as offices and vehicles, and implementation of activities within which responsibilities are shared. Through these committees, accountabilities for SHN outreach and support will be established, roles and responsibilities defined and assigned, structures and systems established, and appropriate supportive policies forged and refined.

Further outreach will occur through use of district/provincial level media to introduce key SHN messages, build awareness, and reinforce support for SHN target interventions and activities.

In terms of impact, SHN capacity will be built within associated MOE, MOH and MCDSS management systems, structures and personnel. MIS systems will be established that inform better planning and decision-making. Inter-sectoral committees will be strengthened and, through them, key alliances fortified with district and provincial level NGOs working in related development areas. As field workers work and partner successfully with local schools and communities, their capacity to serve as effective change agents and advocates will, in turn, increase as a platform upon which future initiatives can be initiated. Further, the decentralized management of education and SHN initiatives will be reinforced and actualized.

National/central level. Outreach at the national/central level will mirror and parallel those undertaken at the provincial/district levels. The SHN Program will be fully integrated within the planning and operational structure of the MOE. As such, meetings will be called with key MOE stakeholders and officials for purposes of building awareness and aligning roles, responsibilities and resources to support the SHN initiative. Under MOE leadership, outreach will continue through the established SHN Steering and Implementation Committees and the participating government, donor and NGO representatives to further organization collaboration, coordinate resources, develop and align policies, establish structures and generate other actions required to achieve SHN goals.

Positive impacts will similarly be registered across a wide range of associated areas. Most importantly, the government will have a piloted and proven SHN model for scaling up to national levels, leading to potential dramatic improvements in child health and academic achievement nationwide. Key stakeholder personnel will have increased SHN management and implementation knowledge and abilities. Cooperative management systems will be

reinforced and institutionalized. National SHN information systems will be established and utilized as a strategic resource for shaping policies and directing resources to support the SHN program. A model of collaborative action will be operational within the government, suggesting the possibility for successful collaboration in pursuit of addressing other national development problems and issues. The credibility and influence of the MOE as a leader in solving problems of national importance through a decentralized management and delivery system will be reinforced.

V. MONITORING AND EVALUATION

Monitoring and Evaluation Framework

A more detailed M & E framework will be developed at the start of the program. For the purposes of the concept paper the major activities and indicators of success for the proposed interventions are detailed below and in an accompanying chart (see Appendix F).

Cognitive and Achievement Tests & Health Assessment. A study will be conducted to assess the impact of the SHN program 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 program 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 constituted 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 program to assess the relative success of the interventions on pupils' learning ability. Data from the National Assessment exam (grade 5) will also be used for measures related to net admission rates by gender and increase in pupil assessment scores by gender.

Program Monitoring. Throughout program implementation, a participatory monitoring system will be used to ensure that the program is on track. Key variables that will be closely monitored will relate to the six major components as described earlier. Specific emphasis will be on the success and difficulties encountered in implementing each of those components. Information collected, and insights gained through the monitoring system will be fed back to major stakeholders to improve project management and influence policy formulation at the national and district levels.

Program Evaluation. A mid-term evaluation will be conducted to assess the processes, systems and achievements of the first three years of the program. The lessons learned will serve as a springboard for scaling up in the remaining two years. The final evaluation will be conducted at the end of the five-year period. Lessons learned through the program will be used to inform policies at the national level. As will be the case with the monitoring function, all evaluations will be participatory.

Impact Assessment. The ultimate goal of the proposed SHN program is to improve health and nutritional status of the pupils to improve their learning capability. These variables will provide the basis for impact measurement.

The monitoring and evaluation framework proposed include indicators to measure expected outcomes for both education and health at each level of program intervention (Central, District, school, community and child). The framework includes indicators designed to capture key elements of the proposed interventions including training, health education, capacity building, data management systems and community involvement.

Milestone Plan

A scheme that identifies key milestones to be met, activities to implement, and dates in which to target has been included in Appendix G as the SHN Program Milestone Plan. These milestones are the key targets required to achieve program contribution to the overall SO2 "Improved quality of basic education for more school-aged children," and in particular, IR2.2, "Improved school-based health and nutrition (SHN) interventions to support pupil learning."

VI. MANAGEMENT SYSTEMS AND STAFFING

Within the Government of Zambia

The management and staffing of the Program to Improve Learning Through School-based Health and Nutrition Interventions (the SHN Program) are integrated within the existing management structure of the SHN Component, one of the eight components within the Ministry of Education's Basic Education Sub-Sector Investment Program (BESSIP). For an illustrative representation of the organization chart see Appendix H.

A Technical Advisor will be hired to work along side the SHN Focal Point within the Ministry of Education. Key responsibilities of the Technical Advisor will be to support the overall development, supervision, and administration of the SHN Pilot Program being conducted in Eastern Province. The Technical Advisor will be housed at the Ministry of Education and will serve as an advisor to the SHN Focal Point, the SHN Steering Committee, and others involved in the SHN Pilot Program in order to build capacity within the MOE to design, implement, monitor, and assess the Pilot Program and future MOE directed SHN interventions.

A Provincial Technical Advisor will be hired to be located within Eastern Province and will work hand-in-hand with, and serve as an advisor to, the Eastern Province SHN Focal Point. The overall activity implementation plan of the SHN Pilot Program being conducted within

the Eastern Province will be the key responsibility of the Eastern Province SHN Focal Point, together with the Provincial Technical Advisor.

Three Assistants will also be hired to facilitate the SHN Pilot Program along with responsible Provincial and District level officials from the Ministry of Education, the Ministry of Health, and the Ministry of Community Development and Social Services. A Training Assistant will assist in the overall coordination and training required for all levels of the pilot program. A Community Assistant will assist in the overall coordination, collaboration, implementation and monitoring of all community-based activities taking place within the Pilot Program. A School Health Assistant will aid in the training and implementation activities required to achieve better SHN programs in the teaching/learning environment and the capacity to assess the health needs of children and administer health interventions to children. The three Assistant positions will be required as full-time positions for the first year of the program and will serve as short-term consultants to the three Ministries throughout the successive years of the program.

It has been determined that the technical expertise is available within Zambia to meet the requirements of the Provincial Technical Advisor, the Training Assistant, the Community Assistant, and the School Health Assistant. The three key ministries will be involved in developing the terms of reference for each of these positions and recruitment from within the country will take place. An interview and selection committee will be established to make final selections.

At the district and community level there are a variety of individuals who will be responsible for the actual development and implementation of action plans in support of the Program to Improve Learning Through School-based Health and Nutrition Interventions. School inspectors, resource center coordinators, community development officers, and community health workers will be responsible for facilitating activities at the community level in order to mobilize them to action. Local leaders, PTA members, and special target group members, among others, will be responsible for the development of action plans that detail how communities and individuals will support better health and nutrition practices for themselves and their children. Teachers will be responsible for the actual screening of children with regard to their health status and will administer interventions and adopt new teaching practices.

Within USAID/Zambia

The management structure for the SHN Program appears slightly different when viewed through the lens of USAID/Zambia. See Appendix I for an illustrative representation of such an organizational chart.

In USAID terms, the SHN Technical Advisor will serve as the Chief of Party. As such s/he will be responsible for:

- overall development, supervision and administration of financial, human resource, management and monitoring systems and activities of the SHN Pilot Program;
- representation, communication and liaison activities with USAID, GRZ and all other public and private organizations;
- development, oversight and maintenance of collaborative agreements and partnering activities between the program and any public or private organizations in relation to achievement of program goals and deliverables;

- attainment of contract milestones and deliverables; and
- assurance of quality at all levels of program development and delivery.

The Chief of Party will report directly to the BEPS/Creative Associates Zambia SHN Project Manager and to the USAID/Zambia CTO.

An Administrative Assistant and Financial Manager will be hired to support the overall and specific activities detailed in the SHN Program contract. These positions will be filled following a local recruitment protocol and will be directly accountable to the Chief of Party.

The position of Provincial Technical Advisor will also be that of Deputy Chief of Party. And other than serving in the absence of the Chief of Party, the rolls and responsibilities of this position will be the same as under the management and staffing plan within the Ministry of Education structure.

As with the Deputy Chief of Party, the Training Assistant, Community Assistant, and School Health Assistant will assume the same responsibilities in both the USAID/Zambia structure as in the Government of Zambia structure. The Deputy Chief of Party and all three program area Assistants will report directly to the Chief of Party.

VII. IMPLEMENTATION PLAN

It is proposed that the SHN Program be implemented from October 1, 2000 through September 30, 2005. The Activity Implementation Schedule in Appendix J provides a detail activity list and timeline for the overall program implementation.

VIII. REPORTING SCHEME

SHN Program Reports

The following SHN Program reports will be submitted to both the USAID CTO and MOE Focal Point for review and approval:

Work plans. The work plan for Year I will be submitted to USAID CTO and the MOE SHN Focal Point within 60 days of initiation of the SHN Program. Subsequent yearly work plans will be submitted within 30 days of the beginning of the program year.

Progress reports. Quarterly progress reports will be submitted to the USAID CTO and MOE SHN Focal Point person within 30 days following the close of each quarter. These reports will describe key achievements, problems and suggested solutions, challenges and lessons learned during the previous quarter. Any modifications which affect the annual work plan will be noted with adjustments explained.

Annual reports. Annual reports will be submitted within 45 days of the close of each program year. They will summarize and provide analysis regarding major achievements and challenges to achieving overall program goals, milestones and work plan targets. A summary of lessons learned and best practices will be included. Newly discovered emergent needs requiring program adjustments will be noted and explained.

Financial Reports. Financial reports will be submitted quarterly and annually to the USAID CTO.

IX. BUDGET

See Appendix K for a draft program budget and accompanying budget notes.

Appendix A

USAID/Zambia Scope of Work for Basic Education Policy Support (BEPS) Activity

Program to Improve Learning Through School-based Health and Nutrition Interventions

USAID/Zambia Scope of Work for Basic Education Policy Support (BEPS) Activity

Background

USAID/Zambia's strategic objective (SO) for basic education, or SO2 is: *Improved quality of basic education for more school-aged children.* The Mission defines "quality basic education" as "improved access, retention and achievement." Improved access means more school-age children, girls and boys, rural and urban, receiving basic education. Improved retention means more pupils continuing and completing primary schooling (grade 1-7). Improved achievement means more pupils learning basic skills and competencies. Three indicators related to these dimensions of quality will measure Achievement of the SO: i) increase in net admission rate, by gender; ii) increase in retention rates, by gender; and iii) increase in pupil assessment scores, by gender. Three intermediate results (IRs) will contribute toward achieving the SO.

- IR 2.1, *improved participation of girls and other vulnerable children*, which will be monitored through a decrease in girls' drop-out rate; a decrease in orphans' drop-out rate; and increase in girls' attendance; an increase in orphans attendance; and an increase in out-of-school children's access to basic education.
- IR 2.2, *improved school-based health and nutrition (SHN) interventions to support pupil learning*, which will be measured by an increase in the number of children receiving micronutrients and deworming interventions; and increase in the number of schools with SHN interventions; and an increase in the number of joint MOE/Ministry of Health SHN products.
- IR 2.3, *improved information for education decision-making processes*, which will be measured by an improved education management information system (EMIS) and improved utilization of the EMIS.

Crosscutting all three of these intermediate results will be strategies to mitigate the negative effects of HIV/AIDS on the quality, access, and sustainability of good basic education. USAID is currently working with the Ministry of Education and other cooperating partners to identify the relevant education needs and to develop appropriate strategies to address those needs. USAID's support will be designed to support the Ministry's plans and to complement support provided by other cooperating partners.

Activities to Be "Bundled" under a Single Mechanism

The Mission intends to "bundle" several of its IR 2.1 and 2.2 activities under one delivery mechanism due to the synergy that can be achieved through the inter-relationship of activities to improve the status of girls and other vulnerable children in education, improve their learning through school health and nutrition interventions and greater capacities of communities to participate in the improvement and sustainability of quality in education, and systematic strategies to mitigate the effects

of HIV/AIDS on the achievement of Zambia's goals in education. Components to be delivered through this mechanism would include:

1. Local Capacity Building for communities, local NGOs, head teachers, teachers, other local school personnel, and district-level personnel in up to 11 districts in Southern Province and 8 districts in Eastern Provinces – focusing on the facilitating greater and more substantive participation of communities in supporting basic education, especially for girls and other vulnerable children
2. Piloting Deworming and Micronutrients program in up to 80 schools in Eastern Province and, later, facilitating the expansion of the program to all districts in Eastern Province and some districts in Southern Province
3. Community Data Collection and Use by communities and educators in Southern and Eastern Province to improve the quality of education overall
4. Central SHN Support for Policy Development and Planning in Education – in particular toward achieving “health promoting schools” throughout Zambia and in developing a system for tracking and managing information about school children's health
5. A Sub-Grant Mechanism which provides for sub-grants to support communities, NGOs, and other non-profit organizations to undertake or expand innovative interventions that:
 - increase the participation of girls and other vulnerable children in education; and/or
 - support or improve innovative SHN activities to improve health and nutritional status among school-age children;
 - integrate HIV/AIDS awareness and prevention messages and health-promoting behaviors into curricular-, extracurricular-, community- and district-based activities.

Purpose of this Statement of Work (SOW)

The Mission has supported various preparatory activities of the Ministry's SHN component and now wishes to increase its support to ensure the success of the Ministry's pilot test of low-cost, effective health and nutrition interventions. The Ministry expects to begin pilot testing in Eastern Province as early as February 2001.

The purpose of this SOW is to obtain technical services from the Basic Education Policy Support (BEPS) project (936-5862) to develop a concept document for USAID/Zambia on how the BEP's delivery mechanism would address the Mission's school health and nutrition (SHN) IR2 activities. The main focus of this SOW is on BEPS' school health and nutrition approach. The Mission's main SHN activities are: (a) piloting deworming and micronutrients program and (b) central SHN support for policy development and planning in education. Because the IR2-SHN activities are related to activities under IR1 (e.g., education for girls and other vulnerable children, community participation and data collection, HIV/AIDS mitigation, and a sub-grant mechanism), the concept document may include a description of how the IR2-SHN activities and strategies could achieve synergy with the other activities in the “bundle.”

The concept document may be approximately 10-15 pages, addressing the following elements:

- Background (understanding of national context & USAID/Zambia's SO)
- Project Rationale (justification, focus, importance)
- Project Description, including
 - Overall integrated, strategic approach
 - Identification of key partners & stakeholders and corresponding strategies for involvement/collaboration (including UNICEF, JICA)
 - Strategy for identifying and testing methodologies to be replicated when scaling up
 - Technical understanding and skill
 - Project start-up and management plan
 - Identification of potential, key national and international resources for inclusion/involvement
 - Key personnel (description of roles & responsibilities)
 - Deliverables over the life of the project
 - Measurable indicators & milestone plan
 - Project timeline (possibly a Gantt chart format)
 - Budget (rough)
 - BEPS capabilities statement (limited description)

In addition to assessing the technical team's ability to effectively communicate with our partners in the Ministry of Education and other agencies and to add value to the Ministry's discussions and plans for its School Health and Nutrition Component, the Mission will evaluate the BEPS team's concept document for IR2-SHN. Key criteria for evaluating the document include:

- Strategic understanding and approach
- Involvement of appropriate stakeholders, resources
- Technical approach, understanding and expertise
- Feasibility & timeliness of project plan
- Budget

The Mission is already confident that BEPS can provide technical assistance in all of the other activities in the "bundle" described above. Based on BEPS' IR2-SHN concept document and its teams' technical capacity in SHN, the Mission will determine if BEPS is the appropriate mechanism for conducting a larger program, encompassing the entire "bundle" of IR1 and IR2 activities.

Delivery Schedule

1. July 6 - BEPS Team begins work in Lusaka.
2. July 18 - Submit the concept document (described above).
3. July 19 - Attend an USAID/Zambia internal review of the concept document (afternoon)

Note: July 20 - Based on the outcomes of the internal review of the concept document, decisions will be made and official documents signed regarding the way forward.

Appendix B

Documents Consulted

Program to Improve Learning Through School-based Health and Nutrition Interventions

Documents Consulted

- Chibale, M.N. School Sanitation and Hygiene Education Project: Experience in Chipata District, Report, March 2000.
- Del Rosso, J.M. School Feeding Programs: Improving Effectiveness and Increasing the Benefit To Education. Partnership for Child Development, Report, June 1999.
- Dolan, C. et al. What's New in the Health and Nutrition of the School-aged Child in School Health and Nutrition Programmes? Partnership for Child Development, paper, April 2000.
- Chiwele, J.M. & G.K. Mwape Integration of Teaching HIV/AIDS Prevention and Psychosocial Life Skills into School & College Curricula in Zambia, UNESCO Report, June 1998.
- JICA Summary of School Health Programme JICA, PHC, Urban Lusaka Project Report, Nov., 1999). Japanese International Cooperation Agency.
- Nkamba, M. & J. Kanyika The Quality of Education: Some Policy Suggestions Based on a Survey of Schools: Zambia, SACMEQ, Policy Research Report No. 5, 1998.
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- USAID/Zambia Promises to Keep: From Reforms to Benefits for Zambians, Country Strategic Plan, 1998-2002.
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- Zambia/MOE Education for All 2000 Assessment, Zambia Ministry of Education, 1999.
- Zambia/MOE Learning Achievement at the Middle BASIC Level, Report on Zambia's National Assessment Project 1999, Report prepared by M.J. Kelly with J. Kanyika, March 2000.
- Zambia/MOE Basic Education Sub-Sector Investment Programme (BESSIP), School Health and Nutrition Component, Report of National and District Sensitization Workshop, 17-28 Feb. 2000, Zambia Ministry of Education
- Zambia/MOE School Health and Nutrition (SHN), Strategic Plan, Zambia Ministry of Education, May 2000.
- Zambia/MOE Educating our Future: National Policy on Education, Zambia Ministry of Education, 1996.
- World Bank Program Appraisal Document (BESSIP), Document No.19008ZA, March 1999.

Appendix C

Programs and Organizations Consulted

Program to Improve Learning Through School-based Health and Nutrition Interventions

Programs and Organizations Consulted

LUSAKA-based People and Organizations Consulted (July 5 – 14, 2000)

Ministry of Education

- Mrs. Catherine Phiri, School Health Nutrition Focal Point Person, BESSIP
- Mrs. Barbara Chilangwa, BESSIP Coordinator, Deputy Permanent Secretary for Technical Coordination
- Mr. Arnold Chengo, BESSIP Manager
- Ms. Matilda Mwamba, Assistant Equity and Gender Focal Person
- Ms. Samuel Saizi Zulu, Teacher Education Specialist
- Mr. Christopher Zulu, Chief Inspector of Schools
- Mr. Mukelabai Songiso, Principal Inspector of Schools
- Mr. Kalubi Agnes, Human Resources Development Officer
- Mr. Simon Chibuta, Director, Teacher Education, Curriculum Development Center
- Mr. George Sililo, Director of Curriculum Development Center

Ministry of Health

- Mr. Vincent Mussowe, Director of Planning
- Mr. Nicholas Chikwenya, Health Planner
- Mr. Crispin Melele, Health Promotion Specialist, Central Board of Health
- Mrs. Josephine Nyambe, Coordinator, Child Health, Zambian Integrated Health Program (ZIHP)
- Ms. Erisa Reeves, Intern, Child Health, ZIPH

Ministry of Community Development and Social Services

- Mrs. Masisani, Deputy Director of Social Welfare
- Ms. Lillian Kaoma, Project Officer, Public Welfare Assistance Management Unit
- Mrs. Charlotte Harland, Project Manager, Public Welfare Assistance Scheme, Department of Welfare
- Mr. Conard, Senior Planner

National Food and Nutrition Commission

- Mrs. Prisilla Likwasi, Director
- Mrs. Enstina Mulenga-Besa, Acting Head, Nutrition Education and Communications
- Ms. Raider Habulembe Mugode, Nutritionist
- Ms. Martha Chibale, National Nutrition Coordinator, Director Child to Child Program

Ministry of Local Government

- Mr. Cledwin Mulambo, Engineer, Water and Sanitation

USAID

- Dr. Kent Noel, Education Advisor, USAID/Zambia
- Ms. Winnie Chilala, Education Specialist, USAID/Zambia
- Ms. Peggy Chibuye, Senior ungPublic Health Specialist, USAID/Zambia
- Mr. Steve Hodgins, Child Survivial Technical Advisor, USAID/Zambia
- Mr. Fred Mugandi, USAID, Information Technology Specialist, USAID/Zambia
- Mr. Walter North, Director, USAID/Zambia
- Ms. Christine Chaitezwi, Financial Analyst, USAID/Zambia
- Ms. Kennedy Mwamba, Systems Manager, USAID/Zambia
- Dr. John Swallow, Education Officer, USAID/Washington
- Ms. Patricia Stephenson, Maternal Child Health Senior Technical Advisor, USAID/Washington

Donors

UNICEF

- Peter DeVries, Project Officer/Education
- Ms. Seko Phiri, Project Officer, Waste Section
- Mr. H. Libpani, Project Officer, Waste Section

Peace Corps

- Ms. Henrietta Koubakouenda, Programming and Training Officer, Community Action for Health Project , US Peace Corps

World Bank

- Clement Siamatowe, Social Sector Officer, World Bank

Department for International Development

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

UNESCO

- Ceciliar Barbieri, Basic Education Experts

JICA

- Mr. Satoshi Nakamura, Technical Cooperation Advisor
- Dr. Rie Ogiwara, Public Health Expert
- Ms. Seko Phiri, Project Officer, WASHE
- Dr. Mami Hirota Shields, Public Health Expert
- Ms. Naomi Toyoshi, Project Formulation Advisor
- Ms. Miki Senoo, Health Education Expert
- Dr. Osawu Tanabe, Assistant Representative

Ireland Aid

- Ms. Edna Kalaluka, Program Executive

Smithkline Beecham

- Mr. Mike Murray, Smithkline Beecham, London, England

NGOs

Medoff

- Dr. Siwale, Director
- Dr. Dean Phiri, Associate

EASTERN PROVINCE Organizations and People Consulted (July 9-12)

Provincial Government

- Mr. Solomon J. Mbuzi, Minister for Eastern Province
- Mr. William Siliweya, Provincial Permanent Secretary

Ministry of Education

Province

- Mr. Watson Mwanza, Principal Inspector of Schools
- Mrs. Catherine Chirwa, Senior Inspector of Schools

Chipata District

- Mr. Musanshi, District Chief Inspector of Schools
- Mr. Chanda, Chipata Teacher Training College, Vice Principal
- Umodzi School: Mrs Nthwewe (headteacher)
- Sanjika School: Mr. Mwale (head teacher) and Mrs Banda (teacher)
- Dambe School: Mr. Manda (deputy head)
- Kronje School: Mrs. Banda (deputy head)

Chadiza District

- Mrs. Ruth Zulu-Mbewe, District Inspector of Schools
- Mr. Tembo, Coordinator, District Resource Centre
- Chilengo School Mr. Tembo (deputy head)

Ministry of Health

- Mr. Square, Director, DHMT
- Mrs. Musukwa, Public health nurse
- Mrs. Susan Mutemwa, Deputy Director Health - Planning.

Ministry of Community Development and Social Service

- Mr. G.K. Dakar, DWASHE chairman and Community Development Officer

- Mr. Banda, Former DWASHE chairman, Mr Banda
- Mr. Mwape, Deputy in charge of rural water supply

NGOs

Africare:

- Matthew Kapete, Director of Zampip
- Selina Mwale, Office/projects Manager
- Rose Ndhlovu, Training Officer
- Orleans Mfunu, Intern

Plan International:

- Emmanuel Chama, Programme Area Manager
- Michael Benedict Phiri, Programmes Coordinator
- Patrick Chabwe, Communications Coordinator

Society for Family Health:

- Kelvin Ngoma, area sales manager
- Progress Mundla, site co-ordinator

Appendix D
Field Visit Report

Program to Improve Learning Through School-based Health and Nutrition Interventions

Field Visit Report

Visit to Eastern Province (9th July – 12th July 2000)

Team Members: Mrs Catherine Phiri, Senior Inspector of Schools, SHN focal person, Ministry of Education.
Dr Kent Noel, Education Advisor (USAID).
Dr Lesley Drake, School Health Consultant (Partnership for Child Development).

Aims of Visit: To meet with all key stakeholders and partners at both the Provincial and District level to discuss:

- Their thoughts upon the design and implementation of the SHN pilot programme in Chipata and Chadiza Districts,
- To gather information from these parties that may be relevant to the practical design and implementation of the SHN programme pilot.

Executive Summary

There is a real and perceived need for a school health and nutrition programme in this Province - and a willingness of all partners at all levels to embrace, and assist in, its' implementation.

Chipata, Chama and Chadiza, the Districts targeted for the pilot programme, are well elected. These Districts have high levels of poverty and malnutrition and have been the focus of very few programmes, in comparison to the other Districts. In addition, a basic communication infrastructure is in place that can now be built upon. There are also intersectoral committees working at all levels, from the community through to Provincial level. The need to work together is recognised and everyone is working hard for the ultimate benefit of the children.

All education officials interviewed (from the Minister down to the teachers) expressed an enthusiasm for the SHN programme and a willingness to fully participate, given adequate training and support. The facilities in the schools visited varied markedly, but were generally clean and well kept with a basic information management system.

The majority of schools have active PTA's, indicating a good relationship with their communities. The majority are easily accessible, but attendance is seasonal, due to both farming responsibilities and cultural obligations.

All health officials interviewed expressed enthusiasm for the SHN programme and welcomed the help of the MoE in this area. All remarked that this group of the population has long been neglected and definitely in need of aid, but lack of resources

hindered their involvement. The main diseases and health issues affecting the school-age child were: malaria, worms, malnutrition and HIV/AIDS.

There appears to be a general lack of any efficient information management system throughout both Districts and communications are basic. This needs to be addressed.

Cultural traditions are still very much an integral part of community life, especially in Chadiza District. Fundamental educational issues, such as low enrolment rates, absenteeism and drop out, as a result of these traditions, will need to be addressed if the SHN programme is to gain maximum impact. Organisations (e.g. Plan International) and government agencies (e.g. Dept Community Development) are already involved in community sensitisation initiatives addressing these issues – with some success.

Community support is critical to the success of this project. The consensus opinion is that communities would welcome the SHN programme IF involved and informed from its' inception. It was acknowledged by all that this takes time – but is essential.

Specific Recommendations

- (a) Promote community involvement and awareness of health and nutrition issues and the SHN programme;
- (b) Promote local capacity building (e.g. organising provincial, district and community intersectoral implementation/coordinating committees);
- (c) Implement an effective management infrastructure;
- (d) Implement an effective information management system;
- (e) Initiate teacher training;

See Appendix 1 for list of contacts

Sunday 9th July

1400h: Welcome meeting with Mr Watson Mwanza – Principal Inspector of Schools (Provincial Education Headquarters). Catherine Phiri presented an update on the SHN programme and the reason for our visit and thanked him for his help with the organization. The itinerary for the visit was discussed.

Visit to Muchini and Soweto Community Compounds (located on the outskirts of Chipata Town, nearby to each other)

Information was gathered about issues relating to their health and general living conditions through interviews with the following Muchini community members: Rebecca Musone; Bina Phiris (water kiosk attendants); and Adrian Banda (owner of “The Good People Shopping Centre”); and the Soweto community member, Arnold Phiri (Grade 9 school student).

People

- The families living here are large. There are, on average, 5 children in each family.
- Mr Banda did not think there was a big problem with orphans in the compound as AIDS was not a problem here – as not many prostitutes!
- Mr Phiri thought that there was a big problem with orphans. His father is dead and his mother is in Malawi. His brother supports him now, along with 3 of his own children and 3 orphans.
- There is a herbalist in the compound selling common herbs (e.g. parsley) to cure common ailments – but is not a traditional healer.
- Very few people wore shoes.

Water

- Water is piped into the compound under the control of Department of Water & Sewerage (TCWS?). It is reputedly the cleanest piped water in Zambia.
- It is bought from kiosks (compound total = 8) using tokens at a price of 20Kwa/20L. 15, 000 Kwa a day is given to TCWS towards purification and maintenance costs).
- Kiosks are open 0630h – 1730h. Although sometimes they are out of order.
- An average family (5 children) would spend 500Kw/day. Mr Phiri’s family spent an average 2, 500 Kwa//mth (4 x 20l/day). They used water from a bore hole for many activities (e.g. washing).
- Most people draw water from wells for washing. On the outskirts of the compound, more people use well water than kiosk water.
- Chlorine tablets not used in general.

Sanitation

- Most people in Muchini do not have latrines – they use others. Others allow this because they don’t want their neighbours dirtying the neighbourhood.
- People would like more latrines – but they are expensive to build.

Schools

- There is a Twivwilani (education nursery) Community Project here.
- Grade 1-7 children go to the Primary Umodzi Basic School.
- Grade 8-9 go to Hillside School.
- When no water is available, the schools shut down – to prevent the spread of disease.

Health

- The health clinic is fairly close by (at the prison), people do go if ill and can afford it.
- Biggest disease problem is malaria, also “Kasamwa?”
- Cholera not much of a problem because water doesn't stand very long, and leaders make sure compounds are kept clean (did appear to be clean!).
- In the rainy season, however, there are some cases of dysentery.
- There seemed to be many people with eye problems in the compound. Some adults had cataracts, other problems due to malnutrition, trachoma?
- A few children had swollen abdomens, a few had sores on their legs, a few had discoloured, patchy hair. Probably due to malnutrition and/or worm infections.

Visit to Umodzi School

Information gathered from the headteacher, Mrs Nthwewe.

- It is the only school in the area and serves many communities.
- Children and teachers travel long distances to get there. There is no room for boarders.
- 500 boys and 600 girls enrolled
- 32 trained teachers
- 6 latrines for girls, six for boys. 1 shower each (~ 1 latrine/100 kids)
- There is an active PTA that tries to raise school fees.
- There is an active PAGE committee. Would like more interaction/visits from PAGE officials
- When asked what was most needed in her school, she replied, “more books”.
- Health workers visit the school often and there is good coordination on national immunisation days.
- Children who attend the morning session, often do not eat before coming to school – they may bring some bread, but it is not enough. Children coming after lunch, most likely did eat before coming to school.
- Water was drawn from a well.
- Did not perceive worms/malnutrition as a particular problem
- Teachers would accept involvement in SHN if they were properly sensitised and trained first.

Monday 10th July – Visit to Chipata District

0830h: Meeting with Mr Watson Mwanza who introduced Mrs Catherine Chirwa (Senior Inspector of Schools) who would accompany us on our mission in Eastern Province.

Brief Minutes

Mrs Phiri explained the need to have a cross-sectoral provincial SHN implementation committee.

Mr Mwanza described to us the composition of the cross-sectoral Provincial PAGE Committee. This included individuals from MoE, MoH, MoLG and MoCDSS.

Kent Noel suggested that perhaps the mandate of the PAGE committee could be revised to encompass this role. Mr Mwanza thought this was a possibility.

There are, at present 4 senior school inspectors. The question was raised whether more inspectors would be needed to facilitate effective monitoring of the SHN programme. Mr Mwanza explained that 3 more inspectors were soon to be appointed to the provincial office. There are 3 vehicles for provincial staff use (although one is broken). There is also a lorry. Each District has a vehicle for use by the District Inspectors. It was noted that fuel is very expensive.

0900h: An introduction and welcome meeting with the Provincial Permanent Secretary, Mr William Siliweya, and the Minister for Eastern Province, Mr Solomon J. Mbuzi. It was agreed to meet again Wednesday 12th.

0930h: Meeting with Mr Musanshi (Chipata District Chief Inspector of Schools)

Brief Minutes

Mr Musanshi provided a map of all the schools in Chipata (Appendix 2). It was agreed that we would visit 3 schools in the District: a peri-urban school (Sanjika); a rural school (Dambe) and; a zonal resource centre school (Kronje).

Sanjika School

The school was 10-15min drive along a main tarmac road from Provincial Headquarters. It is easily accessible at all times.

Information gathered during a meeting and tour of the school with the head-teacher, Mr Mwale and Mrs Banda teacher and informal counsellor.

Enrolment and attendance

- Mr Mwale provided us with enrolment and attendance figures for all grades (1-7) for June 2000 (Appendix 3).
- During the farming seasons (Jan-Feb and Spr-May), approximately 30-35% of the children will be out of school helping their families.
- Children in Grades 3-7 are all affected, (with Grades 4-5 most affected).
- Some older children drop-out (especially boys) and to go to schools in Malawi, where education is free. However, not as good a standard as Zambian education. Lessons taught in Nyanja

Teachers

- There are 14 trained teachers (5 male, 7 female) and 1 assistant teacher

- Mrs Banda has been the school counsellor for 3 years but has had no formal training and does this in her spare time. She gives guidance on harassment, pregnancy, HIV/AIDS.
- Mr Mwale was confident that his teachers had the motivation and ability to be execute the SHN interventions with adequate training. Would welcome this.

Facilities

- The school is fairly well kept, but in need of renovation. Desks, chairs and books were evident. Broken windows.
- A micro-project grant has been awarded to build a new block, sink a borehole and electrify the school. The communities helped raise the money needed.
- 3 latrines for girls, 3 latrines for boys. Brick construction, but not much privacy. 1 latrine for staff.
- Water is drawn from an uncovered well. Chlorine is added to the well at regular intervals.

Communities Served

- The school serves 11 villages.
- Some children walk as far as 6km to reach school. Concern was expressed at girls walking this far for fear of harassment
- Very close to the Malawi border. Inter-marriages common.
- Common for girls to become pregnant by Malawi migrant workers, who after work is completed, return home to their families. Many single parents in area.
- Mr Mwale could not anticipate unhappiness/bad feeling in the community about the SHN. He thinks they would welcome it. They are health sensitised.
- Main perceived disease risk is malaria.

School Committees

- There is an active PTA that serves as a mother board for various project committees, for example production unit committee. Last year produced 15, 50kg bags of maize and 3, 50kg bags of groundnuts. The children all help. Mrs Phiri asked how the children benefited from this activity, Mr Mwale replied that some money is spent on transportation costs to other schools, school renovation etc.
- There is also a bursary committee that works with the community to identify and help needy children.

Health-Related Activities

- There is a new clinic nearby that is actively working with the school and the communities to address health issues. Promotes strong awareness of national immunisation days.
- There is a Neighbourhood Health Committee that aims to promote the link between villages-schools-clinics (members include male and female villagers, teachers, traditional leaders and health workers. It was initiated by the MoH but also uses ADRA guidelines (ADRA is active in area). Activities include discussing ways to prevent diseases such as malaria and diarrhoea, encouraging the use of safe water (there are many unprotected wells), discussing ways
- There is an active Child-to Child Programme.

- The school organises health talks for the children. For example, environmental health worker tested salt brought in by the children for iodine. Over 75% of samples were iodated.

Dambe School

The school was 30 min drive along mud roads turning off the main tarmac road. The road is, however, accessible throughout the year (but perhaps with difficulty).

Information gathered during a meeting and tour of the school with the deputy head-teacher, Mr Manda.

Enrolment and attendance

- Grade 4 school (Grades 1-7).
- 170 children children. Fewer girls than boys and numbers dwindled as children got older.
- During the farming seasons (Jan-Feb and Apr-May), many children are not in school.
- Some older children drop-out (especially boys) to go to schools in Malawi, where education is free.

Teachers

- There are 5 trained teachers (3 male, 2 female) + 1 volunteer.

Facilities

- The blocks are in good repair.
- Many books kept in headmistresses room and thus under utilised.
- 2 latrines for girls, 1 latrine for boys, 2 for staff. Brick construction, private but unventilated.
- Water is drawn from a borehole. However, there are problems. Sometimes there is insufficient water or the water is rusty from the piper. In the dry season, it may dry up completely. No chlorine is added.
- Water is often collected from the stream.
- There is a school garden that grows maize during the rainy season

Communities Served

- The school serves 6 villages.
- Some children walk as far as 5km to reach school. Some villages only 1km away.
- Very close to the Malawi border. Inter-marriages common.
- Common for girls to become pregnant by Malawi migrant workers, who after work is completed, return home to their families. Many single parents in area.
- Mr Manda could not anticipate unhappiness/bad feeling in the community about the SHN. He thinks they would welcome it. They are health sensitised.
- Main perceived disease risk are malaria, worms and eye problems.

School Committees

- There is an active PTA that raises school fees for needy children.

Health-Related Activities

- Magwero clinic is 5km away, but is new and not well established.
- Local health workers do visit every month for the under 5 clinic. Infrequently examine the schoolchildren.
- There is a Neighbourhood Health Committee that was organised by Magwero health workers – seems fairly active
- The Child-to Child Programme was successful last year, but has failed this year. No clear reasons given.

Kronje School

The school was 10-15min drive along a main tarmac road from Provincial Headquarters. It is easily accessible at all times.

Information gathered during a meeting and tour of the school with the deputy head-teacher, Mrs Banda and Mr ? (zonal coordinator).

Enrolment and attendance

- 500 enrolled pupils, 244 female and 253 male, grades (1-7).
- During the farming seasons (Jan-Feb and Spr-May), many children out of school.

Teachers

- There are 12 trained teachers (5 male, 7 female).
- Supposed to be a zonal resource school, but as yet, has not fully developed. Only 1 small room for ZC (who is also a fulltime grade 7 teacher) who has gathered/created no resources as yet.
- Have run a number of workshops on in-service training modules and organised inter-school zonal quiz events.
- Thought that the addition of an extra module for SHN, to already existing module course, would not be a problem, nor teachers giving treatments, as long as properly trained.
- Thought that parents would welcome such interventions – health sensitised area.

Facilities

- The school is in excellent condition. Renovation just completed using microproject grant monies.
- 6 latrines for girls, 6 latrines for boys. Brick, VIP construction, very private and well kept. 2 latrines for staff.
- There are 2 boreholes. 1 is broken. Able to get water all year around, but sometimes have to wait as water gets used up quickly – especially in dry season. Chlorine is not added to water.
- Acts as a zonal resource school for 9 other schools in area – furthest is 8km away.
- Doesn't get to the District Resource Centre very often due to lack of transport (~10km).

Communities Served

- The school serves 3 villages and 11 sections (squatter compounds with 11-25 households in each).

- Thought that community/parents would welcome SHN interventions. They are health sensitised as clinic nearby.
- Main perceived disease risk is malaria, diarrhoea and eye problems. Have not noticed worms to be a problem

School Committees

- There is an active PTA.
- There is a Station Committee comprised of local heads of departments (teachers, health, police, church) that discuss community problems and issues.
- Community Development workers in area – help identify needy children for aid.

Health-Related Activities

- There is a clinic nearby that is actively working with the school and the communities to address health issues.
- There is an active Child-to Child Programme.
- The school organises health talks for the children.

Tuesday 11th July – visit to Chadiza District

0930h: Meeting with the District Inspector of Schools, Mrs Ruth Zulu-Mbewe

Brief minutes

Mrs Mbewe provided a map of all the schools in the District and described these schools: there are 2 secondary schools, 8 basic schools (grades 1-9), 26 middle basic schools (grades 1-7), 4 lower basic schools (grades 1-4) and 3 community schools.

All schools are accessible, all year. The District office has a vehicle.

Mrs Mbewe described health-related activities that are presently implemented in Chadiza District:

- (i) Plan International has developed a child-to-child approach in a number of schools in the District. This project highlights issues on health and sanitation in both schools and communities.
- (ii) ADRA, in cooperation with the MoH are implementing a child-to-child programme (as above) and malaria control.
- (ii) Red Cross are involved in primary health care provision. Procuring basic drugs for health centres (e.g. aspirin).
- (iii) There is an Area Development Committee organised by the local govt who are involved in many issues relating to the welfare of the community, including schools. The members are representatives of local govt, the community, the education sector, the health sector, police etc
- (iv) DWASHE committee has organised many local VWASHE groups in the communities.

There is a specific problem in Chadiza District in that traditional cultures are very evident here. Both boys and girls are initiated from the ages of 10 onwards, which leads to an increase in drop out. In terms of girls, this may be due to early

marriage/pregnancy. But this may be a particular problem with the boys, who after initiation drop out as education is no longer important to them.

Also, it is a very poor District. The poverty levels are amongst the highest in EP. Poor soil conditions mean that fertilizer is vital to crop production. This is very expensive.

Meeting with Susan Mutemwa (Deputy Director Health - Planning) at the District Health Centre.

Brief Minutes

- Health workers do visit schools on a very irregular basis, for example on national immunisation days, the occasional health talk on issues such as nutrition and disease avoidance. Recognised that outlying schools are very neglected. Cited staffing levels being given information at very short notice about "health days" by head office as reasons for this.
- Would like to give physical examinations to children more regularly, but don't have staff or resources.
- Work with both ADRA and Plan International! in communities on issues relating to health and nutrition education and helping out of school children. Also PI give funds for teachers training and logistical support
- The major diseases/conditions affecting school-age children in District are malaria, worm infestations and anaemia
- Recognised the need for a better reporting and communication (+ intersectoral) system.
- Would welcome teachers involvement in health and would be able to give support to this, if local workshops were held and teachers were given adequate training
- Would be able to provide adequate storage facilities for the drugs.

Visit to District Resource Centre

- Run by a coordinator, Mr Tembo and part-time volunteer teachers.
- Well stocked with teaching aids and training information. Have a radio, photocopier, computer, printer, large television and VCR.
- Hold regular workshops for zonal coordinators

Meeting with members of the DWASHE committee and District Community Development Officers (DWASHE chairman and Community Development Officer, Mr G.K. Dakar, former DWASHE chairman, Mr Banda and Mr Mwape, deputy in charge of rural water supply).

- Involved in community mobilisation and participation efforts.
 - Work with communities and have organised many village WASHE committees, women's groups
 - Work with communities in health education, disease prevention (the need for safe water and sanitation, HIV/AIDS etc)
 - Train community members in borehole repair and maintenance
 - Collaborate with MoE on BESSIP sensitisation

- Com Dev. officers work with communities to identify poor and needy children (usually orphans) and help them with school funds etc.
- Recognised high level of malnutrition in villages. Also malaria, respiratory and eye problems are evident.

Visit to Chilengo School (Zonal School)

The school is 12km out of Chadiza town and easily accessible
Information gathered from the headteacher, Mr Tembo.

Enrolment and attendance

- 253 enrolled pupils, 139 female and 115, grades (1-7).
- During the farming seasons (Jan-Feb and Spr-May), many children out of school.
- Estimate that only 30% of school-age children are actually in school, again due to traditional beliefs.

Teachers

- There are 4 trained teachers (2 male, 2 female).
- Visit district resource centre once a week by bicycle

Facilities

- The school is well kept, books, desks and chairs present.
- Latrines are in very poor condition. Only 1 latrine for girls, 1 latrine for boys and 2 latrines for staff. Recognised that children do not often use these facilities.
- There is a borehole, but is used by entire community. Think the water is safe, but do not use chlorine tablets.
- Have a school garden. Grow a cash crop of sunflowers. However, unclear as to how children benefit from this.

Communities Served

- The school serves 24 villages.
- Thought that community/parents would welcome SHN interventions as long as adequately sensitised.
- Main perceived disease risk is malaria, diarrhoea and respiratory problems. HIV/AIDS related diseases also apparent. Have not noticed worms to be a problem

School Committees

- There is an active PTA

Health-Related Activities

- There is an Anti-Aids Club. Headmaster and 1 other teacher trained by ADRA.
- The school organises health talks for the children.

Meeting with Mr Square (Director, DHMT and Mrs Musukwa, public health nurse) at Chipata General Hospital.

- Have 32 health centres in Districts under their management control
- Have school based health services as part of their action plan including health education, physical examination and referral for treatment. Unclear how often get to each school for phy exams.
- Produce school health cards, but have no records on individual children. Records not computerised. Recognise the need for this, but have no resources.
- Immunise children in grade 1 for polio, BCG and tetanus. Children in grades 7,9 and 12 for tetanus and BCG. This usually occurs in dry season.
- Recognize malaria, worms, malnutrition, HIV/AIDS and eye problems as the major health issues affecting children.
- Have deworming as part of their action plan, but have no resources to implement.
- Have good drug distribution lines and storage facilities form Lusaka.
- Would welcome the SHN programme and would like to play an active support role, although resources limited.
- Would like to see workshops involving teachers and local health workers organised and adequate training for teachers.

Wednesday 12th July

0830h: Meeting with the Minister, Permanent Secretary and Principal Inspector of Schools (Mrs Phiri alone)

Brief Minutes

There was a genuine enthusiasm for the project and an eagerness to learn more about the programme. They lent their unsolicited support and assistance to the programme.

0830h: Meeting with Africare (Matthew Kapete, Director of Zampip, Selina Mwale (office/projects manager, Rose Ndhlovu, training officer and Orleans Mfuno, intern) (KN and LD only).

Brief Minutes

- ZIHP people were unavailable. This team is involved in malaria prevention and training of trainers in rural health centres in disease prevention and nutrition issues.
- The Zampip team is involved in improving community and food security by the provision of small agricultural loans to local farmers. In Chadiza, the EEOAp (Economic Expansion in Outlying Areas) is a project that gives credit provision to needy farmers. SAMEP (smallholder agricultural mechanisations promotion) identifies appropriate and sustainable technology.
- Very interested in improving the level of nutrition in communities in general. Are involved in teaching mothers to cook properly utilising local foods to produce a healthy, balanced diet. Are cooperating with the MoH to teach mothers to be about healthy diets, suggested that an extra component could be to teach them about healthy diets for their other children.
- Thought our project ambitious and highlighted that community involvement was critical, especially about the importance of education and the need for children to eat breakfast in the morning.

Visit to Chipata Teacher Training College.

Information gathered from Mr Chanda, Vice Principal

The college is well kept. It has just been renovated and refurbished with DANIDA funds. They have very good computer (8), library, admin support and meeting room facilities.

- The college trains primary schoolteachers (grades 1-7). Total output 290 male, 287 female trained teachers last year. There are 15 teachers.
- Have a wide curriculum and suggested that health education/interventions could be integrated across the curriculum for pre-service training. This has already been done for gender issues (PAGE sensitive)
- Have the manpower to run workshops for in-service teacher training on health interventions and health education.
- Are taught about production units, how to run them etc.
- Life skills are not taught as such yet. More practical life skills as opposed to psycho-social skills
- Don't address HIV/AIDS issues within the curriculum. Have just started an Anti-AIDS club for students.
- Need to appoint SHN focal person for the college and serve on the provincial SHN coordinating committee. Mr S Busiku is the coordinator for HIV/AIDS activities and Mrs Winnie Mvula is already involved in SHN committee meetings. These will be the focal points.

Visit to Society for Family Health

Information gathered from Kelvin Ngoma (area sales manager) and Progress Mundla (site co-ordinator)

- Local NGO since 1992, funded by JICA, USAID, DFID
- Mission Statement: to improve the health status of Zambians using social marketing skills to increase demand for access to, and use of, essential health products and services.
- PowerNet programme: Pilot in Chama, Chipata and Lundazi. The rationale is to market impregnated nets to communities. Individuals buy the nets from the local distributors at a significant discount (10 000Kwa)
- Targeting mothers and babies as a priority. . Not really targeting schools, but have a health education project (child-to-child-to-parent) using drama, role playing, malaria clubs to teach malaria prevention.
- Family Planning and HIV/AIDS prevention: Marketing "maximum" condoms to local shops and community centres. Also HIV awareness campaigns in communities. Coming across resistance from teachers and the church w.r.t HIV/AIDS reproductive health education.
- Working with MoH to distribute water chlorine treatments, but not in schools
- Suggested that they join the provincial SHN coordinating committee.

Visit to Plan International

Information gathered from Emmanuel Chama (Programme Area Manager), Michael Benedict Phiri (Programmes Coordinator) and Patrick Chabwe (Communications Coordinator).

- PI are a self-funding organisation. The majority of funds coming from “developed country foster parents” for local children
- Have a pilot project in Chipata with over 1600 children enrolled in their programme
- Work closely with MoE, MoH, local govt, MoFF, MoCDSS and traditional leaders
- Have helped set up area development committees through local government and provide training to improve local leadership skills. Helping to empower the community
- Promoting community schools. Advising on legal issues and upgrading to government level status (construction etc). Also provide books, uniforms etc.
- Provided training for 24 teachers in Child-to-Child Methodology.
- Promoting PAGE by encouraging gender equity.

Appendix E

PCD Subcontract Proposal

APPENDIX E: Sub-Contract to Creative Associates International Inc.

Section 1

**Provision of Technical Assistance and Quality Assurance for the Basic Education
Sub-Sector Investment Program in Zambia: School Health and Nutrition
Component.**

Submitted by
The Partnership for Child Development

University of Oxford
FOR USAID

This proposal (Section 1) is intended to provide a proposal overview. A more detailed proposal will be submitted shortly.

Objective

To provide technical support to, and quality assurance of, the school health and nutrition intervention activities of the Programme.

Scope of Work:

Throughout the 5 year implementation of the SHN programme, the Partnership for Child Development (PCD) will provide guidance, assistance and quality assurance to the school health and education interventions. This will be in the form of short term consultancies to Zambia at keypoints during the design, planning and implementation of the interventions and health and cognitive assessments. In addition, the coordinating centre, based in the UK, will provide a constant monitoring and evaluation service to the MoE program implementors, as well as advice and guidance when required. Consultants will be available to aid and assist at all times.

Our team will work closely with the cognitive assessment team (see Section 2) as well as SHN program partners to ensure coordinated action. At the end of both the impact assessment period (end of year 3) and the 5-year program, an intervention impact evaluation and cost-effective analysis will be undertaken and reports submitted.

Project Tasks:

- (i) The development and implementation of a computer-based management information system for aiding the implementation, monitoring and evaluation of the School Health and Nutrition (SHN) subcomponent of BESSIP (Consultants Dr Edwin Michael and Dr Lesley Drake).

There is increasing recognition that the effective capture, management and analysis of data is key to the successful implementation of intervention programmes, especially when these projects are large-scale and involve managing multiple sites and

processes. An essential requirement is also that the gathered information be current and easily accessible. By facilitating: (i) the development of a reliable and efficient management information system (MIS) for storing, managing and retrieving complex data from multiple users sources; (ii) the undertaking of meaningful statistical analyses and (iii) the preparation of relevant programme reports, modern database management systems technology today offer not only a powerful tool for up to date capturing, managing and processing of information pertinent to the successful operation of intervention programmes at scale but increasingly also flexible deployment strategies as well as links to other data processing packages, such as mapping and other analytical programmes.

The information to be collected from the SHN program is highly specific and the current design of the EMIS and HMIS do not, as yet, have the provision to accommodate all proposed data types. Here, we propose, working within the developmental framework of EMIS and HMIS, to develop and implement an SHN-MIS for capturing, managing, analyzing and reporting on specific data relevant to undertaking impact and programmatic evaluations of the proposed pilot school-based health interventions. In addition, the core database engine will be intergrated with the commonly-used mapping programme, MapInfo, allowing the ready mapping of the current situation in the relevant district (or across the country) regarding the status of the SHN programmes in the schools recruited to the project. This SHN information will be subsequently uploaded and integrated into EMIS and HMIS.

Examples of the types of data to be collected are described in Appendix E1

(ii) Provision of technical assistance and quality asurance to the SHN interventions (Consultants: Field program design and implementation and quality assurance/evaluation consultants)

PCD will work in close collaboration with all SHN program partners to provide a coordinated and effective design and implementation effort.

A detailed log frame of activities will be constructed. But will follow the basic design as outlined below for Year 1:

Program Activities	Key Task	Time Frame
Phase 1: Preparation	<ul style="list-style-type: none"> • Procurement of pharmaceuticals • Procurement of biomedical consumables • Distribution and storage lines established • Decision made on micronutrient supplementation interventions and collection on biomedical data for pilot Districts¹ • Validation of questionnaire for the identification of schools warranting mass treatment for Schistosomiasis² • Selection criteria for schools defined³ • Validation of Zambian height pole⁴ • Construction and distribution of height poles⁵ • Liaison with training assistants to ensure teachers trained in drug administration techniques. • Liaise with SHN-MIS developers to ensure system in place before implementation 	Year 1, Q1-Q3 Year 1, Q1-3 Year 1, Q3 Year 1, Q1-Q2 Year 1, Q2 Year 1, Q2 Year 1, Q2-3 Year 1, Q2-3 Year 1, Q3 Year 1, Q1-3
Phase 2: Implementation	<ul style="list-style-type: none"> • Health and nutrition assessment • Cognitive assessment • Administration of pharmaceutical interventions • Implementation of skills-based health education intervention 	Year 1, Q3 Year 1, Q3 Year 1, Q4 Year 1, Q4
Phase 3: Monitoring and evaluation	<ul style="list-style-type: none"> • Quarterly progress reports • Continual monitoring and evaluation procedures in place from central office 	Year 1, Q1-4 Year 1, Q1-4

¹ Based upon information gathered by the Situation Analysis team during a survey of the pilot Districts (July 2000) or further biomedical investigations.

² Based upon a questionnaire developed by PCD for Tanzania. Validation will be in collaboration with TDRC, Ndola and using a PCD validation toolkit.

³ Based upon accessibility, number of enrolled pupils per grade, prevalence of schistosomiasis etc.

⁴ Based upon a PCD toolkit (based upon height pole constructed for Tanzanian schoolchildren. Will involve a small scale anthropometric study of Zambian schoolchildren)

⁵ Based upon a WHO toolkit

(iii) Development and implementation of professional development training workshops for teachers (Health education specialist consultants)

In close collaboration with the Ministry of Education, we propose to develop two modular, one week, workshops to encompass both theory and practice of: (i) the provision of health interventions to children through schools and; (ii) skills-based health education. Teaching-learning and other IEC materials to accompany these modules will also be developed

These highly specific modules are seen as components of, and compliments to, the overall teacher training package described elsewhere in this proposal. It is proposed that PCD will cofacilitate the master workshops with training advisors identified from within the Ministry of Education. This will provide a core group of trainers with enhanced capacity to train others in these areas. It is envisaged that the Ministry of Education will organise and implement all future workshops, with assistance from PCD if required.

Module 1: *The provision of health intervention by teachers*

Purpose:

- To provide teachers with the knowledge and skills needed to provide health interventions to children in schools.

Expected Outcomes:

- Demonstrated understanding of diseases, deficiencies and their treatment and control;
- Teachers skilled in the administration of pharmaceuticals to children in schools.

The content of the module is likely to include:

- Clarification of terminology related to the health interventions and pharmaceuticals;
- Background information on the diseases and deficiencies targetted by the SHN program for interventions;
- Background information on the prevention and control of the diseases and deficiencies;
- Policies regarding delivery and administration of pharmaceuticals;
- Skills to administer Zambian validated questionnaire to identify schools requiring mass treatment for schistosomiasis and individuals requiring treatment in non-selected schools;
- Skills to use and maintain tablet height poles;
- Skills to calculate correct dosage of praziquantel required for individual pupils;
- Skills in the handling, administration and storage of the pharmaceuticals;
- Opportunities for teachers to practice their new skills.

Module 2: *Skills-based health education*

Purpose:

- To build upon knowledge gained in Module 1;

- To provide teachers with the knowledge and skills needed to provide skills-based health education.

Expected Outcomes:

- Demonstrated understanding of lifeskills approach to health education;
- Enhanced teaching skills for this approach, including plans to practice new skills.

The content of the module is likely to include:

- Clarification of terminology related to the health, hygiene and disease prevention education messages;
- Relevant policy information;
- Background information on interactive teaching-learning methodology for skills-based health education;
- A balance of health knowledge, attitudes and skills related to safeguarding health and hygiene, and disease prevention;
- Skills to detect physical signs of disease and deficiency in children, and options for action;
- Skills for selecting resources (including MoE criteria for resources);
- Skills for planning and lesson development;
- Skills for being able to use teacher-learning resources in the classroom;
- Opportunities for teachers to practice their new skills.

SECTION 2

Cognitive Assessment for Basic Education Sub-Sector Investment Program in Zambia: School Health and Nutrition Component

Submitted by
Robert J. Sternberg and Elena L. Grigorenko

Yale University
For USAID

Goals and Objectives

The goal of this proposal is to develop a cognitive assessment instrument to measure the effects of health and nutrition interventions among Zambian school children of grades 1 to 7. The proposed cognitive-assessment instrument is practical to use to assess the effects of large-scale school health and nutrition programs on the cognitive function of pupils in a cost-effective way. It will (1) measure the cognitive function of children as opposed to their general knowledge of the school curriculum or their general intelligence, (2) measure the effects of micronutrient and de-worming interventions on the cognitive functioning of pupils, (3) be easy for teachers to administer to their pupils and, (4) not take a lot of time to administer.

Scope of Work

The cognitive assessment instrument will be used within the context of a study of the effects of de-worming and micronutrient interventions on the cognitive functions of pupils, during a three-year period of pilot testing the interventions. It will be carried out with pupils enrolled in Grades 2 and 4 during the first year of the study who are expected to progress through Grades 4 and 6, respectively, during the three-year period. Thus, the cognitive assessment instrument must be developed for use with pupils in grades 2 through 6.

The instrument to be developed shall measure cognitive functioning before and following simple, high impact health interventions in schools (e.g., de-worming and micronutrients). The instrument shall be designed to measure children's ability to follow instructions that become increasingly long and complex over the course of a 30-minute test. It shall be designed to be simple so that teachers can be easily trained to administer the instrument and interpret the scores. Ease of use will enable teachers to administer the assessment a number of times over the course of the health and nutrition intervention pilot test period. The instrument will be designed to do what standardized end-of-year tests cannot do – be sensitive specifically to any improvement in cognitive function that is a result of improved health status. We will develop an instrument that is meaningful, useful, and practical within Zambia's education environment and that will result in valid, reliable data. To achieve this, all items developed will be scrutinized and revised to ensure they are internally consistent, so that when combined, they will provide a

graduated scale of performance by which the various levels of the cognitive function of pupils can be gauged, as well as being externally valid and consistent with Zambia's educational standards and current assessments in Zambia of the cognitive development of children.

Program Tasks

At the completion of the study, we shall accomplish the tasks listed below. The tasks requiring deliveries of reports or written materials are noted by an asterisk (*). The products and deliverables are shown in italics. The deliverables will include 11 copies and 1 electronic copy of the materials and will be distributed to officials and other parties specified by Zambia USAID.

1. Work plan and draft table of contents for the pilot test report (*)

We will develop and deliver a final work plan in consultation with the SHN Focal Person and the CTO and a draft table of contents for a report that will describe the effects of the piloted SHN interventions on the cognitive function of pupils each year. The final work plan will be approved by the CTO. The work plan will include the design specifications of the assessment, item development plan and timetable, identification of Zambian consultants to be involved in each of the development phases and their job descriptions and curriculum vitas, the number and location of pupils and teachers to be involved in each of the instrument development stages, and the critical points at which the CTO, the SHN Focal Person, and her cognitive assessment sub-committee members will have an opportunity to review plans, products, and progress. A plan for how schools are to be selected as pilot and control schools during the 3-year pilot test of the SHN interventions will also be described. *The work plan and draft table of contents for a report will be the product of this step.*

We will ensure that, among the Zambian members of its technical assistance team, either the capacity exists to develop cognitive assessment instrument items, conduct activities associated with pilot testing the cognitive assessment items, and perform the analysis of results or the same capacity be developed through the provision of training. We will describe in our work plan the approach that will be taken to ensure that the capacities exist in Zambia by the end of the contract. Such a plan might include Zambia-based or US-based short-term training for a qualified statistician.

Proposed timeline:

July 1—the beginning of the project

August 1—the delivery of the Work Plan

September 10-30—the recruitment of the Zambian team members (4)

2. Develop Cognitive Assessment Instrument (*)

2. (a) Draft, pre-test, and revise core test items for the Cognitive Assessment Instrument (CAI)

For this first stage of CAI development, we will draft, pre-test, and revise 100 core test items for the cognitive assessment instrument to measure cognitive functioning of pupils before and following simple, high impact health interventions in schools (e.g., de-worming and micronutrients). This initial draft of a core set of items will be developed to serve as a base to be adapted as required in Zambia or other countries that wish to use them. They will be developed in the US and pre-tested with US children to ensure that the items meet a minimum criteria of validity and reliability within the US context including construct validity, face validity, ease of administration, 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.

Our procedures of item development and pre-testing will go through a number of stages including content and psychometric expert review, one-to-one review with individual children from the target population, revision of the items, testing the revised items with a small group of children, analyzing the results including item analysis, and revising the test items based on findings.

The revised test items in English will be the product of this step.

After the initial draft core set of items have been developed in the US, they will be sent to the project team members in Zambia to be translated into a local Zambian language and reviewed by local experts, tested, and revised through trials with Zambian pupils from among the target population. This work will be carried out with the assistance of and in collaboration with the Zambian team member, our representative in Zambia, and our team in the U.S. The trials will include 30 pupils from each of the following grades in Zambian government primary schools: 2nd, 3rd, 4th, 5th, and 6th Grades (5 grades x 30 pupils/grade=150 pupils). We will ensure that the items meet the minimum criteria of validity and reliability within the Zambian context through the same processes described above. We will modify the set of items further so they match the specifics of schooling in Zambia and meet the locally valid set of norms and reference values for Zambia. That is, the items will be scrutinized and revised to ensure they are internally consistent so that when combined, they will provide a graduated scale of performance by which the various levels of the cognitive function of pupils can be gauged which are externally valid and consistent with Zambia's educational standards and current assessments in Zambia of cognitive development of children.

The revised test items in English, the items in the local language, a report of the process and findings of the first stage of CAI development, and a final plan for pilot testing the cognitive assessment instrument and cognitive assessment administration procedures manual will be the product of this step.

Proposed timeline:

July 1-September 10—the development and piloting of a rough draft of items in English
September 10-September 30—initial translation and initial prepiloting of items in Zambia (this will be done collaboratively by Zambian and U.S. team member in Zambia); training Zambian team members
October 1—November 1—the piloting in Zambia (150 children)
November 1-November 20—data analyses and report writing
December 1—the delivery of the final plan and the report on the initial project phase

2. (b) Draft a cognitive assessment administration procedures manual for teachers to use in administering the cognitive assessment instrument

We will draft a cognitive assessment administration procedures manual, in English, giving general directions and procedures for administering the cognitive assessment instrument. This draft of the cognitive assessment administration procedures manual will provide step-by-step instructions to those charged with implementing the cognitive assessment instrument to ensure that it is administered as designed. The draft manual will be reviewed by our team with teachers similar to those who will ultimately be administering the cognitive assessment instrument – teachers of pupils in grades 2-6 who teach in areas where English is not the first language.

The draft cognitive assessment administration procedures manual will be the product of this step.

Proposed timeline:

December 1—the delivery of the draft of the manual

2. (c) Pilot test the cognitive assessment items and draft cognitive assessment administration procedures manual, analyze pilot test results, and revise assessment items and manual accordingly

For the second stage of CAI development, we will administer the CA instrument to grade 2 through 6 pupils, 50 pupils per grade (5 grades x 50 pupils/grade=250 pupils). We will also formatively evaluate the cognitive assessment administration procedures manual with a group of teachers who teach pupils in grades 2 through 6. The pupils shall be different than those involved in the first stage development activities. Pupil performance on the instrument, analysis of the results, and results of the formative evaluation of the manual will be presented in a report and the Contractor will modify the set of items as well as the manual, based on the findings from the pilot test. The modified set of items, the revised cognitive assessment administration procedures manual, and a draft report of findings from the pilot test will be presented to the SHN Focal person, her cognitive assessment sub-committee, and the CTO for review. The report of findings will address how well the cognitive assessment meets the requirements described under 2.(a).

We will plan the agenda for and facilitate a 2-3 day workshop in Lusaka to discuss the pilot test findings. Attendees will consist of principal investigators (Drs. Sternberg and Grigorenko), all members of the team in Zambia, key consultants, the USAID/Zambia CTO, the SHN focal person, and the SHN cognitive assessment sub-committee. Within that group should be at least one representative of the Planning Unit and one representative of the Examinations Council. The logistics of the workshop, i.e., arranging for venue and associated materials, will be our responsibility. During the workshop, we will solicit feedback on the report of findings, the cognitive assessment administration procedures manual, and the instrument. Further, as a way of building the understanding of the workshop participants, we will provide training regarding previous research on the impact of under-nutrition and parasitological infection on the cognitive development of children.

prior to the de-worming and micronutrient interventions and then collected on the same sample of pupils after the interventions.

3. (b) Conduct a train-the-trainer workshop. The workshop will be conducted to train trainers who will, in turn, train teachers of the SHN pilot schools to administer the instrument and collect and forward data to the Contractor, as needed.
3. (c) Train teachers of the SHN pilot schools to administer the instrument and collect and forward data to the Contractor, as needed.
3. (d) Conduct a workshop to train personnel to monitor the implementation of the cognitive assessment in SHN pilot schools to ensure quality control and to report their observations and recommendations. In addition to training on how to monitor and supervise implementation, the participants will receive an orientation on data management and analysis as it applies to studying and reporting results from the cognitive assessment.
3. (e) Monitor the implementation of the cognitive assessment instrument in SHN schools and report findings.
3. (f) Collect data from the cognitive assessment of SHN pilot school sample of pupils, before and after the SHN micronutrient and de-worming interventions, and analyze and report the results.
3. (g) Submit a report that contains a summary of the proceedings of the train-the-trainer workshop, including an evaluation of the workshop by participants and evidence that the participants learned how to administer the instrument and forward the collected data; a summary of the proceedings of the workshop to train implementation monitors, including an evaluation of the workshop by participants and evidence that the participants learned how to monitor the implementation and report their observations; a report on the successes and problems of the cognitive assessment instrument implementation based on the monitors' reports; and submission of a final table of contents for the annual report that will describe the effects of the piloted SHN interventions on the cognitive function of pupils.
3. (h) Submit a report of findings from the cognitive assessment in Year 1 including an analysis of the data collected, the effects of the interventions on the cognitive function of pupils, and any other findings that are described in a final table of contents for the annual report on the effects of the piloted SHN interventions on the cognitive function of pupils.
3. (i) We will be prepared to participate in a seminar to present/discuss a draft report on the effects of SHN interventions on the cognitive function of pupils.
3. (j) During Year 2 of the SHN pilot test, conduct activities described in 3.(c) through 3.(h), in accordance with the Memorandum of Understanding between the U.S.

team and the SHN Pilot Project Contractor or Grantee and submit reports, as described in 3.(g) and 3.(h).

3. (k) During Year 3 of the SHN pilot test, conduct activities described in 3.(c) through 3.(h), in accordance with the Memorandum of Understanding between the US team and the SHN Pilot Project Contractor or Grantee and submit reports, as described in 3.(g) and 3.(h).

Time Line

The desired start date is July 1st, 2000. A validated cognitive assessment instrument shall be completed by March 15, 2001. The report will be available by June 15, 2001. The instrument will be used with a sample of pupils in the SHN pilot schools each year of the pilot test (2001-2003), before and after the SHN interventions (de-worming and micronutrients) have been delivered, and in accordance with a schedule agreed upon with the implementers of the SHN pilot project.

Responsibilities

We will be responsible for coordinating and carrying out all project activities and the delivery of the project products. Specifically, we will be responsible for (1) hiring Zambian collaborators and establishing project groups in Zambia; (2) development of a draft version of the instrument; (3) piloting the instrument; (4) analyzing the pilot data; (5) revising and modifying the instrument; (6) training the personnel; (7) designing the study; (8) printing/reproducing sufficient copies of cognitive assessment materials for review sessions, pilot testing, and implementing the final, validated cognitive assessment instrument - including pupils materials, cognitive assessment administration procedures manuals - and provide any other materials (e.g., writing instruments) required to administer the assessment to pupils participating in the school health and nutrition pilot activity; (9) collecting the data; (10) processing the data; (11) analyzing the data; and (12) delivering a final report. All these activities will be covered from our budget.

The Government of Zambia shall be responsible for payment of any travel allowances, "sitting" allowances, or any other benefits due to government employees assigned to participate in the development and implementation activities and that have not been accounted for above.

Period of Performance and Deliverables

		Period of Performance and Deliverables	Proposed dates of delivery
1		Start	7/1/2000
2	1	Work plan and draft table of contents for the pilot test report.	8/1/2000
3	2.(a)	A core of test items in English, the same items translated in the local language (probably Nyanja), a report of the process and findings of the first stage of CA instrument development and a final plan for pilot testing the cognitive assessment instrument and cognitive assessment administration procedures manual.	9/10/2000
4	2.(b-c)	A final report of pilot test findings, final cognitive assessment administration procedures manual, a cognitive assessment instrument that can be validated, and a final plan for validating the cognitive assessment against a current Ministry of Education national assessment instrument.	12/1/2000
5	2.(d)	A report of the processes and outcomes of the validation, a validated cognitive assessment instrument, and training and monitoring/evaluation plans	6/15/2001
6	3.(a)	A memorandum of understanding with the SHN Pilot Project contractor or grantee, the CTO, and SHN component Focal Person to define the roles and responsibilities for the US team and other SHN Pilot Project Contractor or Grantee	Note: We might remove this or change it
7		Implement the cognitive assessment instrument in First Year SHN intervention and control schools	From July 1, 2001, on
8	3.(g)	Reports of proceedings (train-the-trainers workshop and monitors' workshop), the instrument implementation successes/problems, and the Annual Report's table of contents	12/1/2001
9	3.(h)	Submit a report of findings from the cognitive assessment in Year 1	9/1/2001
10		Implement the cognitive assessment instrument in Second Year SHN intervention and control schools	From July 1, 2001, on
11	3.(j)	Submit a report of findings from the cognitive assessment in Year 2	9/1/2002
12		Implement the cognitive assessment instrument in Third Year SHN intervention and control schools	Form July 1, 2002, on
13	3.(k)	Submit a report of findings from the cognitive assessment in Year 3	9/1/2003

APPENDIX E1 : Examples of types of baseline data that could be collected at the school and individual child levels in relation to the SHN project

School-level

- Date of survey
- Name of school
- Location Name
- Year formed
- Intervention : Control or Treatment
- No. of grades
- No. of classrooms
- No. of total pupils by gender
- No of orphans by gender
- No. of teachers by gender
- No. of trained teachers by gender
- No of trained counsellors by gender
- Dropout rates by gender
- Absenteeism rates by gender
- Average distance walk to school
- Sanitation – latrines, privacy etc
- Water access – pump, bucket or none
- Construction material (roof, walls, floor)
- Electricity
- Presence/absence of first aid kit
- Drugs in first aid kit
- Provision of school meals

Child level

○ Personal/Anthropological data

- Date of survey
- ID no
- Name
- Age
- Sex
- Guardian – Father/Mother/Orphan
- No. of siblings by gender and age

○ Anthropometric data

- Weight in kgs
- Height in cm

○ Health Status

- Hemoglobin level
- Serum ferritin level
- Vitamin A status
- Iodine status

○ Parasitological

- Hookworm infection intensity
- *Ascaris* infection intensity
- *Trichuris* infection intensity
- *Schistosoma* infection intensity
- Malaria episodes past year

○ Medical

- Albendazole received (dates, dosages)

- Praziquantel received (dates, dosages)
- Vitamin A received (dates, dosages)
- Ferrous sulphate received (dates, dosages)
- Iodised oil capsule (dates, dosages)

○ Education

- Family education status: No. and which member attended 1) primary school, 2) secondary school, 3) high school
- School absentism over past year: No. of days and reasons
- National Assessment test scores
- Cognitive assessment test scores

PCD Budget

	Year 1	Year 2	Year 3	Year 4	Year 5
Management Information System					
Design and implementation of SHN-MIS (Consultants: Dr Edwin Michael and Dr Lesley Drake)	25,000				
Training					
Workshop content and materials development for health interventions and health education	10,000				
Personnel					
Field Programme Implementation Consultant	4,500	1,800	1,800	1,800	1,800
Quality Assurance Consultant	2,100	1,800	1,800	1,800	1,800
Training Facilitator 1	2,100	2,100	2,100		
Training Facilitator 2	2,100	2,100	2,100		
Round trips @ 1250 USD per diems (@150 USD/day)	10,000	10,000	10,000	2,500	2,500
Field Project Requirements					
2 x trained parasitologists @ 100 USD/day	2,800	2,800	2,800		
2 x trained nurses @ 100 USD/day	2,800	2,800	2,800		
Blood and urine sample analyses	2,500	2,500	2,500		
Overheads	10,000	10,000	10,000	10,000	10,000
incl. Specialised field equipment, field consumables, computer software and licences, data analysis, communications, office costs and project monitoring and evaluation					
Sub-total	73,900	35,900	35,900	16,100	16,100
PCD Contract fee @ 15% = 26,685 USD (Grand Total = 204,585)					
Cognitive Assessment Proposal					
Personnel					
Research assistant in the US	20,100				
Data analyst	12,400	8,000	8,000		
Report Writer		5,000	5,000		
4 Zambian team members	24,000	24,000	24,000		
Dr Robert Sternberg	2,500				
Dr Elena Grigorenko	5,000	1,250	1,250		
Travel	14,000	3,500	3,500		
Roundtrip airfare (\$3,500)	9,000	1,500	3,500		
Per Diem (\$15/dy)					
Overheads	9,800	9,300	9,300		
Office, communications and workshop expenses					
Management Costs & utilities	2,580	2,580	2,580		
Sub-total	99,380	55,130	55,130		
Total = 209, 640					
SI Contract Fee @ 15% = 240,298	114,498	62,900	62,900		

GRAND TOTAL = 444,883

Appendix F

Monitoring and Evaluation Framework

Monitoring and Evaluation Framework

Goal	Indicator	Tool	Frequency
Child Level-Education			
Improvement in learning capabilities	Changes in cognitive assessment scores	Cognitive Assessment test	Yearly (1-3) *if validated after pilot to be used yearly
Improvement in pupil achievement	Changes in national assessment scores	National Assessment exam (Gr. 5)	yearly
Improvement in attendance	decrease in absenteeism increase in attendance	Attendance records	Quarterly
Child Level-Health			
Improvements in child health and nutrition status:			
Growth	Increase in Height Increase in weight	Height stick Scales	semi annual
Worm Infestation (intestinal)	reduction in eggs per gram of feces	Kato/Katz assessment tool	semi annual
Bilharzia	reduction in eggs in urine	Microscopic exam	semi annual
Iron status	>in serum ferratin > in hemaglobin	Blood chemical analysis	yearly
Iodine status	>in iodine	Blood chemical analysis	yearly
Vitamin.A status	>serum retinol	Blood chemical analysis	yearly
Malarial episodes	<in malarial episodes	observation	semi annual
School Level-Physical			
Improvements in access to water	Availability of water source on the premises	Observation	yearly
Improvement in quality of water	Level of contamination (use of chlorine tabs as proxy)	Chemical water analysis	yearly
Improved availability of latrines	# of latrines available by gender # of private latrines	Observation	yearly
Use of latrines	>use of latrines <use of bush defecation sites	Focus group discussions	yearly
Maintenance of sanitation facilities	>level of cleanliness	observation	yearly

School Level-Educational			
Teacher delivery of quality SHN services	Proper use of record system Appropriate administration of SHN pharmaceuticals Improvements in knowledge	-observation -SHN inspection reports -school-based collection data -teacher quiz -student quiz	yearly spot checks yearly
Admissions increased	Enrollment #	enrollment records	yearly
Improvements in attendance	Decrease in absenteeism	attendance records	quarterly
Improvements in effective record keeping	Data collected and available at district	records	quarterly
School Level-Community			
Level of awareness of SHN	>level of awareness	survey	yearly
Actions occurring as a result of awareness	# and type of actions	records and observation	yearly
District Level			
Prevalence of teachers trained in SHN	%of teachers trained in SHN	survey	yearly
Inter-sectoral collaboration	-existence of joint action plans, committees. -sharing of resources	-documents -interviews -observation -case studies	quarterly
Effective SHN mgt. Of information system	-existence -availability of reliable data -data being used in decision-making	-inspection of documents -interviews -case studies	semi annual
Prevalence of schools with SHN interventions	# schools with SHN interventions -in # of schools	records	yearly

Central level			
Improved inter-ministerial collaboration-MOE, MOH, MCDSS	-MOUs signed -program advisory committee operational -joint action plans developed and implemented at district and community levels	-publications and case studies -minutes of meetings -action plans -signed documents or declarations	yearly
Inter-sectoral collaboration	> # of MOE/MOH products	-documents -interviews -observation -case studies	semi annual
Improved capacity of government officials responsible for SHN	-central ministry personnel demonstrate knowledge of key SHN issues and program strategies -ministry officials organized and delivering SHN -SHN institutionalized within appropriate government training programs.	-case studies -interviews -minutes of meetings -documents	semi annual
Effective mgt. of data	-existence -availability of reliable data -data being used in decision-making	-documents -interviews -observation -case studies	semi annual
Use of SHN data as a basis for decision-making	Use of SHN data to develop policies	-publications or declarations -interviews -desk reviews of documents	yearly

Appendix G

Milestone Plan

**Program to Improve Learning Through School-based Health and Nutrition
Interventions**

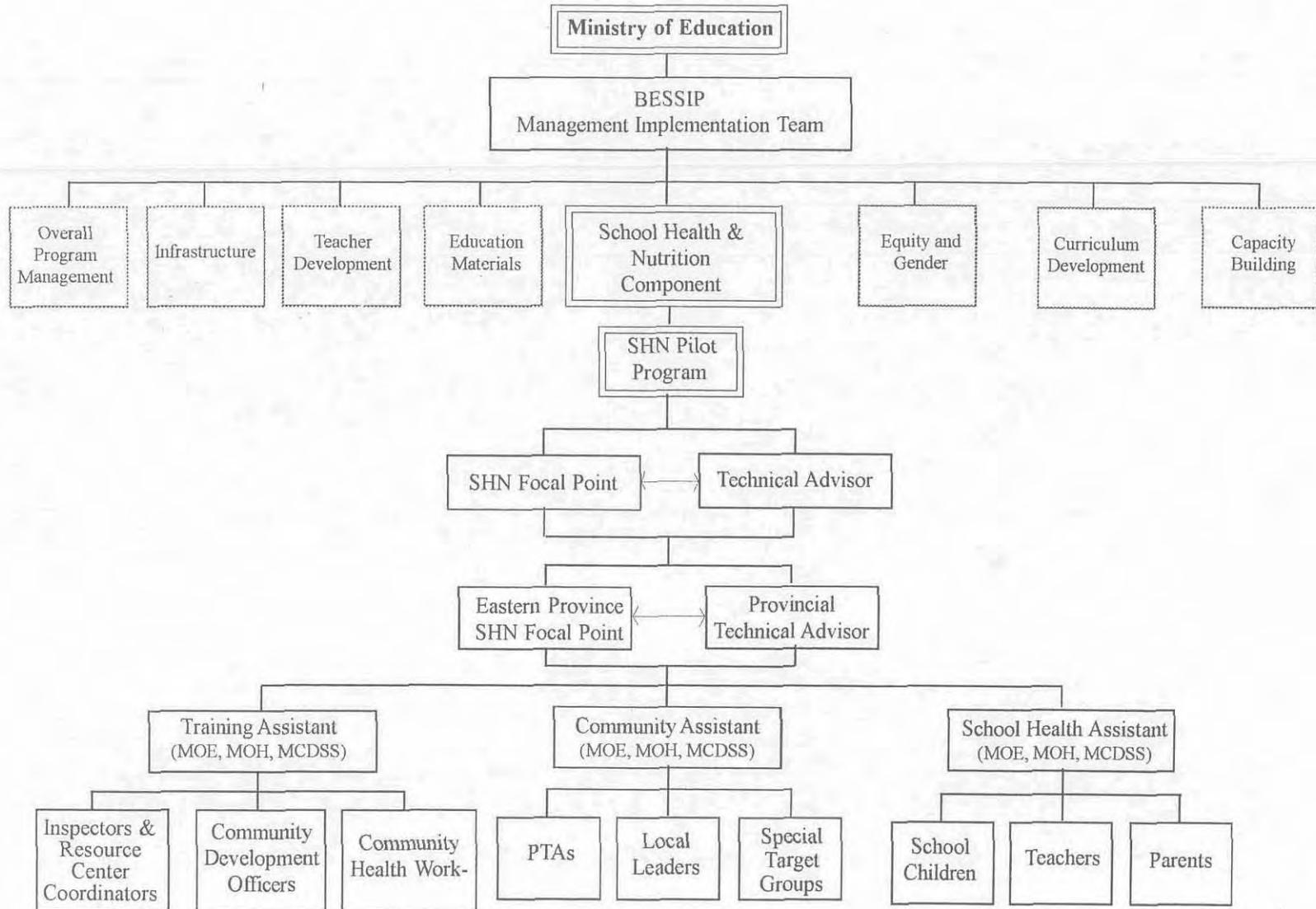
Milestone Plan

Milestone	Activities	Dates
District and community-level field workers and teachers in pilot area trained	<ul style="list-style-type: none"><li data-bbox="737 317 1015 405">• Identify district and community level field workers and teachers<li data-bbox="737 411 943 470">• Conduct needs assessment<li data-bbox="737 476 1024 535">• Develop training curricula and materials<li data-bbox="737 541 1024 630">• Implement workshops, meetings and other training events	Year 2, 3 rd and 4 th qtrs.

Appendix H

Organizational Chart
(as within the Government of Zambia)

Program to Improve Learning Through School-based Health and Nutrition Interventions
 Organizational Chart
 (as within the Government of Zambia)

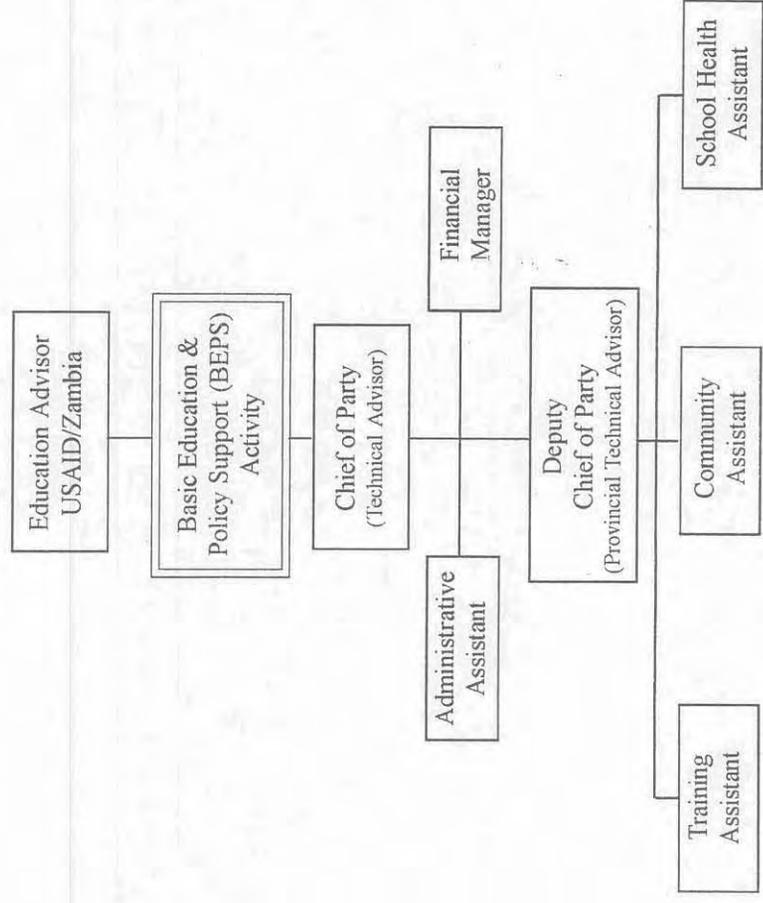


- **Appendix I**

Organizational Chart
(as within the USAID/Zambia structure)

Program to Improve Learning Through School-based Health and Nutrition Interventions

Organizational Chart
(as within the USAID/Zambia structure)



Appendix J

Activity Implementation Schedule

Program to Improve Learning Through School-based Health and Nutrition Interventions
 Activity Implementation Schedule -- October 1, 2000 - September 30, 2005

Activity Description	Year 1				Year 2				Year 3				Year 4				Year 5			
	Q1	Q2	Q3	Q4																
Start Up Activities																				
1. Hire & Field Expat Staff	■																			
2. Identify & Set Up Office Space	■																			
3. Hire Local Staff	■																			
4. Orientation of Program Staff	■																			
5. Establishment of Program Advisory Committee	■																			
6. Refine & Set Research Strategy	■	■																		
7. Inter-Ministerial Briefing Meetings	●		●		●		●		●		●		●		●		●		●	●
8. Provincial & District Briefing Mtg	●		●		●		●		●		●		●		●		●		●	●
9. Development of Communication and Media Strategy		■	■																	
10. Site Selection		■				■				■				■				■		
11. Baseline Data Collection			■				■				■				■				■	
Training Activities																				
12. Field Worker Training		■																		
13. Teacher Training		■																		
14. Training of Teacher Trainers							■				■				■				■	
15. Training of Com. Development Trainers						■				■				■						
Community-based Sensitization Activities																				
16. Implementation of Field Worker Action Plans		■																		

Program to Improve Learning Through School-based Health and Nutrition Interventions

Activity Description	Year 1				Year 2				Year 3				Year 4				Year 5			
	Q1	Q2	Q3	Q4																
30. Formative Assessment																				
31. Internal Program Review																				
32. Program Advisory Committee Meetings	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
33. Quarterly Reports	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
34. Presentation to USAID SO2 Team and BESSIP Steering Committee		●		●		●		●		●		●		●		●		●		●
35. Development and Production of Lessons Learned & Best Practices Document																				

Appendix K

Draft Budget and Budget Notes

DRAFT BUDGET

Creative Associates International, Inc. - Basic Education & Policy Support (BEPS) Activity
 Project Name: Program to Improve Learning Through School-based Health and Nutrition Interventions
 Client: USAID/Zambia
 Budget Period: October 1, 2000 - September 30, 2005

NOTE: Shaded areas indicate items that would be shared within the overall budget for all "bundled" items.

	Year 1			Year 2			Year 3			Year 4			Year 5			
	Rate /Unit	No. of Units	Total	Rate /Unit	No. of Units	Total	Rate /Unit	No. of Units	Total	Rate /Unit	No. of Units	Total	Rate /Unit	No. of Units	Total	
I. Salaries and Wages																
A. Home Office Support Staff																
1. Project Manager (20% time) CLIN 1A	114 /hr	384	43776	114 /hr	384	43776	114 /hr	384	43776	114 /hr	384	43776	114 /hr	384	43776	
2. Project Assistant (30% time) CLIN 1B	52 /hr	576	29952	52 /hr	576	29952	52 /hr	576	29952	55 /hr	576	31450	55 /hr	576	31450	
B. Expat Staff																
1. Chief of Party (CLIN 1A)	114 /hr	1920	218880	114 /hr	1920	218880	114 /hr	1920	218880	114 /hr	1920	218880	114 /hr	1920	218880	
Total Home Office & Expat Salaries (BEPS fixed rates)			292608			292608			292608			294105.6			294105.6	
C. Local Staff																
1. Deputy Chief of Party	2500 /mo.	13	32500	2700 /mo.	13	35100	2916 /mo.	13	37908	3149 /mo.	13	40941	3401 /mo.	13	44216	
2. Training Assistant	2000 /mo.	13	26000	2160 /mo.	6	12960	2332.8 /mo.	4	9331	2519 /mo.	4	10078	2721 /mo.	0	0	
3. Community Assistant	2000 /mo.	13	26000	2160 /mo.	6	12960	2333 /mo.	4	9331	2519 /mo.	4	10078	2721 /mo.	0	0	
4. School Health Assistant	2000 /mo.	13	26000	2160 /mo.	6	12960	2333 /mo.	4	9331	2519 /mo.	4	10078	2721 /mo.	0	0	
5. Senior Finance Manager	2000 /mo.	13	26000	2160 /mo.	13	28080	2333 /mo.	13	30326	2519 /mo.	13	32753	2721 /mo.	13	35373	
6. Administrative Assistant	800 /mo.	13	10400	864 /mo.	13	11232	933 /mo.	13	12131	1008 /mo.	13	13101	1088 /mo.	13	14149	
7. Drivers (2)	280 /mo.	26	7280	302 /mo.	26	7852	327 /mo.	26	8502	353 /mo.	26	9178	380.9 /mo.	26	9904	
Total Local Salaries & Wages			154180			121154.4			118850			126197.9			103642	
II. Local Fringe Benefits			21380				22306.4				23307				24387	25554
III. Short-term Technical Assistants																
A. International Consultants																
1. SHN Technical Advisor (CLIN 1A)	114 /hr	168	19152	114 /hr	168	19152	114 /hr	168	19152	114 /hr	168	19152	0	0	0	
2. Training Advisor (CLIN 13A)	74 /hr	168	12430	74 /hr	168	12430	74 /hr	168	12430	74 /hr	168	12430	0	0	0	
3. Monitoring & Evaluation Advisor (CLIN 7A)	74 /hr	168	12430	74 /hr	168	12430	74 /hr	168	12430	74 /hr	168	12430	0	0	0	
B. Local Consultants																
				100 /day	360	36000	100 /day	528	52800	100 /day	300	30000	100 /day	300	30000	
Total Consultant Salaries			44013			80013			96813			74013			30000	
IV. Allowances (COP)																
A. Shipping																
B. Unaccompanied Baggage			5000	--	--	--	--	--	--	--	--	--	--	--	5000	
C. Storage			150 /mo.	12	1800	150 /mo.	12	1800	150 /mo.	12	1800	150 /mo.	12	1800	150 /mo.	12
D. Settling-in Allowance			5000	--	--	--	--	--	--	--	--	--	--	--	--	
E. Housing, utilities, security			1500 /mo.	12	18000	1500 /mo.	12	18000	1500 /mo.	12	18000	1500 /mo.	12	18000	1500 /mo.	12
Total Allowances			30300			19800			19800			19800			25300	
V. Travel & Transportation																
A. International Airfare																
1. Chief of Party	3500 /trip	1	3500	2500 /trip	1	2500	2500 /trip	2	5000	2500 /trip	1	2500	2500 /trip	1	2500	
2. SHN Technical Advisor	3500 /trip	1	3500	3500 /trip	1	3500	3500 /trip	1	3500	3500 /trip	1	3500	3500 /trip	1	3500	
3. Monitoring & Evaluation Advisor	3500 /trip	1	3500	3500 /trip	1	3500	3500 /trip	1	3500	3500 /trip	1	3500	3500 /trip	1	3500	
4. Training Advisor	3500 /trip	1	3500	3500 /trip	1	3500	3500 /trip	1	3500	3500 /trip	1	3500	3500 /trip	1	3500	
5. Home Office Staff	3500 /trip	2	7000	3500 /trip	1	3500	3500 /trip	1	3500	3500 /trip	1	3500	3500 /trip	1	3500	
6. Training/Conference Attendance	2500 /trip	2	5000	2500 /trip	2	5000	2500 /trip	2	5000	2500 /trip	2	5000	2500 /trip	2	7000	
B. International Per Diem																
1. Lusaka	156 /day	91	14196	156 /day	77	12012	156 /day	77	12012	156 /day	77	12012	156 /day	91	14196	
2. Washington, DC	165 /day	28	4620	165 /day	28	4620	165 /day	28	4620	165 /day	28	4620	165 /day	28	4620	
3. Other (training/conference locations)	150 /day	28	4200	150 /day	28	4200	150 /day	28	4200	150 /day	28	4200	150 /day	28	4200	
C. Local Per Diem																
1. Professional Staff	105 /day	120	12600	105 /day	120	12600	105 /day	120	12600	105 /day	120	12600	105 /day	120	12600	
2. Drivers (2)	105 /day	240	25200	105 /day	240	25200	105 /day	240	25200	105 /day	240	25200	105 /day	240	25200	
Total Travel & Transportation Costs			86816			80132			82632			80132			86816	

VI. Vehicles, Equipment and Furniture

A.	Office Equipment																
1.	Computers	2500 /comp.	4	10000	--	--	--	--	--	--	--	--	--	--	--	--	--
2.	Laser Printer	1500 /printer	1	1500	--	--	--	--	--	--	--	--	--	--	--	--	--
3.	Scanner	1000 /scan	1	1000	--	--	--	--	--	--	--	--	--	--	--	--	--
4.	Photocopier	10000 /copier	1	10000	--	--	--	--	--	--	--	--	--	--	--	--	--
5.	Fax Machine	1000 /fax	1	1000	--	--	--	--	--	--	--	--	--	--	--	--	--
6.	Laptop Computer & Printer	3000 /set	1	3000	--	--	--	--	--	--	--	--	--	--	--	--	--
7.	35 mm & Digital Camera			1000	--	--	--	--	--	--	--	--	--	--	--	--	--
8.	Video Camera			500	--	--	--	--	--	--	--	--	--	--	--	--	--
9.	VCR & Monitor			1000	--	--	--	--	--	--	--	--	--	--	--	--	--
10.	Overhead Projector & Screen			500	--	--	--	--	--	--	--	--	--	--	--	--	--
11.	Cell Phones	200 /phone	1	200	--	--	--	--	--	--	--	--	--	--	--	--	--
B.	Office Furniture			5000	--	--	--	--	--	--	--	--	--	--	--	--	--
C.	Vehicles																
1.	8 passenger wagon (Venture)	15000 /veh	2	30000	--	--	--	--	--	--	--	--	--	--	--	--	--
2.	4x4 Double Cab	40000 /veh	1	40000	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Vehicles, Equipment & Furniture				104700	0												

VII. Other Direct Costs

A.	Temporary Staff Salaries (10 people)	50 /day	300	15000												
B.	Temporary Staff Allowances	15 /day	300	4500												
C.	Stakeholder Meetings	75 /mtg	3	225												
D.	Provincial/District Workshops (15 participants)	42 /day	90	3780												
E.	Field Worker Training (30 participants)	42 /day	540	22680	42 /day	540	22680	42 /day	270	11340	42 /day	270	11340	42 /day	270	11340
F.	Teacher Training (15 participants)	42 /day	360	15120												
G.	Teacher Trainer Training (15 participants)	0	0	0	42 /day	270	11340	42 /day	270	11340	42 /day	135	5670	42 /day	135	5670
H.	Com. Dev. Trainer Training (15 participants)	0	0	0	42 /day	270	11340	42 /day	270	11340	42 /day	135	5670	42 /day	135	5670
I.	Community-based Activities			4000			4000			4000			4000			4000
J.	Special Group Training (30 participants)	20 /day	180	3600												
K.	Mass Communication Interventions			30000			30000			30000			30000			30000
L.	Workshop Supplies	250 /mo.	12	3000												
M.	Office Supplies	250 /mo.	12	3000												
N.	Field Office Communication (fax, email, phone)	300 /mo.	12	3600												
O.	Home Office Communication (fax, email, phone)	200 /mo.	12	2400												
P.	Photocopying	200 /mo.	12	2400												
Q.	Office Rent & Security	1500 /mo.	12	18000												
R.	Vehicle Insurance & Maintenance	2000 /mo.	12	24000	2000 /mo.	12	24000	3000 /mo.	12	36000	3000 /mo.	12	36000	3000 /mo.	12	36000
S.	Vehicle Fuel	3000 /mo.	12	36000												
T.	Training/Conference Fees	250 /conf.	2	500												
U.	Printing & Publishing			30000			30000			30000			30000			30000
V.	Pharmaceutical Supplies			20000			40000			30000			0			0
W.	Assessment Tests			16620			23180			30740			30740			30740
X.	Shipping & Postage			5000			1000			1000			1000			1000
Y.	Medex	27 /person	6	162												
Z.	DBA Insurance															
AA.	Visa Costs	60 /visa	6	360												
BB.	Immunizations	82 /person	6	492												
Total ODCs				263438			308827			307047			265707			234967

Total Allowances, Travel & Transportation, Vehicles, Equipment & Supplies, and ODCs

Subcontractor, Partnership for Child Development

G&A @15%

TOTAL OFFERED PRICE

TOTAL Program Budget: 5348627
Total SHN Program Budget Minus Shared Costs: 4184459

Budget Notes:

I. Salaries and Wages

- A. The SHN Program will be supported by a Program Manager and Program Assistant at the home office of Creative Associates International, Inc. Salaries for those two positions are based on pre-set fixed burden rates within the BEPS contract. The Program Manager is expected to spend approximately 48 days (384 hours) per year in support of this contract. The Program Assistant will be required for 72 days (576 hours) per year. In addition to management and administrative support to the program, the Program Manager will provide technical support in the areas of Field Worker Training and Community Mobilization.
- B. A Chief of Party will be hired as the key personnel responsible for the implementation of the SHN Program in Zambia. Salary for this position is based on a pre-set fixed burden rates within the BEPS contract.
- C. Local staff salaries are estimated based upon current comparable positions within Zambia-based NGOs. An 8% increase to accommodate merit and cost of living increase has been added each year to each local staff salary.

II. Local Fringe Benefits

Benefits are calculated using a flat rate of \$700/year for each employee to cover personal and family package medical benefits, plus a severance package equal to one month's salary for each full year of service.

III. Short-term Technical Assistance

- A. International Consultants. It is anticipated that three international consultants may be required at least once during each year of the program--one each in the areas of School Health and Nutrition, Training, and Monitoring and Evaluation. These positions are aligned with specified CLINs within the BEPS contract and salaries are based on a pre-set fixed burden rate within the contract. Each consultant is estimated to be required for 21 days (168 hours) per year for four years of the contract.
- B. Local Consultants. Support by local consultants may be required in the areas of training, community, and school health after the first year of full-time assistance. Time to supplement those technical areas of expertise has been estimated at 120 days per technical area for year two, 176 days for year three (program expansion year), 100 days for each of years three and four.

IV. Allowances

All allowances have been figures using standard USAID and CAII regulations an practices. Housing, utilities and security is estimated based on figure provided by NGOs currently accommodating long-term expat advisors.

V. Travel & Transportation

All international rates are based on best estimates and actual published per diem rates. Local per diems are based on accepted practice within local Zambian NGOs.

VI. Vehicles, Equipment and Furniture

- A. Office equipment has been estimated at reasonable US prices and contain what we consider to be a start-up package for most field offices.
- B. Office furniture has been estimated at one set price of \$5000.00 for a standard office set-up.
- C. Vehicles. It is anticipated that three vehicles would be required and that they can be purchased locally to save in shipping costs and to ensure servicing at the local dealership. One 4WD double cab will be required for transportation to remote areas and two Ventures will be required, one for staff located in Lusaka and one for activities taking place in the Eastern Province.

VII. Other Direct Costs

- A. Temporary staff might include individuals being hired for participatory drama, data collection, etc. Salaries are based on rates that would be acceptable rates for university students and/or recent graduates. An estimated 300 days of labor at \$50/day has been budgeted for each of the five years of the program.
- B. Temporary staff allowances have been estimated at \$15/day for 300 days per year.

- C. Three stakeholder meetings per year have been budgeted. Minimal costs would be required for conducting these meetings as it is anticipated that they would be day meetings with approximately 30 people in attendance and would be held within Ministry facilities. \$75.00 per meeting has been budgeted to cover the cost of light refreshments.
- D. Provincial/District Workshops will be held to sensitize and build capacity of provincial and district personnel. A total of one week of training per year for 15 participants has been budgeted. Total budgeted amounts are calculated using government per diem rates plus estimated transportation costs (\$32 + \$10) per participant.
- E. Field Worker Training will include training for district level field workers from the three ministries of Education, Health and Community Development. It is anticipated that each workshop will have a maximum of 30 participants. Three weeks of training have been budgeted for in the first two years of the program and one and a half weeks of training have been budgeted for years three, four, and five. Total budgeted amounts have been calculated using government per diem rates plus estimated transportation costs (\$32 + \$10) per participant.
- F. Teacher Training will take place in week-long workshops for 15 teachers/workshop. The SHN Program is designed to provide four weeks of training for teachers each year. Total budgeted amounts have been calculated using government per diem rates plus estimated transportation costs (\$32 + \$10) per participant.
- G. Training of Teacher Trainers will begin in the second year of the program. In years two and three 15 participants will be trained in three weeks of training programs. In years four and five the participants will receive one and a half weeks of training. Total budgeted amounts have been calculated using government per diem rates plus estimated transportation costs (\$32 + \$10) per participant.
- H. The training of trainers within the Community Development College will follow the same pattern as that of the Teacher Trainers. In years two and three 15 participants will be trained in three weeks of training programs. In years four and five the participants will receive one and a half weeks of training. Total budgeted amounts have been calculated using government per diem rates plus estimated transportation costs (\$32 + \$10) per participant.
- I. An estimated lump sum has been budgeted for community-based activities. Since the community-driven activities are anticipated to be as diverse as the communities themselves, it is difficult to estimate beyond a rough "guess" at what might be required to support such activities. \$4000 has been budgeted for each year of the program.
- J. Special Group Training refers to the "yet to be determined" community groups who are found to be most influential in the health and nutritional status and practices of school-age children. These might be religious leaders, initiation counselors, patrons of orphanages, etc. who need to be trained in ways similar to field workers. It has been estimated that approximately 30 people per year might be identified as potential workshop participants. One week of training per special group has been budgeted with per diems set at \$20/day.
- K. Mass Communication Interventions would include radio broadcasts, newsletters, posters, etc. that might be developed as part of the IEC strategy or to serve other needs that may surface throughout the life of the program. \$30,000.00 per year has been budgeted for these products.
- L. Workshop supplies include such items as flip charts, markers, staplers, training manuals, etc. that might be required. To cover the supply costs for all scheduled workshops, \$250/month has been budgeted.
- M. Office Supplies are those items consumed by the SHN Program office staff to perform their routine tasks--prepare reports; give presentations; communicate with USAID, various ministries and home office staff; etc. \$250/month has been budgeted to cover the cost of a variety of office supplies.

- N. Field Office Communication costs have been estimated at \$300/month to cover phone, email, and fax charges to USAID, CAIL, and other destinations as required.
- O. Home Office Communication costs have been estimated at \$200/month to cover phone, email, and fax charges to USAID, the Program field offices, and other destinations as required.
- P. Photocopying has been estimated at \$200/month to cover the costs incurred for the duplication of various reports, training materials, etc.
- Q. Office Rent & Security has been budgeted based on figures provided by other Zambian-based project offices at \$1500/month.
- R. Vehicle Insurance & Maintenance is budgeted at \$2000/month for the first two years and increased to \$3000/month for years three, four and five when the vehicles will have clocked more miles and be suffering from more wear-and-tear.
- S. Vehicle fuel is budgeted for the three project vehicles at a total of \$3000.00 per month. This is an estimate based on prices provided by other NGOs operating similar field projects.
- T. Training/Conference Fees have been budgeted for training that might be required of Ministry personnel to be funded under this program. It is estimated that attendance might be funded for two conferences/workshops per year, with an estimated registration fee of \$250 each.
- U. Printing & Publishing estimates have been included to cover the cost of producing documents on lessons learned and best practices, newsletters, and other items that might be suggested throughout the course of the program. \$30,000/year has been budgeted for printing and publishing.
- V. Pharmaceutical Supplies would include deworming tablets and micronutrient capsules. Deworming tablets are administered in one dose every six months and micronutrient capsules are administered in weekly, semi-annually, and annually, depending upon the supplement. All drugs will be purchased in the US and shipped to Zambia via US distributors. It is estimated that \$20,000 will cover the cost of drugs and shipping to supply students in 20 schools for one year. The SHN Program has budgeted for the entire treatment group in year one, for the increase in treatment group in year two and for half of the treatment group in year three. It is anticipated that by year three, additional donors will be on board to help cover the cost of these drugs to our target schools and additional schools, as well.
- W. Costs for producing and administering the National (Grade 5) Assessment Test have been budgeted to be administered to both the pilot and control schools each year (40 schools in year one, 60 in year two, and eighty in years 3, 4, and 5). The cost for 3 people to work 3 days at each school (including travel) has been budgeted and the government per diem rate of \$42/day (including transportation) and an additional \$500 has been added each year for an administrative or development costs that may occur.
- X. Shipping and postage has been budgeted at \$5000.00 for year one, to cover the necessary shipping of start-up equipment and supplies from the US, and at \$1000 for each year thereafter.
- Y, Z, AA, BB. These items are necessary budget items to cover the costs incurred for fielding both long- and short-term consultants and are based on standard rates and practices.

Details of the draft budget for the subcontractor, Partnership for Child Development, are included in Appendix E along with the full subcontractor proposal.